FANUC AC SPINDLE MOTOR αi-B series
FANUC AC SPINDLE MOTOR βi-B series

DESCRIPTIONS

JR AUTOMATION TECHNOLOGY, INC*
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In this manual, we endeavor to include all pertinent matters.
There are, however, a very large number of operations that must not or cannot be performed, and if the manual contained them all, it would be enormous in volume.
It is, therefore, requested to assume that any operations that are not explicitly described as being possible are "not possible".

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SAFETY PRECAUTIONS

This "Safety Precautions" section describes the precautions which must be observed to ensure safety when using FANUC spindle motors.
Users of any spindle motor model are requested to read this manual carefully before using the spindle motor.
The users are also requested to read this manual carefully and understand each function of the motor for correct use.
The users are basically forbidden to do any behavior or action not mentioned in this manual. They are invited to ask FANUC previously about what behavior or action is prohibited.

For matters that are not described in this manual, a machine must be designed and assembled in accordance with EN60204-1 to ensure the safety of the machine and compliance with European specifications. For details, refer to the specification.

This product is manufactured under strict quality control. To apply this product to a facility expected to cause a serious accident or damage due to a failure in this product, install a safety device.

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DEFINITION OF WARNING, CAUTION, AND NOTE

This manual includes safety precautions for protecting the user and preventing damage to the machine. Precautions are classified into Warning and Caution according to their bearing on safety. Also, supplementary information is described as a Note. Read the Warning, Caution, and Note thoroughly before attempting to use the machine.

> ⚠ **WARNING**
> Applied when there is a danger of the user being injured or when there is a damage of both the user being injured and the equipment being damaged if the approved procedure is not observed.

> ⚠ **CAUTION**
> Applied when there is a danger of the equipment being damaged, if the approved procedure is not observed.

> **NOTE**
> The Note is used to indicate supplementary information other than Warning and Caution.

- Read this manual carefully, and store it in a safe place.

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WARNING

⚠ WARNING

- Be safely dressed when handling a motor.

Wear safety shoes or gloves when handling a motor as you may get hurt on any edge or protrusion on it or electric shocks.

- Use a crane or lift to move a motor from one place to another.

A motor is heavy. If you lift the motor by hand, you may get a backache, or you may be seriously injured when you drop the motor. A suitable crane or lift must be used to move the motor. (For the weight of motors, refer to this manual.)

When moving a motor using a crane or lift, use a hanging bolt if the motor has a corresponding tapped hole, or textile rope if it has no tapped hole. If a motor is attached with a machine or any other heavy stuff, do not use a hanging bolt to move the motor as the hanging bolt and/or motor may get broken.

- Before starting to connect a motor to electric wires, make sure they are isolated from an electric power source.

A failure to observe this caution is vary dangerous because you may get electric shocks.

- Be sure to secure power wires and short-bars.

If operation is performed with a terminal loose, the terminal block may become abnormally hot, possibly causing a fire. Also, the terminal may become disconnected, causing a ground fault or short-circuit, and possibly giving you electric shocks. See the section in this manual that gives the tightening torque for attaching power wires and short-bars to the terminal block.

- Be sure to ground a motor frame.

To avoid electric shocks, be sure to connect the grounding terminal in the terminal box to the grounding terminal of the machine.

- Do not ground a motor power wire terminal or short-circuit it to another power wire terminal.

A failure to observe this caution may cause electric shocks or a burned wiring.

* Some motors require a special connection such as a winding switching. Refer to their respective motor specification manuals for details.

- Do not supply the power to the motor while any terminal is exposed.

A failure to observe this caution is very dangerous because you may get electric shocks if your body or any conductive stuff touches an exposed terminal.

- Do not bring any dangerous stuff near a motor.

Motors are connected to a power line, and may get hot. If a flammable is placed near a motor, it may be ignited, catch fire, or explode.

- If an alarm is issued, the spindle may coast.

If an alarm is issued during spindle operation, the spindle may coast. Do not get close to the spindle or touch it until it is decelerated and stopped by mechanical friction load because the stop command and emergency stop are disabled while the spindle is coasting.

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⚠ WARNING

- Do not get close to a rotary section of a motor when it is rotating.

You may get your clothes or fingers caught in a rotary section, and may be injured. Before starting a motor, ensure that there is no stuff that can fly away (such as a key) on the motor.
Note that a motor with a through hole has a protruding shaft at its rear side and the shaft also rotates.

- Do not insert your finger or a stick into the fan motor.

A cover is mounted on the fan motor, but a stick may get inside it. When the fan is rotating, inserting your finger or a stick may injure you.

- Do not touch a motor with a wet hand.

A failure to observe this caution is vary dangerous because you may get electric shocks.

- Before touching a motor, shut off the power to it.

Even if a motor is not rotating, there may be a voltage across the terminals of the motor.
Especially before touching a power supply connection, take sufficient precautions.
Otherwise you may get electric shocks.

- A voltage is applied for a while after the power is shut off. Before touching a motor, be sure to check 0 V.

There is a high voltage across power terminals for a while after the power is shut off. Do not touch a motor or connect the motor to another device before checking the voltage. Otherwise you may get electric shocks or the motor may get damaged. Be sure to check that the voltage is lowered to 0 V, then touch the motor.

- To drive a motor, use a specified amplifier and parameters.

If a motor is driven with a wrong combination of an amplifier and parameters, the motor may exhibit abnormal behavior, such as runaway or excessive torque output, possibly causing damage to the motor and machine. There also is a danger that workpieces, tools, or other objects may fly away due to excessive rotation, possibly injuring the user.

- Before driving a motor, be sure to secure it.

If a motor is driven without being secured, it may roll over during acceleration or deceleration, injuring the user.

- To drive a liquid-cooled motor, be sure to cool the motor with coolant.

If a motor is driven with a sealed cooling line while the coolant is remaining inside, inner pressure may increase by temperature rise, possibly causing damage to the motor. There is also a danger that motor parts may fly away.

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CAUTION

⚠ CAUTION

- Do not touch a motor when it is running or immediately after it stops.

A motor may get hot when it is running. Do not touch the motor before it gets cool enough. Otherwise, you may get burned.

- Be careful not get your hair or cloths caught in a fan.

Be careful especially for a fan used to generate an inward air flow.
Be careful also for a fan even when the motor is stopped, because it continues to rotate while the amplifier is turned on.

- FANUC spindle motors are designed for use with machine tool spindles. Do not use them for any other purpose.

If a FANUC motor is used for an unintended purpose, it may cause an unexpected symptom or trouble. If you want to use a motor for an unintended purpose, previously consult with FANUC.

- Ensure that a base or frame on which a motor is mounted is strong enough.

Motors are heavy. If a base or frame on which a motor is mounted is not strong enough, it is impossible to achieve the required precision.

- Ensure that motors and related components are mounted securely.

If a motor or its component slips out of place or comes off when the motor is running, it is very dangerous.

- Be sure to connect motor cables correctly.

An incorrect connection of a cable cause abnormal heat generation, equipment malfunction, or failure. Always use a cable with an appropriate current carrying capacity (or thickness). For how to connect cables to motors, refer to their respective specification manuals.

- Ensure that motors are cooled if they are those that require forcible cooling.

If a motor that requires forcible cooling is not cooled normally, it may cause a failure or trouble. For a fan-cooled motor, ensure that it is not clogged or blocked with dust and dirt. For a liquid-cooled motor, ensure that the amount of the liquid is appropriate and that the liquid piping is not clogged. For both types, perform regular cleaning and inspection.

- When attaching a component having inertia, such as a pulley, to a motor, ensure that any imbalance between the motor and component is minimized.

If there is a large imbalance, the motor may vibrates abnormally, resulting in the motor being broken.

- Be sure to attach a key to a motor with a keyed shaft.

If a motor with a keyed shaft runs with no key attached, it may impair torque transmission or cause imbalance, resulting in the motor being broken. With the αi / βi-B series, a shaft with no key is used as standard.

- Do not step or sit on a motor.

If you step or sit on a motor, it may get deformed or broken. Do not put a motor on another unless they are in packages.

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⚠ CAUTION

- **When storing a motor, put it in a dry (non-condensing) place at room temperature (0 to 40 °C).**

If a motor is stored in a humid or hot place, its components may get damaged or deteriorated. In addition, keep a motor in such a position that its shaft is held horizontal and its terminal box is at the top.

- **Do not apply shocks to a motor or cause scratches to it.**

If a motor is subjected to shocks or is scratched, its components may be adversely affected, resulting in normal operation being impaired. Be very careful when handling plastic portions, sensors, and windings, because they are very liable to break. Especially, avoid lifting a motor by pulling its plastic portion, winding, or power cable.

- **Do not conduct dielectric strength or insulation test for a sensor.**

Such a test can damage elements in the sensor.

- **Do not disassemble a motor.**

Disassembling a motor may cause a failure or trouble in it.
If disassembly is in need because of maintenance or repair, please contact a service representative of FANUC.

- **Do not modify a motor.**

Do not modify a motor unless directed by FANUC. Modifying a motor may cause a failure or trouble in it.

- **Use a motor under an appropriate environmental condition.**

Using a motor in an adverse environment may cause a failure or trouble in it. Refer to this manual for details of the operating and environmental conditions for motors.

- **Do not apply a commercial power source voltage directly to a motor.**

Applying a commercial power source voltage directly to a motor may result in its windings being burned. Be sure to use a specified amplifier for supplying voltage to the motor.

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NOTE

NOTE

- **Do not remove a nameplate from a motor.**

If a nameplate comes off, be careful not to lose it. If the nameplate is lost, the motor becomes unidentifiable, resulting in maintenance becoming impossible.

- **When testing the winding or insulation resistance of a motor, satisfy the conditions stipulated in IEC34.**

Testing a motor under a condition severer than those specified in IEC34 may damage the motor.

- **For a motor with a terminal box, make a conduit hole for the terminal box in a specified position.**

When making a conduit hole, be careful not to break or damage unspecified portions. Refer to an applicable specification manual.

- **Before using a motor, measure its winding and insulation resistances, and make sure they are normal.**

Especially for a motor that has been stored for a prolonged period of time, conduct these checks. A motor may deteriorate depending on the condition under which it is stored or the time during which it is stored. For the winding resistances of motors, refer to the appendix of this manual, or ask FANUC. For insulation resistances, see the following table.

- **To use a motor as long as possible, perform periodic maintenance and inspection for it, and check its winding and insulation resistances.**

Note that extremely severe inspections (such as dielectric strength tests) of a motor may damage its windings. For the winding resistances of motors, refer to the appendix of this specification manual, or ask FANUC. For insulation resistances, see the following table.

MOTOR INSULATION RESISTANCE MEASUREMENT

Measure an insulation resistance between each winding and motor frame using an insulation resistance meter (500 VDC). Judge the measurements according to the following table.

Insulation resistance	Judgment
100 MΩ or higher	Acceptable
10 MΩ to 100 MΩ	The winding has begun deteriorating. There is no problem with the performance at present. Be sure to perform periodic inspection.
1 MΩ to 10 MΩ	The winding has considerably deteriorated. Special care is in need. Be sure to perform periodic inspection.
Lower than 1 MΩ	Unacceptable. Replace the motor.

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WARNING SIGNS LABELS

The following label is attached to the motor.
Attach this label to a prominent place on the motor to call attention to the user.



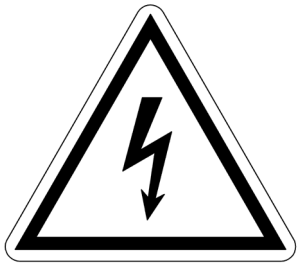
(compliance with the IEC standard)

Warning, hot surface

Since the motor is heated to a high temperature during operation or immediately after a stop, touching the motor may cause a burn.
So, attach this label to a prominent place to call attention when the surface is exposed and may be touched.

Remark:

The graphical symbol of this label conforms to the IEC standard, which is a global standard.
The graphical symbol has the meaning of hot surface warning, so the description is omitted.



(compliance with the IEC standard)

Warning, risk of electric shock

Before maintenance, please turn off and lockout main power disconnect and all circuits powered by an external source.
A failure to observe this caution is very dangerous because you may get electric shocks.
So, please attach this label to a prominent place.
(such as the lid of the terminal box).

Remark:

The graphical symbol of this label conforms to the IEC standard, which is a global standard.
The graphical symbol has the meaning of electric shock warning, so the description is omitted.

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PREFACE

The models covered by this manual, and their abbreviations are:

Series	Model
αiI-B series 200V type	αiI 0.5/10000-B, αiI 0.5/15000-B, αiI 1/10000-B, αiI 1/15000-B, αiI 1/24000-B, αiI 1.5/10000-B, αiI 1.5/20000-B, αiI 2/10000-B, αiI 2/12000-B, αiI 2/20000-B, αiI 3/10000-B, αiI 3/12000-B, αiI 3/15000-B, αiI 6/10000-B, αiI 6/12000-B, αiI 6/15000-B, αiI 8/8000-B, αiI 8/10000-B, αiI 8/12000-B, αiI 12/8000-B, αiI 12/12000-B, αiI 15/8000-B, αiI 15/12000-B, αiI 18/8000-B, αiI 18/12000-B, αiI 22/8000-B, αiI 22/12000-B, αiI 30/7000-B, αiI 40/7000-B, αiI 50/5000-B
αiI-B series 400V type	αiI 0.5/10000HV-B, αiI 1/10000HV-B, αiI 1.5/10000HV-B, αiI 2/10000HV-B, αiI 2/20000HV-B, αiI 3/10000HV-B, αiI 6/10000HV-B, αiI 8/8000HV-B, αiI 8/10000HV-B, αiI 8/12000HV-B, αiI 12/8000HV-B, αiI 12/12000HV-B, αiI 15/8000HV-B, αiI 15/12000HV-B, αiI 22/8000HV-B, αiI 22/12000HV-B, αiI 30/7000HV-B, αiI 40/7000HV-B, αiI 50/5000HV-B, αiI 60/5000HV-B, αiI 75/5000HV-B, αiI 100/5000HV-B, αiI 150/5000HV-B
αiS-B 400V type	αiS 2000/2000HV-B
αiIP-B series 200V type	αiIP 12/8000-B, αiIP 15/8000-B, αiIP 18/8000-B, αiIP 22/8000-B, αiIP 30/6000-B, αiIP 40/6000-B, αiIP 50/6000-B, αiIP 60/5000-B
αiIP-B series 400V type	αiIP 15/8000HV-B, αiIP 22/8000HV-B, αiIP 40/6000HV-B, αiIP 50/6000HV-B, αiIP 60/5000HV-B
αiIT-B series 200V type	αiIT 1/24000-B, αiIT 1.5/20000-B, αiIT 2/20000-B, αiIT 3/12000-B, αiIT 3/15000-B, αiIT 6/12000-B, αiIT 6/15000-B, αiIT 8/12000-B, αiIT 8/15000-B, αiIT 12/12000-B, αiIT 15/12000-B, αiIT 15/15000-B, αiIT 22/12000-B, αiIPT 22/8000-B
αiIT-B series 400V type	αiIT 1.5/20000HV-B, αiIT 2/20000HV-B, αiIT 3/12000HV-B, αiIT 6/12000HV-B, αiIT 8/12000HV-B, αiIT 8/15000HV-B, αiIT 12/12000HV-B, αiIT 15/12000HV-B, αiIT 15/15000HV-B, αiIT 22/12000HV-B
αiS-B 200V type	αiS 1/12000-B
αiST-B 200V type	αiST 1/12000-B
αiIL-B series 200V type	αiIL 8/20000-B, αiIL 15/15000-B, αiIL 26/15000-B
αiIL-B series 400V type	αiIL 8/20000HV-B, αiIL 15/15000HV-B, αiIL 26/15000HV-B
αiI-B (IP65) series	αiI 0.5/10000-B (IP65), αiI 1/8000-B (IP65), αiI 1.5/8000-B (IP65), αiI 2/8000-B (IP65), αiI 3/8000-B (IP65), αiI 6/8000-B (IP65)
βiI-B series 200V type	βiI 3/12000-B, βiI 6/12000-B, βiI 8/12000-B, βiI 12/10000-B, βiI 15/8000-B
βiI-B series 400V type	βiI 3/12000HV-B, βiI 6/12000HV-B, βiI 8/12000HV-B, βiI 12/10000HV-B, βiI 15/8000HV-B
βiIP-B series 200V type	βiIP 8/6000-B, βiIP 12/6000-B, βiIP 15/8000-B, βiIP 18/8000-B, βiIP 22/8000-B, βiIP 30/8000-B, βiIP 40/6000-B
βiIT-B series 200V type	βiIT 12/10000-B, βiIT 15/8000-B
βiIC-B series 200V type	βiIC 3/6000-B, βiIC 6/6000-B, βiIC 8/6000-B

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I. SPECIFICATIONS

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1 LINEUP OF THE SERIES

1.1 MOTOR LINEUP

The FANUC AC Spindle Motor αi-B / βi-B series consists of the series listed below with their features.

Lineup for Spindle Motor αi-B series

- 200V type

Continuous rated output kW	αiI-B series		αiIP-B series	αiIT-B series	αiS-B, αiST-B	αiIL-B series
0.55	αiI 0.5/10000-B	αiI 0.5/15000-B				
1.1	αiI 1/10000-B	αiI 1/15000-B				
1.5	αiI 1.5/10000-B	αiI 1.5/20000-B				
2.2	αiI 2/10000-B	αiI 1/24000-B αiI 1.5/20000-B		αiIT 1/24000-B αiIT 1.5/20000-B		
3.7	αiI 3/10000-B	αiI 2/12000-B αiI 2/20000-B αiI 3/12000-B		αiIT 2/20000-B αiIT 3/12000-B		
5.5	αiI 6/10000-B	αiI 3/15000-B αiI 6/12000-B	αiIP 12/8000-B	αiIT 3/15000-B αiIT 6/12000-B		
7.5	αiI 8/8000-B	αiI 6/15000-B αiI 8/10000-B αiI 8/12000-B	αiIP 15/8000-B	αiIT 6/15000-B αiIT 8/12000-B αiIT 8/15000-B	αiS 1/12000-B αiST 1/12000-B	
9			αiIP 18/ 8000-B			
11	αiI 12/8000-B	αiI 12/12000-B	αiIP 22/ 8000-B	αiIT 12/12000-B αiIPT 22/ 8000-B		
15	αiI 15/8000-B	αiI 15/12000-B	αiIP 30/6000-B	αiIT 15/12000-B αiIT 15/15000-B		αiIL 8/20000-B
18.5	αiI 18/8000-B	αiI 18/12000-B	αiIP 40/6000-B			αiIL 15/15000-B
22	αiI 22/8000-B	αiI 22/12000-B	αiIP 50/6000-B	αiIT 22/12000-B		
26						αiIL 26/15000-B
30	αiI 30/7000-B		αiIP 60/5000-B			
37	αiI 40/7000-B					
45	αiI 50/5000-B					

Model supporting winding switching

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- 400V type

Continuous rated output kW	αiI-B series		αiS-B	αiIP-B series	αiIT-B series	αiIL-B series
0.55	αiI 0.5/10000HV-B					
1.1	αiI 1/10000HV-B					
1.5	αiI 1.5/10000HV-B				αiIT 1.5/20000HV-B	
2.2	αiI 2/10000HV-B	αiI 2/20000HV-B			αiIT 2/20000HV-B	
3.7	αiI 3/10000HV-B				αiIT 3/12000HV-B	
5.5	αiI 6/10000HV-B				αiIT 6/12000HV-B	
7.5	αiI 8/8000HV-B	αiI 8/10000HV-B αiI 8/12000HV-B		αiIP 15/6000HV-B αiIP 15/8000HV-B	αiIT 8/12000HV-B αiIT 8/15000HV-B	
9						
11	αiI 12/8000HV-B	αiI 12/12000HV-B		αiIP 22/6000HV-B αiIP 22/8000HV-B	αiIT 12/12000HV-B	
15	αiI 15/8000HV-B	αiI 15/12000HV-B			αiIT 15/12000HV-B αiIT 15/15000HV-B	αiIL 8/20000HV-B
18.5				αiIP 40/6000HV-B		αiIL 15/15000HV-B
22	αiI 22/8000HV-B	αiI 22/12000HV-B		αiIP 50/6000HV-B	αiIT 22/12000HV-B	
26						αiIL 26/15000HV-B
30	αiI 30/7000HV-B			αiIP 60/5000HV-B		
37	αiI 40/7000HV-B					
45	αiI 50/5000HV-B					
60	αiI 60/5000HV-B					
75	αiI 75/5000HV-B					
100	αiI 100/5000HV-B					
150	αiI 150/5000HV-B					
200			αiS 2000/2000HV-B			

Model supporting winding switching

- IP65 type

Continuous rated output kW	αiI-B (IP65) series
0.55	αiI 0.5/10000-B (IP65)
0.9	αiI 1/8000-B (IP65), αiI 1.5/8000-B (IP65)
1.5	αiI 2/8000-B (IP65)
2.2	αiI 3/8000-B (IP65)
3.0	αiI 6/8000-B (IP65)

Lineup for Spindle Motor βi-B series

Continuous rated output kW	βiI-B series 200V type	βiI-B series 400V type	βiIP-B series 200V type	βiIT-B series 200V type	βiIC-B series 200V type
3.7	βiI 3/12000-B	βiI 3/12000HV-B	βiIP 8/6000-B		βiIC 3/6000-B
5.5	βiI 6/12000-B	βiI 6/12000HV-B	βiIP 12/6000-B		βiIC 6/6000-B
7.5	βiI 8/12000-B	βiI 8/12000HV-B	βiIP 15/8000-B		βiIC 8/6000-B
9			βiIP 18/8000-B		
11	βiI 12/10000-B	βiI 12/10000HV-B	βiIP 22/8000-B	βiIT 12/10000-B	
15	βiI 15/8000-B	βiI 15/8000HV-B	βiIP 30/8000-B βiIP 40/6000-B	βiIT 15/8000-B	

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1.2 FEATURES

FANUC AC spindle motor αi-B/βi-B series

The FANUC AC spindle motor αi-B/βi-B series have the following features:

- The S6 rated output equivalent to the S3 rated output is added.
- A tapped hole which enables balance calibration at the rear side of the motor is added to the sensor gear.

Differences between the αi-B series and βi-B series

The FANUC AC spindle motor αi-B series are standard models for CNC machine tool spindles and have an extensive lineup to support various types of machining.
The FANUC AC spindle motor βi-B series are highly cost-performance models having sufficient basic performance for CNC machine tool spindles.

(1) αiI-B, βiI-B series

The FANUC AC spindle motor αiI-B and βiI-B series are spindle motors available for both of the lathes and machining centers of CNC machine tools excepting some models. The αiI-B series are standard spindle motors and the βiI-B series are highly cost-performance spindle motors.

Features

- The motor is compact, light-weight, and furnished with digital control for much higher performance.
- Spindle HRV control enables high-efficiency and low-heating driving.
- The built-in αiM sensor or αiMZ sensor enables synchronous spindle and Z-axis feed, rigid tapping, and Cs axis contour control.
- Improvement in machining of the motor housing enhances the accuracy of the mounting part.
- Waterproof and pressure-proof design conforming to the international standard (IEC) is employed to improve reliability and make it resistant to most environments.

(2) αiIP-B, βiIP-B series

The FANUC AC spindle motor αiIP-B and βiIP-B series are spindle motors that achieve high torque in the low-speed zone.
The αiIP-B series are standard spindle motors and the βiIP-B series are highly cost-performance spindle motors.

(3) αiS 2000/2000-B

The FANUC AC spindle motor αiS 2000/2000-B is suited to large size machine tool spindles.

Features

- The spindle motor line-up is reinforced by adding a large output 200 kW model.
- High torque 2000 Nm is achieved as continuous rated torque at low speed.
- High torque with a compact size is achieved by neodymium magnets.
- Further output power is enabled by the multi motors drive technology.

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(4) αiIT-B, βiIT-B series

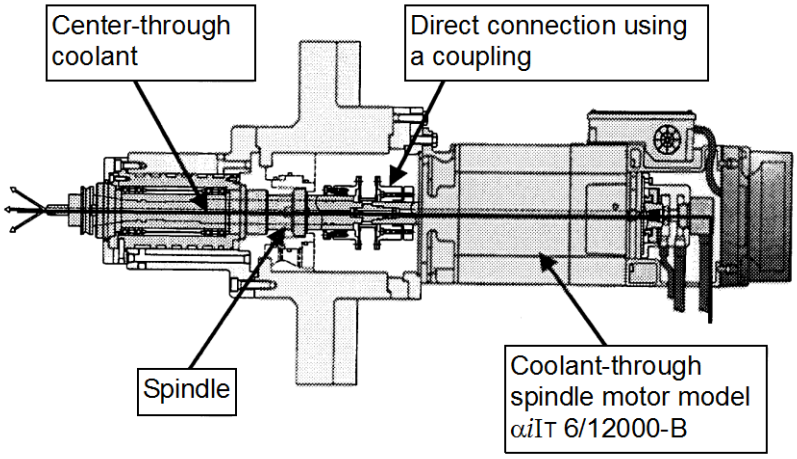
The FANUC AC spindle motor αiIT-B and βiIT-B series are spindle motors whose motor shaft has a through hole at the center. The αiIT-B series are standard spindle motors and the βiIT-B series are highly cost-performance spindle motors.

Features

- By directly connecting the spindle with a spindle motor (hollow shaft), higher-speed spindle rotation and highly efficient center-through coolant machining are enabled.
- The motor is achieved IP54 except the shaft-through portion.
- A spindle of direct motor connection type is connected with a motor by using a coupling, so that this type of spindle has several advantages. For example, transfer of heat produced by the motor to the spindle is minimized, and each of the motor and spindle can be maintained separately.

Item of comparison	Belt driving, gear driving	Direct motor connection
Spindle rotation speed	-	Higher
Spindle vibration	-	Lower
Spindle heat-up	-	Lower

Example of spindle of direct motor connection structure



Features of a spindle of direct motor connection type

<1> Higher-speed spindle rotation can be achieved.
<2> Transfer of heat produced by the motor to the spindle is minimized.
<3> Each of the motor and spindle can be maintained separately.

Caution

(1) For attachment of this type of motor to a spindle, only coupling-based direct connection with the spindle is allowed. When a spindle of direct motor connection type is used, fretting can occur with the motor shaft in a short-time operation, or the bearing of the spindle or motor can be damaged if the spindle and motor are not aligned precisely. As the method of quantitatively determining whether a spindle and motor are aligned precisely, FANUC recommends the user to measure the vibration acceleration of the motor after connected with the spindle. For details, see Subsection 3.3.1, "Points about the Direct Connection Structure of Spindle Motors with a Through Hole" in Part III.

(2) Do not apply a thrust load onto the motor shaft. Select a coupling that does not apply a thrust load onto the motor shaft due to a cause such as coolant pressure when the temperature rises or cutting is performed.

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(5) αiS 1/12000-B, αiST 1/12000-B

The FANUC AC spindle motors αiS 1/12000-B and αiST 1/12000-B are compact spindle motors that achieve a high torque by using neodymium magnets. The αiST-B series is a spindle motor whose motor shaft has a through hole at the center.

Features

- Small-scale models achieve quick acceleration and deceleration with high S1 rated output and low inertia regardless of compactness.

(6) αiIL-B series

The FANUC AC spindle motor αiIL-B series is liquid-cooled motors. They feature low temperature rise, high-speed, high torque at low speed, and low vibration.
Coupling an αiIL series 200V type motor directly to the spindle of a machining center makes it possible to realize gear-less, high-precision operation.
The motor shaft has a through hole, through which center-through coolant can be passed.

Features

- Thermal conduction to the spindle head and heat radiation to the machine column are reduced by cooling the front flange and motor case.
- A high torque at low rotation speed is realized by achieving high-efficient cooling based on liquid coolant and employing an output switching function (Y-Y switching).
- High-speed rotation is supported with grease-based lubrication.
- A vibration class of V3 (rotation component) is attained by strict rotor balance adjustments.
- The motor shaft is provided with a through hole for center-through coolant.
- The motor is achieved IP54 except the shaft-through portion.
- The αiMZ sensor signal incorporated in the motor can be used in performing orientation and rigid tapping, so there is no need to mount a detector on the machine tool.

(7) αiI-B (IP65) series

The FANUC AC spindle motor αiI-B (IP65) series is a spindle motor that supports the waterproof and dustproof standards IP65.

Features

- Both 200 V and 400 V are supported. (There are some exceptions.)
- Both the power line and sensor terminal employ connectors to support the waterproof and dustproof standards IP65.

(8) βiIc-B series

The FANUC AC spindle motor βiIc-B series improve spindle axis sensor-less control utilizing spindle speed information detected by αiBZ Sensor or αi Positioncoder.

Features

- Improvement of output characteristics at high speed and speed stability at low speed by spindle sensor-less control

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2 ORDERING SPECIFICATION NUMBER

For the FANUC AC spindle motor αi-B / βi-B series, the following two types of nameplates are provided: Nameplate attached on the main motor unit and output specification nameplate. The nameplate on the main motor unit indicates basic information, continuous ratings, and CE mark. The output specification nameplate indicates all short-time ratings including continuous ratings that are available with the motor. When you order the FANUC AC spindle motor αi-B / βi-B series, you must order a output specification nameplate according to your desired output characteristics together. The machine tool builder is to attach the output specification nameplate on the power magnetics cabinet of the machine tool in which the relevant motor is installed. However, note that you must attach the output specification nameplate only to the machine tool that must display the short-time rated output (S2, S3, S6). You do not have to attach the output specification nameplate to the machine tool that only displays the continuous rated output (S1).
This chapter describes the ordering specification number of the main motor unit and the order specification number of an output specification nameplate.

2.1 ORDERING SPECIFICATION NUMBER OF THE MAIN MOTOR UNIT
2.2 ORDER SPECIFICATION NUMBER OF A OUTPUT SPECIFICATION NAMEPLATE
2.3 SELECTABLE SPECIFICATION NUMBERS

2.1 ORDERING SPECIFICATION NUMBER OF THE MAIN MOTOR UINT

The ordering specification number of the FANUC AC spindle motor αi-B / βi-B series adheres to the notation below.
(Please connect to FANUC, for the other ordering specification not mentioned below.)

A06B-2□□□-B△○▽(#abcd)
* Some models require #abcd.

□□□ An ordering specification number is described on the tables in Section 2.3.
* Every combination doesn't exist.

△ 1 : Flange mounting type
2 : Foot mounting type
8 : Foot flange mounting type

○ 0 : Standard, without keyway
1 : High-speed, without keyway
2 : High-precision and low-vibration, without keyway
3 : High-speed, high-precision, and low-vibration, without keyway
4 : Ultrahigh-speed, high-precision, and low-vibration, without keyway
5 : Standard, with keyway
* Not all models have this number.

▽ 0 : αiM sensor, Rear exhaust fan
1 : αiM sensor, Front exhaust fan
2 : αiM sensor, without cooling fan
3 : αiMZ sensor, Rear exhaust fan
4 : αiMZ sensor, Front exhaust fan

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5 : αiMZ sensor, without cooling fan
* Not all models have this number.

The following ordering specification number adheres to the notation below for the αiS 2000/2000HV-B .

A06B-2091-B△○▽#0058

△○▽ 110 : Without keyway, pulsecoder αiA1000, front exhaust fan
210 : With keyway, pulsecoder αiA1000, front exhaust fan

2.2 ORDER SPECIFICATION NUMBER OF A OUTPUT SPECIFICATION NAMEPLATE

The order specification number of a output specification nameplate of the FANUC AC spindle motor αi-B / βi-B series adheres to the notation below.
(If you want to use a specification not listed below, contact FANUC.)

A06B-1230-K□□□#S0◇

□□□ An order specification number is described on the tables in Section 2.3.
* Every combination does not exist in Section 2.3.

◇ 0 : Standard specification
P : S3/S6 25% rated addition specification
S : S3/S6 15% rated addition specification
* In case of βi-B series, “P” shows S3/S6 15% rated addition specification.
* Not all models have this number.

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2.3 SELECTABLE SPECIFICATION NUMBERS

The following lists the combinations of selectable numbers in symbols in specification Nos.

(1)αiI-B series

200V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△		○				▽						◇		
		1	2	0	2	3	5	0	1	2	3	4	5	0	P	S
αiI 0.5/10000-B	401	○	-	○	○	-	○	-	-	○	-	-	○	○	○	-
αiI 0.5/15000-B	400	○	-	○	-	-	-	-	-	○	-	-	○	-	○	-
αiI 1/10000-B	402	○	○	○	-	-	○	○	○	-	○	○	-	○	○	○
αiI 1/15000-B	422	○	-	-	○	-	-	-	-	-	○	○	-	○	-	-
αiI 1/24000-B	420	○	-	-	○	-	-	-	-	-	○	-	-	-	-	○
αiI 1.5/10000-B	403	○	○	○	○	-	○	○	○	-	○	○	-	-	○	○
αiI 1.5/20000-B(*2)	423	○	-	-	○	-	-	-	-	-	○	-	-	○	-	-
αiI 1.5/20000-B	423	○	-	-	○	-	-	-	-	-	○	-	-	-	-	○
αiI 2/10000-B	404	○	○	○	○	-	○	○	○	-	○	○	-	○	○	○
αiI 2/12000-B	418	○	-	-	○	-	-	-	-	-	○	-	-	-	-	○
αiI 2/20000-B	424	○	-	-	○	-	-	-	-	-	○	-	-	-	-	○
αiI 3/10000-B	405	○	○	○	○	-	○	○	○	-	○	○	-	○	○	○
αiI 3/12000-B	425	○	-	-	○	-	-	-	-	-	○	-	-	○	-	○
αiI 3/15000-B	419	○	-	-	○	-	-	-	-	-	○	-	-	-	-	○
αiI 6/10000-B	406	○	○	○	○	-	○	○	○	-	○	○	-	○	○	○
αiI 6/12000-B	426	○	-	○	○	-	-	○	○	-	○	○	-	○	○	-
αiI 6/15000-B(*2)	433	○	-	-	○	-	-	-	-	-	○	-	-	○	-	-
αiI 6/15000-B	433	○	-	-	○	-	-	-	-	-	○	-	-	-	-	○
αiI 8/8000-B	407	○	○	○	○	-	○	○	○	-	○	○	-	○	○	○
αiI 8/10000-B	427	○	-	○	○	-	-	○	○	-	○	○	-	○	○	-
αiI 8/12000-B(*2)	427	○	-	-	-	○	-	○	-	-	○	-	-	1	R	-
αiI 12/8000-B	408	○	○	○	○	-	○	○	○	-	○	○	-	○	○	○
αiI 12/12000-B	428	○	-	-	○	-	-	○	-	-	○	-	-	○	○	○
αiI 15/8000-B	409	○	○	○	○	-	○	○	○	-	○	○	-	○	○	○
αiI 15/12000-B	429	○	-	-	○	-	-	○	-	-	○	-	-	○	○	○
αiI 18/8000-B	410	○	○	○	○	-	○	○	○	-	○	○	-	○	○	○
αiI 18/12000-B	430	○	-	-	○	-	-	○	-	-	○	-	-	○	○	-
αiI 22/8000-B	411	○	○	○	○	-	○	○	○	-	○	○	-	○	○	○
αiI 22/12000-B	431	○	-	-	○	-	-	○	-	-	○	-	-	○	○	○
αiI 30/7000-B	412	○	○	○	○	-	○	○	○	-	○	○	-	○	○	-
αiI 40/7000-B	413	○	○	○	○	-	○	○	○	-	○	○	-	○	○	-
αiI 50/5000-B	414	○	○	○	○	-	○	○	○	-	○	○	-	○	○	-

(*2) For this specification, #0101 is added.

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400V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△				○				▽						◇		
		1	2	8	9	0	2	3	5	0	1	2	3	4	5	0	P	S
αiI 0.5/10000HV-B	501	○	-	-	-	○	-	-	○	-	-	○	-	-	○	○	-	-
αiI 1/10000HV-B	502	○	○	-	-	○	-	-	○	○	○	-	○	○	-	○	-	-
αiI 1.5/10000HV-B	503	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	-	-
αiI 2/10000HV-B	504	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	-	-
αiI 2/20000HV-B(*2)	524	○	-	-	-	-	○	-	-	-	-	-	○	-	-	○	-	-
αiI 3/10000HV-B	505	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	-	-
αiI 6/10000HV-B	506	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	○	-
αiI 8/8000HV-B	507	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	○	-
αiI 8/10000HV-B	527	○	-	-	-	-	-	○	-	○	-	-	○	-	-	○	-	-
αiI 8/12000HV-B(*2)	527	○	-	-	-	-	-	○	-	○	-	-	○	-	-	○	-	-
αiI 12/8000HV-B	508	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	○	-
αiI 12/12000HV-B	528	○	-	-	-	-	○	-	-	○	-	-	○	-	-	-	○	-
αiI 15/8000HV-B	509	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	○	○
αiI 15/12000HV-B	529	○	-	-	-	○	-	-	-	○	-	-	○	-	-	○	-	-
αiI 22/8000HV-B	511	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	○	
αiI 22/12000HV-B	531	○	-	-	-	○	-	-	-	○	-	-	○	-	-	○	○	
αiI 30/7000HV-B	512	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	○	-
αiI 40/7000HV-B	513	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	○	-
αiI 50/5000HV-B	514	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	-	-
αiI 60/5000HV-B	515	○	○	-	-	○	○	-	○	○	○	-	○	○	-	○	-	-
αiI 75/5000HV-B	516	-	-	○	-	○	-	-	○	-	-	-	○	○	-	○	-	-
αiI 100/5000HV-B	518	-	-	-	○	○	-	-	-	○	○	○	○	-	-	○	-	-
αiI 150/5000HV-B	532	-	-	○	-	○	-	-	○	-	-	-	○	-	-	○	-	-

(*2) For this specification, #0101 is added.

(2)αiS 2000/2000HV-B

400V type: A06B-2□□□-B△○▽#abcd

Symbol in specification No. / Model name	□□□	△		○	▽	abcd	Shaft end seal
		1	2	1	0		
αiS 2000/2000HV-B	091	○	○	○	○	0058	Oil seal

(*3)The specification number for the αiS 2000/2000HV is exceptional. See page 8.

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(3) αiIP-B series

200V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△				○			▽				◇	
		1	2	5	6	0	2	5	0	1	3	4	0	P
αiIP 12/8000-B	448	○	○	-	-	○	○	○	○	○	○	○	○	○
αiIP 15/8000-B	449	○	○	-	-	○	○	○	○	○	○	○	○	○
αiIP 18/8000-B	456	○	○	-	-	○	○	○	○	○	○	○	○	○
αiIP 22/8000-B	451	○	○	-	-	○	○	○	○	○	○	○	○	○
αiIP 30/6000-B	452	○	○	-	-	○	○	○	○	○	○	○	○	○
αiIP 40/6000-B	453	○	○	-	-	○	-	○	○	○	○	○	○	○
αiIP 50/6000-B	454	○	○	-	-	○	-	○	○	○	○	○	○	○
αiIP 60/5000-B	455	○	○	-	-	○	-	○	○	○	○	○	○	-

400V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△		○			▽				◇
		1	2	0	2	5	0	1	3	4	0
αiIP 15/8000HV-B	549	○	○	○	○	○	○	○	○	○	○
αiIP 22/8000HV-B	551	○	○	○	○	○	○	○	○	○	○
αiIP 40/6000HV-B	553	○	○	○	○	○	○	○	○	○	○
αiIP 50/6000HV-B	554	○	○	○	○	○	○	○	○	○	○
αiIP 60/5000HV-B	555	○	○	○	○	○	○	○	○	○	○

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(4) αiIT-B series

200V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△	○		▽	◇			Distance block (*4)	
		1	2	3	3	0	P	S	Distance block	Distance block with windows
αiIT 1/24000-B	460	○	○	-	○	-	-	○	A06B-1463-K560	-
αiIT 1.5/20000-B	463	○	○	-	○	-	-	○		
αiIT 2/20000-B	464	○	○	-	○	-	-	○	A06B-1464-K560	A06B-1464-K580
αiIT 3/12000-B	465	○	○	-	○	○	-	○		
αiIT 3/15000-B	475	○	-	○	○	-	-	U		
αiIT 6/12000-B	466	○	○	-	○	○	○	-	A06B-1466-K560	A06B-1466-K580
αiIT 6/15000-B	476	○	○	-	○	-	-	○		
αiIT 8/12000-B	467	○	○	-	○	○	○	○		
αiIT 8/15000-B(*5)	477	○	-	○	○	-	-	○		
αiIT 12/12000-B	468	○	○	-	○	-	○	○	A06B-1469-K560	A06B-1469-K580
αiIT 15/12000-B	469	○	○	-	○	○	○	○		
αiIT 15/15000-B	479	○	○	-	○	○	○	○		
αiIT 22/12000-B	471	○	○	-	○	○	○	○		
αiIPT 22/8000-B	472	○	○	-	○	○	-	-		

(*4) Order the distance block separately the main motor unit(Separately packed).
(*5) For this specification, #0501 is added.

400V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△	○		▽	◇			Distance block (*4)	
		1	2	3	3	0	P	S	Distance block	Distance block with windows
αiIT 1.5/20000HV-B(*2)	563	○	○	-	○	○	-	-	A06B-1463-K560	-
αiIT 2/20000HV-B(*2)	564	○	○	-	○	○	-	-	A06B-1464-K560	A06B-1464-K580
αiIT 3/12000HV-B	565	○	○	-	○	○	-	-		
αiIT 6/12000HV-B	566	○	○	-	○	○	-	-	A06B-1466-K560	A06B-1466-K580
αiIT 8/12000HV-B	567	○	○	-	○	○	-	-		
αiIT 8/15000HV-B	577	○	-	○	○	○	-	-		
αiIT 12/12000HV-B	568	○	○	-	○	-	○	-	A06B-1469-K560	A06B-1469-K580
αiIT 15/12000HV-B	569	○	○	-	○	○	-	-		
αiIT 15/15000HV-B	579	○	○	-	○	○	○	○		
αiIT 22/12000HV-B	571	○	○	-	○	○	○	-		

(*2) For this specification, #0101 is added.
(*4) Order the distance block separately the main motor unit(Separately packed).

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(5)αiS 1/12000-B

200V type: A06B-2□□□-B△○▽#abcd

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△	○	▽	◇
		1	2	3	0
αiS 1/12000-B	462	○	○	○	○

(6)αiST 1/12000-B

200V type: A06B-2□□□-B△○▽#abcd

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△	○	▽	◇
		1	2	3	0
αiST 1/12000-B	478	○	○	○	○

(7) αiIL-B series

200V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△	○		▽	◇	
		1	3	4	5	1	N
αiIL 8/20000-B	497	○	-	○	○	-	○
αiIL 15/15000-B	495	○	○	-	○	○	-
αiIL 26/15000-B	494	○	○	-	○	○	-

400V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△	○		▽	◇	
		1	3	4	5	1	N
αiIL 8/20000HV-B	597	○	-	○	○	-	○
αiIL 15/15000HV-B	595	○	○	-	○	○	-
αiIL 26/15000HV-B	594	○	○	-	○	○	-

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(8) αiI-B(IP65) series

200V・400V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△		○		▽	◇	
		1	9	0	5	5	0	1
αiI 0.5/10000-B(IP65)	481	○	-	○	-	○	○	-
αiI 1/8000-B(IP65)	482	○	-	○	-	○	○	-
αiI 1.5/8000-B(IP65)	483	○	-	○	-	○	○	-
αiI 3/8000-B(IP65)	485	○	-	○	○	○	○	-
αiI 6/8000-B(IP65)	486	○	-	○	-	○	○	-

200V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△		○		▽	◇	
		1	9	0	5	5	0	1
αiI 2/8000-B(IP65)	484	-	○	○	○	○	-	○

400V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△		○		▽	◇	
		1	9	0	5	5	0	1
αiI 2/8000-B(IP65)	484	○	-	○	○	○	○	-

(9) βiI-B series

200V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△		○		▽				◇	
		1	2	0	5	0	1	3	4	0	P
βiI 3/12000-B	444	○	○	○	○	○	○	○	○	○	○
βiI 6/12000-B	445	○	○	○	○	○	○	○	○	○	○
βiI 8/12000-B	446	○	○	○	○	○	○	○	○	○	○
βiI 12/10000-B	447	○	○	○	○	○	○	○	○	○	○
βiI 15/8000-B	498	○	○	○	○	○	○	○	○	○	○

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400V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△		○		▽				◇	
		1	2	0	5	0	1	3	4	0	P
βiI 3/12000HV-B	544	○	○	○	○	○	○	○	○	○	○
βiI 6/12000HV-B	545	○	○	○	○	○	○	○	○	○	○
βiI 8/12000HV-B	546	○	○	○	○	○	○	○	○	○	○
βiI 12/10000HV-B	547	○	○	○	○	○	○	○	○	○	○
βiI 15/8000HV-B	598	○	○	○	○	○	○	○	○	○	○

(10) βiIP-B series

200V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△		○		▽				◇
		1	2	0	5	0	1	3	4	0
βiIP 8/6000-B	457	○	○	○	○	○	○	○	○	○
βiIP 12/6000-B	458	○	○	○	○	○	○	○	○	○
βiIP 15/8000-B	442	○	○	○	○	○	○	○	○	○
βiIP 18/8000-B	443	○	○	○	○	○	○	○	○	○
βiIP 22/8000-B	459	○	○	○	○	○	○	○	○	○
βiIP 30/8000-B	499	○	○	○	○	○	○	○	○	○
βiIP 40/6000-B	480	○	○	○	○	○	○	○	○	○

(11) βiIT-B series

200V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△	○	▽	◇		Distance block (*4)	
		1	2	3	0	P	Distance block	Distance block with windows
βiIT 12/10000-B	490	○	○	○	○	○	A06B-1466-K560	A06B-1466-K580
βiIT 15/8000-B	491	○	○	○	○	○	A06B-1469-K560	A06B-1469-K580

(*4) Order the distance block separately the main motor unit(Separately packed).

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(12) βiIc-B series

200V type: A06B-2□□□-B△○▽

Spec. number for output specification nameplate: A06B-1230-K□□□#S0◇

Symbol in specification No. / Model name	□□□	△		○		▽		◇
		1	2	0	5	6	7	0
βiIc 3/6000-B	415	○	○	○	○	○	○	○
βiIc 6/6000-B	416	○	○	○	○	○	○	○
βiIc 8/6000-B	417	○	○	○	○	○	○	○

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3 MOTOR SPECIFICATIONS

This chapter describes the specifications related to FANUC AC spindle motor αi-B / βi-B series motors.

This chapter, "MOTOR SPECIFICATIONS", consists of the following sections.

3.1 TERMS
3.2 CURVES AND DATA SHEET
3.3 EXTERNAL DIMENSIONS
3.4 COOLING FAN

3.1 TERMS

The following table lists key terms used in this manual.

This version (Edition 01)		Unit (SI)	Description
Term	Symbol		
S1 continuous rated output	Pc	kW	Output capable of operating the motor continuously
S2 ○-minute rated output(*1)	—	kW	Output capable of operating the motor for ○ minutes at room temperature
S3 ○% rated output(*2)		kW	Output capable of operating the motor continuously for ○% of a cycle (10 minutes) in intermittent use
S6 ○% rated output(*2)		kW	Output capable of operating the motor continuously for ○% of a cycle (10 minutes) in continuous use
Steady-state maximum output(*3)	P_{max}	kW	Maximum output in the steady state
Maximum output at acceleration for PS selection	—	kW	Maximum output at acceleration. Data used to select a power supply (αiPS), and not a guaranteed value.
S1 continuous rated current	I_C	A(rms)	Maximum value of the current necessary for outputting the S1 rated output Pc
S2 ○-minute rated current(*1)	—	A(rms)	Maximum value of the current necessary for outputting the S2 ○-minute rated output
Moment of inertia	—	kg▪m^2	Amount representing the magnitude of the inertia of a rotating object. It represents the magnitude of the property to resist a change in rotation when that change is made. It is expressed by the product of the weight of a portion of the object and the square of the distance from the rotation axis to that portion.
Rotor moment of inertia or Moment of inertia of rotor	Jm	kg▪m^2	Moment of inertia of the rotor of the motor
Load moment of inertia	—	kg▪m^2	Moment of inertia coupled to the rotor

(*1) ○ is replaced by a time such as 15 or 30.
(*2) ○% is replaced by a percentage such as 15% or 25%.
(*3) Guideline for the maximum output in rated power voltage, not a guaranteed value.

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3.2 CURVES AND DATA SHEET

This section describes the specifications and specification of the FANUC AC spindle motor α*i*-B / β*i*-B series with characteristic curves and a data sheet for each motor.

This section, "CURVES AND DATA SHEET", consists of the following subsections.

3.2.1 About Characteristic Curves and Data Sheet
3.2.2 α*i*I-B series 200V-type
3.2.3 α*i*I-B series 400V-type
3.2.4 α*i*S-B 400V-type
3.2.5 α*i*I$_P$-B series 200V-type
3.2.6 α*i*I$_P$-B series 400V-type
3.2.7 α*i*I$_T$-B series 200V-type
3.2.8 α*i*I$_T$-B series 400V-type
3.2.9 α*i*S-B 200V-type
3.2.10 α*i*S$_T$-B 200V-type
3.2.11 α*i*I$_L$-B series 200V-type
3.2.12 α*i*I$_L$-B series 400V-type
3.2.13 α*i*I-B (IP65) series
3.2.14 β*i*I-B series 200V-type
3.2.15 β*i*I-B series 400V-type
3.2.16 β*i*I$_P$-B series
3.2.17 β*i*I$_T$-B series
3.2.18 β*i*I$_C$-B series

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3.2.1 About Characteristic Curves and Data Sheet

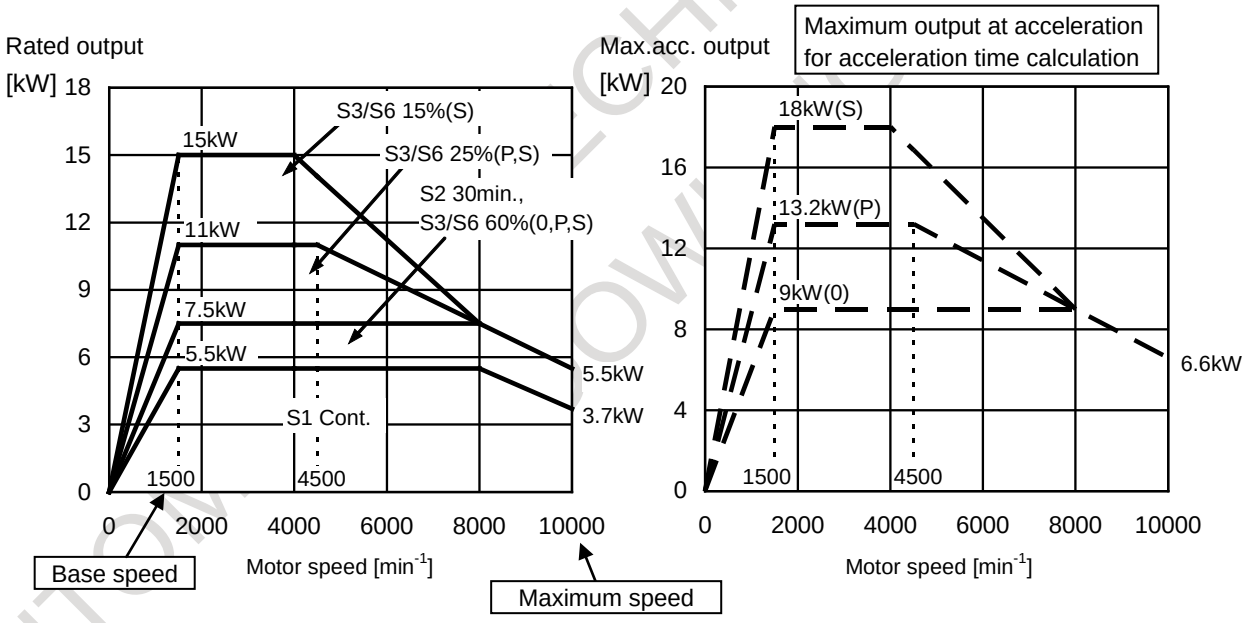
The specifications of each motor are described by the characteristic curves and data sheet given below.

(1) Characteristic curves

As characteristic curves, "speed-output specification" and "speed-torque specification" are provided for each motor.
When multiple specification nameplates are applicable for the same main motor unit, the last character of the specification number is added to the corresponding rated output in the specification chart.

Speed-output specification

Speed-output specification shows the relations between motor output and speed.
In the S1 continuous operating zone, the motor can be used continuously with any combination of speed and output.
The S2 ○-minute operating zone is a zone in which the motor can be used at room temperature for the indicated time.
The S3 ○% operating zone is a zone in which the motor can output the indicated percentage in a single cycle (10 minutes) in intermittent use.
The S6 ○% operating zone is a zone in which the motor can output the indicated percentage in a single cycle (10 minutes) in the continuous rotation status.
A data sheet shows values when the input voltage is 200 V or 400V.

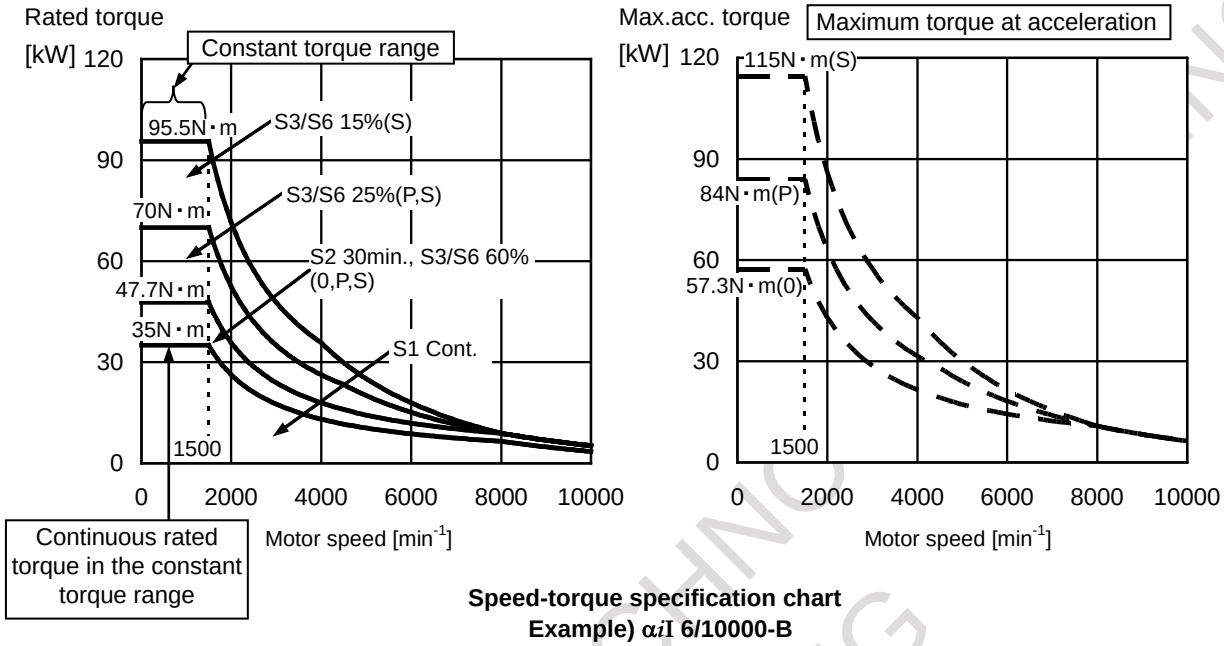


Speed-output specification chart
Example) αiI 6/10000-B

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Speed-torque specification

Speed-torque specification shows the relations between motor torque and speed.
The definitions of S1, S2, S3, and S6 are the same as those for speed-output specification.
A data sheet shows values when the input voltage is 200 V or 400V.



Speed-torque specification chart
Example) αiI 6/10000-B

Reference: Torque calculation

The torque T for any motor speed can be determined from the formula below.

$T[N \cdot m]=P[kW] \times 1000/0.1047/N[min^{-1}]$
P[kW] : Motor output
$N[min^{-1}]$: Motor speed

Assuming that T is in units of [kgf·m]
$T[kgf \cdot m]=P[kW] \times 1000/1.0269/N[min^{-1}]$

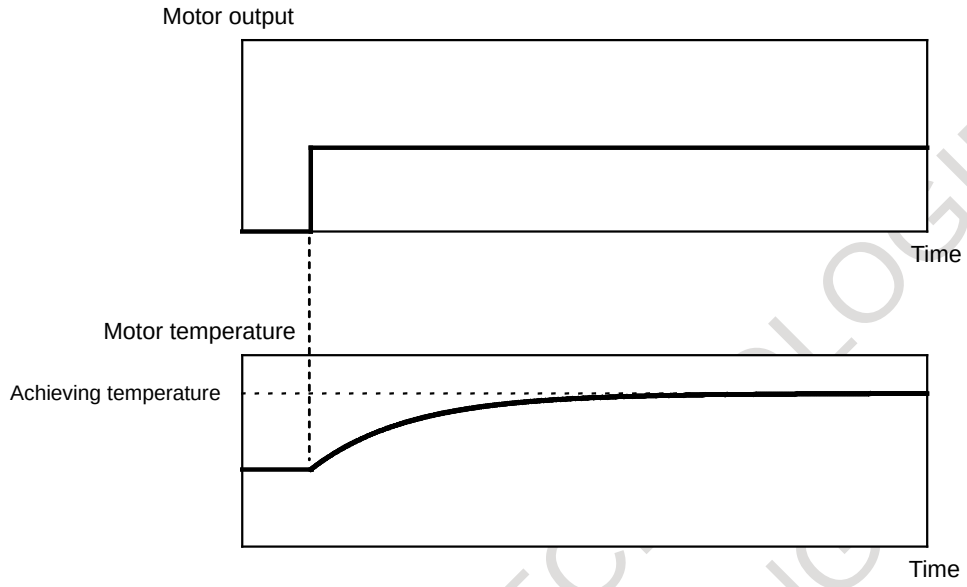
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(2) Data sheet

A data sheet lists parameters related to motor performance.
Parameters contained in a data sheet are as below.

S1 continuous rated output: P_C [kW]

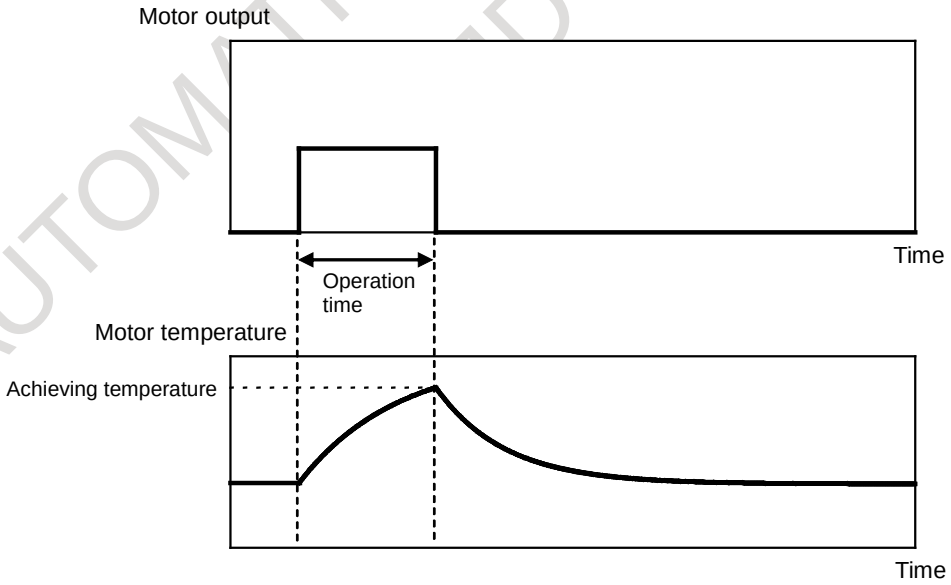
The S1 continuous rated output is the rating at which the motor can be used continuously with the indicated output.



The rated output is guaranteed at the rated power voltage (amplifier input: 200 or 400 VAC, 50/60Hz). If the input power voltage fluctuates, the rated output may not be achieved even within the permissible range.

S2 ○-minute rated output: [kW]

Output that can be used for the indicated time (○ minutes) with the motor being at room temperature.
If the output is to be used again, the motor must return to room temperature beforehand.



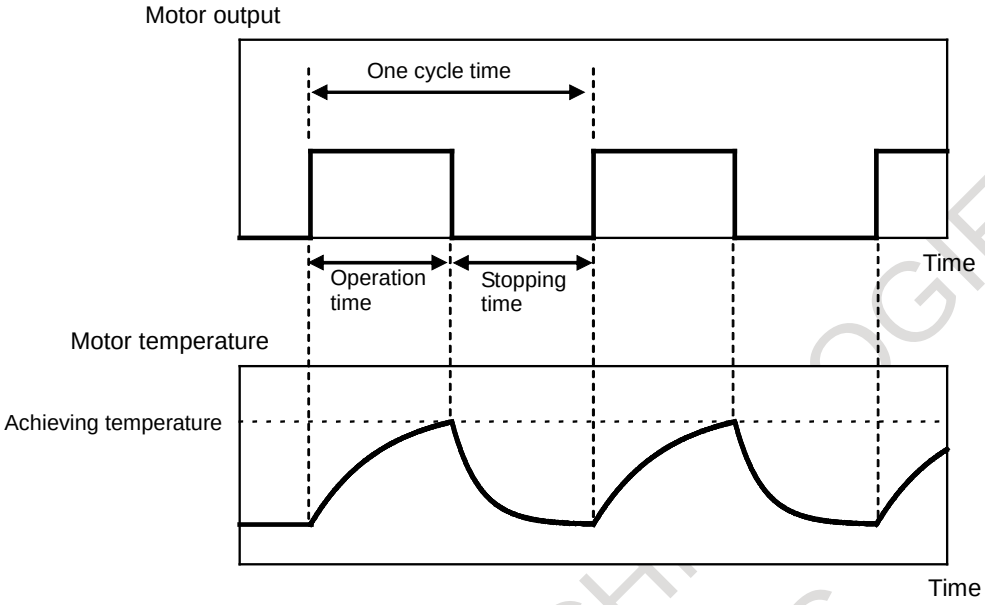
The rated output is guaranteed at the rated power voltage (amplifier input: 200 or 400 VAC, 50/60Hz). If the input power voltage fluctuates, the rated output may not be achieved even within the permissible range.

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S3 ○-% rated output: [kW]

Output that can be used for the indicated cycle retention percentage (○%) in a single cycle.
Example)

If the S3 25% rated output is 11 kW, the output of 11 kW can be used for 2 minutes and 30 seconds in a 10-minute cycle, and the output stops for the remaining time of 7 minutes and 30 seconds.



$$\text{Cycle retention percentage} = \frac{\text{Operation time}}{\text{One cycle time}} \times 100[\%]$$

The rated output is guaranteed at the rated power voltage (amplifier input: 200 or 400 VAC, 50/60Hz). If the input power voltage fluctuates, the rated output may not be achieved even within the permissible range.

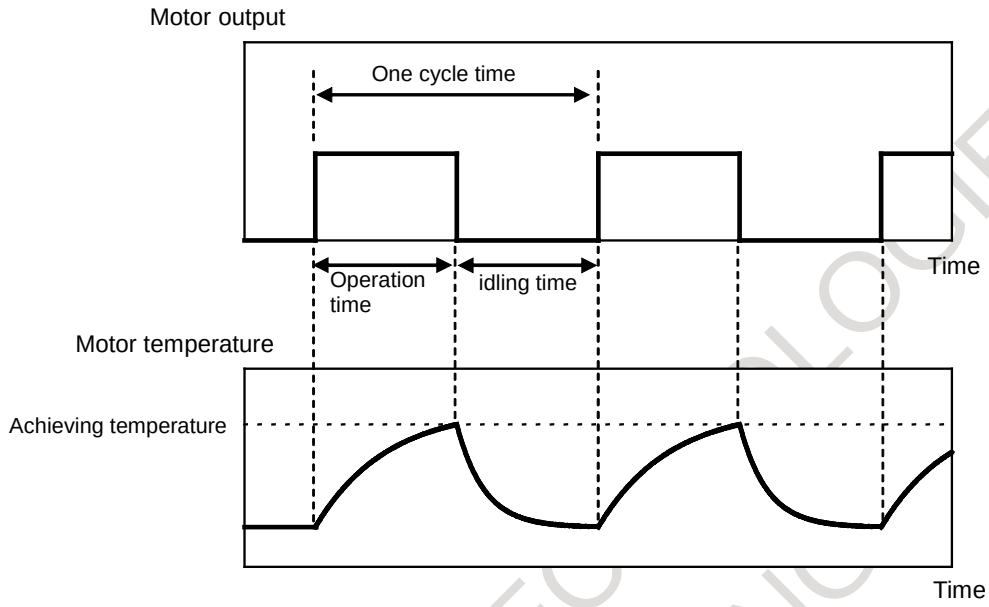
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S6 ○% rated output: [kW]

Output that can be used for the indicated cycle retention percentage (○%) in a single cycle with keeping rotation.

Example)

If the S6 25% rated output is 11 kW, the output of 11 kW can be used for 2 minutes and 30 seconds in a 10-minute cycle, and the motor rotates with no load for the remaining time of 7 minutes and 30 seconds.



$$\text{Cycle retention percentage} = \frac{\text{Operation time}}{\text{One cycle time}} \times 100[\%]$$

The rated output is guaranteed at the rated power voltage (amplifier input: 200 or 400 VAC, 50/60Hz). If the input power voltage fluctuates, the rated output may not be achieved even within the permissible range.

S1 continuous rated current: I_C [A]

Maximum current value necessary for obtaining the S1 continuous rated output.

S2 ○-minute rated current: [A]

Maximum current value necessary for obtaining the S2 ○-minute rated output.

S3/S6 ○-% rated output: [A]

Maximum current value necessary for obtaining the S3/S6 ○-% rated output.

Base speed (S1 rating): [min^{-1}]

Speed necessary for the S1 rated output to reach a maximum.

Base speed (S2 rating): [min^{-1}]

Speed necessary for the S2 rated output to reach a maximum.

Base speed (S3/S6 rating): [min^{-1}]

Speed necessary for the S3/S6 rated output to reach a maximum.

Max. speed: N_m [min^{-1}]

Maximum speed at which the motor can be operated.

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Steady-state maximum output: P_{max} [kW]

Maximum output in the steady state. The maximum output at the rated power voltage is not a guaranteed value but a guideline.

Maximum output at acceleration for PS selection: [kW]

Maximum output at acceleration. It is data used to select a power supply (αiPS), and is not a guaranteed value.

Continuous rated torque in the constant torque range: [Nm]

S1 continuous rated torque that becomes constant in the speed range before the S1 continuous rated output is reached.

Moment of inertia of the rotor: J_m [kg·m^2]

Moment of inertia of the rotor of the motor.

Weight: w [kg]

Weight of the motor.

Winding resistance: Ra [mΩ]

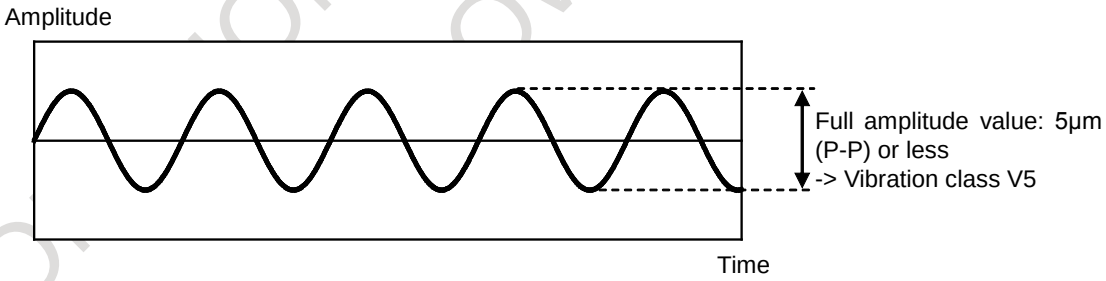
Resistance value between motor terminals. The value is a standard value at 20°C. (±10%)

Number of teeth for speed detection

Number of teeth of the built-in sensor of the motor.

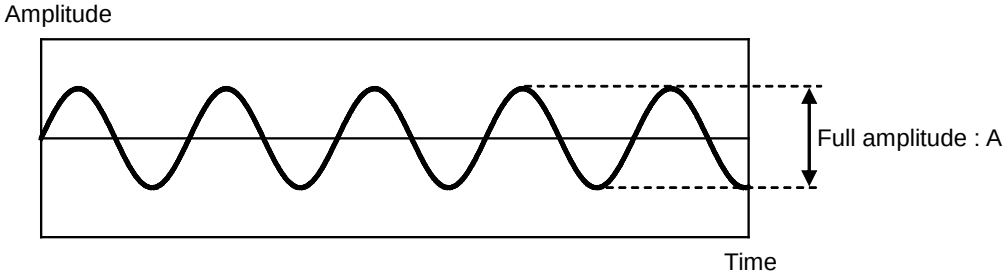
Vibration class

Vibration class (rotation component) of the motor. The vibration class is determined by measuring the full amplitude (P-P) of the motor when the motor is driven with no load and at the maximum speed at the equivalent peak value (EQP). If, for example, the vibration class is V5, the full amplitude of the motor with no load and at the maximum speed is 5μm (P-P) or less.



Relationship between oscillation amplitude and vibration velocity

The full amplitude value and vibration velocity have the following relationship. The full amplitude value can be calculated from vibration velocity.



$A\ [\mu m] = 6 \times 10^7 \times V\ [m/s] / \pi / N\ [min^{-1}]$

A [μm] : Full amplitude value

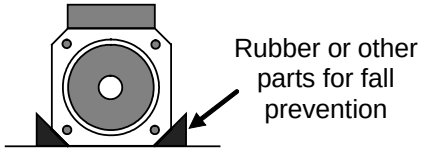
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V [m/s] : Vibration velocity
N [min^{-1}] : Motor speed

By measuring vibration from vibration velocity, a stable measured value can be achieved eliminating vibration caused by wave of current, low frequency vibration of the stand or other component or other vibration. Therefore, vibration velocity is suitable for measuring vibration due to unbalanced rotating body.

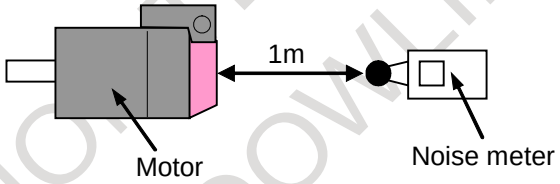
NOTE

- When measuring the motor with key, fasten the half key (key whose thickness is half of the provided key) to the keyway on the output shaft with a pipe or fasten the provided key by using a pulley with corrected balance or other tool.
- When measuring the motor alone, lift the motor with a wire rope or put it on a rubber sheet that is 10 to 20 mm thick. When measuring the flange mounting type motor on the rubber sheet, support it using rubber or other parts for fall prevention because the motor may fall during acceleration and deceleration.



Noise

Noise level of the motor. It is measured at a position 1 m apart from the motor, by using a frequency filter with the A characteristic.



* A characteristic.....Characteristic corrected to approximate human senses

Cooling system

Cooling system of the motor. The definition is as per IEC60034-6, and the IC code is as per IEC 34-6.

Rated power of the cooling fan

Rated power of the cooling fan.

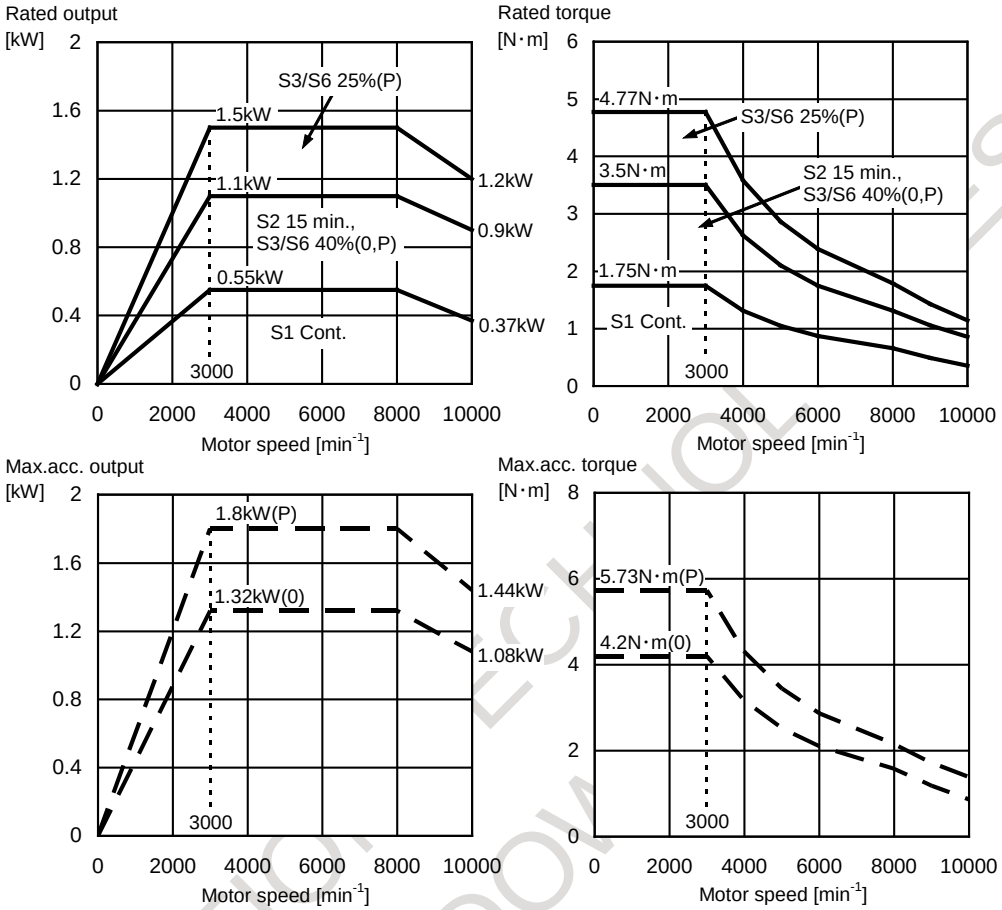
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3.2.2 αiI-B series 200V-type

Model αiI 0.5/10000-B

Spec. number for motor: A06B-2401-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K401#S00→(0), #S0P→(P)
Applicable amplifier: αiSP 2.2-B, βiSVSP*-7.5-B



Item		Symbol	Value		Unit
Model			#S00	#S0P	
Rated output	S1 continuous rated	P_C	0.55	0.55	kW
	S2 15 min., S3/S6 40% rated		1.1	1.1	kW
	S3/S6 25% rated		-	1.5	kW
Rated current	S1 continuous rated	I_C	7	7	A
	S2 15 min., S3/S6 40% rated		11	11	A
	S3/S6 25% rated		-	15	A
Speed	Base speed	N_b	3000		min^{-1}
	Max. speed	N_{max}	10000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			1.32	1.8	kW
Continuous rated torque in the constant torque range		T_b	1.75		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.00048		$kg·m^2$
Weight		W	7		kg
Winding resistance (U-V, V-W, and W-U)		R	2750		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			64		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and non-cooled (IC0A0)		

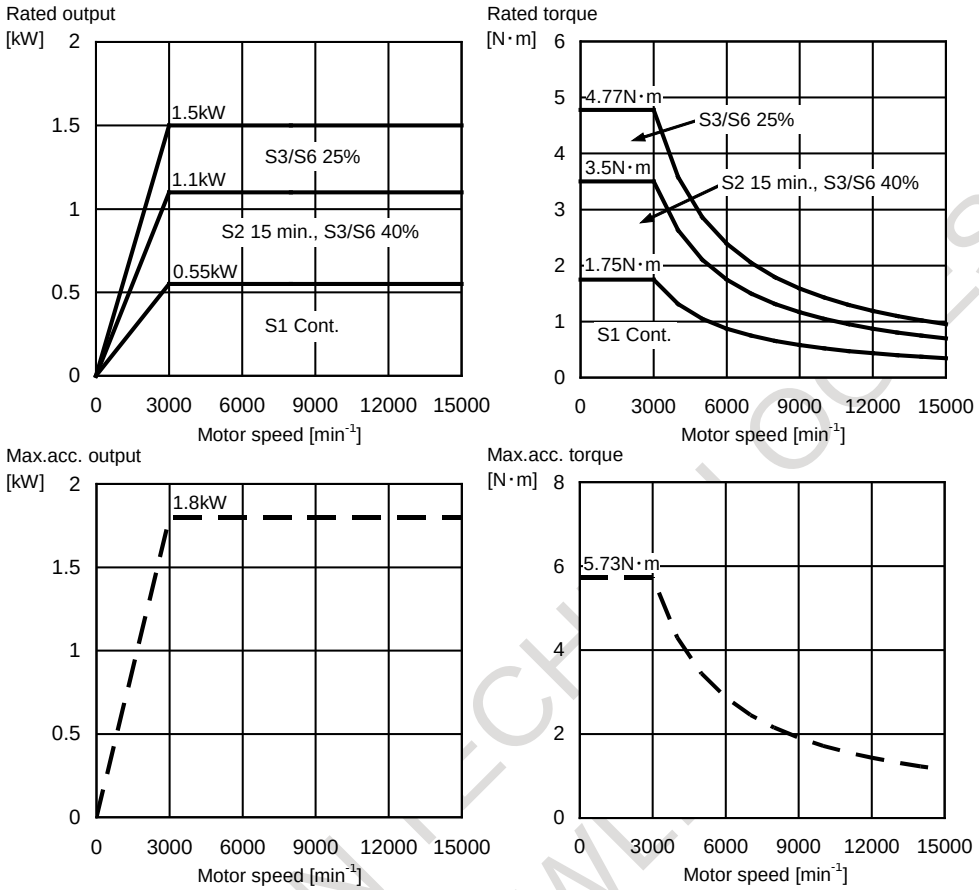
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Model αiI 0.5/15000-B

Spec. number for motor: A06B-2400-B□□□

Spec. number for output specification nameplate: A06B-1230-K400#S0P

Applicable amplifier: αiSP 2.2-B, βiSVSP*-7.5-B



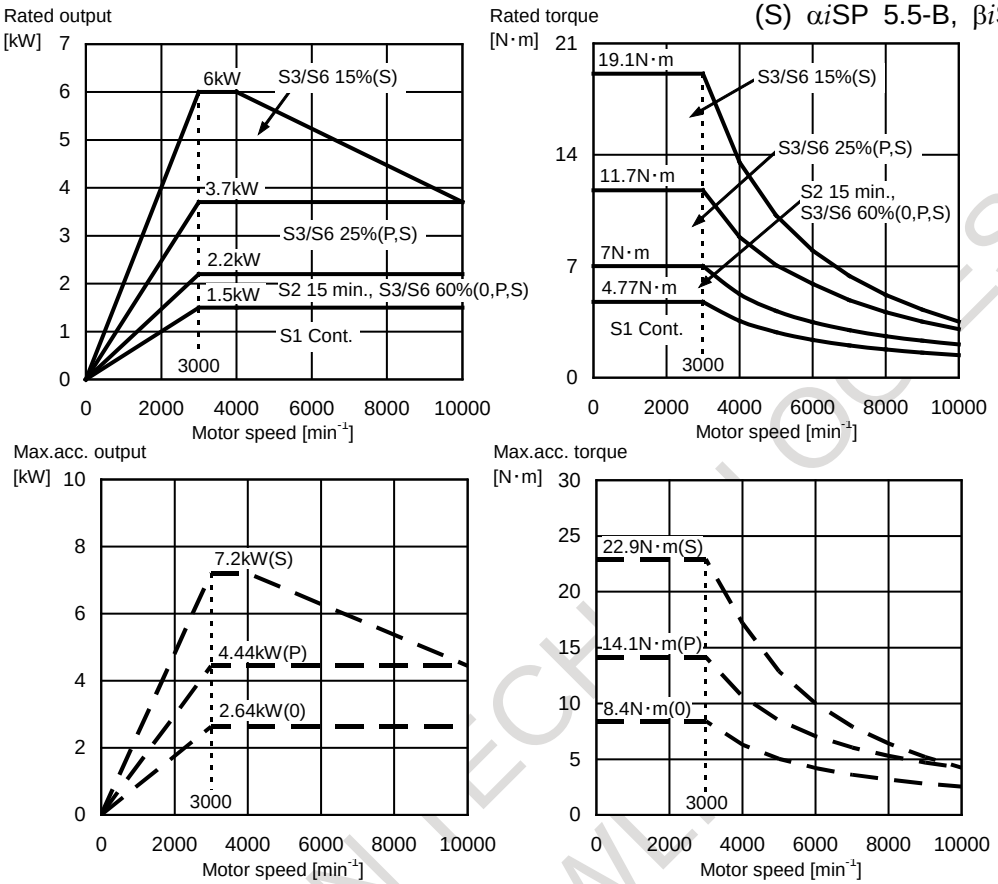
Item		Symbol	Value	Unit
Model			#S0P	
Rated output	S1 continuous rated	P_C	0.55	kW
	S2 15 min., S3/S6 40% rated		1.1	kW
	S3/S6 25% rated		1.5	kW
Rated current	S1 continuous rated	I_C	8	A
	S2 15 min., S3/S6 40% rated		12	A
	S3/S6 25% rated		15	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	15000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			1.8	kW
Continuous rated torque in the constant torque range		T_b	1.75	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.00048	$kg·m^2$
Weight		W	7	kg
Winding resistance (U-V, V-W, and W-U)		R	570	mΩ
Built-in detector			αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection			64	λ/rev.
Output shaft seal			Simple labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V5	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and non-cooled (IC0A0)	

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Model αiI 1/10000-B

Spec. number for motor: A06B-2402-B□□□

Spec. number for output specification nameplates: A06B-1230-K402#S00→(0), #S0P→(P),#S0S→(S)
Applicable amplifier: (0),(P) αiSP 2.2-B, βiSVSP*-7.5-B
(S) αiSP 5.5-B, βiSVSP*-7.5-B



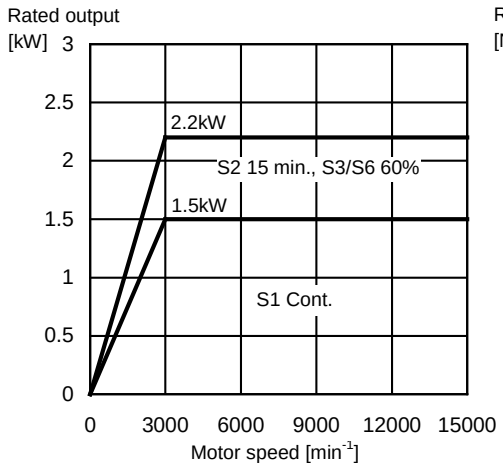
Item		Symbol	Value			Unit
Model			#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	1.5	1.5	1.5	kW
	S2 15 min., S3/S6 60% rated		2.2	2.2	2.2	kW
	S3/S6 25% rated		-	3.7	3.7	kW
	S3/S6 15% rated		-	-	6	kW
Rated current	S1 continuous rated	I_C	11	11	11	A
	S2 15 min., S3/S6 60% rated		13	13	13	A
	S3/S6 25% rated		-	19	19	A
	S3/S6 15% rated		-	-	26	A
Speed	Base speed	N_b	3000			min^{-1}
	Max. speed	N_{max}	10000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output			kW
Maximum output at acceleration for PS selection			2.64	4.44	7.2	kW
Continuous rated torque in the constant torque range		T_b	4.77			N·m
Number of poles			4			
Moment of inertia of the rotor		J_m	0.003			$kg·m^2$
Weight		W	18			kg
Winding resistance (U-V, V-W, and W-U)		R	420			mΩ
Built-in detector			αiM sensor or αiMZ sensor contained			
Number of teeth for speed detection			128			λ/rev.
Output shaft seal			Oil seal			
Degree of protection			IP54			
Vibration			V5 (option V3)			
Noise			75 or less			dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)			
Rated power of the cooling fan			32			W

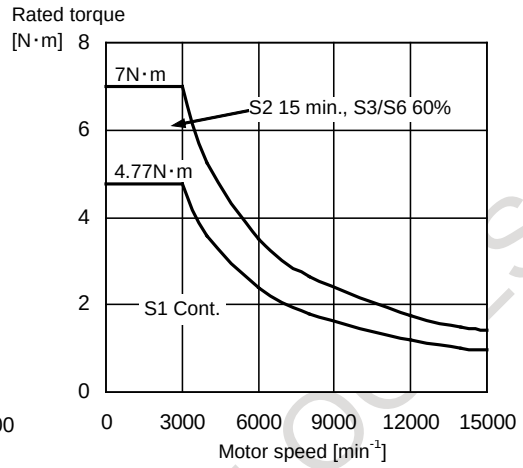
JR AUTOMATION TECHNOLOGIES INC*

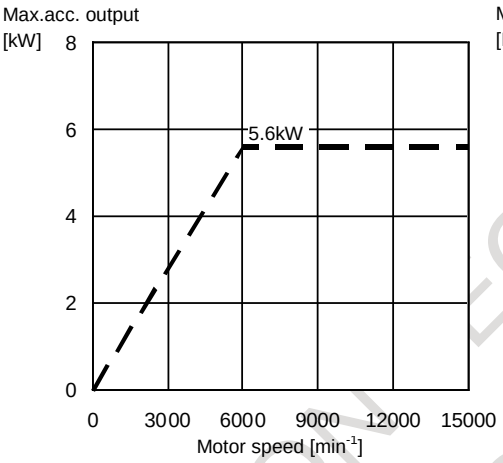
Model αiI 1/15000-B

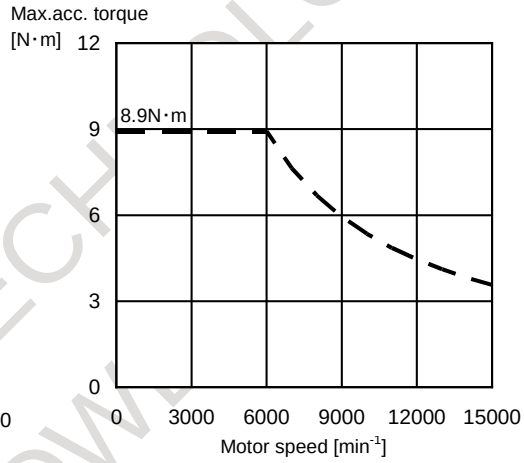
Spec. number for motor: A06B-2422-B□□□

Spec. number for output specification nameplate: A06B-1230-K422#S00
Applicable amplifier: αiSP 5.5-B, βiSVSP*-7.5-B









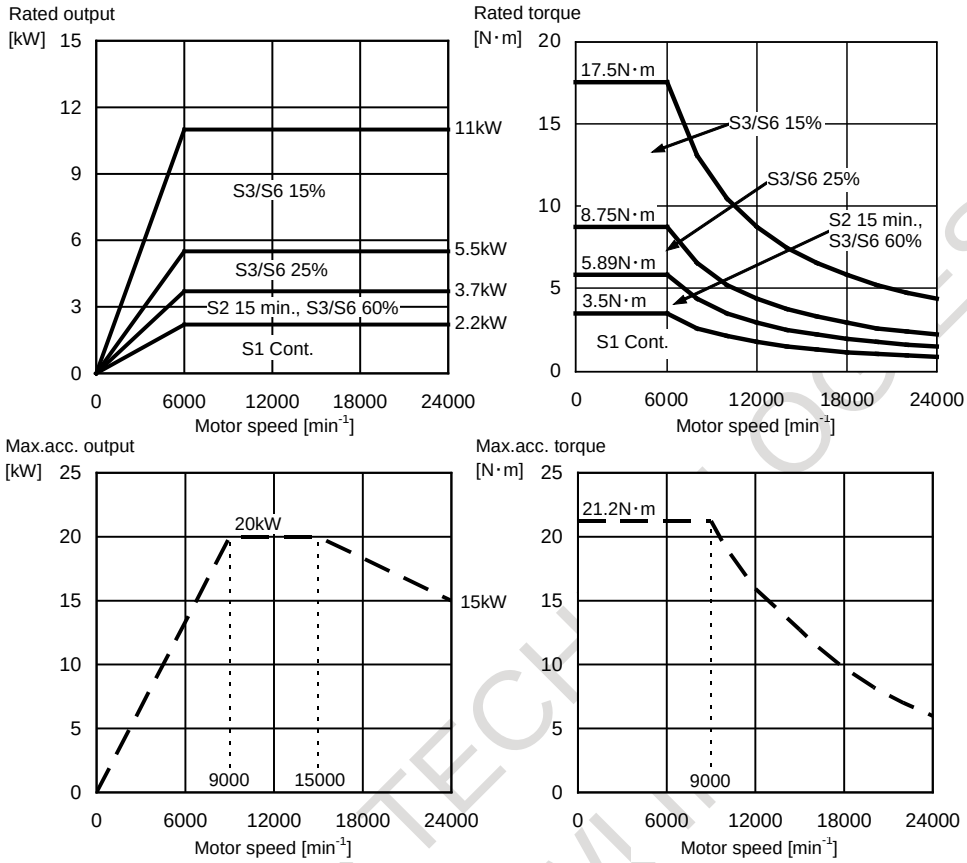
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	1.5	kW
	S2 15 min., S3/S6 60% rated		2.2	kW
Rated current	S1 continuous rated	I_C	24	A
	S2 15 min., S3/S6 60% rated		27	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	15000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			5.6	kW
Continuous rated torque in the constant torque range		T_b	4.77	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.003	$kg·m^2$
Weight		W	18	kg
Winding resistance (U-V, V-W, and W-U)		R	102	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple Labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			32	W

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 1/24000-B

Spec. number for motor: A06B-2420-B123

Spec. number for output specification nameplate: A06B-1230-K420#S0S
Applicable amplifier: αiSP 22-B, βiSVSP*-18-B



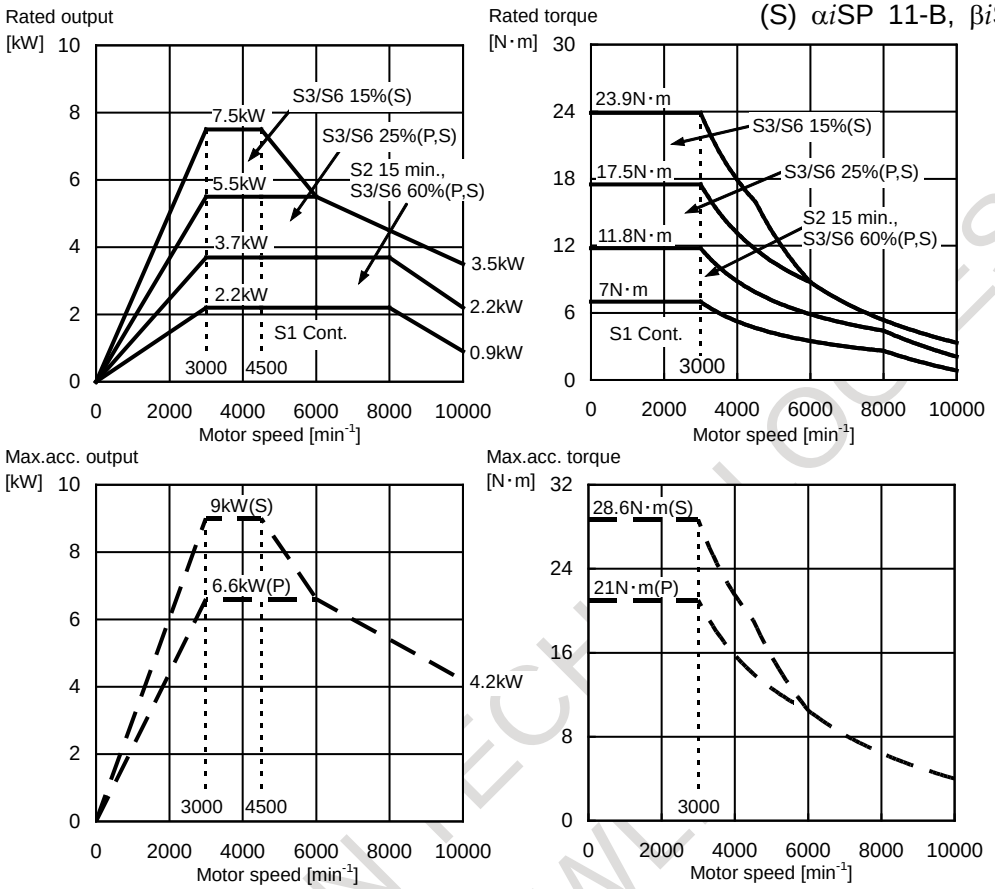
Item		Symbol	Value	Unit
Model			#S0S	
Rated output	S1 continuous rated	P_C	2.2	kW
	S2 15 min., S3/S6 60% rated		3.7	kW
	S3/S6 25% rated		5.5	kW
	S3/S6 15% rated		11	kW
Rated current	S1 continuous rated	I_C	32	A
	S2 15 min., S3/S6 60% rated		42	A
	S3/S6 25% rated		52	A
	S3/S6 15% rated		84	A
Speed	Base speed	N_b	6000	min^{-1}
	Max. speed	N_{max}	24000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			22.0	kW
Continuous rated torque in the constant torque range		T_b	3.5	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.003	$kg·m^2$
Weight		W	19	kg
Winding resistance (U-V, V-W, and W-U)		R	43.8	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			32	W

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 1.5/10000-B

Spec. number for motor: A06B-2403-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K403#S0P→(P), #S0S→(S)
Applicable amplifier: (P) αiSP 5.5-B, βiSVSP*-7.5-B
(S) αiSP 11-B, βiSVSP*-7.5-B



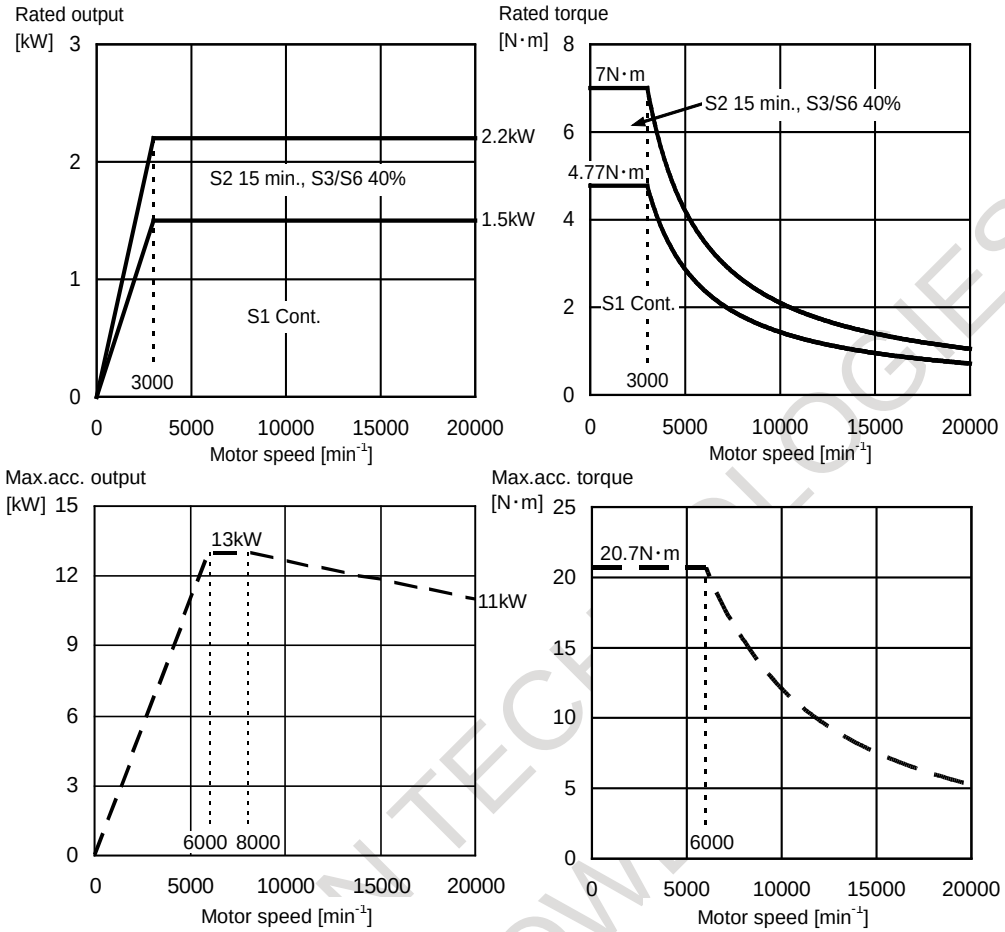
Item		Symbol	Value		Unit
Model			#S0P	#S0S	
Rated output	S1 continuous rated	P_C	2.2	2.2	kW
	S2 15 min., S3/S6 60% rated		3.7	3.7	kW
	S3/S6 25% rated		5.5	5.5	kW
	S3/S6 15% rated		-	7.5	kW
Rated current	S1 continuous rated	I_C	14	14	A
	S2 15 min., S3/S6 60% rated		18	18	A
	S3/S6 25% rated		25	25	A
	S3/S6 15% rated		-	28	A
Speed	Base speed	N_b	3000		min^{-1}
	Max. speed	N_{max}	10000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			6.6	9.0	kW
Continuous rated torque in the constant torque range		T_b	7.0		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0043		$kg·m^2$
Weight		W	24		kg
Winding resistance (U-V, V-W, and W-U)		R	410		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			128		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			32		W

JR AUTOMATION TECHNOLOGIES INC*
JDOWNLOADER

Model αiI 1.5/20000-B

Spec. number for motor: A06B-2423-B123#0101

Spec. number for output specification nameplate: A06B-1230-K423#S00
Applicable amplifier: αiSP 15-B, βiSVSP*-15-B



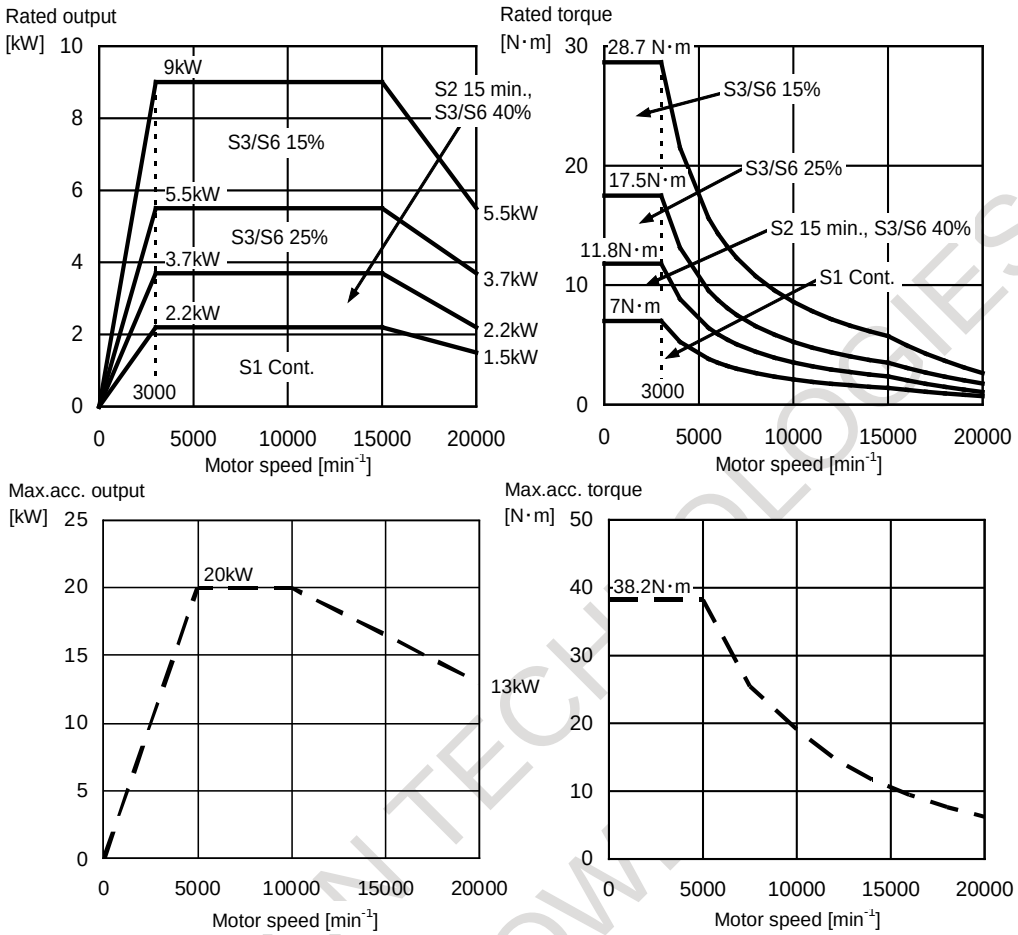
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	1.5	kW
	S2 15 min., S3/S6 40% rated		2.2	kW
Rated current	S1 continuous rated	I_C	28	A
	S2 15 min., S3/S6 40% rated		33	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	20000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			13.0	kW
Continuous rated torque in the constant torque range		T_b	4.77	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0043	$kg·m^2$
Weight		W	24	kg
Winding resistance (U-V, V-W, and W-U)		R	61.5	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			32	W

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 1.5/20000-B

Spec. number for motor: A06B-2423-B□□□

Spec. number for output specification nameplate: A06B-1230-K423#S0S
Applicable amplifier: αiSP 22-B, βiSVSP*-18-B



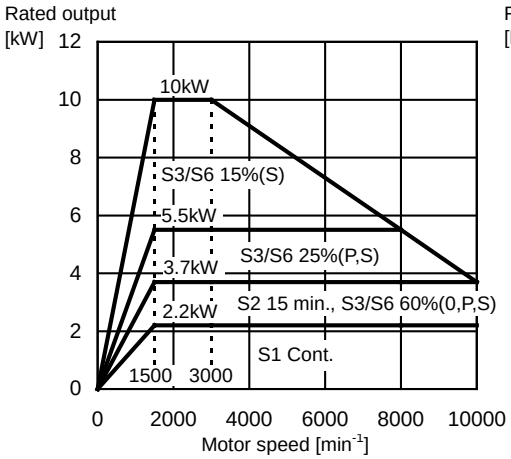
Item		Symbol	Value	Unit
Model			#S0S	
Rated output	S1 continuous rated	P_C	2.2	kW
	S2 15 min., S3/S6 40% rated		3.7	kW
	S3/S6 25% rated		5.5	kW
	S3/S6 15% rated		9	kW
Rated current	S1 continuous rated	I_C	32	A
	S2 15 min., S3/S6 40% rated		44	A
	S3/S6 25% rated		54	A
	S3/S6 15% rated		77	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	20000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			22.0	kW
Continuous rated torque in the constant torque range		T_b	7.0	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0043	$kg·m^2$
Weight		W	24	kg
Winding resistance (U-V, V-W, and W-U)		R	61.5	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			32	W

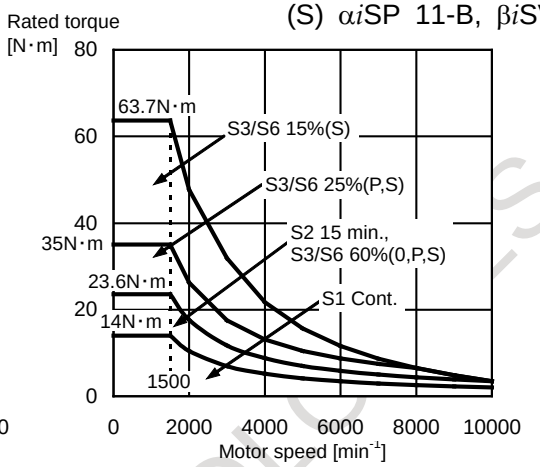
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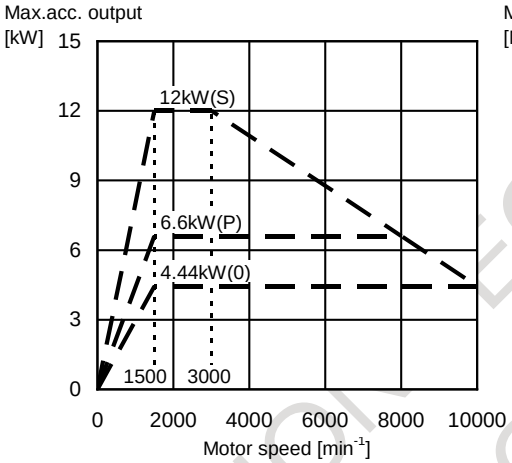
Model αiI 2/10000-B

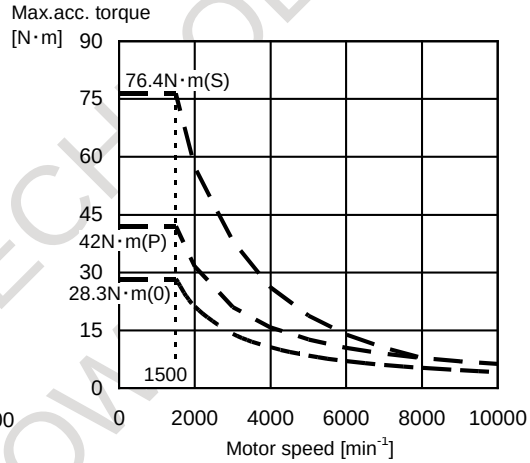
Spec. number for motor: A06B-2404-B□□□

Spec. number for output specification nameplates: A06B-1230-K404#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0) αiSP 5.5-B, βiSVSP*-7.5-B
(P) αiSP 11-B, βiSVSP*-7.5-B
(S) αiSP 11-B, βiSVSP*-11-B









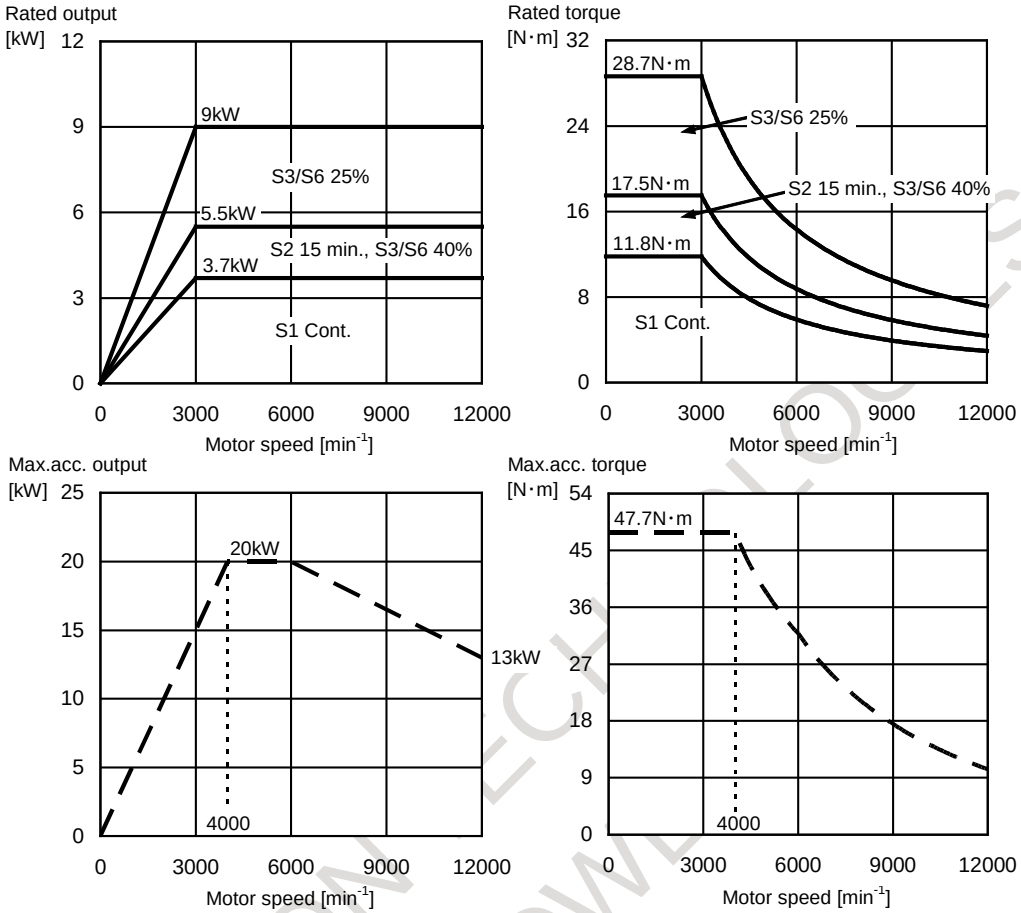
Item		Symbol	Value			Unit
Model			#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	2.2	2.2	2.2	kW
	S2 15 min., S3/S6 60% rated		3.7	3.7	3.7	kW
	S3/S6 25% rated		-	5.5	5.5	kW
	S3/S6 15% rated		-	-	10	kW
Rated current	S1 continuous rated	I_C	19	19	19	A
	S2 15 min., S3/S6 60% rated		27	27	27	A
	S3/S6 25% rated		-	42	42	A
	S3/S6 15% rated		-	-	49	A
Speed	Base speed	N_b	1500			min^{-1}
	Max. speed	N_{max}	10000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output			kW
Maximum output at acceleration for PS selection			4.44	6.6	12.0	kW
Continuous rated torque in the constant torque range		T_b	14.0			N·m
Number of poles			4			
Moment of inertia of the rotor		J_m	0.0078			$kg·m^2$
Weight		W	27			kg
Winding resistance (U-V, V-W, and W-U)		R	307			mΩ
Built-in detector			αiM sensor or αiMZ sensor contained			
Number of teeth for speed detection			128			λ/rev.
Output shaft seal			Oil seal			
Degree of protection			IP54			
Vibration			V5 (option V3)			
Noise			75 or less			dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)			
Rated power of the cooling fan			38			W

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 2/12000-B

Spec. number for motor: A06B-2418-B□□□

Spec. number for output specification nameplates: A06B-1230-K418#S0S
Applicable amplifier: αiSP 22-B, βiSVSP*-18-B



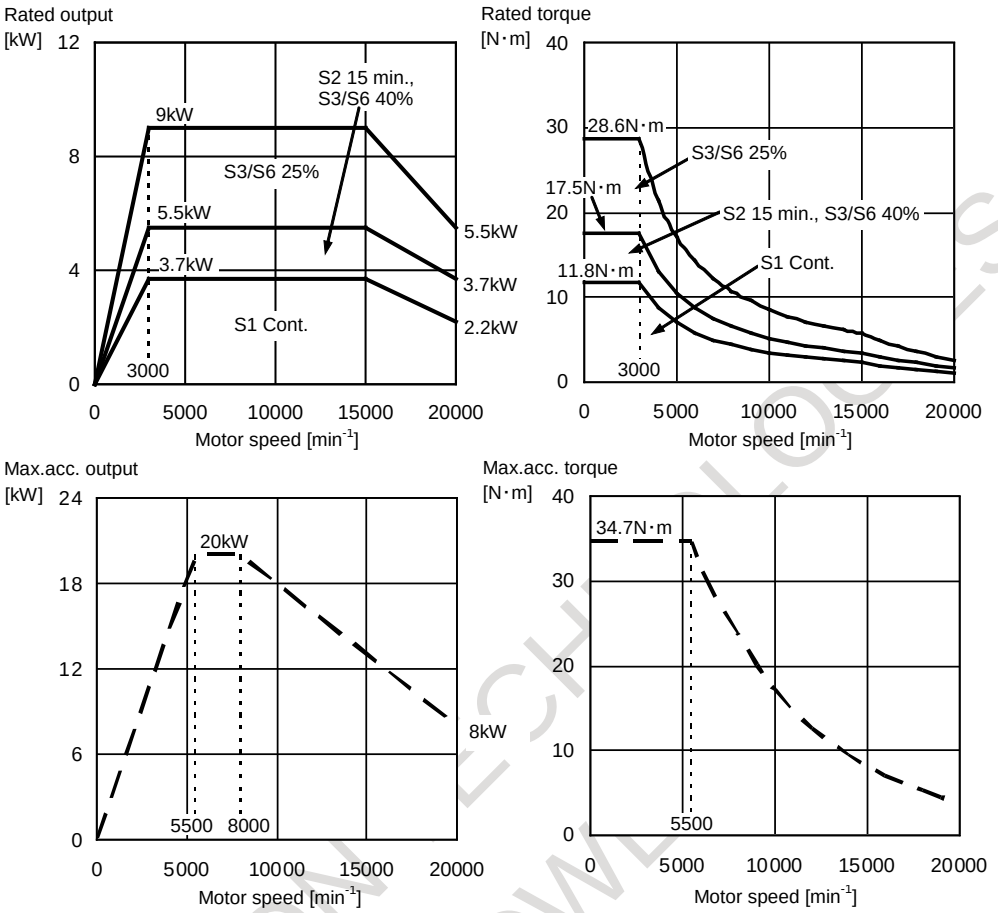
Item		Symbol	Value	Unit
Model			#S0S	
Rated output	S1 continuous rated	P_C	3.7	kW
	S2 15 min., S3/S6 40% rated		5.5	kW
	S3/S6 25% rated		9	kW
Rated current	S1 continuous rated	I_C	34	A
	S2 15 min., S3/S6 40% rated		41	A
	S3/S6 25% rated		56	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	12000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			22.0	kW
Continuous rated torque in the constant torque range		T_b	11.8	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0078	$kg·m^2$
Weight		W	27	kg
Winding resistance (U-V, V-W, and W-U)		R	103	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			38	W

JR AUTOMATION TECHNOLOGIES INC*
JDOWELL

Model αiI 2/20000-B

Spec. number for motor: A06B-2424-B□□□

Spec. number for output specification nameplate: A06B-1230-K424#S0S
Applicable amplifier: αiSP 22-B, βiSVSP*-18-B



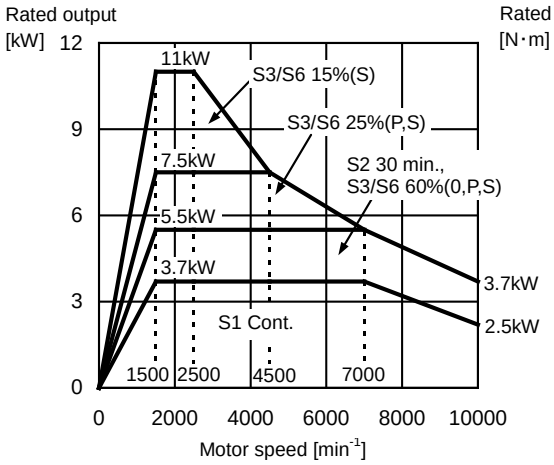
Item		Symbol	Value	Unit
Model			#S0S	
Rated output	S1 continuous rated	P_C	3.7	kW
	S2 15 min., S3/S6 40% rated		5.5	kW
	S3/S6 25% rated		9	kW
Rated current	S1 continuous rated	I_C	53	A
	S2 15 min., S3/S6 40% rated		70	A
	S3/S6 25% rated		90	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	20000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			20.0	kW
Continuous rated torque in the constant torque range		T_b	11.8	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0078	$kg·m^2$
Weight		W	27	kg
Winding resistance (U-V, V-W, and W-U)		R	48.5	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			38	W

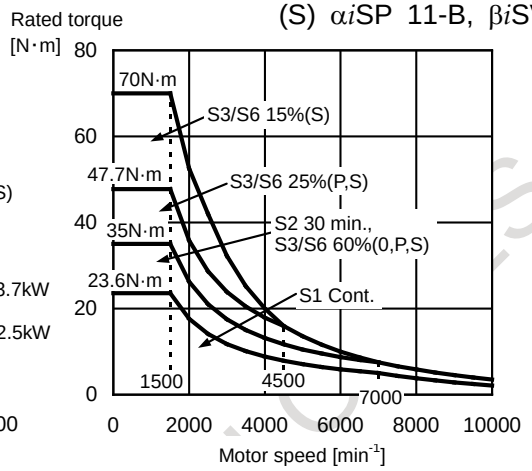
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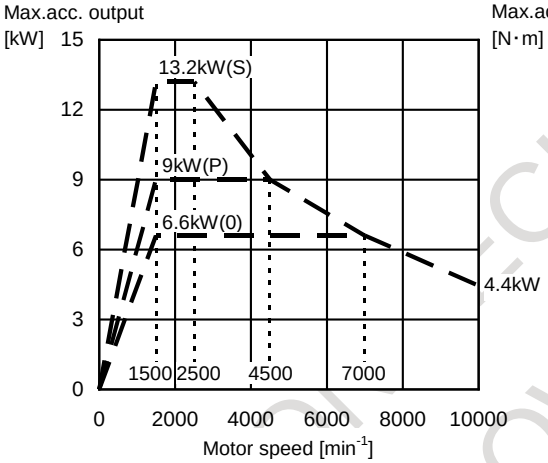
Model αiI 3/10000-B

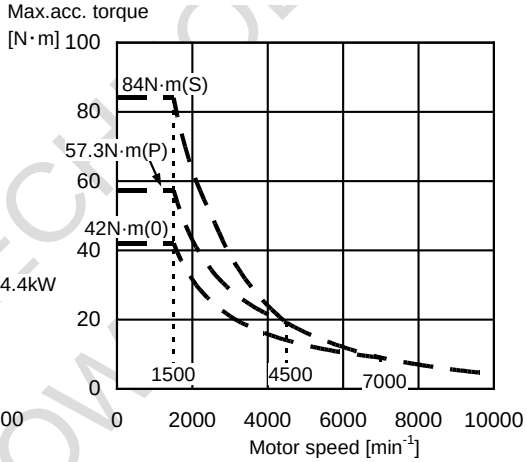
Spec. number for motor: A06B-2405-B□□□

Spec. numbers for output specification nameplates A06B-1230-K405#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0) αiSP 5.5-B, βiSVSP*-7.5-B
(P) αiSP 11-B, βiSVSP*-7.5-B
(S) αiSP 11-B, βiSVSP*-11-B









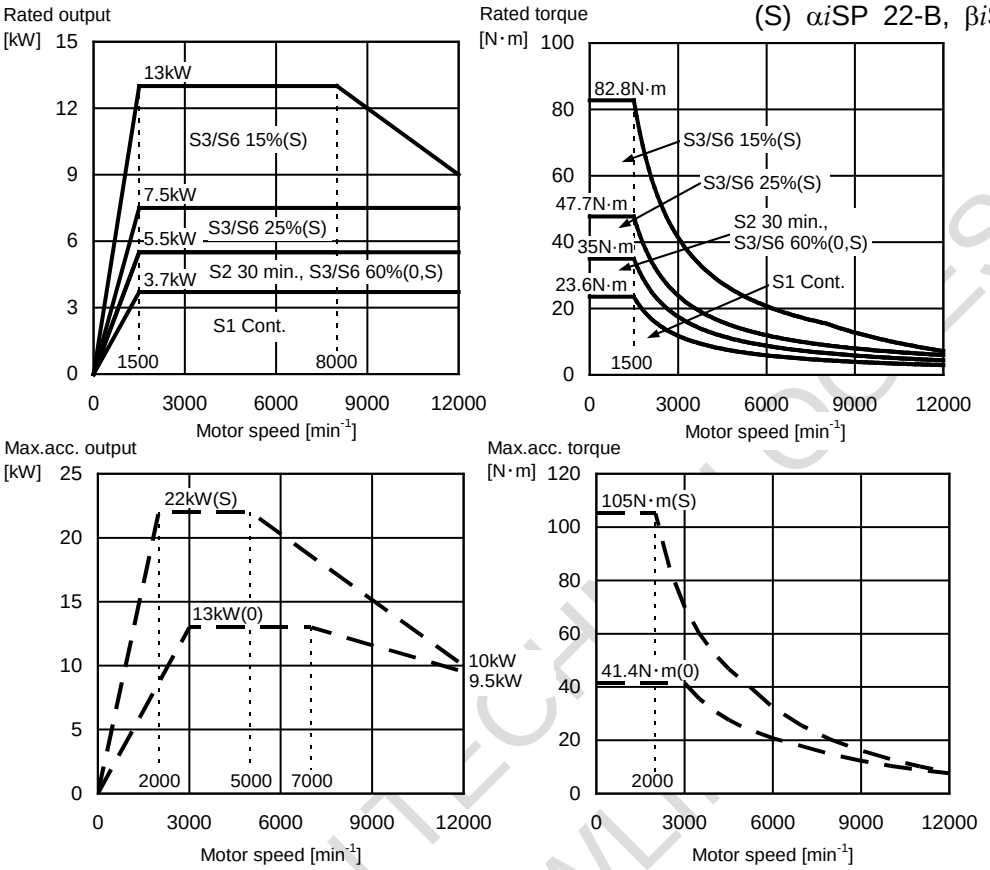
Item		Symbol	Value			Unit
Model			#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	3.7	3.7	3.7	kW
	S2 30 min., S3/S6 60% rated		5.5	5.5	5.5	kW
	S3/S6 25% rated		-	7.5	7.5	kW
	S3/S6 15% rated		-	-	11	kW
Rated current	S1 continuous rated	I_C	23	23	23	A
	S2 30 min., S3/S6 60% rated		29	29	29	A
	S3/S6 25% rated		-	39	40	A
	S3/S6 15% rated		-	-	52	A
Speed	Base speed	N_b	1500			min^{-1}
	Max. speed	N_{max}	10000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output			kW
Maximum output at acceleration for PS selection		P_f	6.6	9.0	13.2	kW
Continuous rated torque in the constant torque range		T_b	23.6			N·m
Number of poles			4			
Moment of inertia of the rotor		J_m	0.0148			$kg·m^2$
Weight		W	46			kg
Winding resistance (U-V, V-W, and W-U)		R	289			mΩ
Built-in detector			αiM sensor or αiMZ sensor contained			
Number of teeth for speed detection			128			λ/rev.
Output shaft seal			Oil seal			
Degree of protection			IP54			
Vibration			V5 (option V3)			
Noise			75 or less			dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)			
Rated power of the cooling fan			38			W

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 3/12000-B

Spec. number for motor: A06B-2425-B1□□

Spec. numbers for output specification nameplates A06B-1230-K425#S00→(0), #S0S→(S)
Applicable amplifier: (0) αiSP 11-B, βiSVSP*-11-B
(S) αiSP 22-B, βiSVSP*-18-B



Item		Symbol	Value		Unit
Model			#S00	#S0S	
Rated output	S1 continuous rated	P_C	3.7	3.7	kW
	S2 30 min., S3/S6 60% rated		5.5	5.5	kW
	S3/S6 25% rated		-	7.5	kW
	S3/S6 15% rated		-	13	kW
Rated current	S1 continuous rated	I_C	36	36	A
	S2 30 min., S3/S6 60% rated		46	46	A
	S3/S6 25% rated		-	56	A
	S3/S6 15% rated		-	87	A
Speed	Base speed	N_b	1500		min^{-1}
	Max. speed	N_{max}	12000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection		P_f	13.0	22.0	kW
Continuous rated torque in the constant torque range		T_b	23.6		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0148		$kg·m^2$
Weight		W	46		kg
Winding resistance (U-V, V-W, and W-U)		R	100		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			128		λ/rev.
Output shaft seal			Simple labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			38		W

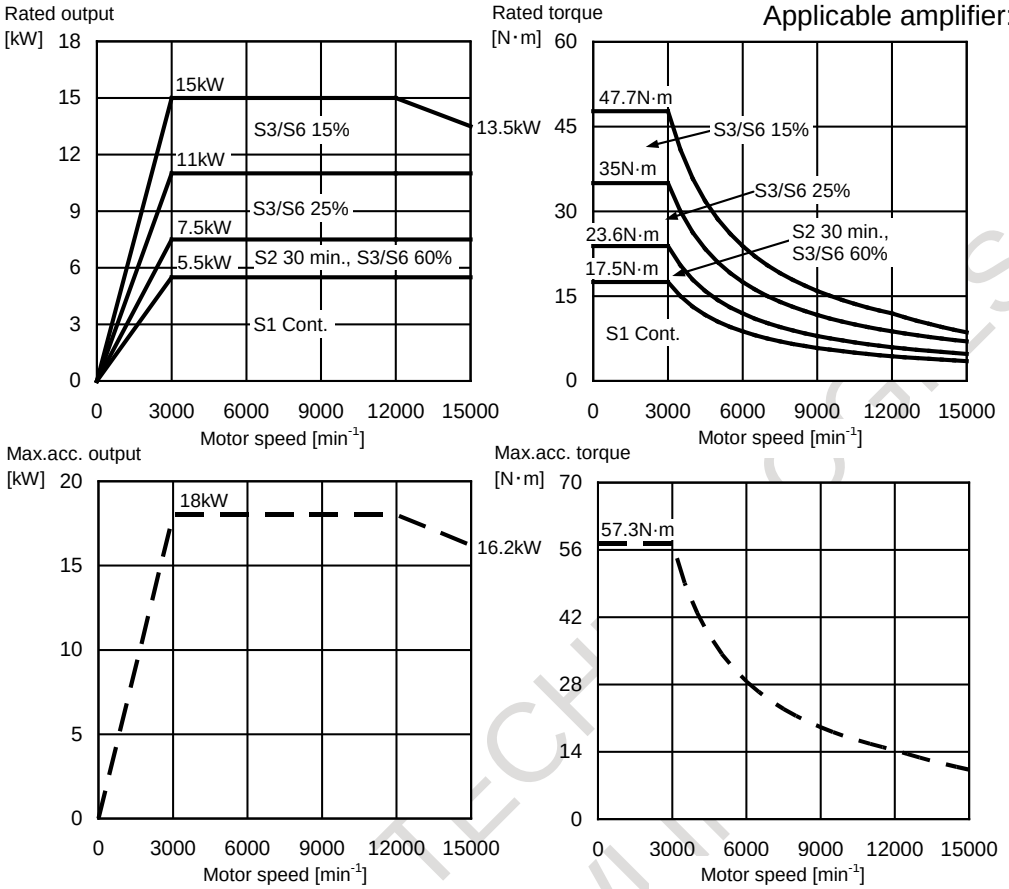
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Model αiI 3/15000-B

Spec. number for motor: A06B-2419-B123

Spec. number for output specification nameplate: A06B-1230-K419#S0S

Applicable amplifier: αiSP 22-B



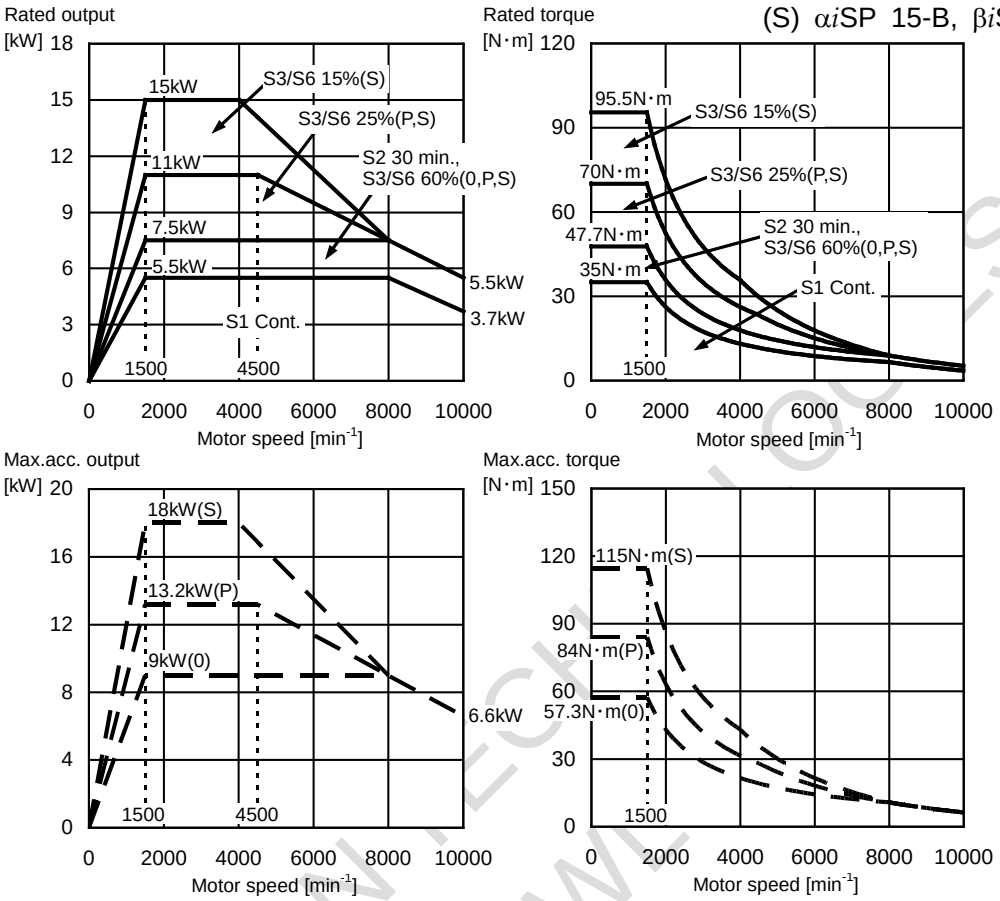
Item		Symbol	Value	Unit
Model			#S0S	
Rated output	S1 continuous rated	P_C	5.5	kW
	S2 30 min., S3/S6 60% rated		7.5	kW
	S3/S6 25% rated		11	kW
	S3/S6 15% rated		15	kW
Rated current	S1 continuous rated	I_C	55	A
	S2 30 min., S3/S6 60% rated		65	A
	S3/S6 25% rated		81	A
	S3/S6 15% rated		103	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	15000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			18.0	kW
Continuous rated torque in the constant torque range		T_b	17.5	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0148	$kg·m^2$
Weight		W	46	kg
Winding resistance (U-V, V-W, and W-U)		R	32.0	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			38	W

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Model αiI 6/10000-B

Spec. number for motor: A06B-2406-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K406#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0),(P) αiSP 11-B, βiSVSP*-11-B
(S) αiSP 15-B, βiSVSP*-15-B



Item		Symbol	Value			Unit
Model			#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	5.5	5.5	5.5	kW
	S2 30 min., S3/S6 60% rated		7.5	7.5	7.5	kW
	S3/S6 25% rated		-	11	11	kW
	S3/S6 15% rated		-	-	15	kW
Rated current	S1 continuous rated	I_C	43	43	43	A
	S2 30 min., S3/S6 60% rated		49	49	49	A
	S3/S6 25% rated		-	63	63	A
	S3/S6 15% rated		-	-	76	A
Speed	Base speed	N_b	1500			min^{-1}
	Max. speed	N_{max}	10000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output			kW
Maximum output at acceleration for PS selection			9.0	13.2	18.0	kW
Continuous rated torque in the constant torque range		T_b	35.0			N·m
Number of poles			4			
Moment of inertia of the rotor		J_m	0.0179			$kg·m^2$
Weight		W	51			kg
Winding resistance (U-V, V-W, and W-U)		R	118			mΩ
Built-in detector			αiM sensor or αiMZ sensor contained			
Number of teeth for speed detection			256			λ/rev.
Output shaft seal			Oil seal			
Degree of protection			IP54			
Vibration			V5 (option V3)			
Noise			75 or less			dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)			
Rated power of the cooling fan			50			W

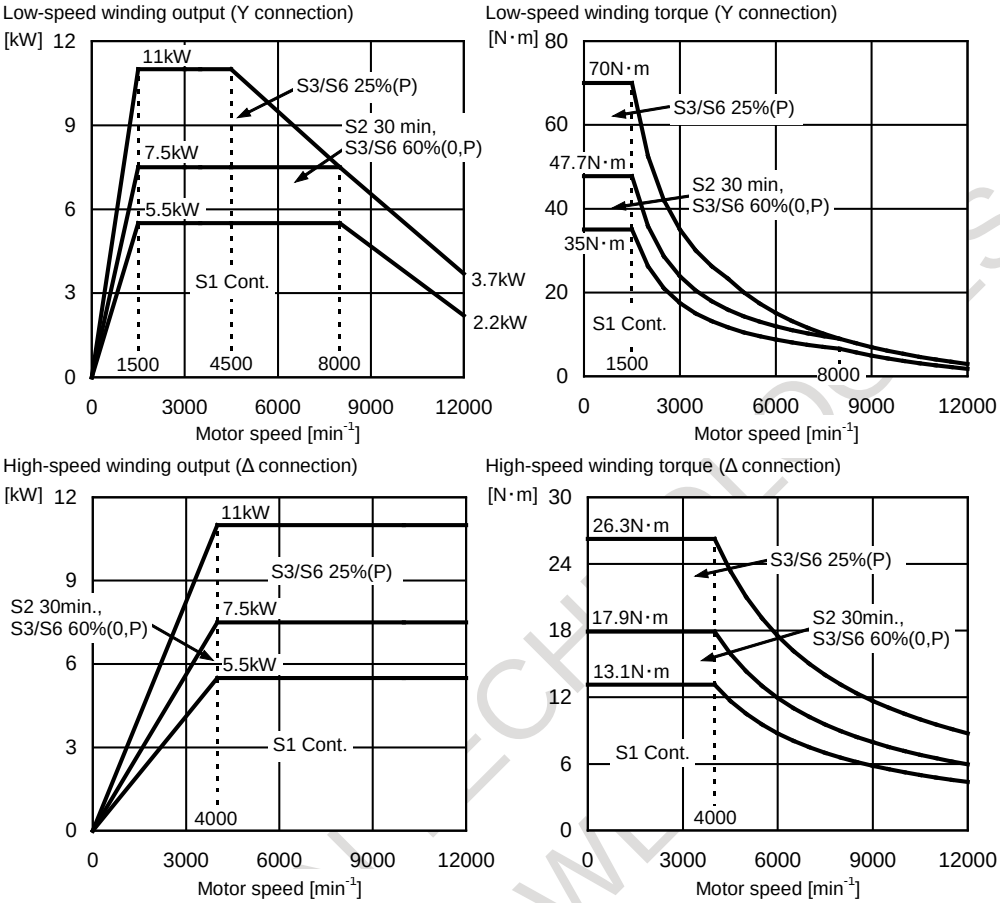
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Model αiI 6/12000-B

Spec. number for motor: A06B-2426-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K426#S00→(0), #S0P→(P)

Rated output Applicable amplifier: αiSP 11-B, βiSVSP*-11-B



Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	5.5	5.5	5.5	5.5	kW
	S2 30 min., S3/S6 60% rated		7.5	7.5	7.5	7.5	kW
	S3/S6 25% rated		-	11	-	11	kW
Rated current	S1 continuous rated	I_C	38	38	38	38	A
	S2 30 min., S3/S6 60% rated		48	48	45	45	A
	S3/S6 25% rated		-	63	-	56	A
Speed	Base speed	N_b	1500		4000		min^{-1}
	Max. speed	N_{max}	12000		12000		min^{-1}
Switching speed			4000				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection			9.0	13.2	9.0	13.2	kW
Continuous rated torque in the constant torque range		T_b	35.0		13.1		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.0179				$kg·m^2$
Weight		W	51				kg
Winding resistance (U-X, V-Y, and W-Z)			64.8				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Simple labyrinth				
Degree of protection			IP54 (The shaft-through portion is excluded)				
Vibration			V5 (option V3)				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			50				W

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Model αiI 6/12000-B

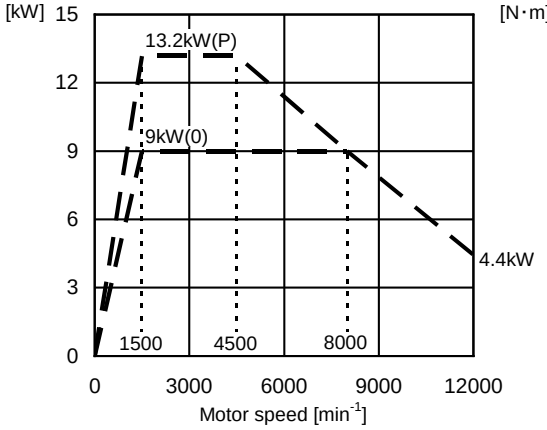
Spec. number for motor: A06B-2426-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K426#S00→(0), #S0P→(P)

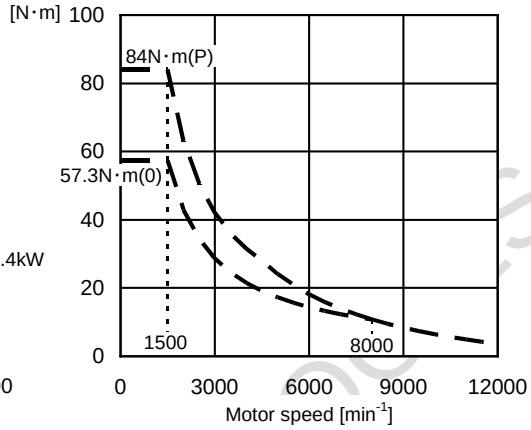
Max.acc. output

Applicable amplifier: αiSP 11-B, βiSVSP*-11-B

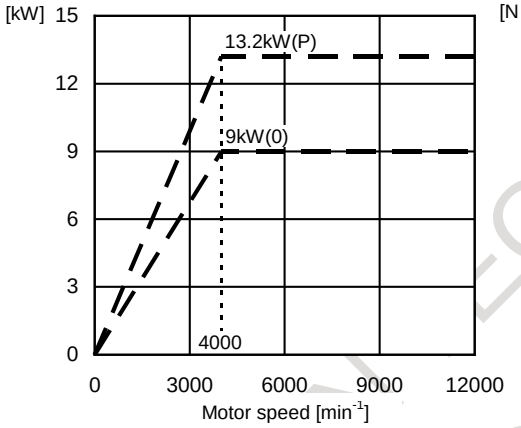
Low-speed winding output (Y connection)



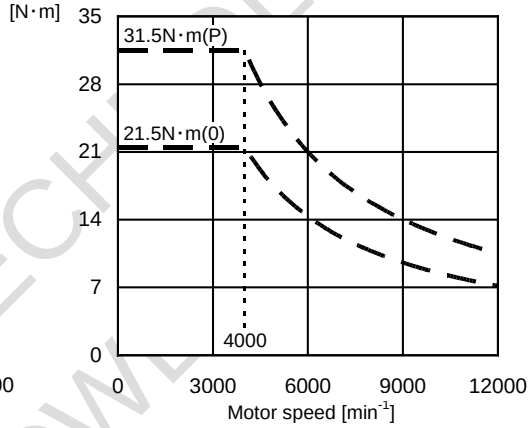
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)

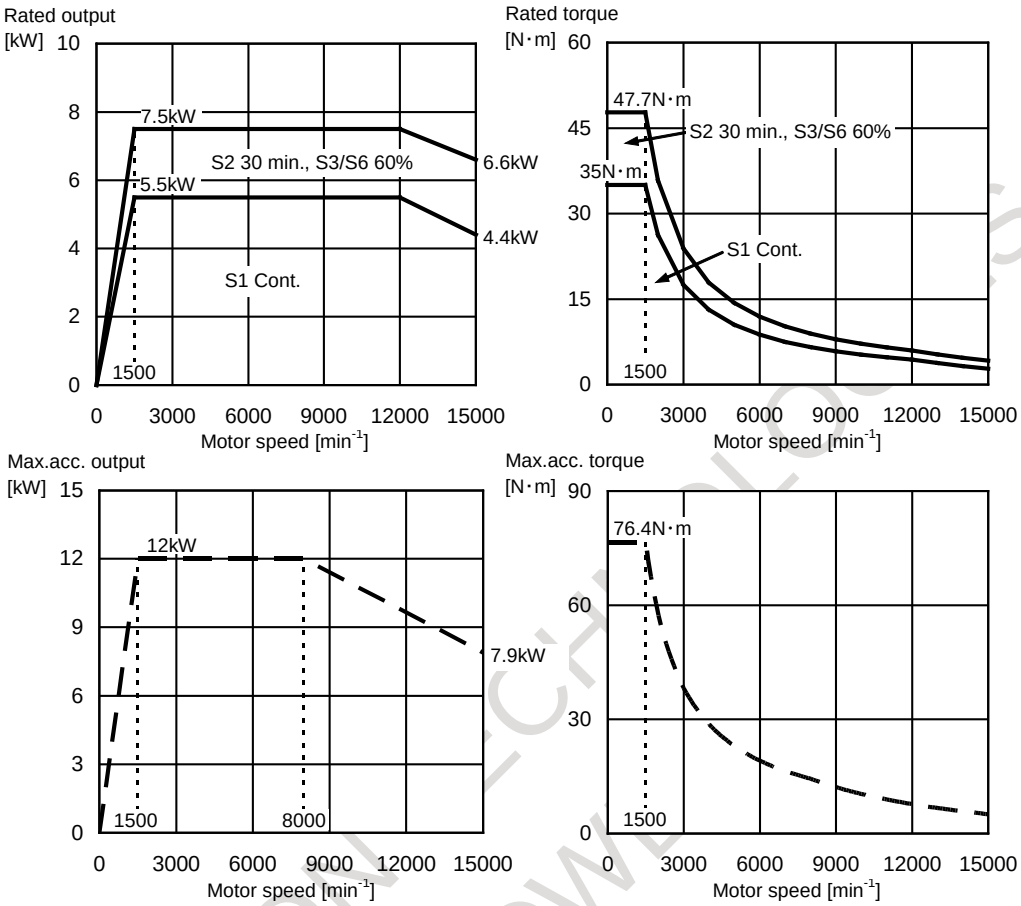


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Model αiI 6/15000-B

Spec. number for motor: A06B-2433-B123#0101

Spec. number for output specification nameplate: A06B-1230-K433#S00
Applicable amplifier: αiSP 11-B, βiSVSP*-11-B



Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	5.5	kW
	S2 30 min., S3/S6 60% rated		7.5	kW
Rated current	S1 continuous rated	I_C	44	A
	S2 30 min., S3/S6 60% rated		53	A
Speed	Base speed	N_b	1500	min^{-1}
	Max. speed	N_{max}	15000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection		P_f	12.0	kW
Continuous rated torque in the constant torque range		T_b	35.0	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0179	$kg·m^2$
Weight		W	51	kg
Winding resistance (U-V, V-W, and W-U)		R	118	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			256	λ/rev.
Output shaft seal			Simple labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			50	W

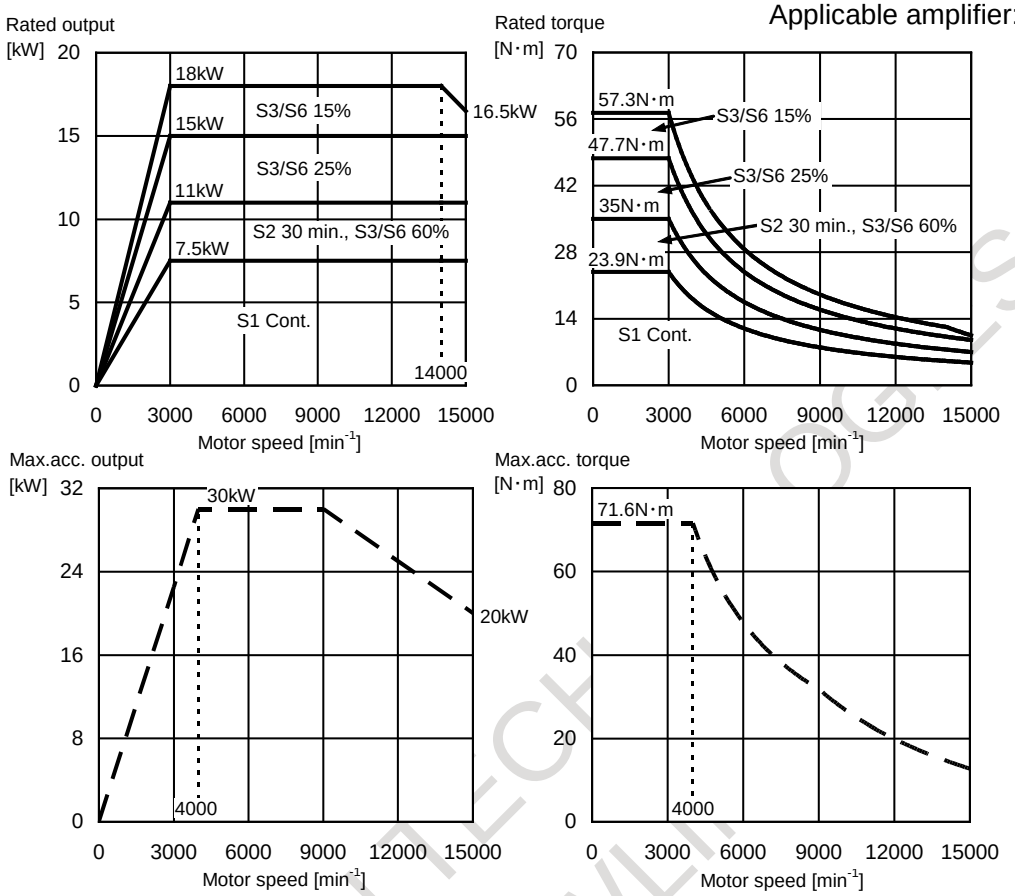
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Model αiI 6/15000-B

Spec. number for motor: A06B-2433-B123

Spec. number for output specification nameplate: A06B-1230-K433#S0S

Applicable amplifier: αiSP 22-B



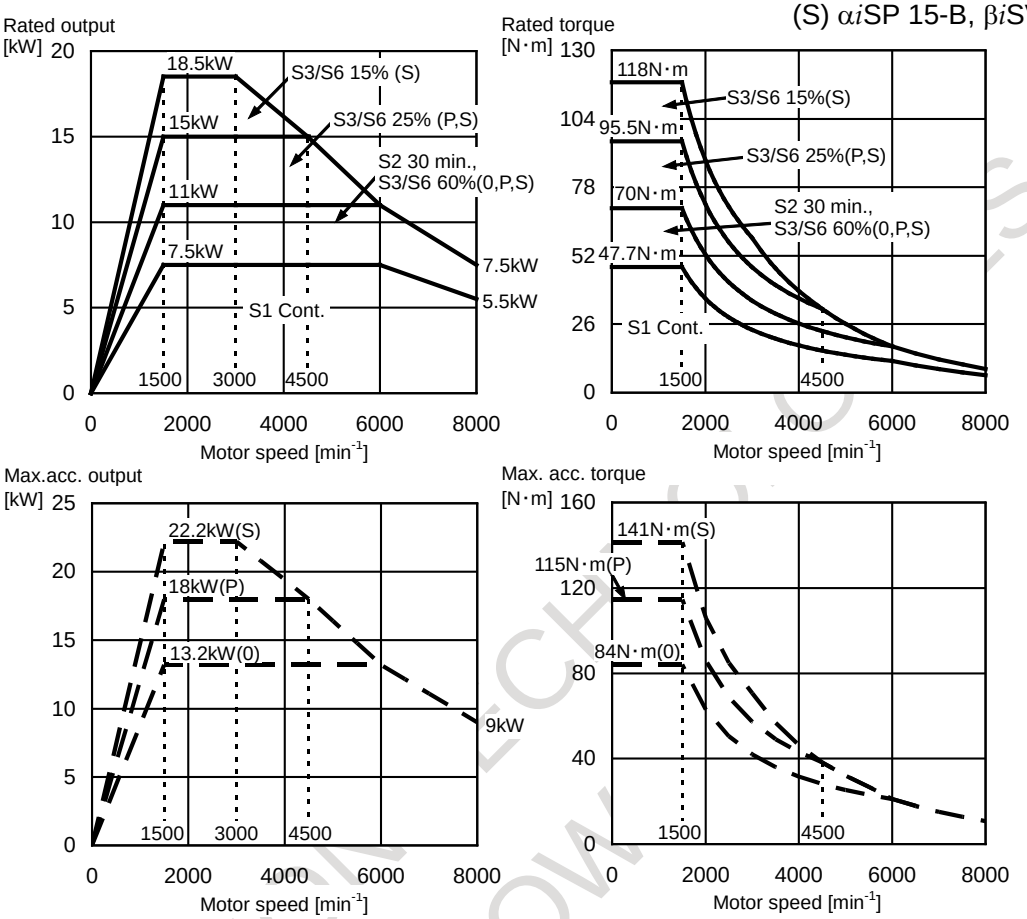
Item		Symbol	Value	Unit
Model			#S0S	
Rated output	S1 continuous rated	P_C	7.5	kW
	S2 30 min., S3/S6 60% rated		11	kW
	S3/S6 25% rated		15	kW
	S3/S6 15% rated		18	kW
Rated current	S1 continuous rated	I_C	59	A
	S2 30 min., S3/S6 60% rated		74	A
	S3/S6 25% rated		91	A
	S3/S6 15% rated		105	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	15000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			33.0	kW
Continuous rated torque in the constant torque range		T_b	23.9	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0179	$kg·m^2$
Weight		W	51	kg
Winding resistance (U-V, V-W, and W-U)		R	29.8	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			256	λ/rev.
Output shaft seal			Simple labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			50	W

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Model αiI 8/8000-B

Spec. number for motor: A06B-2407-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K407#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0) αiSP 11-B, βiSVSP*-11-B
(P) αiSP 15-B, βiSVSP*-15-B
(S) αiSP 15-B, βiSVSP*-18-B



Item		Symbol	Value			Unit
Model			#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	7.5	7.5	7.5	kW
	S2 30 min., S3/S6 60% rated		11	11	11	kW
	S3/S6 25% rated		-	15	15	kW
	S3/S6 15% rated		-	-	18.5	kW
Rated current	S1 continuous rated	I_C	44	44	44	A
	S2 30 min., S3/S6 60% rated		56	56	63	A
	S3/S6 25% rated		-	71	71	A
	S3/S6 15% rated		-	-	79	A
Speed	Base speed	N_b	1500			min^{-1}
	Max. speed	N_{max}	8000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output			kW
Maximum output at acceleration for PS selection		P_f	13.2	18.0	22.2	kW
Continuous rated torque in the constant torque range		T_b	47.7			N·m
Number of poles			4			
Moment of inertia of the rotor		J_m	0.0275			$kg·m^2$
Weight		W	80			kg
Winding resistance (U-V, V-W, and W-U)		R	106			mΩ
Built-in detector			αiM sensor or αiMZ sensor contained			
Number of teeth for speed detection			256			λ/rev.
Output shaft seal			Oil seal			
Degree of protection			IP54			
Vibration			V5 (option V3)			
Noise			75 or less			dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)			
Rated power of the cooling fan			50			W

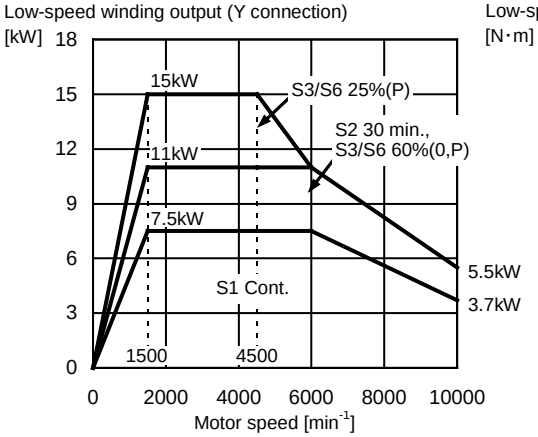
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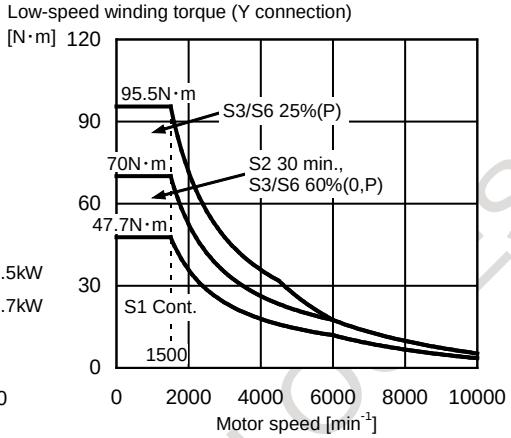
Model αiI 8/10000-B

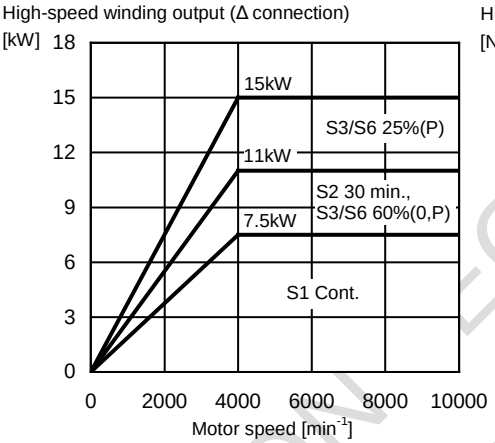
Spec. number for motor: A06B-2427-B□□□

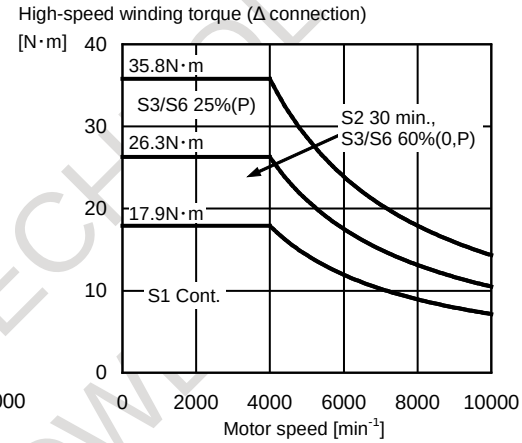
Spec. numbers for output specification nameplates: A06B-1230-K427#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 11-B, βiSVSP*-11-B
(P) αiSP 15-B, βiSVSP*-15-B

Rated output









Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	7.5	7.5	7.5	7.5	kW
	S2 30 min., S3/S6 60% rated		11	11	11	11	kW
	S3/S6 25% rated		-	15	-	15	kW
Rated current	S1 continuous rated	I_C	43	43	46	46	A
	S2 30 min., S3/S6 60% rated		53	52	57	53	A
	S3/S6 25% rated		-	66	-	67	A
Speed	Base speed	N_b	1500		4000		min^{-1}
	Max. speed	N_{max}	12000		12000		min^{-1}
Switching speed			4000				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection		P_f	13.2	18.0	13.2	18.0	kW
Continuous rated torque in the constant torque range		T_b	47.7		17.9		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.0275				$kg·m^2$
Weight		W	80				kg
Winding resistance (U-X, V-Y, and W-Z)			56.0				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Simple labyrinth				
Degree of protection			IP54 (The shaft-through portion is excluded)				
Vibration			V5 (option V3)				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			50				W

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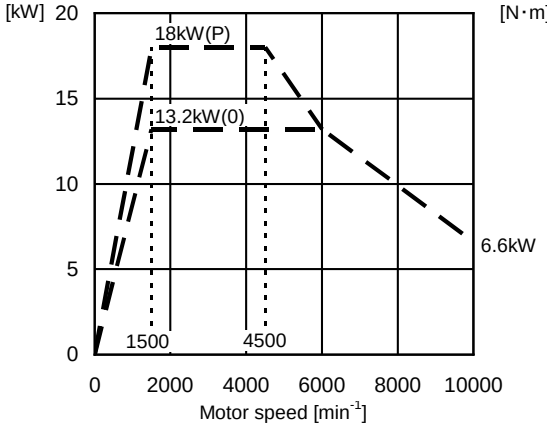
Model αiI 8/10000-B

Spec. number for motor: A06B-2427-B□□□

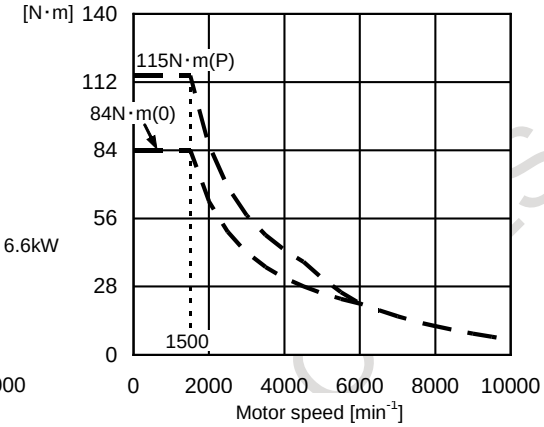
Spec. numbers for output specification nameplates: A06B-1230-K427#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 11-B, βiSVSP*-11-B
(P) αiSP 15-B, βiSVSP*-15-B

Max.acc. output

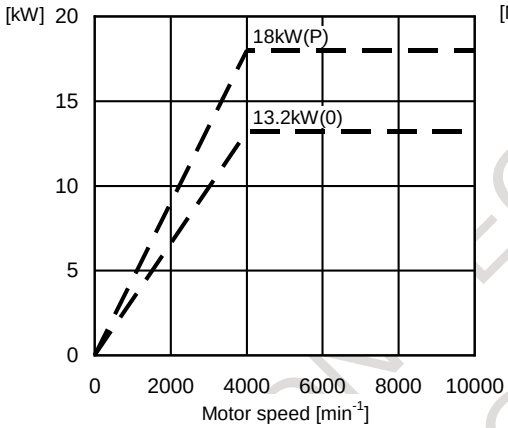
Low-speed winding output (Y connection)



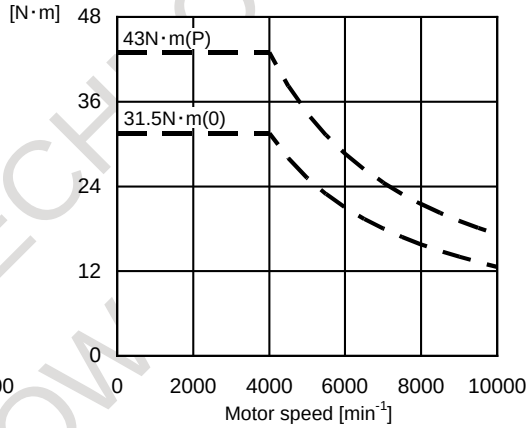
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



Low-speed winding torque (Δ connection)



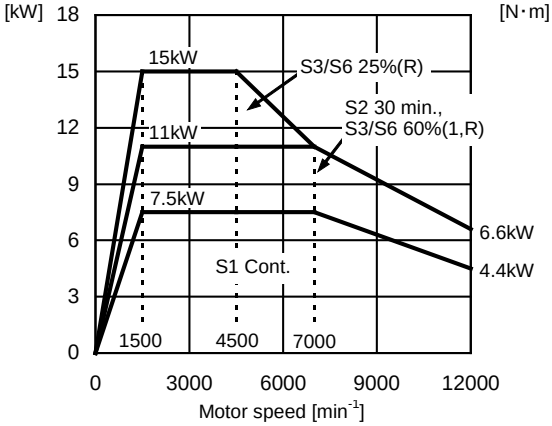
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Model αiI 8/12000-B

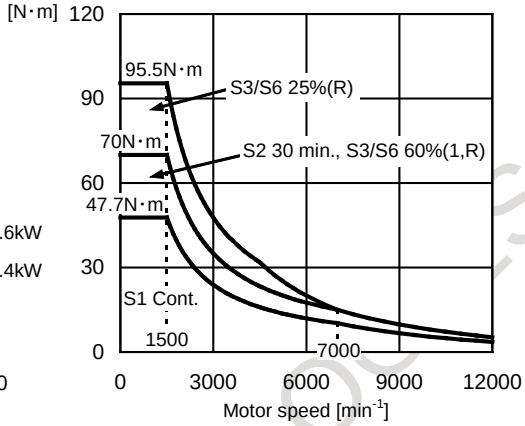
Spec. number for motor: A06B-2427-B13□#0101

Spec. numbers for output specification nameplates: A06B-1230-K427#S01→(1), #S0R→(R)
Rated output Applicable amplifier: αiSP 15-B, βiSVSP*-15-B

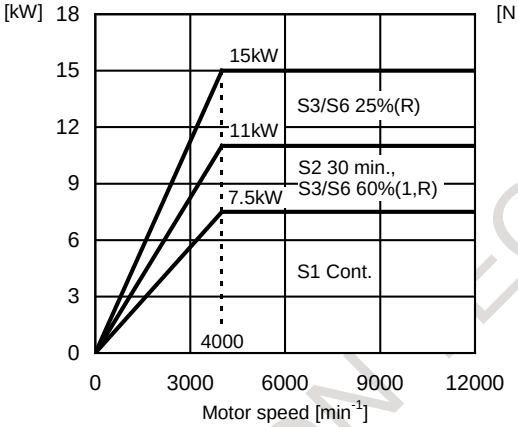
Low-speed winding output (Y connection)



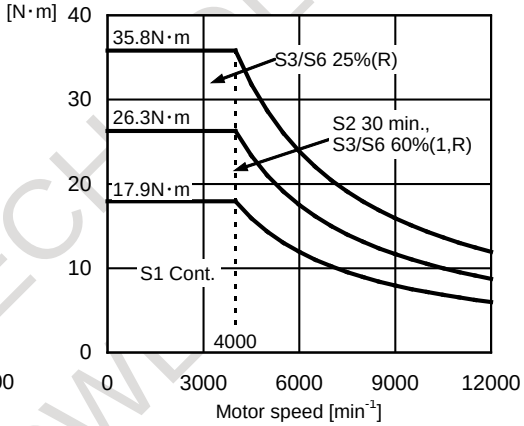
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S01	#S0R	#S01	#S0R	
Rated output	S1 continuous rated	P_C	7.5	7.5	7.5	7.5	kW
	S2 30 min., S3/S6 60% rated		11	11	11	11	kW
	S3/S6 25% rated		-	15	-	15	kW
Rated current	S1 continuous rated	I_C	49	49	51	51	A
	S2 30 min., S3/S6 60% rated		61	61	62	62	A
	S3/S6 25% rated		-	72	-	81	A
Speed	Base speed	N_b	1500		4000		min^{-1}
	Max. speed	N_{max}	12000		12000		min^{-1}
Switching speed			4000				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection		P_f	13.2	18.0	13.2	18.0	kW
Continuous rated torque in the constant torque range		T_b	47.7		17.9		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.0275				$kg·m^2$
Weight		W	80				kg
Winding resistance (U-X, V-Y, and W-Z)			56.0				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Simple labyrinth				
Degree of protection			IP54 (The shaft-through portion is excluded)				
Vibration			V3				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			50				W

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Model αiI 8/12000-B

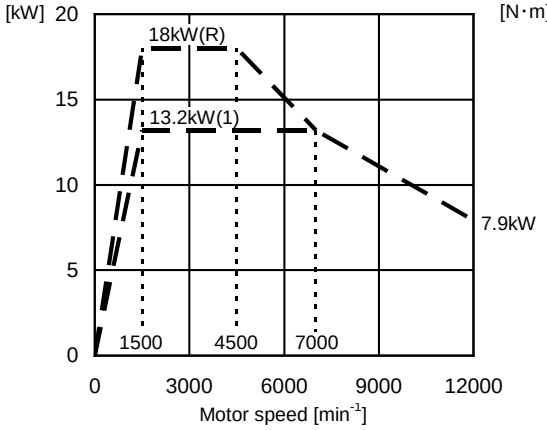
Spec. number for motor: A06B-2427-B13□#0101

Spec. numbers for output specification nameplates: A06B-1230-K427#S01→(1), #S0R→(R)

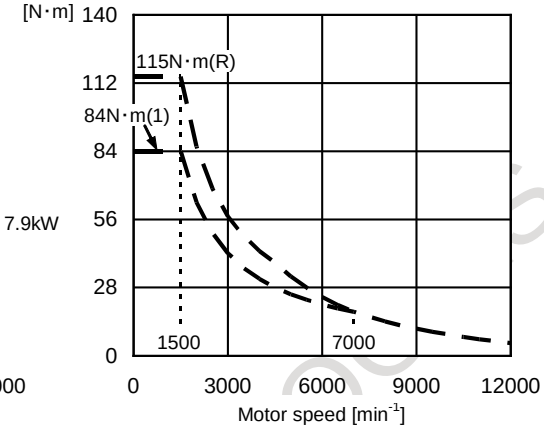
Max.acc. output

Applicable amplifier: αiSP 15-B, βiSVSP*-15-B

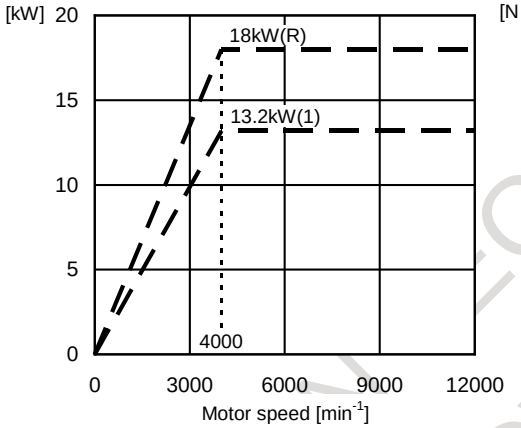
Low-speed winding output (Y connection)



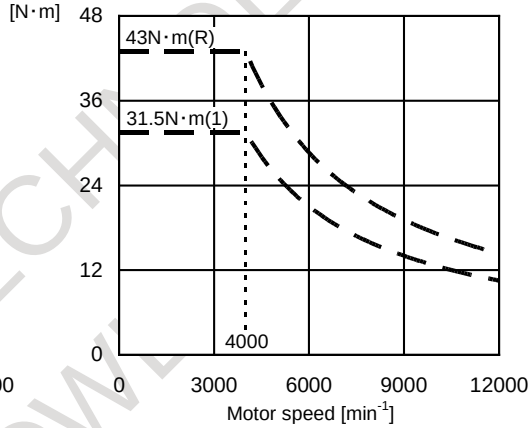
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)

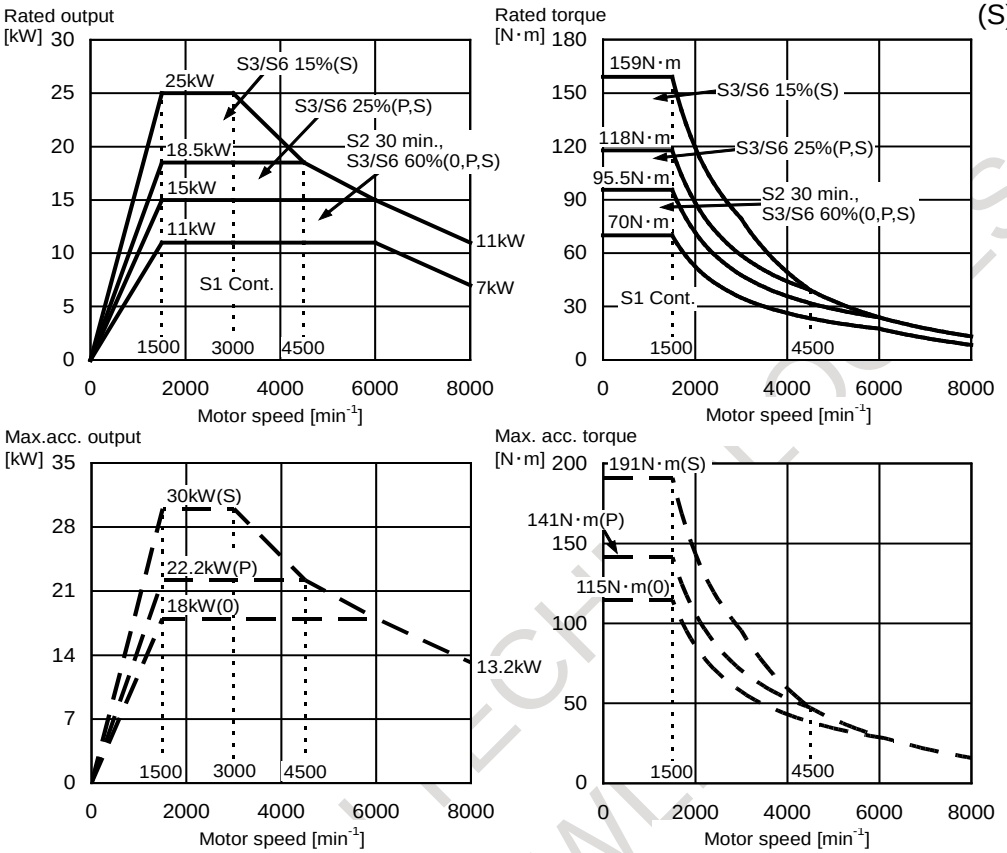


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Model αiI 12/8000-B

Spec. number for motor: A06B-2408-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K408#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0) αiSP 15-B, βiSVSP*-15-B
(P) αiSP 15-B, βiSVSP*-18-B
(S) αiSP 22-B



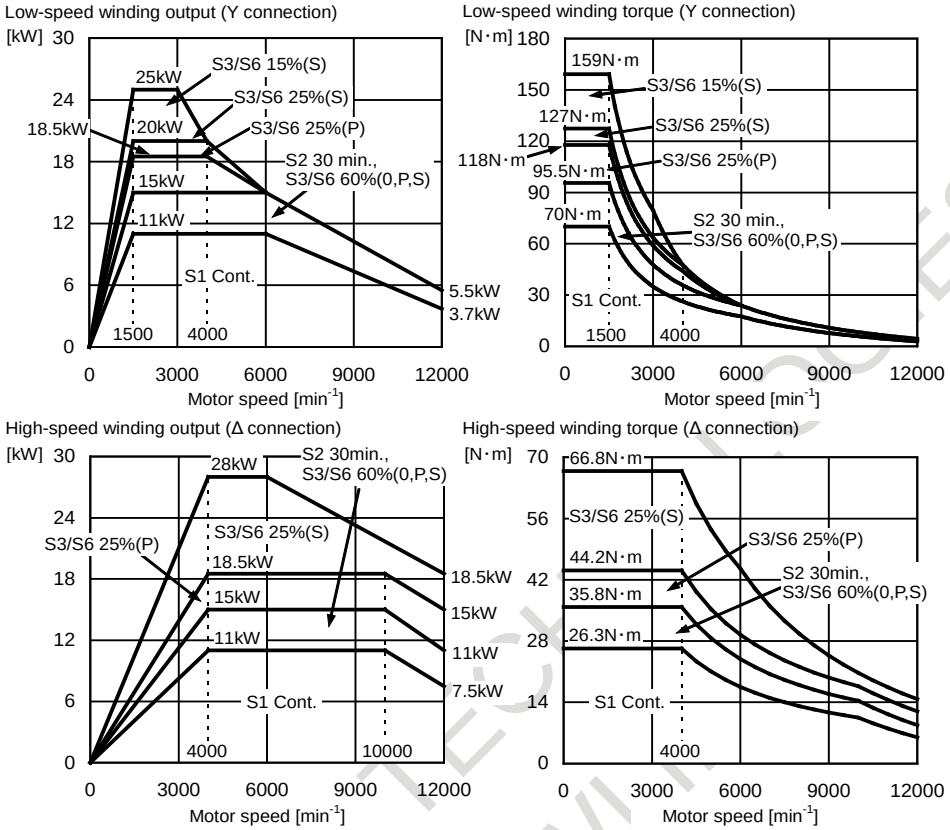
Item		Symbol	Value			Unit
Model			#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	11	11	11	kW
	S2 30 min., S3/S6 60% rated		15	15	15	kW
	S3/S6 25% rated		-	18.5	18.5	kW
	S3/S6 15% rated		-	-	25	kW
Rated current	S1 continuous rated	I_C	57	57	57	A
	S2 30 min., S3/S6 60% rated		79	79	79	A
	S3/S6 25% rated		-	92	92	A
	S3/S6 15% rated		-	-	103	A
Speed	Base speed	N_b	1500			min^{-1}
	Max. speed	N_{max}	8000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output			kW
Maximum output at acceleration for PS selection			18.0	22.2	30.0	kW
Continuous rated torque in the constant torque range		T_b	70.0			N·m
Number of poles			4			
Moment of inertia of the rotor		J_m	0.07			$kg·m^2$
Weight		W	95			kg
Winding resistance (U-V, V-W, and W-U)		R	105			mΩ
Built-in detector			αiM sensor or αiMZ sensor contained			
Number of teeth for speed detection			256			λ/rev.
Output shaft seal			Oil seal			
Degree of protection			IP54			
Vibration			V5 (option V3)			
Noise			75 or less			dB(A)
Cooling system			Totally enclosed and fan cooled(IC0A6)			
Rated power of the cooling fan			100			W

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Model αiI 12/12000-B — Spec. number for motor: A06B-2428-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K428#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0) αiSP 15-B, βiSVSP*-15-B
(P) αiSP 15-B, βiSVSP*-18-B
(S) αiSP 22-B

Rated output



Item		Symbol	Value						Unit
Connection			Low-speed winding (Y connection)			High-speed winding (Δ connection)			
Model			#S00	#S0P	#S0S	#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	11	11	11	11	11	11	kW
	S2 30 min., S3/S6 60% rated		15	15	15	15	15	15	kW
	S3/S6 25% rated		-	18.5	20	-	18.5	28	kW
	S3/S6 15% rated		-	-	25	-	-	-	kW
Rated current	S1 continuous rated	I_C	54	54	57	54	54	51	A
	S2 30 min., S3/S6 60% rated		64	64	77	64	64	63	A
	S3/S6 25% rated		-	76	91	-	76	104	A
	S3/S6 15% rated		-	-	101	-	-	-	A
Speed	Base speed	N_b	1500			4000			min^{-1}
	Max. speed	N_m	12000			12000			min^{-1}
Switching speed			4000						min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output						kW
Maximum output at acceleration for PS selection			18.0	22.2	30.0	18.0	22.2	33.6	kW
Continuous rated torque in the constant torque range		T_b	70.0			26.3			N·m
Number of poles			4						
Moment of inertia of the rotor		J_m	0.07						$kg·m^2$
Weight		W	95						kg
Winding resistance (U-X, V-Y, and W-Z)			61.7						mΩ
Built-in detector			αiM sensor or αiMZ sensor contained						
Number of teeth for speed detection			256						λ/rev.
Output shaft seal			Simple labyrinth						
Degree of protection			IP54 (The shaft-through portion is excluded)						
Vibration			V5 (option V3)						
Noise			75 or less						dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)						
Rated power of the cooling fan			100						W

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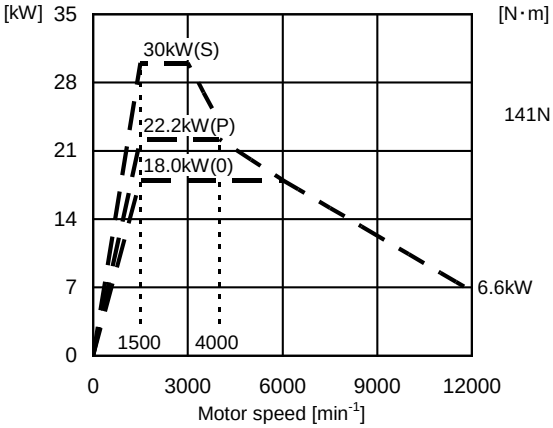
Model αiI 12/12000-B

Spec. number for motor: A06B-2428-B□□□

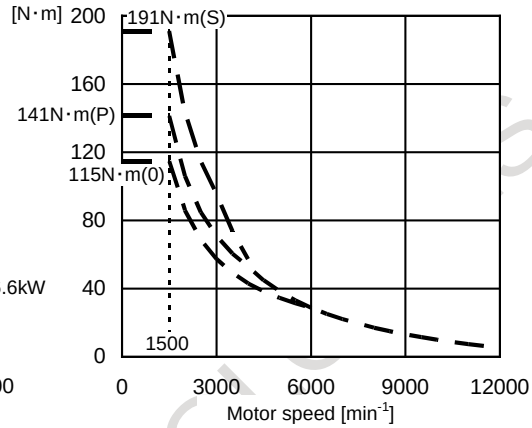
Spec. numbers for output specification nameplates: A06B-1230-K428#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0) αiSP 15-B, βiSVSP*-15-B
(P) αiSP 15-B, βiSVSP*-18-B
(S) αiSP 22-B

Max.acc. output

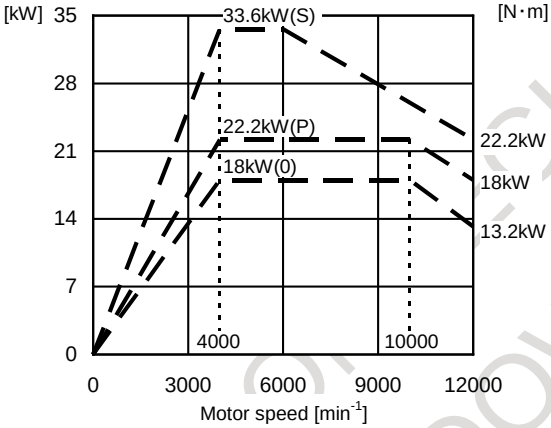
Low-speed winding output (Y connection)



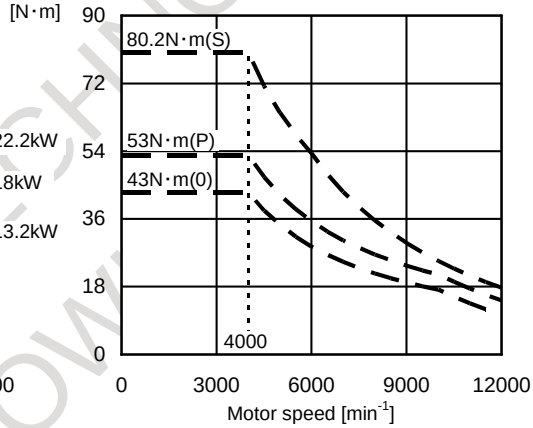
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)

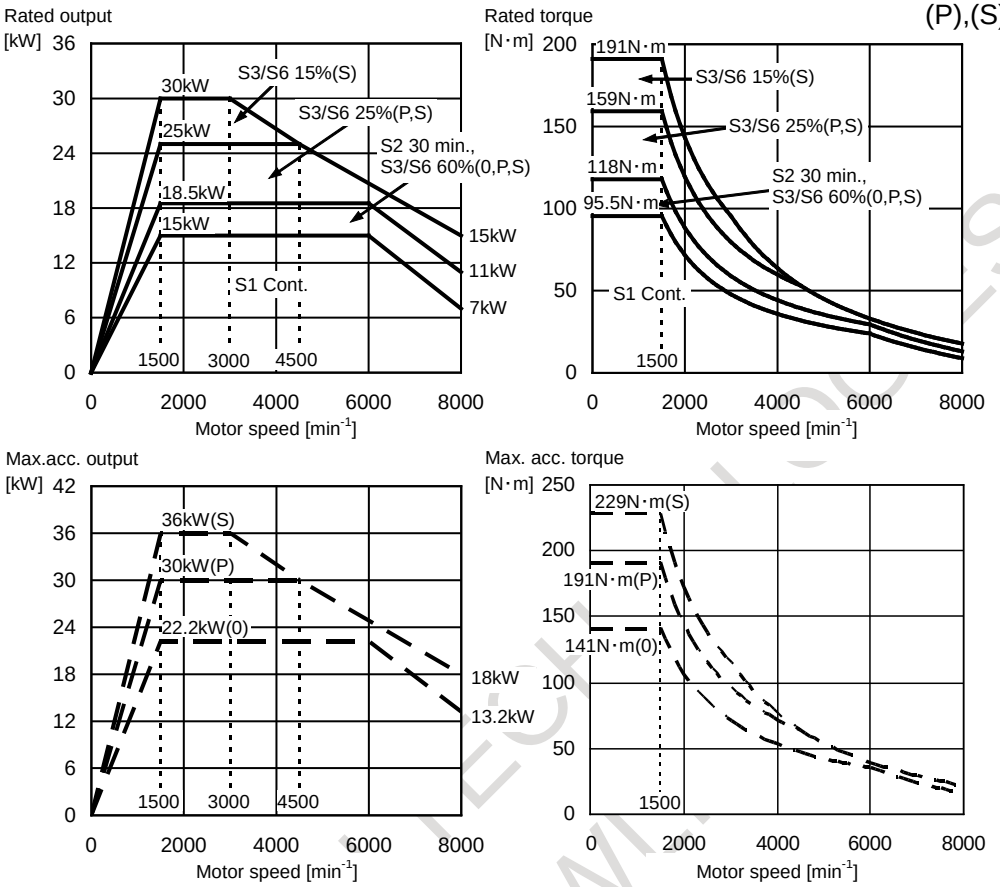


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Model αiI 15/8000-B

Spec. number for motor: A06B-2409-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K409#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0) αiSP 22-B, βiSVSP*-18-B (P),(S) αiSP 22-B



Item		Symbol	Value			Unit
Model			#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	15	15	15	kW
	S2 30 min., S3/S6 60% rated		18.5	18.5	18.5	kW
	S3/S6 25% rated		-	25	25	kW
	S3/S6 15% rated		-	-	30	kW
Rated current	S1 continuous rated	I_C	77	77	77	A
	S2 30 min., S3/S6 60% rated		96	96	96	A
	S3/S6 25% rated		-	110	110	A
	S3/S6 15% rated		-	-	123	A
Speed	Base speed	N_b	1500			min^{-1}
	Max. speed	N_{max}	8000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output			kW
Maximum output at acceleration for PS selection			22.2	30.0	36.0	kW
Continuous rated torque in the constant torque range		T_b	95.5			N·m
Number of poles			4			
Moment of inertia of the rotor		J_m	0.09			$kg·m^2$
Weight		W	110			kg
Winding resistance (U-V, V-W, and W-U)		R	79.0			mΩ
Built-in detector			αiM sensor or αiMZ sensor contained			
Number of teeth for speed detection			256			λ/rev.
Output shaft seal			Oil seal			
Degree of protection			IP54			
Vibration			V5 (option V3)			
Noise			75 or less			dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)			
Rated power of the cooling fan			100			W

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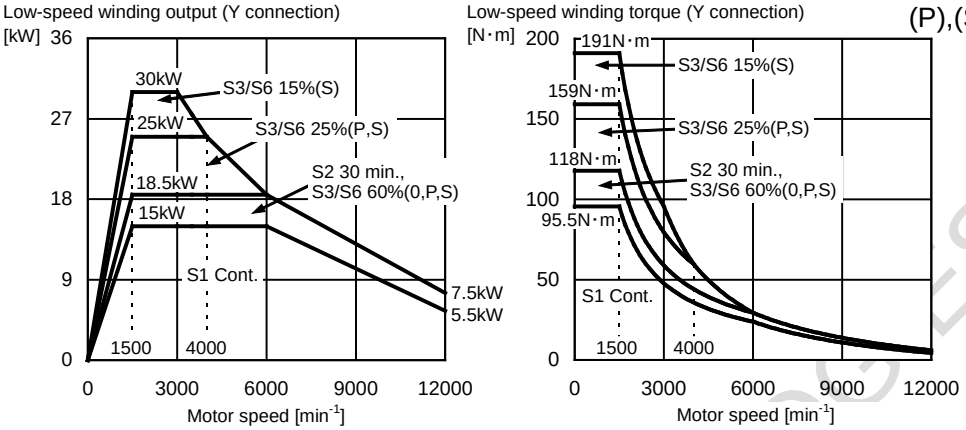
Model αiI 15/12000-B

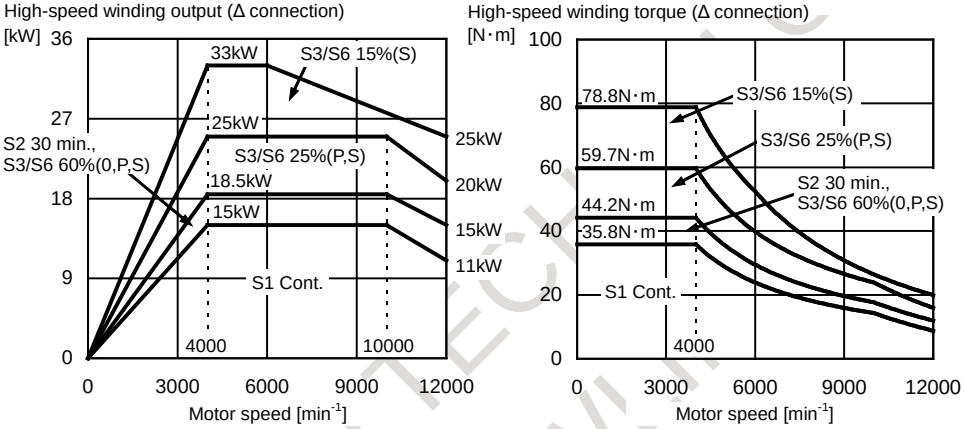
Spec. number for motor: A06B-2429-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K429#S00→(0), #S0P→(P), #S0S→(S)

Rated output

Applicable amplifier: (0) αiSP 22-B, βiSVSP*-18-B (P),(S) αiSP 22-B





Item		Symbol	Value						Unit
Connection			Low-speed winding (Y connection)			High-speed winding (Δ connection)			
Model			#S00	#S0P	#S0S	#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	15	15	15	15	15	15	kW
	S2 30 min., S3/S6 60% rated		18.5	18.5	18.5	18.5	18.5	18.5	kW
	S3/S6 25% rated		-	25	25	-	25	25	kW
	S3/S6 15% rated		-	-	30	-	-	33	kW
Rated current	S1 continuous rated	I_C	74	74	74	71	71	71	A
	S2 30 min., S3/S6 60% rated		85	85	96	81	81	85	A
	S3/S6 25% rated		-	105	110	-	103	107	A
	S3/S6 15% rated		-	-	123	-	-	130	A
Speed	Base speed	N_b	1500			4000			min^{-1}
	Max. speed	N_m	12000			12000			min^{-1}
Switching speed			4000						min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output						kW
Maximum output at acceleration for PS selection			22.2	30.0	36.0	22.2	30.0	39.6	kW
Continuous rated torque in the constant torque range		T_b	95.5			35.8			N·m
Number of poles			4						
Moment of inertia of the rotor		J_m	0.09						$kg·m^2$
Weight		W	110						kg
Winding resistance (U-X, V-Y, and W-Z)			40.0						mΩ
Built-in detector			αiM sensor or αiMZ sensor contained						
Number of teeth for speed detection			256						λ/rev.
Output shaft seal			Simple labyrinth						
Degree of protection			IP54 (The shaft-through portion is excluded)						
Vibration			V5 (option V3)						
Noise			75 or less						dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)						
Rated power of the cooling fan			100						W

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Model αiI 15/12000-B

Spec. number for motor: A06B-2429-B□□□

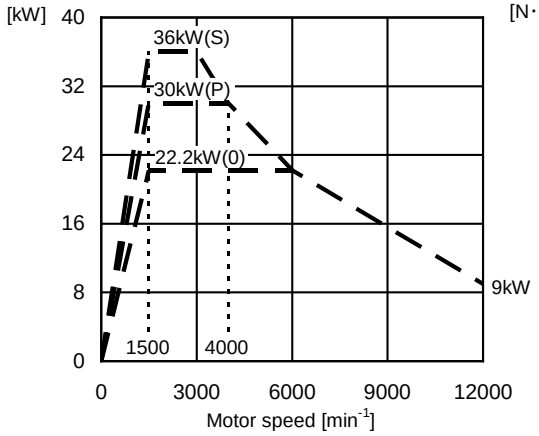
Spec. numbers for output specification nameplates: A06B-1230-K429#S00→(0), #S0P→(P), #S0S→(S)

Applicable amplifier: (0) αiSP 22-B, βiSVSP*-18-B

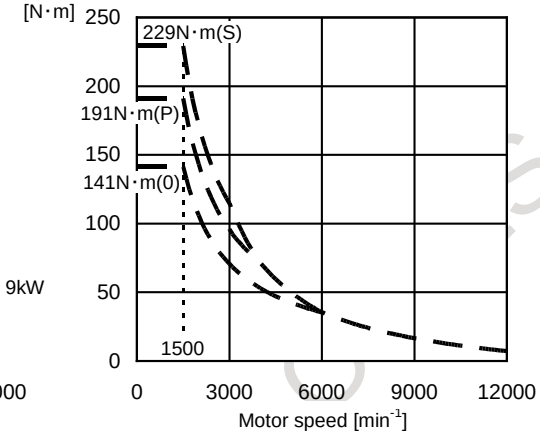
(P),(S) αiSP 22-B

Max.acc. output

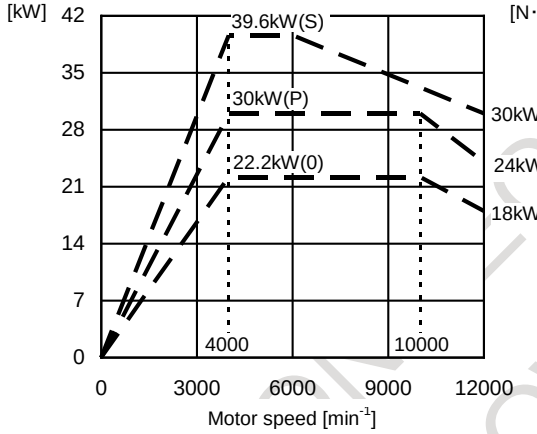
Low-speed winding output (Y connection)



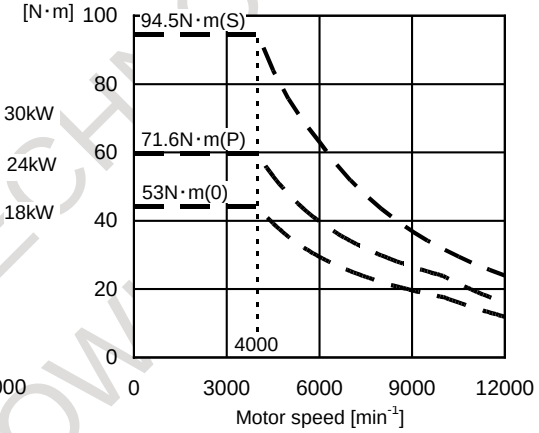
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)

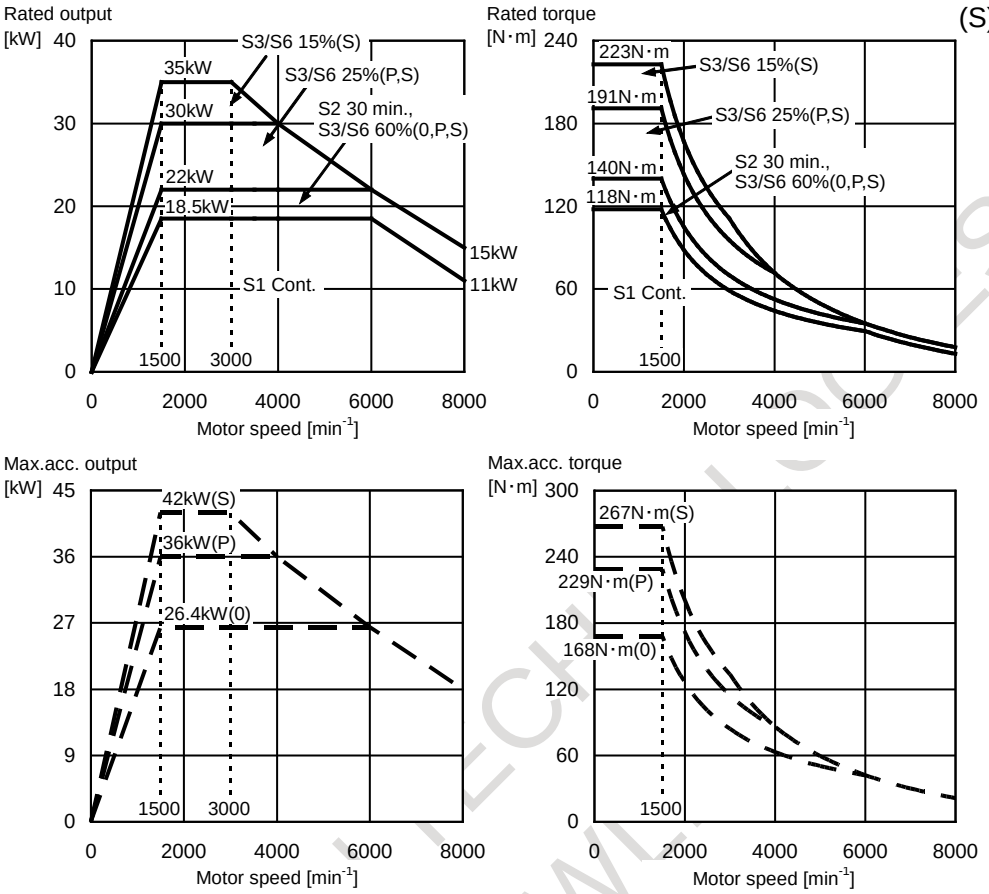


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Model αiI 18/8000-B

Spec. number for motor: A06B-2410-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K410#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0),(P) αiSP 22-B
(S) αiSP 26-B



Item		Symbol	Value			Unit
Model			#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	18.5	18.5	18.5	kW
	S2 30 min., S3/S6 60% rated		22	22	22	kW
	S3/S6 25% rated		-	30	30	kW
	S3/S6 15% rated		-	-	35	kW
Rated current	S1 continuous rated	I_C	82	82	82	A
	S2 30 min., S3/S6 60% rated		95	95	95	A
	S3/S6 25% rated		-	120	122	A
	S3/S6 15% rated		-	-	133	A
Speed	Base speed	N_b	1500			min^{-1}
	Max. speed	N_{max}	8000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output			kW
Maximum output at acceleration for PS selection			26.4	36.0	42.0	kW
Continuous rated torque in the constant torque range		T_b	118			N·m
Number of poles			4			
Moment of inertia of the rotor		J_m	0.105			$kg·m^2$
Weight		W	125			kg
Winding resistance (U-V, V-W, and W-U)		R	84.9			mΩ
Built-in detector			αiM sensor or αiMZ sensor contained			
Number of teeth for speed detection			256			λ/rev.
Output shaft seal			Oil seal			
Degree of protection			IP54			
Vibration			V5 (option V3)			
Noise			75 or less			dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)			
Rated power of the cooling fan			100			W

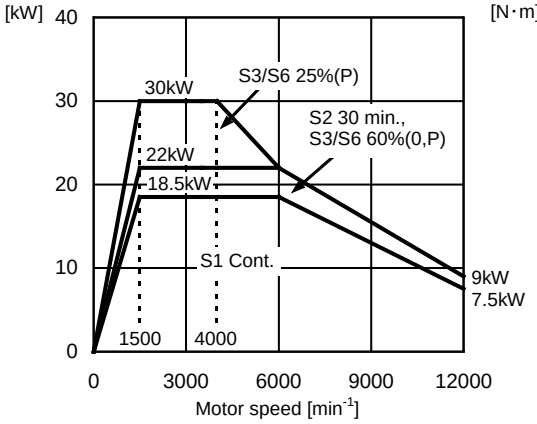
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Model αiI 18/12000-B — Spec. number for motor: A06B-2430-B□□□

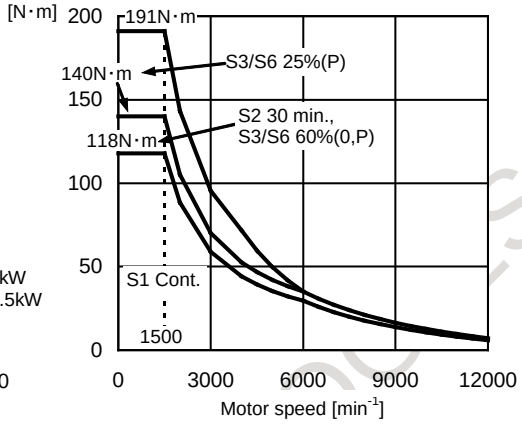
Spec. numbers for output specification nameplates: A06B-1230-K430#S00→(0), #S0P→(P)

Rated output — Applicable amplifier: αiSP 22-B

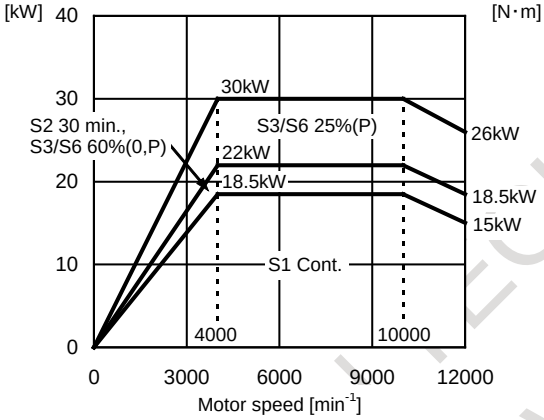
Low-speed winding output (Y connection)



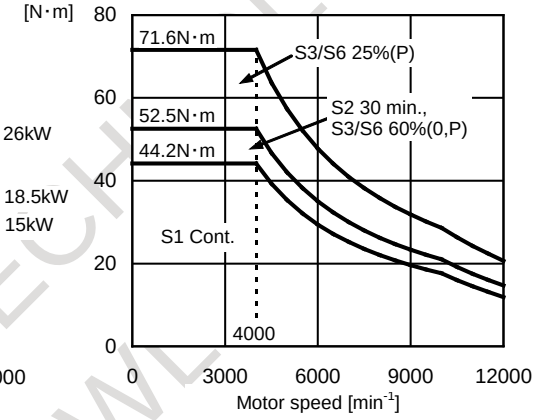
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	18.5	18.5	18.5	18.5	kW
	S2 30 min., S3/S6 60% rated		22	22	22	22	kW
	S3/S6 25% rated		-	30	-	30	kW
Rated current	S1 continuous rated	I_C	79	79	79	79	A
	S2 30 min., S3/S6 60% rated		91	91	91	91	A
	S3/S6 25% rated		-	120	-	111	A
Speed	Base speed	N_b	1500		4000		min^{-1}
	Max. speed	N_m	12000		12000		min^{-1}
Switching speed			4000				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection			26.4	36.0	26.4	36.0	kW
Continuous rated torque in the constant torque range		T_b	118		44.2		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.105				$kg·m^2$
Weight		W	125				kg
Winding resistance (U-X, V-Y, and W-Z)			43.7				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Simple labyrinth				
Degree of protection			IP54 (The shaft-through portion is excluded)				
Vibration			V5 (option V3)				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			100				W

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Model αiI 18/12000-B

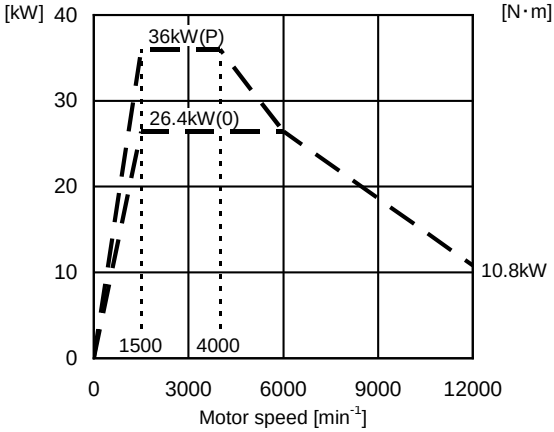
Spec. number for motor: A06B-2430-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K430#S00→(0), #S0P→(P)

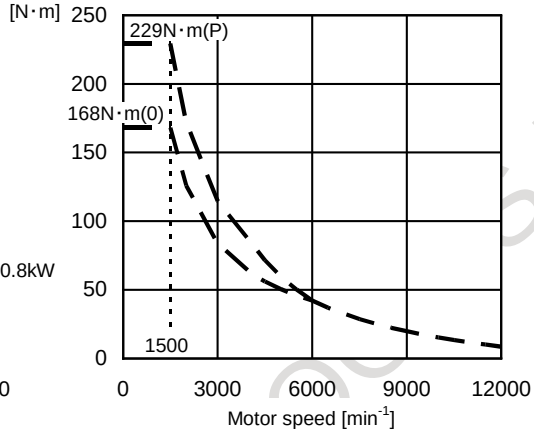
Max.acc. output

Applicable amplifier: αiSP 22-B

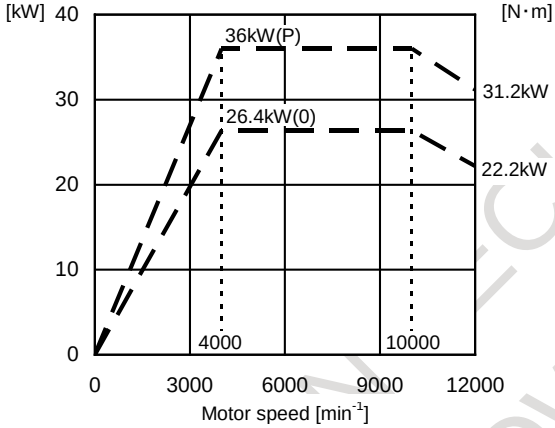
Low-speed winding output (Y connection)



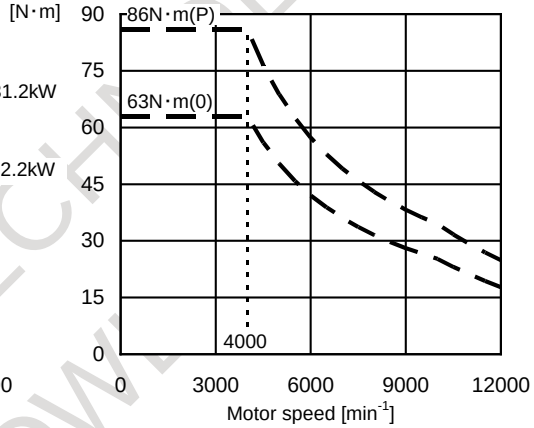
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)

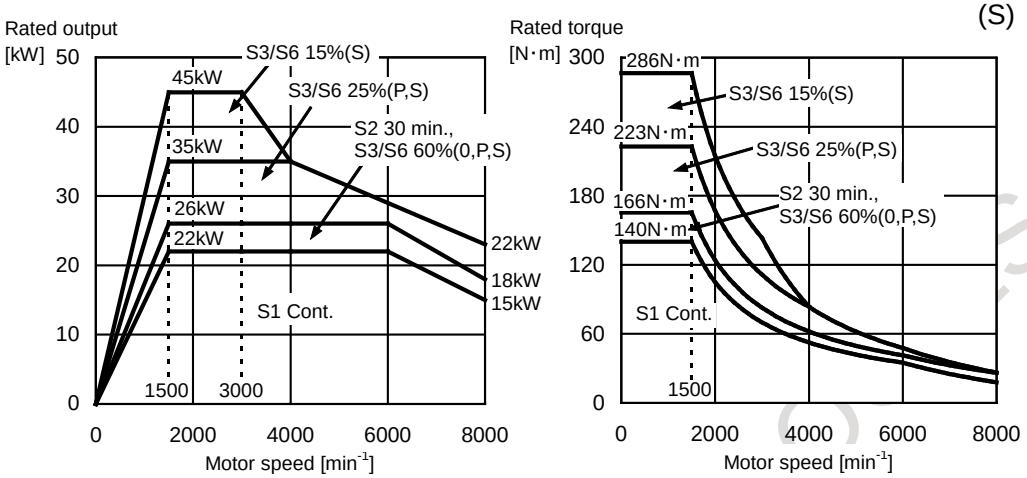


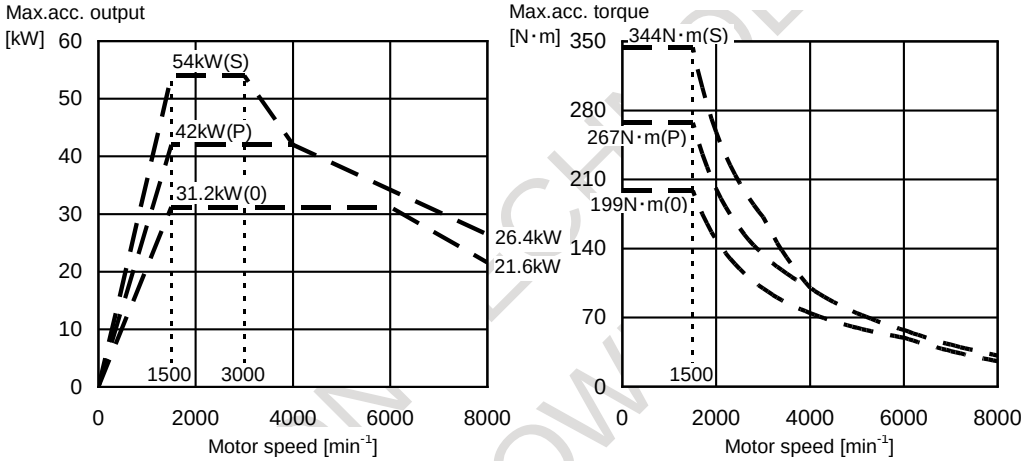
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Model αiI 22/8000-B

Spec. number for motor: A06B-2411-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K411#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0),(P) αiSP 26-B
(S) αiSP 30-B





Item		Symbol	Value			Unit
Model			#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	22	22	22	kW
	S2 30 min., S3/S6 60% rated		26	26	26	kW
	S3/S6 25% rated		-	35	35	kW
	S3/S6 15% rated		-	-	45	kW
Rated current	S1 continuous rated	I_C	105	105	105	A
	S2 30 min., S3/S6 60% rated		127	127	127	A
	S3/S6 25% rated		-	147	152	A
	S3/S6 15% rated		-	-	172	A
Speed	Base speed	N_b	1500			min^{-1}
	Max. speed	N_{max}	8000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output			kW
Maximum output at acceleration for PS selection			31.2	42.0	54.0	kW
Continuous rated torque in the constant torque range		T_b	140			N·m
Number of poles			4			
Moment of inertia of the rotor		J_m	0.128			$kg·m^2$
Weight		W	143			kg
Winding resistance (U-V, V-W, and W-U)		R	50.5			mΩ
Built-in detector			αiM sensor or αiMZ sensor contained			
Number of teeth for speed detection			256			λ/rev.
Output shaft seal			Oil seal			
Degree of protection			IP54			
Vibration			V5 (option V3)			
Noise			75 or less			dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)			
Rated power of the cooling fan			100			W

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Model αiI 22/12000-B

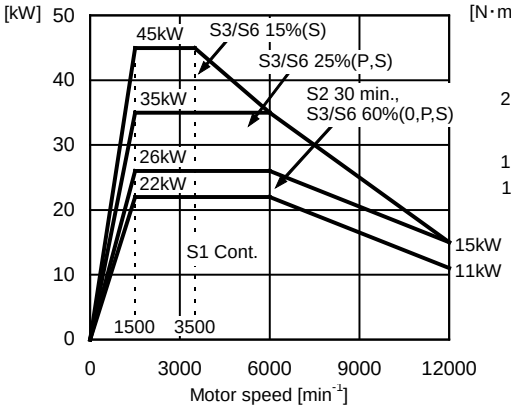
Spec. number for motor: A06B-2431- B□□□

Spec. numbers for output specification nameplates: A06B-1230-K431#S00→(0), #S0P→(P), #S0S→(S)

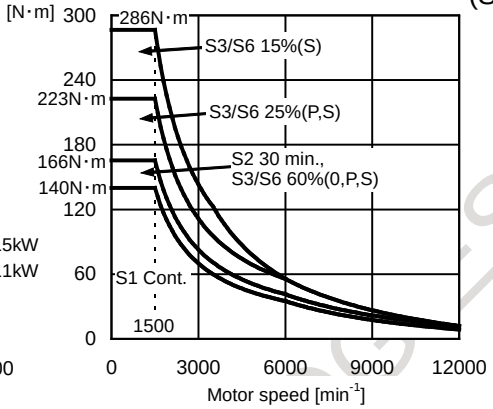
Rated output

Applicable amplifier: (0),(P) αiSP 26-B
(S) αiSP 30-B

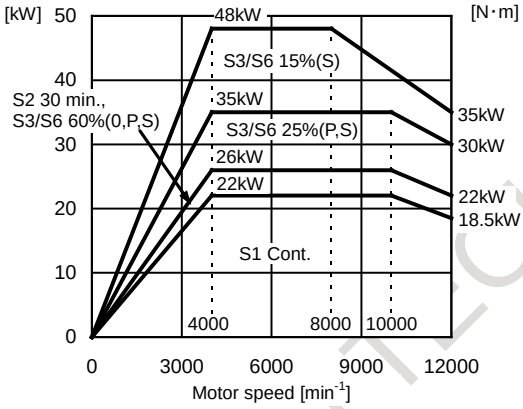
Low-speed winding output (Y connection)



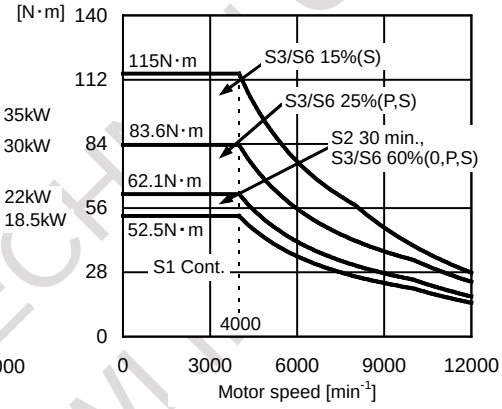
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value						Unit
Connection			Low-speed winding (Y connection)			High-speed winding (Δ connection)			
Model			#S00	#S0P	#S0S	#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	22	22	22	22	22	22	kW
	S2 30 min., S3/S6 60% rated		26	26	26	26	26	26	kW
	S3/S6 25% rated		-	35	35	-	35	35	kW
	S3/S6 15% rated		-	-	45	-	-	48	kW
Rated current	S1 continuous rated	I_C	100	100	100	101	101	101	A
	S2 30 min., S3/S6 60% rated		111	111	111	112	112	112	A
	S3/S6 25% rated		-	150	150	-	140	140	A
	S3/S6 15% rated		-	-	183	-	-	186	A
Speed	Base speed	N_b	1500			4000			min^{-1}
	Max. speed	N_m	12000			12000			min^{-1}
Switching speed			4000						min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output						kW
Maximum output at acceleration for PS selection			31.2	42.0	54.0	31.2	42.0	57.6	kW
Continuous rated torque in the constant torque range		T_b	140			52.5			N·m
Number of poles			4						
Moment of inertia of the rotor		J_m	0.128						$kg·m^2$
Weight		W	143						kg
Winding resistance (U-X, V-Y, and W-Z)			24.0						mΩ
Built-in detector			αiM sensor or αiMZ sensor contained						
Number of teeth for speed detection			256						λ/rev.
Output shaft seal			Simple labyrinth						
Degree of protection			IP54 (The shaft-through portion is excluded)						
Vibration			V5 (option V3)						
Noise			75 or less						dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)						
Rated power of the cooling fan			100						W

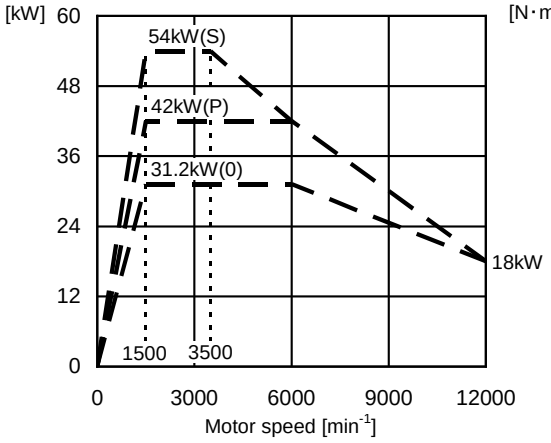
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Model αiI 22/12000-B Spec. number for motor: A06B-2431-B□□□

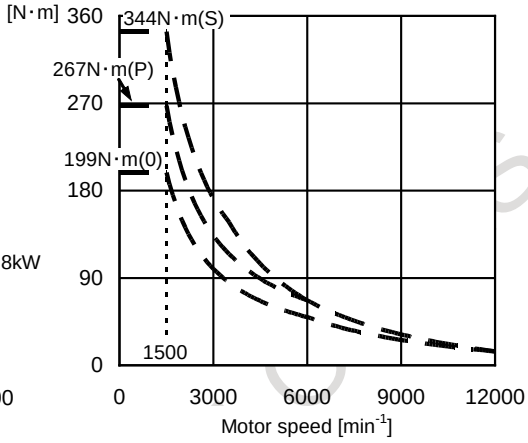
Spec. numbers for output specification nameplates: A06B-1230-K431#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0),(P) αiSP 26-B
(S) αiSP 30-B

Max.acc. output

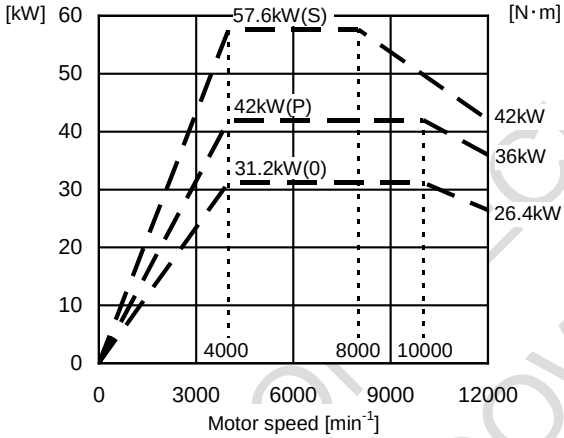
Low-speed winding output (Y connection)



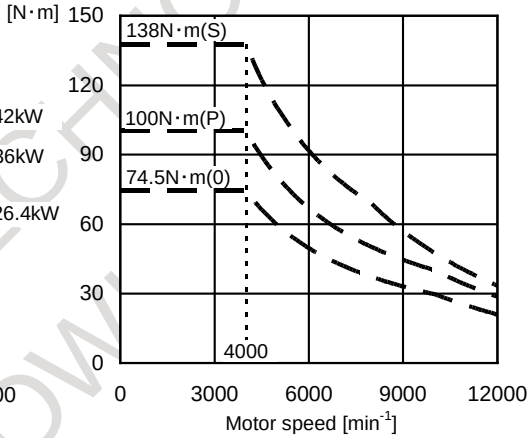
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



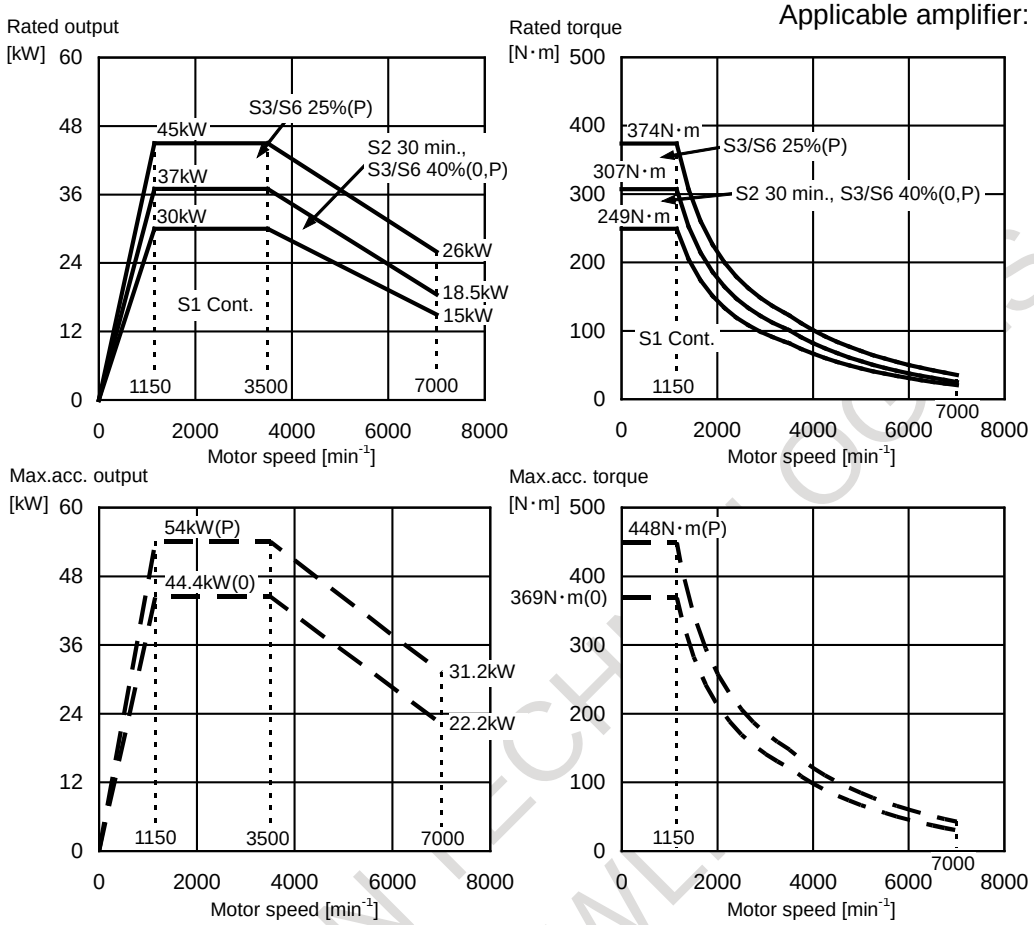
High-speed winding torque (Δ connection)



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Model αiI 30/7000-B Spec. number for motor: A06B-2412-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K412#S00→(0), #S0P→(P)
Applicable amplifier: αiSP 37-B



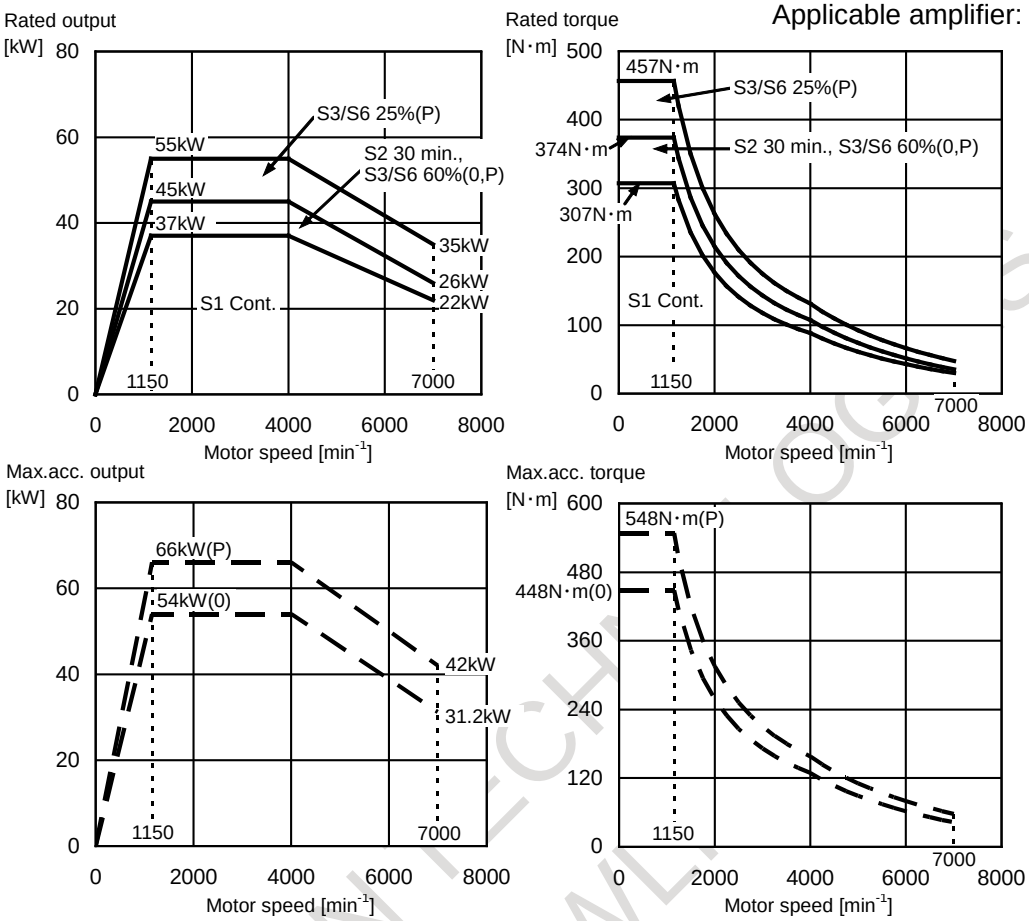
Item		Symbol	Value		Unit
Model			#S00	#S0P	
Rated output	S1 continuous rated	P_C	30	30	kW
	S2 30 min., S3/S6 40% rated		37	37	kW
	S3/S6 25% rated		-	45	kW
Rated current	S1 continuous rated	I_C	144	144	A
	S2 30 min., S3/S6 40% rated		170	170	A
	S3/S6 25% rated		-	205	A
Speed	Base speed	N_b	1150		min^{-1}
	Max. speed	N_{max}	7000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			44.4	54.0	kW
Continuous rated torque in the constant torque range		T_b	249		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.295		$kg·m^2$
Weight		W	250		kg
Winding resistance (U-V, V-W, and W-U)		R	24.3		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			160		W

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Model αiI 40/7000-B Spec. number for motor: A06B-2413-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K413#S00→(0), #S0P→(P)

Applicable amplifier: αiSP 45-B

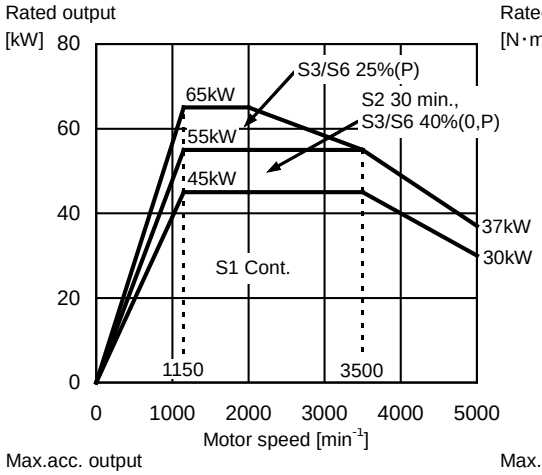


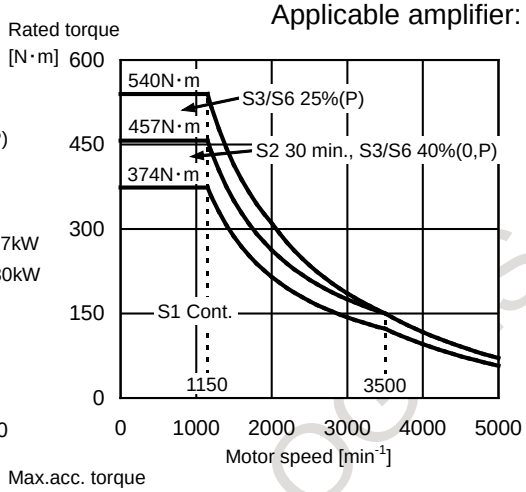
Item		Symbol	Value		Unit
Model			#S00	#S0P	
Rated output	S1 continuous rated	P_C	37	37	kW
	S2 30 min., S3/S6 60% rated		45	45	kW
	S3/S6 25% rated		-	55	kW
Rated current	S1 continuous rated	I_C	189	189	A
	S2 30 min., S3/S6 60% rated		220	220	A
	S3/S6 25% rated		-	258	A
Speed	Base speed	N_b	1150		min^{-1}
	Max. speed	N_{max}	7000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			54.0	66.0	kW
Continuous rated torque in the constant torque range		T_b	307		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.355		$kg·m^2$
Weight		W	290		kg
Winding resistance (U-V, V-W, and W-U)		R	13.8		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled IC0A6		
Rated power of the cooling fan			160		W

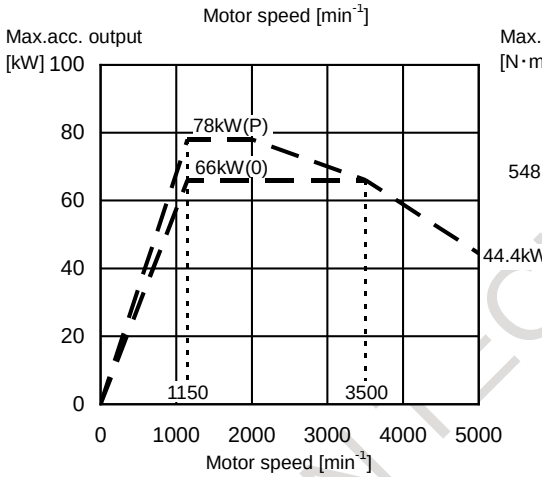
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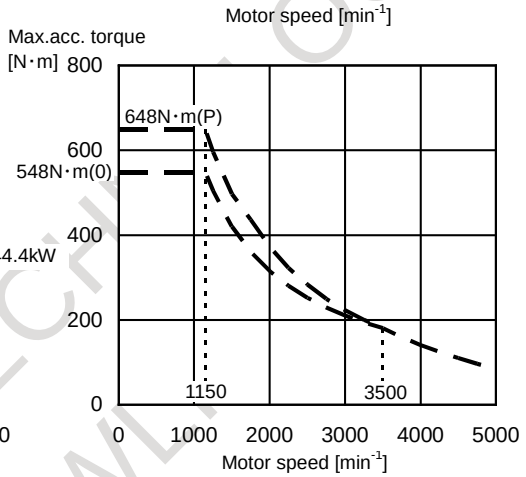
Model αiI 50/5000-B Spec. number for motor: A06B-2414-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K414#S00→(0), #S0P→(P)
Applicable amplifier: αiSP 55-B









Item		Symbol	Value		Unit
Modle			#S00	#S0P	
Rated output	S1 continuous rated	P_C	45	45	kW
	S2 30 min., S3/S6 40% rated		55	55	kW
	S3/S6 25% rated		-	65	kW
Rated current	S1 continuous rated	I_C	224	224	A
	S2 30 min., S3/S6 40% rated		273	273	A
	S3/S6 25% rated		-	288	A
Speed	Base speed	N_b	1150		min^{-1}
	Max. speed	N_{max}	5000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			66.0	78.0	kW
Continuous rated torque in the constant torque range		T_b	374		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.49		$kg·m^2$
Weight		W	460		kg
Winding resistance (U-V, V-W, and W-U)		R	20.8		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V10 (option V5)		
Noise			80 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			185		W

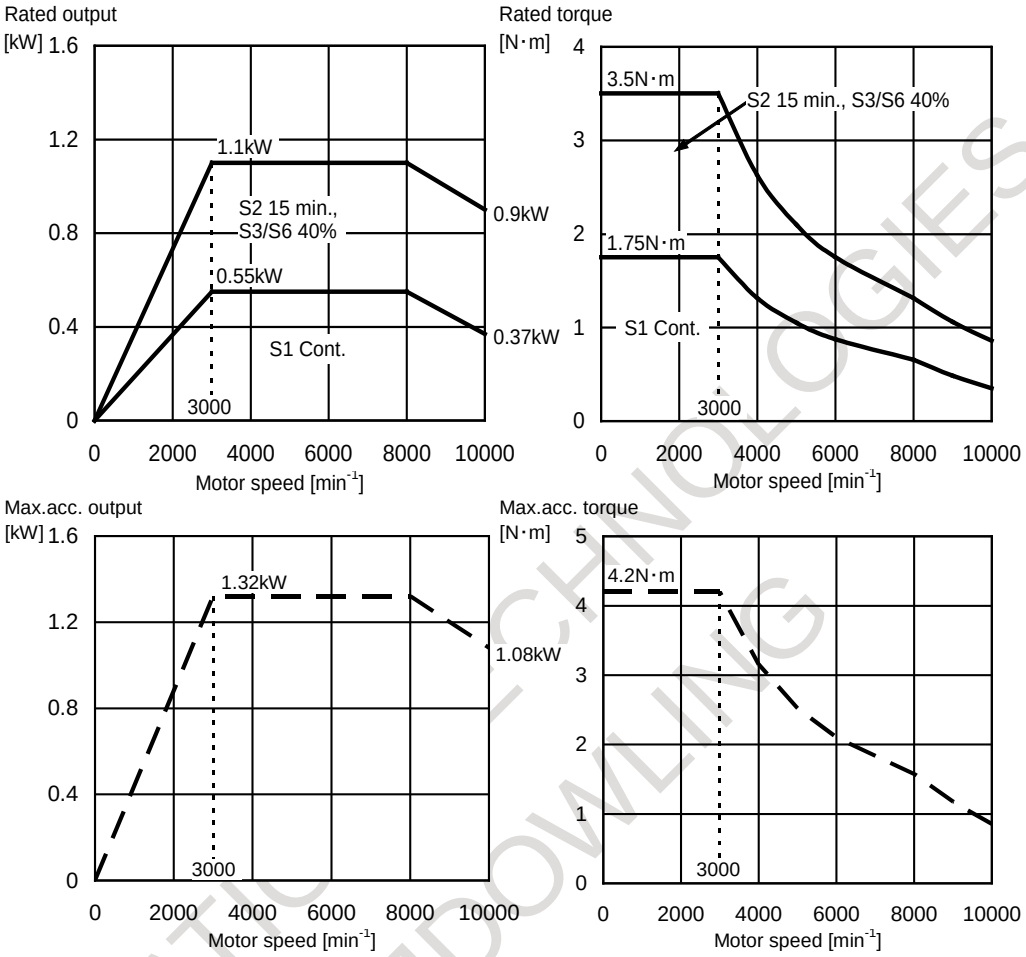
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3.2.3 αiI-B series 400V-type

Model αiI 0.5/10000HV-B

Spec. number for motor: A06B-2501-B□□□

Spec. number for output specification nameplate: A06B-1230-K501#S00
Applicable amplifier: αiSP 5.5HV-B, βiSVSP*-11HV-B



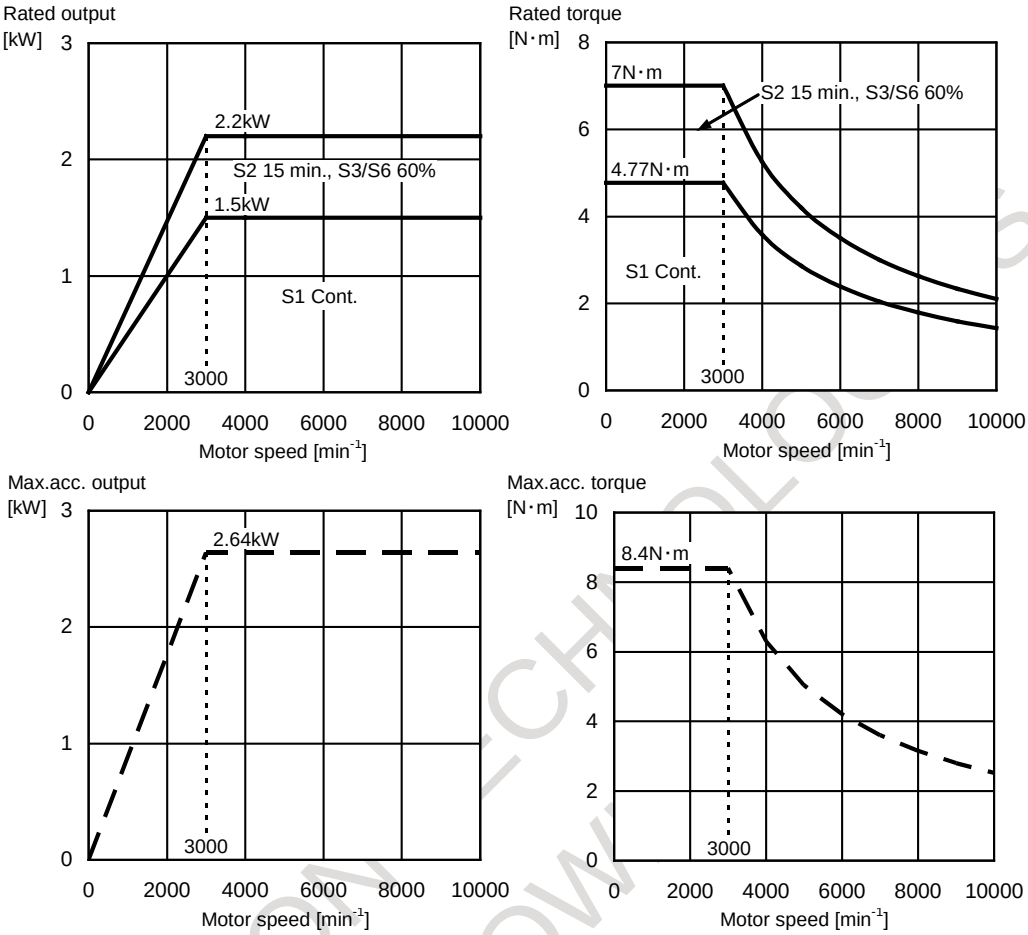
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	0.55	kW
	S2 15 min., S3/S6 40% rated		1.1	kW
Rated current	S1 continuous rated	I_C	4	A
	S2 15 min., S3/S6 40% rated		6	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	10000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			1.32	kW
Continuous rated torque in the constant torque range		T_b	1.75	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.00048	$kg·m^2$
Weight		W	7	kg
Winding resistance (U-V, V-W, and W-U)		R	2750	mΩ
Built-in detector			αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection			64	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP54	
Vibration			V5 (option V3)	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and non-cooled (IC0A0)	

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Model αiI 1/10000HV-B

Spec. number for motor: A06B-2502-B□□□

Spec. number for output specification nameplate: A06B-1230-K502#S00
Applicable amplifier: αiSP 5.5HV-B, βiSVSP*-11HV-B



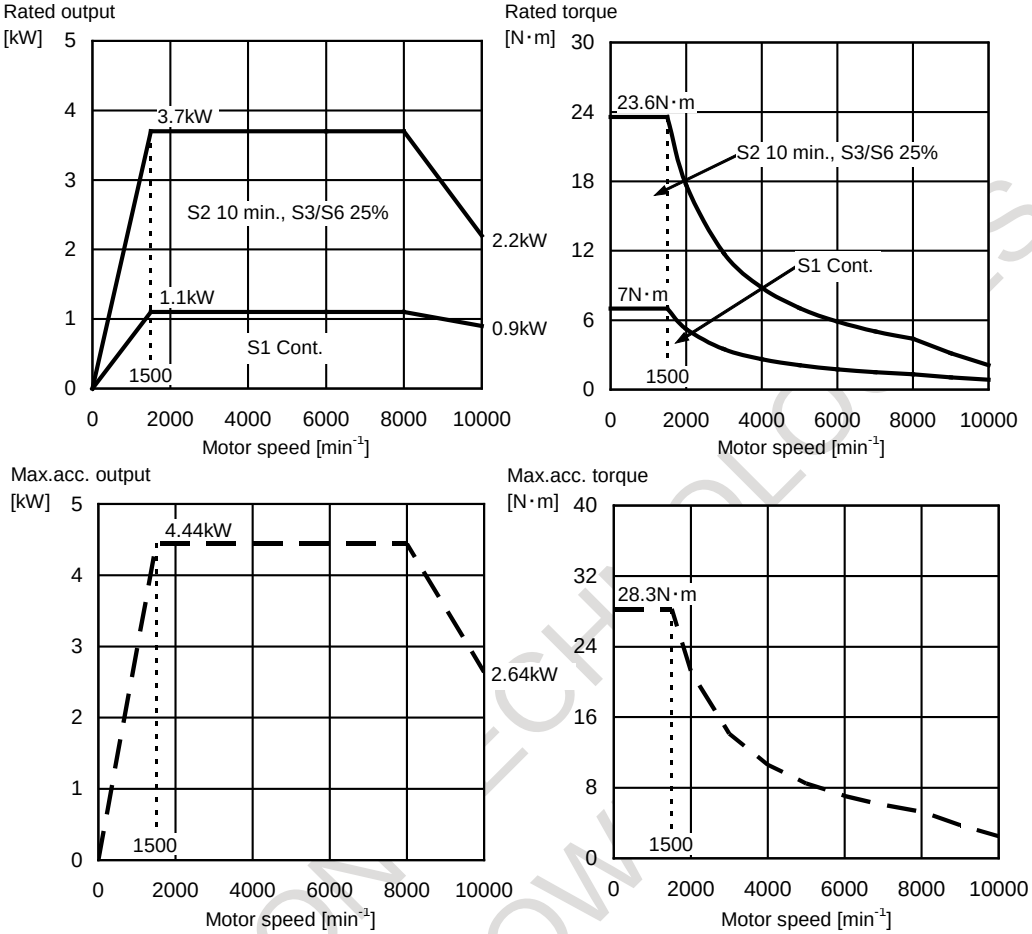
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	1.5	kW
	S2 15 min., S3/S6 60% rated		2.2	kW
Rated current	S1 continuous rated	I_C	6	A
	S2 15 min., S3/S6 60% rated		7	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	10000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			2.64	kW
Continuous rated torque in the constant torque range		T_b	4.77	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.003	$kg·m^2$
Weight		W	18	kg
Winding resistance (U-V, V-W, and W-U)		R	1970	mΩ
Built-in detector			αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP54	
Vibration			V5 (option V3)	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			28	W

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 1.5/10000HV-B

Spec. number for motor: A06B-2503-B□□□

Spec. number for output specification nameplate: A06B-1230-K503#S00
Applicable amplifier: αiSP 5.5HV-B, βiSVSP*-11HV-B



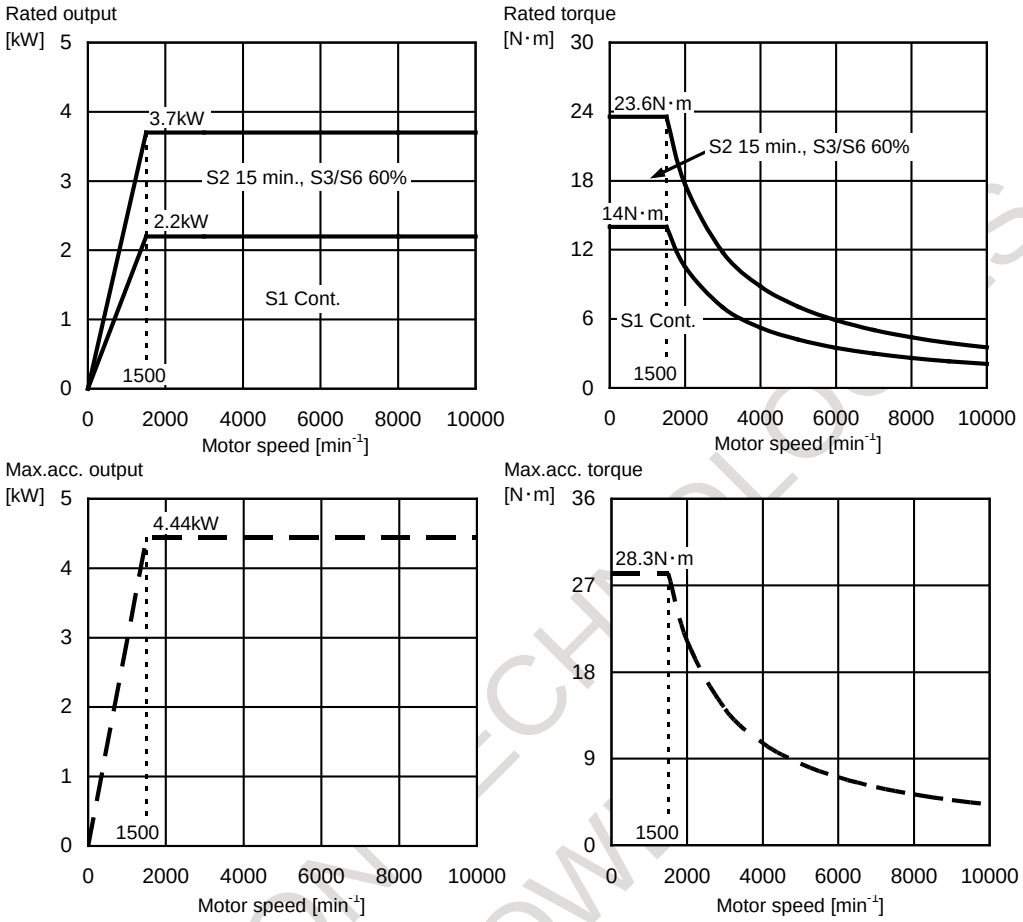
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	1.1	kW
	S2 10 min., S3/S6 25% rated		3.7	kW
Rated current	S1 continuous rated	I_C	7	A
	S2 10 min., S3/S6 25% rated		14	A
Speed	Base speed	N_b	1500	min^{-1}
	Max. speed	N_{max}	10000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			4.44	kW
Continuous rated torque in the constant torque range		T_b	7.0	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0043	$kg·m^2$
Weight		W	24	kg
Winding resistance (U-V, V-W, and W-U)		R	1761	mΩ
Built-in detector			αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP54	
Vibration			V5 (option V3)	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			28	W

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 2/10000HV-B

Spec. number for motor: A06B-2504-B□□□

Spec. number for output specification nameplate: A06B-1230-K504#S00
Applicable amplifier: αiSP 5.5HV-B, βiSVSP*-11HV-B



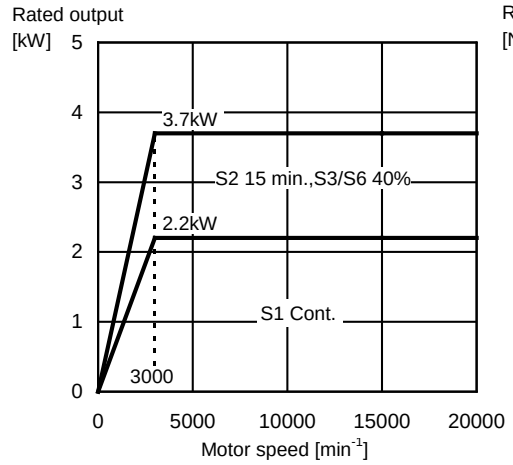
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	2.2	kW
	S2 15 min., S3/S6 60% rated		3.7	kW
Rated current	S1 continuous rated	I_C	10	A
	S2 15 min., S3/S6 60% rated		15	A
Speed	Base speed	N_b	1500	min^{-1}
	Max. speed	N_{max}	10000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			4.44	kW
Continuous rated torque in the constant torque range		T_b	14.0	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0078	$kg·m^2$
Weight		W	27	kg
Winding resistance (U-V, V-W, and W-U)		R	1180	mΩ
Built-in detector			αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP54	
Vibration			V5 (option V3)	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			34	W

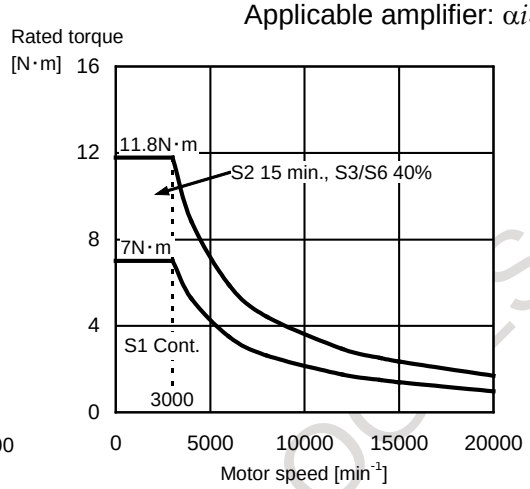
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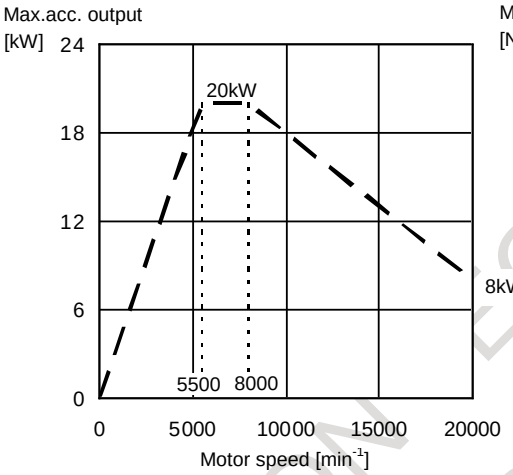
Model αiI 2/20000HV-B

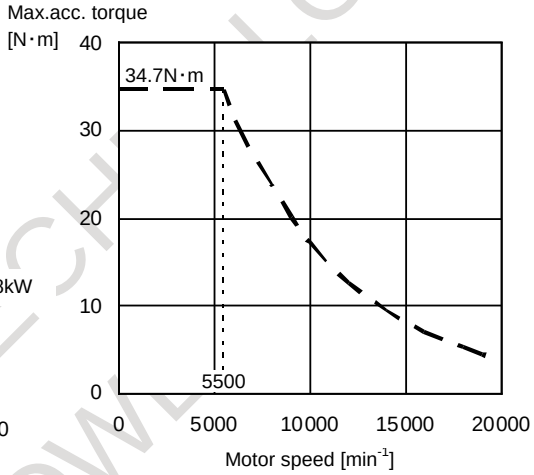
Spec. number for motor: A06B-2524-B12□#0101

Spec. number for output specification nameplate: A06B-1230-K524#S00
Applicable amplifier: αiSP 30HV-B









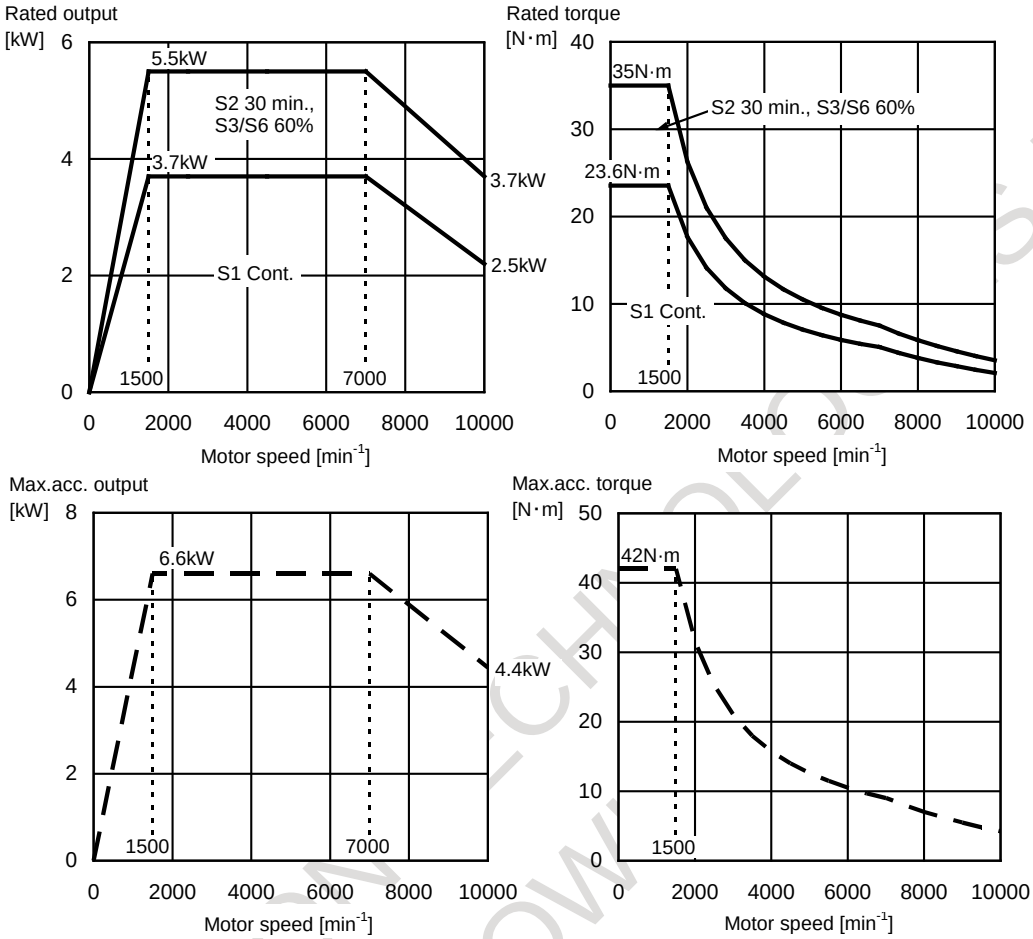
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	2.2	kW
	S2 15 min., S3/S6 40% rated		3.7	kW
Rated current	S1 continuous rated	I_C	21	A
	S2 15 min., S3/S6 40% rated		28	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	20000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			20.0	kW
Continuous rated torque in the constant torque range		T_b	7.0	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0078	$kg·m^2$
Weight		W	27	kg
Winding resistance (U-V, V-W, and W-U)		R	187	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple Labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			34	W

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Model αiI 3/10000HV-B

Spec. number for motor: A06B-2505-B□□□

Spec. number for output specification nameplate: A06B-1230-K505#S00
Applicable amplifier: αiSP 5.5HV-B, βiSVSP*-11HV-B



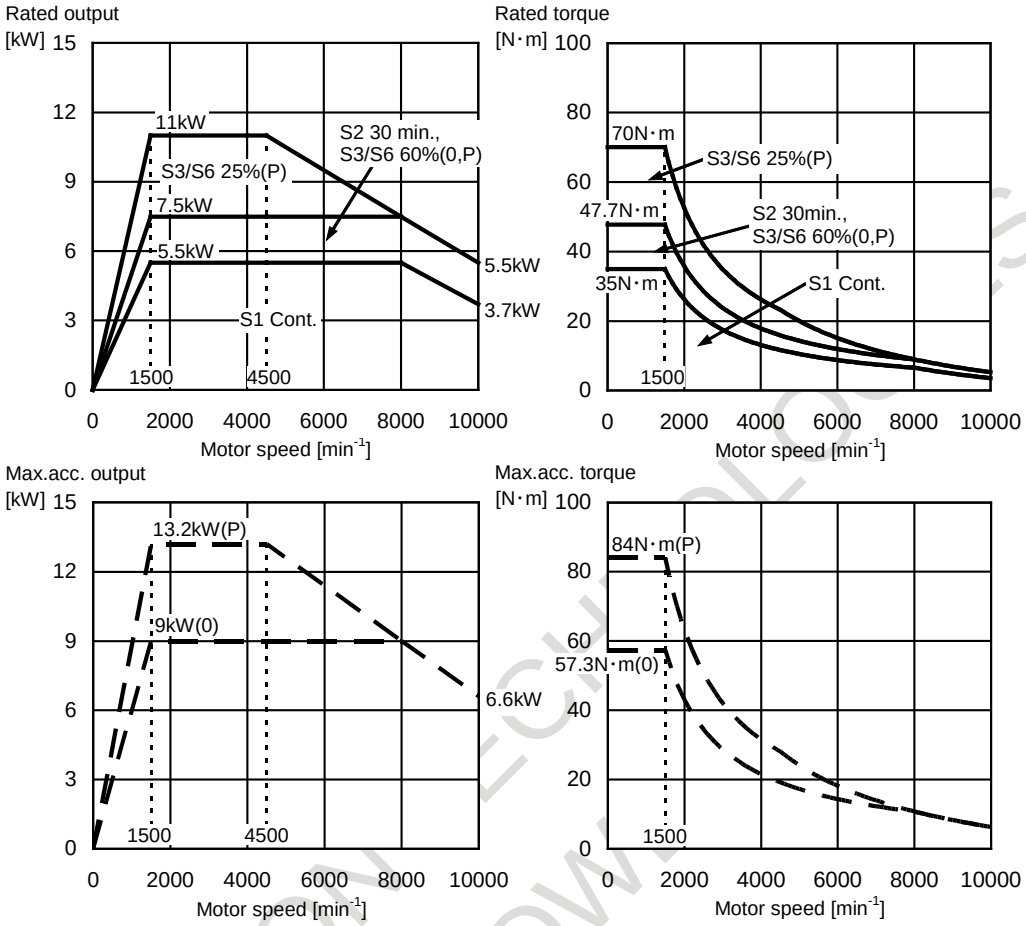
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	3.7	kW
	S2 30 min., S3/S6 60% rated		5.5	kW
Rated current	S1 continuous rated	I_C	11	A
	S2 30 min., S3/S6 60% rated		14	A
Speed	Base speed	N_b	1500	min^{-1}
	Max. speed	N_{max}	10000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			6.6	kW
Continuous rated torque in the constant torque range		T_b	23.6	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0148	$kg·m^2$
Weight		W	46	kg
Winding resistance (U-V, V-W, and W-U)		R	1150	mΩ
Built-in detector			αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP54	
Vibration			V5 (option V3)	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			34	W

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 6/10000HV-B

Spec. number for motor: A06B-2506-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K506#S00→(0), #S0P→(P)
Applicable amplifier: αiSP 11HV-B, βiSVSP*-11HV-B



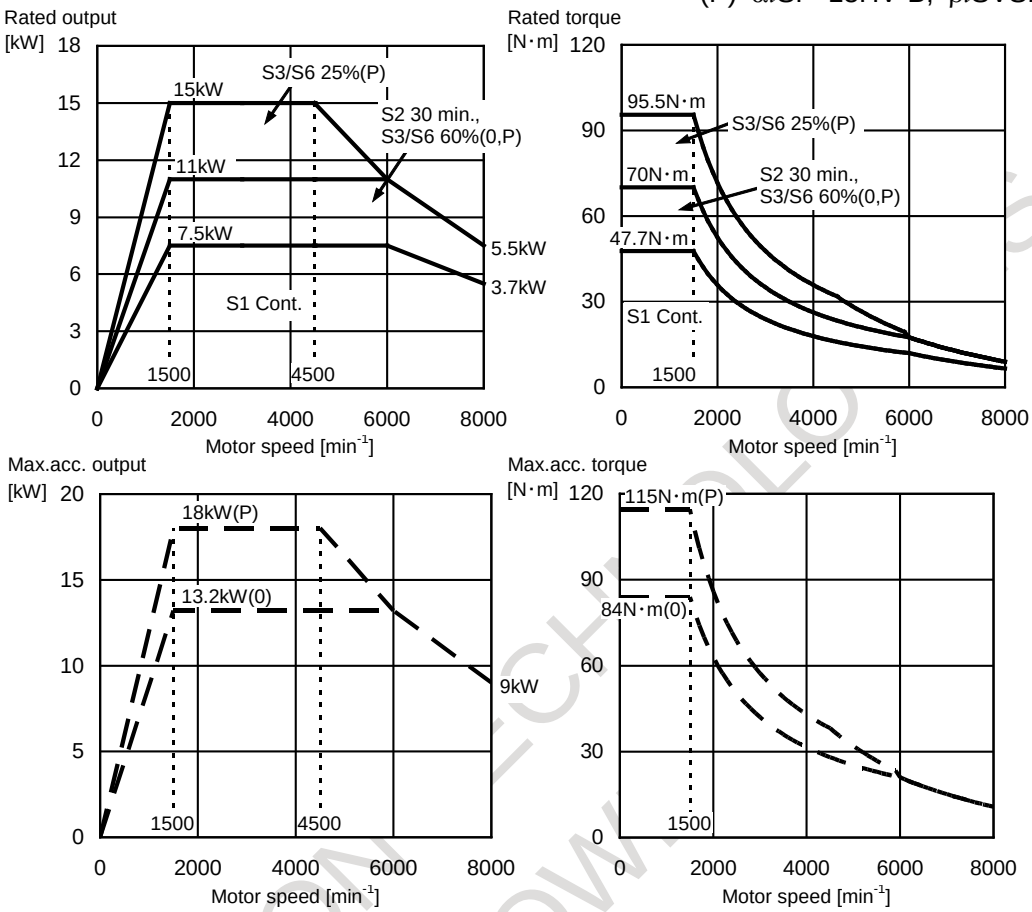
Item		Symbol	Value		Unit
Model			#S00	#S0P	
Rated output	S1 continuous rated	P_C	5.5	5.5	kW
	S2 30 min., S3/S6 60% rated		7.5	7.5	kW
	S3/S6 25% rated		-	11	kW
Rated current	S1 continuous rated	I_C	20	20	A
	S2 30 min., S3/S6 60% rated		26	26	A
	S3/S6 25% rated		-	32	A
Speed	Base speed	N_b	1500		min^{-1}
	Max. speed	N_{max}	10000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			9.0	13.2	kW
Continuous rated torque in the constant torque range		T_b	35.0		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0179		$kg·m^2$
Weight		W	51		kg
Winding resistance (U-V, V-W, and W-U)		R	434		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			80		W

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 8/8000HV-B

Spec. number for motor: A06B-2507-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K507#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 11HV-B, βiSVSP*-11HV-B
(P) αiSP 15HV-B, βiSVSP*-15HV-B



Item		Symbol	Value		Unit
Model			#S00	#S0P	
Rated output	S1 continuous rated	P_C	7.5	7.5	kW
	S2 30 min., S3/S6 60% rated		11	11	kW
	S3/S6 25% rated		-	15	kW
Rated current	S1 continuous rated	I_C	21	21	A
	S2 30 min., S3/S6 60% rated		28	28	A
	S3/S6 25% rated		-	36	A
Speed	Base speed	N_b	1500		min^{-1}
	Max. speed	N_{max}	8000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection		P_f	13.2	18.0	kW
Continuous rated torque in the constant torque range		T_b	47.7		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0275		$kg·m^2$
Weight		W	80		kg
Winding resistance (U-V, V-W, and W-U)		R	448		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			80		W

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Model αiI 8/10000HV-B

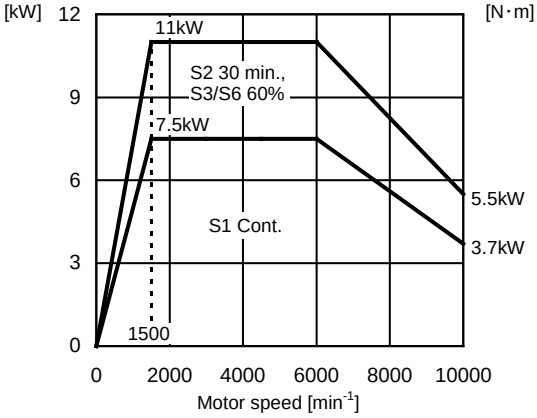
Spec. number for motor: A06B-2527-B1□□

Spec. number for output specification nameplate: A06B-1230-K527#S00

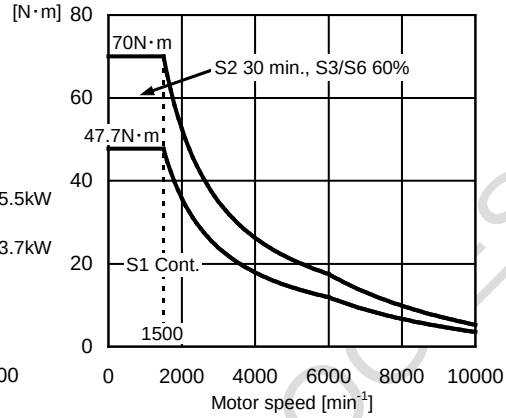
Rated output

Applicable amplifier: αiSP 11HV-B, βiSVSP*-11HV-B

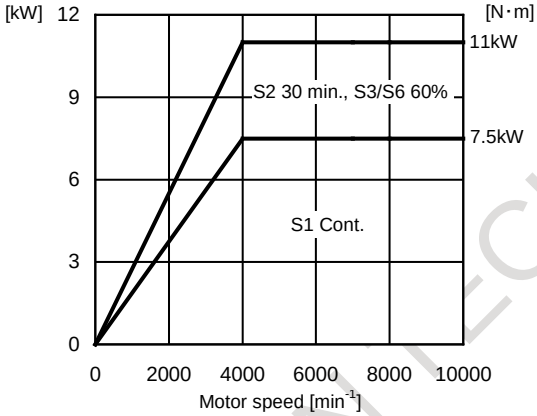
Low-speed winding output (Y connection)



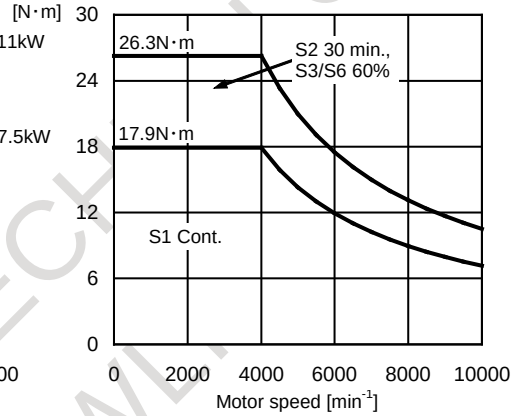
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	7.5	7.5	kW
	S2 30 min., S3/S6 60% rated		11	11	kW
Rated current	S1 continuous rated	I_C	21	22	A
	S2 30 min., S3/S6 60% rated		28	28	A
Speed	Base speed	N_b	1500	4000	min^{-1}
	Max. speed	N_{max}	10000	10000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			13.2	13.2	kW
Continuous rated torque in the constant torque range		T_b	47.7	17.9	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0275		$kg·m^2$
Weight		W	80		kg
Winding resistance (U-X, V-Y, and W-Z)			219		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V5		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			80		W

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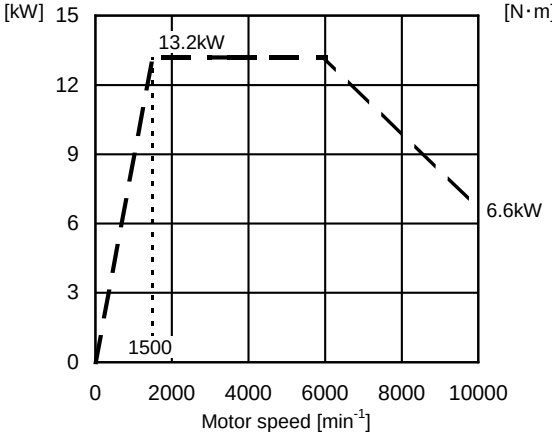
Model αiI 8/10000HV-B

Spec. number for motor: A06B-2527-B1□□

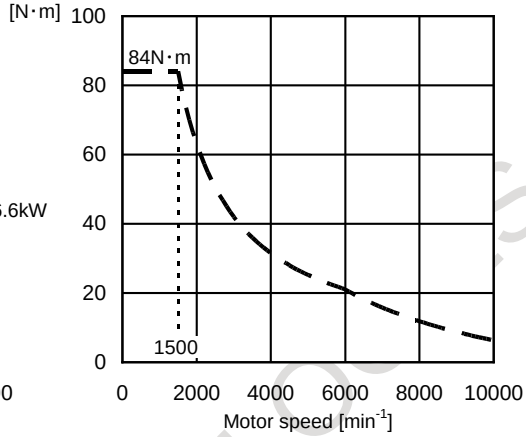
Spec. number for output specification nameplate: A06B-1230-K527#S00

Max.acc. output Applicable amplifier: αiSP 11HV-B, βiSVSP*-11HV-B

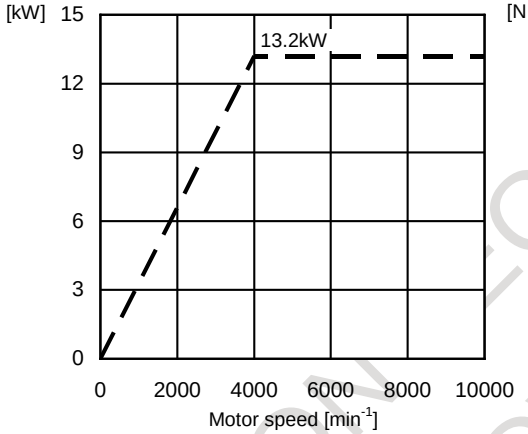
Low-speed winding output (Y connection)



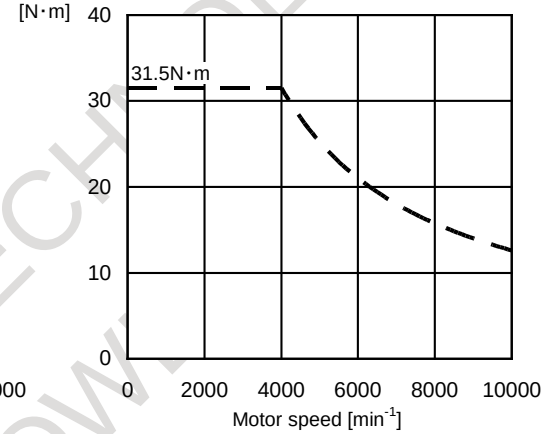
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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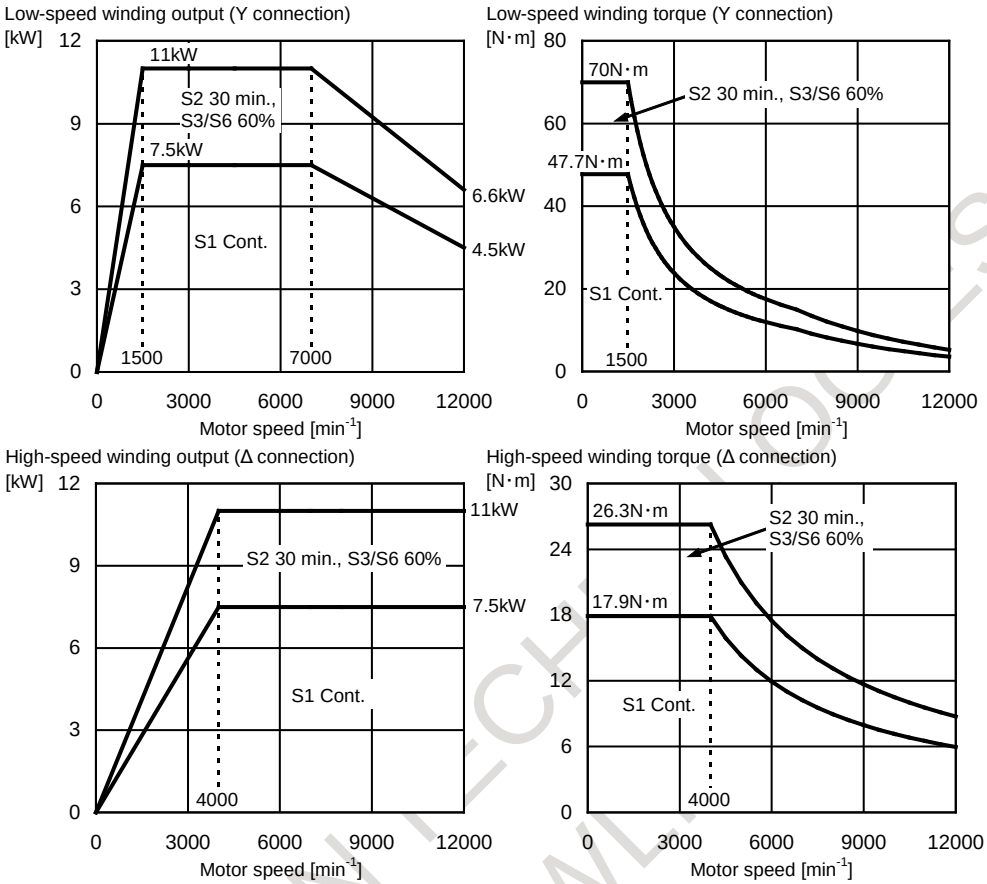
Model αiI 8/12000HV-B

Spec. number for motor: A06B-2527-B13□#0101

Spec. number for output specification nameplate: A06B-1230-K527#S01

Rated output

Applicable amplifier: αiSP 15HV-B, βiSVSP*-15HV-B



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S01	#S01	
Rated output	S1 continuous rated	P_C	7.5	7.5	kW
	S2 30 min., S3/S6 60% rated		11	11	kW
Rated current	S1 continuous rated	I_C	23	25	A
	S2 30 min., S3/S6 60% rated		29	30	A
Speed	Base speed	N_b	1500	4000	min^{-1}
	Max. speed	N_{max}	12000	12000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			13.2	13.2	kW
Continuous rated torque in the constant torque range		T_b	47.7	17.9	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0275		$kg·m^2$
Weight		W	80		kg
Winding resistance (U-X, V-Y, and W-Z)			219		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			80		W

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Model αiI 8/12000HV-B

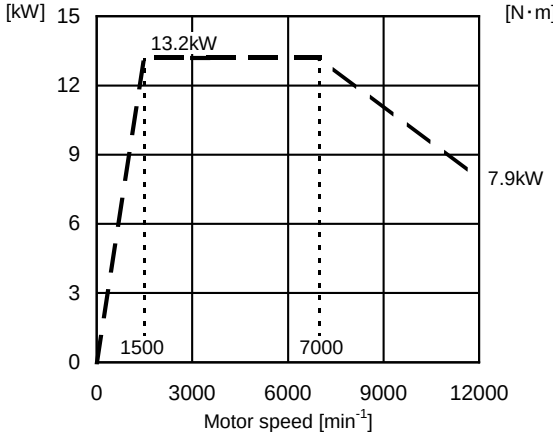
Spec. number for motor: A06B-2527-B13□#0101

Spec. number for output specification nameplate: A06B-1230-K527#S01

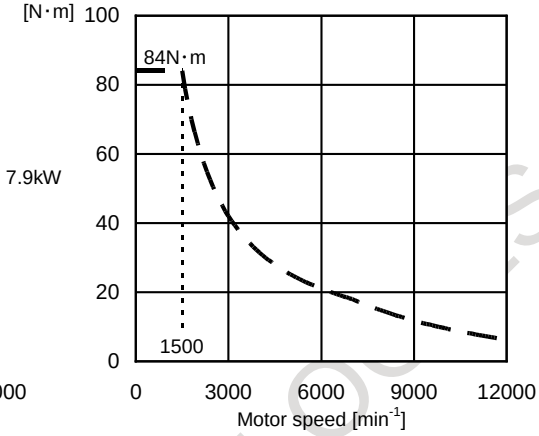
Max.acc. output

Applicable amplifier: αiSP 15HV-B, βiSVSP*-15HV-B

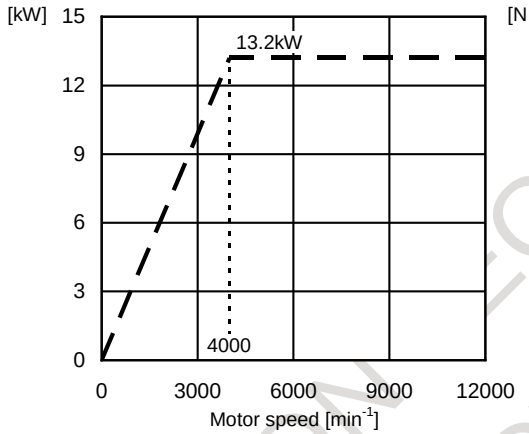
Low-speed winding output (Y connection)



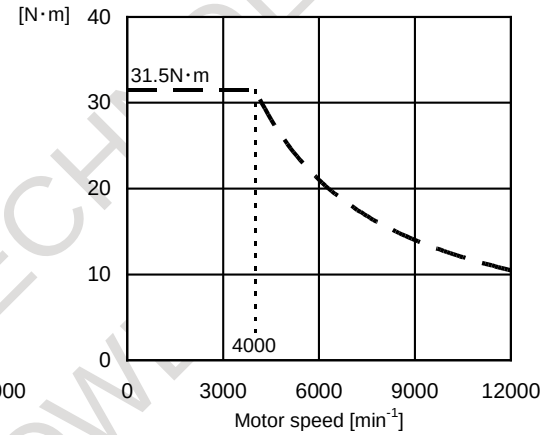
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)

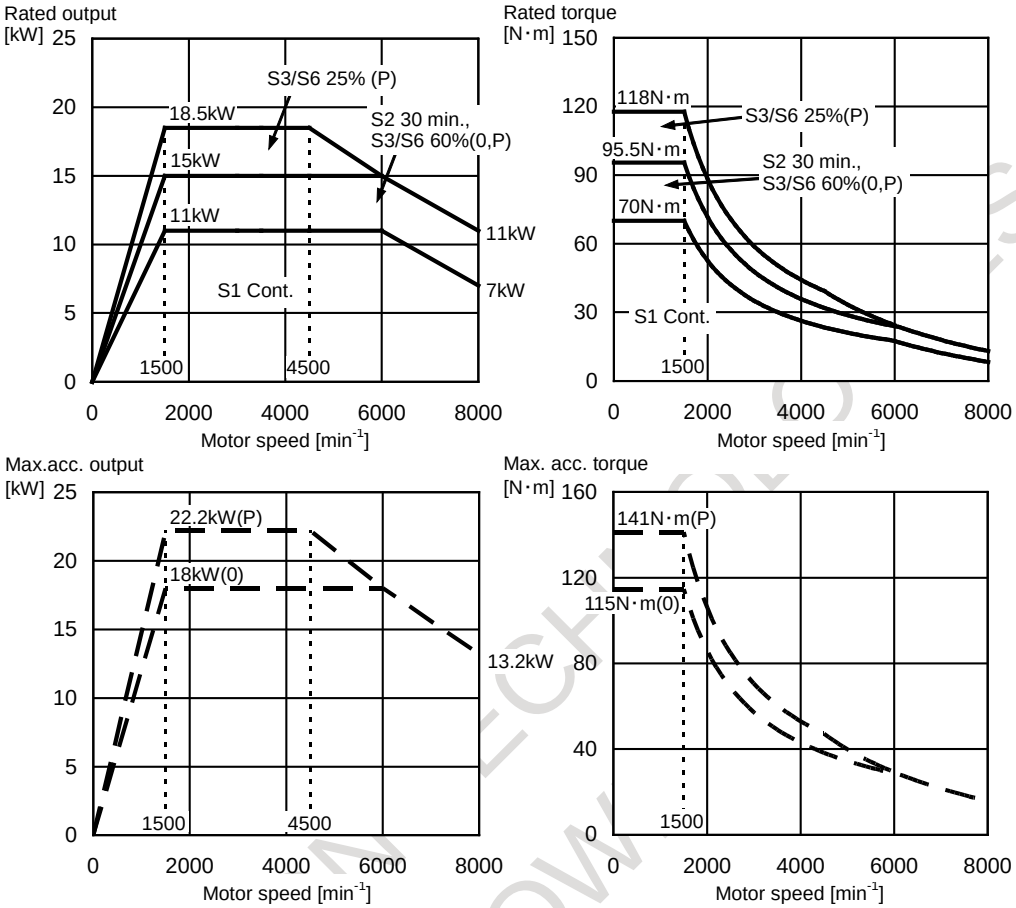


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Model αiI 12/8000HV-B

Spec. number for motor: A06B-2508-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K508#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 15HV-B, βiSVSP*-15HV-B
(P) αiSP 15HV-B, βiSVSP*-18HV-B



Item		Symbol	Value		Unit
Model			#S00	#S0P	
Rated output	S1 continuous rated	P_C	11	11	kW
	S2 30 min., S3/S6 60% rated		15	15	kW
	S3/S6 25% rated		-	18.5	kW
Rated current	S1 continuous rated	I_C	27	27	A
	S2 30 min., S3/S6 60% rated		32	32	A
	S3/S6 25% rated		-	38	A
Speed	Base speed	N_b	1500		min^{-1}
	Max. speed	N_{max}	8000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection		P_f	18.0	22.2	kW
Continuous rated torque in the constant torque range		T_b	70.0		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.07		$kg·m^2$
Weight		W	95		kg
Winding resistance (U-V, V-W, and W-U)		R	442		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			116		W

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Model αiI 12/12000HV-B

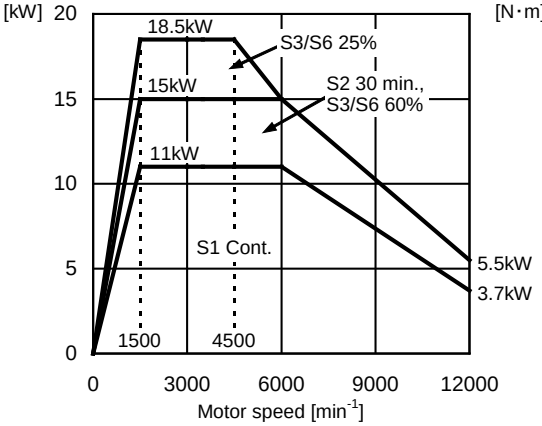
Spec. number for motor: A06B-2528-B□□□

Spec. number for output specification nameplate: A06B-1230-K528#S0P

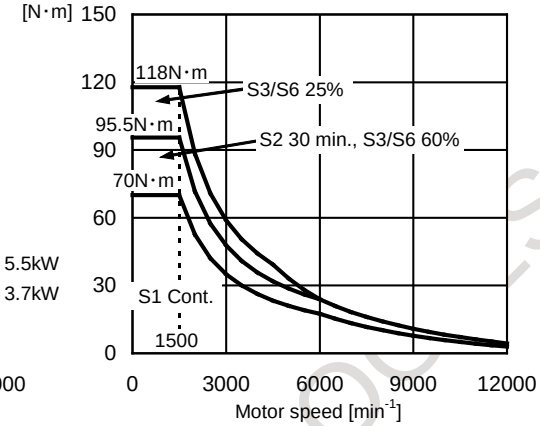
Rated output

Applicable amplifier: αiSP 15HV-B, βiSVSP*-18HV-B

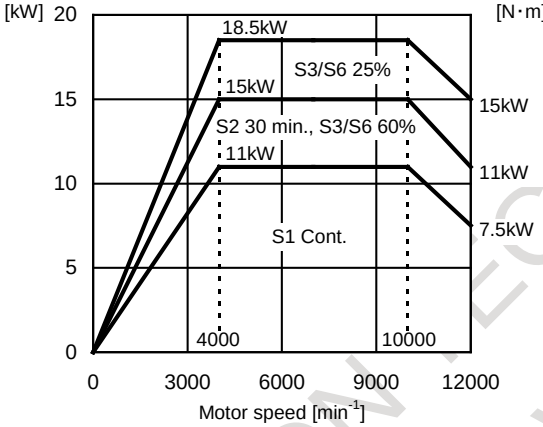
Low-speed winding output (Y connection)



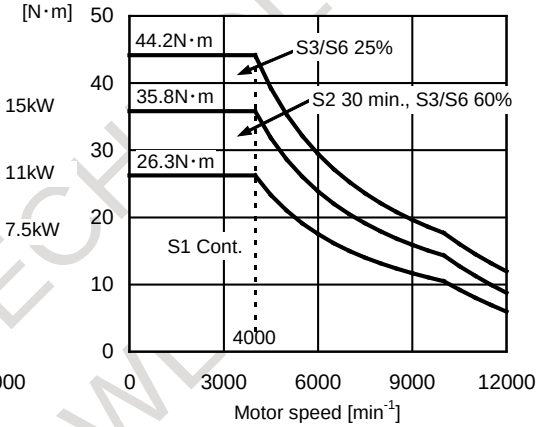
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S0P	#S0P	
Rated output	S1 continuous rated	P_C	11	11	kW
	S2 30 min., S3/S6 60% rated		15	15	kW
	S3/S6 25% rated		18.5	18.5	kW
Rated current	S1 continuous rated	I_C	27	27	A
	S2 30 min., S3/S6 60% rated		34	32	A
	S3/S6 25% rated		39	37	A
Speed	Base speed	N_b	1500	4000	min^{-1}
	Max. speed	N_{max}	12000	12000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			22.2		kW
Continuous rated torque in the constant torque range		T_b	70.0	26.3	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.07		$kg·m^2$
Weight		W	95		kg
Winding resistance (U-X, V-Y, and W-Z)			233		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			116		W

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 12/12000HV-B

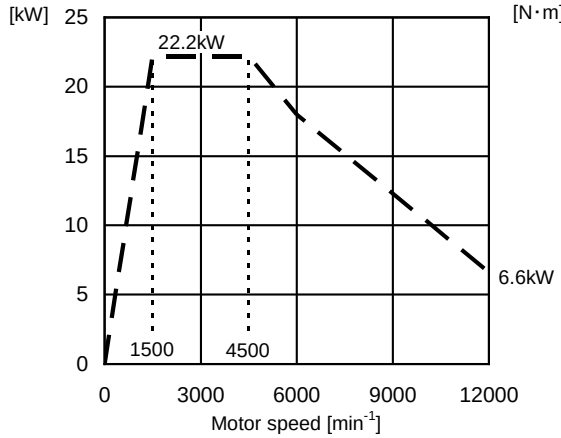
Spec. number for motor: A06B-2528-B□□□

Spec. number for output specification nameplate: A06B-1230-K528#S0P

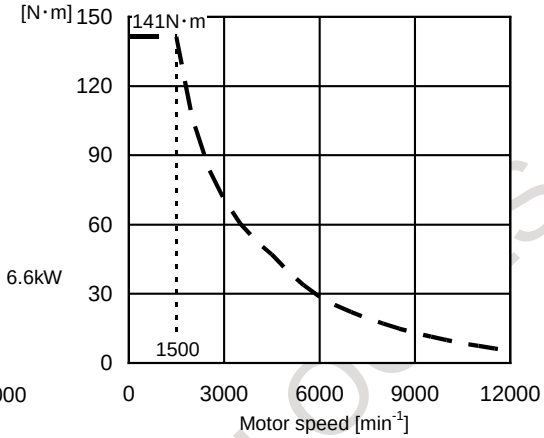
Max.acc. output

Applicable amplifier: αiSP 15HV-B, βiSVSP*-18HV-B

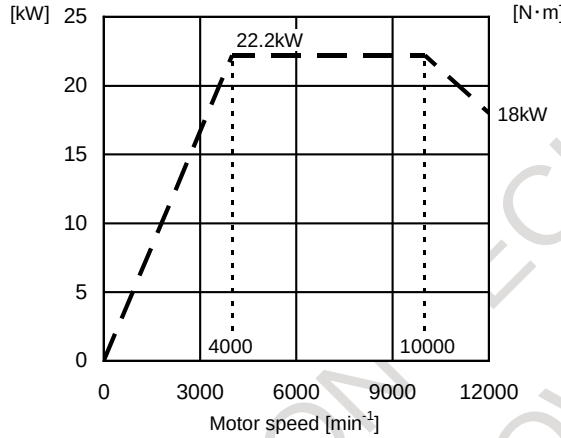
Low-speed winding output (Y connection)



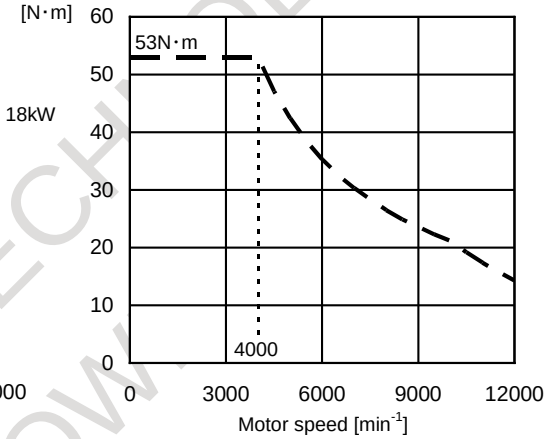
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)

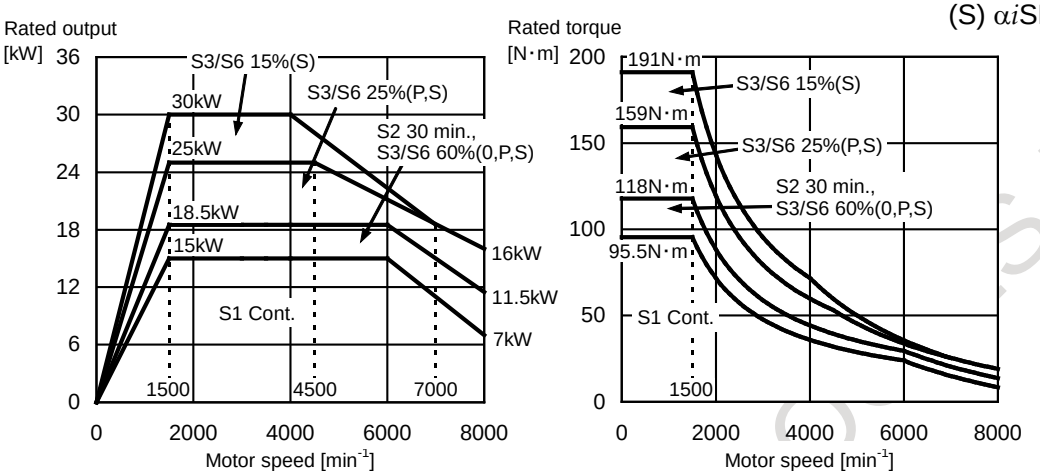


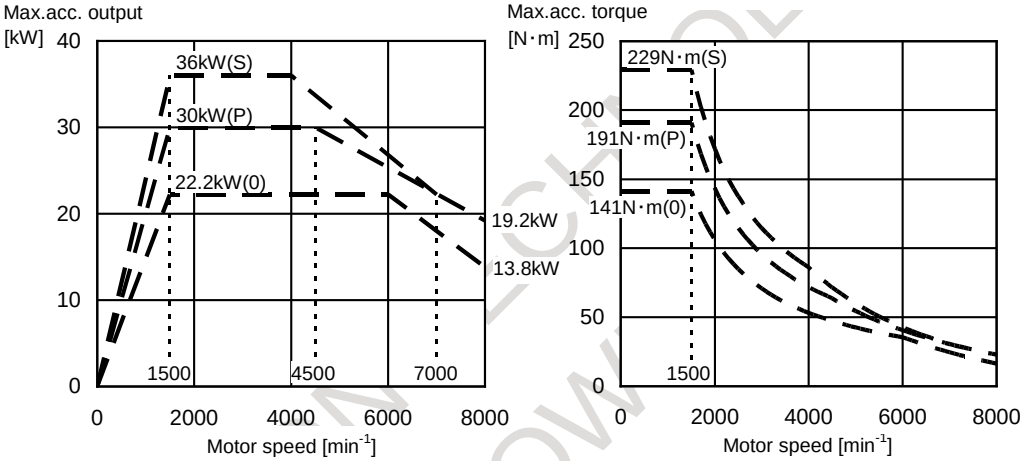
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Model αiI 15/8000HV-B

Spec. number for motor: A06B-2509-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K509#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0),(P) αiSP 22HV-B
(S) αiSP 30HV-B





Item		Symbol	Value			Unit
Model			#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	15	15	15	kW
	S2 30 min., S3/S6 60% rated		18.5	18.5	18.5	kW
	S3/S6 25% rated		-	25	25	kW
	S3/S6 15% rated		-	-	30	kW
Rated current	S1 continuous rated	I_C	37	37	37	A
	S2 30 min., S3/S6 60% rated		44	44	44	A
	S3/S6 25% rated		-	58	58	A
	S3/S6 15% rated		-	-	71	A
Speed	Base speed	N_b	1500			min^{-1}
	Max. speed	N_{max}	8000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output			kW
Maximum output at acceleration for PS selection			22.2	30.0	36.0	kW
Continuous rated torque in the constant torque range		T_b	95.5			N·m
Number of poles			4			
Moment of inertia of the rotor		J_m	0.09			$kg·m^2$
Weight		W	110			kg
Winding resistance (U-V, V-W, and W-U)		R	306			mΩ
Built-in detector			αiM sensor or αiMZ sensor contained			
Number of teeth for speed detection			256			λ/rev.
Output shaft seal			Oil seal			
Degree of protection			IP54			
Vibration			V5 (option V3)			
Noise			75 or less			dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)			
Rated power of the cooling fan			116			W

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Model αiI 15/12000HV-B

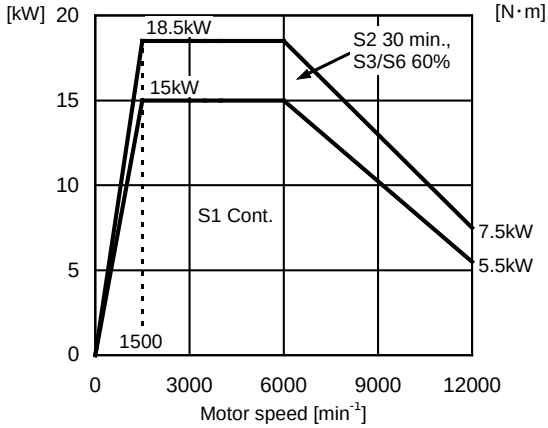
Spec. number for motor: A06B-2529-B□□□

Spec. number for output specification nameplate: A06B-1230-K529#S00

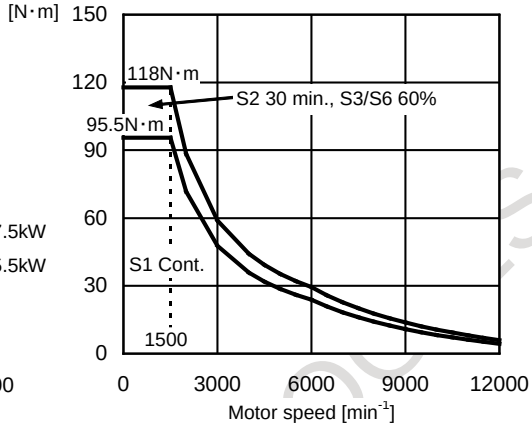
Rated output

Applicable amplifier: αiSP 22HV-B

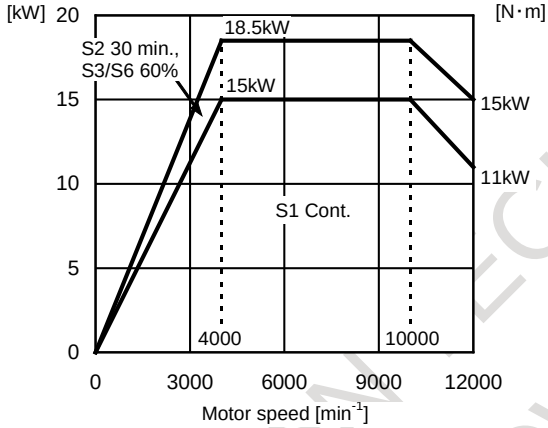
Low-speed winding output (Y connection)



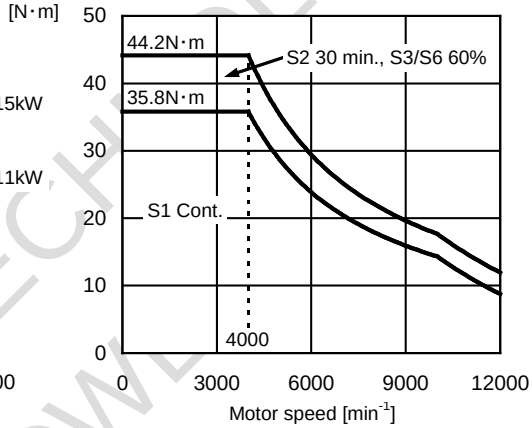
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Rated output	S1 continuous rated	P_C	15	15	kW
	S2 30 min., S3/S6 60% rated		18.5	18.5	kW
Rated current	S1 continuous rated	I_C	37	37	A
	S2 30 min., S3/S6 60% rated		46	42	A
Speed	Base speed	N_b	1500	4000	min^{-1}
	Max. speed	N_m	12000	12000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			22.2	22.2	kW
Continuous rated torque in the constant torque range		T_b	95.5	35.8	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.09		$kg·m^2$
Weight		W	110		kg
Winding resistance (U-X, V-Y, and W-Z)			152		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V5		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			116		W

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Model αiI 15/12000HV-B

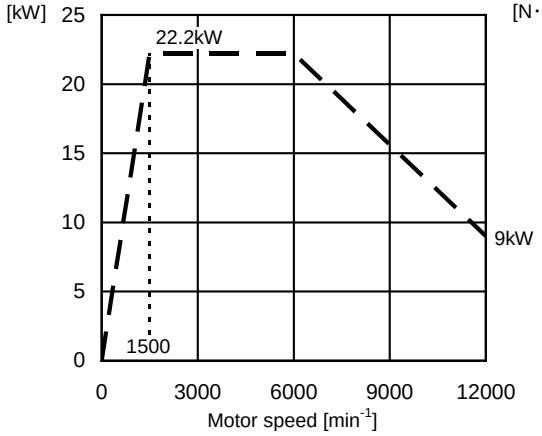
Spec. number for motor: A06B-2529-B□□□

Spec. number for output specification nameplate: A06B-1230-K529#S00

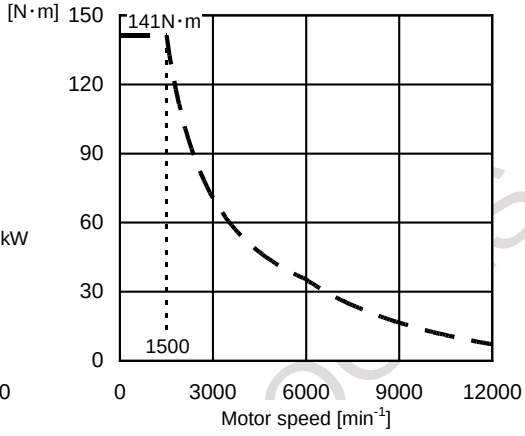
Max.acc. output

Applicable amplifier: αiSP 22HV-B

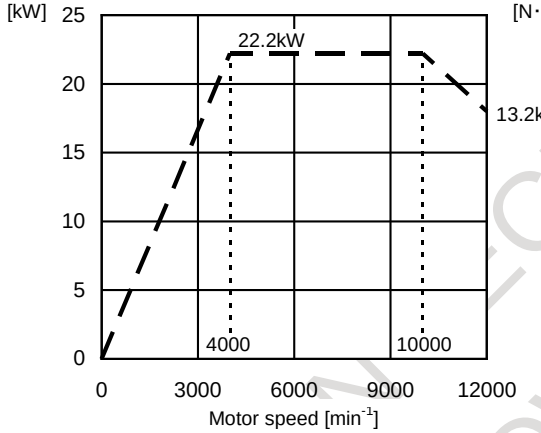
Low-speed winding output (Y connection)



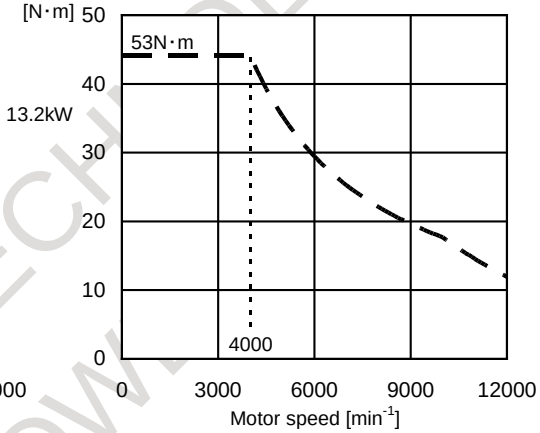
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)

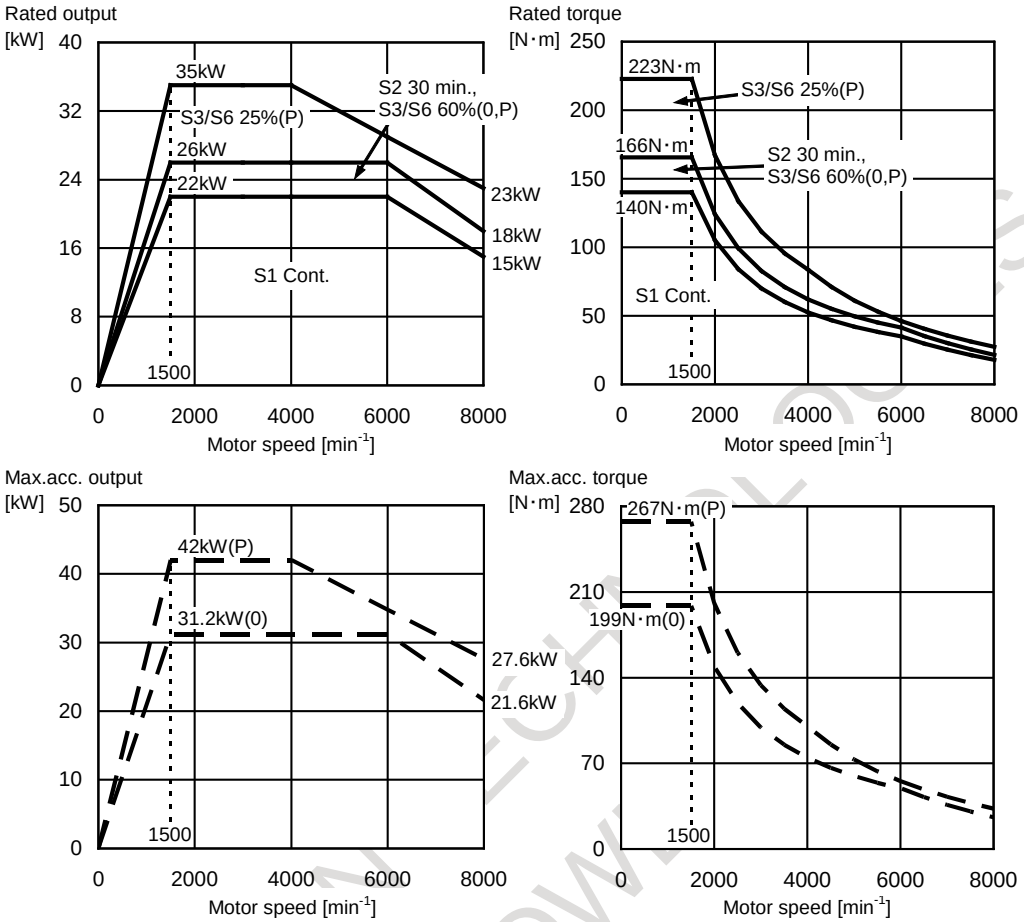


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Model αiI 22/8000HV-B

Spec. number for motor: A06B-2511-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K511#S00→(0), #S0P→(P)
Applicable amplifier: αiSP 30HV-B



Item		Symbol	Value		Unit
Model			#S00	#S0P	
Rated output	S1 continuous rated	P_C	22	22	kW
	S2 30 min., S3/S6 60% rated		26	26	kW
	S3/S6 25% rated		-	35	kW
Rated current	S1 continuous rated	I_C	50	50	A
	S2 30 min., S3/S6 60% rated		57	57	A
	S3/S6 25% rated		-	74	A
Speed	Base speed	N_b	1500		min^{-1}
	Max. speed	N_{max}	8000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			31.2	42.0	kW
Continuous rated torque in the constant torque range		T_b	140		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.128		$kg·m^2$
Weight		W	143		kg
Winding resistance (U-V, V-W, and W-U)		R	182		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			116		W

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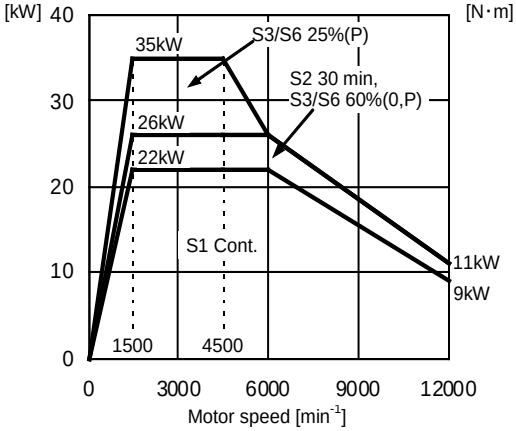
Model αiI 22/12000HV-B

Spec. number for motor: A06B-2531-B□□□

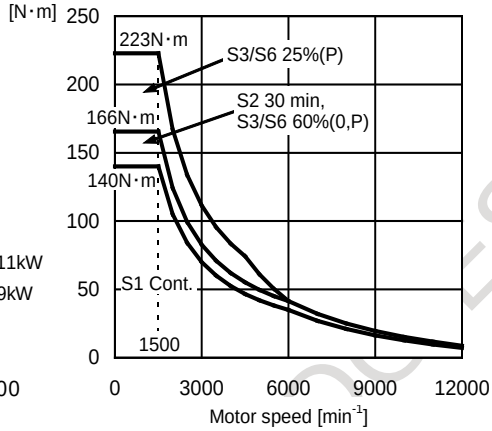
Spec. numbers for output specification nameplates: A06B-1230-K531#S00→(0), #S0P→(P)

Rated output Applicable amplifier: αiSP 30HV-B

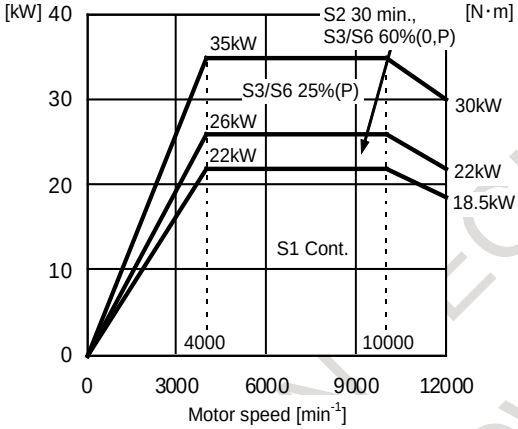
Low-speed winding output (Y connection)



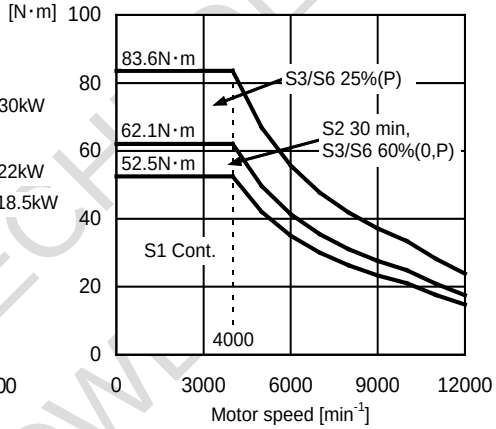
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	22	22	22	22	kW
	S2 30 min., S3/S6 60% rated		26	26	26	26	kW
	S3/S6 25% rated		-	35	-	35	kW
Rated current	S1 continuous rated	I_C	50	50	47	47	A
	S2 30 min., S3/S6 60% rated		57	57	53	53	A
	S3/S6 25% rated		-	74	-	69	A
Speed	Base speed	N_b	1500		4000		min^{-1}
	Max. speed	N_{max}	12000		12000		min^{-1}
Switching speed			4000				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection			31.2	42.0	31.2	42.0	kW
Continuous rated torque in the constant torque range		T_b	140		52.5		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.128				$kg·m^2$
Weight		W	143				kg
Winding resistance (U-X, V-Y, and W-Z)			99.0				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Simple Labyrinth				
Degree of protection			IP54 (The shaft-through portion is excluded)				
Vibration			V5				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			116				W

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Model αiI 22/12000HV-B

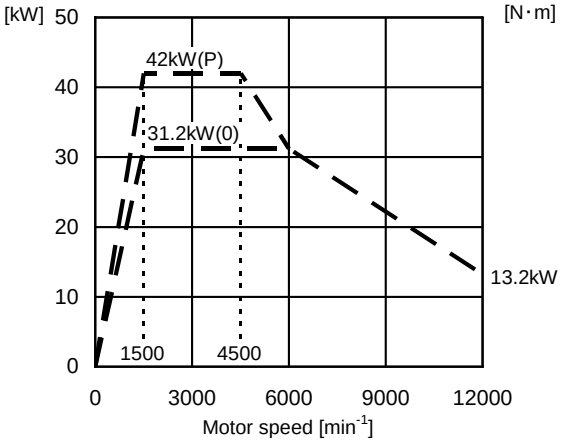
Spec. number for motor: A06B-2531-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K531#S00→(0), #S0P→(P)

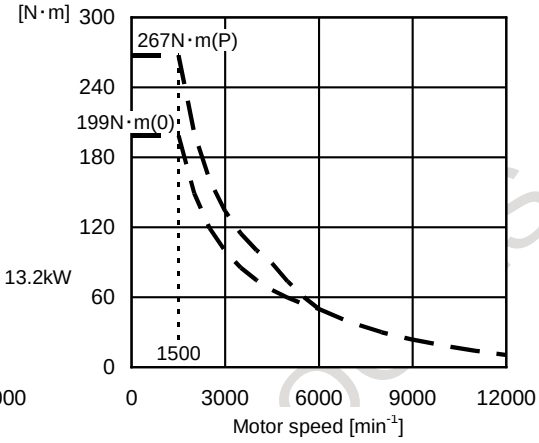
Max.acc. output

Applicable amplifier: αiSP 30HV-B

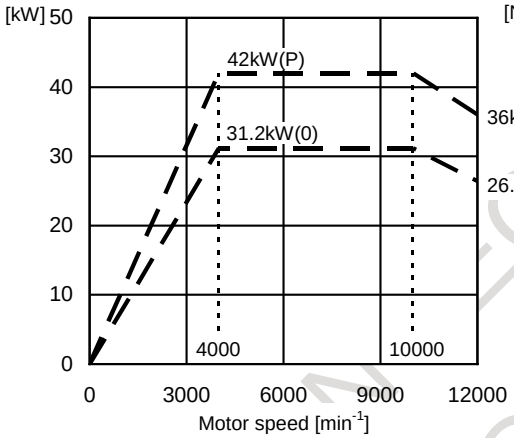
Low-speed winding output (Y connection)



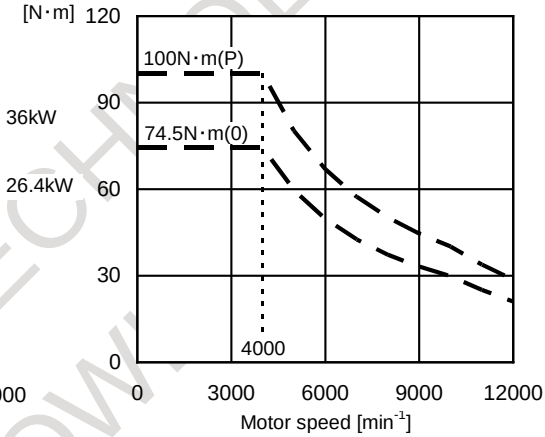
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)

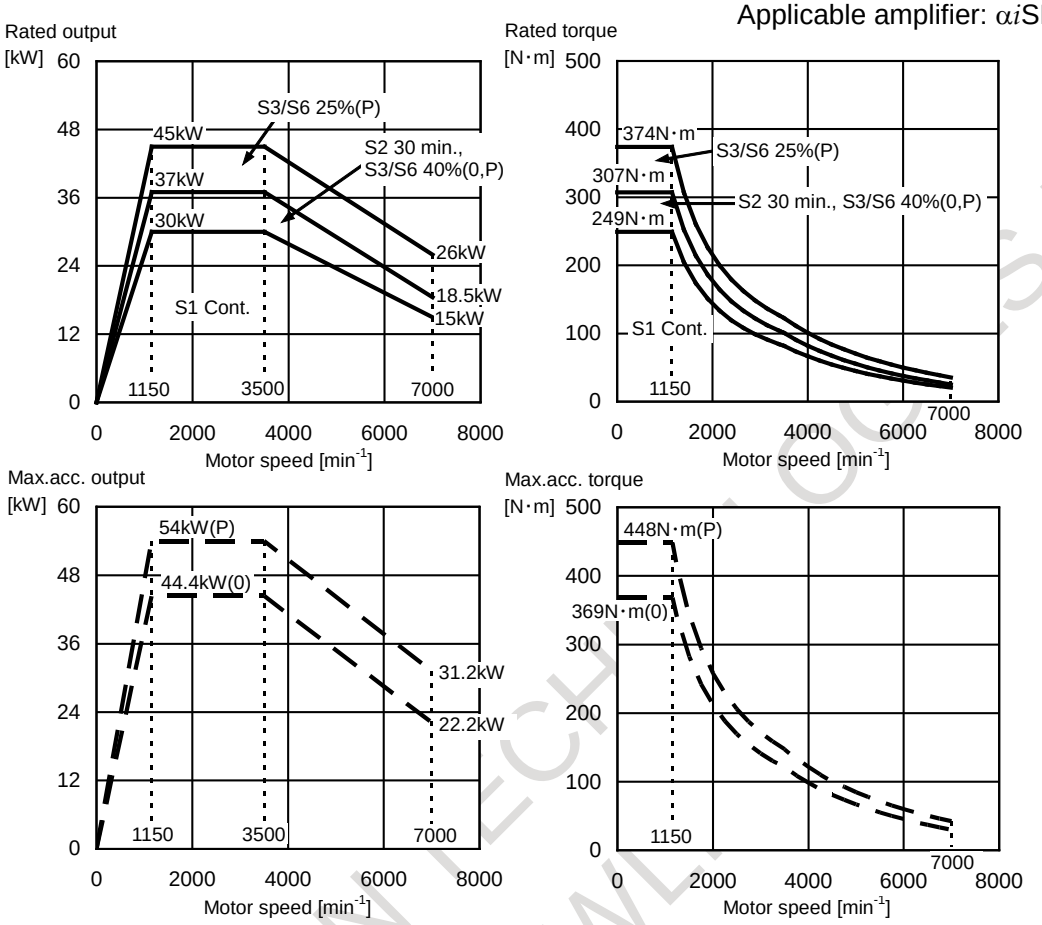


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Model αiI 30/7000HV-B

Spec. number for motor: A06B-2512-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K512#S00→(0), #S0P→(P)
Applicable amplifier: αiSP 45HV-B



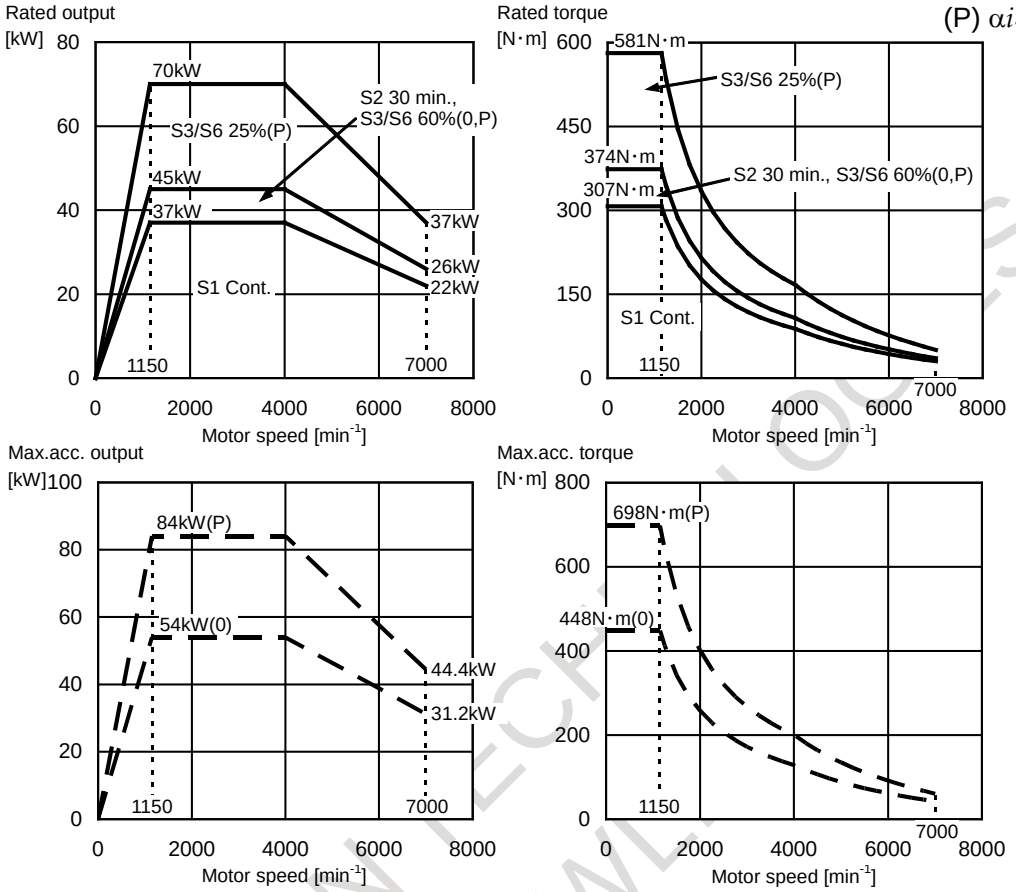
Item		Symbol	Value		Unit
Model			#S00	#S0P	
Rated output	S1 continuous rated	P_C	30	30	kW
	S2 30 min., S3/S6 40% rated		37	37	kW
	S3/S6 25% rated		-	45	kW
Rated current	S1 continuous rated	I_C	69	69	A
	S2 30 min., S3/S6 40% rated		81	81	A
	S3/S6 25% rated		-	98	A
Speed	Base speed	N_b	1150		min^{-1}
	Max. speed	N_{max}	7000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			44.4	54.0	kW
Continuous rated torque in the constant torque range		T_b	249		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.295		$kg·m^2$
Weight		W	250		kg
Winding resistance (U-V, V-W, and W-U)		R	94.0		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			170		W

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Model αiI 40/7000HV-B

Spec. number for motor: A06B-2513-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K513#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 45HV-B
(P) αiSP 75HV-B



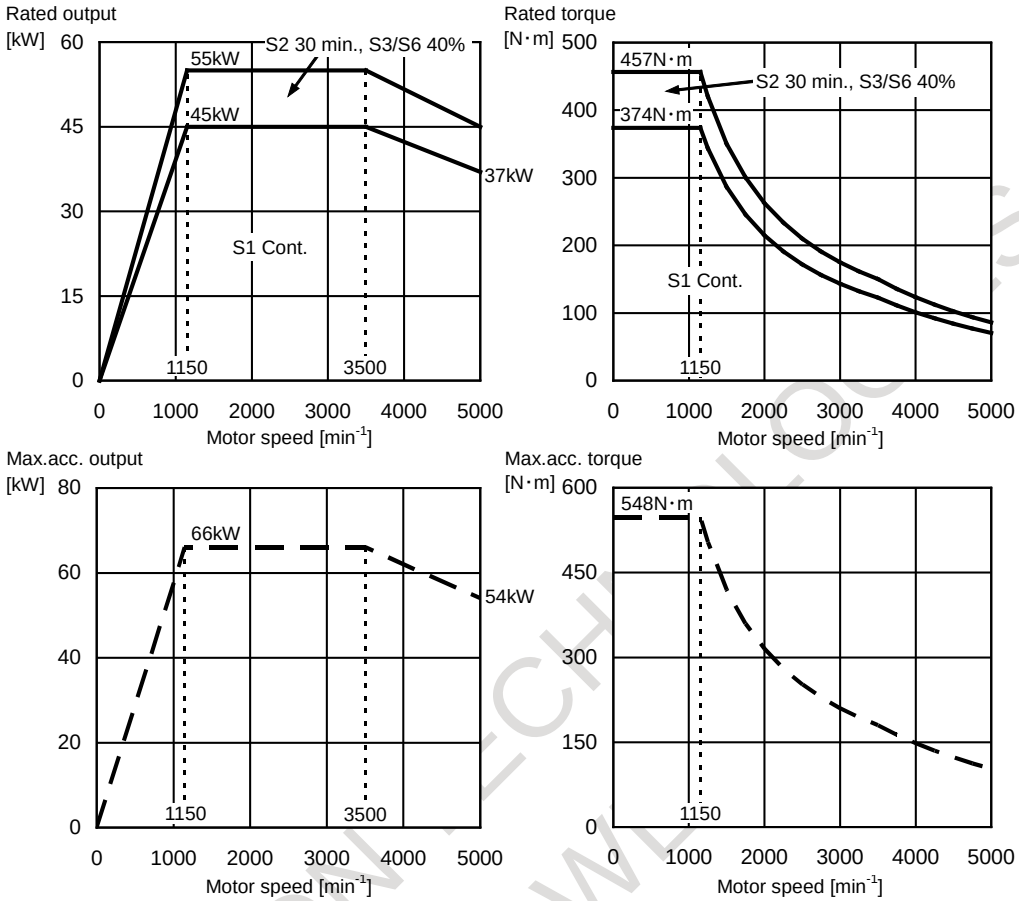
Item		Symbol	Value		Unit
Model			#S00	#S0P	
Rated output	S1 continuous rated	P_C	37	37	kW
	S2 30 min., S3/S6 60% rated		45	45	kW
	S3/S6 25% rated		-	70	kW
Rated current	S1 continuous rated	I_C	102	102	A
	S2 30 min., S3/S6 60% rated		120	120	A
	S3/S6 25% rated		-	174	A
Speed	Base speed	N_b	1150		min^{-1}
	Max. speed	N_{max}	7000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			54.0	84.0	kW
Continuous rated torque in the constant torque range		T_b	307		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.355		$kg·m^2$
Weight		W	290		kg
Winding resistance (U-V, V-W, and W-U)		R	48.5		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			170		W

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Model αiI 50/5000HV-B

Spec. number for motor: A06B-2514-B□□□

Spec. number for output specification nameplate: A06B-1230-K514#S00
Applicable amplifier: αiSP 45HV-B



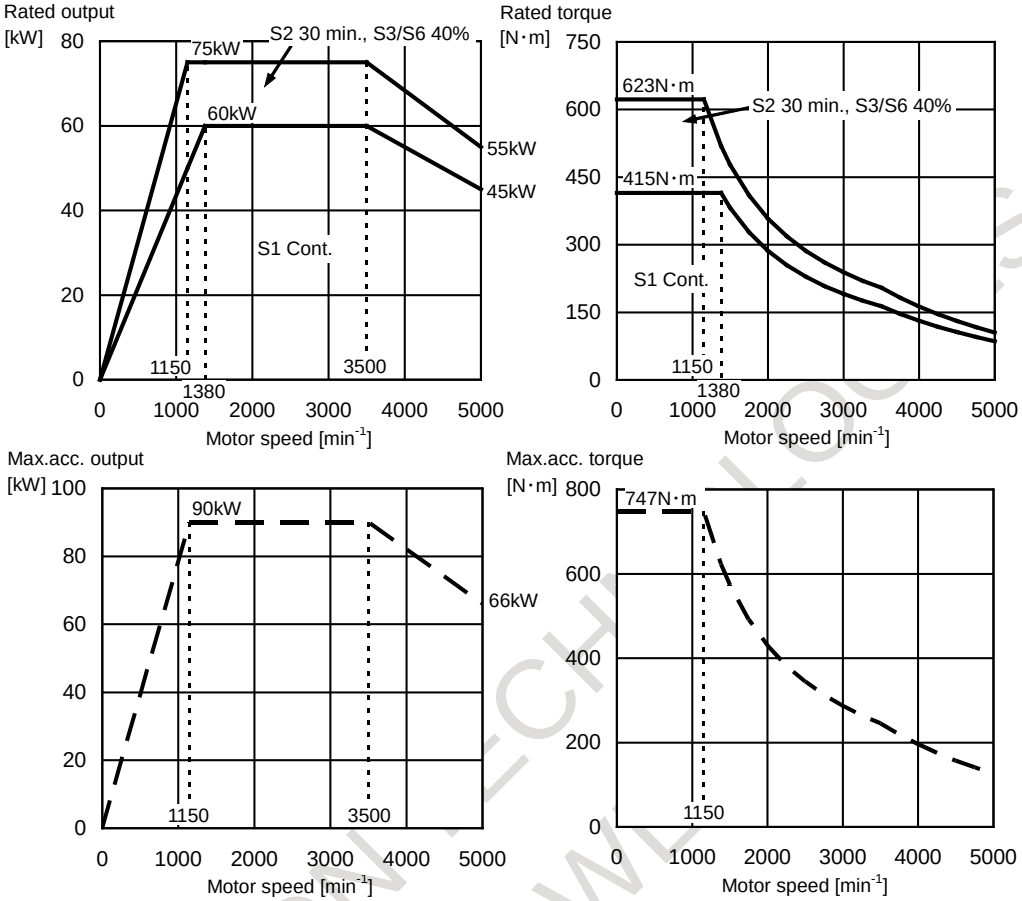
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	45	kW
	S2 30 min., S3/S6 40% rated		55	kW
Rated current	S1 continuous rated	I_C	86	A
	S2 30 min., S3/S6 40% rated		101	A
Speed	Base speed	N_b	1150	min^{-1}
	Max. speed	N_{max}	5000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			66.0	kW
Continuous rated torque in the constant torque range		T_b	374	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.49	$kg·m^2$
Weight		W	460	kg
Winding resistance (U-V, V-W, and W-U)		R	83.2	mΩ
Built-in detector			αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection			256	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP54	
Vibration			V10 (option V5)	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			180	W

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 60/5000HV-B

Spec. number for motor: A06B-2515-B□□□

Spec. number for output specification nameplate: A06B-1230-K515#S00
Applicable amplifier: αiSP 75HV-B



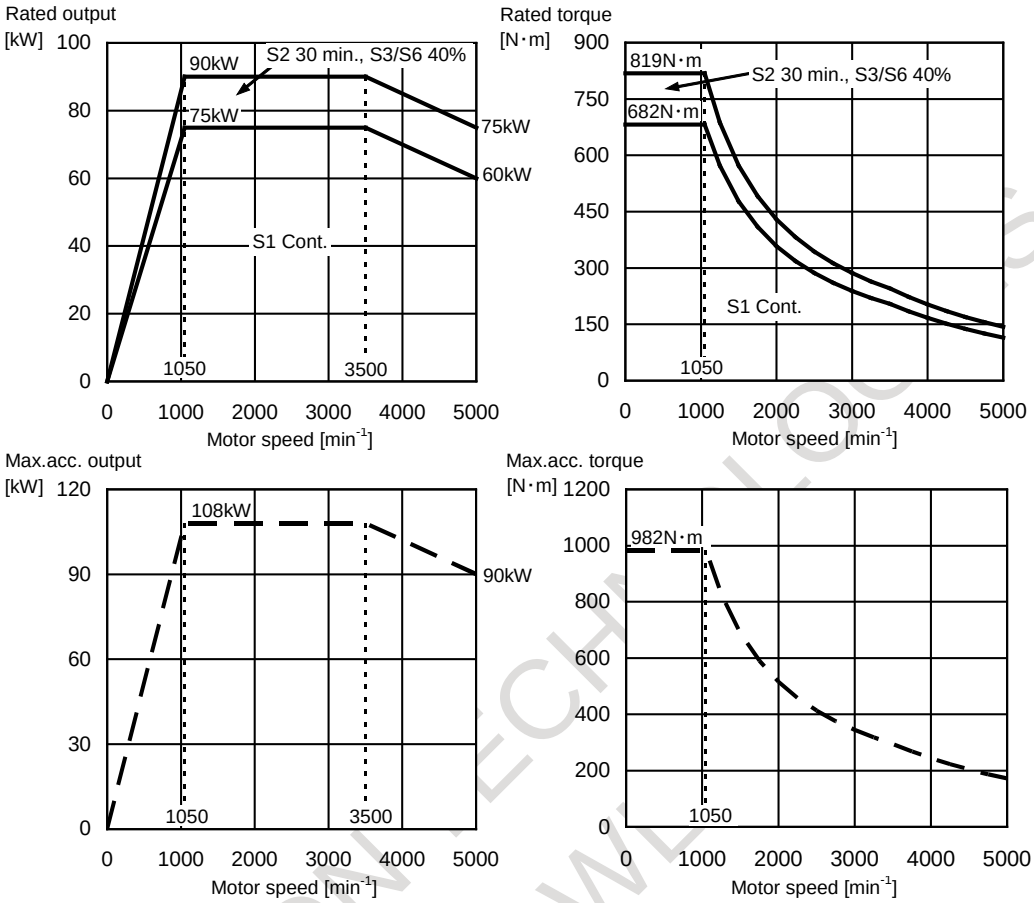
Item			Symbol	Value	Unit
Model				#S00	
Rated output	S1 continuous rated		P_C	60	kW
	S2 30 min., S3/S6 40% rated			75	kW
Rated current	S1 continuous rated		I_C	120	A
	S2 30 min., S3/S6 40% rated			161	A
Speed	Base speed	S1 continuous rated		1380	min^{-1}
		S2 30 min., S3/S6 40% rated	N_b	1150	min^{-1}
	Max. speed		N_{max}	5000	min^{-1}
Steady-state maximum output			P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection				90.0	kW
Continuous rated torque in the constant torque range			T_b	415	N·m
Number of poles				4	
Moment of inertia of the rotor			J_m	0.49	$kg·m^2$
Weight			W	468	kg
Winding resistance (U-V, V-W, and W-U)			R	20.8	mΩ
Built-in detector				αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection				256	λ/rev.
Output shaft seal				Oil seal	
Degree of protection				IP54	
Vibration				V10 (option V5)	
Noise				75 or less	dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan				180	W

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Model αiI 75/5000HV-B

Spec. number for motor: A06B-2516-B□□□

Spec. number for output specification nameplate: A06B-1230-K516#S00
Applicable amplifier: αiSP 75HV-B



Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	75	kW
	S2 30 min., S3/S6 40% rated		90	kW
Rated current	S1 continuous rated	I_C	160	A
	S2 30 min., S3/S6 40% rated		185	A
Speed	Base speed	N_b	1050	min^{-1}
	Max. speed	N_{max}	5000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			108	kW
Continuous rated torque in the constant torque range		T_b	682	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.80	$kg·m^2$
Weight		W	690	kg
Winding resistance (U-V, V-W, and W-U)		R	17.3	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			256	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V10	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			250	W

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Model αiI 100/5000HV-B

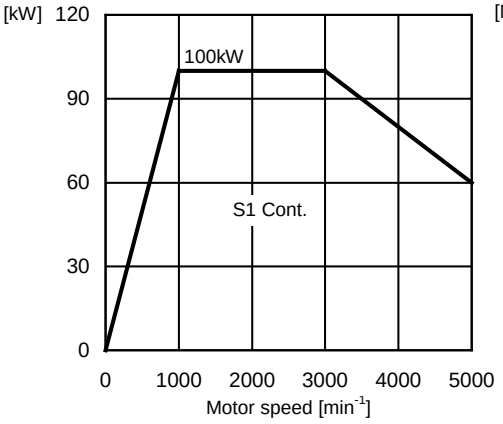
Spec. number for motor: A06B-2518-B□□□

Spec. number for output specification nameplate: A06B-1230-K518#S00

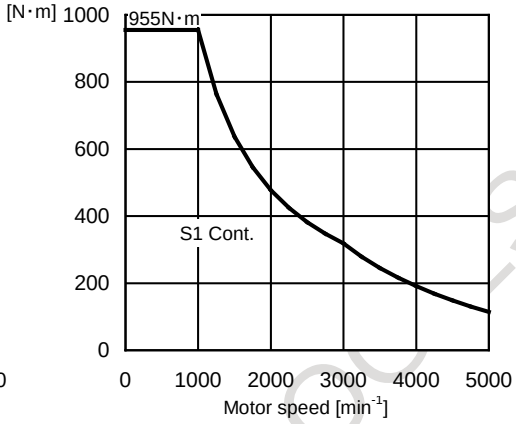
Rated output

Applicable amplifier: αiSP 100HV-B

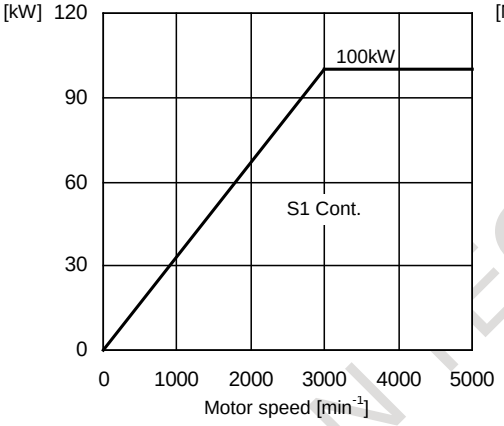
Low-speed winding output (Y connection)



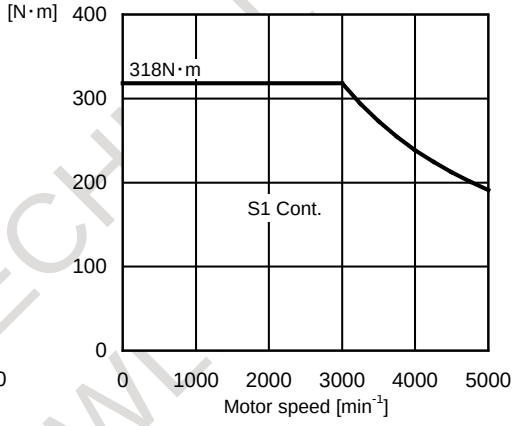
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	100	100	kW
Rated current	S1 continuous rated	I_C	191	200	A
speed	Base speed	N_b	1000	3000	min^{-1}
	Max. speed	N_{max}	5000	5000	min^{-1}
Switching speed			3000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			120		kW
Continuous rated torque in the constant torque range		T_b	955	318	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.98		$kg·m^2$
Weight		W	825		kg
Winding resistance (U-X, V-Y, and W-Z)			20.0		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V10		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			250		W

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Model αiI 100/5000HV-B

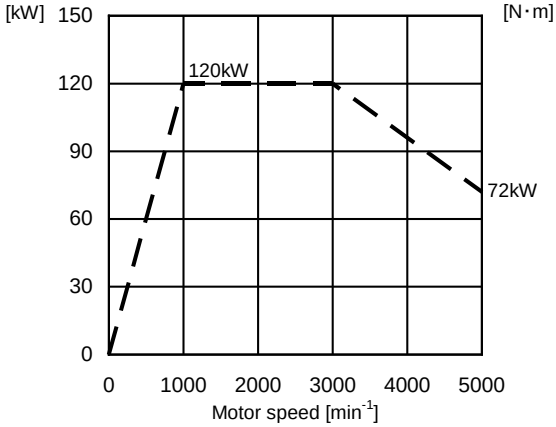
Spec. number for motor: A06B-2518-B□□□

Spec. number for output specification nameplate: A06B-1230-K518#S00

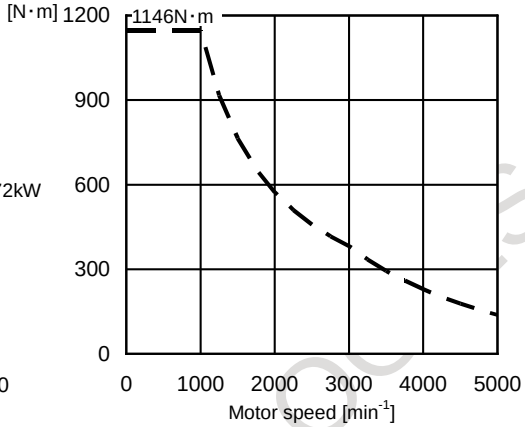
Max.acc. output

Applicable amplifier: αiSP 100HV-B

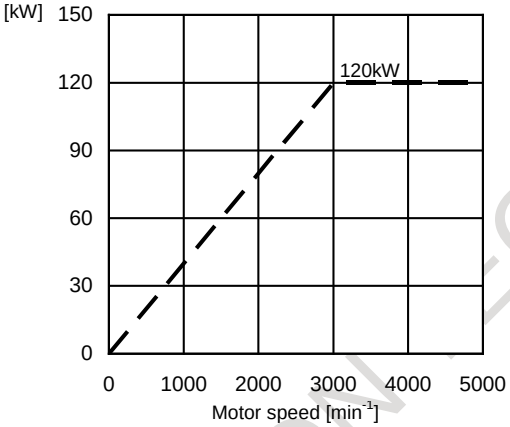
Low-speed winding output (Y connection)



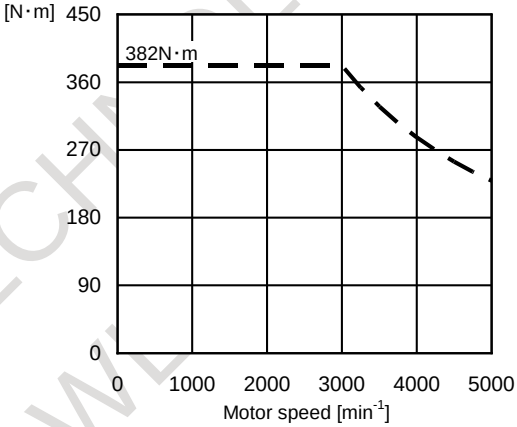
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



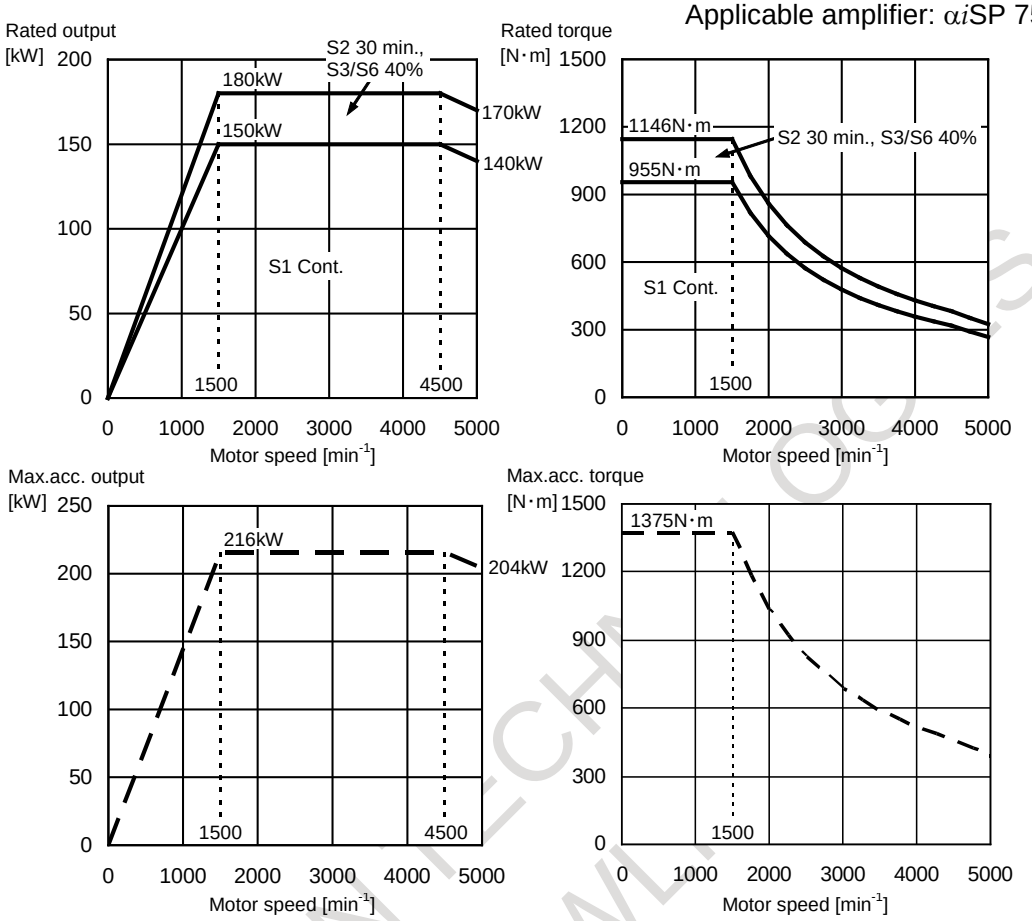
JR AUTOMATION TECHNOLOGIES INC*
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Model αiI 150/5000HV-B

Spec. number for motor: A06B-2532-B□□□

Spec. number for output specification nameplate: A06B-1230-K532#S00

Applicable amplifier: αiSP 75HV-B x 2



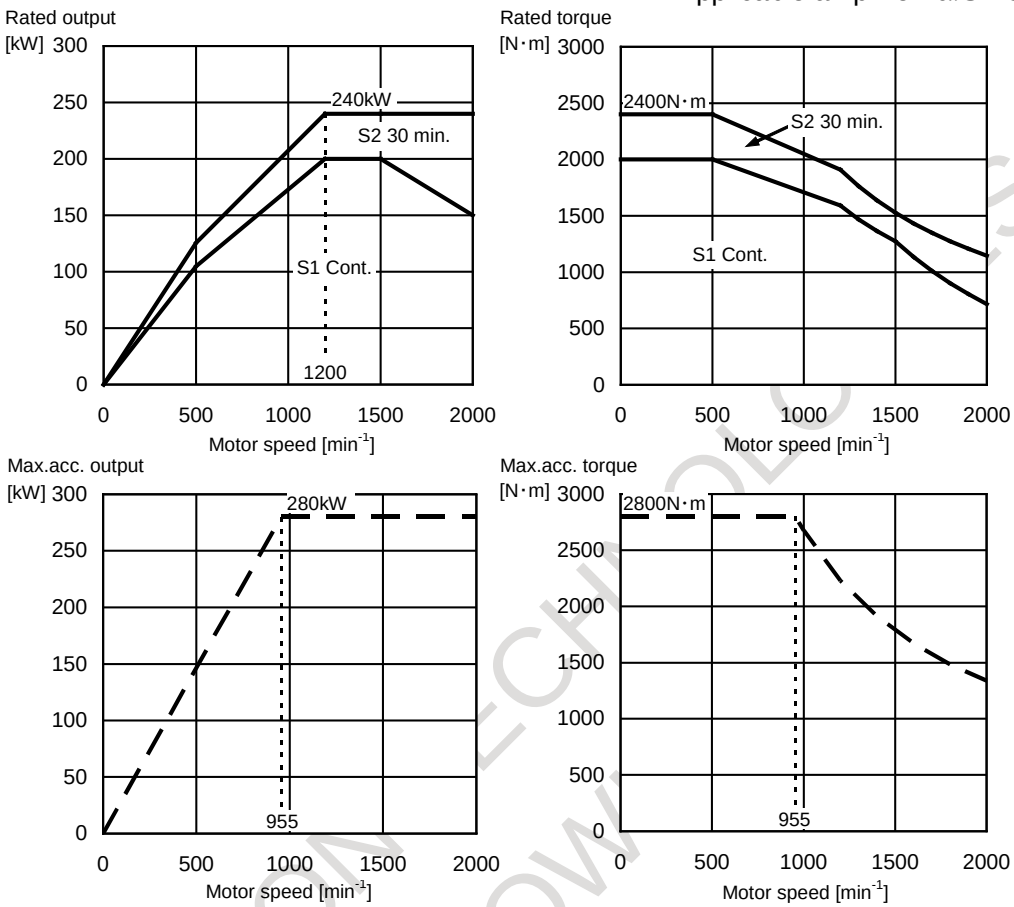
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	150	kW
	S2 30 min., S3/S6 40% rated		180	kW
Rated current	S1 continuous rated	I_C	309	A
	S2 30 min., S3/S6 40% rated		358	A
Speed	Base speed	N_b	1500	min^{-1}
	Max. speed	N_{max}	5000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			216	kW
Continuous rated torque in the constant torque range		T_b	955	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.98	$kg·m^2$
Weight		W	835	kg
Winding resistance (U1-V1, V1-W1, U1-W1, U2-V2, V2-W2, and U2-W2)		R	26.7	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			256	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V10	
Noise			80 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			720	W

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3.2.4 αiS-B series 400V-type

Model αiS 2000/2000HV-B — Spec. number for motor: A06B-2091-B□□□#0058

Applicable amplifier: αiSV 360HV-B x4



Item		Symbol	Value	Unit
Rated output	S1 continuous rated	P_C	200	kW
	S2 30 min. rated		240	kW
Rated current	S1 continuous rated	I_C	358	A
	S2 30 min. rated		429	A
Speed	Base speed	N_b	1200	min^{-1}
	Max. speed	N_{max}	2000	min^{-1}
Maximum output at acceleration for PS selection			280	kW
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Continuous rated torque in the constant torque range		T_b	2000	N·m
Number of poles			16	
Moment of inertia of the rotor		J_m	1.97	$kg·m^2$
Weight		W	1000	kgf
Winding resistance (U-V, V-W, and W-U)		Ra	29.4	mΩ
Vibration			V30	
Built-in detector			Pulsecoder αiA1000	
Resolution			1,000,000	Division/rev
Output shaft seal			Oil seal	
Degree of protection			IP44	
Noise			80 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC416)	
Rated power of the cooling fan			800	W

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3.2.5 αiIP-B series 200V-type

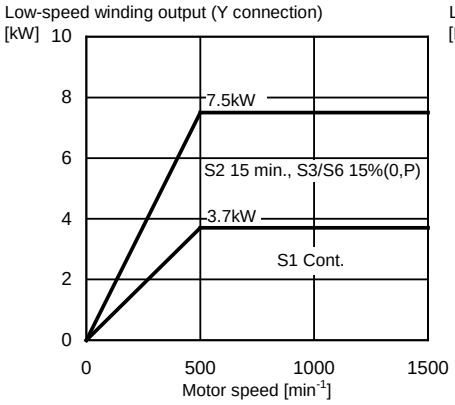
Model αiIP 12/8000-B

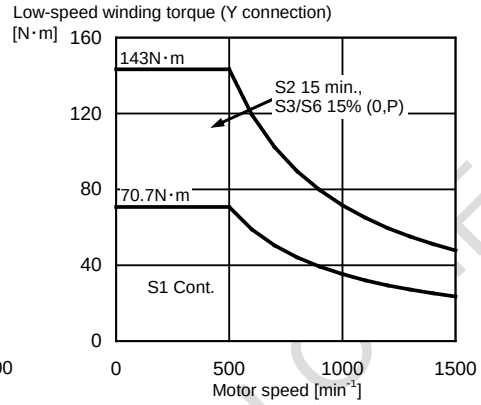
Spec. number for motor: A06B-2448-B□□□

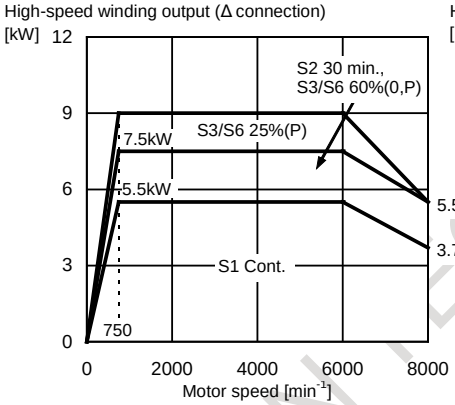
Spec. numbers for output specification nameplates: A06B-1230-K448#S00→(0), #S0P→(P)

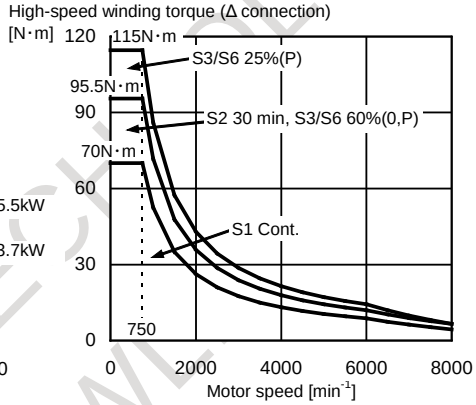
Rated output

Applicable amplifier: αiSP 11-B, βiSVSP*-11-B









Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	3.7	3.7	5.5	5.5	kW
	S2 30 min., S3/S6 60% rated		-	-	7.5	7.5	kW
	S2 15 min., S3/S6 15% rated		7.5	7.5	-	-	kW
	S3/S6 25% rated		-	-	-	9	kW
Rated current	S1 continuous rated	I_C	23	23	39	39	A
	S2 30 min., S3/S6 60% rated		-	-	49	49	A
	S2 15 min., S3/S6 15% rated		42	42	-	-	A
	S3/S6 25% rated		-	-	-	62	A
Speed	Base speed	N_b	500		750		min^{-1}
	Max. speed	N_{max}	1500		8000		min^{-1}
Switching speed			750				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection			12.3	9.0	12.3	10.8	kW
Continuous rated torque in the constant torque range		T_b	70.7		70.0		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.07				$kg·m^2$
Weight		W	95				kg
Winding resistance (U-X, V-Y, and W-Z)			301				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Oil seal				
Degree of protection			IP54				
Vibration			V5 (option V3)				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			100				W

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Model αiI$_P$ 12/8000-B

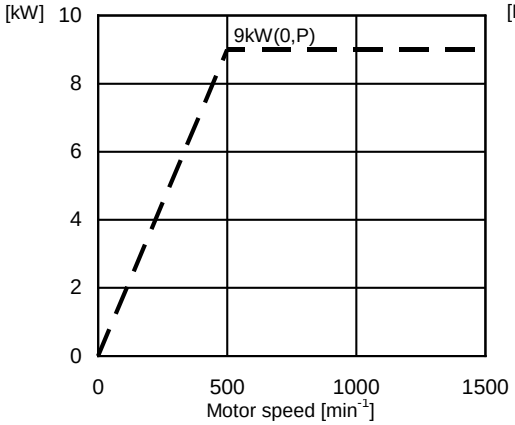
Spec. number for motor: A06B-2448-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K448#S00→(0), #S0P→(P)

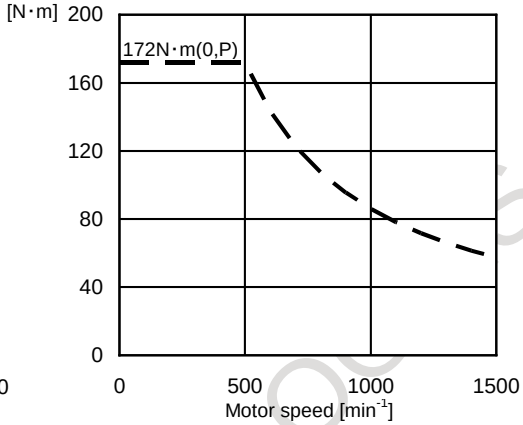
Max.acc. output

Applicable amplifier: αiSP 11-B、βiSVSP*-11B

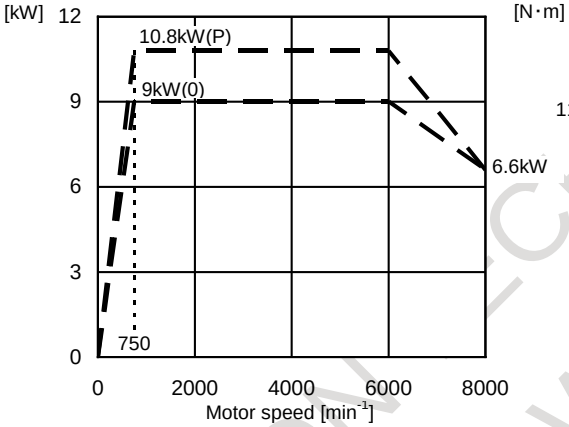
Low-speed winding output (Y connection)



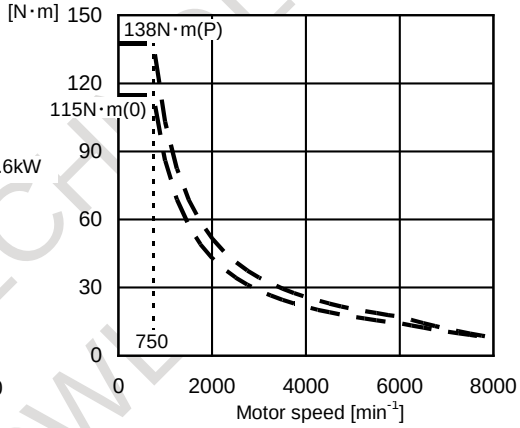
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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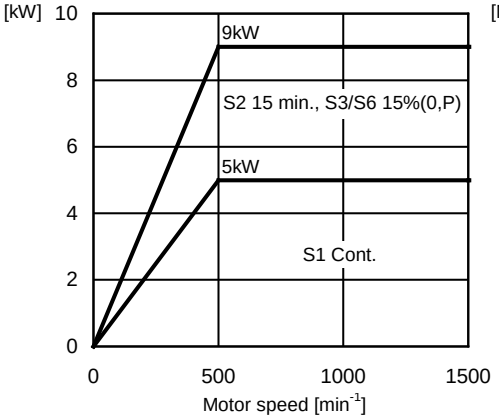
Model αiIP 15/8000-B

Spec. number for motor: A06B-2449-B□□□

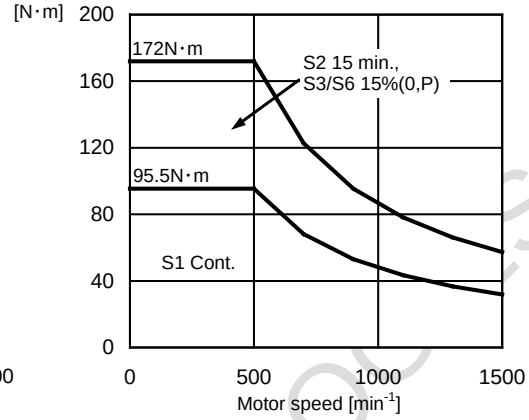
Spec. numbers for output specification nameplates: A06B-1230-K449#S00→(0), #S0P→(P)

Rated output Applicable amplifier: αiSP 15-B, βiSVSP*-15-B

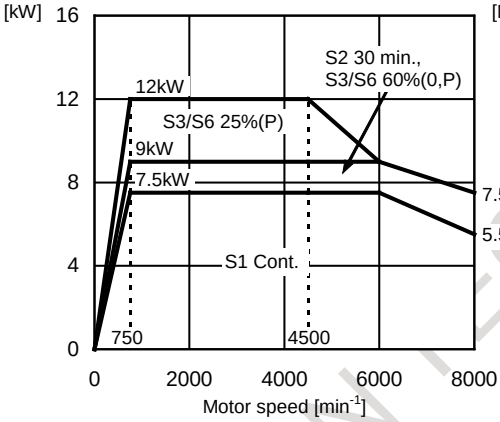
Low-speed winding output (Y connection)



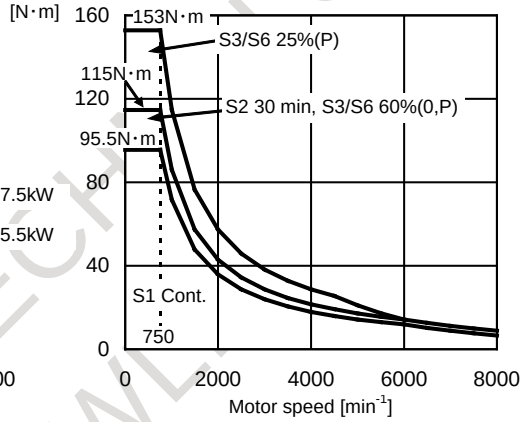
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	5	5	7.5	7.5	kW
	S2 30 min., S3/S6 60% rated		-	-	9	9	kW
	S2 15 min., S3/S6 15% rated		9	9	-	-	kW
	S3/S6 25% rated		-	-	-	12	kW
Rated current	S1 continuous rated	I_C	40	40	50	50	A
	S2 30 min., S3/S6 60% rated		-	-	58	58	A
	S2 15 min., S3/S6 15% rated		61	61	-	-	A
	S3/S6 25% rated		-	-	-	74	A
Speed	Base speed	N_b	500		750		min^{-1}
	Max. speed	N_{max}	1500		8000		min^{-1}
Switching speed			750				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection			13.5	10.8	13.5	14.4	kW
Continuous rated torque in the constant torque range		T_b	95.5		95.5		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.09				$kg·m^2$
Weight		W	110				kg
Winding resistance (U-X, V-Y, and W-Z)			220				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Oil seal				
Degree of protection			IP54				
Vibration			V5 (option V3)				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			100				W

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Model αiI$_P$ 15/8000-B

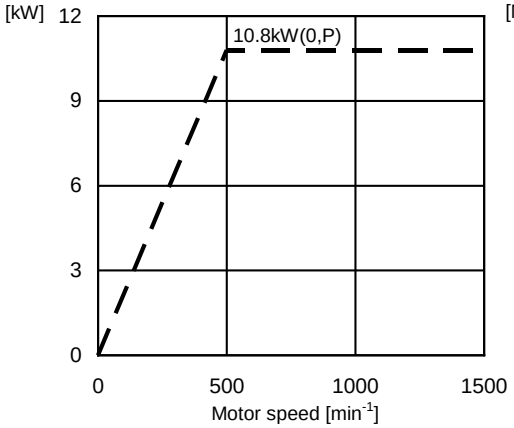
Spec. number for motor: A06B-2449-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K449#S00→(0), #S0P→(P)

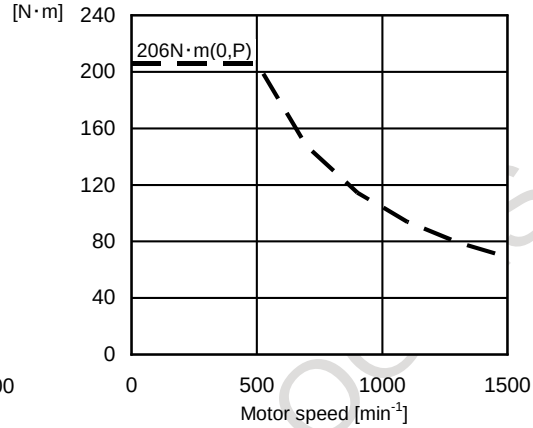
Max.acc. output

Applicable amplifier: αiSP 15-B, βiSVSP*-15-B

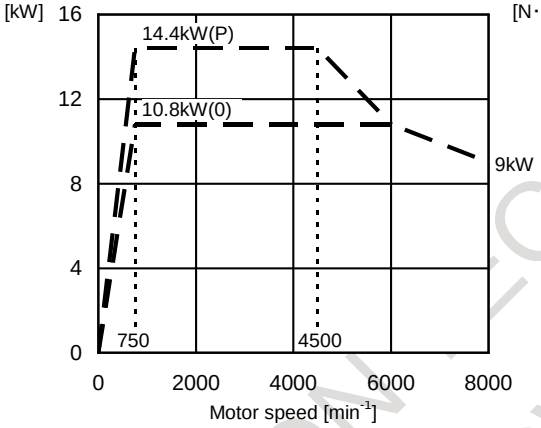
Low-speed winding output (Y connection)



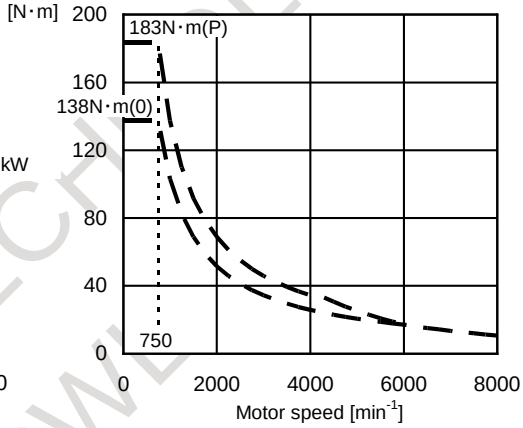
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiIP 18/8000-B

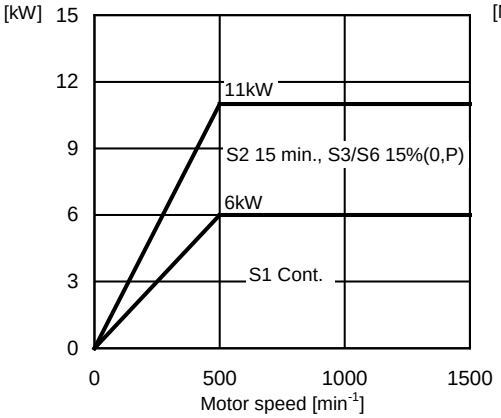
Spec. number for motor: A06B-2456-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K456#S00→(0), #S0P→(P)

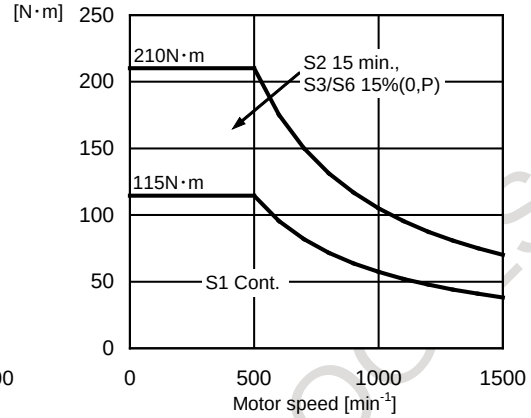
Rated output

Applicable amplifier: αiSP 15-B, βiSVSP*-15-B

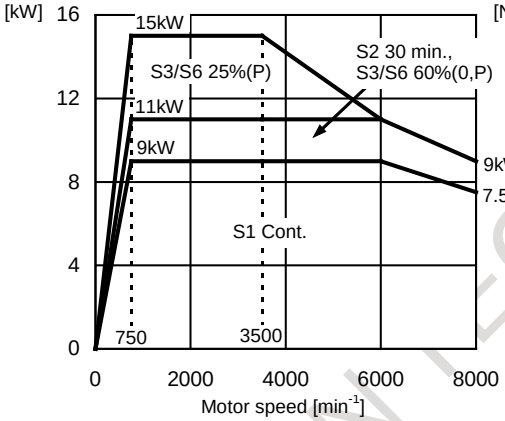
Low-speed winding output (Y connection)



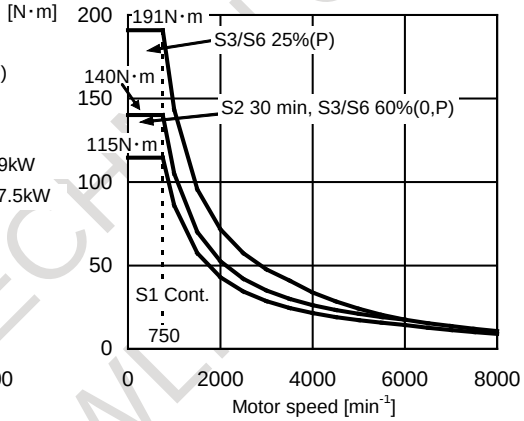
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



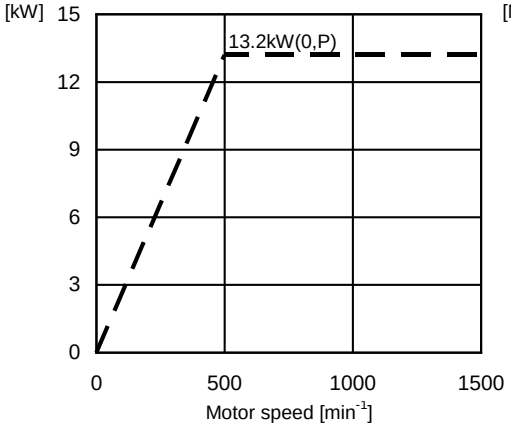
Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	6	6	9	9	kW
	S2 30 min., S3/S6 60% rated		-	-	11	11	kW
	S2 15 min., S3/S6 15% rated		11	11	-	-	kW
	S3/S6 25% rated		-	-	-	15	kW
Rated current	S1 continuous rated	I_C	32	32	55	55	A
	S2 30 min., S3/S6 60% rated		-	-	63	63	A
	S2 15 min., S3/S6 15% rated		53	53	-	-	A
	S3/S6 25% rated		-	-	-	80	A
Speed	Base speed	N_b	500		750		min^{-1}
	Max. speed	N_{max}	1500		8000		min^{-1}
Switching speed			750				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection			15.1	13.2	15.1	18.0	kW
Continuous rated torque in the constant torque range		T_b	115		115		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.105				$kg·m^2$
Weight		W	125				kg
Winding resistance (U-X, V-Y, and W-Z)			227				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Oil seal				
Degree of protection			IP54				
Vibration			V5 (option V3)				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			100				W

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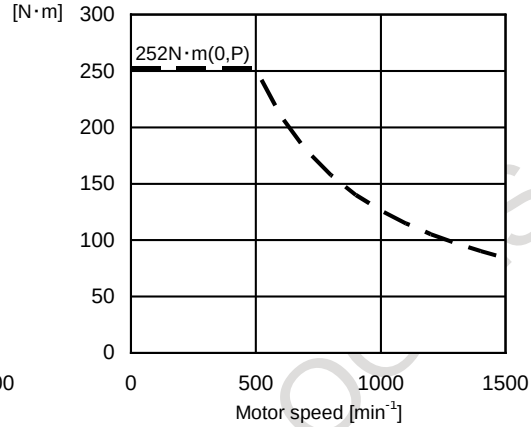
Model αiI$_P$ 18/8000-B — Spec. number for motor: A06B-2456-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K456#S00→(0), #S0P→(P)
Max.acc. output — Applicable amplifier: αiSP 15-B, βiSVSP*-15-B

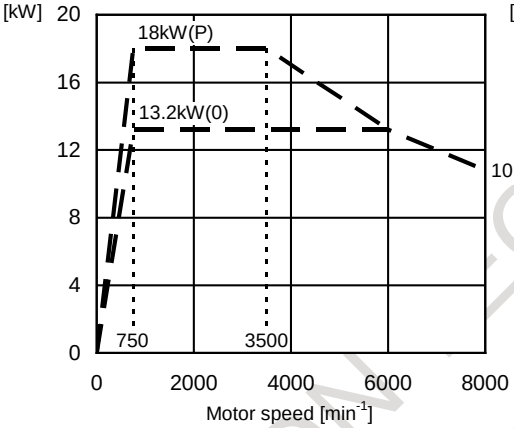
Low-speed winding output (Y connection)



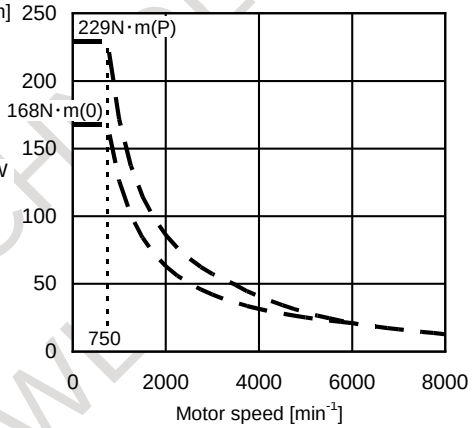
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiIP 22/8000-B

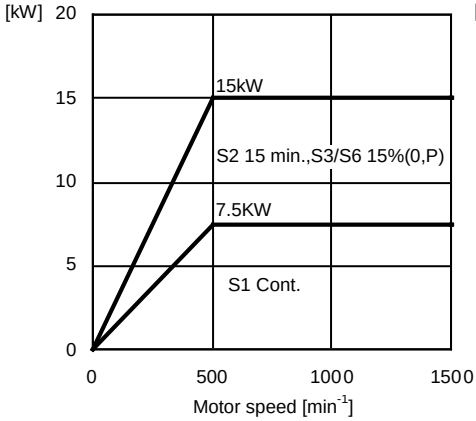
Spec. number for motor: A06B-2451-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K451#S00→(0), #S0P→(P)

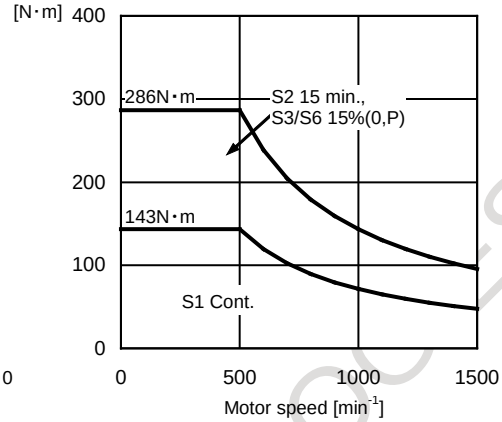
Rated output

Applicable amplifier: αiSP 22-B

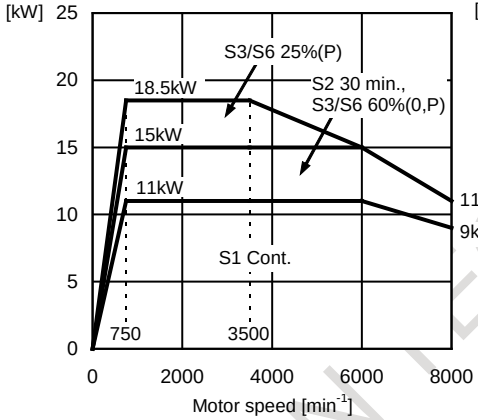
Low-speed winding output (Y connection)



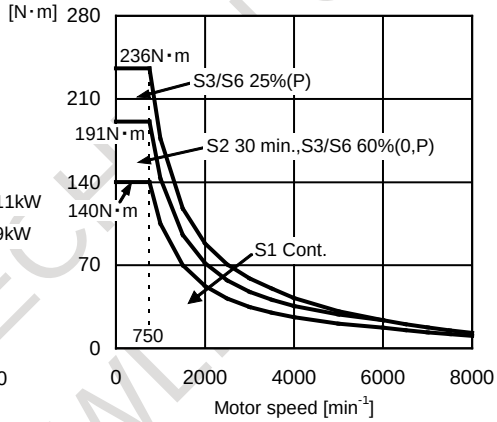
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	7.5	7.5	11	11	kW
	S2 30 min., S3/S6 60% rated		-	-	15	15	kW
	S2 15 min., S3/S6 15% rated		15	15	-	-	kW
	S3/S6 25% rated		-	-	-	18.5	kW
Rated current	S1 continuous rated	I_C	43	43	69	69	A
	S2 30 min., S3/S6 60% rated		-	-	88	88	A
	S2 15 min., S3/S6 15% rated		80	80	-	-	A
	S3/S6 25% rated		-	-	-	106	A
Speed	Base speed	N_b	500		750		min^{-1}
	Max. speed	N_{max}	1500		8000		min^{-1}
Switching speed			750				min^{-1}
Steady-state maximum output		P_{max}	120% of each maximum rated output				kW
Maximum output at acceleration for PS selection			20.0	18.0	20.0	22.2	kW
Continuous rated torque in the constant torque range		T_b	143		140		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.128				$kg·m^2$
Weight		W	143				kg
Winding resistance (U-X, V-Y, and W-Z)			162				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Oil seal				
Degree of protection			IP54				
Vibration			V5 (option V3)				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			100				W

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Model αiI$_P$ 22/8000-B

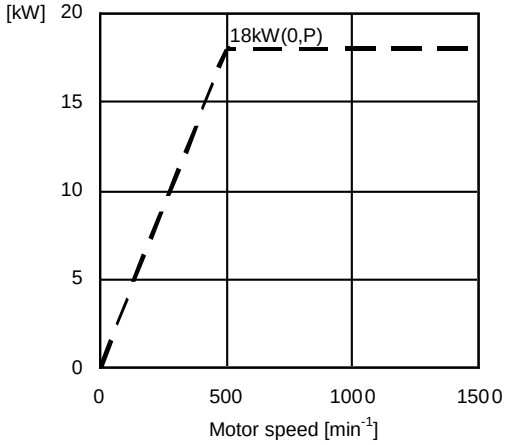
Spec. number for motor: A06B-2451-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K451#S00→(0), #S0P→(P)

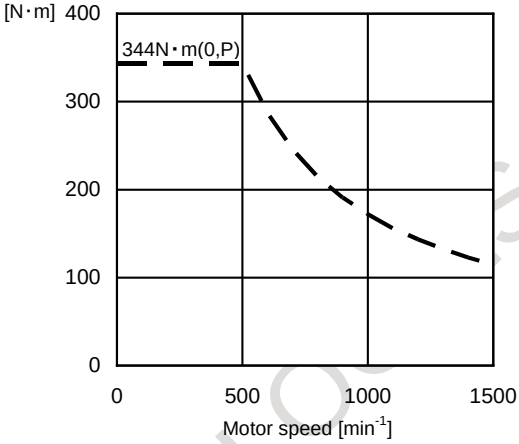
Max.acc. output

Applicable amplifier: αiSP 22-B

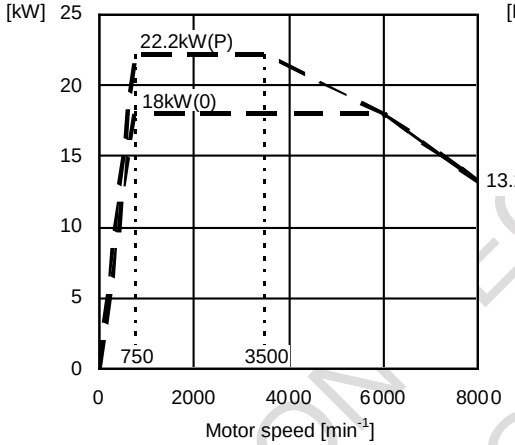
Low-speed winding output (Y connection)



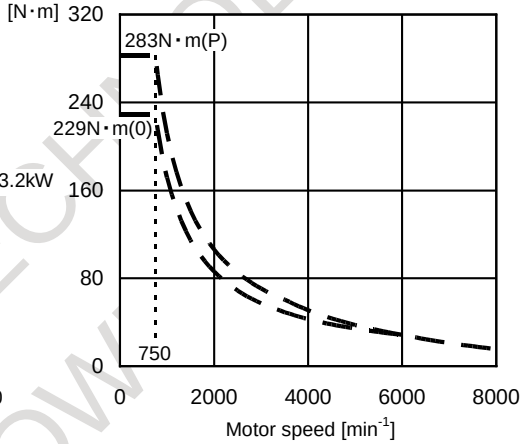
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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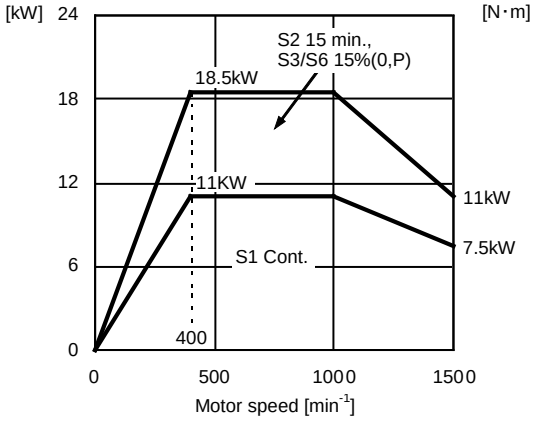
Model αiIP 30/6000-B

Spec. number for motor: A06B-2452-B□□□

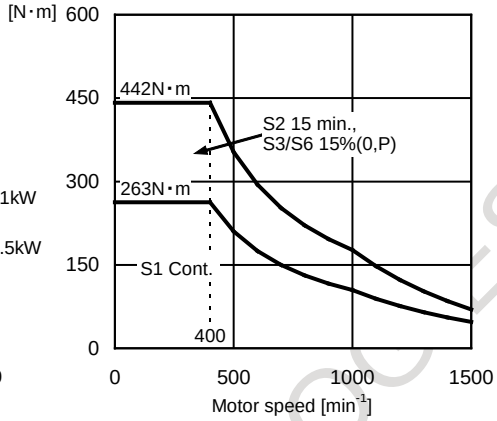
Spec. numbers for output specification nameplates: A06B-1230-K452#S00→(0), #S0P→(P)

Rated output Applicable amplifier: αiSP 22-B

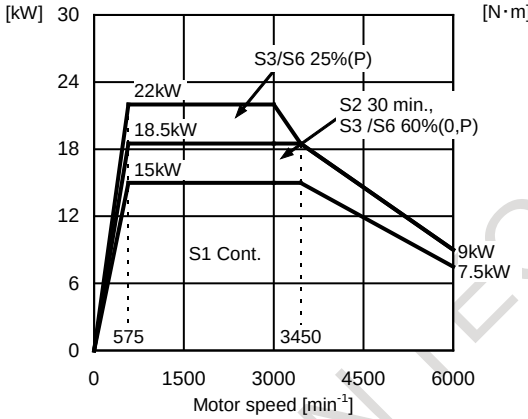
Low-speed winding output (Y connection)



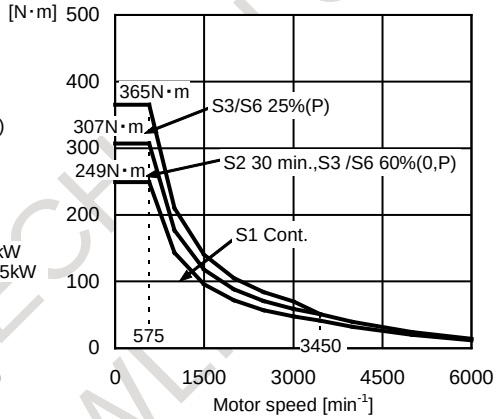
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	11	11	15	15	kW
	S2 30 min., S3/S6 60% rated		-	-	18.5	18.5	kW
	S2 15 min., S3/S6 15% rated		18.5	18.5	-	-	kW
	S3/S6 25% rated		-	-	-	22	kW
Rated current	S1 continuous rated	I_C	54	54	86	86	A
	S2 30 min., S3/S6 60% rated		-	-	101	101	A
	S2 15 min., S3/S6 15% rated		87	87	-	-	A
	S3/S6 25% rated		-	-	-	115	A
Speed	Base speed	N_b	400		575		min^{-1}
	Max. speed	N_{max}	1500		6000		min^{-1}
Switching speed			575				min^{-1}
Steady-state maximum output		P_{max}	120% of each maximum rated output				kW
Maximum output at acceleration for PS selection			25.0	22.2	25.0	26.4	kW
Continuous rated torque in the constant torque range		T_b	263		249		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.295				$kg·m^2$
Weight		W	250				kg
Winding resistance (U-X, V-Y, and W-Z)			91.5				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Oil seal				
Degree of protection			IP54				
Vibration			V5 (option V3)				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			160				W

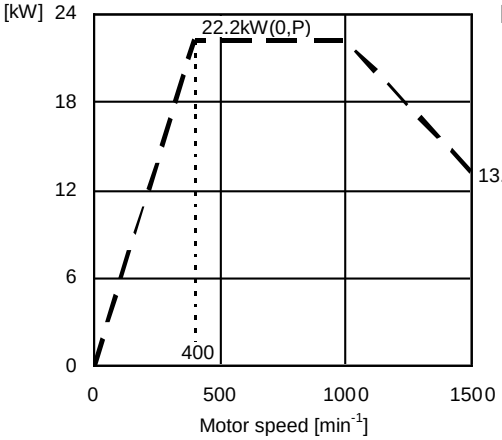
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Model αiI$_P$ 30/6000-B

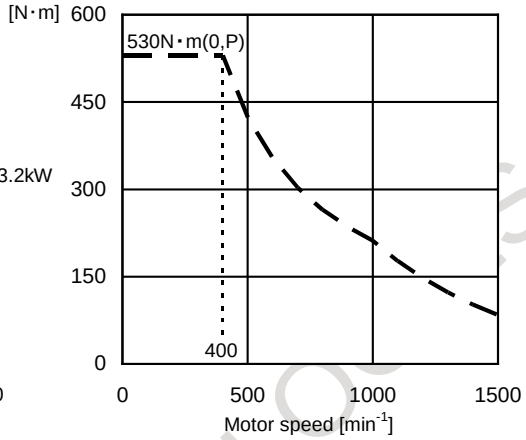
Spec. number for motor: A06B-2452-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K452#S00→(0), #S0P→(P)
Max.acc. output Applicable amplifier: αiSP 22-B

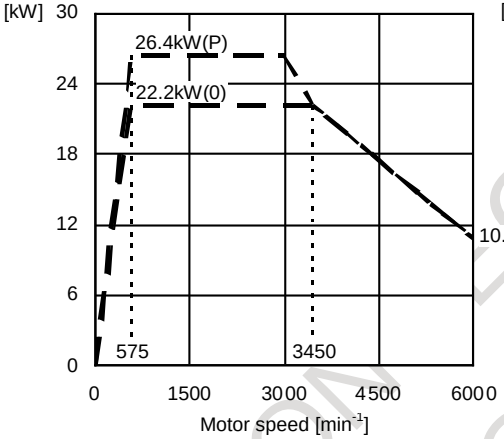
Low-speed winding output (Y connection)



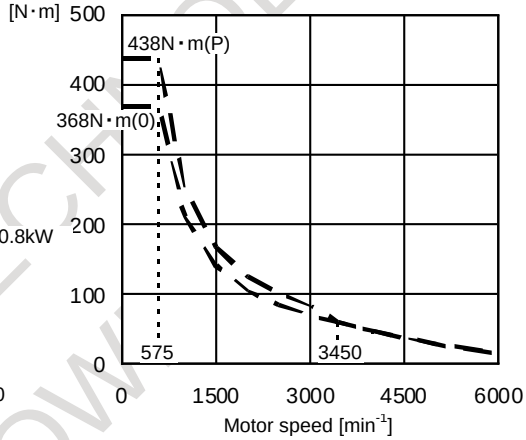
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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JDOWNLOADS

Model αiIP 40/6000-B

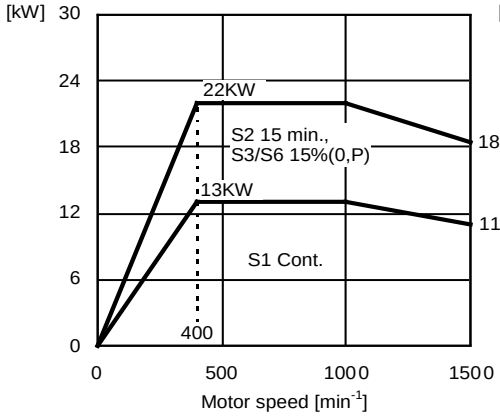
Spec. number for motor: A06B-2453-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K453#S00→(0), #S0P→(P)

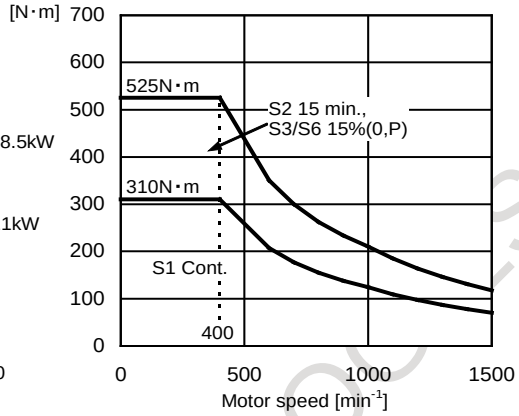
Rated output

Applicable amplifier: αiSP 26-B

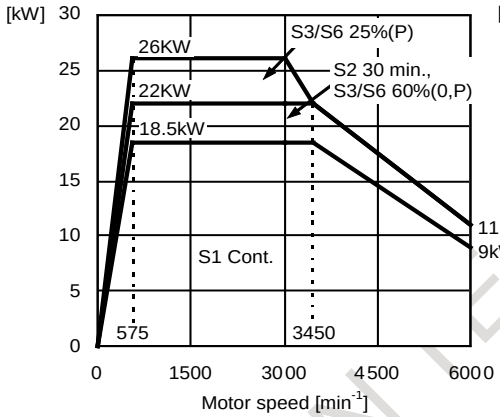
Low-speed winding output (Y connection)



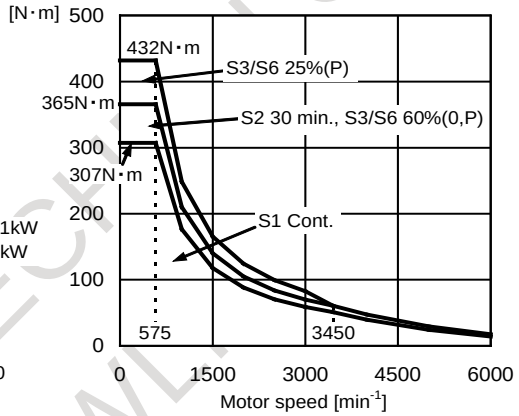
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	13	13	18.5	18.5	kW
	S2 30 min., S3/S6 60% rated		-	-	22	22	kW
	S2 15 min., S3/S6 15% rated		22	22	-	-	kW
	S3/S6 25% rated		-	-	-	26	kW
Rated current	S1 continuous rated	I_C	70	70	108	108	A
	S2 30 min., S3/S6 60% rated		-	-	123	123	A
	S2 15 min., S3/S6 15% rated		115	115	-	-	A
	S3/S6 25% rated		-	-	-	142	A
Speed	Base speed	N_b	400		575		min^{-1}
	Max. speed	N_{max}	1500		6000		min^{-1}
Switching speed			575				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection			29.0	26.4	29.0	31.2	kW
Continuous rated torque in the constant torque range		T_b	310		307		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.295				$kg·m^2$
Weight		W	250				kg
Winding resistance (U-X, V-Y, and W-Z)			76.2				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Oil seal				
Degree of protection			IP54				
Vibration			V5 (option V3)				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			160				W

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Model αiIP 40/6000-B

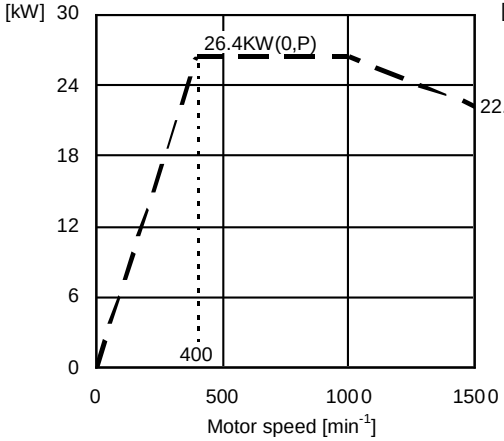
Spec. number for motor: A06B-2453-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K453#S00→(0), #S0P→(P)

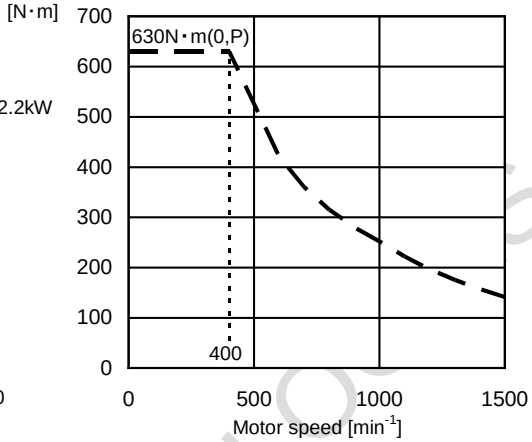
Max.acc. output

Applicable amplifier: αiSP 26-B

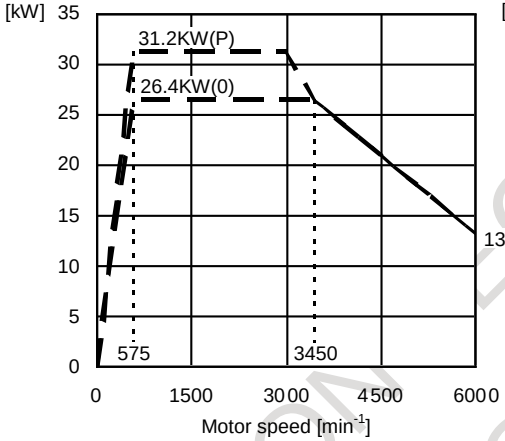
Low-speed winding output (Y connection)



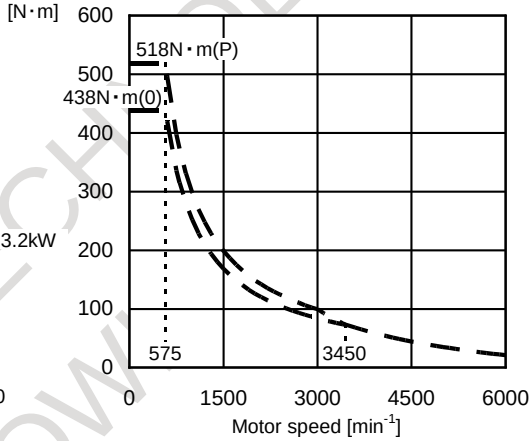
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



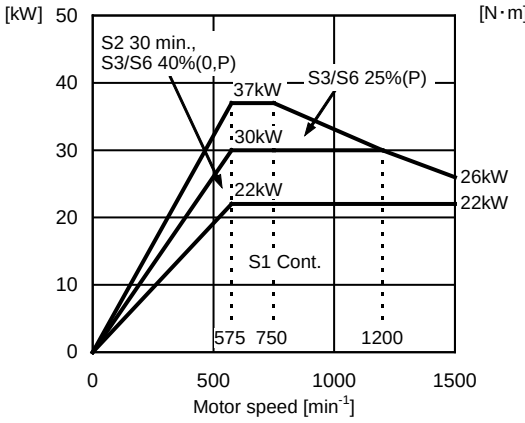
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Model αiI$_P$ 50/6000-B — Spec. number for motor: A06B-2454-B□□□

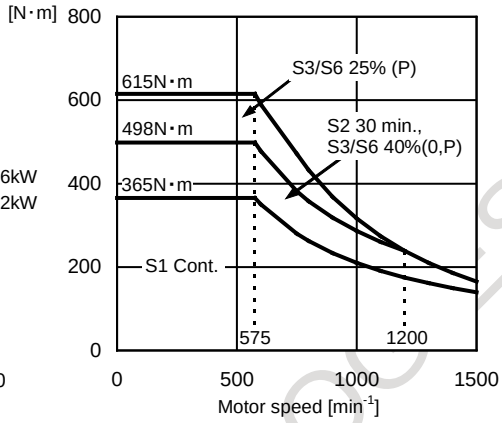
Spec. numbers for output specification nameplates: A06B-1230-K454#S00→(0), #S0P→(P)

Rated output — Applicable amplifier: αiSP 26-B

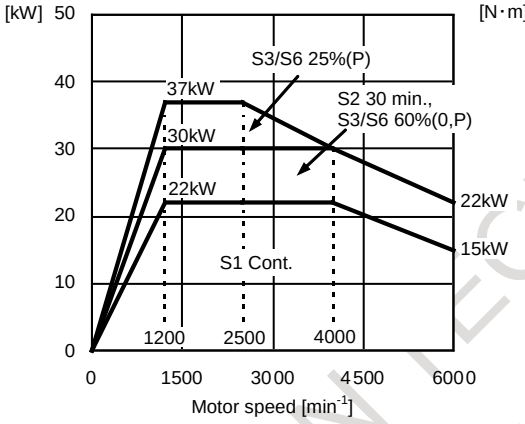
Low-speed winding output (Y connection)



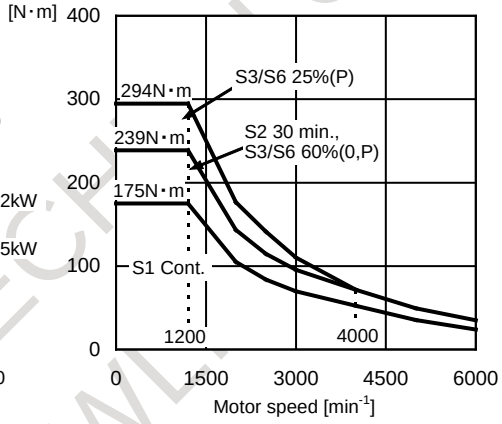
Low-speed winding output (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	22	22	22	22	kW
	S2 30 min., S3/S6 60% rated		-	-	30	30	kW
	S2 30 min., S3/S6 40% rated		30	30	-	-	kW
	S3/S6 25% rated		-	37	-	37	kW
Rated current	S1 continuous rated	I_C	95	95	94	94	A
	S2 30 min., S3/S6 60% rated		-	-	117	125	A
	S2 30 min., S3/S6 40% rated		118	127	-	-	A
	S3/S6 25% rated		-	156	-	143	A
Speed	Base speed	N_b	575		1200		min^{-1}
	Max. speed	N_{max}	1500		6000		min^{-1}
Switching speed			1200				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection			35.4	44.4	35.4	44.4	kW
Continuous rated torque in the constant torque range		T_b	365		175		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.355				$kg \cdot m^2$
Weight		W	290				kg
Winding resistance (U-X, V-Y, and W-Z)			39.5				mΩ
Built-in detector			αiM sensor or αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Oil seal				
Degree of protection			IP54				
Vibration			V5 (option V3)				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			160				W

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Model αiIP 50/6000-B

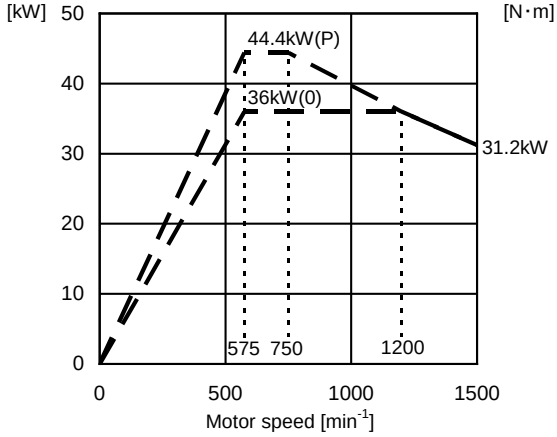
Spec. number for motor: A06B-2454-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K454#S00→(0), #S0P→(P)

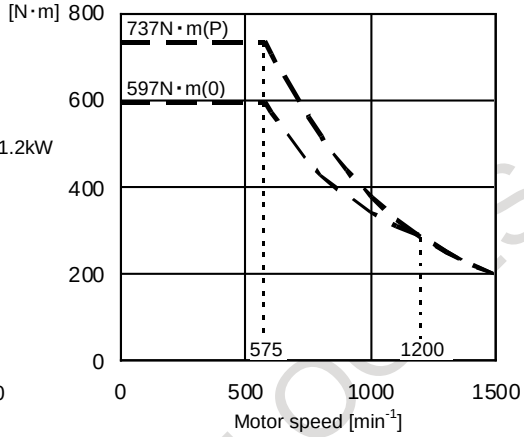
Max.acc. output

Applicable amplifier: αiSP 26-B

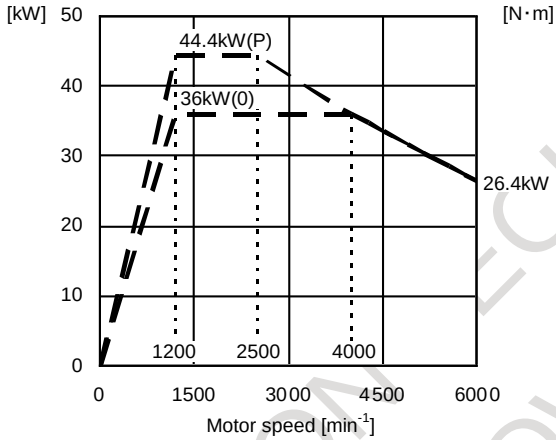
Low-speed winding output (Y connection)



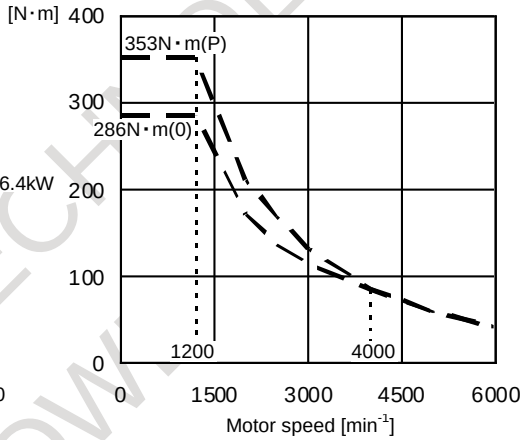
Low-speed winding output (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiIP 60/5000-B

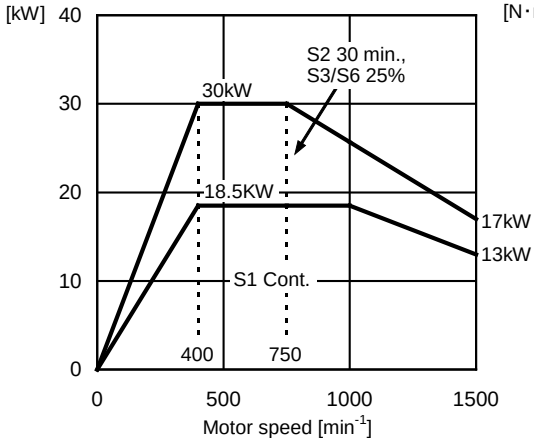
Spec. number for motor: A06B-2455-B□□□

Spec. numbers for output specification nameplate: A06B-1230-K455#S00

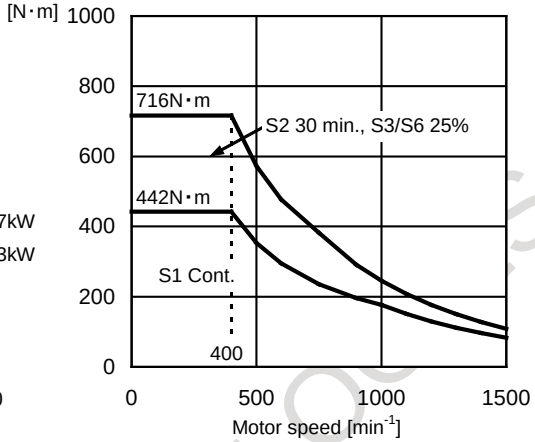
Rated output

Applicable amplifier: αiSP 30-B

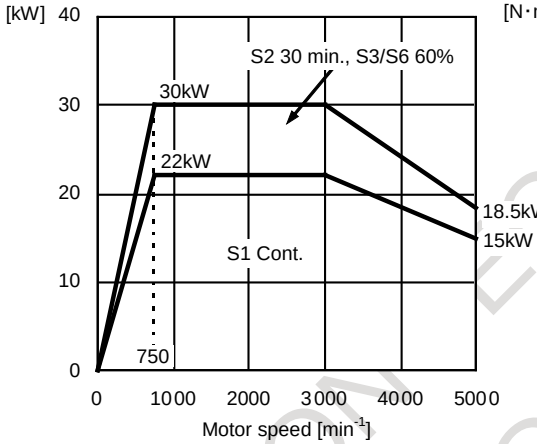
Low-speed winding output (Y connection)



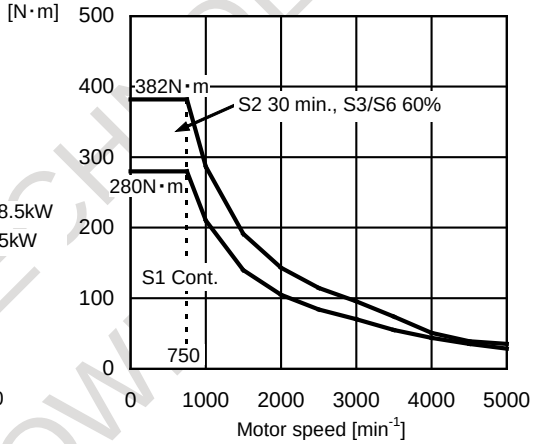
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	18.5	22	kW
	S2 30 min., S3/S6 60% rated		-	30	kW
	S2 30 min., S3/S6 25% rate		30	-	kW
Rated current	S1 continuous rated	I_C	87	106	A
	S2 30 min., S3/S6 60% rated		-	139	A
	S2 30 min., S3/S6 25% rate		132	-	A
Speed	Base speed	N_b	400	750	min^{-1}
	Max. speed	N_{max}	1500	5000	min^{-1}
Switching speed			750		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			36.0	36.0	kW
Continuous rated torque in the constant torque range		T_b	442	280	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.49		$kg·m^2$
Weight		W	468		kg
Winding resistance (U-X, V-Y, and W-Z)			45.4		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V10 (option V5)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			185		W

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Model αiIP 60/5000-B

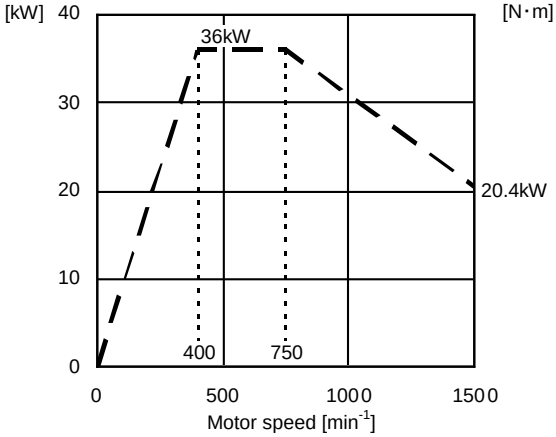
Spec. number for motor: A06B-2455-B□□□

Spec. numbers for output specification nameplate: A06B-1230-K455#S00

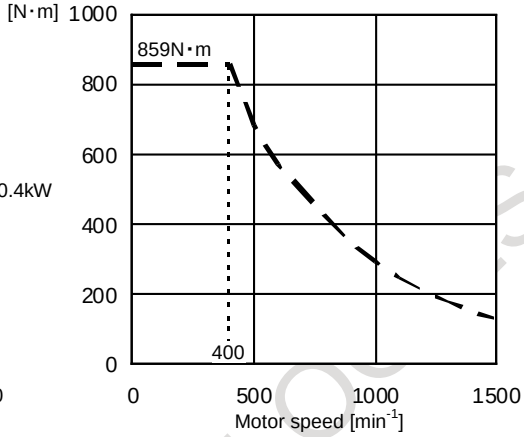
Max.acc. output

Applicable amplifier: αiSP 30-B

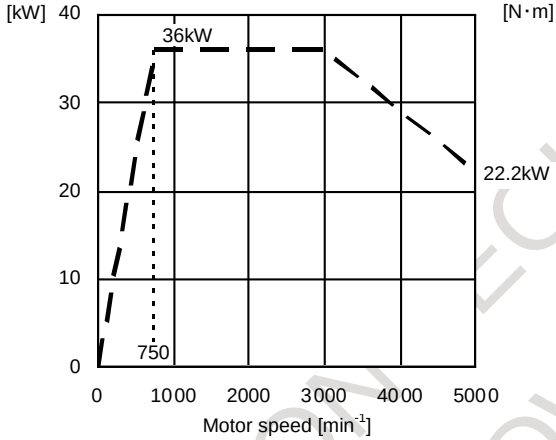
Low-speed winding output (Y connection)



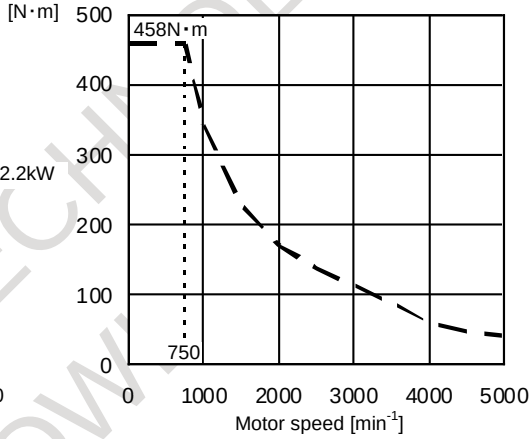
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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JDOWNLOADS

3.2.6 αiIP series 400V-type

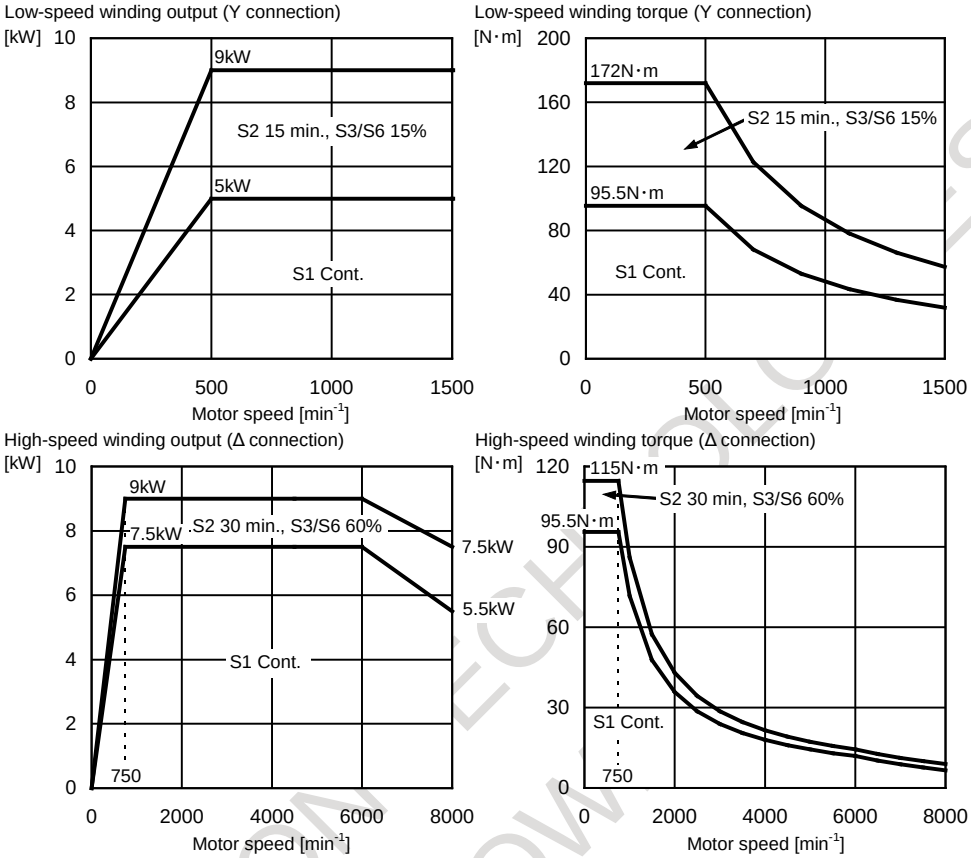
Model αiIP 15/8000HV-B

Spec. number for motor: A06B-2549-B□□□

Spec. number for output specification nameplate: A06B-1230-K549#S00

Rated output

Applicable amplifier: αiSP 15HV-B, βiSVSP*-15HV-B



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	5	7.5	kW
	S2 30 min., S3/S6 60% rated		-	9	kW
	S2 15 min., S3/S6 15% rated		9	-	kW
Rated current	S1 continuous rated	I_C	19	25	A
	S2 30 min., S3/S6 60% rated		-	29	A
	S2 15 min., S3/S6 15% rated		29	-	A
Speed	Base speed	N_b	500	750	min^{-1}
	Max. speed	N_{max}	1500	8000	min^{-1}
Switching speed			750		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			10.8	13.5	kW
Continuous rated torque in the constant torque range		T_b	95.5	95.5	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.09		$kg·m^2$
Weight		W	110		kg
Winding resistance (U-X, V-Y, and W-Z)			925		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			116		W

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Model αiI$_P$ 15/8000HV-B

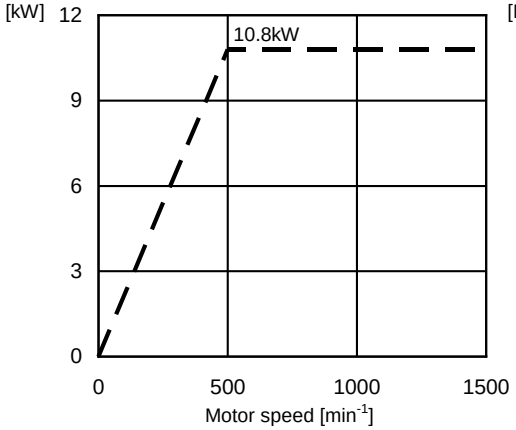
Spec. number for motor: A06B-2549-B□□□

Spec. number for output specification nameplate: A06B-1230-K549#S00

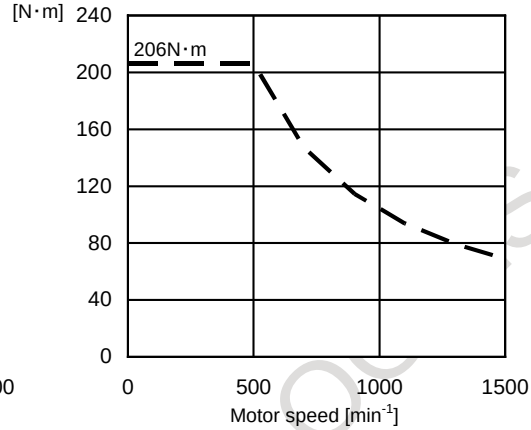
Max.acc. output

Applicable amplifier: αiSP 15HV-B, βiSVSP*-15HV-B

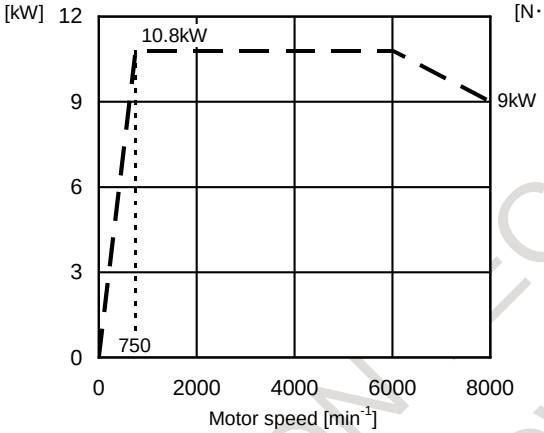
Low-speed winding output (Y connection)



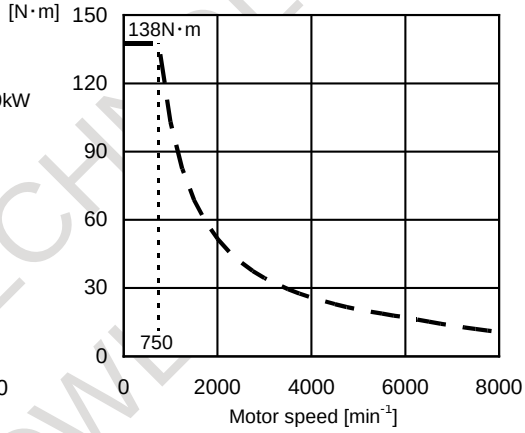
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiIP 22/8000HV-B

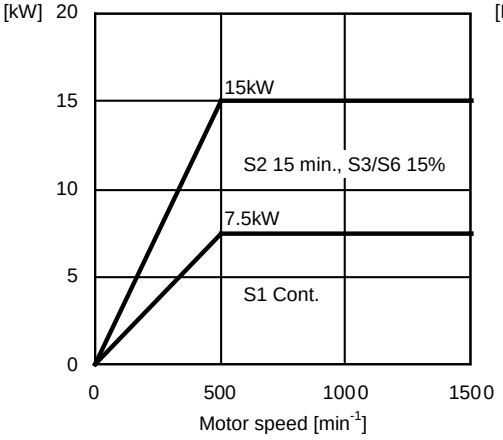
Spec. number for motor: A06B-2551-B□□□

Spec. number for output specification nameplate: A06B-1230-K551#S00

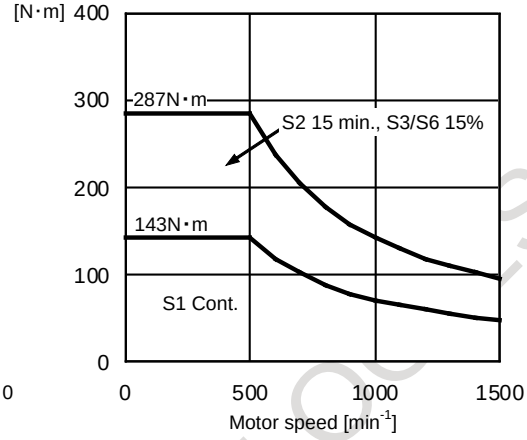
Rated output

Applicable amplifier: αiSP 22HV-B

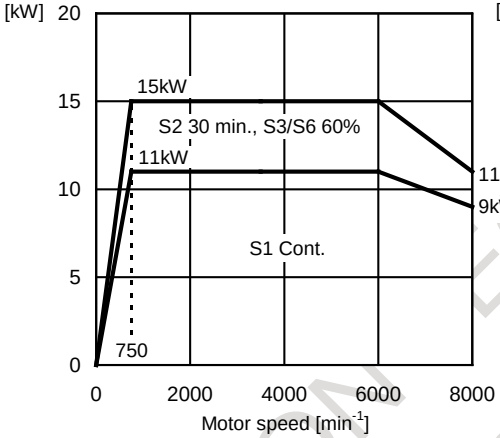
Low-speed winding output (Y connection)



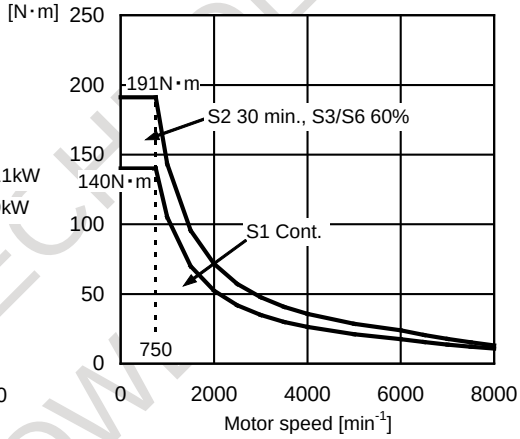
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	7.5	11	kW
	S2 30 min., S3/S6 60% rated		-	15	kW
	S2 15 min., S3/S6 15% rated		15	-	kW
Rated current	S1 continuous rated	I_C	25	38	A
	S2 30 min., S3/S6 60% rated		-	49	A
	S2 15 min., S3/S6 15% rated		45	-	A
Speed	Base speed	N_b	500	750	min^{-1}
	Max. speed	N_{max}	1500	8000	min^{-1}
Switching speed			750		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			18.0	20.0	kW
Continuous rated torque in the constant torque range		T_b	143	140	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.128		$kg·m^2$
Weight		W	143		kg
Winding resistance (U-X, V-Y, and W-Z)			645		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			116		W

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Model αiI$_P$ 22/8000HV-B

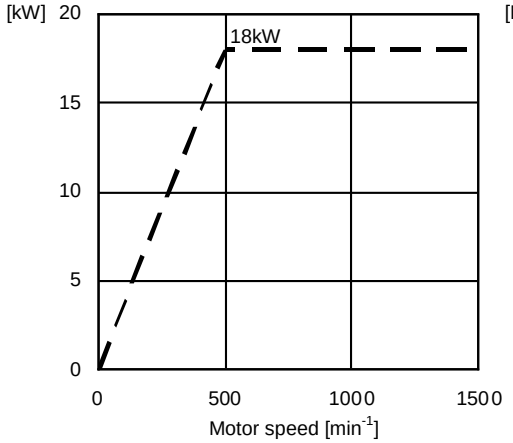
Spec. number for motor: A06B-2551-B□□□

Spec. number for output specification nameplate: A06B-1230-K551#S00

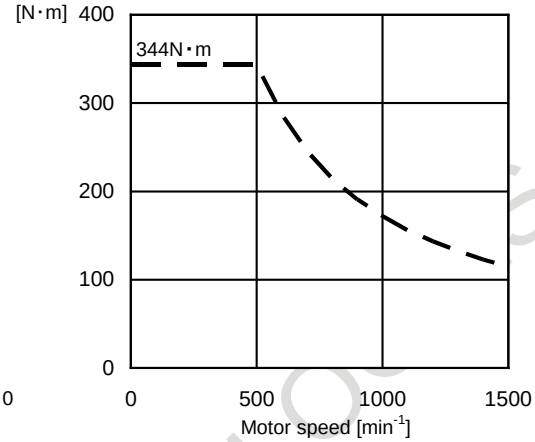
Max.acc. output

Applicable amplifier: αiSP 22HV-B

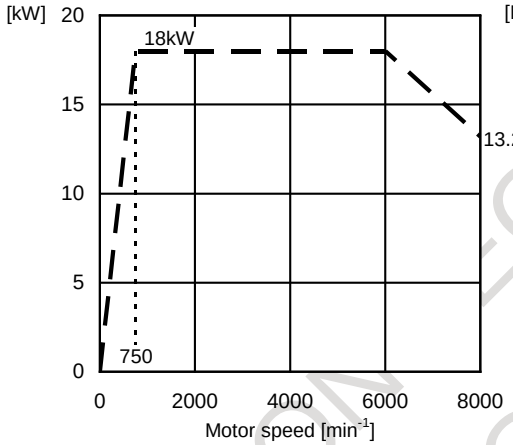
Low-speed winding output (Y connection)



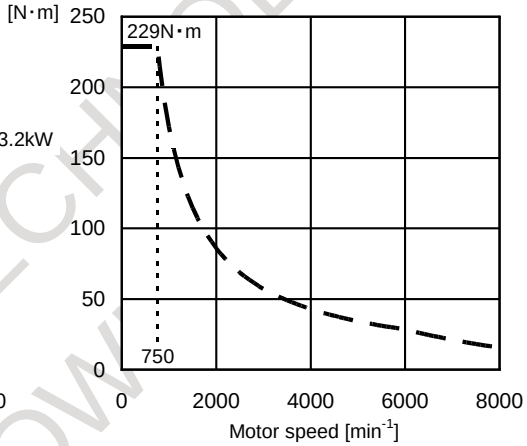
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiIP 40/6000HV-B

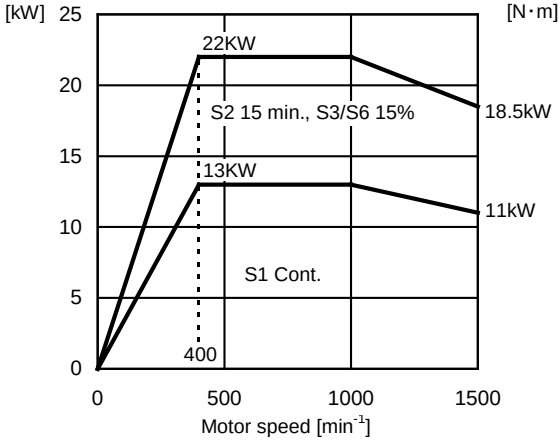
Spec. number for motor: A06B-2553-B□□□

Spec. number for output specification nameplate: A06B-1230-K553#S00

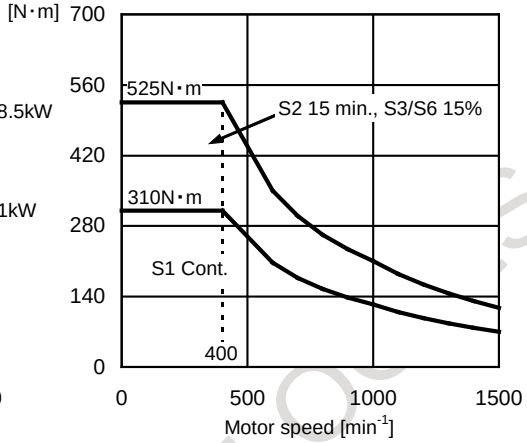
Rated output

Applicable amplifier: αiSP 30HV-B

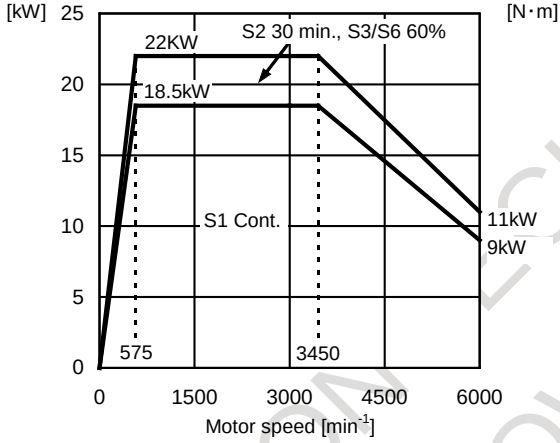
Low-speed winding output (Y connection)



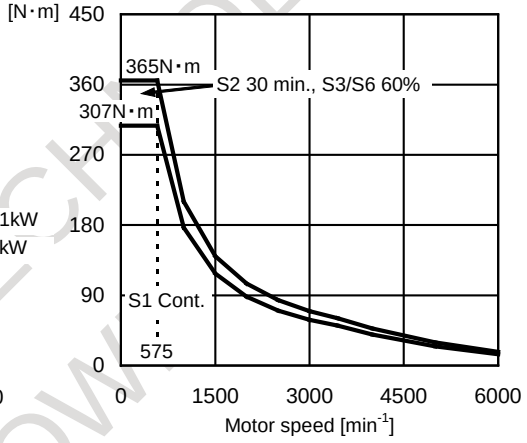
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	13	18.5	kW
	S2 30 min., S3/S6 60% rated		-	22	kW
	S2 15 min., S3/S6 15% rated		22	-	kW
Rated current	S1 continuous rated	I_C	33	54	A
	S2 30 min., S3/S6 60% rated		-	62	A
	S2 15 min., S3/S6 15% rated		47	-	A
Speed	Base speed	N_b	400	575	min^{-1}
	Max. speed	N_{max}	1500	6000	min^{-1}
Switching speed			575		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			26.4	26.4	kW
Continuous rated torque in the constant torque range		T_b	310	307	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.295		$kg·m^2$
Weight		W	250		kg
Winding resistance (U-X, V-Y, and W-Z)			305		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			170		W

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Model αiI$_P$ 40/6000HV-B

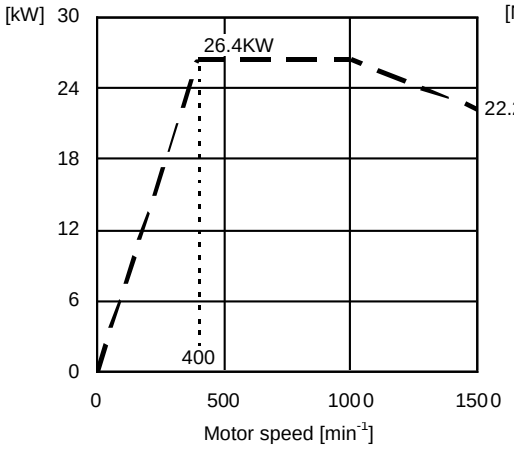
Spec. number for motor: A06B-2553-B□□□

Spec. number for output specification nameplate: A06B-1230-K553#S00

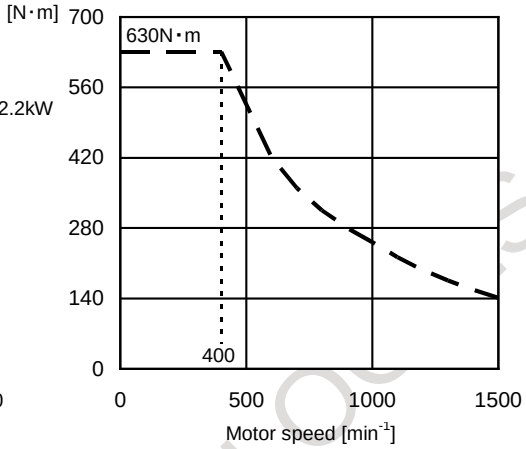
Max.acc. output

Applicable amplifier: αiSP 30HV-B

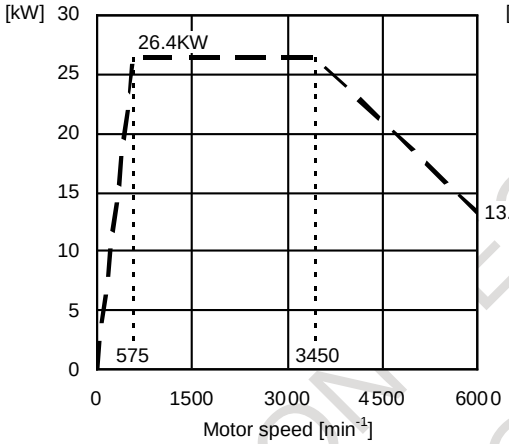
Low-speed winding output (Y connection)



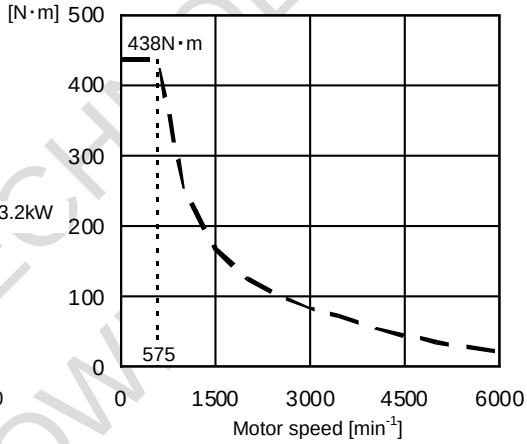
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiIP 50/6000HV-B

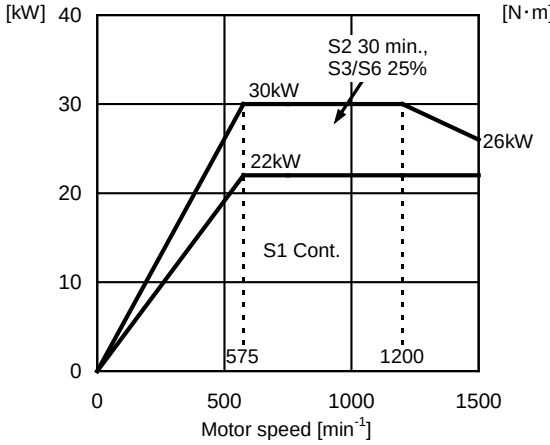
Spec. number for motor: A06B-2554-B□□□

Spec. number for output specification nameplate: A06B-1230-K554#S00

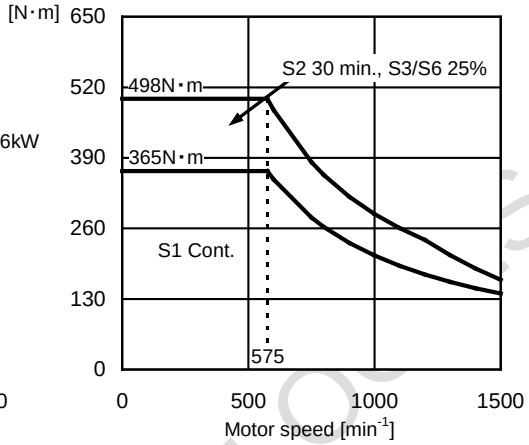
Rated output

Applicable amplifier: αiSP 30HV-B

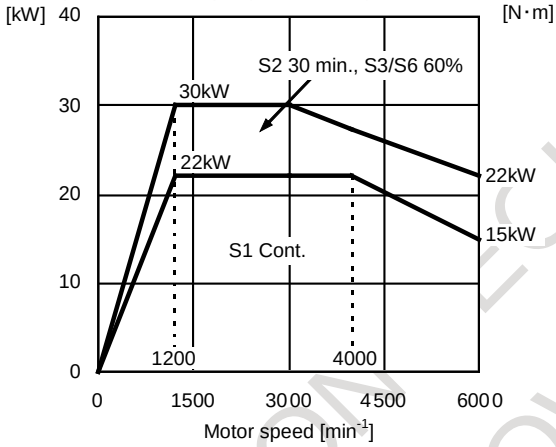
Low-speed winding output (Y connection)



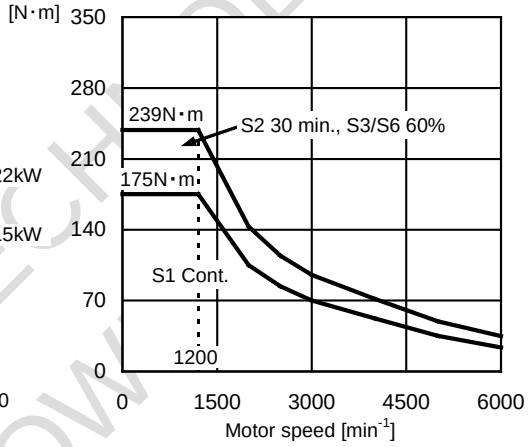
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	22	22	kW
	S2 30 min., S3/S6 60% rated		-	30	kW
	S2 30 min., S3/S6 25% rated		30	-	kW
Rated current	S1 continuous rated	I_C	47	47	A
	S2 30 min., S3/S6 60% rated		-	58	A
	S2 30 min., S3/S6 25% rated		59	-	A
Speed	Base speed	N_b	575	1200	min^{-1}
	Max. speed	N_{max}	1500	6000	min^{-1}
Switching speed			1200		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			35.4	35.4	kW
Continuous rated torque in the constant torque range		T_b	365	175	N・m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.355		$kg・m^2$
Weight		W	290		kg
Winding resistance (U-X, V-Y, and W-Z)			157		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V5 (option V3)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			170		W

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Model αiIP 50/6000HV-B

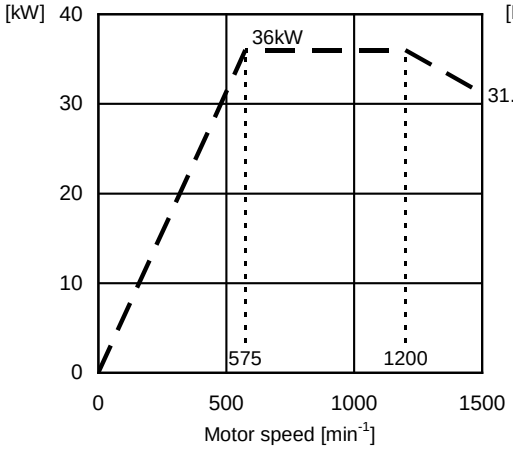
Spec. number for motor: A06B-2554-B□□□

Spec. number for output specification nameplate: A06B-1230-K554#S00

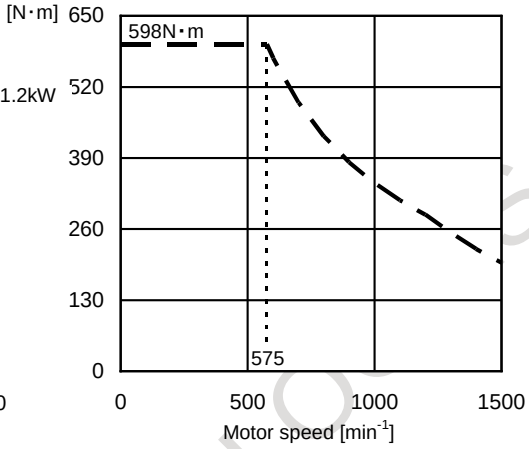
Max.acc. output

Applicable amplifier: αiSP 30HV-B

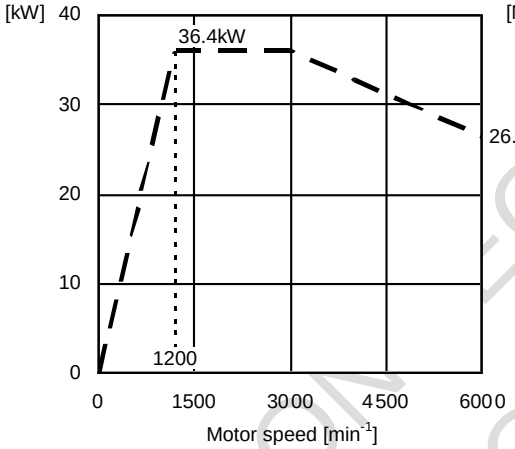
Low-speed winding output (Y connection)



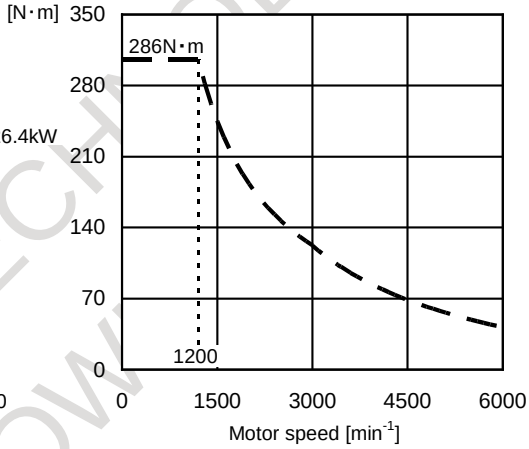
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiIP 60/5000HV-B

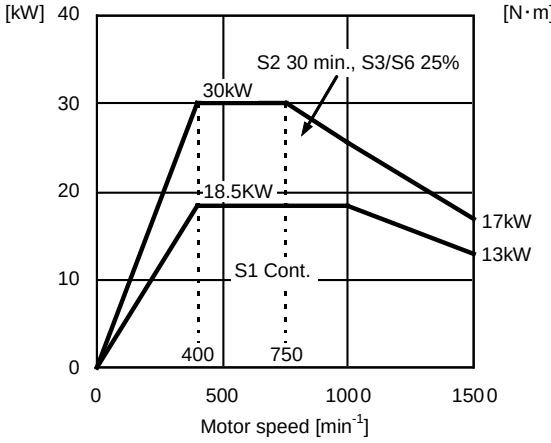
Spec. number for motor: A06B-2555-B□□□

Spec. number for output specification nameplate: A06B-1230-K555#S00

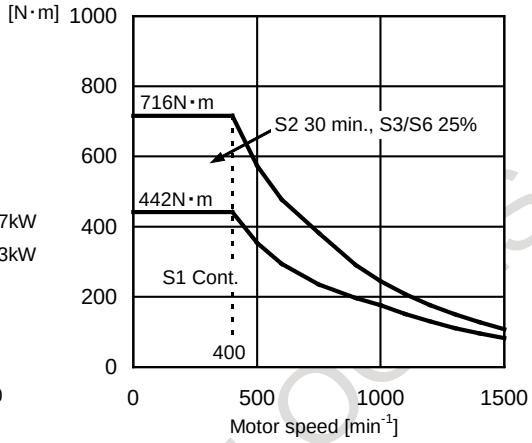
Rated output

Applicable amplifier: αiSP 30HV-B

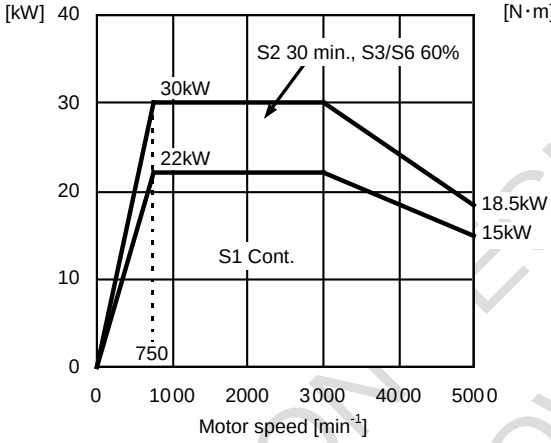
Low-speed winding output (Y connection)



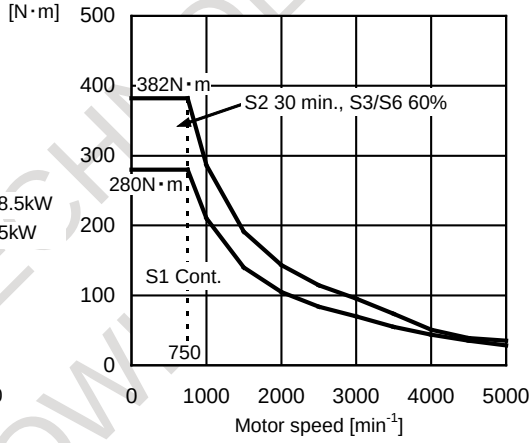
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	18.5	22	kW
	S2 30 min., S3/S6 60% rated		-	30	kW
	S2 15 min., S3/S6 15% rated		30	-	kW
Rated current	S1 continuous rated	I_C	44	53	A
	S2 30 min., S3/S6 60% rated		-	70	A
	S2 15 min., S3/S6 15% rated		66	-	A
Speed	Base speed	N_b	400	750	min^{-1}
	Max. speed	N_{max}	1500	5000	min^{-1}
Switching speed			750		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			36.0	36.0	kW
Continuous rated torque in the constant torque range		T_b	442	280	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.49		$kg·m^2$
Weight		W	468		kg
Winding resistance (U-X, V-Y, and W-Z)			177		mΩ
Built-in detector			αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Oil seal		
Degree of protection			IP54		
Vibration			V10 (option V5)		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			180		W

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Model αiIP 60/5000HV-B

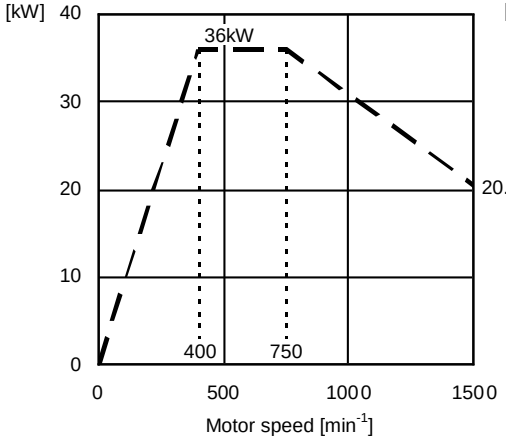
Spec. number for motor: A06B-2555-B□□□

Spec. number for output specification nameplate: A06B-1230-K555#S00

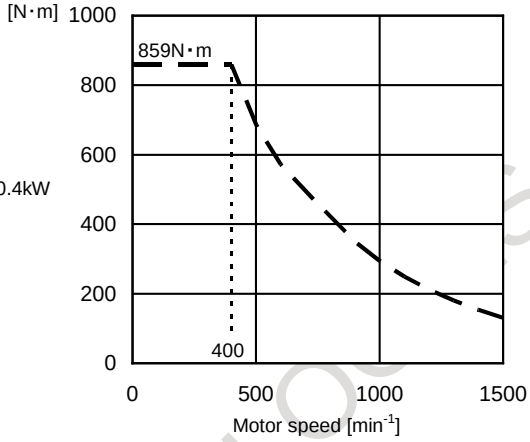
Max.acc. output

Applicable amplifier: αiSP 30HV-B

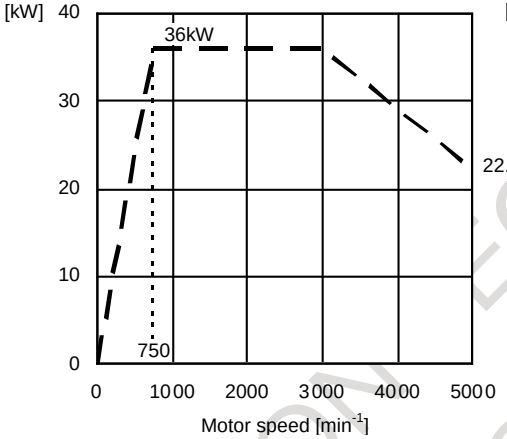
Low-speed winding output (Y connection)



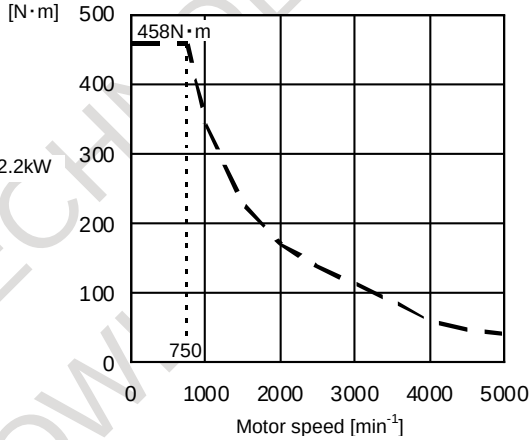
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



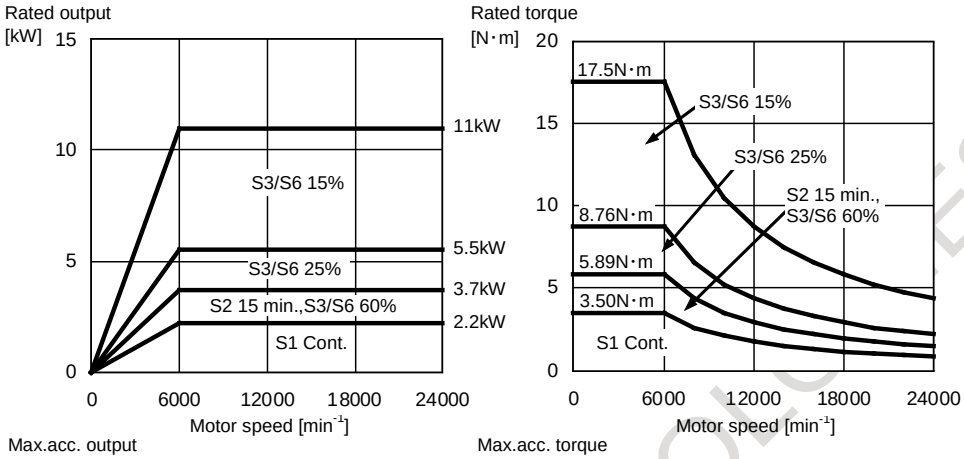
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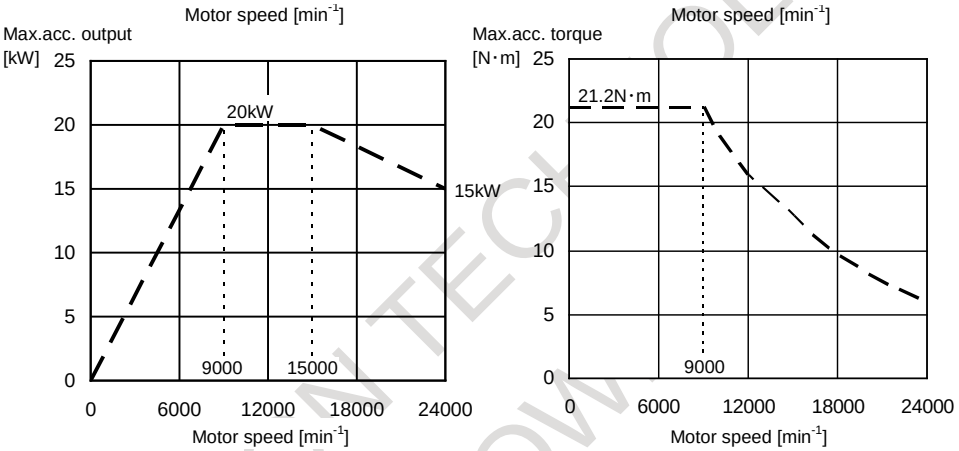
3.2.7 αiIT-B series 200V-type

Model αiIT 1/24000-B

Spec. number for motor: A06B-2460-B123

Spec. number for output specification nameplate: A06B-1230-K460#S0S
Applicable amplifier: αiSP 22-B, βiSVSP*-18-B





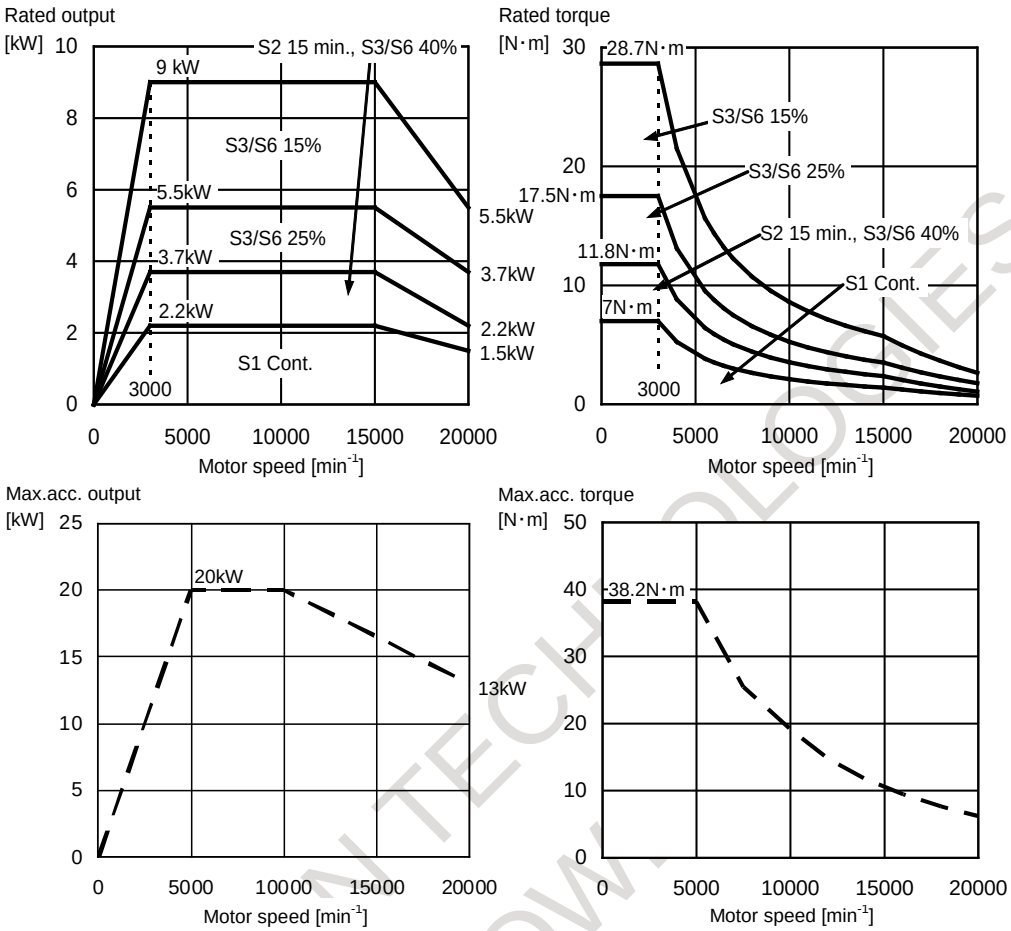
Item		Symbol	Value	Unit
Model			#S0S	
Rated output	S1 continuous rated	P_C	2.2	kW
	S2 15 min., S3/S6 60% rated		3.7	kW
	S3/S6 25% rated		5.5	kW
	S3/S6 15% rated		11	kW
Rated current	S1 continuous rated	I_C	32	A
	S2 15 min., S3/S6 60% rated		42	A
	S3/S6 25% rated		52	A
	S3/S6 15% rated		84	A
Speed	Base speed	N_b	6000	min^{-1}
	Max. speed	N_{max}	24000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			22.0	kW
Continuous rated torque in the constant torque range		T_b	3.5	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.003	$kg·m^2$
Weight		W	18	kg
Winding resistance (U-V, V-W, and W-U)			43.8	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple Labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			32	W

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Model $\alpha i I_T$ 1.5/20000-B

Spec. number for motor: A06B-2463-B123

Spec. number for output specification nameplate: A06B-1230-K463#S0S
Applicable amplifier: αiSP 22-B, βiSVSP*-18-B



Item		Symbol	Value	Unit
Model			#S0S	
Rated output	S1 continuous rated	P_C	2.2	kW
	S2 15 min., S3/S6 40% rated		3.7	kW
	S3/S6 25% rated		5.5	kW
	S3/S6 15% rated		9	kW
Rated current	S1 continuous rated	I_C	32	A
	S2 15 min., S3/S6 40% rated		44	A
	S3/S6 25% rated		54	A
	S3/S6 15% rated		77	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	20000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			22.0	kW
Continuous rated torque in the constant torque range		T_b	7.0	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0043	$kg·m^2$
Weight		W	24	kg
Winding resistance (U-V, V-W, and W-U)			61.5	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple Labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			32	W

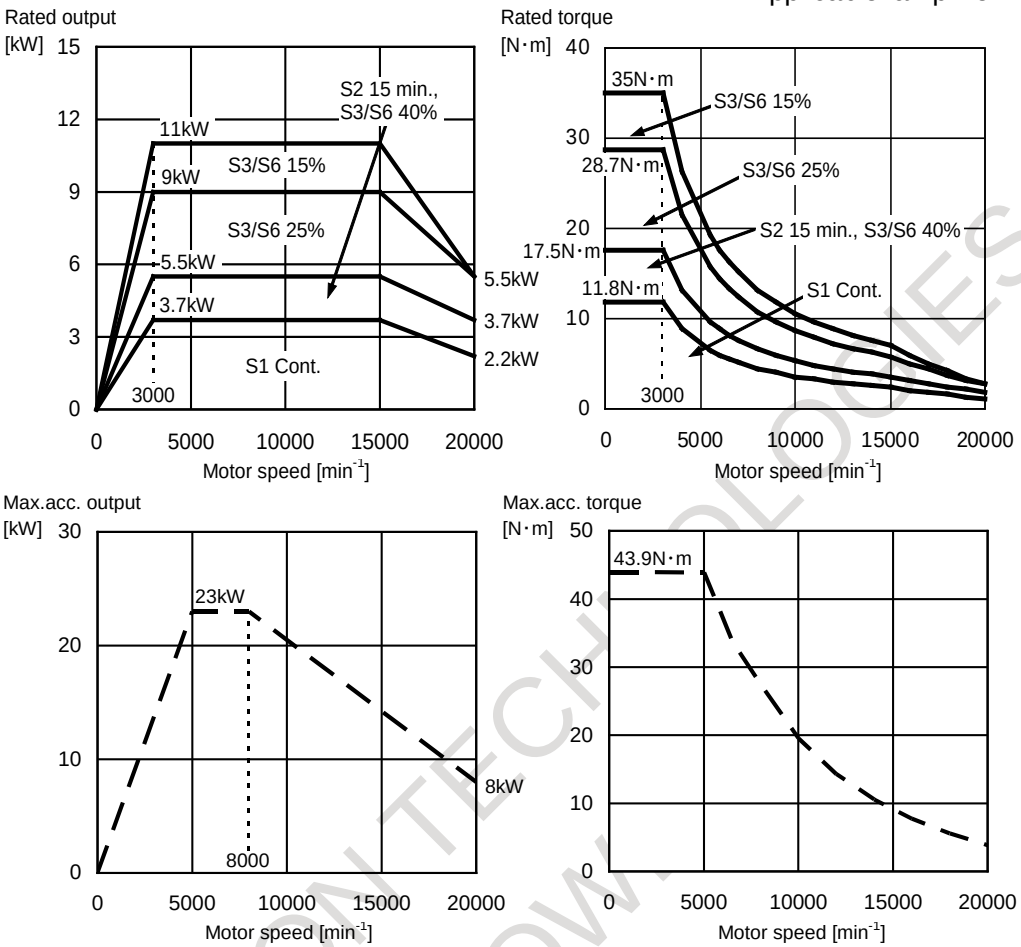
JR AUTOMATIC TECHNOLOGIES INC*

Model αiI$_T$ 2/20000-B

Spec. number for motor: A06B-2464-B123

Spec. number for output specification nameplate: A06B-1230-K464#S0S

Applicable amplifier: αiSP 22-B



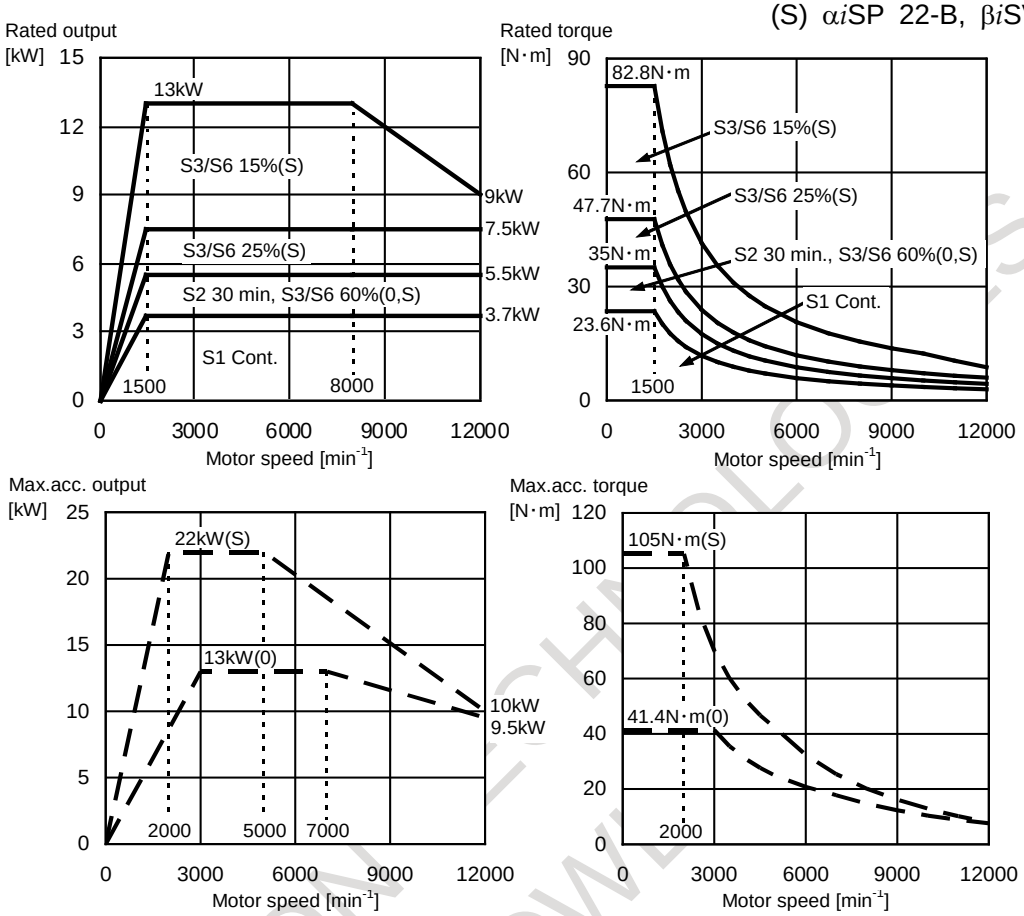
Item		Symbol	Value	Unit
Model			#S0S	
Rated output	S1 continuous rated	P_C	3.7	kW
	S2 15 min., S3/S6 40% rated		5.5	kW
	S3/S6 25% rated		9	kW
	S3/S6 15% rated		11	kW
Rated current	S1 continuous rated	I_C	53	A
	S2 15 min., S3/S6 40% rated		70	A
	S3/S6 25% rated		90	A
	S3/S6 15% rated		106	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	20000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			26.0	kW
Continuous rated torque in the constant torque range		T_b	11.8	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0078	$kg·m^2$
Weight		W	27	kg
Winding resistance (U-V, V-W, and W-U)			48.5	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple Labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			38	W

JR AUTOMATION TECHNOLOGIES INC*

Model $\alpha i I_T$ 3/12000-B

Spec. number for motor: A06B-2465-B123

Spec. numbers for output specification nameplates: A06B-1230-K465#S00→(0), #S0S→(S)
Applicable amplifier: (0) αiSP 11-B, βiSVSP*-11-B
(S) αiSP 22-B, βiSVSP*-18-B



Item		Symbol	Value		Unit
Model			#S00	#S0S	
Rated output	S1 continuous rated	P_C	3.7	3.7	kW
	S2 30 min., S3/S6 60% rated		5.5	5.5	kW
	S3/S6 25% rated		-	7.5	kW
	S3/S6 15% rated		-	13	kW
Rated current	S1 continuous rated	I_C	36	36	A
	S2 30 min., S3/S6 60% rated		46	46	A
	S3/S6 25% rated		-	56	A
	S3/S6 15% rated		-	90	A
Speed	Base speed	N_b	1500		min^{-1}
	Max. speed	N_{max}	12000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			13.0	22.0	kW
Continuous rated torque in the constant torque range		T_b	23.6		N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0148		$kg·m^2$
Weight		W	46		kg
Winding resistance (U-V, V-W, and W-U)			100		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			128		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			38		W

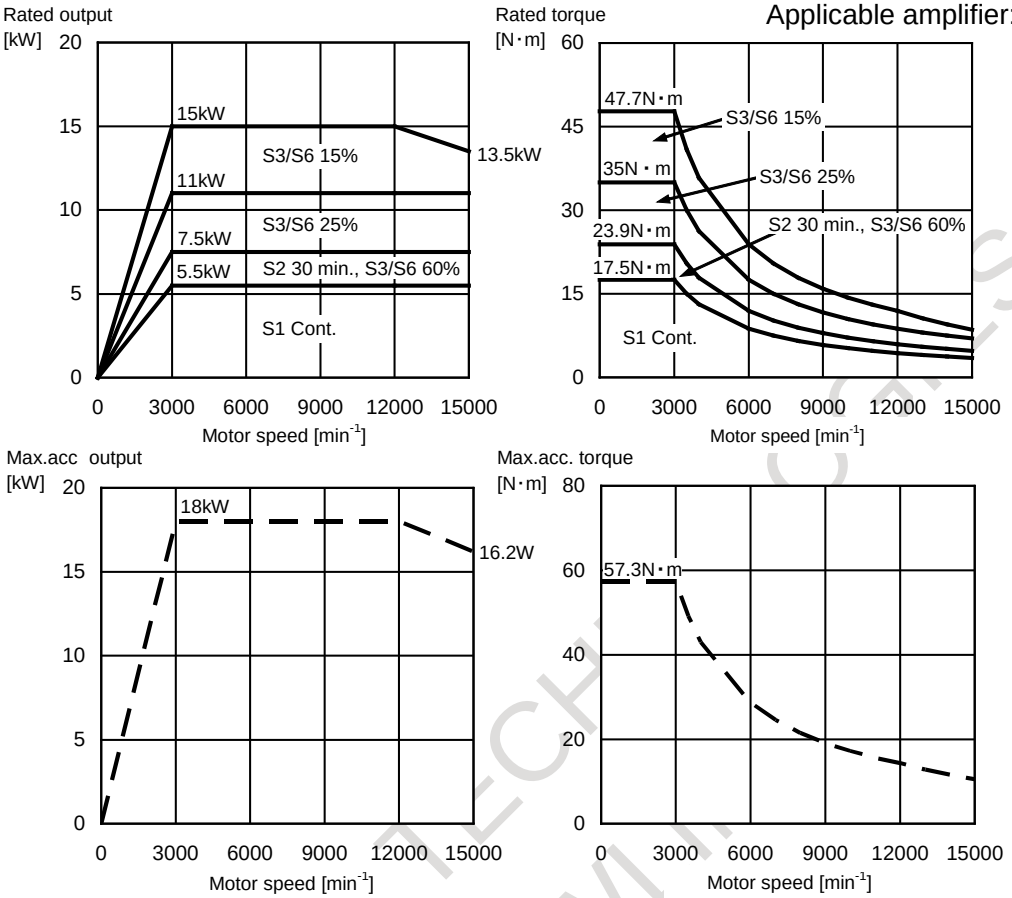
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Model αiI$_T$ 3/15000-B

Spec. number for motor: A06B-2475-B133

Spec. number for output specification nameplate: A06B-1230-K475#S0U

Applicable amplifier: αiSP 22-B



Item		Symbol	Value	Unit
Model			#S0U	
Rated output	S1 continuous rated	P_C	5.5	kW
	S2 30 min., S3/S6 60% rated		7.5	kW
	S3/S6 25% rated		11	kW
	S3/S6 15% rated		15	kW
Rated current	S1 continuous rated	I_C	55	A
	S2 30 min., S3/S6 60% rated		65	A
	S3/S6 25% rated		81	A
	S3/S6 15% rated		103	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	15000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			18.0	kW
Continuous rated torque in the constant torque range		T_b	17.5	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0148	$kg·m^2$
Weight		W	46	kg
Winding resistance (U-V, V-W, and W-U)			32.0	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple Labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			38	W

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Model $\alpha i I_T$ 6/12000-B

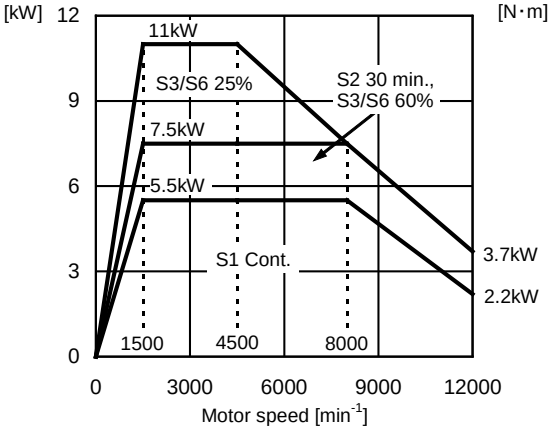
Spec. number for motor: A06B-2466-B123

Spec. number for output specification nameplate: A06B-1230-K466#S0P

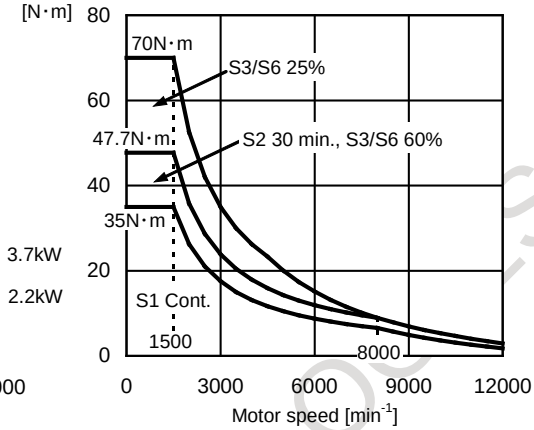
Rated output

Applicable amplifier: αiSP 11-B, βiSVSP*-11-B

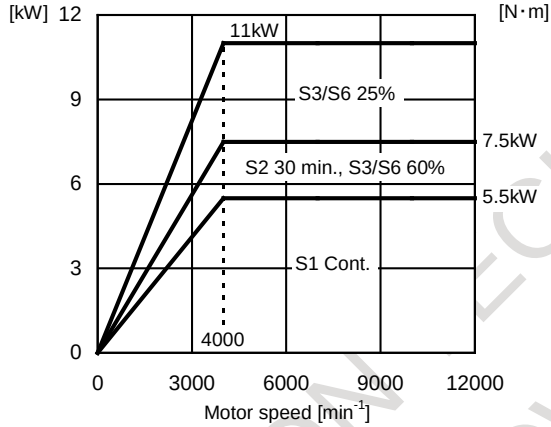
Low-speed winding output (Y connection)



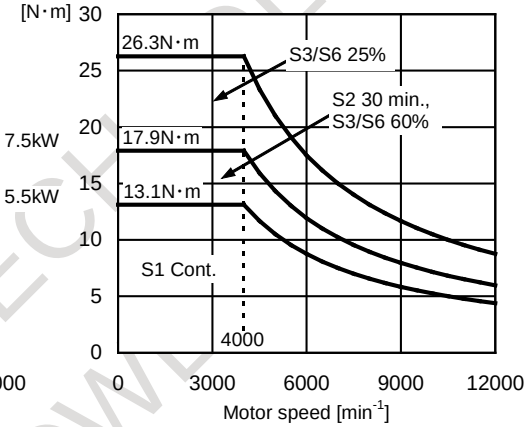
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S0P	#S0P	
Rated output	S1 continuous rated	P_C	5.5	5.5	kW
	S2 30 min., S3/S6 60% rated		7.5	7.5	kW
	S3/S6 25% rated		11	11	kW
Rated current	S1 continuous rated	I_C	37	38	A
	S2 30 min., S3/S6 60% rated		48	45	A
	S3/S6 25% rated		63	56	A
Speed	Base speed	N_b	1500	4000	min^{-1}
	Max. speed	N_{max}	12000	12000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			13.2		kW
Continuous rated torque in the constant torque range		T_b	35.0	13.1	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0179		$kg·m^2$
Weight		W	51		kg
Winding resistance (U-X, V-Y, and W-Z)			64.8		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			50		W

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Model $\alpha i I_T$ 6/12000-B

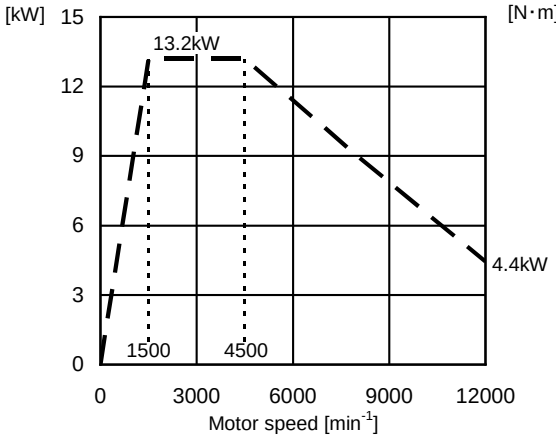
Spec. number for motor:A06B-2466-B123

Spec. number for output specification nameplate: A06B-1230-K466#S0P

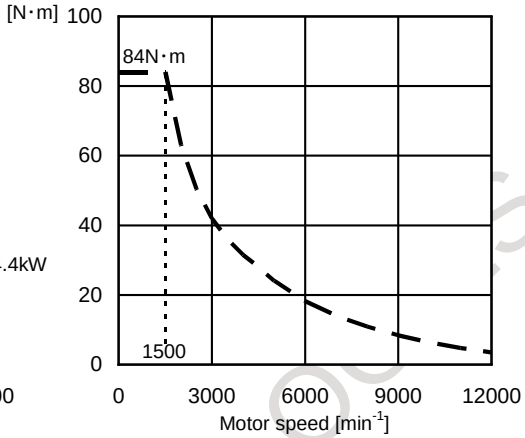
Max.acc. output

Applicable amplifier: αiSP 11-B, βiSVSP*-11-B

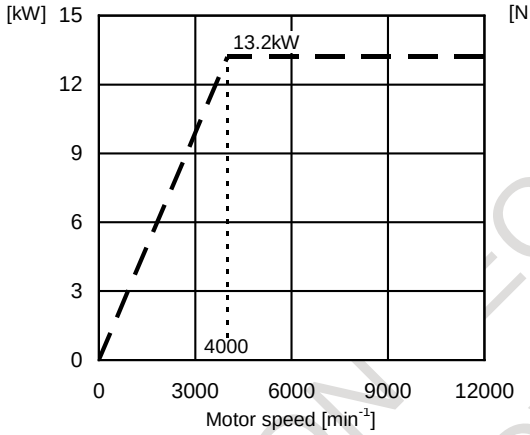
Low-speed winding output (Y connection)



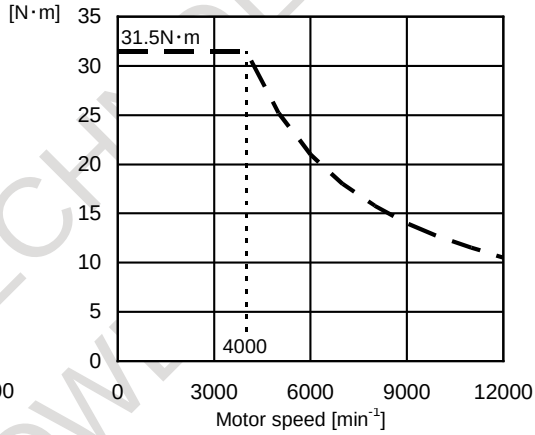
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiI$_T$ 6/15000-B

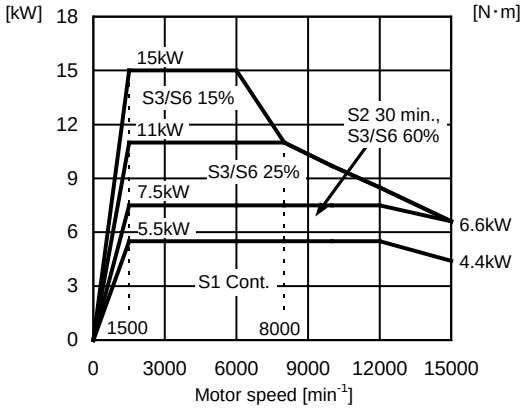
Spec. number for motor: A06B-2476-B123

Spec. number for output specification nameplate: A06B-1230-K476#S0S

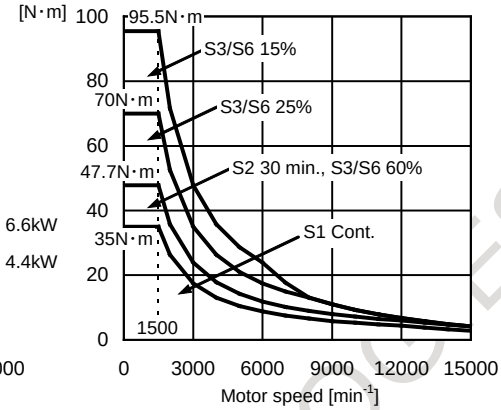
Rated output

Applicable amplifier: αiSP 22-B

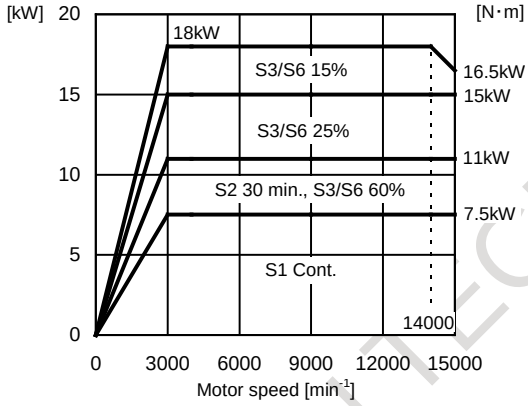
Low-speed winding output (Y connection)



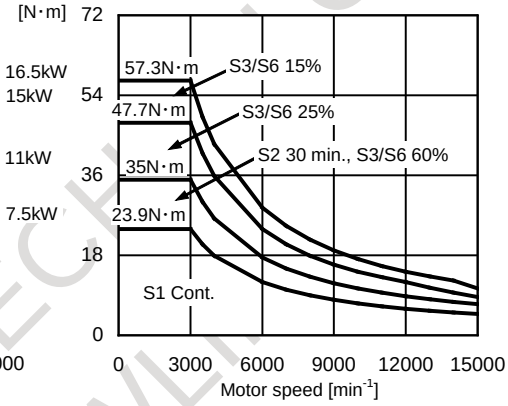
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S0S	#S0S	
Rated output	S1 continuous rated	P_C	5.5	7.5	kW
	S2 30 min., S3/S6 60% rated		7.5	11	kW
	S3/S6 25% rated		11	15	kW
	S3/S6 15% rated		15	18	kW
Rated current	S1 continuous rated	I_C	44	59	A
	S2 30 min., S3/S6 60% rated		53	74	A
	S3/S6 25% rated		71	91	A
	S3/S6 15% rated		91	105	A
Speed	Base speed	N_b	1500	3000	min^{-1}
	Max. speed	N_{max}	15000	15000	min^{-1}
Switching speed			3000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			33.0		kW
Continuous rated torque in the constant torque range		T_b	35.0	23.9	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0179		kg·m^2
Weight		W	51		kg
Winding resistance (U-X, V-Y, and W-Z)			44.7		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			50		W

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Model $\alpha i I_T$ 6/15000-B

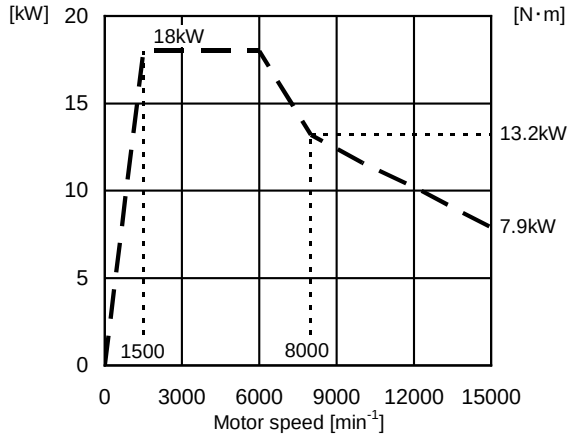
Spec. number for motor: A06B-2476-B123

Spec. number for output specification nameplate: A06B-1230-K476#S0S

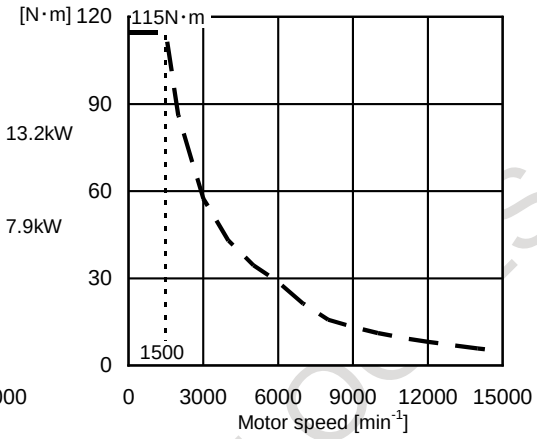
Max.acc. output

Applicable amplifier: αiSP 22-B

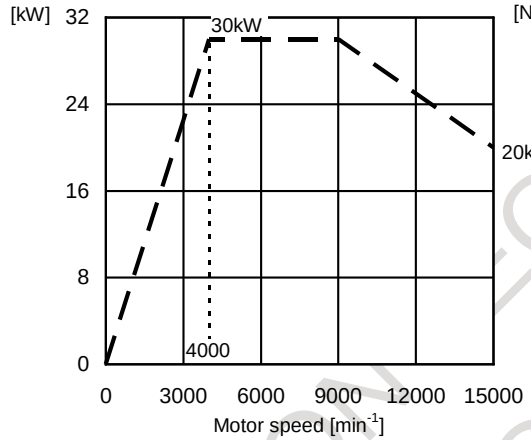
Low-speed winding output (Y connection)



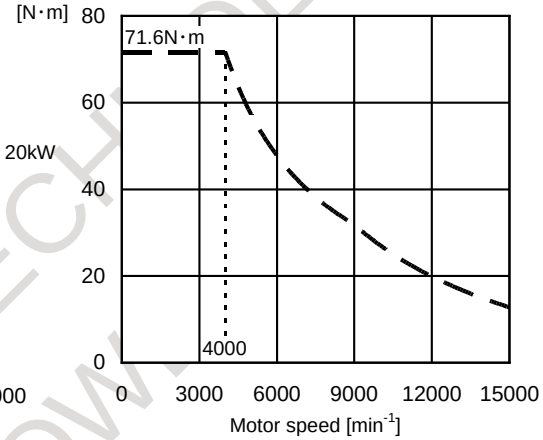
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)

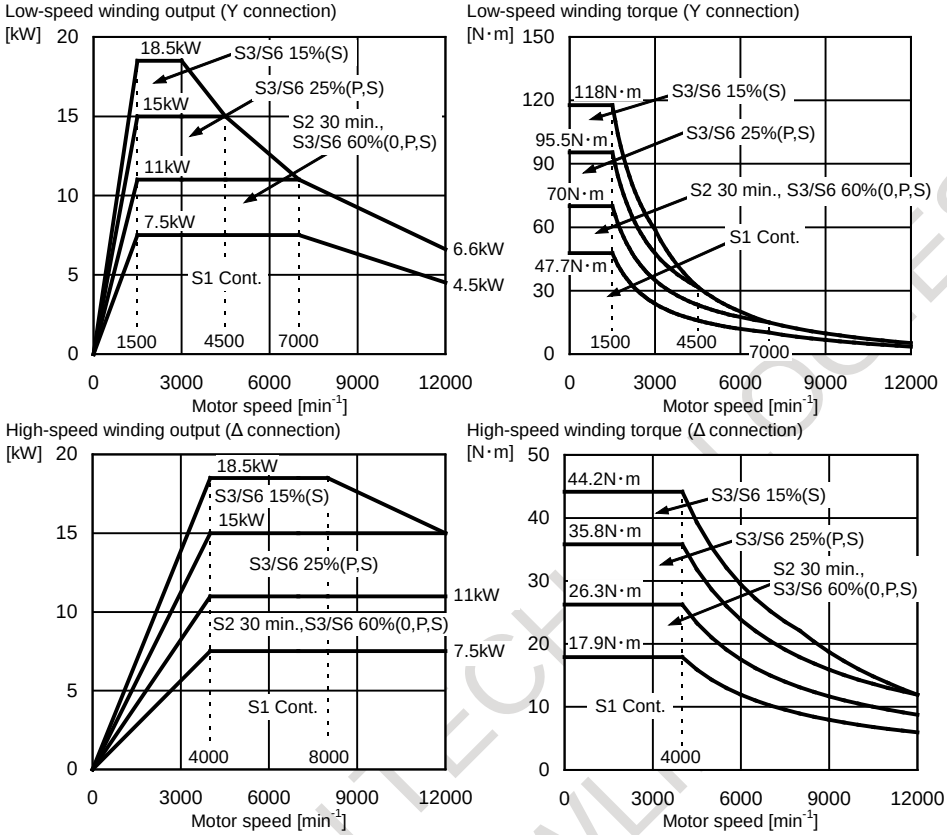


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Model $\alpha i I_T$ 8/12000-B — Spec. number for motor: A06B-2467-B123

Spec. numbers for output specification nameplates: A06B-1230-K467#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0),(P) αiSP 15-B, βiSVSP*-15-B
(S) αiSP 22-B, βiSVSP*-18-B

Rated output



Item		Symbol	Value						Unit
Connection			Low-speed winding (Y connection)			High-speed winding (Δ connection)			
Model			#S00	#S0P	#S0S	#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	7.5	7.5	7.5	7.5	7.5	7.5	kW
	S2 30 min., S3/S6 60% rated		11	11	11	11	11	11	kW
	S3/S6 25% rated		-	15	15	-	15	15	kW
	S3/S6 15% rated		-	-	18.5	-	-	18.5	kW
Rated current	S1 continuous rated	I_C	49	49	49	51	51	51	A
	S2 30 min., S3/S6 60% rated		61	61	61	62	62	62	A
	S3/S6 25% rated		-	72	72	-	72	70	A
	S3/S6 15% rated		-	-	86	-	-	79	A
Speed	Base speed	N_b	1500			4000			min^{-1}
	Max. speed	N_{max}	12000			12000			min^{-1}
Switching speed			4000						min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output						kW
Maximum output at acceleration for PS selection			13.2	18.0	22.2	13.2	18.0	22.2	kW
Continuous rated torque in the constant torque range		T_b	47.7			17.9			N·m
Number of poles			4						
Moment of inertia of the rotor		J_m	0.0275						$kg·m^2$
Weight		W	80						kg
Winding resistance (U-X, V-Y, and W-Z)			56.0						mΩ
Built-in detector			αiMZ sensor contained						
Number of teeth for speed detection			256						λ/rev.
Output shaft seal			Simple Labyrinth						
Degree of protection			IP54 (The shaft-through portion is excluded)						
Vibration			V3						
Noise			75 or less						dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)						
Rated power of the cooling fan			50						W

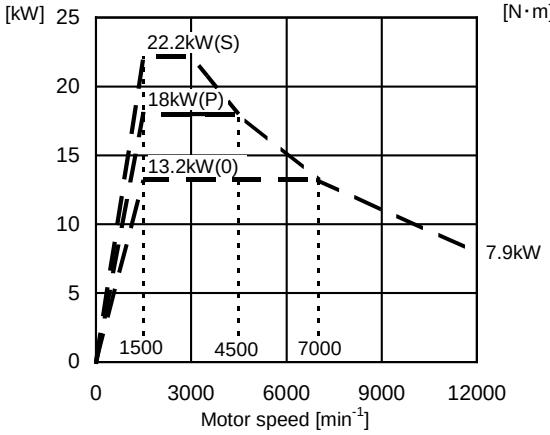
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Model $\alpha i I_T$ 8/12000-B — Spec. number for motor: A06B-2467-B123

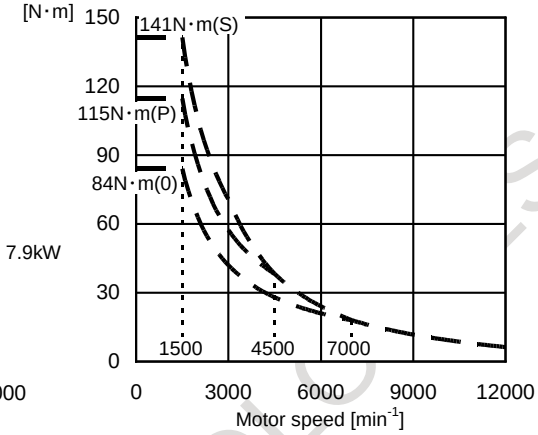
Spec. numbers for output specification nameplates: A06B-1230-K467#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0),(P) αiSP 15-B, βiSVSP*-15-B
(S) αiSP 22-B, βiSVSP*-18-B

Max.acc. output

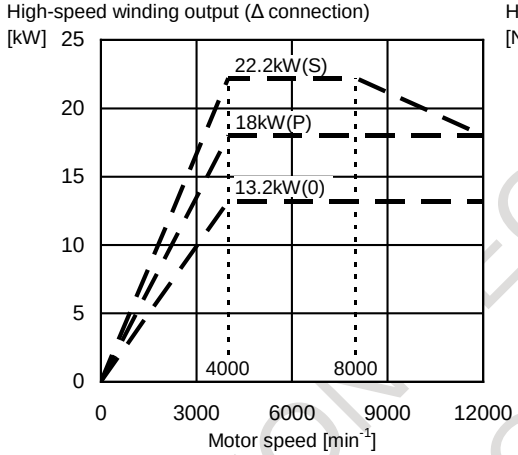
Low-speed winding output (Y connection)



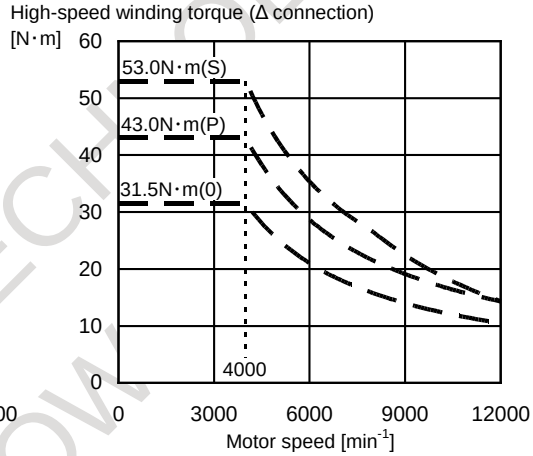
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model $\alpha i I_T$ 8/15000-B

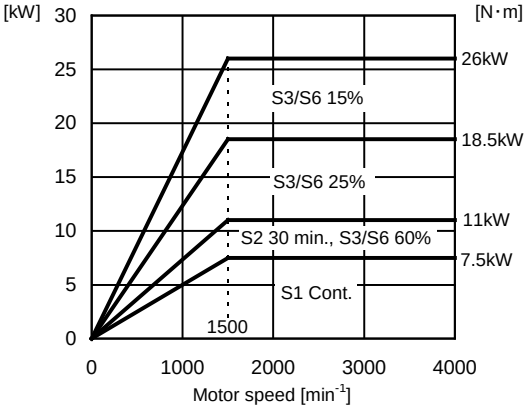
Spec. number for motor: A06B-2477-B133#0501

Spec. number for output specification nameplate: A06B-1230-K477#S0S

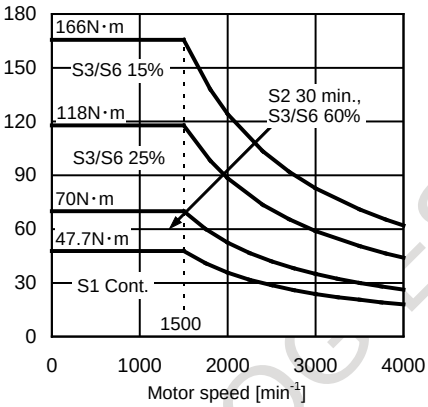
Rated output

Applicable amplifier: αiSP 30-B

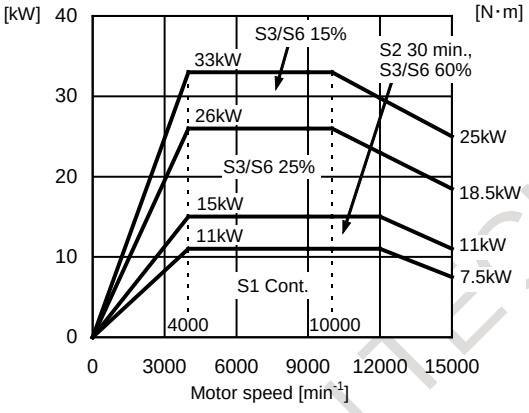
Low-speed winding output (Y connection)



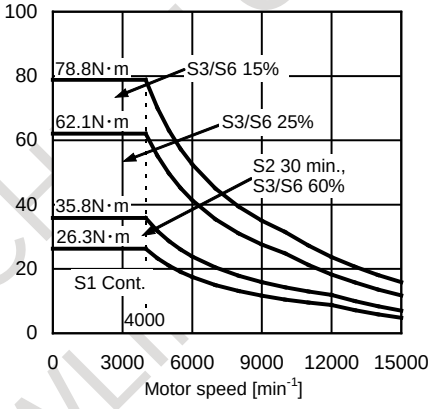
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S0S	#S0S	
Rated output	S1 continuous rated	P_C	7.5	11	kW
	S2 30 min., S3/S6 60% rated		11	15	kW
	S3/S6 25% rated		18.5	26	kW
	S3/S6 15% rated		26	33	kW
Rated current	S1 continuous rated	I_C	70	89	A
	S2 30 min., S3/S6 60% rated		90	105	A
	S3/S6 25% rated		124	143	A
	S3/S6 15% rated		162	169	A
Speed	Base speed	N_b	1500	4000	min^{-1}
	Max. speed	N_{max}	4000	15000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			48.0		kW
Continuous rated torque in the constant torque range		T_b	47.7	26.3	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0275		$kg·m^2$
Weight		W	80		kg
Winding resistance (U-X, V-Y, and W-Z)			31.0		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			50		W

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Model αiI$_T$ 8/15000-B

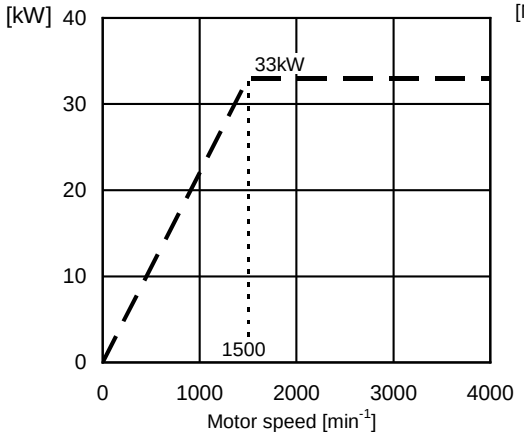
Spec. number for motor: A06B-2477-B133#0501

Spec. number for output specification nameplate: A06B-1230-K477#S0S

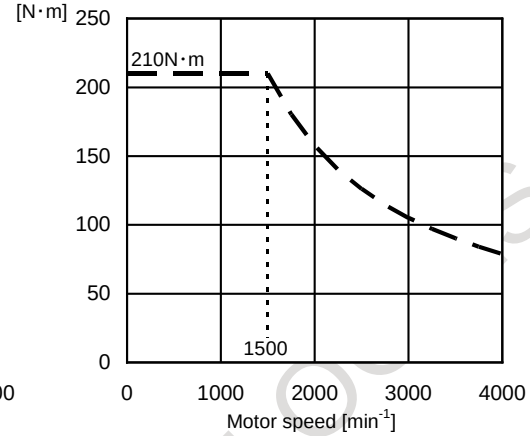
Max.acc. output

Applicable amplifier: αiSP 30-B

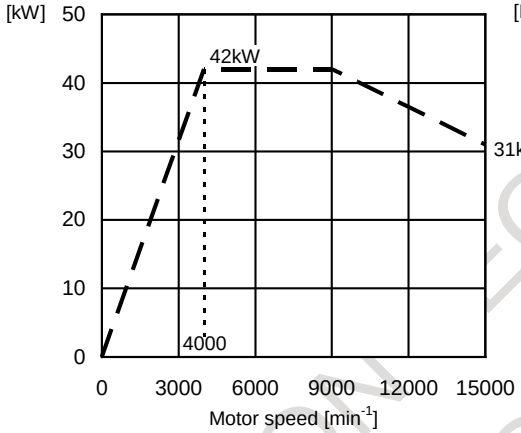
Low-speed winding output (Y connection)



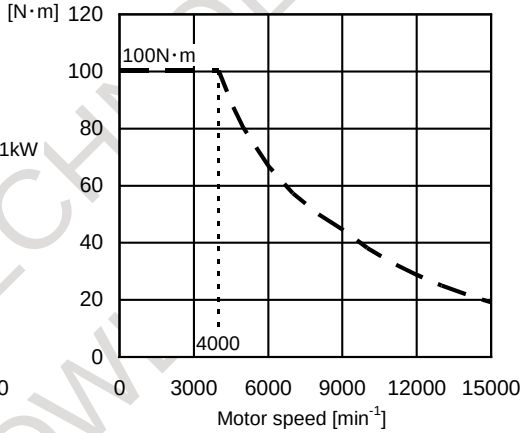
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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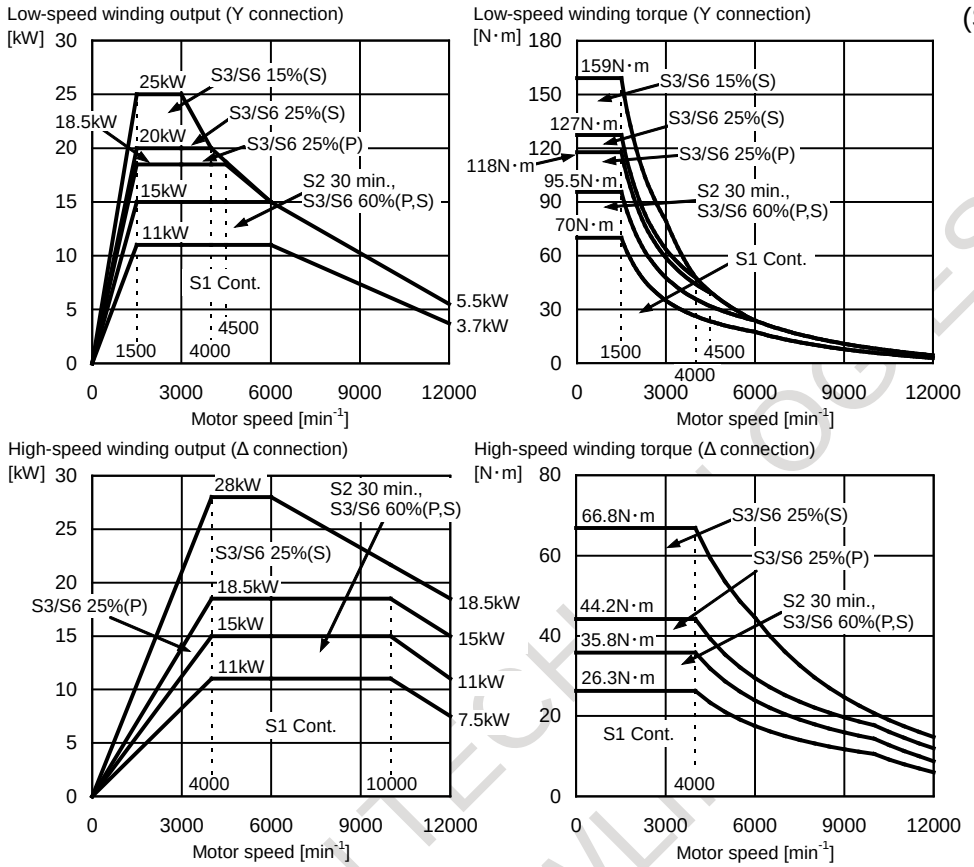
Model $\alpha i I_T$ 12/12000-B

Spec. number for motor: A06B-2468-B123

Spec. numbers for output specification nameplates: A06B-1230-K468#S0P→(P), #S0S→(S)

Rated output

Applicable amplifier: (P) αiSP 15-B, βiSVSP*-18-B
(S) αiSP 22-B



Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S0P	#S0S	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	11	11	11	11	kW
	S2 30 min., S3/S6 60% rated		15	15	15	15	kW
	S3/S6 25% rated		18.5	20	18.5	28	kW
	S3/S6 15% rated		-	25	-	-	kW
Rated current	S1 continuous rated	I_C	54	54	54	54	A
	S2 30 min., S3/S6 60% rated		67	67	64	64	A
	S3/S6 25% rated		77	84	74	105	A
	S3/S6 15% rated		-	103	-	-	A
Speed	Base speed	N_b	1500		4000		min^{-1}
	Max. speed	N_{max}	12000		12000		min^{-1}
Switching speed			4000				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection			22.2	30.0	22.2	33.6	kW
Continuous rated torque in the constant torque range		T_b	70.0		26.3		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.07				$kg·m^2$
Weight		W	95				kg
Winding resistance (U-X, V-Y, and W-Z)			61.7				mΩ
Built-in detector			αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Simple Labyrinth				
Degree of protection			IP54 (The shaft-through portion is excluded)				
Vibration			V3				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			100				W

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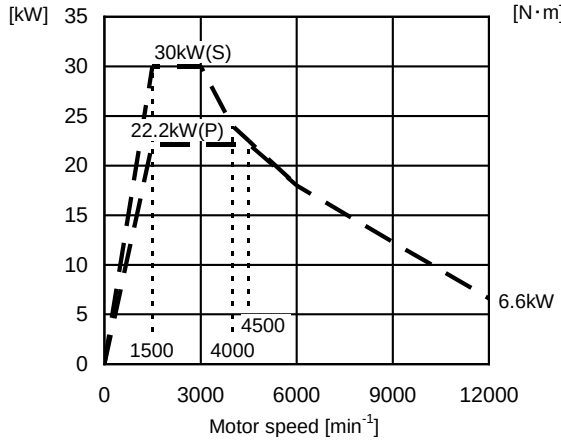
Model $\alpha i I_T$ 12/12000-B

Spec. number for motor: A06B-2468-B123

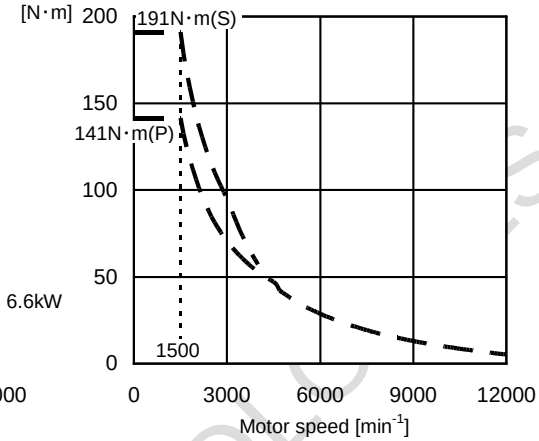
Spec. numbers for output specification nameplates: A06B-1230-K468#S0P→(P), #S0S→(S),
Applicable amplifier: (P) αiSP 15-B, βiSVSP*-18-B
(S) αiSP 22-B

Max.acc. output

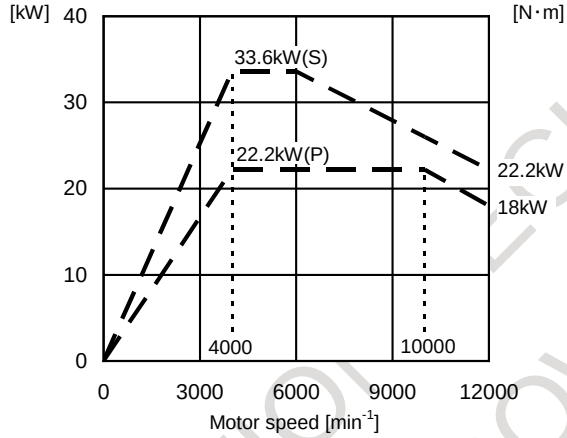
Low-speed winding output (Y connection)



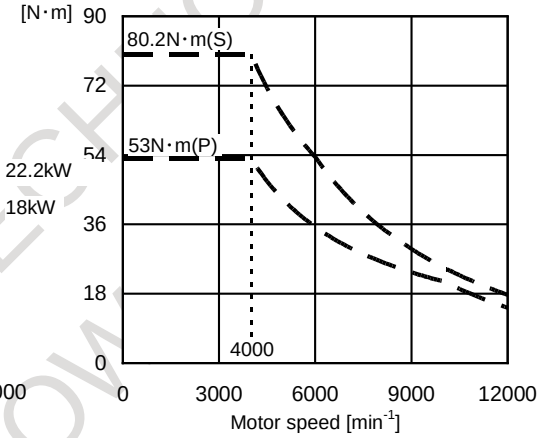
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiI$_T$ 15/12000-B

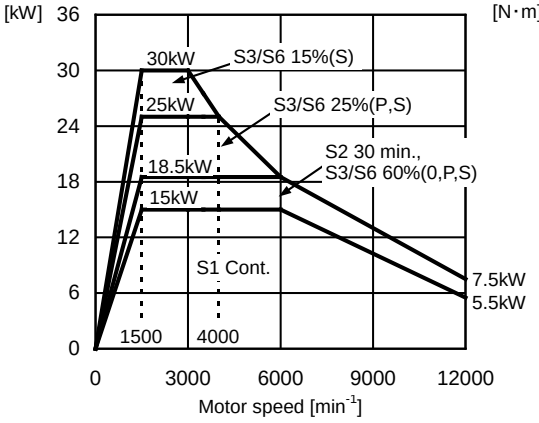
Spec. number for motor: A06B-2469-B123

Spec. numbers for output specification nameplates: A06B-1230-K469#S00→(0), #S0P→(P), #S0S→(S)

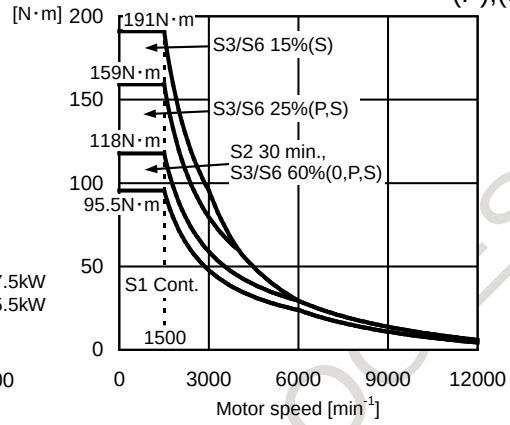
Rated output

Applicable amplifier: (0) αiSP 22-B, βiSVSP*-18-B (P),(S) αiSP 22-B

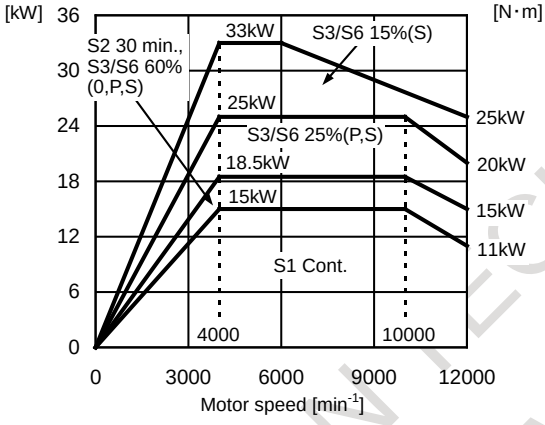
Low-speed winding output (Y connection)



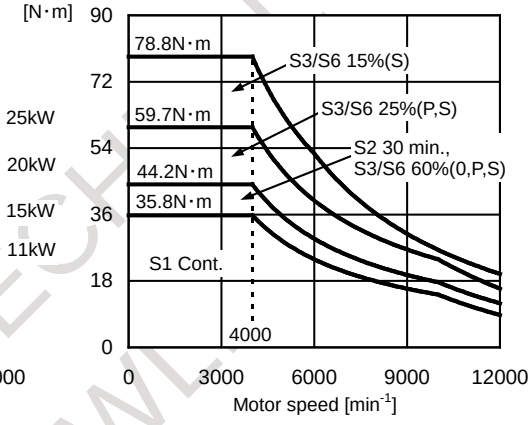
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value						Unit
Connection			Low-speed winding (Y connection)			High-speed winding (Δ connection)			
Model			#S00	#S0P	#S0S	#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	15	15	15	15	15	15	kW
	S2 30 min., S3/S6 60% rated		18.5	18.5	18.5	18.5	18.5	18.5	kW
	S3/S6 25% rated		-	25	25	-	25	25	kW
	S3/S6 15% rated		-	-	30	-	-	33	kW
Rated current	S1 continuous rated	I_C	77	77	77	72	72	72	A
	S2 30 min., S3/S6 60% rated		96	96	96	85	85	85	A
	S3/S6 25% rated		-	110	110	-	107	107	A
	S3/S6 15% rated		-	-	123	-	-	130	A
Speed	Base speed	N_b	1500			4000			min^{-1}
	Max. speed	N_m	12000			12000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output						kW
Maximum output at acceleration for PS selection			22.2	30.0	36.0	22.2	30.0	39.6	kW
Continuous rated torque in the constant torque range		T_b	95.5			35.8			N·m
Number of poles			4						
Moment of inertia of the rotor		J_m	0.09						$kg·m^2$
Weight		W	110						kg
Winding resistance (U-X, V-Y, and W-Z)			40.0						mΩ
Built-in detector			αiMZ sensor contained						
Number of teeth for speed detection			256						λ/rev.
Output shaft seal			Simple Labyrinth						
Degree of protection			IP54 (The shaft-through portion is excluded)						
Vibration			V3						
Noise			75 or less						dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)						
Rated power of the cooling fan			100						W

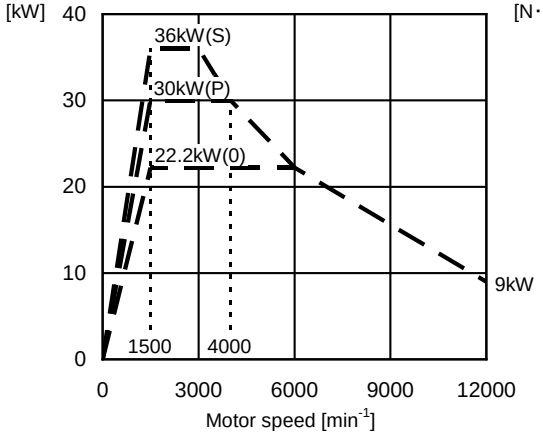
JR AUTOMATION TECHNOLOGIES INC*

Model αiI$_T$ 15/12000-B — Spec. number for motor: A06B-2469-B123

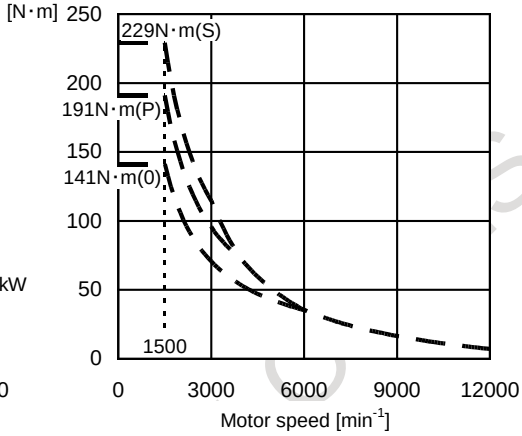
Spec. numbers for output specification nameplates: A06B-1230-K469#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0) αiSP 22-B, βiSVSP*-18-B
(P),(S) αiSP 22-B

Max.acc. output

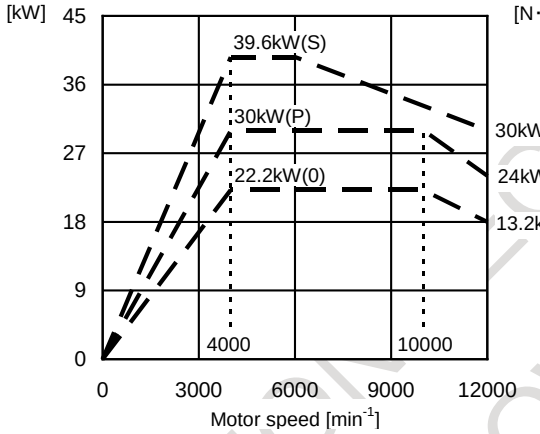
Low-speed winding output (Y connection)



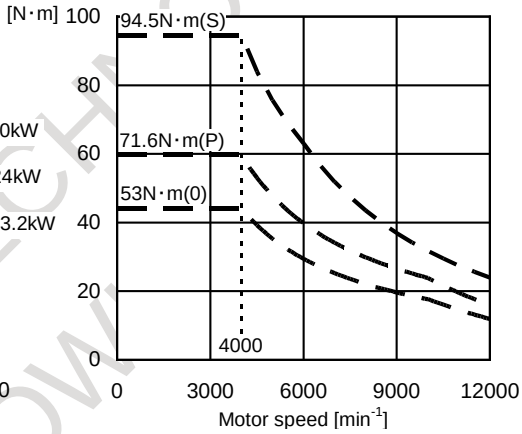
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



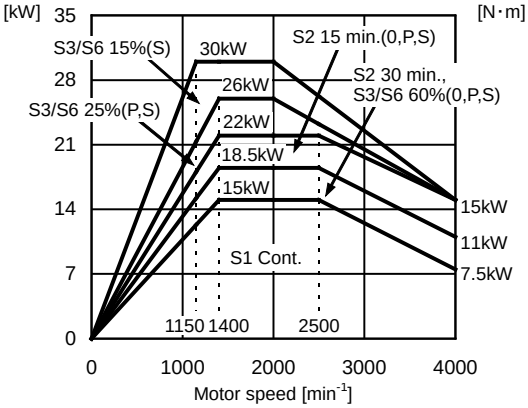
JR AUTOMATION TECHNOLOGIES INC*
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Model $\alpha i I_T$ 15/15000-B — Spec. number for motor: A06B-2479-B123

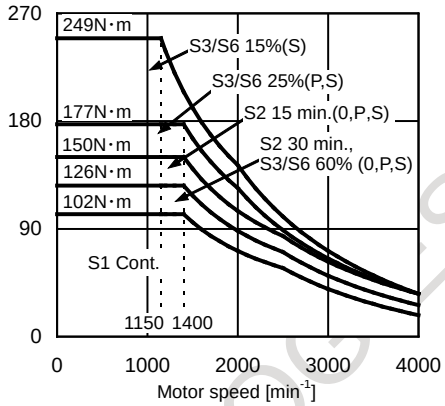
Spec. numbers for output specification nameplates: A06B-1230-K479#S00→(0), #S0P→(P), #S0S→(S)

Rated output — Applicable amplifier: αiSP 30-B

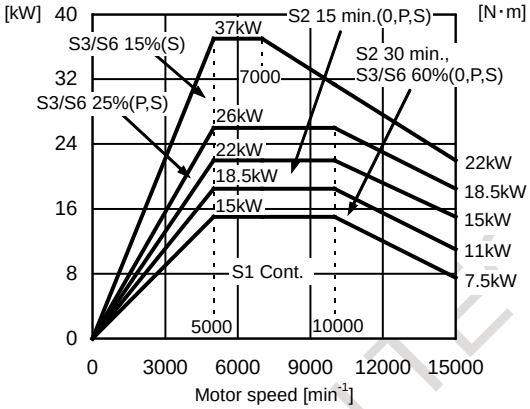
Low-speed winding output (Y connection)



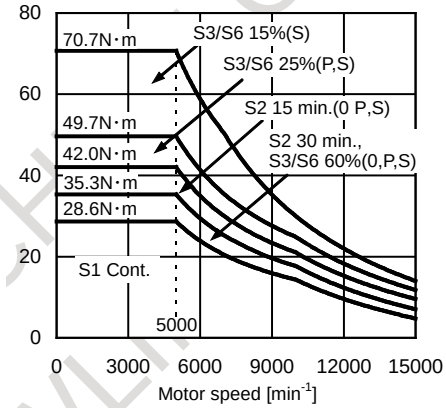
Low-speed winding torque (Y connection)



High-speed winding output (Y connection)



High-speed winding torque (Y connection)



Item		Symbol	Value						Unit
Connection			Low-speed winding (Y connection)			High-speed winding (Δ connection)			
Model			#S00	#S0P	#S0S	#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	15	15	15	15	15	15	kW
	S2 30 min., S3/S6 60% rated		18.5	18.5	18.5	18.5	18.5	18.5	kW
	S2 15 min. rated		22	22	22	22	22	22	kW
	S3/S6 25% rated		-	26	26	-	26	26	kW
	S3/S6 15% rated		-	-	30	-	-	37	kW
Rated current	S1 continuous rated	I_C	81	81	81	83	83	83	A
	S2 30 min., S3/S6 60% rated		102	102	102	94	94	94	A
	S2 15 min. rated		122	122	122	105	105	105	A
	S3/S6 25% rated		-	138	138	-	122	122	A
	S3/S6 15% rated		-	-	164	-	-	152	A
Speed	Base speed	N_b	1400			5000			min^{-1}
	Max. speed	N_{max}	4000			15000			min^{-1}
Switching speed			3500						min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output						kW
Maximum output at acceleration for PS selection			38.0	50.0	50.0	38.0	50.0	50.0	kW
Continuous rated torque in the constant torque range		T_b	102			28.6			N·m
Number of poles			4						
Moment of inertia of the rotor		J_m	0.055						$kg·m^2$
Weight		W	121						kg
Winding resistance (U1-V1, V1-W1, and W1-U1)			72.8						mΩ
Winding resistance (U2-V2, V2-W2, and W2-U2)			29.8						mΩ
Built-in detector			αiMZ sensor contained						
Number of teeth for speed detection			256						λ/rev.
Output shaft seal			Simple Labyrinth						
Degree of protection			IP54 (The shaft-through portion is excluded)						
Vibration			V3						
Noise			75 or less						dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)						
Rated power of the cooling fan			100						W

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Model $\alpha i I_T$ 15/15000-B

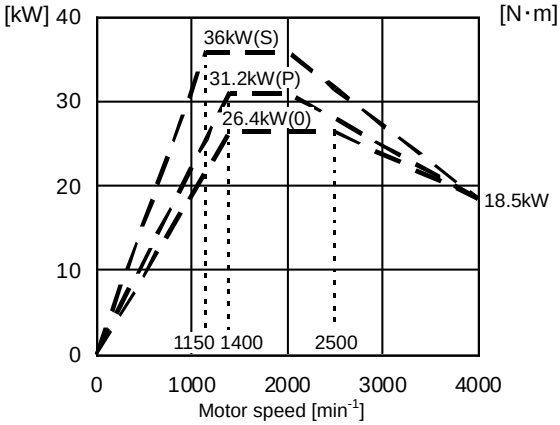
Spec. number for motor: A06B-2479-B123

Spec. numbers for output specification nameplate: A06B-1230-K479#S00→(0), #S0P→(P), #S0S→(S)

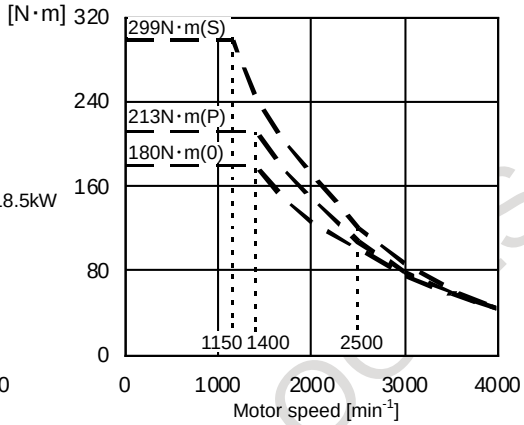
Max.acc. output

Applicable amplifier: αiSP 30-B

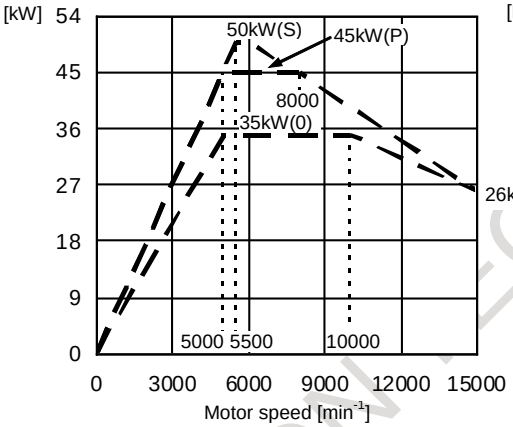
Low-speed winding output (Y connection)



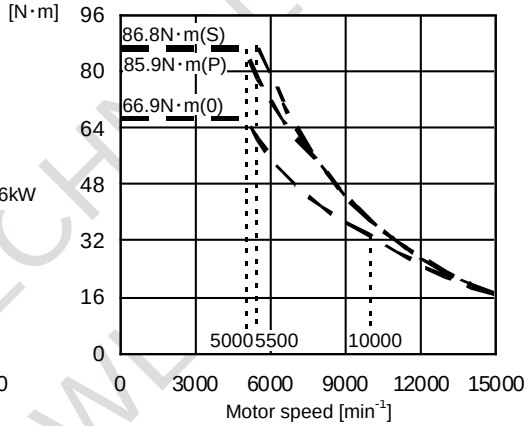
Low-speed winding torque (Y connection)



High-speed winding output (Y connection)



High-speed winding torque (Y connection)



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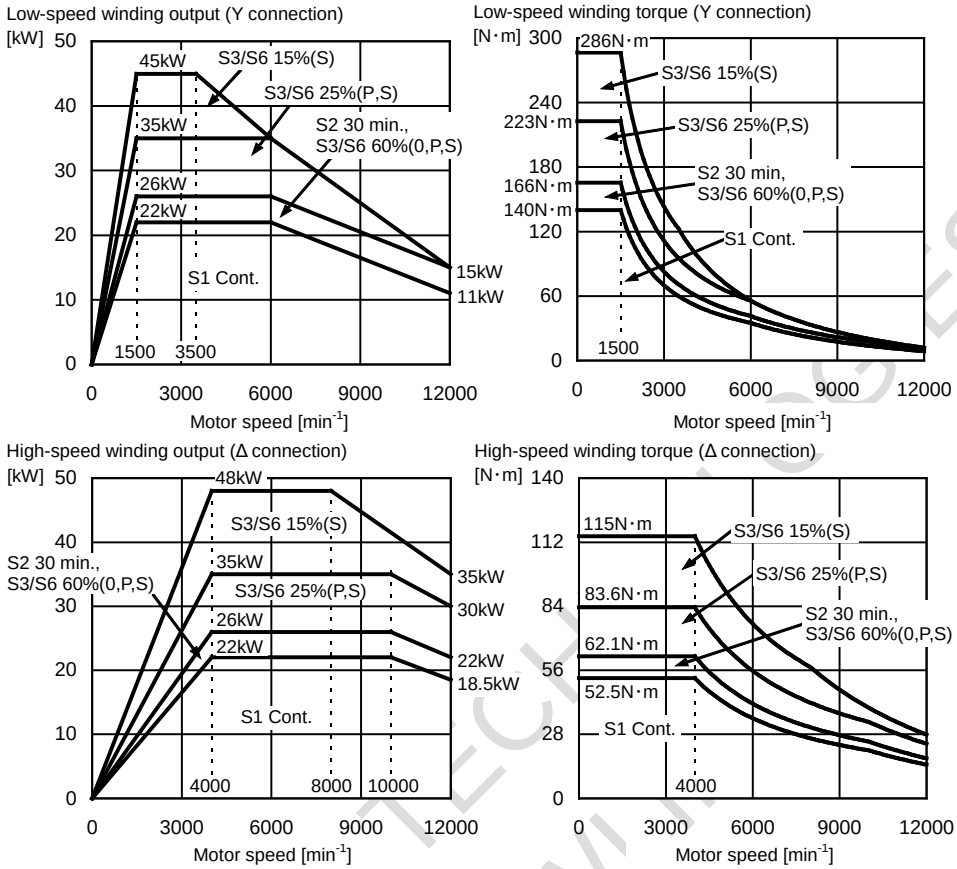
Model αiIT 22/12000-B

Spec. number for motor: A06B-2471-B123

Spec. numbers for output specification nameplates: A06B-1230-K471#S00→(0), #S0P→(P), #S0S→(S)

Rated output

Applicable amplifier: (0),(P) αiSP 26-B
(S) αiSP 30-B



Item		Symbol	Value						Unit
Connection			Low-speed winding (Y connection)			High-speed winding (Δ connection)			
Model			#S00	#S0P	#S0S	#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	22	22	22	22	22	22	kW
	S2 30 min., S3/S6 60% rated		26	26	26	26	26	26	kW
	S3/S6 25% rated		-	35	35	-	35	35	kW
	S3/S6 15% rated		-	-	45	-	-	48	kW
Rated current	S1 continuous rated	I_C	100	100	100	101	101	101	A
	S2 30 min., S3/S6 60% rated		111	111	111	112	112	112	A
	S3/S6 25% rated		-	150	150	-	140	140	A
	S3/S6 15% rated		-	-	183	-	-	186	A
Speed	Base speed	N_b	1500			4000			min^{-1}
	Max. speed	N_m	12000			12000			min^{-1}
Switching speed			4000						min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output						kW
Maximum output at acceleration for PS selection			31.2	42.0	54.0	31.2	42.0	57.6	kW
Continuous rated torque in the constant torque range		T_b	140			52.5			N·m
Number of poles			4						
Moment of inertia of the rotor		J_m	0.128						$kg·m^2$
Weight		W	143						kg
Winding resistance (U-X, V-Y, and W-Z)			24.0						mΩ
Built-in detector			αiMZ sensor contained						
Number of teeth for speed detection			256						λ/rev.
Output shaft seal			Simple Labyrinth						
Degree of protection			IP54 (The shaft-through portion is excluded)						
Vibration			V3						
Noise			75 or less						dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)						
Rated power of the cooling fan			100						W

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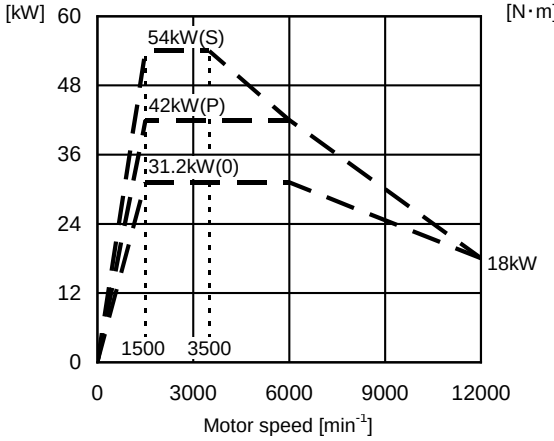
Model αiIT 22/12000-B

Spec. number for motor: A06B-2471- B123

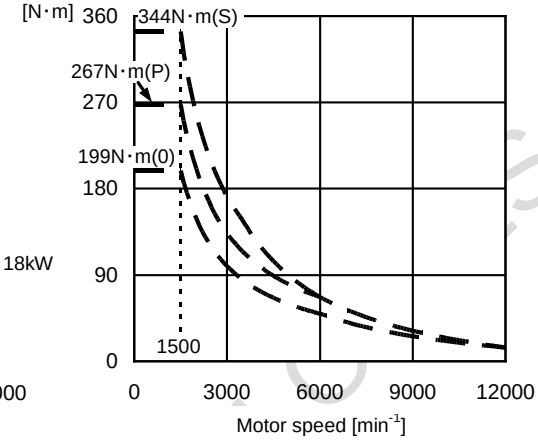
Spec. numbers for output specification nameplates: A06B-1230-K471#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0),(P) αiSP 26-B
(S) αiSP 30-B

Max.acc. output

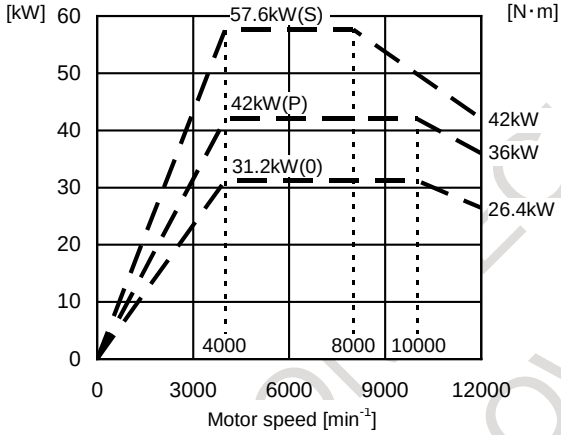
Low-speed winding output (Y connection)



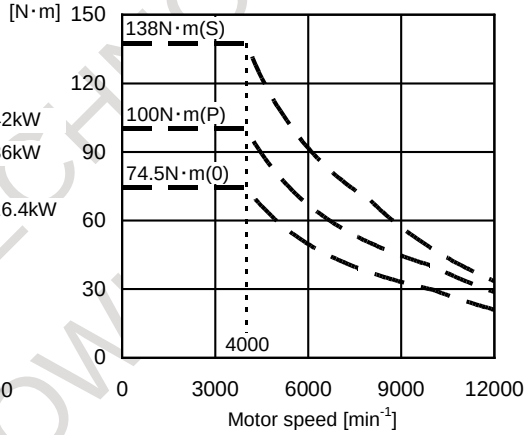
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiI$_{PT}$ 22/8000-B

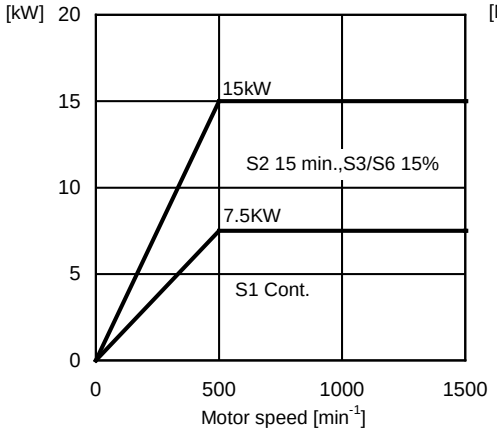
Spec. number for motor: A06B-2472-B123

Spec. number for output specification nameplate: A06B-1230-K472#S00

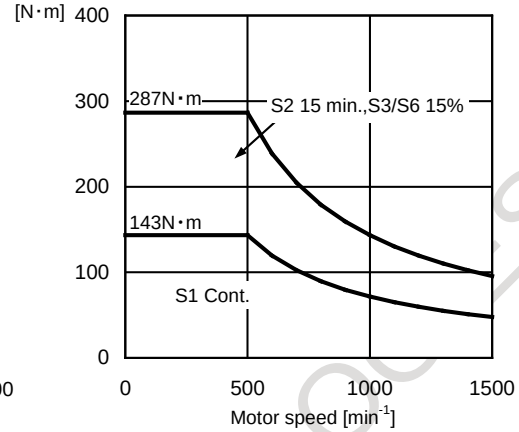
Rated output

Applicable amplifier: αiSP 22-B

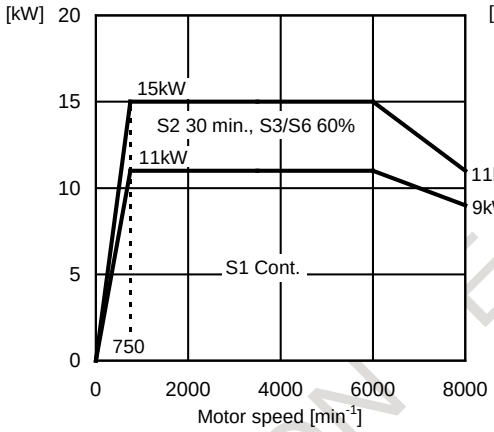
Low-speed winding output (Y connection)



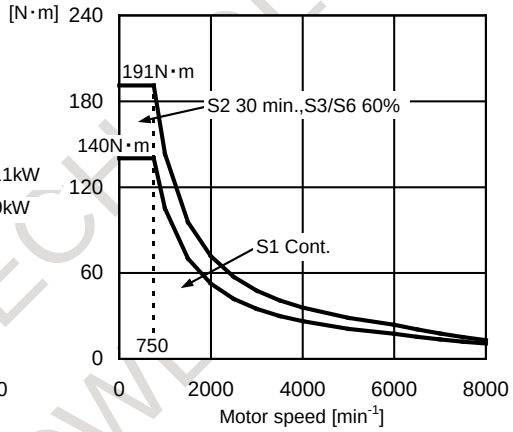
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	7.5	11	kW
	S2 30 min., S3/S6 60% rated		-	15	kW
	S2 15 min, S3/S6 15% rated		15	-	kW
Rated current	S1 continuous rated	I_C	43	69	A
	S2 30min, S3/S6 60%rated		-	88	A
	S2 15min, S3/S6 15%rated		80	-	A
Speed	Base speed	N_b	500	750	min^{-1}
	Max. speed	N_{max}	1500	8000	min^{-1}
Switching speed			750		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated		kW
Maximum output at acceleration for PS selection			18.0	20.0	kW
Continuous rated torque in the constant torque range		T_b	143	140	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.128		kg·m^2
Weight		W	143		kg
Winding resistance (U-X, V-Y, and W-Z)			161.9		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			100		W

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Model αiI$_{PT}$ 22/8000-B

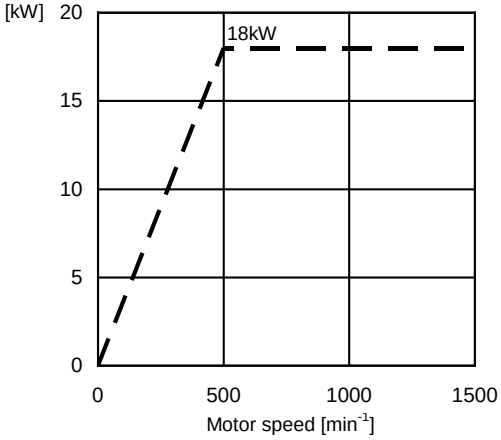
Spec. number for motor: A06B-2472- B123

Spec. number for output specification nameplate: A06B-1230-K472#S00

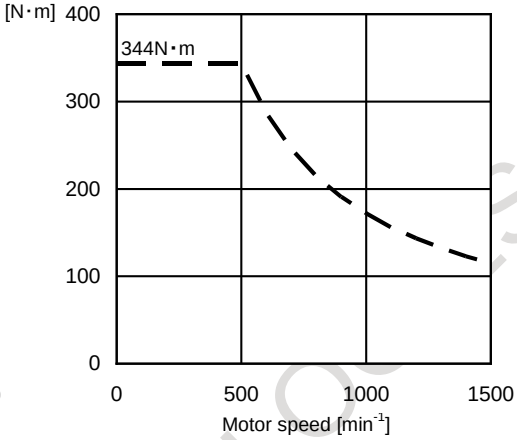
Max.acc. output

Applicable amplifier: αiSP 22-B

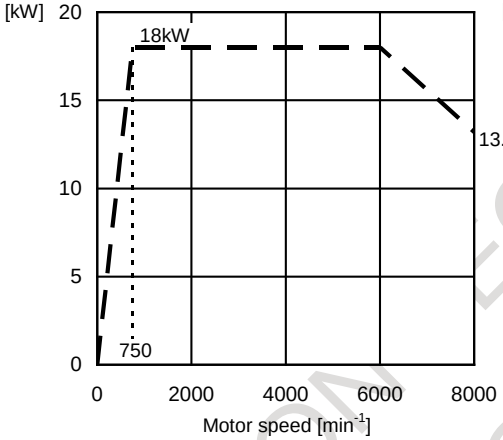
Low-speed winding output (Y connection)



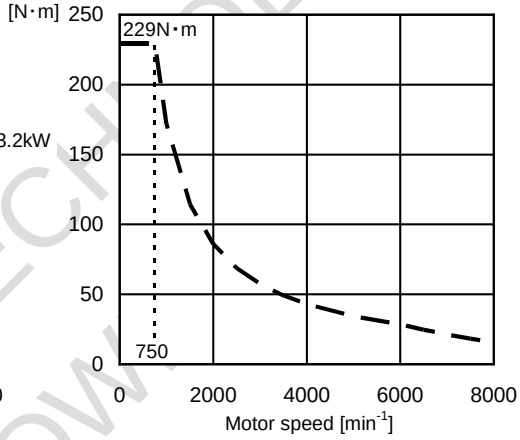
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



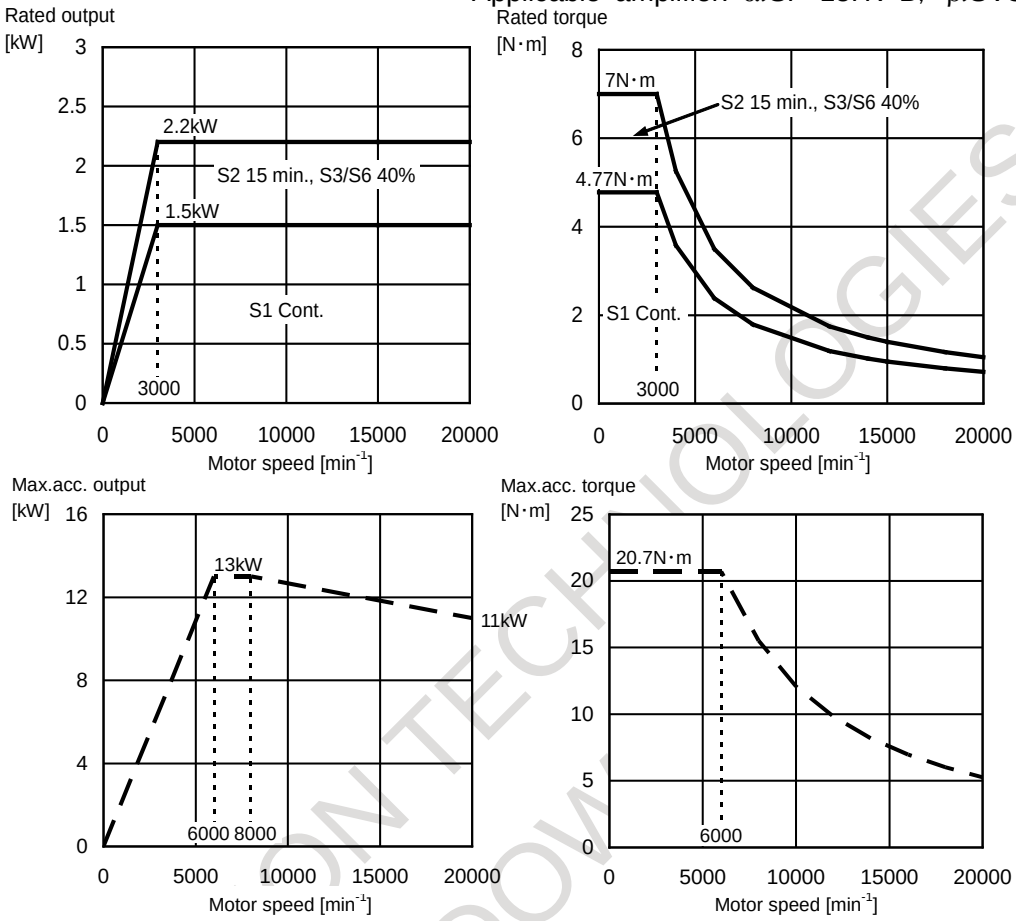
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3.2.8 αiIT-B series 400V-type

Model αiIT 1.5/20000HV-B

Spec. number for motor: A06B-2563-B123#0101

Spec. number for output specification nameplate: A06B-1230-K563#S00
Applicable amplifier: αiSP 15HV-B, βiSVSP*-15HV-B



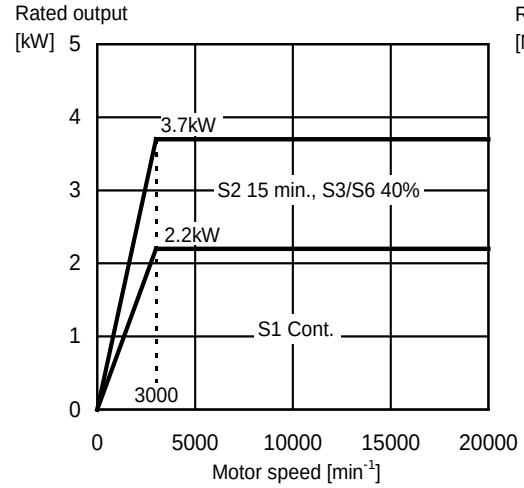
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	1.5	kW
	S2 15 min., S3/S6 40% rated		2.2	kW
Rated current	S1 continuous rated	I_C	13	A
	S2 15 min., S3/S6 40% rated		16	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	20000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			13.0	kW
Continuous rated torque in the constant torque range		T_b	4.77	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0043	$kg·m^2$
Weight		W	24	kg
Winding resistance (U-V, V-W, and W-U)			267	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple Labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			28	W

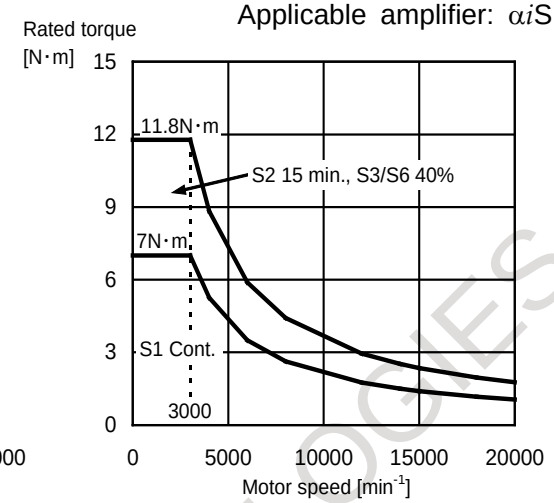
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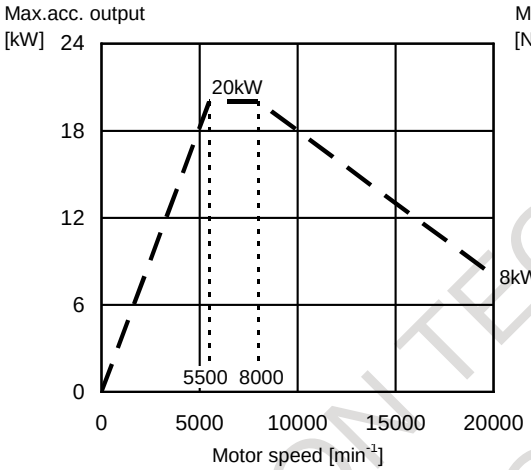
Model αiI$_T$ 2/20000HV-B

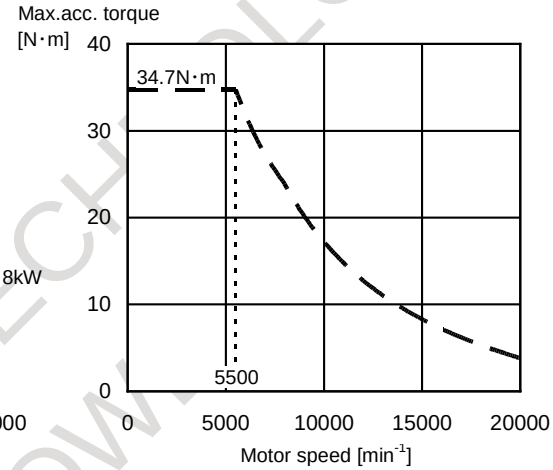
Spec. number for motor: A06B-2564-B123#0101

Spec. number for output specification nameplate: A06B-1230-K564#S00
Applicable amplifier: αiSP 30HV-B









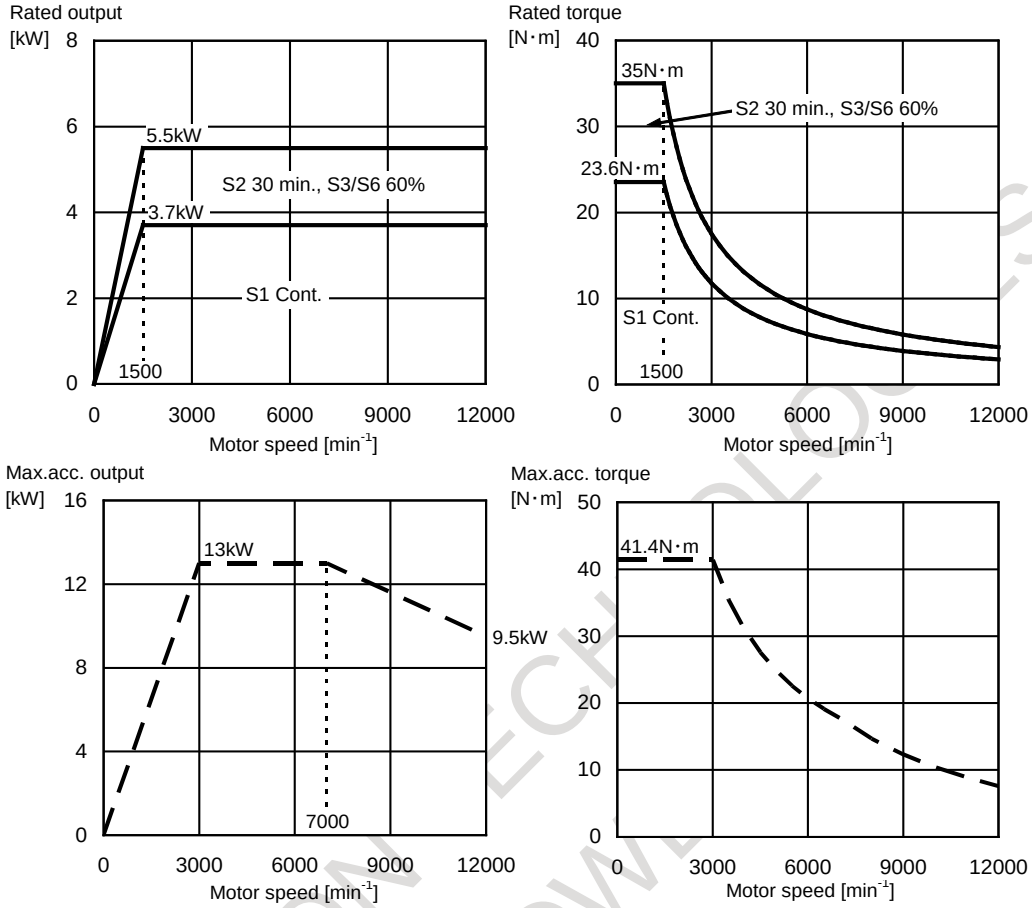
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	2.2	kW
	S2 15 min., S3/S6 40% rated		3.7	kW
Rated current	S1 continuous rated	I_C	21	A
	S2 15 min., S3/S6 40% rated		28	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	20000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			20.0	kW
Continuous rated torque in the constant torque range		T_b	7.0	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0078	$kg·m^2$
Weight		W	27	kg
Winding resistance (U-V, V-W, and W-U)			187	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple Labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			34	W

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Model αiI$_T$ 3/12000HV-B

Spec. number for motor: A06B-2565-B123

Spec. number for output specification nameplate: A06B-1230-K565#S00
Applicable amplifier: αiSP 11HV-B, βiSVSP*-11HV-B



Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	3.7	kW
	S2 30 min., S3/S6 60% rated		5.5	kW
Rated current	S1 continuous rated	I_C	18	A
	S2 30 min., S3/S6 60% rated		23	A
Speed	Base speed	N_b	1500	min^{-1}
	Max. speed	N_{max}	12000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			13.0	kW
Continuous rated torque in the constant torque range		T_b	23.6	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0148	$kg·m^2$
Weight		W	46	kg
Winding resistance (U-V, V-W, and W-U)			430	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple Labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			34	W

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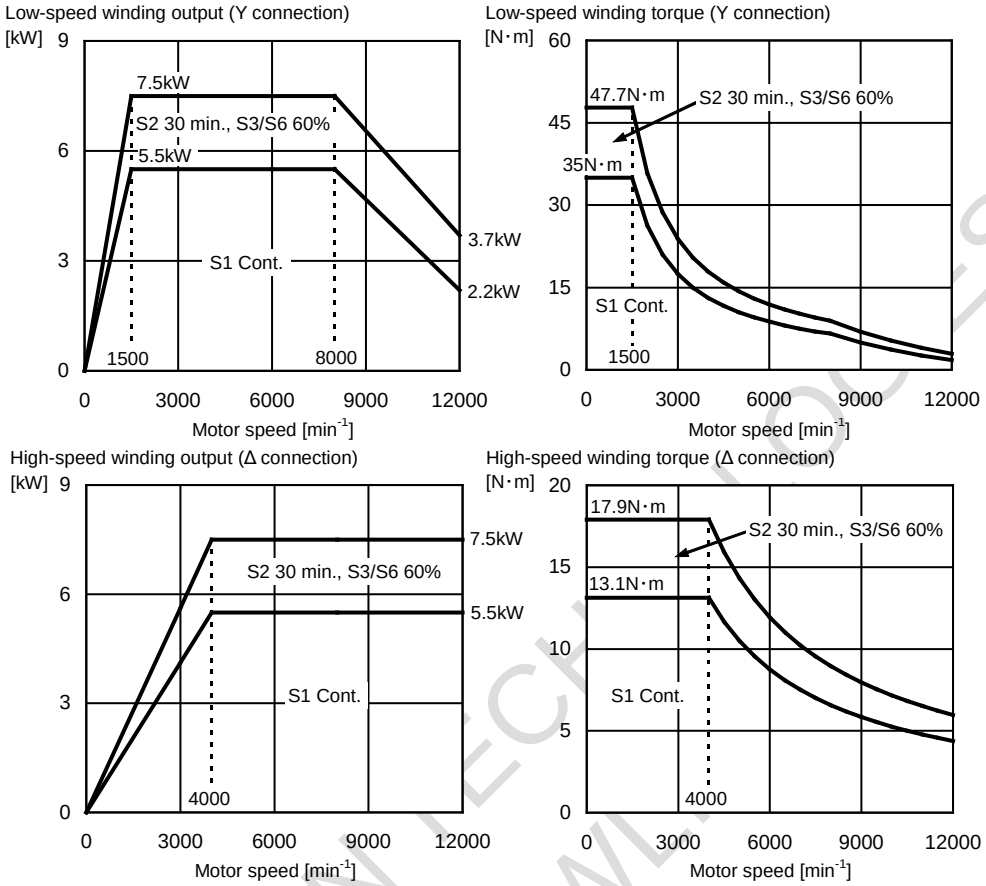
Model αiI$_T$ 6/12000HV-B

Spec. number for motor: A06B-2566-B123

Spec. number for output specification nameplate: A06B-1230-K566#S00

Rated output

Applicable amplifier: αiSP 15HV-B, βiSVSP*-15HV-B



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	5.5	5.5	kW
	S2 30 min., S3/S6 60% rated		7.5	7.5	kW
Rated current	S1 continuous rated	I_C	18	18	A
	S2 30 min., S3/S6 60% rated		22	24	A
Speed	Base speed	N_b	1500	4000	min^{-1}
	Max. speed	N_{max}	12000	12000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			13.0		kW
Continuous rated torque in the constant torque range		T_b	35.0	13.1	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0179		kg·m^2
Weight		W	51		kg
Winding resistance (U-X, V-Y, and W-Z)			238		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			80		W

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Model αiI$_T$ 6/12000HV-B

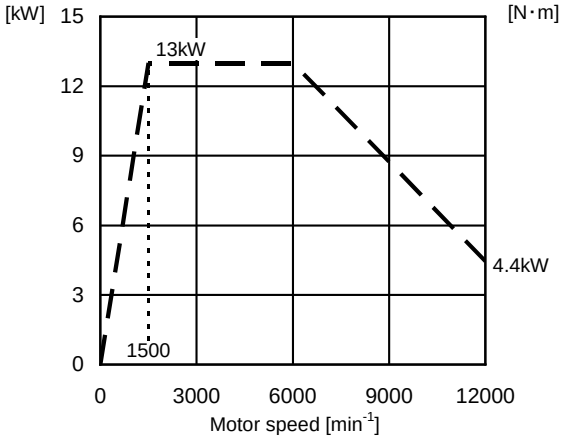
Spec. number for motor: A06B-2566-B123

Spec. number for output specification nameplate: A06B-1230-K566#S00

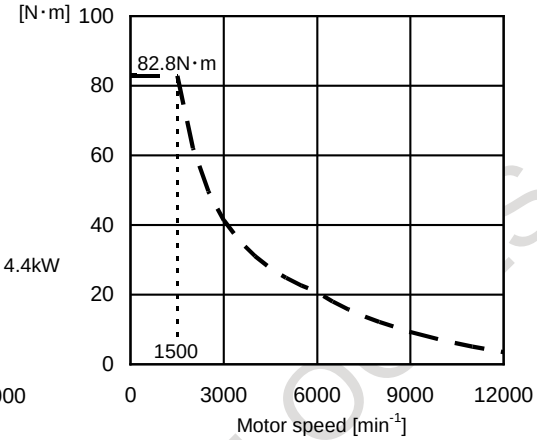
Max.acc. output

Applicable amplifier: αiSP 15HV-B, βiSVSP*-15HV-B

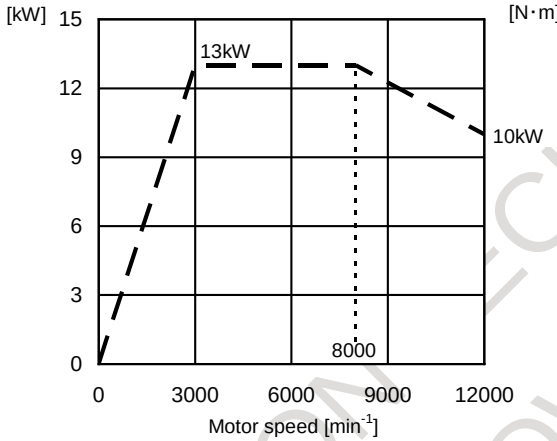
Low-speed winding output (Y connection)



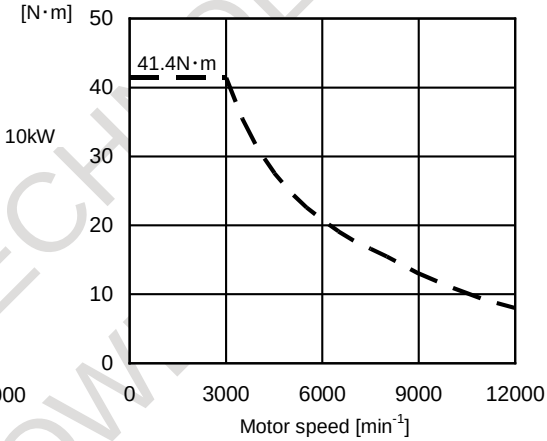
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiI$_T$ 8/12000HV-B

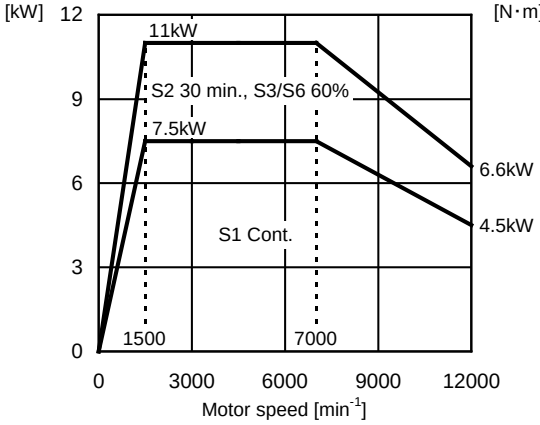
Spec. number for motor: A06B-2567-B123

Spec. number for output specification nameplate: A06B-1230-K567#S00

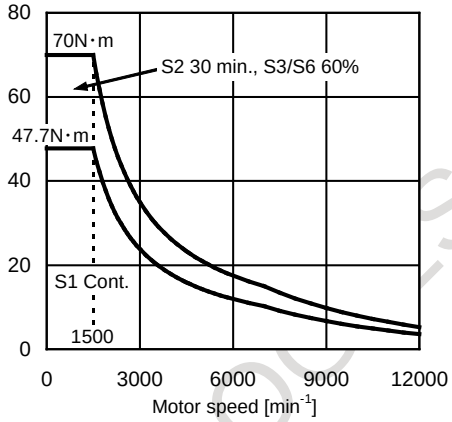
Rated output

Applicable amplifier: αiSP 15HV-B, βiSVSP*-15HV-B

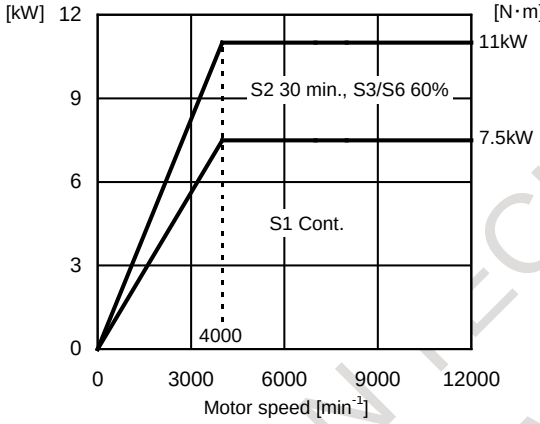
Low-speed winding output (Y connection)



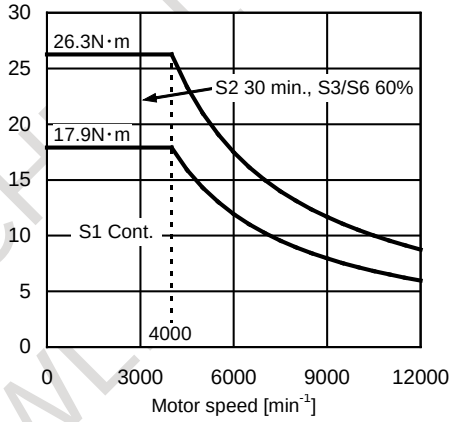
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	7.5	7.5	kW
	S2 30 min., S3/S6 60% rated		11	11	kW
Rated current	S1 continuous rated	I_C	23	25	A
	S2 30 min., S3/S6 60% rated		29	30	A
Speed	Base speed	N_b	1500	4000	min^{-1}
	Max. speed	N_{max}	12000	12000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			13.2		kW
Continuous rated torque in the constant torque range		T_b	47.7	17.9	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0275		kg·m^2
Weight		W	80		kg
Winding resistance (U-X, V-Y, and W-Z)			219		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			80		W

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Model αiI$_T$ 8/12000HV-B

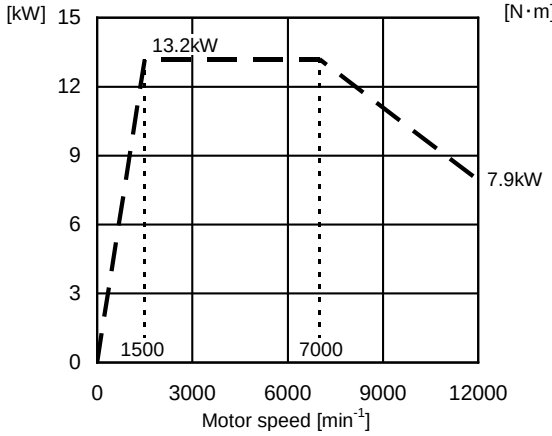
Spec. number for motor: A06B-2567-B123

Spec. number for output specification nameplate: A06B-1230-K567#S00

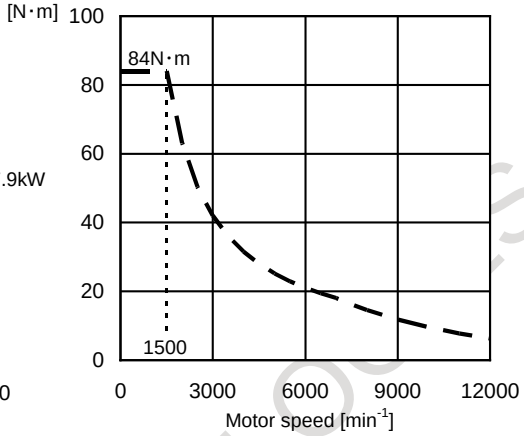
Max.acc. output

Applicable amplifier: αiSP 15HV-B, βiSVSP*-15HV-B

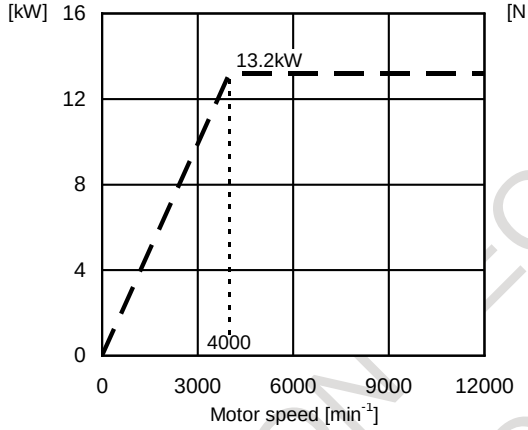
Low-speed winding output (Y connection)



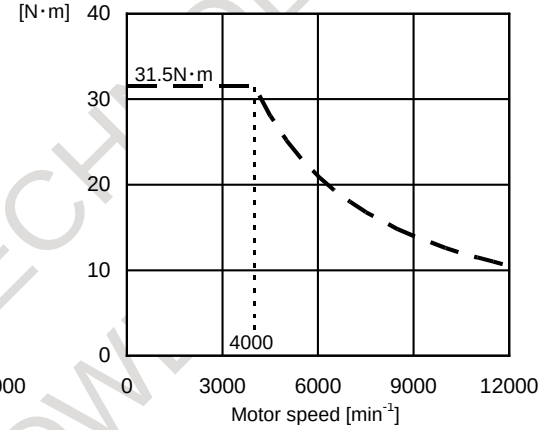
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiI$_T$ 8/15000HV-B

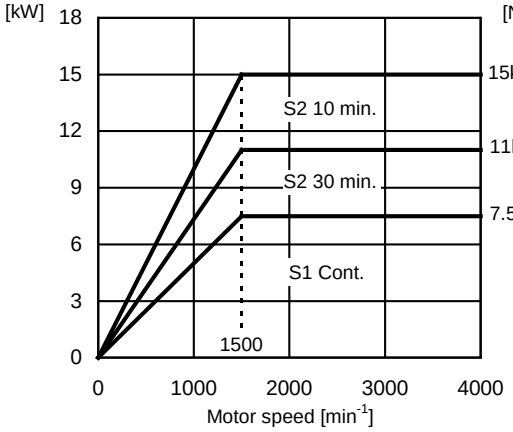
Spec. number for motor: A06B-2577-B133

Spec. number for output specification nameplate: A06B-1230-K577#S00

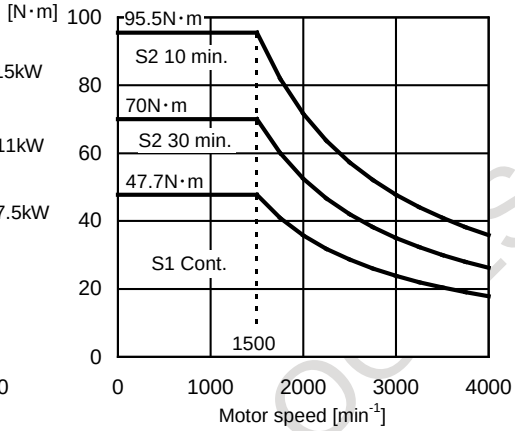
Rated output

Applicable amplifier: αiSP 30HV-B

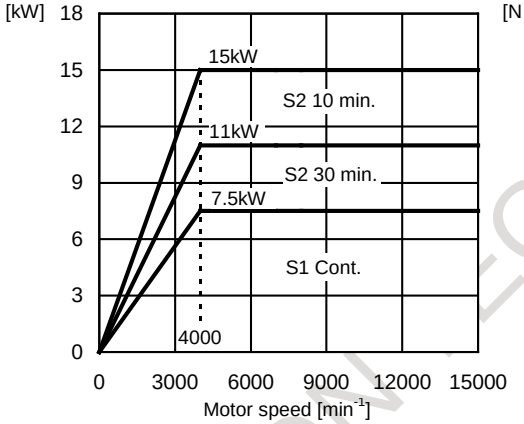
Low-speed winding output (Y connection)



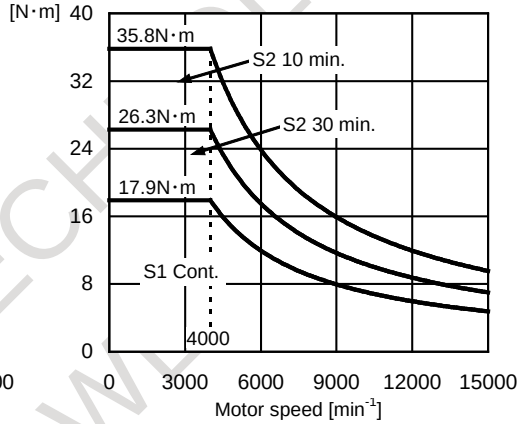
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	7.5	7.5	kW
	S2 30 min. rated		11	11	kW
	S2 10 min. rated		15	15	kW
Rated current	S1 continuous rated	I_C	35	37	A
	S2 30 min. rated		44	45	A
	S2 10 min. rated		55	53	A
Speed	Base speed	N_b	1500	4000	min^{-1}
	Max. speed	N_{max}	4000	15000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			28.0		kW
Continuous rated torque in the constant torque range		T_b	47.7	17.9	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0275		kg·m^2
Weight		W	80		kg
Winding resistance (U-X, V-Y, and W-Z)			109		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			80		W

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Model αiI$_T$ 8/15000HV-B

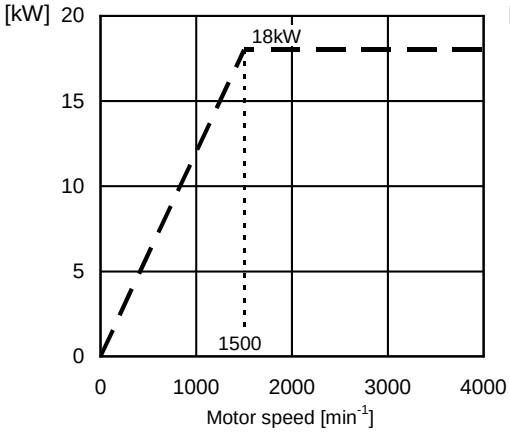
Spec. number for motor: A06B-2577-B133

Spec. number for output specification nameplate: A06B-1230-K577#S00

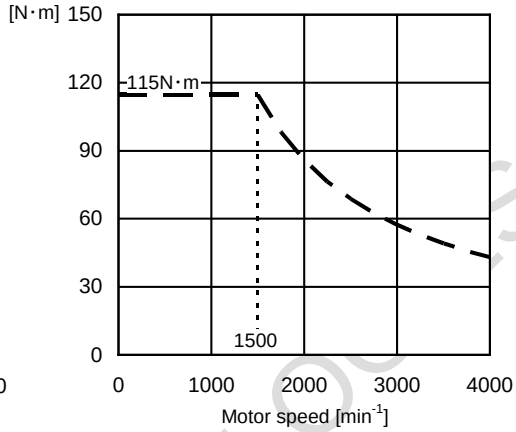
Max.acc. output

Applicable amplifier: αiSP 30HV-B

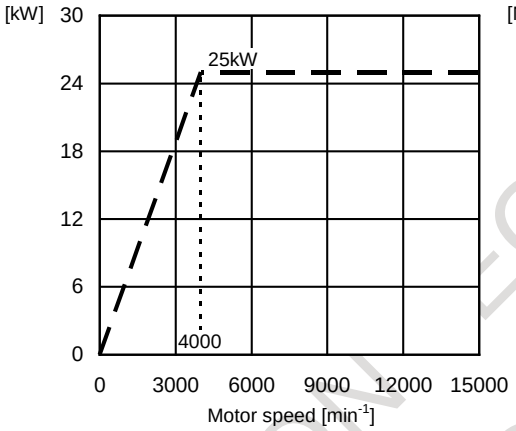
Low-speed winding output (Y connection)



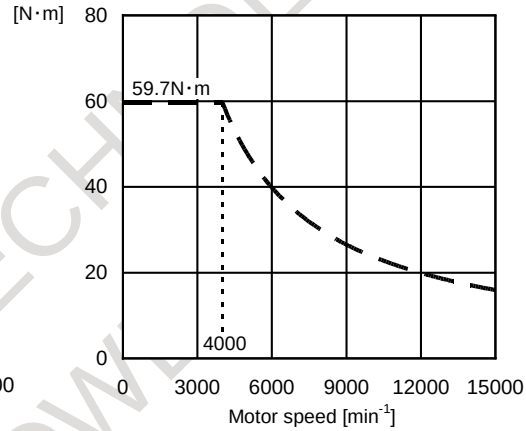
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiI$_T$ 12/12000HV-B

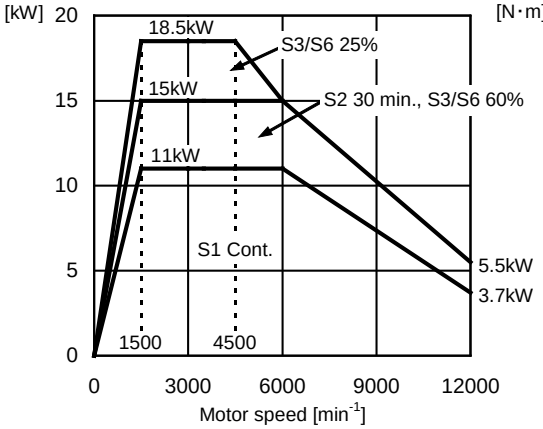
Spec. number for motor: A06B-2568-B123

Spec. number for output specification nameplate: A06B-1230-K568#S0P

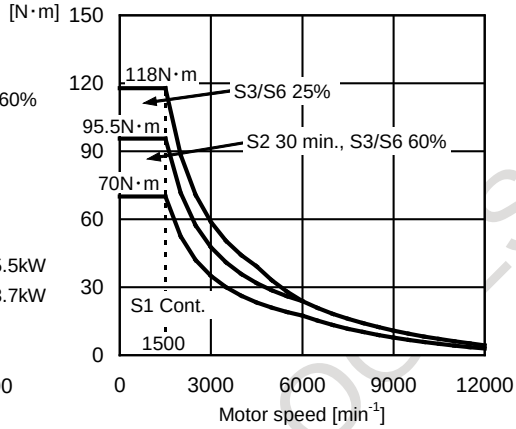
Rated output

Applicable amplifier: αiSP 15HV-B、βiSVSP*-18HV-B

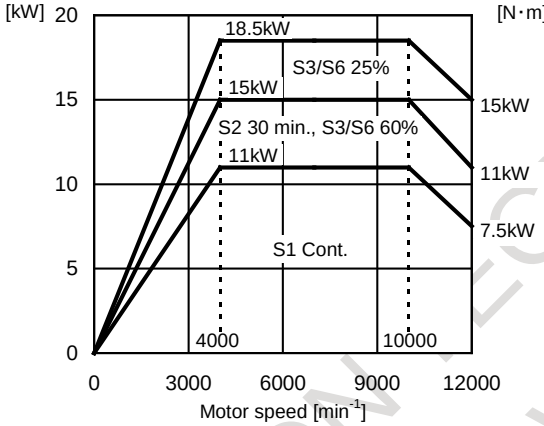
Low-speed winding output (Y connection)



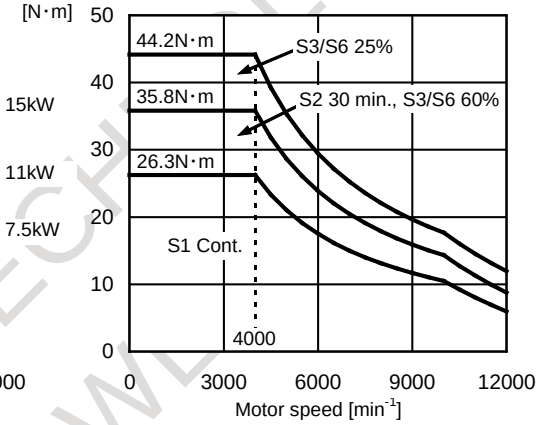
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S0P	#S0P	
Rated output	S1 continuous rated	P_C	11	11	kW
	S2 30 min., S3/S6 60% rated		15	15	kW
	S3/S6 25% rated		18.5	18.5	kW
Rated current	S1 continuous rated	I_C	27	27	A
	S2 30 min., S3/S6 60% rated		34	32	A
	S3/S6 25% rated		39	37	A
Speed	Base speed	N_b	1500	4000	min^{-1}
	Max. speed	N_{max}	12000	12000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			22.2		kW
Continuous rated torque in the constant torque range		T_b	70.0	26.3	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.07		kg·m^2
Weight		W	95		kg
Winding resistance (U-X, V-Y, and W-Z)			233		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			256		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			116		W

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Model αiI$_T$ 12/12000HV-B

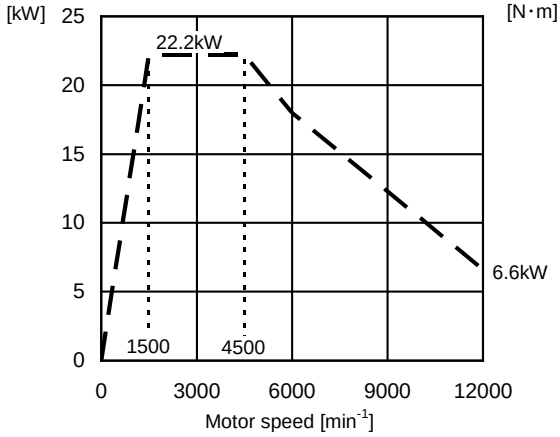
Spec. number for motor: A06B-2568-B123

Spec. number for output specification nameplate: A06B-1230-K568#S0P

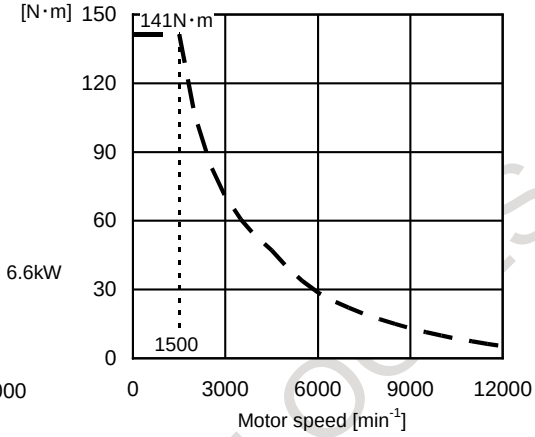
Max.acc. output

Applicable amplifier: αiSP 15HV-B, βiSVSP*-18HV-B

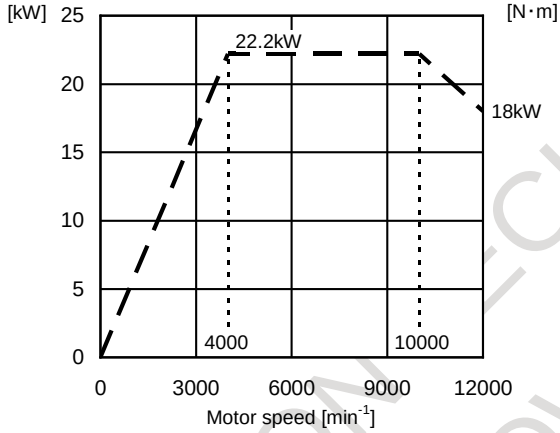
Low-speed winding output (Y connection)



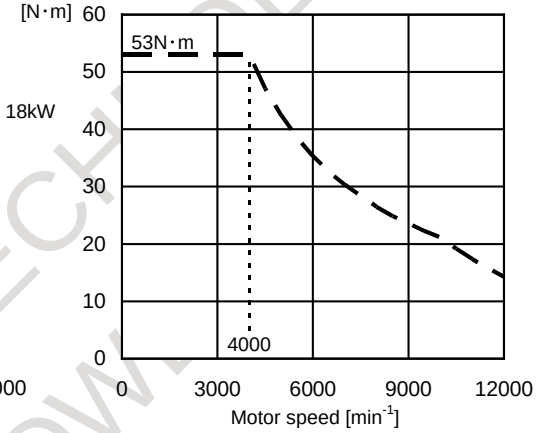
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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Model αiIT 15/12000HV-B

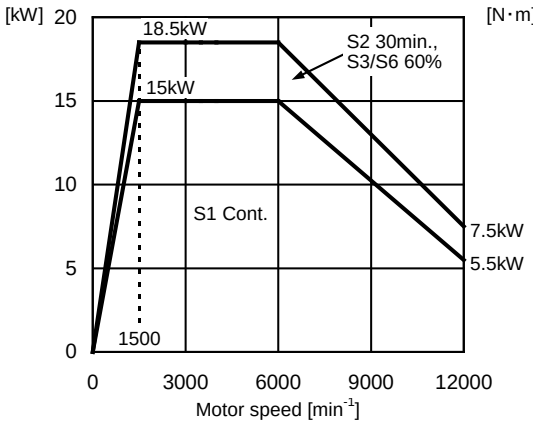
Spec. number for motor: A06B-2569-B123

Spec. number for output specification nameplate: A06B-1230-K569#S00

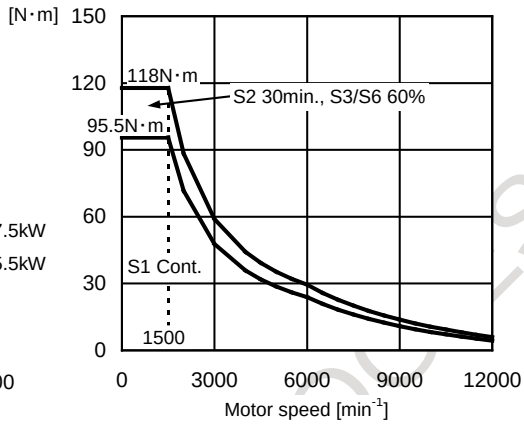
Rated output

Applicable amplifier: αiSP 22HV-B

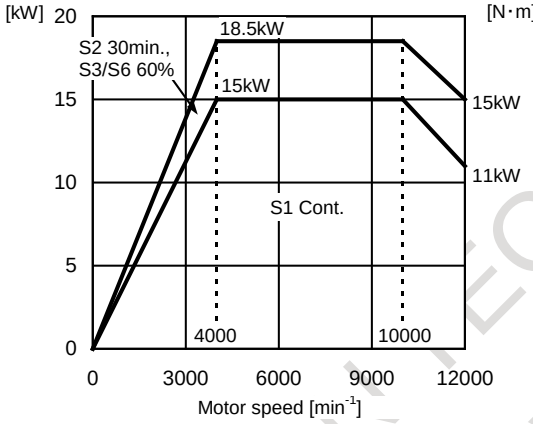
Low-speed winding output (Y connection)



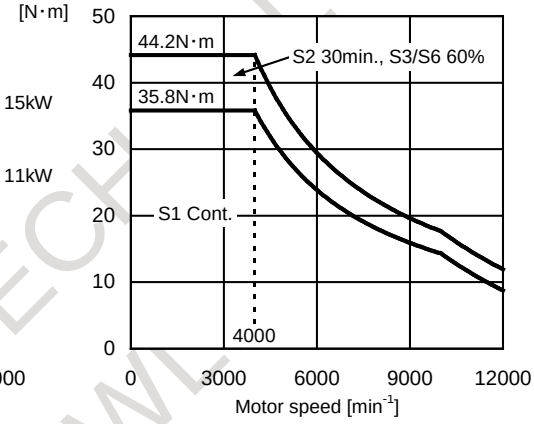
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S00	#S00	
Rated output	S1 continuous rated	P_C	15	15	kW
	S2 30 min., S3/S6 60% rated		18.5	18.5	kW
Rated current	S1 continuous rated	I_C	37	36	A
	S2 30 min., S3/S6 60% rated		45	41	A
Speed	Base speed	N_b	1500	4000	min^{-1}
	Max. speed	N_m	12000	12000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			22.2		kW
Continuous rated torque in the constant torque range		T_b	95.5	35.8	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.09		$kg·m^2$
Weight		W	110		kg
Winding resistance (U-X, V-Y, and W-Z)			152		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			256		λ /rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan			116		W

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Model αiI$_T$ 15/12000HV-B

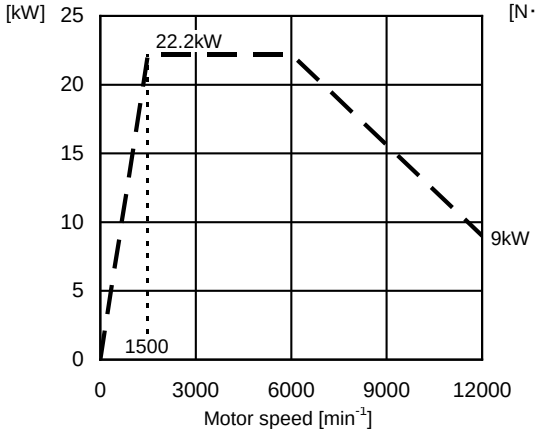
Spec. number for motor: A06B-2569-B123

Spec. number for output specification nameplate: A06B-1230-K569#S00

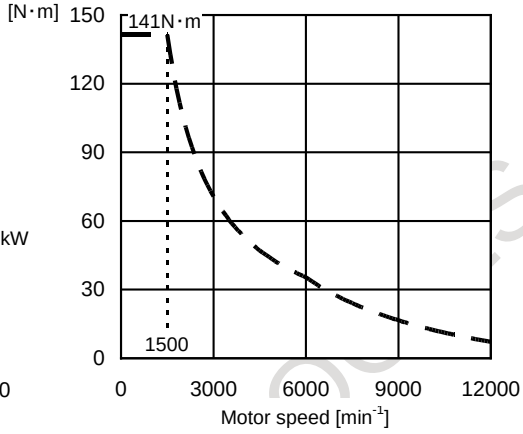
Max.acc. output

Applicable amplifier: αiSP 22HV-B

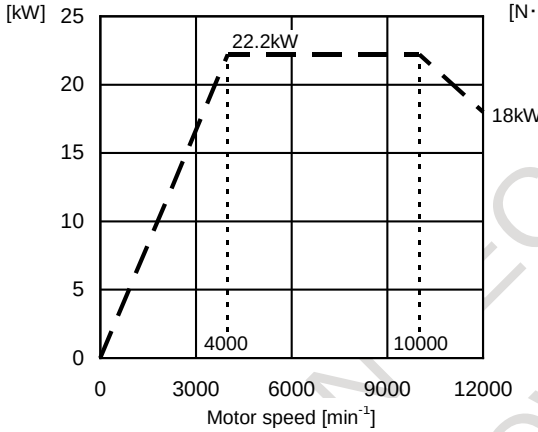
Low-speed winding output (Y connection)



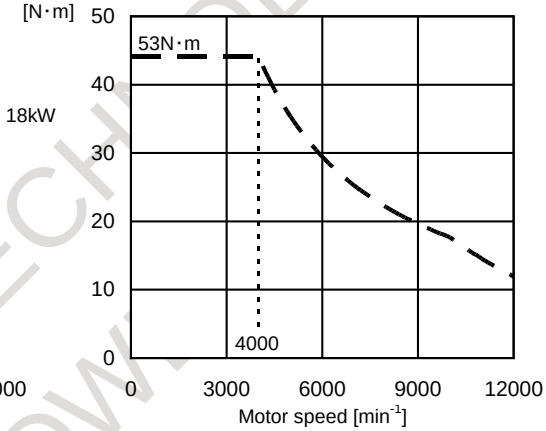
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



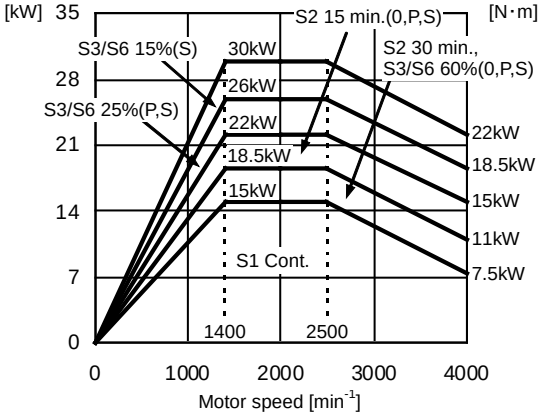
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Model αiIT 15/15000HV-B — Spec. number for motor: A06B-2579-B123

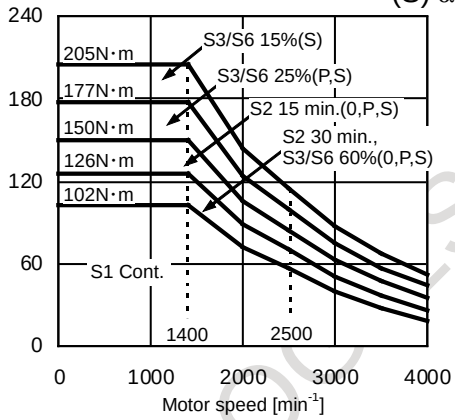
Spec. number for output specification nameplate: A06B-1230-K579#S00→(0), #S0P→(P), #S0S→(S)

Rated output — Applicable amplifier: (0),(P) αiSP 30HV-B (S) αiSP 45HV-B

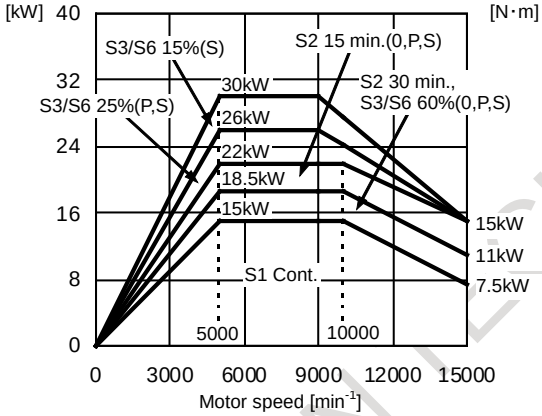
Low-speed winding output (Y connection)



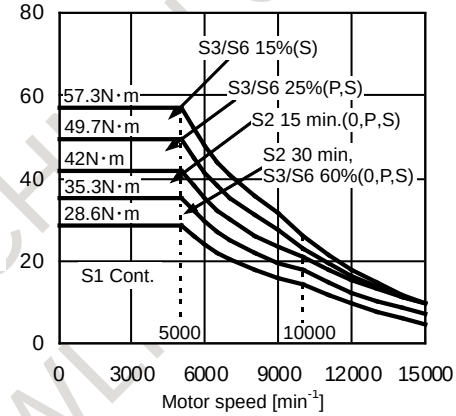
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value						Unit
Connection			Low-speed winding (Y connection)			High-speed winding (Δ connection)			
Model			#S00	#S0P	#S0S	#S00	#S0P	#S0S	
Rated output	S1 continuous rated	P_C	15	15	15	15	15	15	kW
	S2 30 min., S3/S6 60% rated		18.5	18.5	18.5	18.5	18.5	18.5	kW
	S2 15 min. rated		22	22	22	22	22	22	kW
	S3/S6 25% rated		-	26	26	-	26	26	kW
	S3/S6 15% rated		-	-	30	-	-	30	kW
Rated current	S1 continuous rated	I_C	48	48	48	41	41	41	A
	S2 30 min., S3/S6 60% rated		58	58	58	56	56	56	A
	S2 15 min. rated		68	68	68	68	68	68	A
	S3/S6 25% rated		-	78	78	-	76	76	A
	S3/S6 15% rated		-	-	86	-	-	82	A
Speed	Base speed	N_b	1400			5000			min^{-1}
	Max. speed	N_{max}	4000			15000			min^{-1}
Switching speed			3500						min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output						kW
Maximum output at acceleration for PS selection			38.0	50.0	58.0	38.0	50.0	58.0	kW
Continuous rated torque in the constant torque range		T_b	102			28.6			N·m
Number of poles			4						
Moment of inertia of the rotor		J_m	0.055						$kg·m^2$
Weight		W	121						kg
Winding resistance (U-X, V-Y, and W-Z)			92.3						mΩ
Built-in detector			αiMZ sensor contained						
Number of teeth for speed detection			256						λ/rev.
Output shaft seal			Simple Labyrinth						
Degree of protection			IP54 (The shaft-through portion is excluded)						
Vibration			V3						
Noise			75 or less						dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)						
Rated power of the cooling fan			116						W

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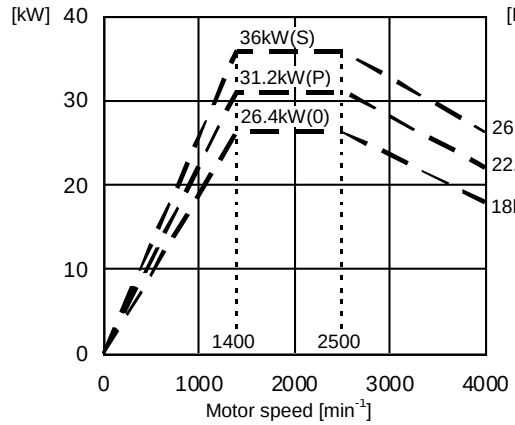
Model $\alpha i I_T$ 15/15000HV-B

Spec. number for motor: A06B-2579-B123

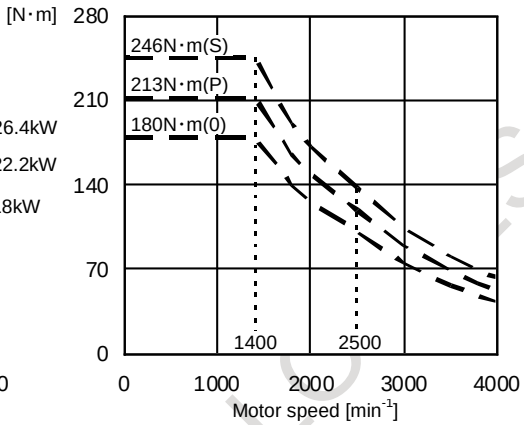
Spec. numbers for output specification nameplates: A06B-1230-K579#S00→(0), #S0P→(P), #S0S→(S)
Applicable amplifier: (0),(P)αiSP 30HV-B
(S) αiSP 45HV-B

Max.acc. output

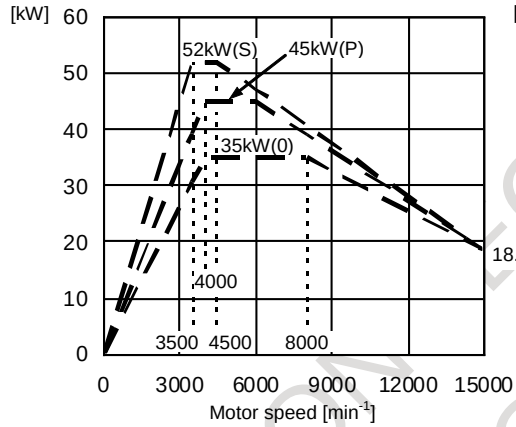
Low-speed winding output (Y connection)



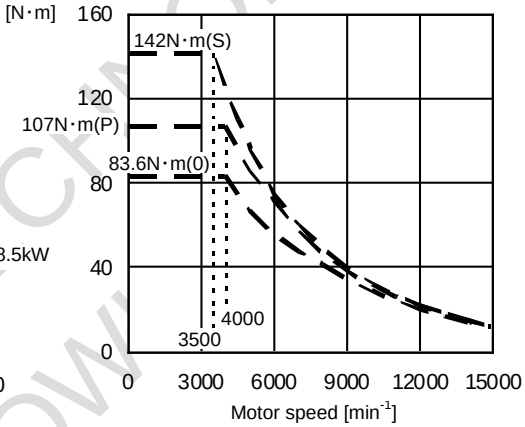
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



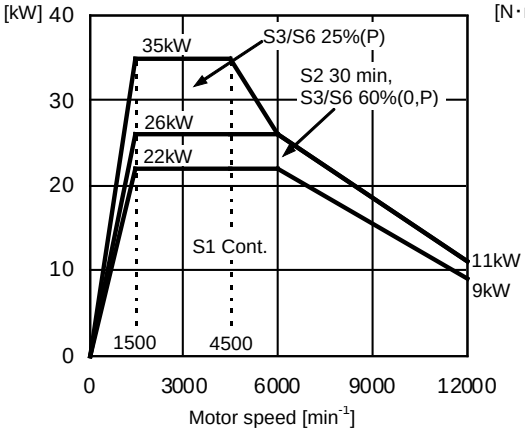
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Model αiIT 22/12000HV-B — Spec. number for motor: A06B-2571-B123

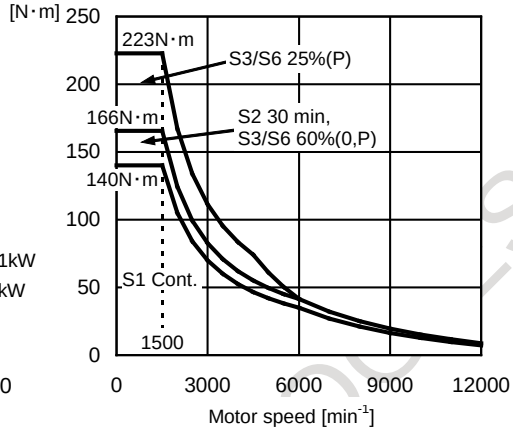
Spec. numbers for output specification nameplates: A06B-1230-K571#S00→(0), #S0P→(P)

Rated output — Applicable amplifier: αiSP 30HV-B

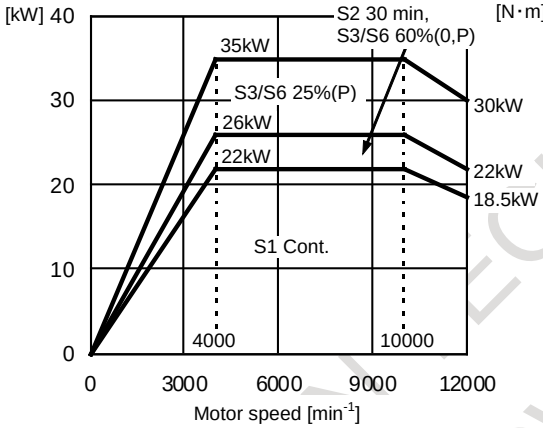
Low-speed winding output (Y connection)



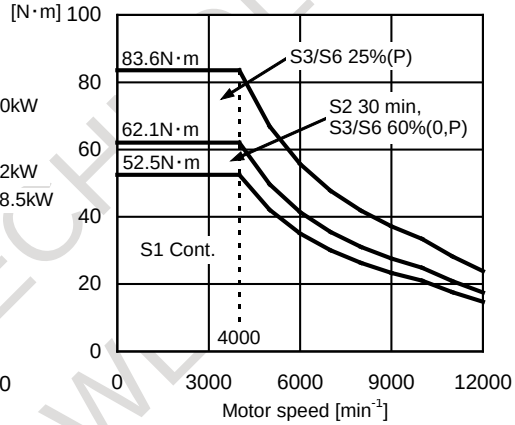
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value				Unit
Connection			Low-speed winding (Y connection)		High-speed winding (Δ connection)		
Model			#S00	#S0P	#S00	#S0P	
Rated output	S1 continuous rated	P_C	22	22	22	22	kW
	S2 30 min., S3/S6 60% rated		26	26	26	26	kW
	S3/S6 25% rated		-	35	-	35	kW
Rated current	S1 continuous rated	I_C	46	46	47	47	A
	S2 30 min., S3/S6 60% rated		54	54	53	53	A
	S3/S6 25% rated		-	74	-	69	A
Speed	Base speed	N_b	1500		4000		min^{-1}
	Max. speed	N_{max}	12000		12000		min^{-1}
Switching speed			4000				min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output				kW
Maximum output at acceleration for PS selection			31.2	42.0	31.2	42.0	kW
Continuous rated torque in the constant torque range		T_b	140		52.5		N·m
Number of poles			4				
Moment of inertia of the rotor		J_m	0.128				$kg·m^2$
Weight		W	143				kg
Winding resistance (U-X, V-Y, and W-Z)			99.0				mΩ
Built-in detector			αiMZ sensor contained				
Number of teeth for speed detection			256				λ/rev.
Output shaft seal			Simple Labyrinth				
Degree of protection			IP54 (The shaft-through portion is excluded)				
Vibration			V3				
Noise			75 or less				dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)				
Rated power of the cooling fan			116				W

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Model αiI$_T$ 22/12000HV-B

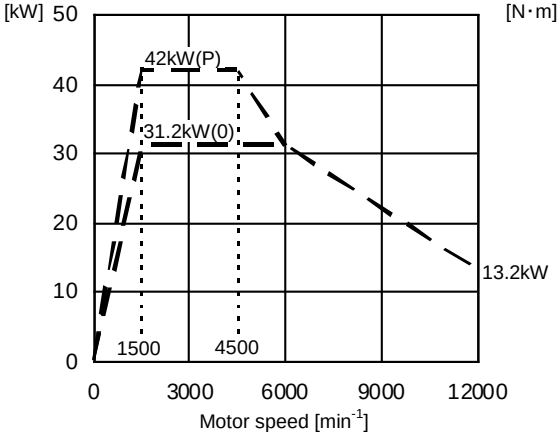
Spec. number for motor: A06B-2571- B123

Spec. numbers for output specification nameplates: A06B-1230-K571#S00→(0), #S0P→(P)

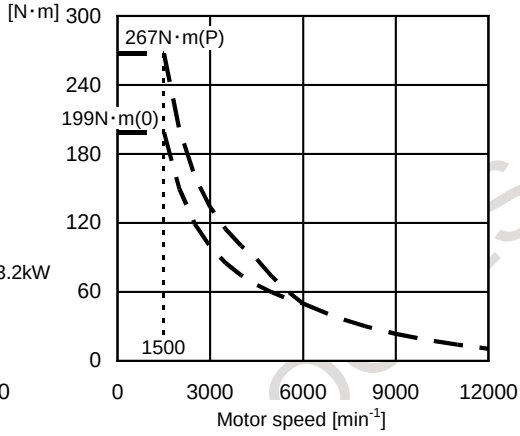
Max.acc. output

Applicable amplifier: αiSP 30HV-B

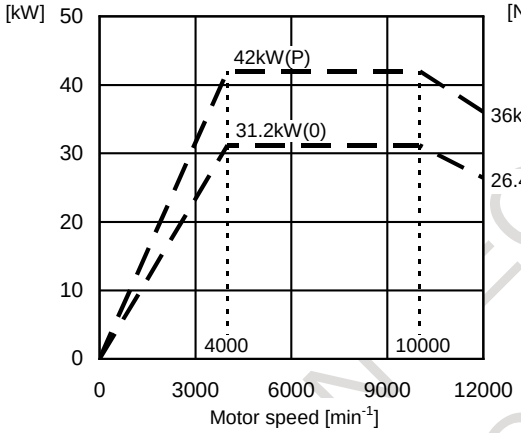
Low-speed winding output (Y connection)



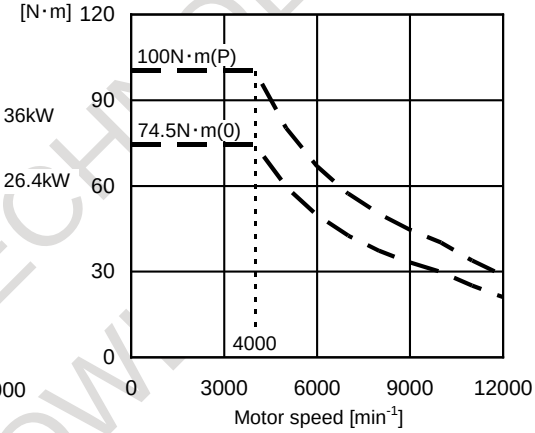
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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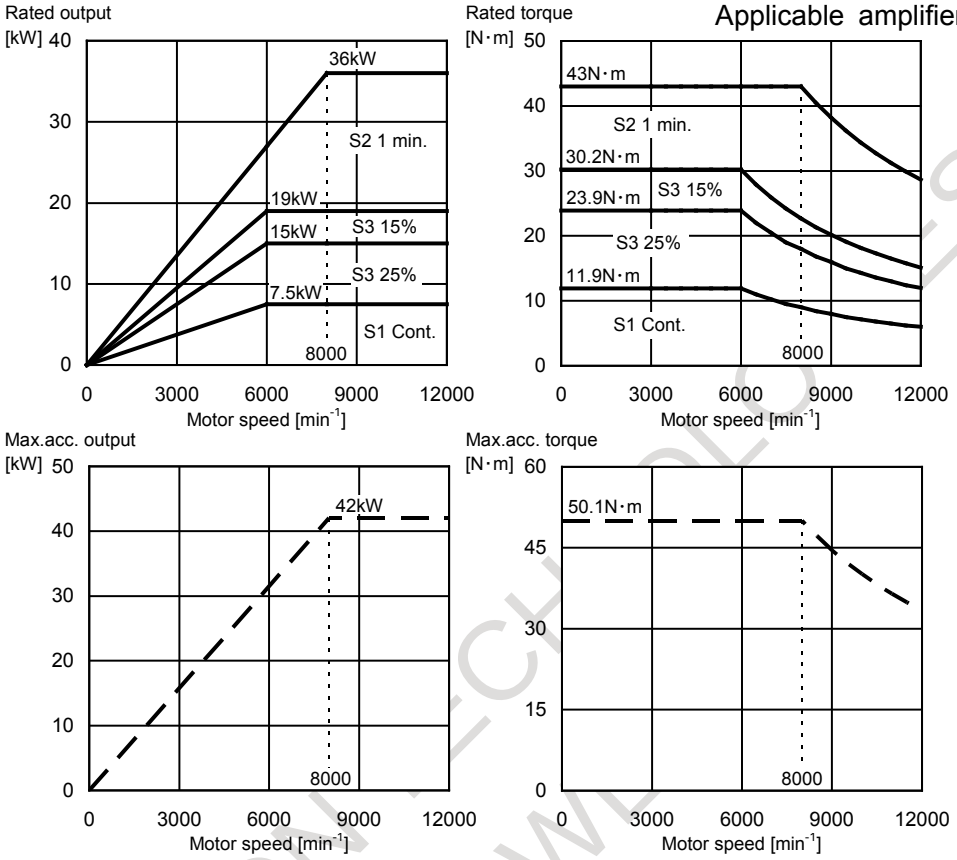
3.2.9 αiS-B 200V-type

Model αiS 1/12000-B

Spec. number for motor: A06B-2462-B123

Spec. number for output specification nameplate: A06B-1230-K462#S00

Applicable amplifier: αiSP 26-B



Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	7.5	kW
	S3 25% rated		15	kW
	S3 15% rated		19	kW
	S2 1 min. rated		36	kW
Rated current	S1 continuous rated	I_C	39	A
	S3 25% rated		77	A
	S3 15% rated		90	A
	S2 1 min. rated		132	A
Speed	Base speed	N_b	6000	min^{-1}
	Max. speed	N_{max}	12000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			45.0	kW
Continuous rated torque in the constant torque range		T_b	17.5	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0023	$kg·m^2$
Weight		W	19	kg
Winding resistance (U-V, V-W, and W-U)			54.0	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple Labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			82 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			32	W

* When applying this motor, carefully read Chapter 6, "CAUTIONS FOR SYNCHRONOUS MOTOR" in Part III.

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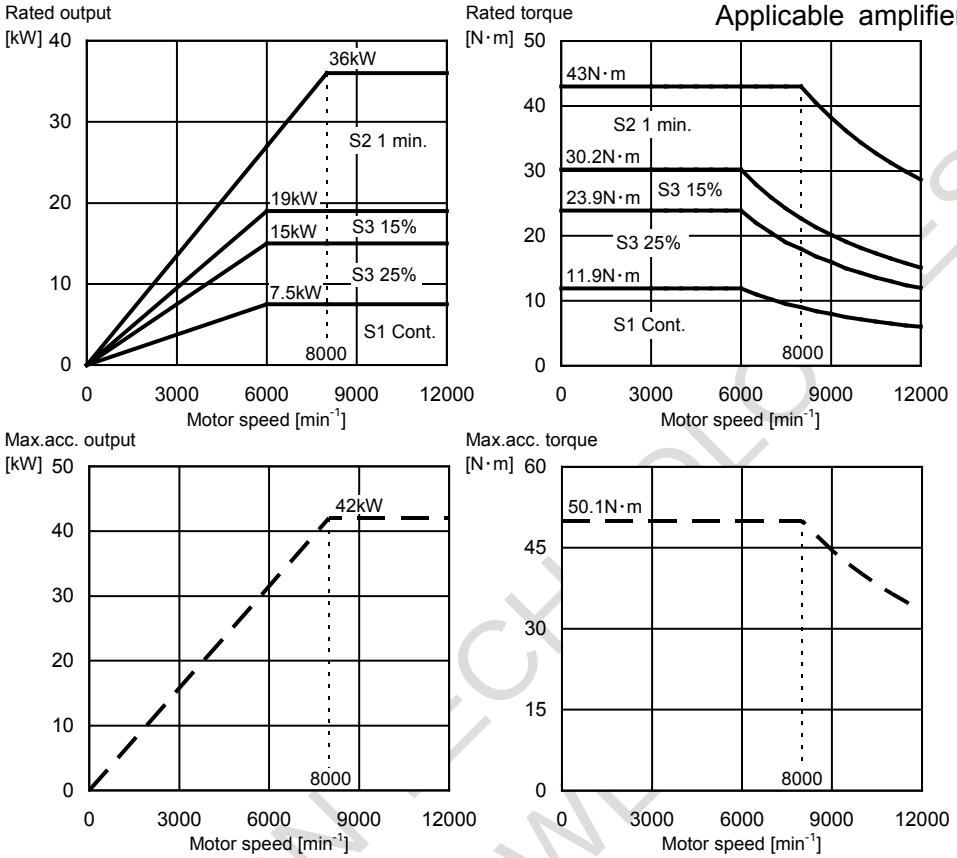
3.2.10 αiS-B 200V-type

Model αiST 1/12000-B

Spec. number for motor: A06B-2478-B123

Spec. number for output specification nameplate: A06B-1230-K478#S00

Applicable amplifier: αiSP 26-B



Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	7.5	kW
	S3 25% rated		15	kW
	S3 15% rated		19	kW
	S2 1 min. rated		36	kW
Rated current	S1 continuous rated	I_C	39	A
	S3 25% rated		77	A
	S3 15% rated		90	A
	S2 1 min. rated		132	A
Speed	Base speed	N_b	6000	min^{-1}
	Max. speed	N_{max}	12000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			45.0	kW
Continuous rated torque in the constant torque range		T_b	17.5	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0023	$kg·m^2$
Weight		W	19	kg
Winding resistance (U-V, V-W, and W-U)			54.0	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Simple Labyrinth	
Degree of protection			IP54 (The shaft-through portion is excluded)	
Vibration			V3	
Noise			82 or less	dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan			32	W

* When applying this motor, carefully read Chapter 6, "CAUTIONS FOR SYNCHRONOUS MOTOR" in Part III.

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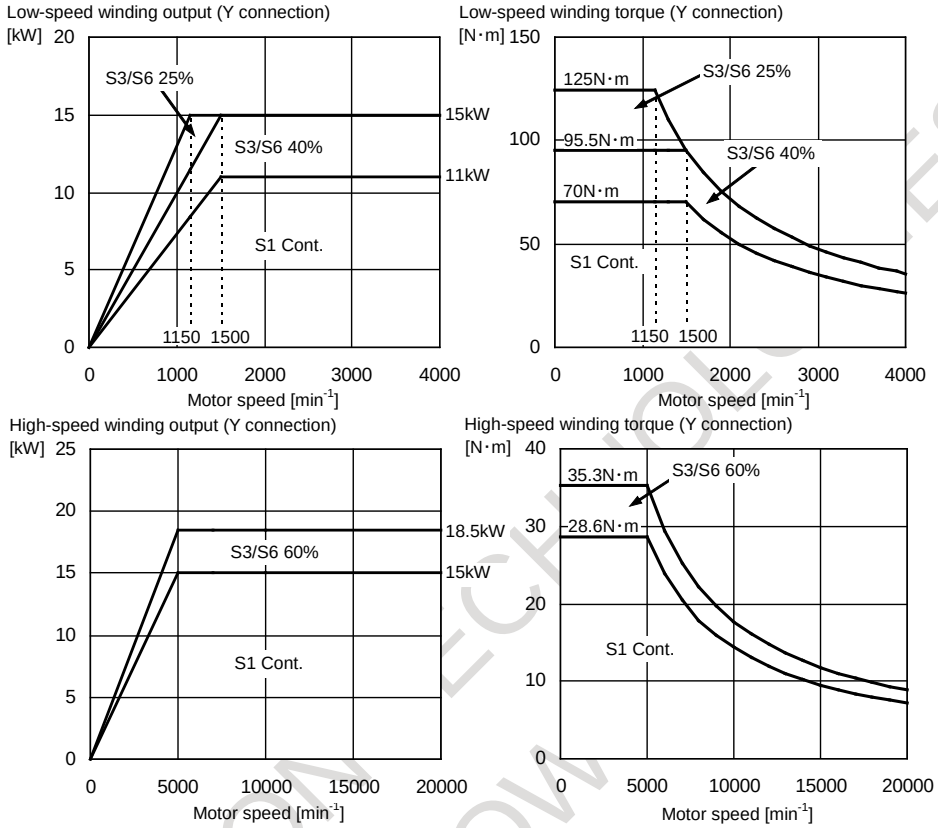
3.2.11 αiIL-B series 200V-type

Model αiIL 8/20000-B

Spec. number for motor: A06B-2497-B145

Spec. number for output specification nameplate: A06B-1230-K497#S0N
Applicable amplifier: αiSP 30-B
Cooler capacity 2.9kW(2500kcal/h)

Rated output



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Y connection)	
Model			#S0N	#S0N	
Rated output	S1 continuous rated	P_C	11	15	kW
	S3/S6 60% rated		-	18.5	kW
	S3/S6 40% rated		15	-	kW
	S3/S6 25% rated		15	-	kW
Rated current	S1 continuous rated	I_C	76	107	A
	S3/S6 60% rated		-	121	A
	S3/S6 40% rated		96	-	A
	S3/S6 25% rated		119	-	A
Speed	Base speed	N_b	1500	5000	min^{-1}
	Max. speed	N_{max}	4000	20000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			41.0		kW
Continuous rated torque in the constant torque range		T_b	70.0	28.6	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0275		$kg·m^2$
Weight		W	80		kg
Winding resistance (U1-V1, V1-W1, and W1-U1)			100		mΩ
Winding resistance (U2-V2, V2-W2, and W2-U2)			40.5		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			128		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Liquid-cooling method (IC9U7A7)		

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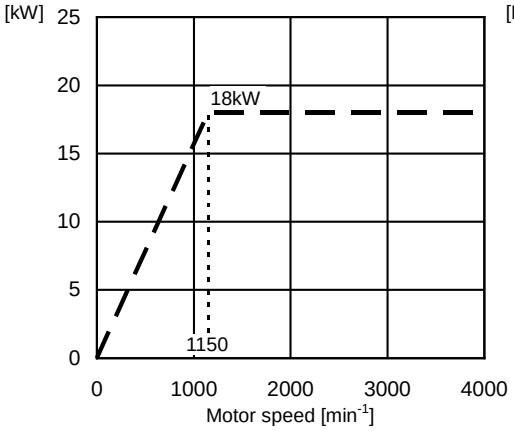
Model αiI$_L$ 8/20000-B

Spec. number for motor: A06B-2497-B145

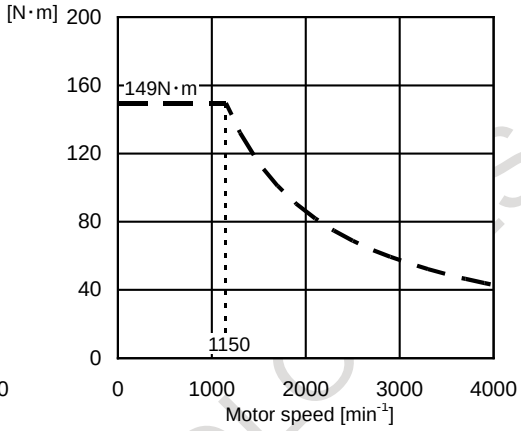
Spec. number for output specification nameplate: A06B-1230-K497#S0N
Applicable amplifier: αiSP 30-B
Cooler capacity 2.9kW(2500kcal/h)

Max.acc. output

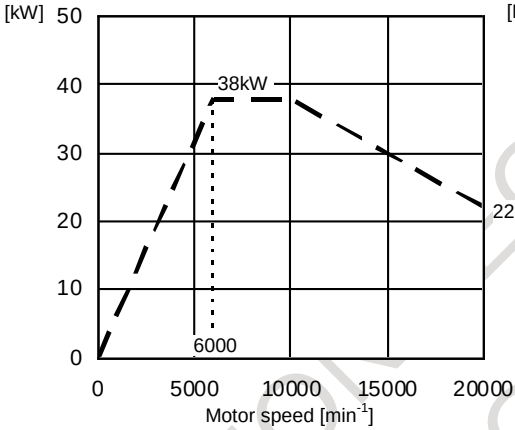
Low-speed winding output (Y connection)



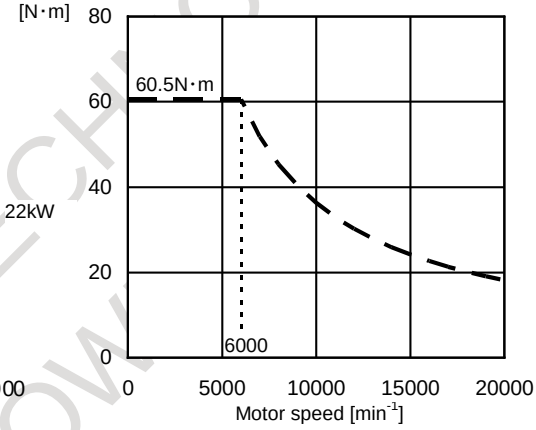
Low-speed winding output (Y connection)



High-speed winding output (Y connection)



High-speed winding torque (Y connection)



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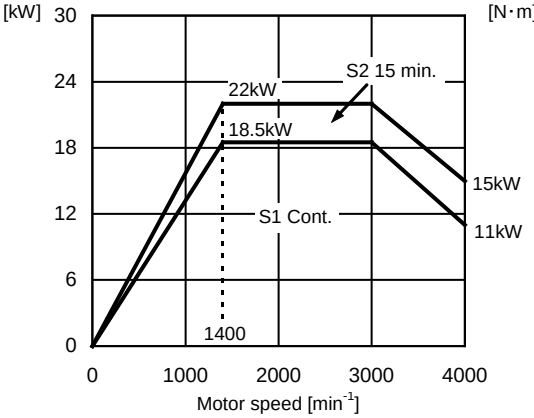
Model αiIL 15/15000-B

Spec. number for motor: A06B-2495-B135

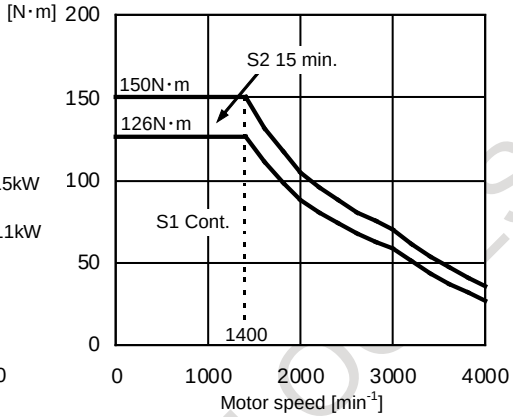
Spec. number for output specification nameplate: A06B-1230-K495#S01
Applicable amplifier: αiSP 30-B
Cooler capacity 3.5kW(3000kcal/h)

Rated output

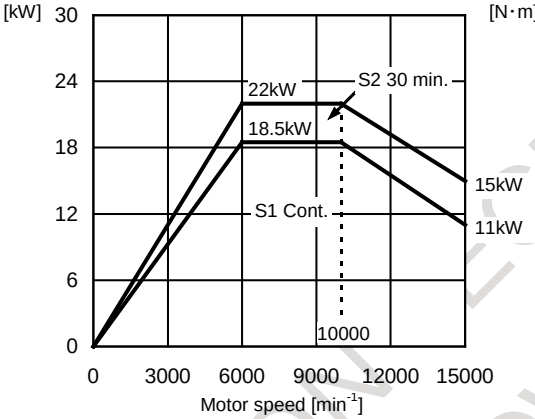
Low-speed winding output (Y connection)



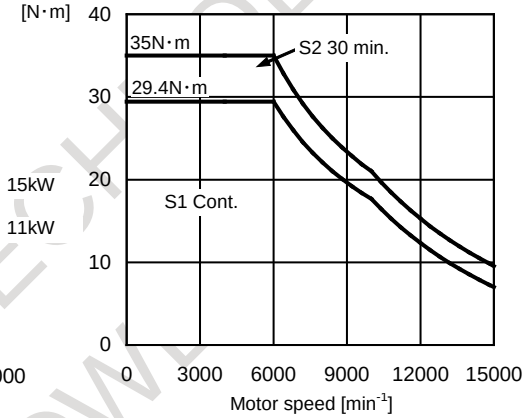
Low-speed winding torque (Y connection)



High-speed winding output (Y connection)



High-speed winding torque (Y connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Y connection)	
Model			#S01	#S01	
Rated output	S1 continuous rated	P_C	18.5	18.5	kW
	S2 30 min. rated		-	22	kW
	S2 15 min. rated		22	-	kW
Rated current	S1 continuous rated	I_C	103	84	A
	S2 30 min. rated		-	96	A
	S2 15 min. rated		121	-	A
Speed	Base speed	N_b	1400	6000	min^{-1}
	Max. speed	N_{max}	4000	15000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			41.0		kW
Continuous rated torque in the constant torque range		T_b	126	29.4	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.055		$kg·m^2$
Weight		W	140		kg
Winding resistance (U1-V1, V1-W1, and W1-U1)			37.6		mΩ
Winding resistance (U2-V2, V2-W2, and W2-U2)			19.6		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			128		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Liquid-cooling method (IC9U7A7)		

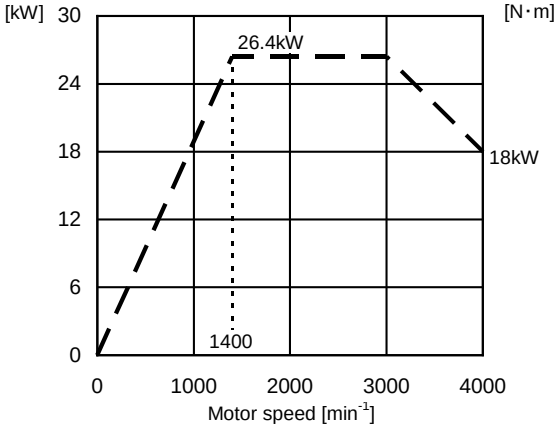
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Model αiI$_L$ 15/15000-B

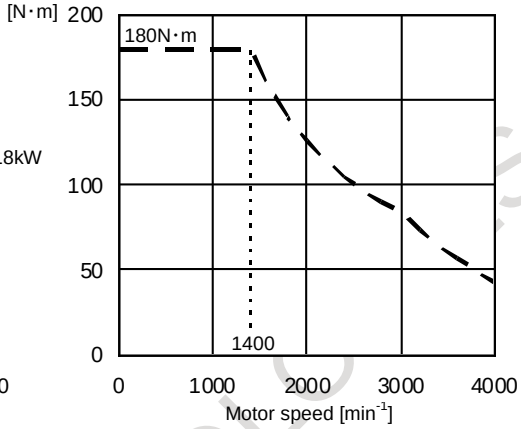
Spec. number for motor: A06B-2495-B135

Spec. number for output specification nameplate: A06B-1230-K495#S01
Applicable amplifier: αiSP 30-B
Max.acc. output
Cooler capacity 3.5kW(3000kcal/h)

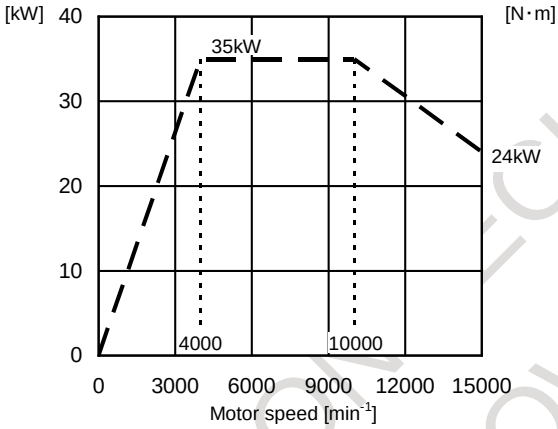
Low-speed winding output (Y connection)



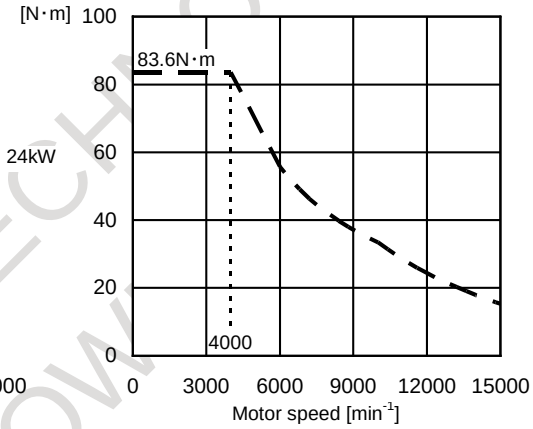
Low-speed winding output (Y connection)



High-speed winding output (Y connection)



High-speed winding torque (Y connection)



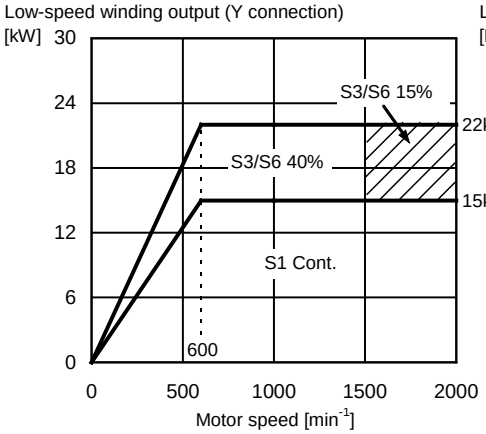
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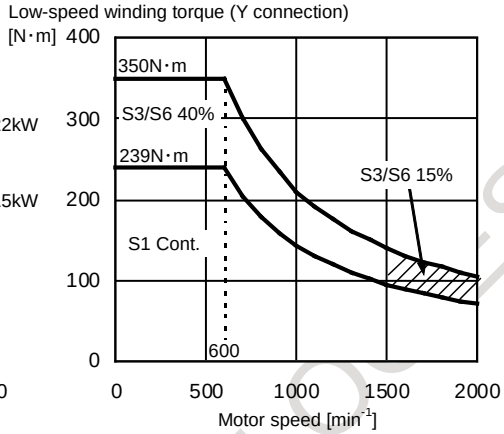
Model αiIL 26/15000-B

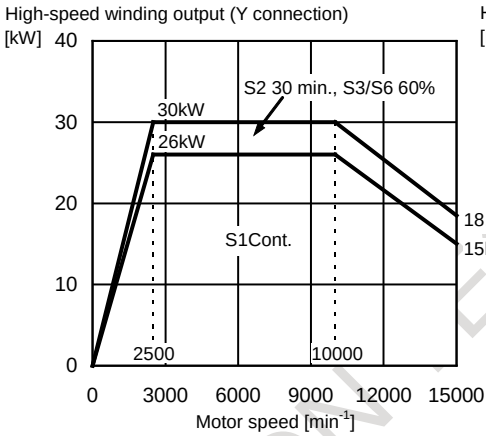
Spec. number for motor: A06B-2494-B135

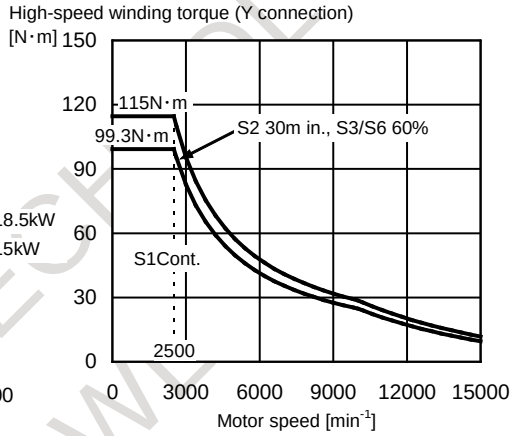
Spec. number for output specification nameplate: A06B-1230-K494#S01
Applicable amplifier: αiSP 30-B
Cooler capacity 4.1kW(3500kcal/h)

Rated output









Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Y connection)	
Model			#S01	#S01	
Rated output	S1 continuous rated	P_C	15	26	kW
	S2 30 min., S3/S6 60% rated		-	30	kW
	S3/S6 40% rated		22	-	kW
	S3/S6 15% rated		22	-	
Rated current	S1 continuous rated	I_C	79	107	A
	S2 30 min., S3/S6 60% rated		-	133	A
	S3/S6 40% rated		108	-	A
	S3/S6 15% rated		95	-	
Speed	Base speed	N_b	600	2500	min^{-1}
	Max. speed	N_{max}	2000	15000	min^{-1}
Switching speed			1800		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			43.0		kW
Continuous rated torque in the constant torque range		T_b	239	99.3	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.167		$kg·m^2$
Weight		W	170		kg
Winding resistance (U1-V1, V1-W1, and W1-U1)			128		mΩ
Winding resistance (U2-V2, V2-W2, and W2-U2)			51.6		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			128		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Liquid-cooling method (IC9U7A7)		

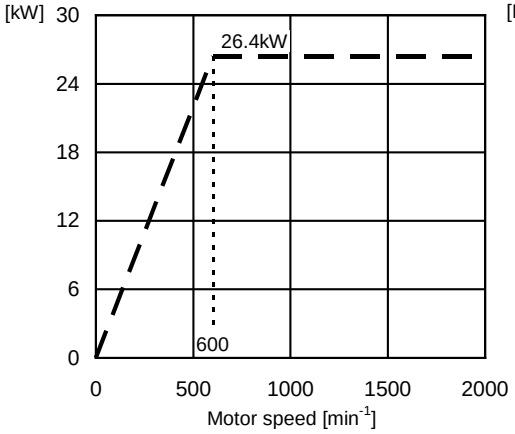
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Model αiI$_L$ 26/15000-B

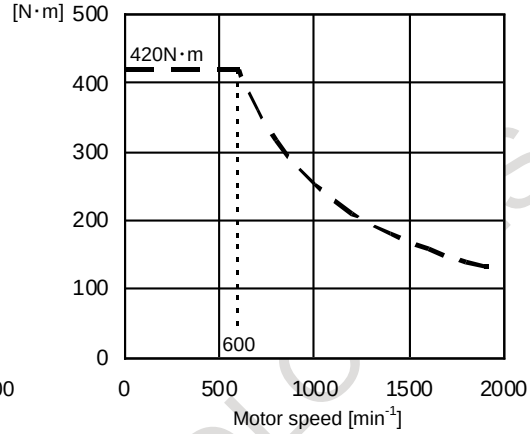
Spec. number for motor: A06B-2494-B135

Spec. number for output specification nameplate: A06B-1230-K494#S01
Applicable amplifier: αiSP 30-B
Max.acc. output
Cooler capacity 4.1kW(3500kcal/h)

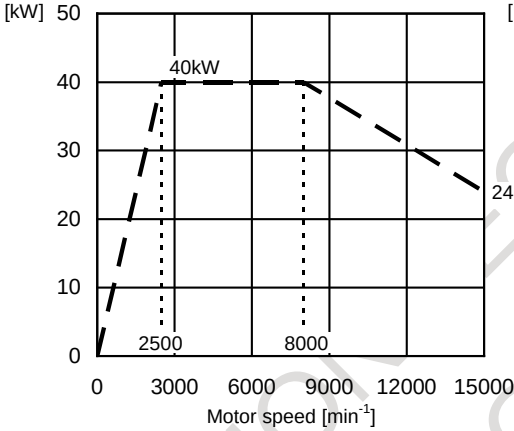
Low-speed winding output (Y connection)



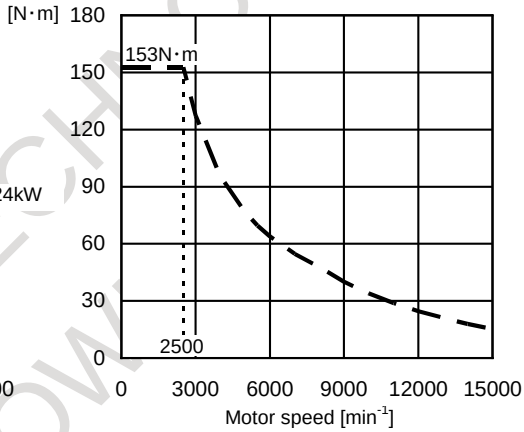
Low-speed winding output (Y connection)



High-speed winding output (Y connection)



High-speed winding torque (Y connection)



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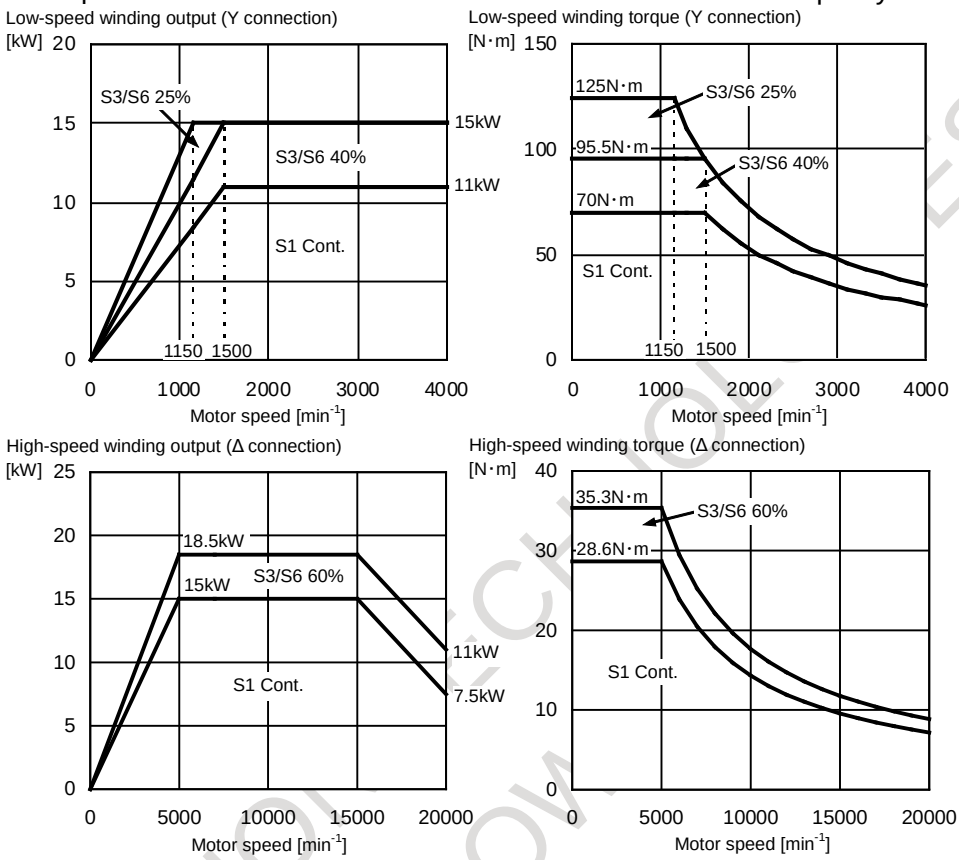
3.2.12 αiIL-B series 400V-type

Model αiIL 8/20000HV-B

Spec. number for motor: A06B-2597-B145

Spec. number for output specification nameplate: A06B-1230-K597#S0N
Applicable amplifier: αiSP 45HV-B
Cooler capacity 2.9kW(2500kcal/h)

Rated output



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S0N	#S0N	
Rated output	S1 continuous rated	P_C	11	15	kW
	S3/S6 60% rated		-	18.5	kW
	S3/S6 40% rated		15	-	kW
	S3/S6 25% rated		15	-	kW
Rated current	S1 continuous rated	I_C	48	47	A
	S3/S6 60% rated		-	53	A
	S3/S6 40% rated		60	-	A
	S3/S6 25% rated		75	-	A
Speed	Base speed	N_b	1500	5000	min^{-1}
	Max. speed	N_{max}	4000	20000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			48.0		kW
Continuous rated torque in the constant torque range		T_b	70.0	28.6	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.0275		$kg·m^2$
Weight		W	80		kg
Winding resistance (U-X, V-Y, and W-Z)			137		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			128		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Liquid-cooling method (IC9U7A7)		

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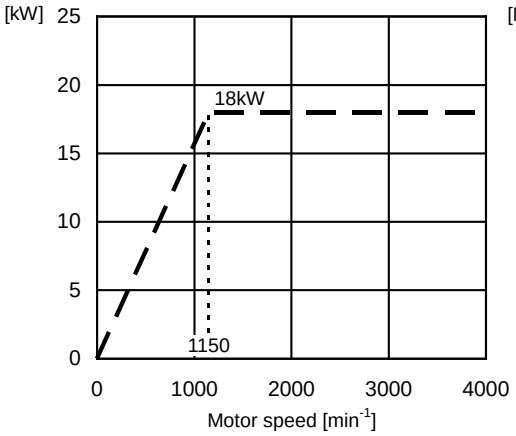
Model αiI$_L$ 8/20000HV-B

Spec. number for motor: A06B-2597-B145

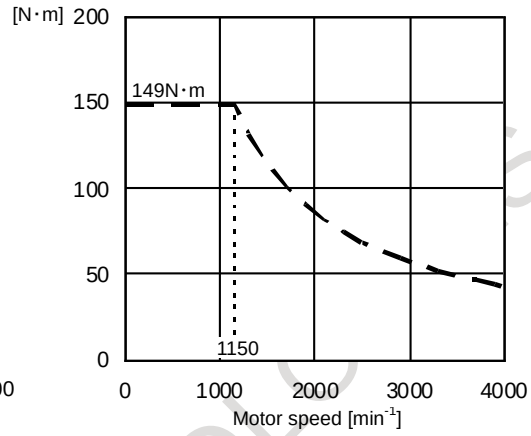
Spec. number for output specification nameplate: A06B-1230-K597#S0N
Applicable amplifier: αiSP 45HV-B
Cooler capacity 2.9kW(2500kcal/h)

Max.acc. output

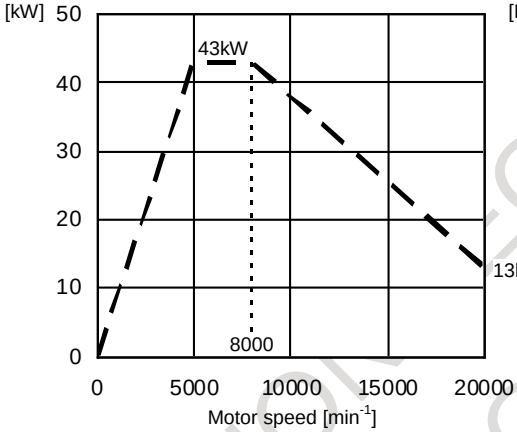
Low-speed winding output (Y connection)



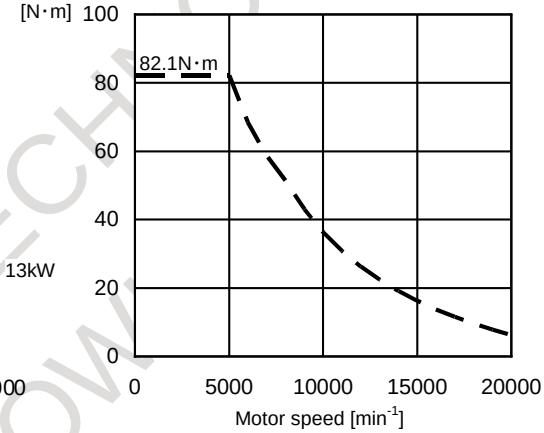
Low-speed winding output (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



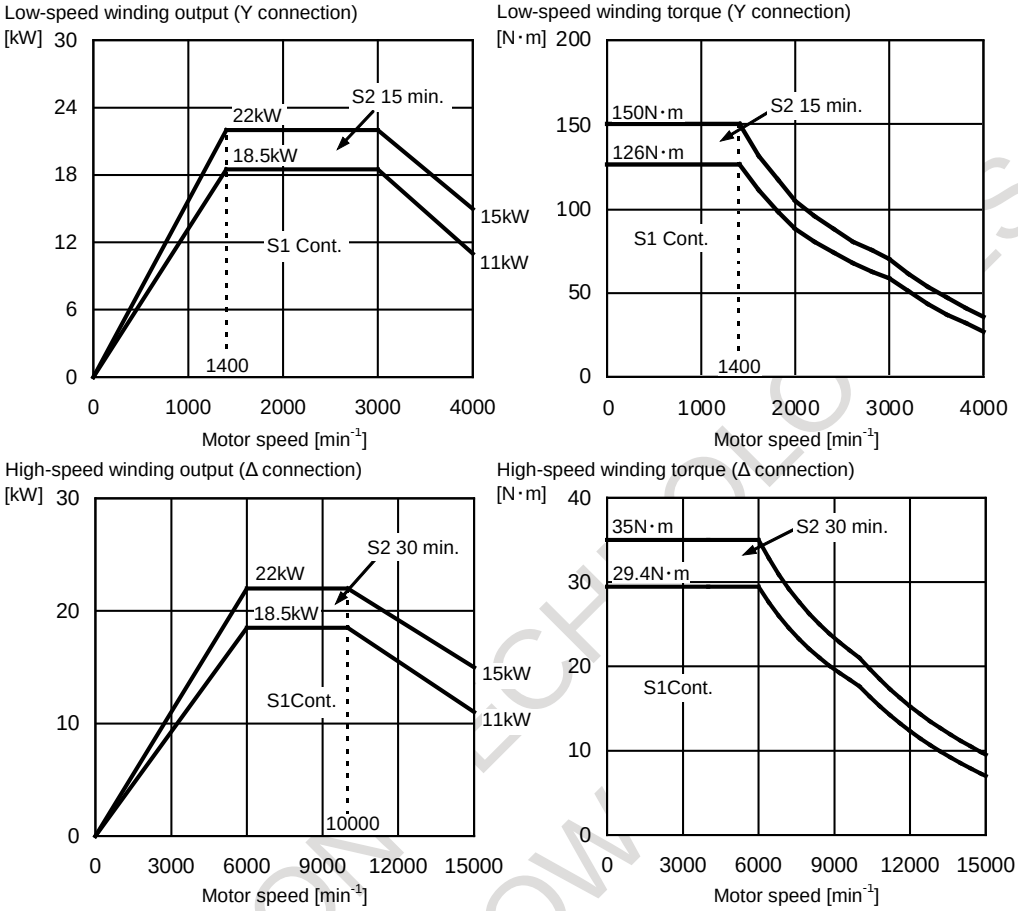
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Model αiIL 15/15000HV-B

Spec. number for motor: A06B-2595-B135

Spec. number for output specification nameplate: A06B-1230-K595#S01
Applicable amplifier: αiSP 45HV-B
Cooler capacity 3.5kW(3000kcal/h)

Rated output



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S01	#S01	
Rated output	S1 continuous rated	P_C	18.5	18.5	kW
	S2 30 min. rated		-	22	kW
	S2 15 min. rated		22	-	kW
Rated current	S1 continuous rated	I_C	66	53	A
	S2 30 min. rated		-	63	A
	S2 15 min. rated		77	-	A
Speed	Base speed	N_b	1400	6000	min^{-1}
	Max. speed	N_{max}	4000	15000	min^{-1}
Switching speed			4000		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			48.0		kW
Continuous rated torque in the constant torque range		T_b	126	29.4	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.055		$kg·m^2$
Weight		W	140		kg
Winding resistance (U-X, V-Y, and W-Z)			76.0		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			128		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Liquid-cooling method (IC9U7A7)		

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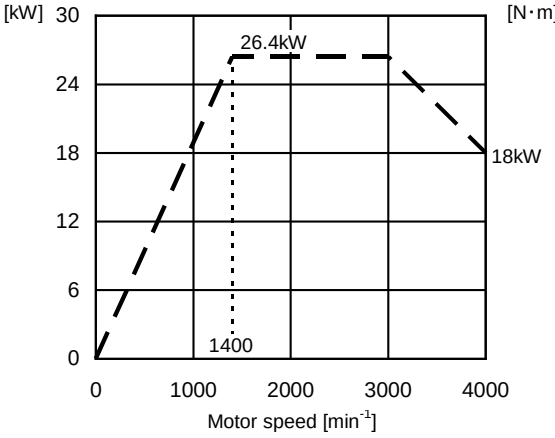
Model αiI$_L$ 15/15000HV-B

Spec. number for motor: A06B-2595-B135

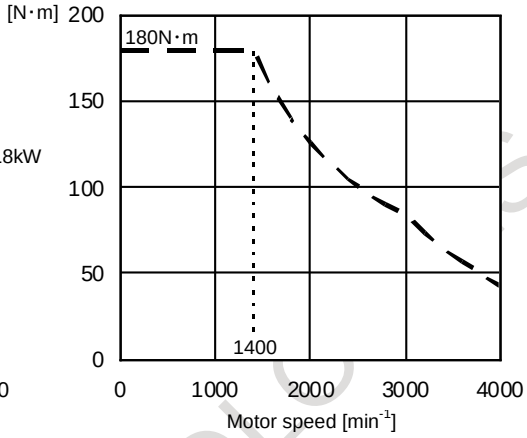
Spec. number for output specification nameplate: A06B-1230-K595#S01
Applicable amplifier: αiSP 45HV-B
Cooler capacity 3.5kW(3000kcal/h)

Max.acc. output

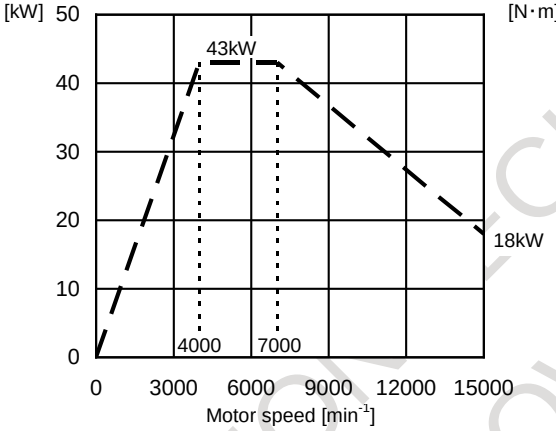
Low-speed winding output (Y connection)



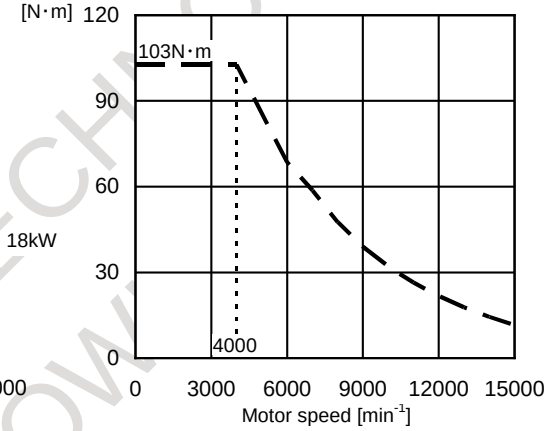
Low-speed winding output (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



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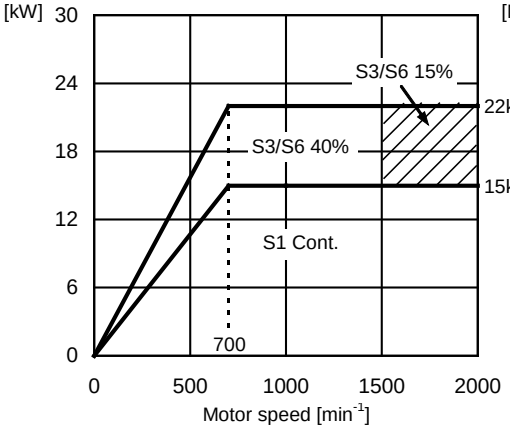
Model αiIL 26/15000HV-B

Spec. number for motor: A06B-2594-B135

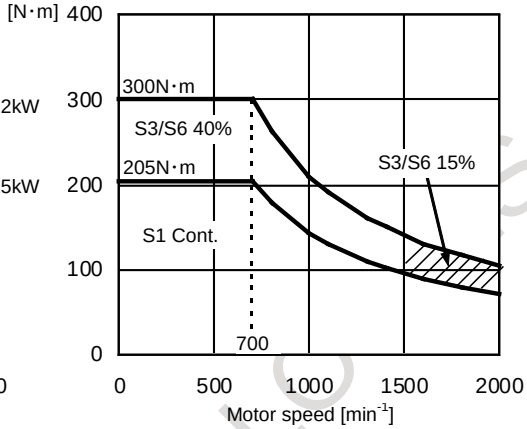
Spec. number for output specification nameplate: A06B-1230-K594#S01
Applicable amplifier: αiSP 45HV-B
Cooler capacity 4.1kW(3500kcal/h)

Rated output

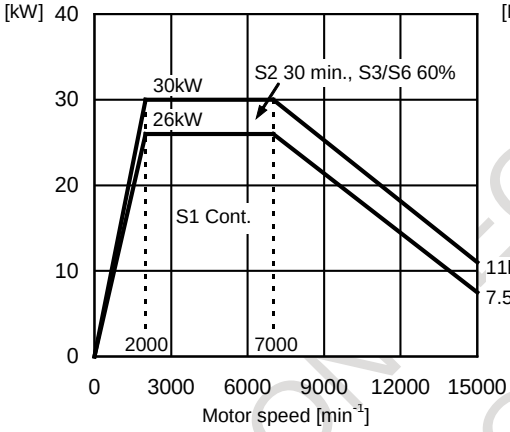
Low-speed winding output (Y connection)



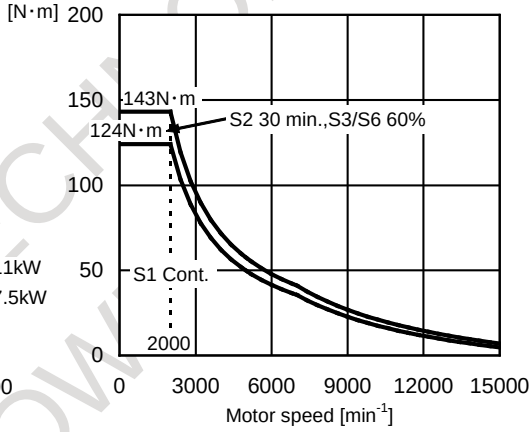
Low-speed winding torque (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)



Item		Symbol	Value		Unit
Connection			Low-speed winding (Y connection)	High-speed winding (Δ connection)	
Model			#S01	#S01	
Rated output	S1 continuous rated	P_C	15	26	kW
	S2 30 min., S3/S6 60% rated		-	30	kW
	S3/S6 40% rated		22	-	kW
	S3/S6 15% rated		22	-	
Rated current	S1 continuous rated	I_C	47	65	A
	S2 30 min., S3/S6 60% rated		-	75	A
	S3/S6 40% rated		66	-	A
	S3/S6 15% rated		58	-	
Speed	Base speed	N_b	700	2000	min^{-1}
	Max. speed	N_{max}	2000	15000	min^{-1}
Switching speed			1500		min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output		kW
Maximum output at acceleration for PS selection			50.0		kW
Continuous rated torque in the constant torque range		T_b	205	124	N·m
Number of poles			4		
Moment of inertia of the rotor		J_m	0.167		$kg·m^2$
Weight		W	170		kg
Winding resistance (U-X, V-Y, and W-Z)			187		mΩ
Built-in detector			αiMZ sensor contained		
Number of teeth for speed detection			128		λ/rev.
Output shaft seal			Simple Labyrinth		
Degree of protection			IP54 (The shaft-through portion is excluded)		
Vibration			V3		
Noise			75 or less		dB(A)
Cooling system			Liquid-cooling method (IC9U7A7)		

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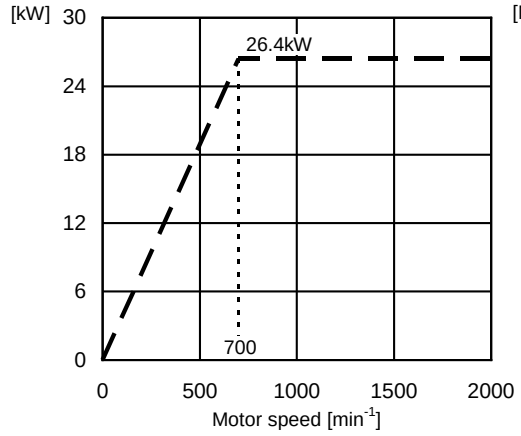
Model αiI$_L$ 26/15000HV-B

Spec. number for motor: A06B-2594-B135

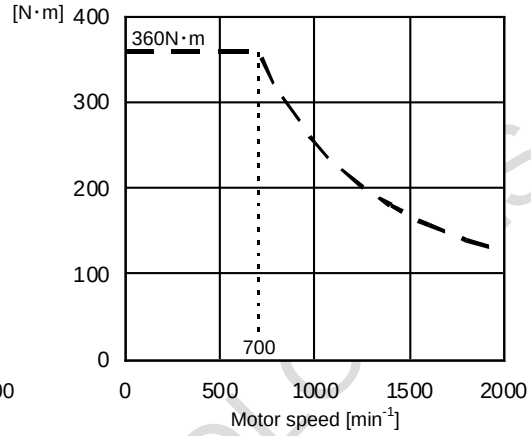
Spec. number for output specification nameplate: A06B-1230-K594#S01
Applicable amplifier: αiSP 45HV-B
Cooler capacity 4.1kW(3500kcal/h)

Max.acc. output

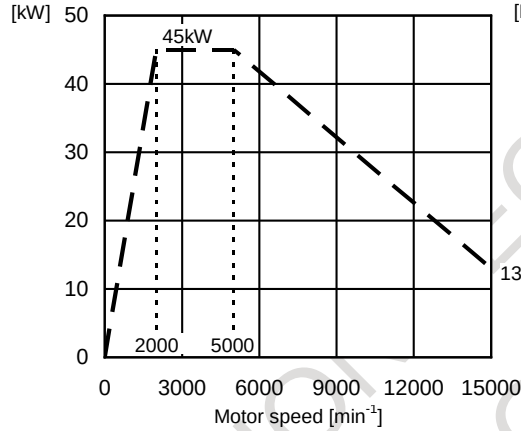
Low-speed winding output (Y connection)



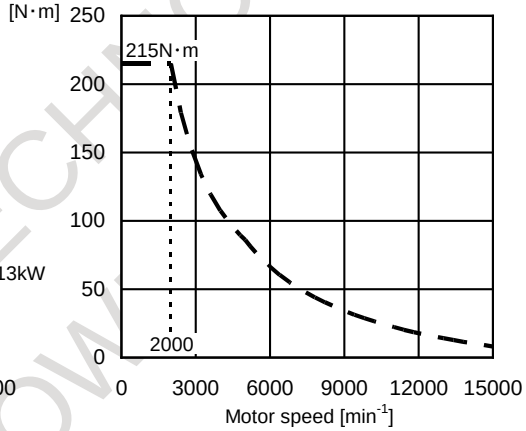
Low-speed winding output (Y connection)



High-speed winding output (Δ connection)



High-speed winding torque (Δ connection)

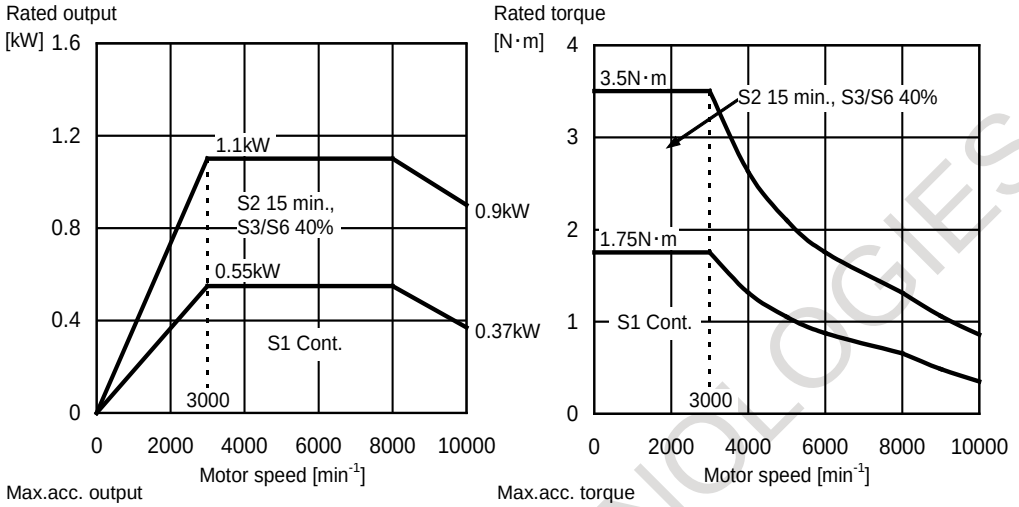


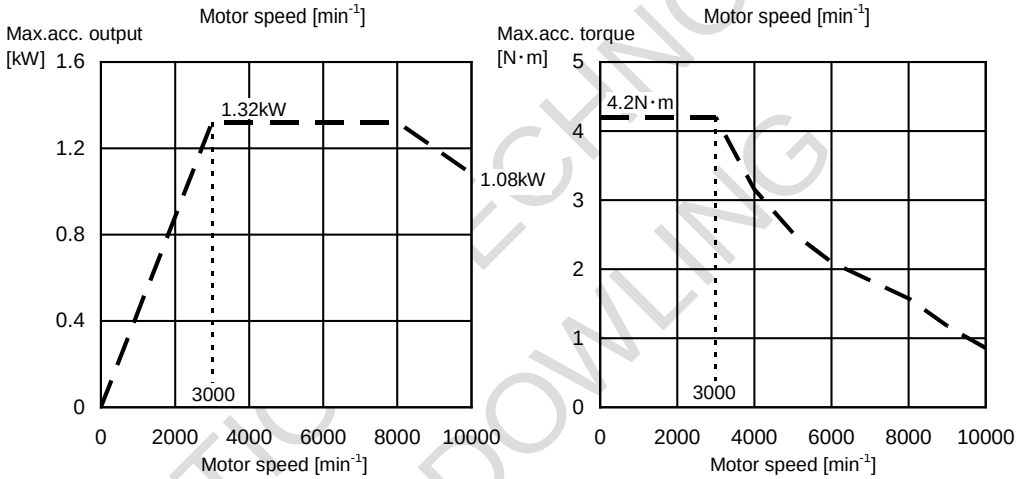
JR AUTOMATION TECHNOLOGIES INC*
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3.2.13 αiI-B (IP65) series

Model αiI 0.5/10000-B (IP65) Spec. number for motor: A06B-2481-B105

Spec. number for output specification nameplate: A06B-1230-K481#S00
Applicable amplifier: αiSP 2.2-B, βiSVSP*-7.5-B (200V), αiSP 5.5HV-B, βiSVSP*-11HV-B (400V)



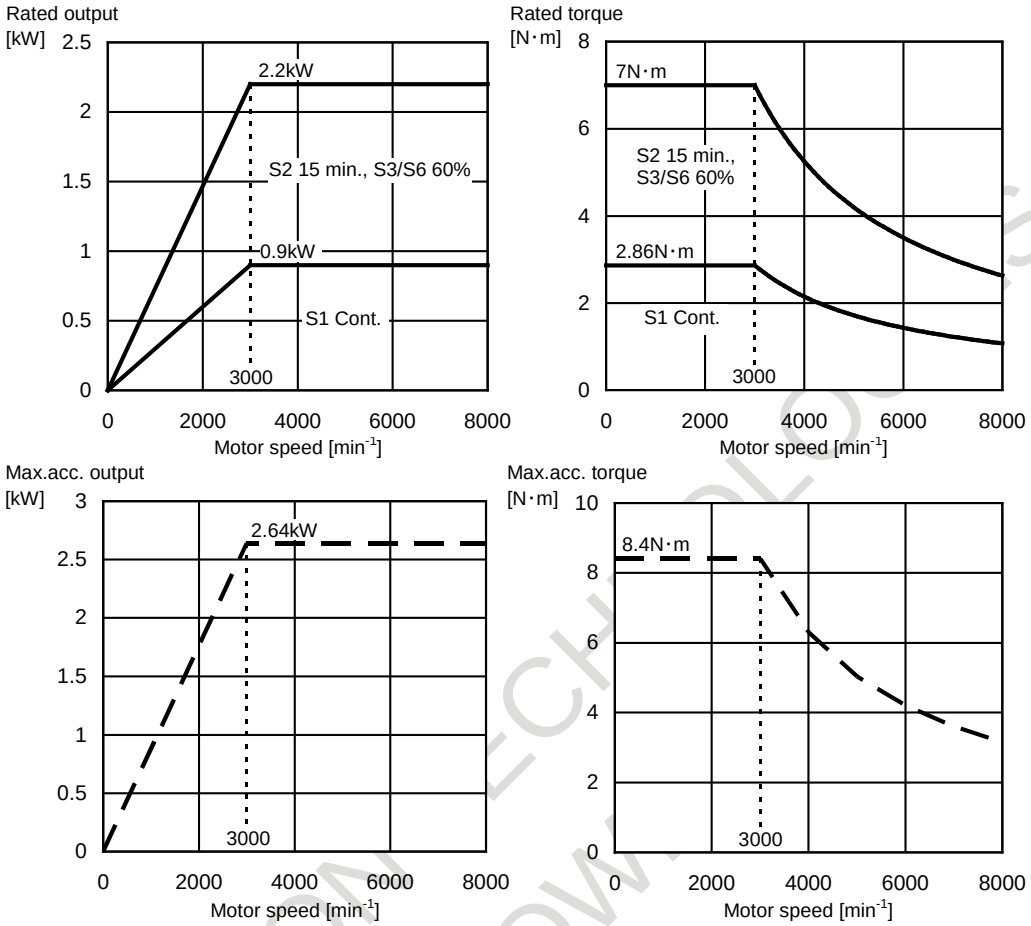


Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	0.55	kW
	S2 15 min., S3/S6 40% rated		1.1	kW
Rated current	S1 continuous rated	I_C	7	A
	S2 15 min., S3/S6 40% rated		11	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	10000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			1.32	kW
Continuous rated torque in the constant torque range		T_b	1.75	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.00048	$kg·m^2$
Weight		W	7	kg
Winding resistance (U-V, V-W, and W-U)		R	650	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			64	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP65 (The shaft-through portion is excluded)	
Vibration			V5	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and non-cooled (IC0A0)	

JR AUTOMATIC TECHNOLOGIES INC*
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Model αiI 1/8000-B (IP65) Spec. number for motor: A06B-2482-B105

Spec. number for output specification nameplate: A06B-1230-K482#S00
Applicable amplifier: αiSP 2.2-B, βiSVSP*-7.5-B (200V), αiSP 5.5HV-B, βiSVSP*-11HV-B (400V)

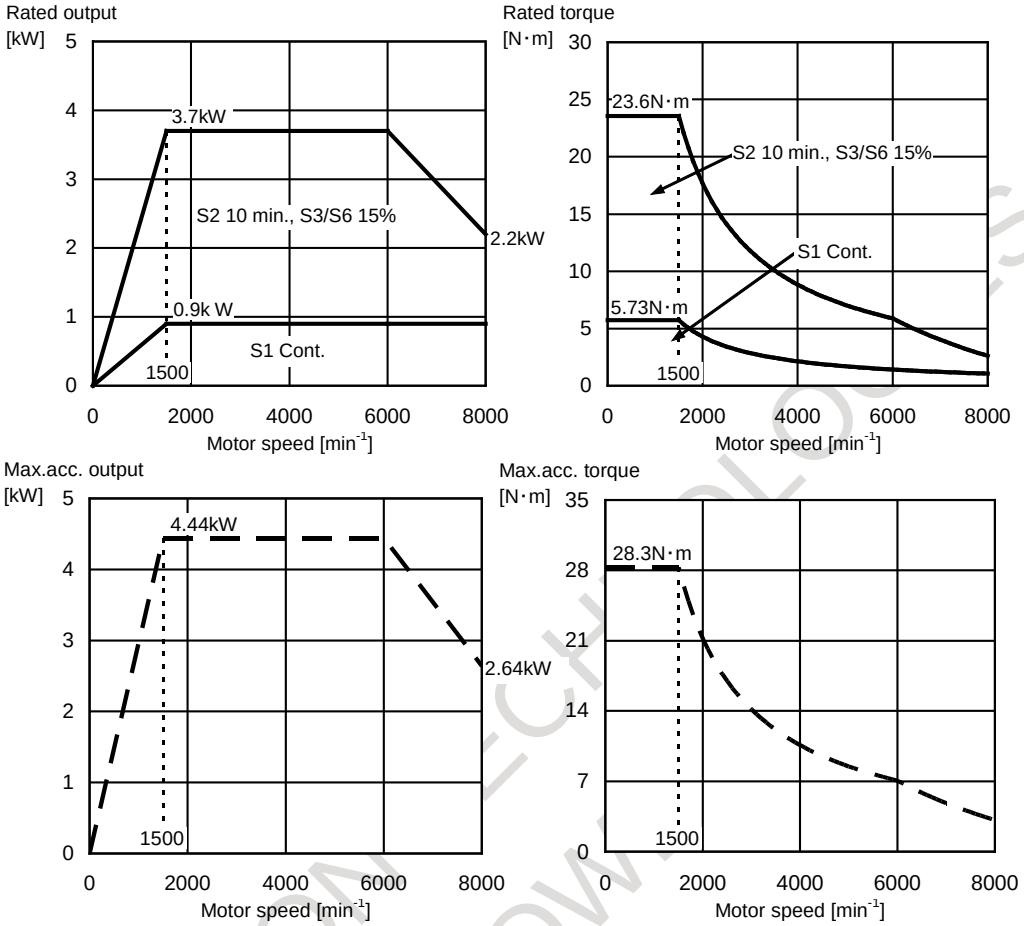


Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	0.9	kW
	S2 15 min., S3/S6 60% rated		2.2	kW
Rated current	S1 continuous rated	I_C	8	A
	S2 15 min., S3/S6 60% rated		13	A
Speed	Base speed	N_b	3000	min^{-1}
	Max. speed	N_{max}	8000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			2.64	kW
Continuous rated torque in the constant torque range		T_b	2.86	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.003	$kg·m^2$
Weight		W	18	kg
Winding resistance (U-V, V-W, and W-U)		R	605	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP65 (The shaft-through portion is excluded)	
Vibration			V5	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and non-cooled (IC0A0)	

JR AUTOMATION TECHNOLOGIES INC*
JDOWNLOADS

Model αiI 1.5/8000-B (IP65) Spec. number for motor: A06B-2483-B105

Spec. number for output specification nameplate: A06B-1230-K483#S00
Applicable amplifier: αiSP 5.5-B, βiSVSP*-7.5-B (200V), αiSP 11HV-B, βiSVSP*-11HV-B (400V)



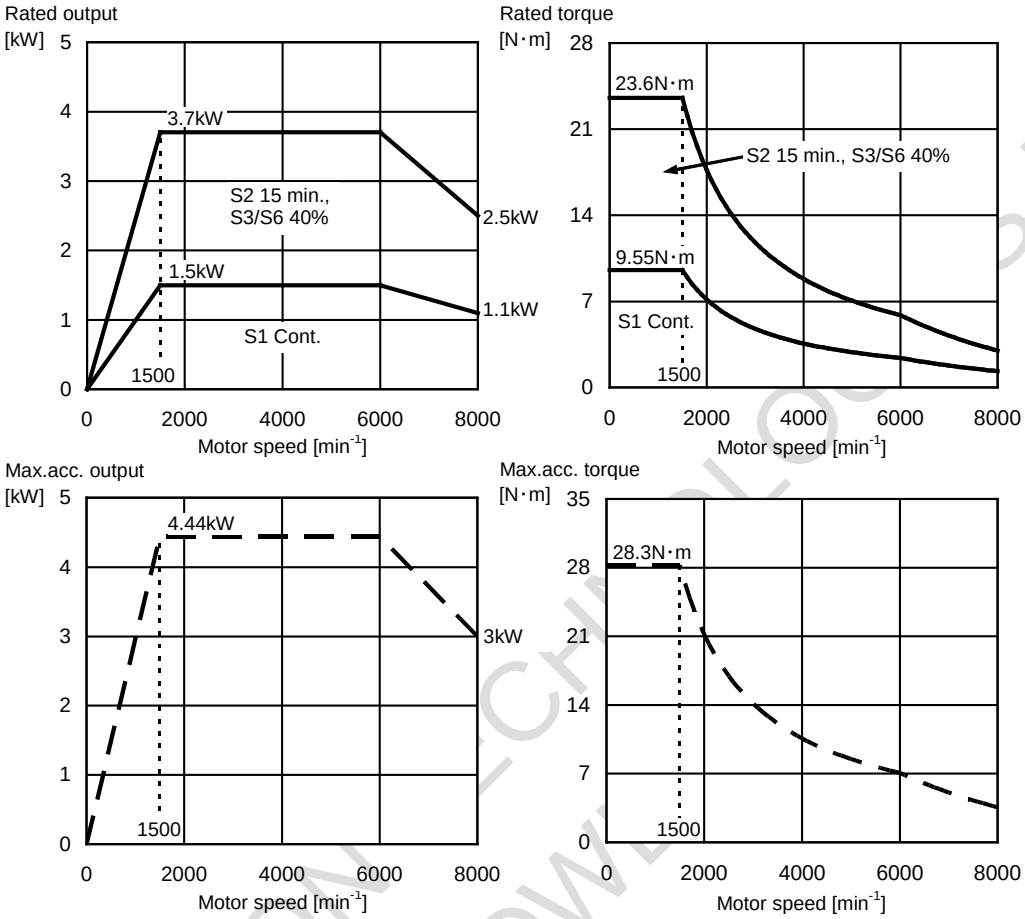
Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	0.9	kW
	S2 10 min., S3/S6 15% rated		3.7	kW
Rated current	S1 continuous rated	I_C	12	A
	S2 10 min., S3/S6 15% rated		27	A
Speed	Base speed	N_b	1500	min^{-1}
	Max. speed	N_{max}	8000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			4.44	kW
Continuous rated torque in the constant torque range		T_b	5.73	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0043	$kg·m^2$
Weight		W	24	kg
Winding resistance (U-V, V-W, and W-U)		R	525	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP65 (The shaft-through portion is excluded)	
Vibration			V5	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and non-cooled (IC0A0)	

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 2/8000-B (IP65)

Spec. number for motor: A06B-2484-B9□5

Spec. number for output specification nameplate: A06B-1230-K484#S01
Applicable amplifier: αiSP 5.5 -B, βiSVSP*-7.5-B (200V)

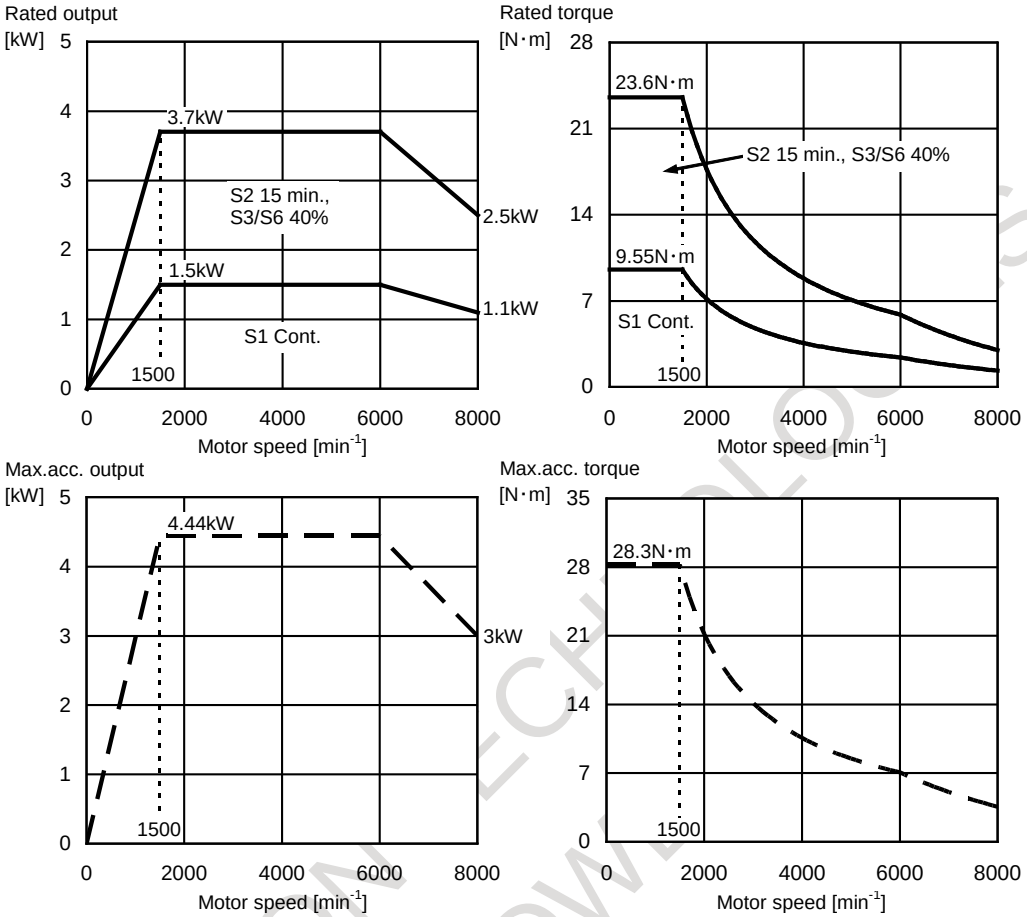


Item		Symbol	Value	Unit
Model			#S01	
Rated output	S1 continuous rated	P_C	1.5	kW
	S2 15 min., S3/S6 40% rated		3.7	kW
Rated current	S1 continuous rated	I_C	16	A
	S2 15 min., S3/S6 40% rated		27	A
Speed	Base speed	N_b	1500	min^{-1}
	Max. speed	N_{max}	8000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			4.44	kW
Continuous rated torque in the constant torque range		T_b	9.55	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0078	$kg·m^2$
Weight		W	27	kg
Winding resistance (U-V, V-W, and W-U)		R	323	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP65 (The shaft-through portion is excluded)	
Vibration			V5	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and non-cooled (IC0A0)	

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 2/8000-B (IP65) Spec. number for motor: A06B-2484-B1□5

Spec. number for output specification nameplate: A06B-1230-K484#S00
Applicable amplifier: αiSP 11HV-B, βiSVSP*-11HV-B (400V)

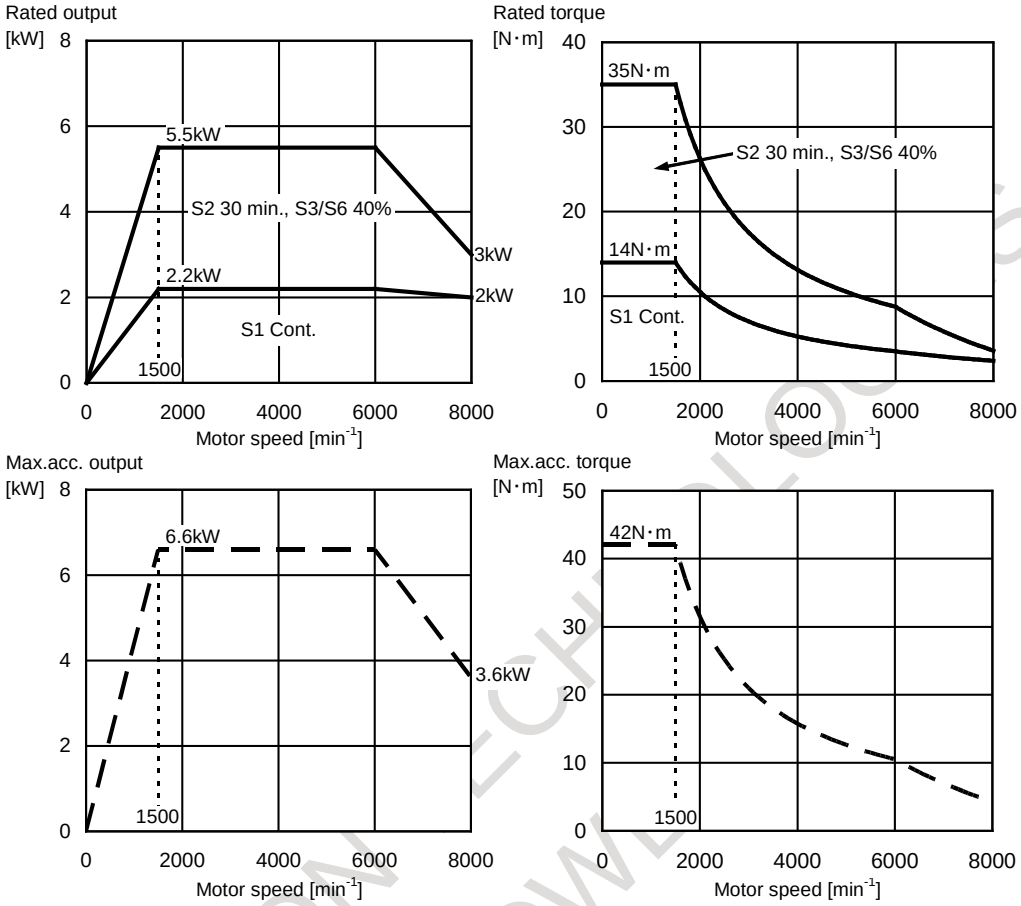


Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	1.5	kW
	S2 15 min., S3/S6 40% rated		3.7	kW
Rated current	S1 continuous rated	I_C	16	A
	S2 15 min., S3/S6 40% rated		27	A
Speed	Base speed	N_b	1500	min^{-1}
	Max. speed	N_{max}	8000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			4.44	kW
Continuous rated torque in the constant torque range		T_b	9.55	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0078	$kg·m^2$
Weight		W	27	kg
Winding resistance (U-V, V-W, and W-U)		R	323	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP65 (The shaft-through portion is excluded)	
Vibration			V5	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and non-cooled (IC0A0)	

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Model αiI 3/8000-B (IP65) Spec. number for motor: A06B-2485-B□□□

Spec. number for output specification nameplate: A06B-1230-K485#S00
Applicable amplifier: αiSP 5.5-B, βiSVSP*-7.5-B (200V), αiSP 11HV-B, βiSVSP*-11HV-B (400V)

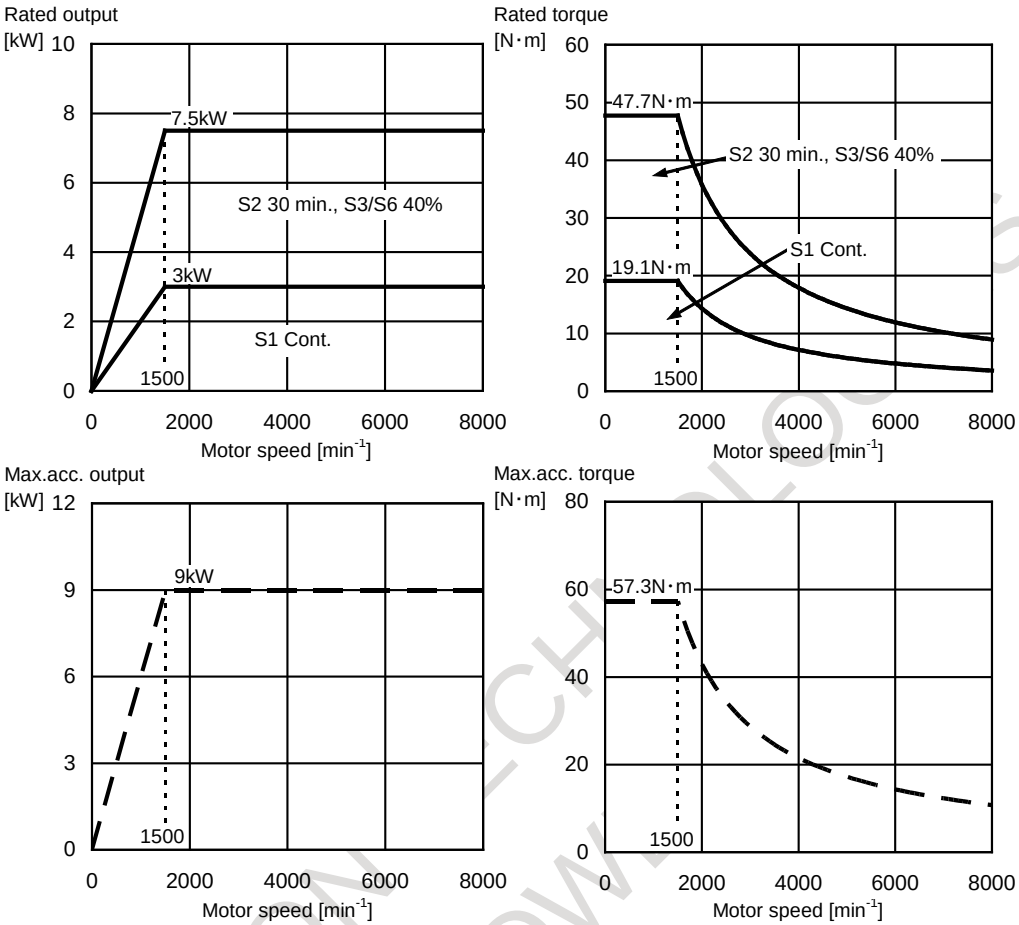


Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	2.2	kW
	S2 30 min., S3/S6 40% rated		5.5	kW
Rated current	S1 continuous rated	I_C	17	A
	S2 30 min., S3/S6 40% rated		28	A
Speed	Base speed	N_b	1500	min^{-1}
	Max. speed	N_{max}	8000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			6.6	kW
Continuous rated torque in the constant torque range		T_b	14.0	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0148	$kg·m^2$
Weight		W	46	kg
Winding resistance (U-V, V-W, and W-U)		R	289	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			128	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP65 (The shaft-through portion is excluded)	
Vibration			V5	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and non-cooled (IC0A0)	

JR AUTOMATION TECHNOLOGIES INC*

Model αiI 6/8000-B (IP65) Spec. number for motor: A06B-2486-B105

Spec. numbers for output specification nameplates: A06B-1230-K486#S00
Applicable amplifier: αiSP 11-B, βiSVSP*-11-B (200V), αiSP 30HV-B (400V)



Item		Symbol	Value	Unit
Model			#S00	
Rated output	S1 continuous rated	P_C	3.0	kW
	S2 30 min., S3/S6 40% rated		7.5	kW
Rated current	S1 continuous rated	I_C	30	A
	S2 30 min., S3/S6 40% rated		49	A
Speed	Base speed	N_b	1500	min^{-1}
	Max. speed	N_{max}	8000	min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output	kW
Maximum output at acceleration for PS selection			9.0	kW
Continuous rated torque in the constant torque range		T_b	19.1	N·m
Number of poles			4	
Moment of inertia of the rotor		J_m	0.0179	$kg·m^2$
Weight		W	51	kg
Winding resistance (U-V, V-W, and W-U)		R	118	mΩ
Built-in detector			αiMZ sensor contained	
Number of teeth for speed detection			256	λ/rev.
Output shaft seal			Oil seal	
Degree of protection			IP65 (The shaft-through portion is excluded)	
Vibration			V5	
Noise			75 or less	dB(A)
Cooling system			Totally enclosed and non-cooled (IC0A0)	

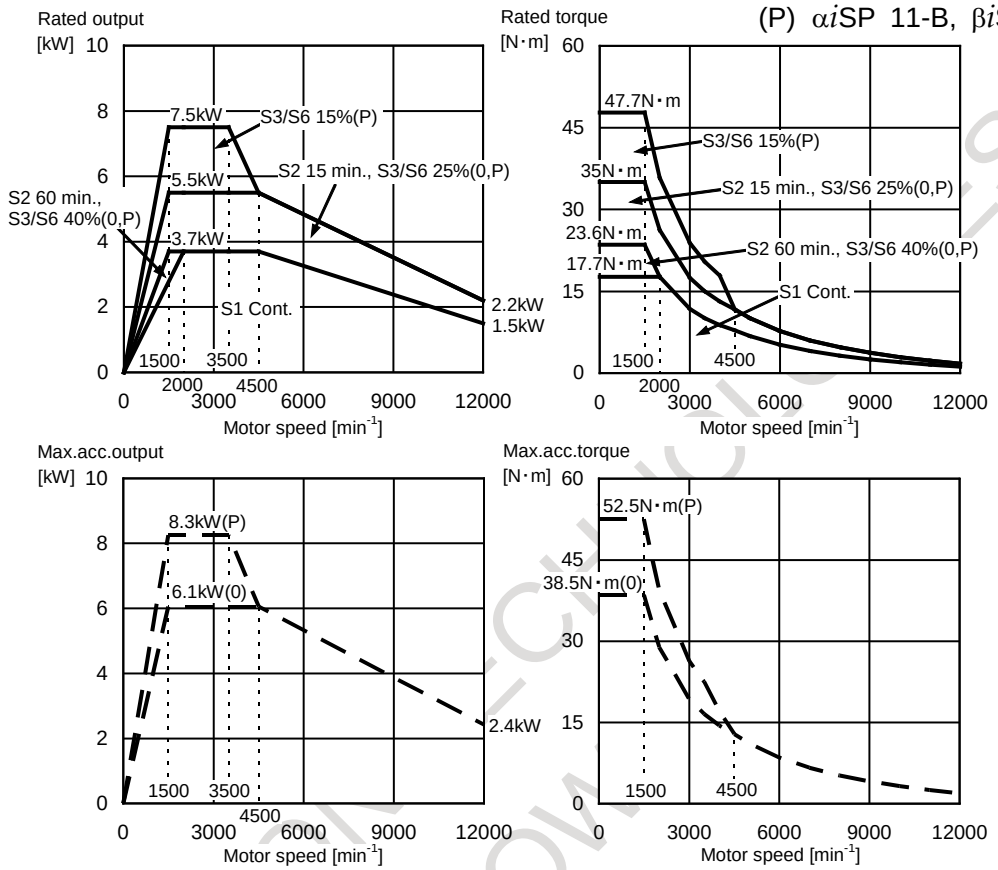
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3.2.14 βiI-B series 200V-type

Model βiI 3/12000-B

Spec. number for motor: A06B-2444-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K444#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 5.5-B, βiSVSP*-7.5-B
(P) αiSP 11-B, βiSVSP*-7.5-B



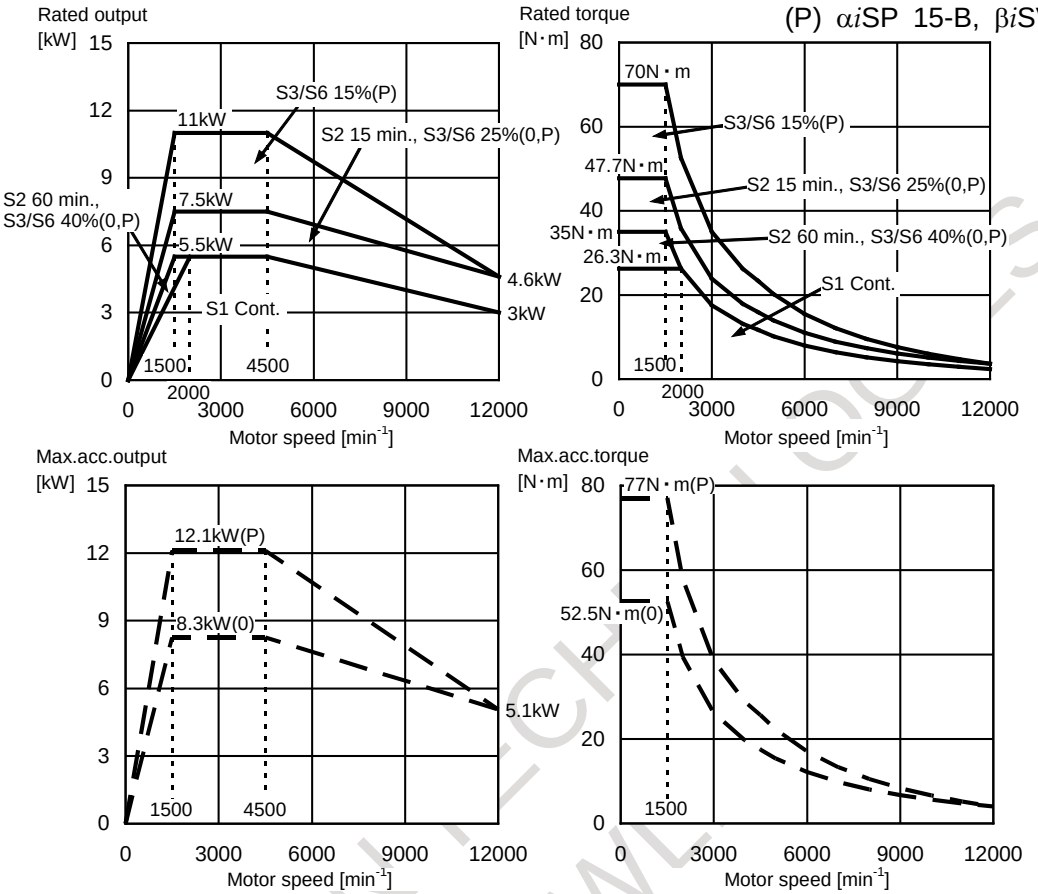
Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	3.7	3.7	kW
	S2 15 min., S3/S6 25% rated			5.5	5.5	kW
	S3/S6 15% rated			-	7.5	kW
Rated current	S1 continuous rated		I_C	18	18	A
	S2 60 min., S3/S6 40% rated			22	22	A
	S2 15 min., S3/S6 25% rated			29	29	A
	S3/S6 15% rated			-	41	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	12000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				6.1	8.3	kW
Continuous rated torque in the constant torque range			T_b	17.7		N・m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.0078		$kg・m^2$
Weight			W	27		kg
Winding resistance (U-V, V-W, and W-U)			R	466		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				128		λ/rev.
Output shaft seal				Oil seal		
Degree of protection				IP54		
Vibration				V5		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				38		W

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Model βiI 6/12000-B

Spec. number for motor: A06B-2445-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K445#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 11-B, βiSVSP*-11-B
(P) αiSP 15-B, βiSVSP*-15-B



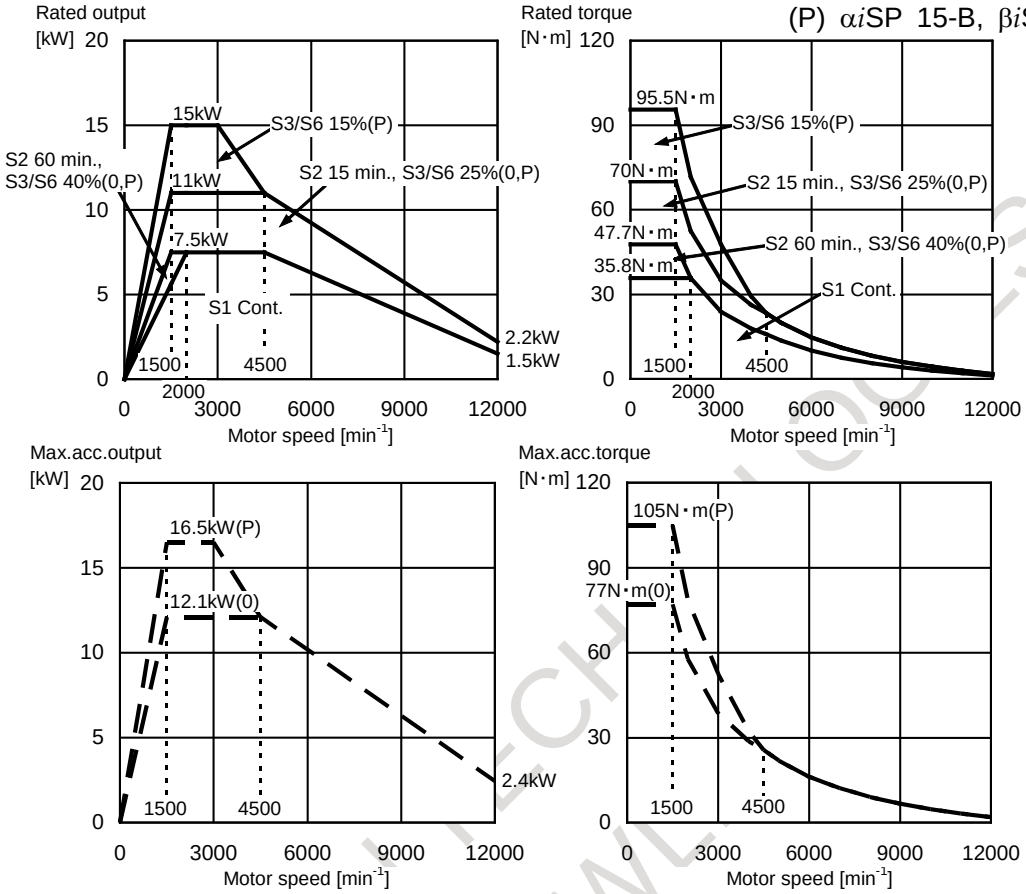
Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	5.5	5.5	kW
	S2 15 min., S3/S6 25% rated			7.5	7.5	kW
	S3/S6 15% rated			-	11	kW
Rated current	S1 continuous rated		I_C	40	40	A
	S2 60 min., S3/S6 40% rated			47	47	A
	S2 15 min., S3/S6 25% rated			56	56	A
	S3/S6 15% rated			-	80	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	12000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				8.3	12.1	kW
Continuous rated torque in the constant torque range			T_b	26.3		N・m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.0148		$kg・m^2$
Weight			W	46		kg
Winding resistance (U-V, V-W, and W-U)			R	102		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				128		λ/rev.
Vibration				V5		
Output shaft seal				Oil seal		
Degree of protection				IP54		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				38		W

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Model βiI 8/12000-B

Spec. number for motor: A06B-2446-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K446#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 11-B, βiSVSP*-11-B
(P) αiSP 15-B, βiSVSP*-15-B



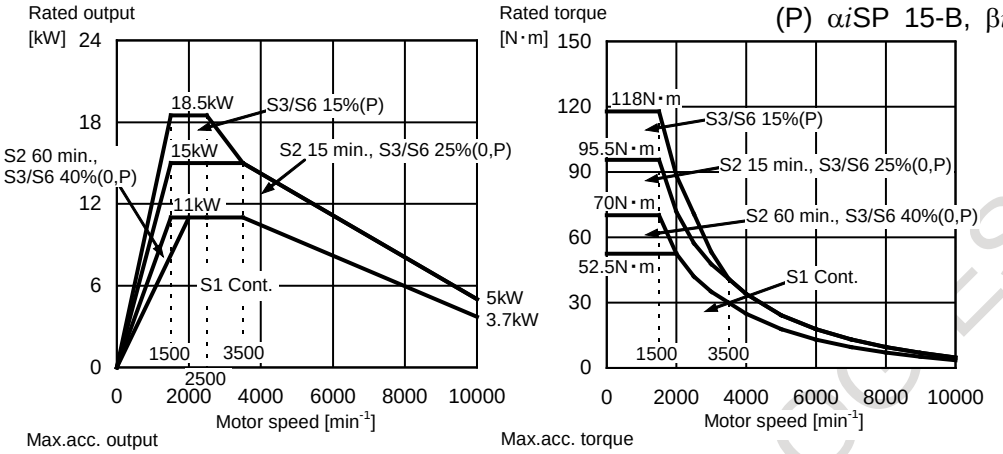
Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	7.5	7.5	kW
	S2 15 min., S3/S6 25% rated			11	11	kW
	S3/S6 15% rated			-	15	kW
Rated current	S1 continuous rated		I_C	36	36	A
	S2 60 min., S3/S6 40% rated			42	42	A
	S2 15 min., S3/S6 25% rated			56	56	A
	S3/S6 15% rated			-	78	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	12000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				12.1	16.5	kW
Continuous rated torque in the constant torque range			T_b	35.8		N·m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.0179		$kg·m^2$
Weight			W	51		kg
Winding resistance (U-V, V-W, and W-U)			R	146		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				256		λ/rev.
Output shaft seal				Oil seal		
Degree of protection				IP54		
Vibration				V5		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				50		W

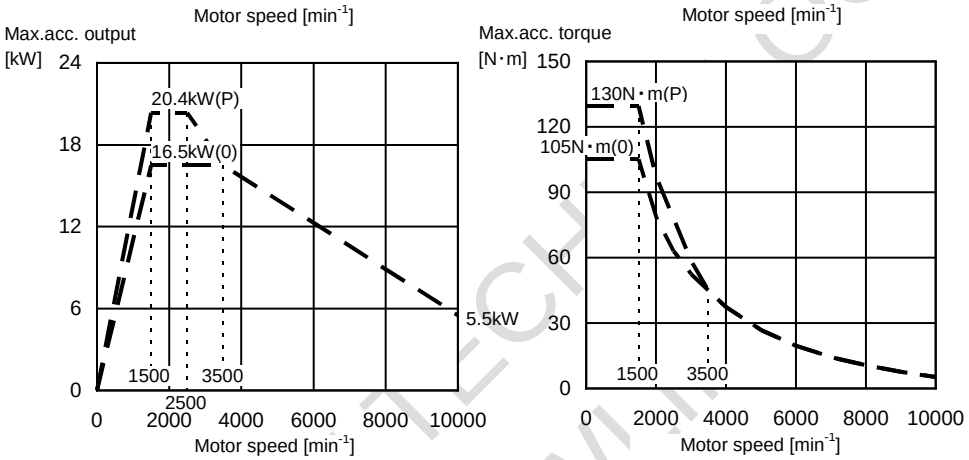
JR AUTOMATION TECHNOLOGIES INC*

Model βiI 12/10000-B

Spec. number for motor: A06B-2447-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K447#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 15-B, βiSVSP*-15-B
(P) αiSP 15-B, βiSVSP*-18-B





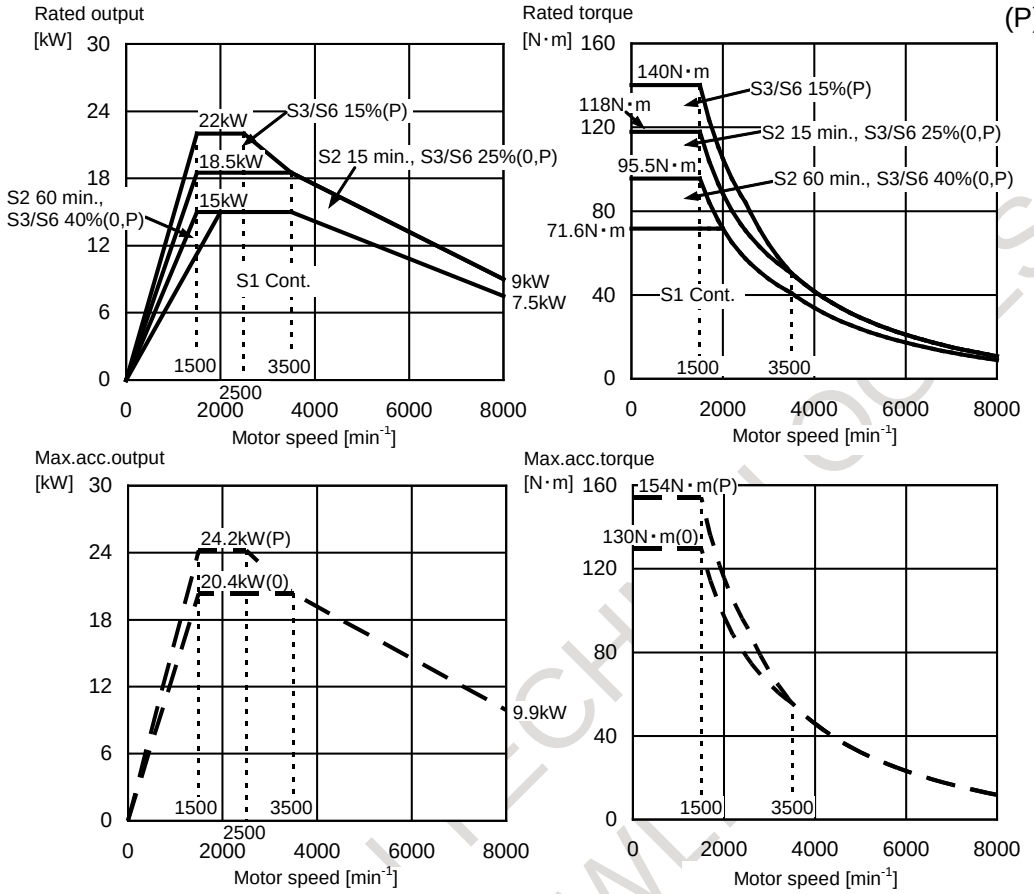
Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	11	11	kW
	S2 15 min., S3/S6 25% rated			15	15	kW
	S3/S6 15% rated			-	18.5	kW
Rated current	S1 continuous rated		I_C	43	43	A
	S2 60 min., S3/S6 40% rated			49	49	A
	S2 15 min., S3/S6 25% rated			63	63	A
	S3/S6 15% rated			-	75	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	10000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				16.5	20.4	kW
Continuous rated torque in the constant torque range			T_b	52.5		N·m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.0275		$kg·m^2$
Weight			W	80		kg
Winding resistance (U-V, V-W, and W-U)			R	142		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				256		λ/rev.
Vibration				V5		
Output shaft seal				Oil seal		
Degree of protection				IP54		
Vibration				V5		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				50		W

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Model βiI 15/8000-B

Spec. number for motor: A06B-2498-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K498#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 22-B, βiSVSP*-18-B
(P) αiSP 22-B



Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	15	15	kW
	S2 15 min., S3/S6 25% rated			18.5	18.5	kW
	S3/S6 15% rated			-	22	kW
Rated current	S1 continuous rated		I_C	69	69	A
	S2 60 min., S3/S6 40% rated			75	75	A
	S2 15 min., S3/S6 25% rated			80	80	A
	S3/S6 15% rated			-	86	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	8000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				20.4	24.2	kW
Number of poles				4		
Continuous rated torque in the constant torque range			T_b	71.6		N・m
Moment of inertia of the rotor			J_m	0.07		$kg・m^2$
Weight			W	95		kg
Winding resistance (U-V, V-W, and W-U)			R	162		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				256		λ/rev.
Output shaft seal				Oil seal		
Degree of protection				IP54		
Vibration				V5		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				100		W

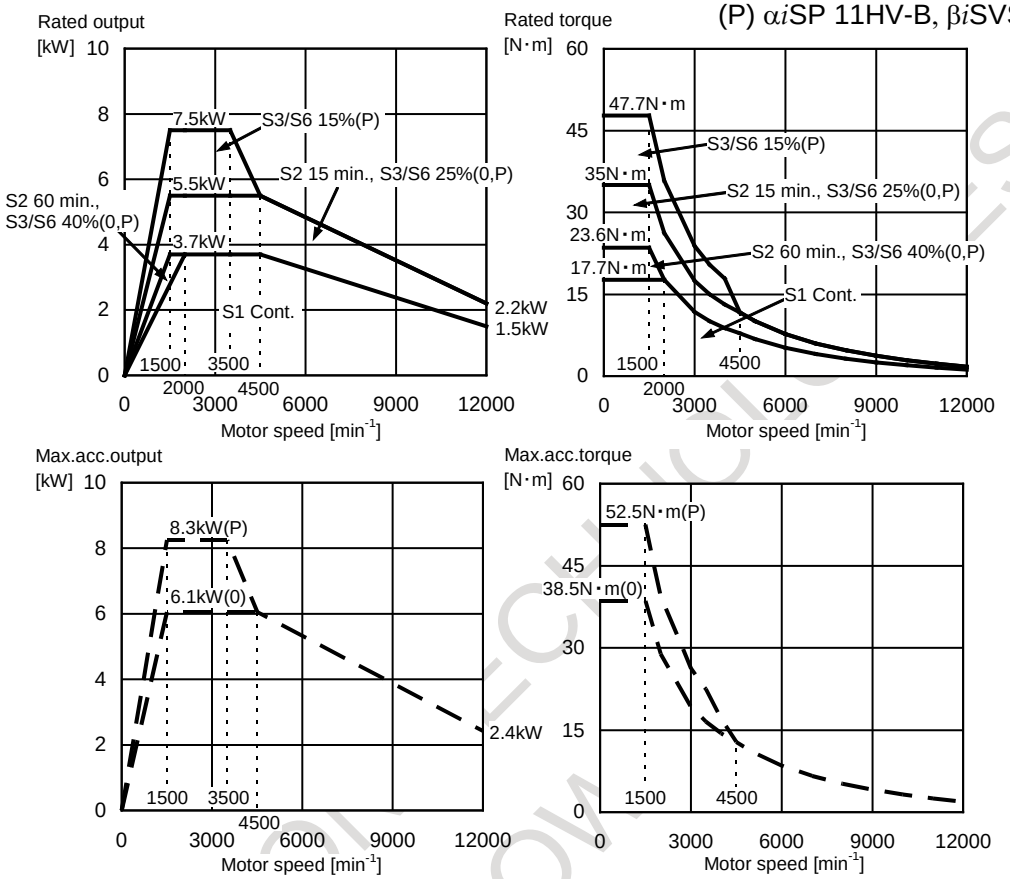
JR AUTOMATION TECHNOLOGIES INC*

3.2.15 βiI -B series 400V-type

Model βiI 3/12000HV-B

Spec. number for motor: A06B-2544-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K544#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 5.5HV-B, βiSVSP*-11HV-B
(P) αiSP 11HV-B, βiSVSP*-11HV-B



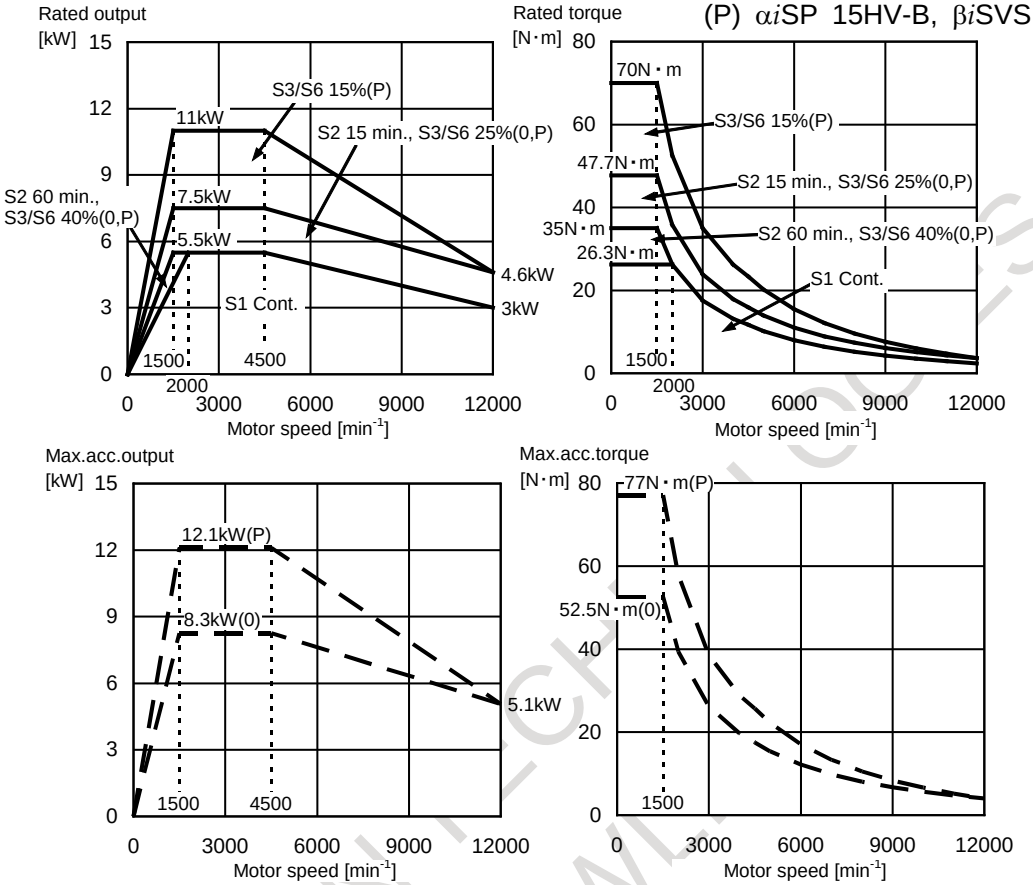
Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	3.7	3.7	kW
	S2 15 min., S3/S6 25% rated			5.5	5.5	kW
	S3/S6 15% rated			-	7.5	kW
Rated current	S1 continuous rated		I_C	9	9	A
	S2 60 min., S3/S6 40% rated			11	11	A
	S2 15 min., S3/S6 25% rated			15	15	A
	S3/S6 15% rated			-	21	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	12000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				6.1	8.3	kW
Continuous rated torque in the constant torque range			T_b	17.7		N・m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.0078		$kg・m^2$
Weight			W	27		kg
Winding resistance (U-V, V-W, and W-U)			R	1864		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				128		λ/rev.
Output shaft seal				Oil seal		
Degree of protection				IP54		
Vibration				V5		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				34		W

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Model βiI 6/12000HV-B

Spec. number for motor: A06B-2545-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K545#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 11HV-B, βiSVSP*-11HV-B
(P) αiSP 15HV-B, βiSVSP*-15HV-B



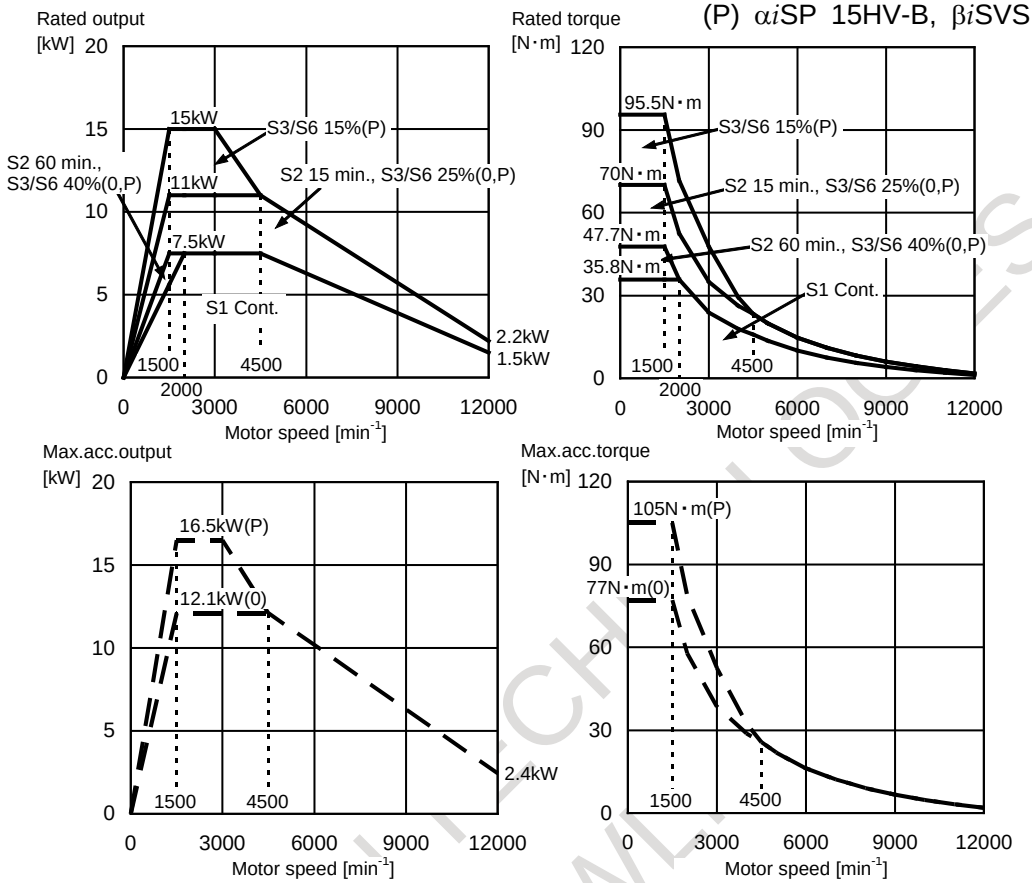
Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	5.5	5.5	kW
	S2 15 min., S3/S6 25% rated			7.5	7.5	kW
	S3/S6 15% rated			-	11	kW
Rated current	S1 continuous rated		I_C	20	20	A
	S2 60 min., S3/S6 40% rated			24	24	A
	S2 15 min., S3/S6 25% rated			28	28	A
	S3/S6 15% rated			-	40	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	12000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				8.3	12.1	kW
Continuous rated torque in the constant torque range			T_b	26.3		N・m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.0148		$kg・m^2$
Weight			W	46		kg
Winding resistance (U-V, V-W, and W-U)			R	421		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				128		λ/rev.
Output shaft seal				Oil seal		
Degree of protection				IP54		
Vibration				V5		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				34		W

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Model βiI 8/12000HV-B

Spec. number for motor: A06B-2546-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K546#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 11HV-B, βiSVSP*-11HV-B
(P) αiSP 15HV-B, βiSVSP*-15HV-B



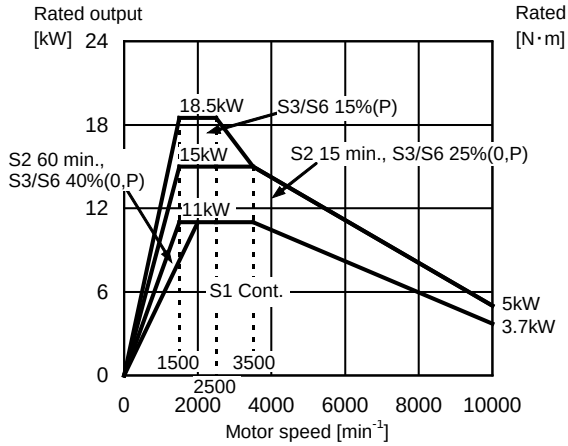
Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	7.5	7.5	kW
	S2 15 min., S3/S6 25% rated			11	11	kW
	S3/S6 15% rated			-	15	kW
Rated current	S1 continuous rated		I_C	24	24	A
	S2 60 min., S3/S6 40% rated			22	22	A
	S2 15 min., S3/S6 25% rated			36	36	A
	S3/S6 15% rated			-	38	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	12000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				12.1	16.5	kW
Continuous rated torque in the constant torque range			T_b	35.8		N・m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.0179		$kg・m^2$
Weight			W	51		kg
Winding resistance (U-V, V-W, and W-U)			R	600		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				256		λ/rev.
Output shaft seal				Oil seal		
Degree of protection				IP54		
Vibration				V5		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				80		W

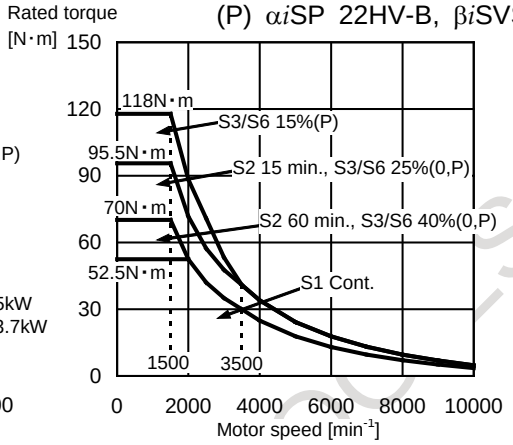
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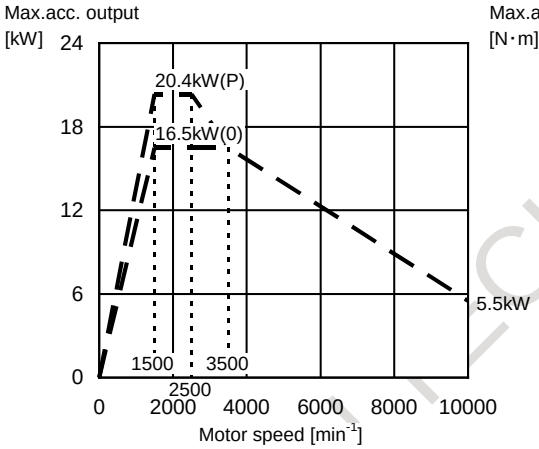
Model βiI 12/10000HV-B

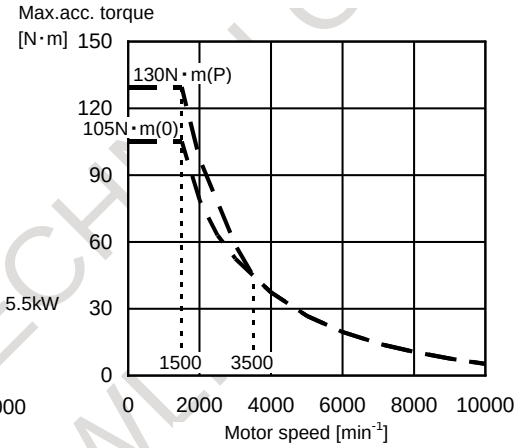
Spec. number for motor: A06B-2547-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K547#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 15HV-B, βiSVSP*-15HV-B
(P) αiSP 22HV-B, βiSVSP*-18HV-B









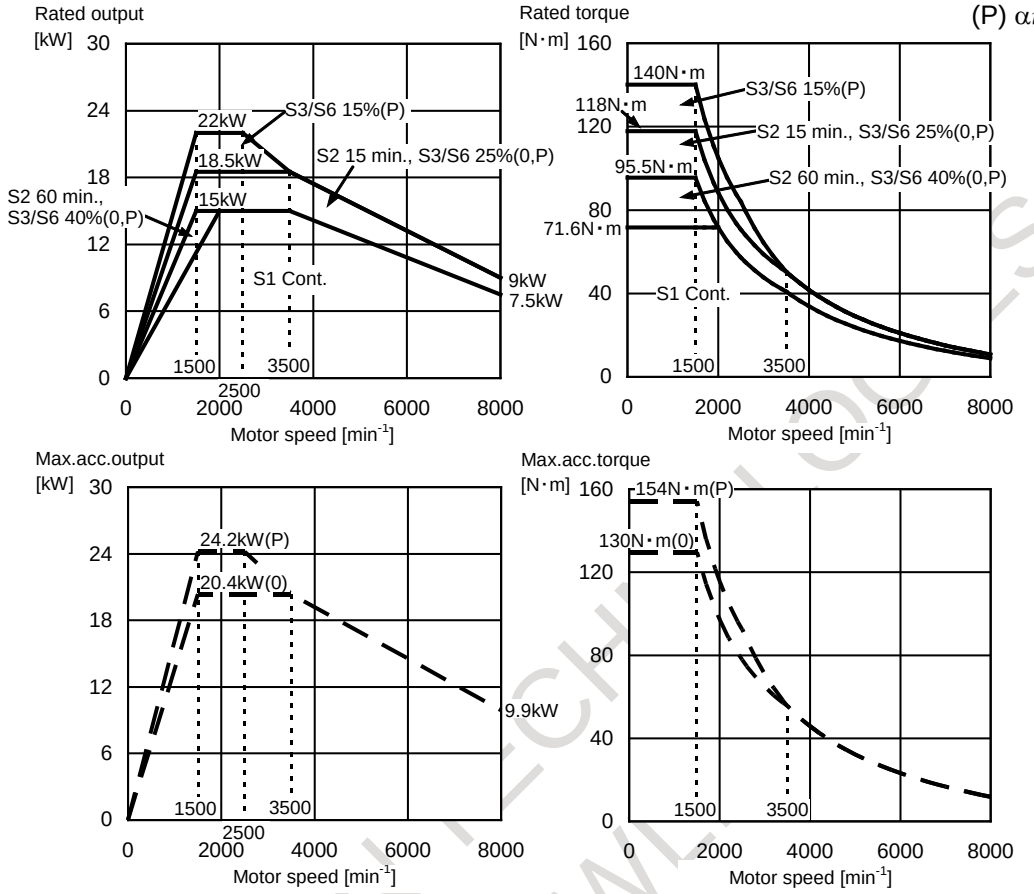
Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	11	11	kW
	S2 15 min., S3/S6 25% rated			15	15	kW
	S3/S6 15% rated			-	18.5	kW
Rated current	S1 continuous rated		I_C	25	25	A
	S2 60 min., S3/S6 40% rated			25	25	A
	S2 15 min., S3/S6 25% rated			34	34	A
	S3/S6 15% rated			-	41	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	10000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				16.5	20.4	kW
Continuous rated torque in the constant torque range			T_b	52.5		N・m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.0275		$kg・m^2$
Weight			W	80		kg
Winding resistance (U-V, V-W, and W-U)			R	549		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				256		λ/rev.
Output shaft seal				Oil seal		
Degree of protection				IP54		
Vibration				V5		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				80		W

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Model βiI 15/8000HV-B

Spec. number for motor: A06B-2598-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K598#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 22HV-B, βiSVSP*-18HV-B
(P) αiSP 22HV-B



Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	15	15	kW
	S2 15 min., S3/S6 25% rated			18.5	18.5	kW
	S3/S6 15% rated			-	22	kW
Rated current	S1 continuous rated		I_C	37	37	A
	S2 60 min., S3/S6 40% rated			38	38	A
	S2 15 min., S3/S6 25% rated			47	47	A
	S3/S6 15% rated			-	49	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	8000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				20.4	24.2	kW
Continuous rated torque in the constant torque range			T_b	71.6		N·m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.07		$kg·m^2$
Weight			w	95		kg
Winding resistance (U-V, V-W, and W-U)			R	162		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				256		λ/rev.
Output shaft seal				Oil seal		
Degree of protection				IP54		
Vibration				V5		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				116		W

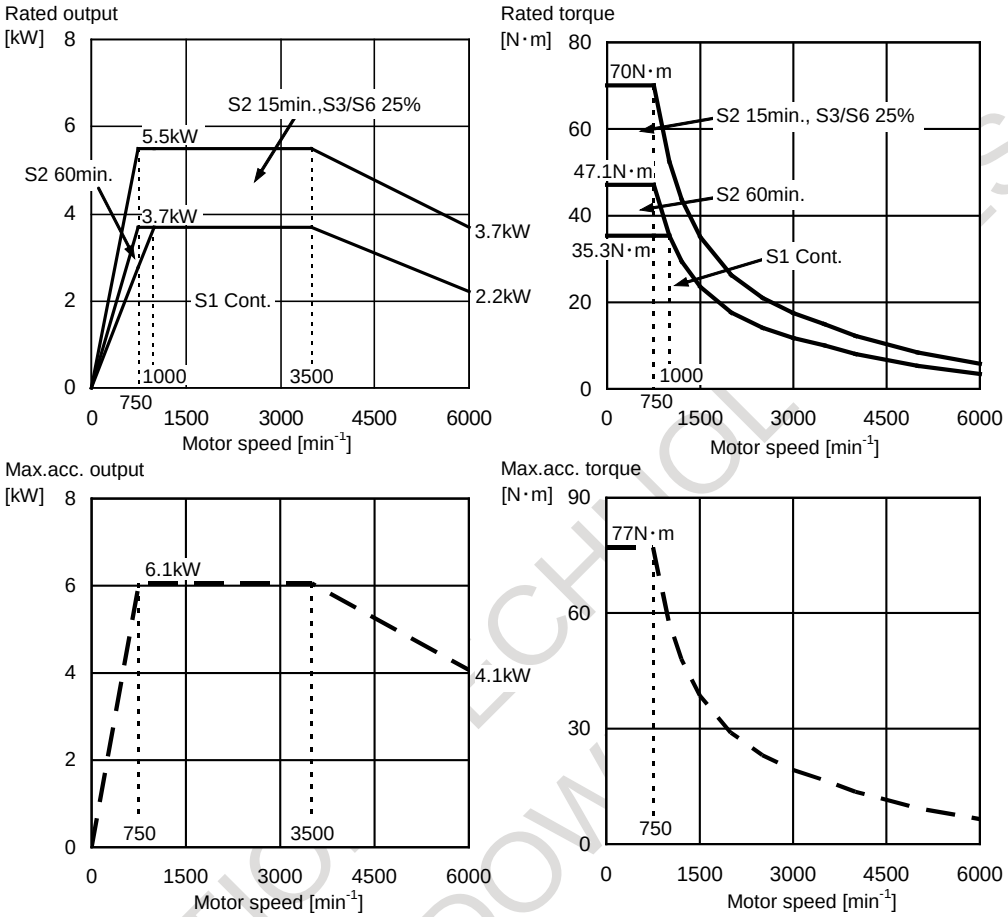
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3.2.16 βiIP-B series 200V-type

Model βiIP 8/6000-B

Spec. number for motor: A06B-2457-B□□□

Spec. number for output specification nameplate: A06B-1230-K457#S00
Applicable amplifier: αiSP 11-B, βiSVSP*-7.5-B



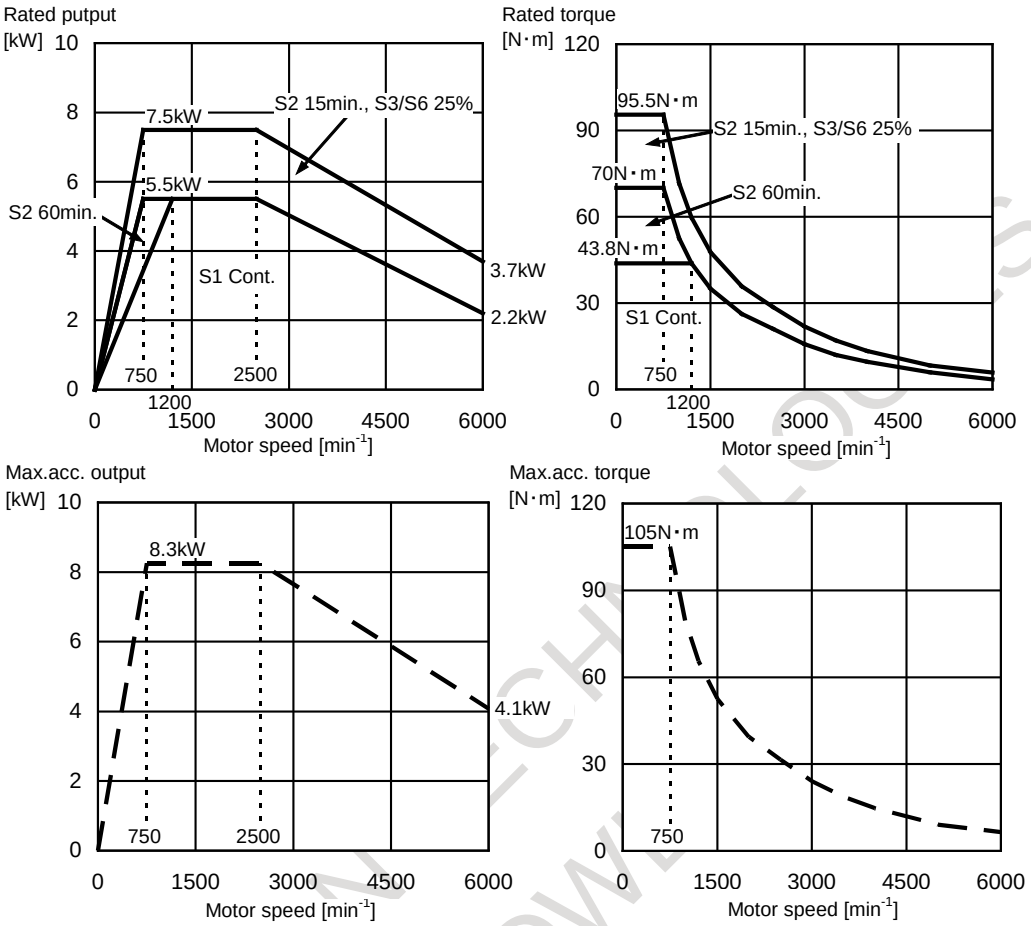
Item			Symbol	Value	Unit
Model				#S00	
Rated output	S1 continuous rated, S2 60 min. rated		P_C	3.7	kW
	S2 15 min., S3/S6 25% rated			5.5	kW
Rated current	S1 continuous rated		I_C	21	A
	S2 60 min. rated			33	A
	S2 15 min., S3/S6 25% rated			37	A
Speed	Base speed	S1 continuous rated		1000	min^{-1}
		S2 60 min. rated, S2 15 min., S3/S6 25% rated	N_b	750	min^{-1}
	Max. speed		N_{max}	6000	min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output	kW
Maximum output at acceleration for PS selection				6.1	kW
Continuous rated torque in the constant torque range			T_b	35.3	N·m
Number of poles				4	
Moment of inertia of the rotor			J_m	0.0179	$kg·m^2$
Weight			W	51	kg
Winding resistance (U-V, V-W, and W-U)			R	428	mΩ
Built-in detector				αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection				256	λ/rev.
Output shaft seal				Oil seal	
Degree of protection				IP54	
Vibration				V5	
Noise				75 or less	dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan				50	W

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Model βiIP 12/6000-B

Spec. number for motor: A06B-2458-B□□□

Spec. number for output specification nameplate: A06B-1230-K458#S00
Applicable amplifier: αiSP 11-B, βiSVSP*-7.5-B



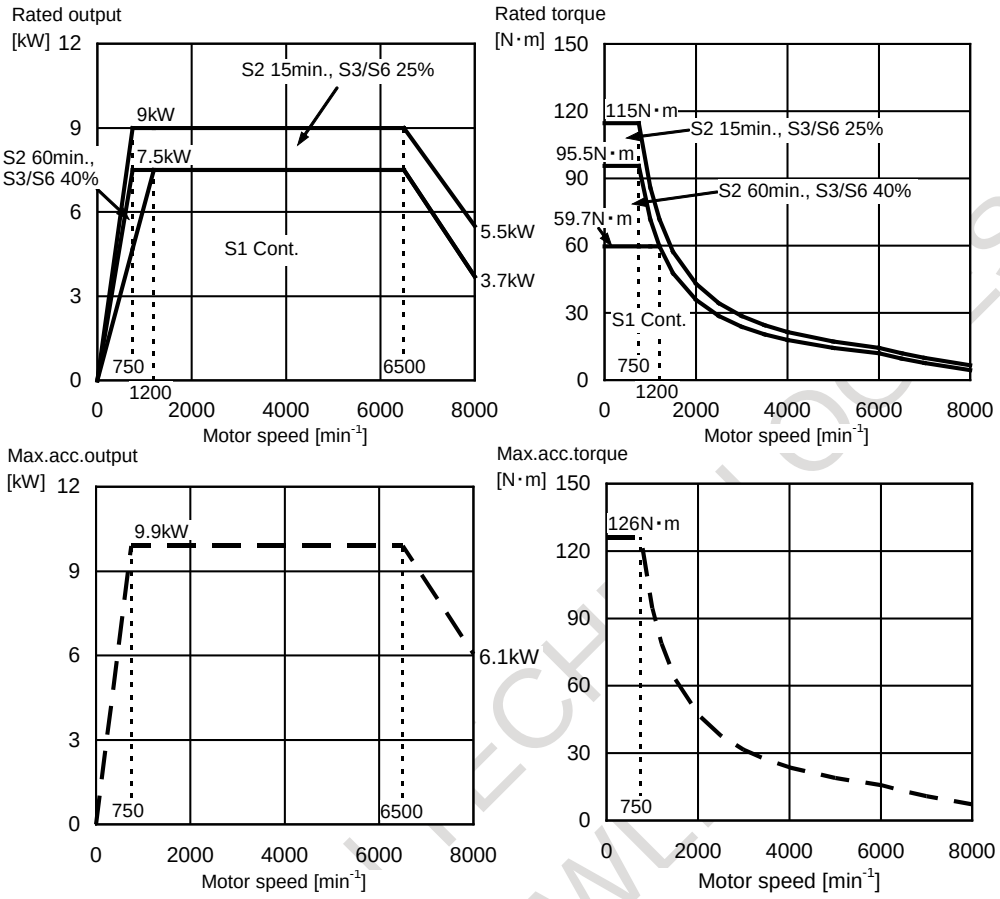
Item			Symbol	Value	Unit
Model				#S00	
Rated output	S1 continuous rated, S2 60 min. rated		P_C	5.5	kW
	S2 15 min., S3/S6 25% rated			7.5	kW
Rated current	S1 continuous rated		I_C	25	A
	S2 60 min. rated			30	A
	S2 15 min., S3/S6 25% rated			38	A
Speed	Base speed	S1 continuous rated		1200	min^{-1}
		S2 60 min. rated, S2 15 min., S3/S6 25% rated	N_b	750	min^{-1}
	Max. speed		N_{max}	6000	min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output	kW
Maximum output at acceleration for PS selection				8.3	kW
Continuous rated torque in the constant torque range			T_b	43.8	N·m
Number of poles				4	
Moment of inertia of the rotor			J_m	0.0275	$kg·m^2$
Weight			W	80	kg
Winding resistance (U-V, V-W, and W-U)			R	397	mΩ
Built-in detector				αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection				256	λ/rev.
Output shaft seal				Oil seal	
Degree of protection				IP54	
Vibration				V5	
Noise				75 or less	dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan				50	W

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Model βiIP 15/8000-B

Spec. number for motor: A06B-2442-B□□□

Spec. number for output specification nameplate: A06B-1230-K442#S00
Applicable amplifier: αiSP 11-B, βiSVSP*-11-B



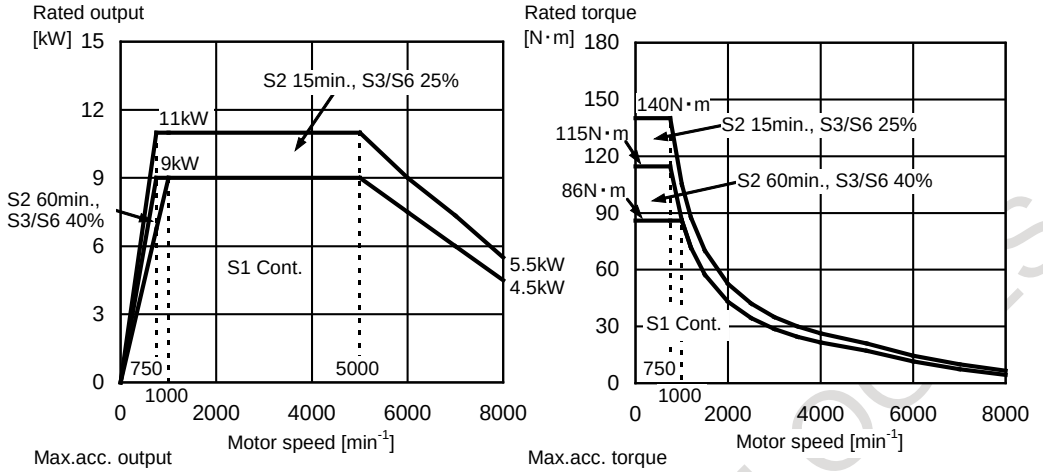
Item			Symbol	Value	Unit
Model				#S00	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	7.5	kW
	S2 15 min., S3/S6 25% rated			9	kW
Rated current	S1 continuous rated		I_C	36	A
	S2 60 min., S3/S6 40% rated			50	A
	S2 15 min., S3/S6 25% rated			59	A
Speed	Base speed	S1 continuous rated		1200	min^{-1}
		S2 60 min., S3/S6 40% rated, S2 15 min., S3/S6 25% rated	N_b	750	min^{-1}
	Max. speed		N_{max}	8000	min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output	kW
Maximum output at acceleration for PS selection				9.9	kW
Continuous rated torque in the constant torque range			T_b	59.7	N·m
Number of poles				4	
Moment of inertia of the rotor			J_m	0.07	$kg·m^2$
Weight			w	95	kg
Winding resistance (U-V, V-W, and W-U)			R	201	mΩ
Built-in detector				αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection				256	λ/rev.
Output shaft seal				Oil seal	
Degree of protection				IP54	
Vibration				V5	
Noise				75 or less	dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan				100	W

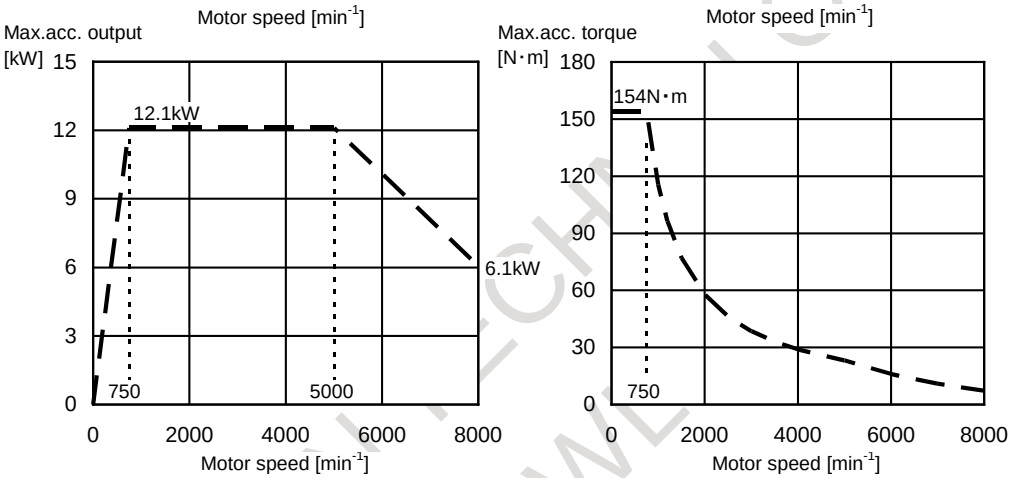
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Model βiIP 18/8000-B

Spec. number for motor: A06B-2443-B□□□

Spec. number for output specification nameplate: A06B-1230-K443#S00
Applicable amplifier: αiSP 11-B, βiSVSP*-11-B





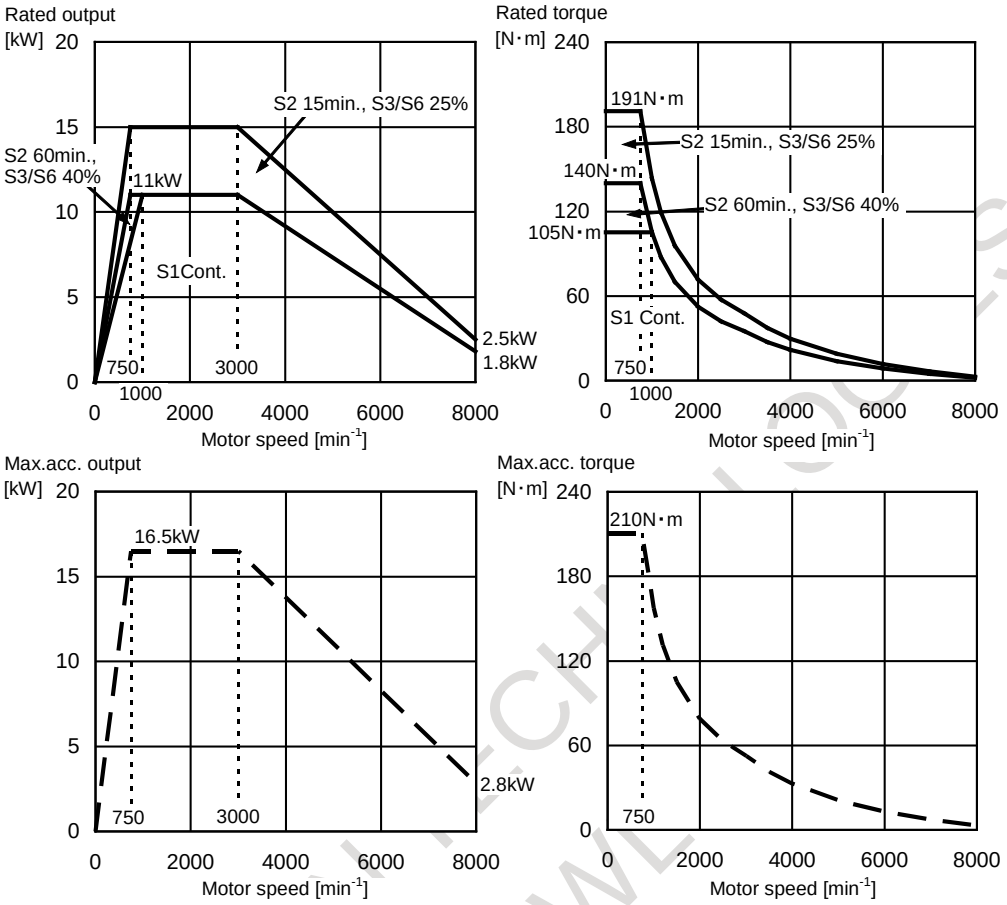
Item			Symbol	Value	Unit
Model				#S00	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	9	kW
	S2 15 min., S3/S6 25% rated			11	kW
Rated current	S1 continuous rated		I_C	39	A
	S2 60 min., S3/S6 40% rated			49	A
	S2 15 min., S3/S6 25% rated			57	A
Speed	Base speed	S1 continuous rated		1000	min^{-1}
		S2 60 min., S3/S6 40% rated, S2 15 min., S3/S6 25% rated	N_b	750	min^{-1}
	Max. speed		N_{max}	8000	min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output	kW
Maximum output at acceleration for PS selection				12.1	kW
Continuous rated torque in the constant torque range			T_b	86.0	N·m
Number of poles				4	
Moment of inertia of the rotor			J_m	0.09	$kg·m^2$
Weight			w	110	kg
Winding resistance (U-V, V-W, and W-U)			R	208	mΩ
Built-in detector				αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection				256	λ/rev.
Output shaft seal				Oil seal	
Degree of protection				IP54	
Vibration				V5	
Noise				75 or less	dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan				100	W

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Model βiIP 22/8000-B

Spec. number for motor: A06B-2459-B□□□

Spec. number for output specification nameplate: A06B-1230-K459#S00
Applicable amplifier: αiSP 15-B, βiSVSP*-15-B



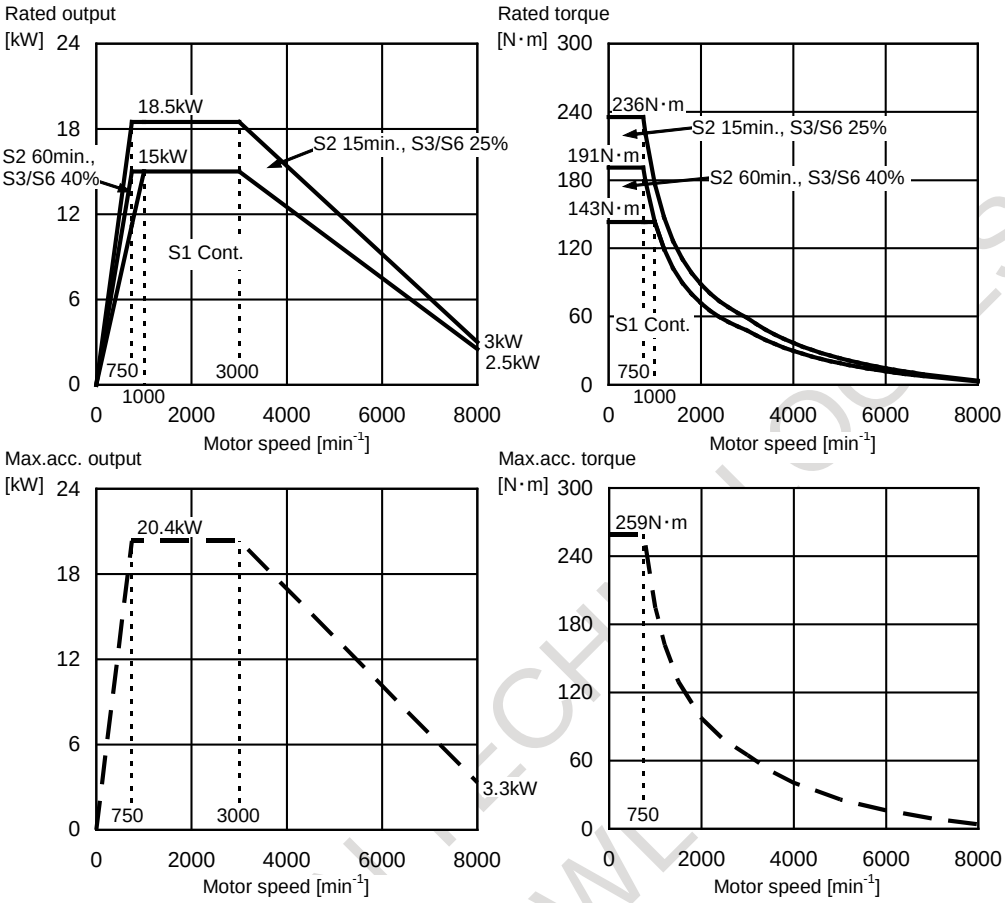
Item			Symbol	Value	Unit
Model				#S00	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	11	kW
	S2 15 min., S3/S6 25% rated			15	kW
Rated current	S1 continuous rated		I_C	44	A
	S2 60 min., S3/S6 40% rated			53	A
	S2 15 min., S3/S6 25% rated			67	A
Speed	Base speed	S1 continuous rated		1000	min^{-1}
		S2 60 min., S3/S6 40% rated, S2 15 min., S3/S6 25% rated	N_b	750	min^{-1}
	Max. speed		N_{max}	8000	min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output	kW
Maximum output at acceleration for PS selection				16.5	kW
Continuous rated torque in the constant torque range			T_b	105	N·m
Number of poles				4	
Moment of inertia of the rotor			J_m	0.105	$kg·m^2$
Weight			w	125	kg
Winding resistance (U-V, V-W, and W-U)			R	242	mΩ
Built-in detector				αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection				256	λ/rev.
Output shaft seal				Oil seal	
Degree of protection				IP54	
Vibration				V5	
Noise				75 or less	dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan				100	W

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Model βiIP 30/8000-B

Spec. number for motor: A06B-2499-B□□□

Spec. number for output specification nameplate: A06B-1230-K499#S00
Applicable amplifier: αiSP 22-B, βiSVSP*-18-B



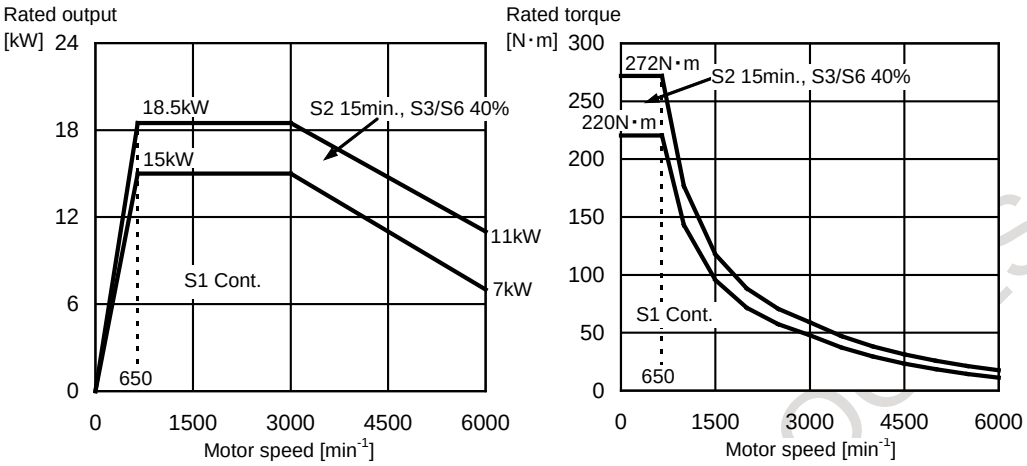
Item			Symbol	Value	Unit
Model				#S00	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	15	kW
	S2 15 min., S3/S6 25% rated			18.5	kW
Rated current	S1 continuous rated		I_C	61	A
	S2 60 min., S3/S6 40% rated			69	A
	S2 15 min., S3/S6 25% rated			83	A
Speed	Base speed	S1 continuous rated		1000	min^{-1}
		S2 60 min., S3/S6 40% rated, S2 15 min., S3/S6 25% rated	N_b	750	min^{-1}
	Max. speed		N_{max}	8000	min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output	kW
Maximum output at acceleration for PS selection				20.4	kW
Continuous rated torque in the constant torque range			T_b	143	N·m
Number of poles				4	
Moment of inertia of the rotor			J_m	0.128	$kg·m^2$
Weight			w	143	kg
Winding resistance (U-V, V-W, and W-U)			R	192	mΩ
Built-in detector				αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection				256	λ/rev.
Output shaft seal				Oil seal	
Degree of protection				IP54	
Vibration				V5	
Noise				75 or less	dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan				100	W

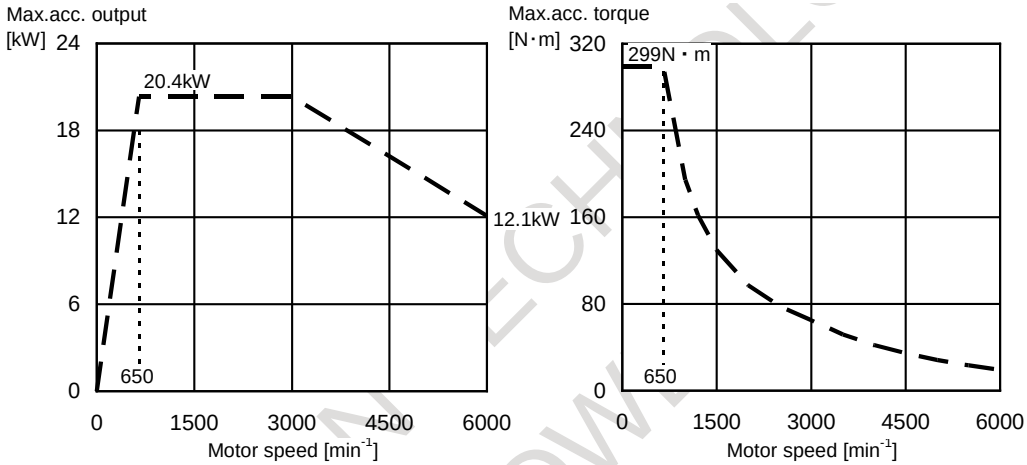
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Model βiIP 40/6000-B

Spec. number for motor: A06B-2480-B□□□

Spec. number for output specification nameplate: A06B-1230-K480#S00
Applicable amplifier: αiSP 22-B, βiSVSP*-18-B





Item			Symbol	Value	Unit
Model				#S00	
Rated output	S1 continuous rated		P_C	15	kW
	S2 15 min., S3/S6 40% rated			18.5	kW
Rated current	S1 continuous rated		I_C	69	A
	S2 15 min., S3/S6 40% rated			79	A
Speed	Base speed	S1 continuous rated, S2 15 min., S3/S6 40% rated	N_b	650	min^{-1}
	Max. speed		N_{max}	6000	min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output	kW
Maximum output at acceleration for PS selection				20.4	kW
Continuous rated torque in the constant torque range			T_b	220	N·m
Number of poles				4	
Moment of inertia of the rotor			J_m	0.295	$kg·m^2$
Weight			w	250	kg
Winding resistance (U-V, V-W, and W-U)			R	77.8	mΩ
Built-in detector				αiM sensor or αiMZ sensor contained	
Number of teeth for speed detection				256	λ/rev.
Output shaft seal				Oil seal	
Degree of protection				IP54	
Vibration				V5	
Noise				75 or less	dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan				160	W

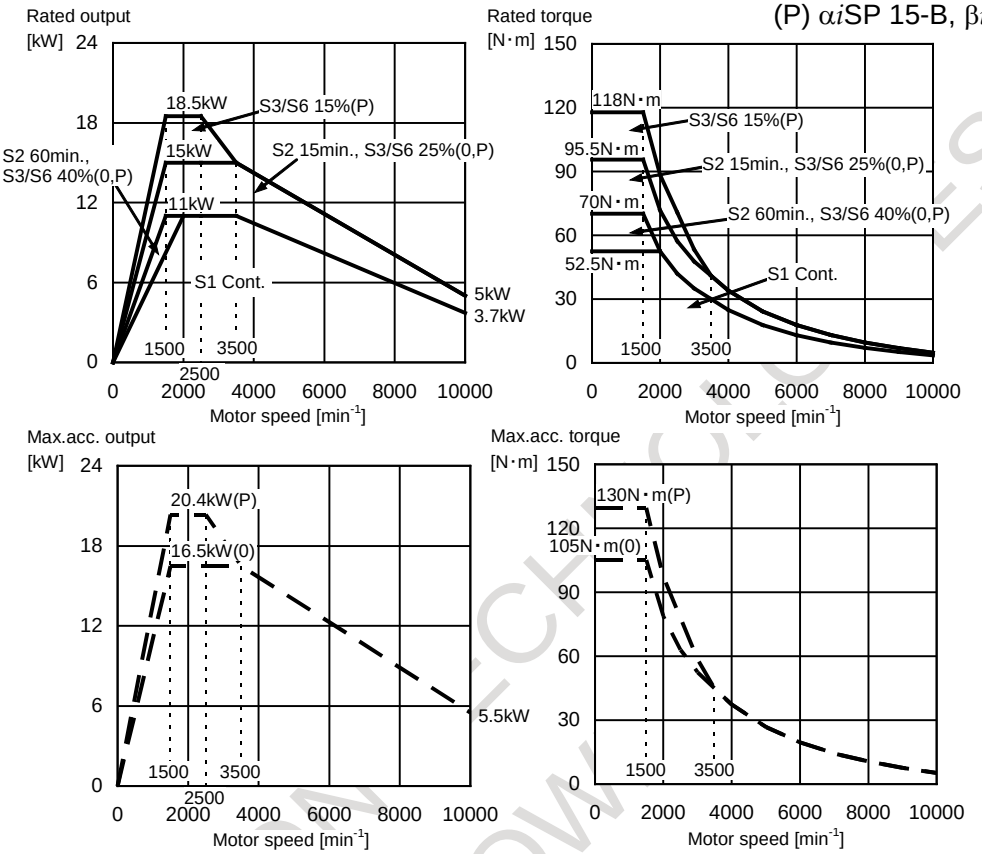
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3.2.17 βiIT-B Series 200V-type

Model βiIT 12/10000-B

Spec. number for motor: A06B-2490-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K490#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 15-B, βiSVSP*-15-B
(P) αiSP 15-B, βiSVSP*-18-B



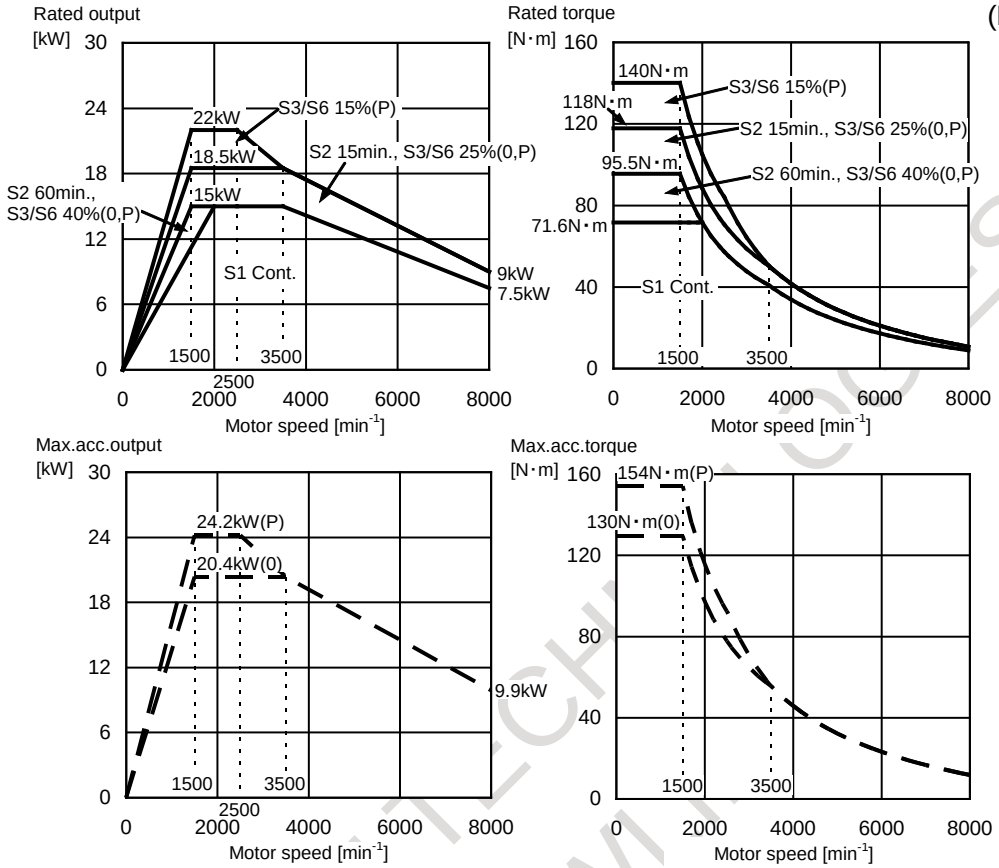
Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	11	11	kW
	S2 15 min., S3/S6 25% rated			15	15	kW
	S3/S6 15% rated			-	18.5	kW
Rated current	S1 continuous rated		I_C	43	43	A
	S2 60 min., S3/S6 40% rated			49	49	A
	S2 15 min., S3/S6 25% rated			63	63	A
	S3/S6 15% rated			-	75	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	10000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				16.5	20.4	kW
Continuous rated torque in the constant torque range			T_b	52.5		N·m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.0275		$kg·m^2$
Weight			W	80		kg
Winding resistance (U-V, V-W, and W-U)			R	142		mΩ
Built-in detector				αiMZ sensor contained		
Number of teeth for speed detection				256		λ/rev.
Output shaft seal				Simple Labyrinth		
Degree of protection				IP54 (The shaft-through portion is excluded)		
Vibration				V3		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				50		W

JR AUTOMATION TECHNOLOGIES INC*

Model βiIT 15/8000-B

Spec. number for motor: A06B-2491-B□□□

Spec. numbers for output specification nameplates: A06B-1230-K491#S00→(0), #S0P→(P)
Applicable amplifier: (0) αiSP 22-B ,βiSVSP*-18-B
(P) αiSP 22-B



Item			Symbol	Value		Unit
Model				#S00	#S0P	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	15	15	kW
	S2 15 min., S3/S6 25% rated			18.5	18.5	kW
	S3/S6 15% rated			-	22	kW
Rated current	S1 continuous rated		I_C	69	69	A
	S2 60 min., S3/S6 40% rated			75	75	A
	S2 15 min., S3/S6 25% rated			80	80	A
	S3/S6 15% rated			-	92	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	8000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				20.4	24.2	kW
Continuous rated torque in the constant torque range			T_b	71.6		N·m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.07		$kg·m^2$
Weight			W	95		kg
Winding resistance (U-V, V-W, and W-U)			R	162		mΩ
Built-in detector				αiMZ sensor contained		
Number of teeth for speed detection				256		λ/rev.
Output shaft seal				Simple Labyrinth		
Degree of protection				IP54 (The shaft-through portion is excluded)		
Vibration				V3		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				100		W

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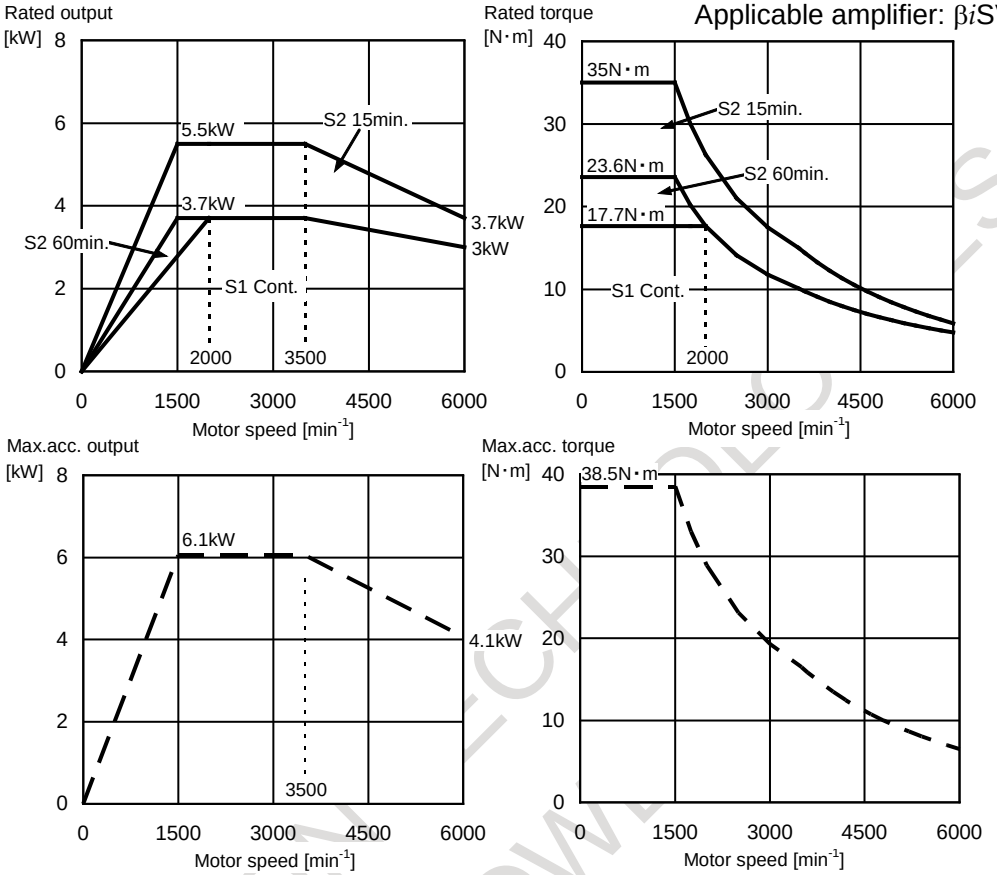
3.2.18 βiIc-B Series 200V-type

Model βiIc 3/6000-B

Spec. number for motor: A06B-2415-B□□□

Spec. number for output specification nameplate: A06B-1230-K415#S00

Applicable amplifier: βiSVSP*-7.5-B



Item			Symbol	Value	Unit
Model				#S00	
Rated output	S1 continuous rated, S2 60 min. rated		P_C	3.7	kW
	S2 15 min. rated			5.5	kW
Rated current	S1 continuous rated		I_C	22	A
	S2 60 min. rated			23	A
	S2 15 min. rated			30	A
Speed	Base speed	S1 continuous rated		2000	min^{-1}
		S2 60 min. rated, S2 15 min. rated	N_b	1500	min^{-1}
	Max. speed		N_{max}	6000	min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output	kW
Maximum output at acceleration for PS selection				6.1	kW
Continuous rated torque in the constant torque range			T_b	17.7	N·m
Number of poles				4	
Moment of inertia of the rotor			J_m	0.0078	$kg·m^2$
Weight			w	27	kg
Winding resistance (U-V, V-W, and W-U)			R	466	mΩ
Built-in detector				-	
Number of teeth for speed detection				-	λ/rev.
Output shaft seal				Oil seal	
Degree of protection				IP54	
Vibration				V5	
Noise				75 or less	dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan				38	W

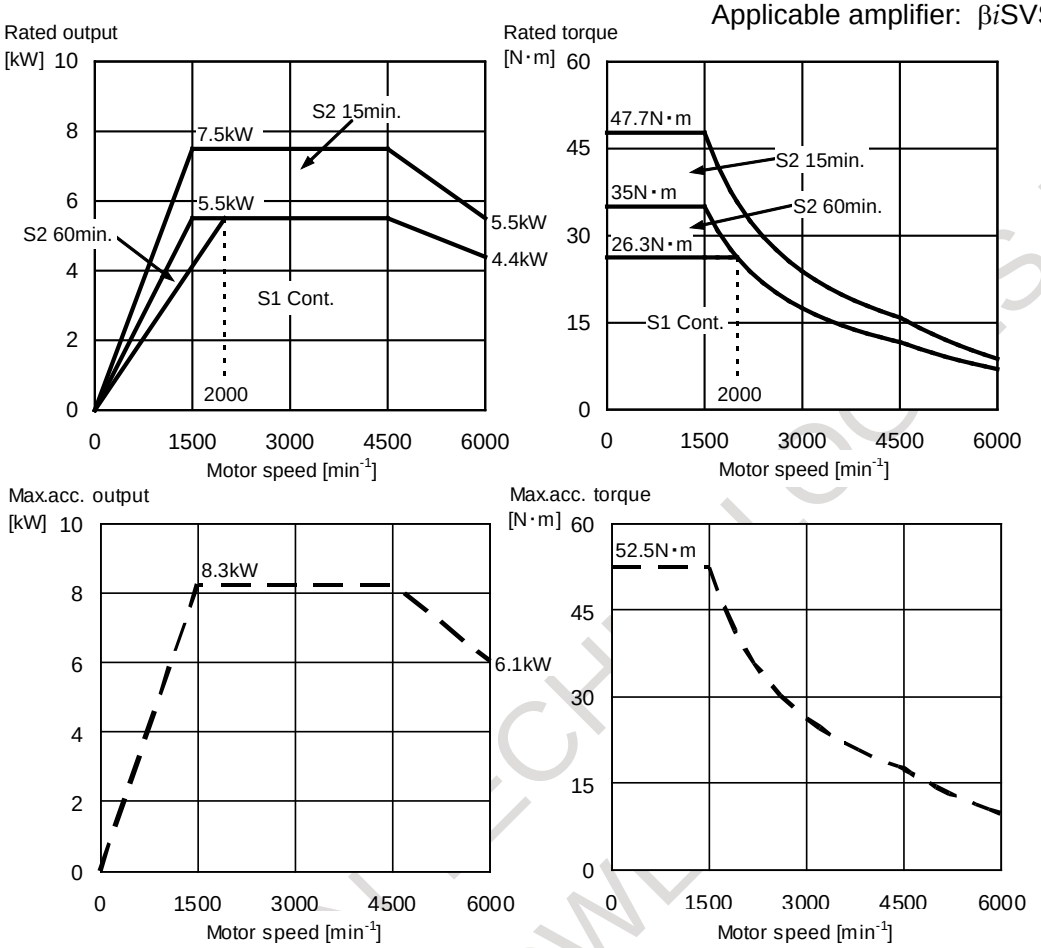
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Model βiIc 6/6000-B

Spec. number for motor: A06B-2416-B□□□

Spec. number for output specification nameplate: A06B-1230-K416#S00

Applicable amplifier: βiSVSP*-7.5-B



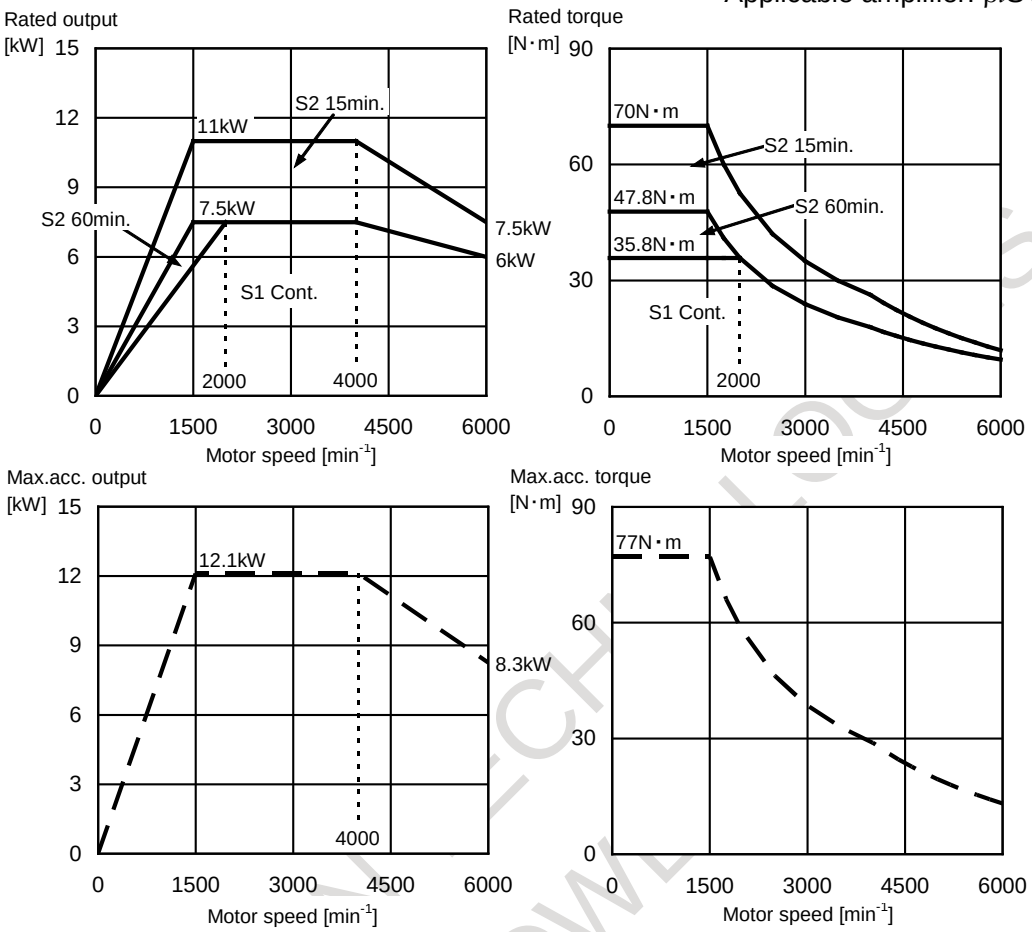
Item			Symbol	Value	Unit
Model				#S00	
Rated output	S1 continuous rated, S2 60 min. rated		P_C	5.5	kW
	S2 15 min. rated			7.5	kW
Rated current	S1 continuous rated		I_C	27	A
	S2 60 min. rated			29	A
	S2 15 min. rated			37	A
Speed	Base speed	S1 continuous rated		2000	min^{-1}
		S2 60 min. rated, S2 15 min. rated	N_b	1500	min^{-1}
	Max. speed		N_{max}	6000	min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output	kW
Maximum output at acceleration for PS selection				8.3	kW
Continuous rated torque in the constant torque range			T_b	26.3	N·m
Number of poles				4	
Moment of inertia of the rotor			J_m	0.0148	$kg·m^2$
Weight			w	46	kg
Winding resistance (U-V, V-W, and W-U)			R	289	mΩ
Built-in detector				-	
Number of teeth for speed detection				-	λ/rev.
Output shaft seal				Oil seal	
Degree of protection				IP54	
Vibration				V5	
Noise				75 or less	dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan				38	W

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Model βiIc 8/6000-B

Spec. number for motor: A06B-2417-B□□□

Spec. number for output specification nameplate: A06B-1230-K417#S00
Applicable amplifier: βiSVSP*-11-B



Item			Symbol	Value	Unit
Model				#S00	
Rated output	S1 continuous rated, S2 60 min. rated		P_C	7.5	kW
	S2 15 min. rated			11	kW
Rated current	S1 continuous rated		I_C	41	A
	S2 60 min. rated			44	A
	S2 15 min. rated			57	A
Speed	Base speed	S1 continuous rated		2000	min^{-1}
		S2 60 min. rated, S2 15 min. rated	N_b	1500	min^{-1}
	Max. speed		N_{max}	6000	min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output	kW
Maximum output at acceleration for PS selection				12.1	kW
Continuous rated torque in the constant torque range			T_b	35.8	N·m
Number of poles				4	
Moment of inertia of the rotor			J_m	0.0179	$kg·m^2$
Weight			w	51	kg
Winding resistance (U-V, V-W, and W-U)			R	146	mΩ
Built-in detector				-	
Number of teeth for speed detection				-	λ/rev.
Output shaft seal				Oil seal	
Degree of protection				IP54	
Vibration				V5	
Noise				75 or less	dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)	
Rated power of the cooling fan				50	W

JR AUTOMATION TECHNOLOGIES INC*

NOTE

1 The applicable amplifier contained is a standard one.
The following combinations are supported in addition to the standard amplifiers.

Motor model	Applicable amplifier
αiI 0.5/10000-B, αiI 0.5/15000-B, αiI 1/10000-B, αiI 1/15000-B, αiI 1.5/10000-B, αiI 2/10000-B(#S00, #S0P), αiI 3/10000-B(#S00, #S0P), βiI 3/12000-B, βiI$_P$ 8/6000-B, βiI$_P$ 12/6000-B, βiI$_C$ 3/6000-B, βiI$_C$ 6/6000-B	βiSVSP*-11-B βiSVSP*-15-B βiSVSP*-18-B
αiI 2/10000-B(#S0S), αiI 3/10000-B(#S0S), αiI 3/12000-B(#S00), αiI 6/10000-B(#S00, #S0P), αiI 6/12000-B, αiI 6/15000-B(#S00), αiI 8/8000-B(#S00), αiI 8/10000-B(#S00), αiI$_P$ 12/8000-B, αiI$_T$ 3/12000-B(#S00), αiI$_T$ 6/12000-B, βiI 6/12000-B(#S00), βiI 8/12000-B(#S0P), βiI$_P$ 15/8000-B, βiI$_P$ 18/8000-B, βiI$_C$ 8/6000-B	βiSVSP*-15-B βiSVSP*-18-B
αiI 1.5/20000-B(#S00), αiI 6/10000-B(#S0S), αiI 8/8000-B(#S0P), αiI 8/10000-B(#S0P), αiI 8/12000-B, αiI 12/8000-B(#S00), αiI 12/12000-B(#S00), αiI$_P$ 15/8000-B, αiI$_P$ 18/8000-B, αiI$_T$ 8/12000-B(#S00, #S0P), βiI 6/12000-B(#S0P), βiI 8/12000-B(#S0P), βiI 12/10000-B(#S00), βiI$_P$ 22/8000-B, βiI$_T$ 12/10000-B(#S00)	βiSVSP*-18-B
αiI 0.5/10000HV-B, αiI 1/10000HV-B, αiI 1.5/10000HV-B, αiI 2/10000HV-B, αiI 3/10000HV-B, αiI 6/10000HV-B, αiI 8/8000HV-B(#S00), αiI 8/10000HV-B, αiI$_T$ 3/12000HV-B, βiI 3/12000HV-B, βiI 6/12000HV-B(#S00), βiI 8/12000HV-B(#S00)	βiSVSP*-15HV-B βiSVSP*-18HV-B
αiI 8/8000HV-B(#S0P), αiI 8/12000HV-B, αiI 12/8000HV-B, αiI$_P$ 15/8000HV-B, αiI$_T$ 1.5/20000HV-B, αiI$_T$ 6/12000HV-B, αiI$_T$ 8/12000HV-B, βiI 6/12000HV-B(#S0P), βiI 8/12000HV-B(#S0P), βiI 12/10000HV-B(#S00),	βiSVSP*-18HV-B

2 The degree of protection (IEC60034-5) of the motor is IP54.(Except αiI-B (IP65) series)
The degree of protection of the motor that has labyrinth seal or flinger seal is IP54 except the shaft-though portion, however. Ensure that the labyrinth seal and flinger seal are not directly exposed to coolant or mist.

3 For models supporting winding switching, the CNC software option, switching magnetic contactor unit, and others associated with the output switch function are required. For models supporting winding switching, see Section 1.1, "MOTOR LINEUP" in Part I.
For details of the output switch control, refer to the FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65412EN).

4 Using αiI 150/5000HV-B requires the CNC software option (spindle tandem control).

5 The input power supply voltage of a fan motor for αiI 1/10000HV-B, αiI 1.5/10000HV-B, αiI 2/10000HV-B, αiI 2/20000HV-B, αiI 3/10000HV-B, αiI$_T$ 1.5/20000HV-B, αiI$_T$ 2/20000HV-B, αiI$_T$ 3/12000HV-B, βiI 3/12000HV-B, or βiI 6/12000HV-B, is 200/230 VAC, 1ϕ, 50/60 Hz.

6 The rated current of αiS 2000/2000HV-B indicates the total current of multiple connected amplifiers. When selecting a cable, consider a margin of 1.2 times the rated current.

7 For the degree of protection of αiS 2000/2000HV-B, the fan motor is excluded.

8 Since αiS 2000/2000HV-B is driven with multiple amplifiers, the torque tandem option or PWM distribution module is required depending on the target CNC type.

9 αiS 2000/2000HV-B is driven as a servo axis motor using servo amplifiers. For details of parameter setting and others, contact FANUC.

10 When assembling a motor with the machine, align the motor shaft with the spindle so that the vibration acceleration of the motor does not exceed 4.9 m/s^2 (0.5 G) (at maximum speed).
(Before shipping machines, check that the vibration acceleration is 4.9 m/s^2 (0.5 G) or less for all motors.)

11 Select a coupling that does not apply a thrust load onto the motor shaft due to a cause such as temperature rise or coolant pressure.
Note that in the direction in which the motor shaft is pushed toward the inside of the motor, the allowable load is 0 kgf.
(When the motor shaft is inserted into the spindle to connect the motor shaft and spindle using a coupling, the motor shaft may remain pushed inside the motor. After connecting the spindle and motor shaft with a coupling, check whether the motor shaft is pushed inside the motor. For details, see Section 3.3, "WHEN A MOTOR IS DIRECTLY CONNECTED TO A SPINDLE VIA A COUPLING" in Part III.).

12 The αi-B (IP65) series supports both 200 V and 400 V as the power supply voltage. (αiI 2/8000-B(IP65) is excluded.)
"(200 V)" is shown for the applicable amplifiers for 200 V and "(400 V)" is shown for those for 400 V.
Note that different parameters apply to 200 V and 400 V.

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3.3 EXTERNAL DIMENSIONS

The external dimensions of the FANUC AC spindle motor α*i*-B / β*i*-B series are given below.
In addition, shaft figure, allowable radial load, assembling accuracy, and power terminals are also provided.

This section, "EXTERNAL DIMENSIONS", consists of the following.

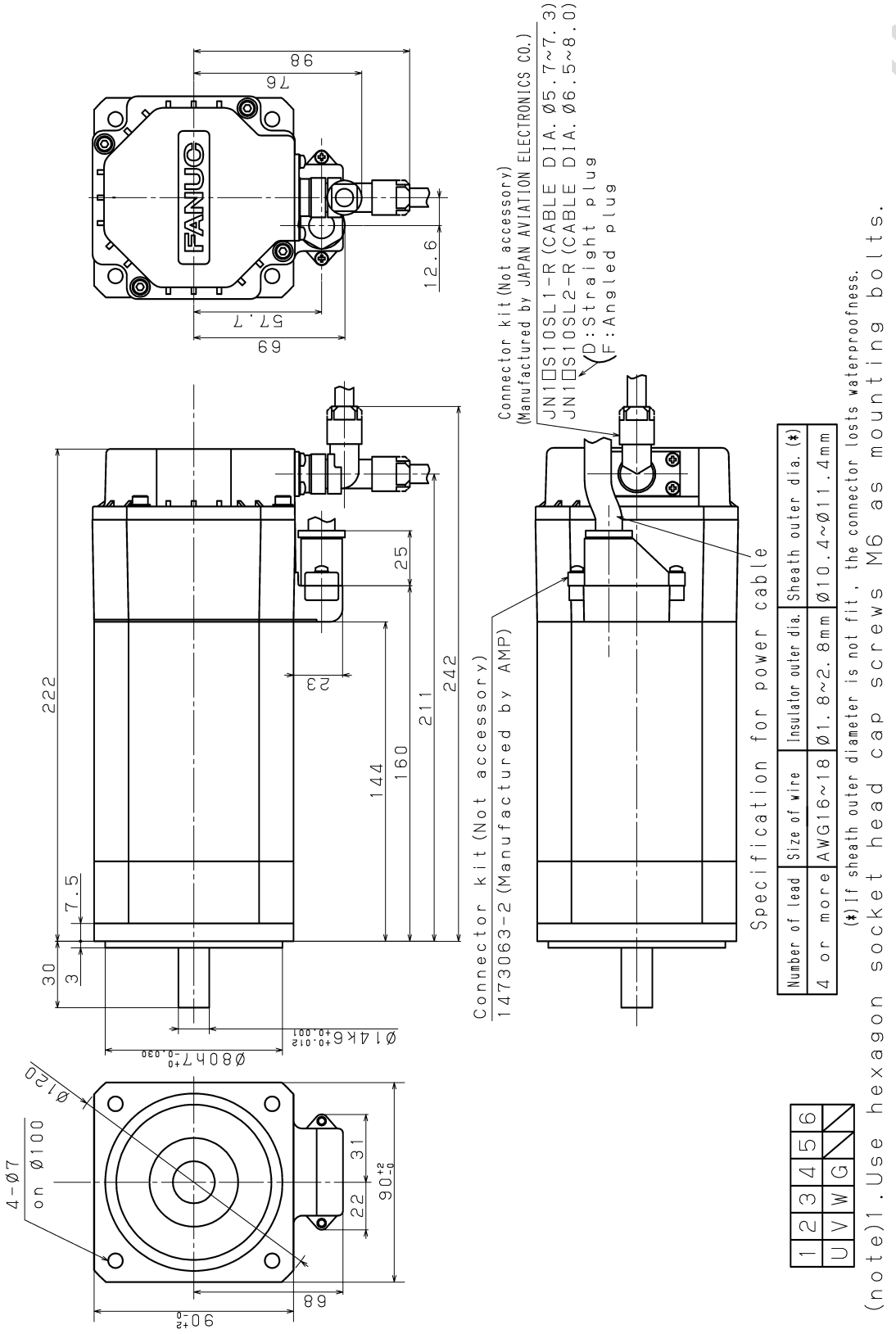
3.3.1 Models α*i*I 0.5/10000-B, α*i*I 0.5/15000-B, α*i*I 0.5/10000HV-B
3.3.2 Models α*i*I 1/10000-B, α*i*I 1/15000-B, α*i*I 1/24000-B, α*i*I 1.5/10000-B, α*i*I 1.5/20000-B, α*i*I 1/10000HV-B, α*i*I 1.5/10000HV-B
3.3.3 Models α*i*I 2/10000-B, α*i*I 2/12000-B, α*i*I 2/20000-B, α*i*I 3/10000-B, α*i*I 3/12000-B, α*i*I 3/15000-B, α*i*I 2/10000HV-B, α*i*I 2/20000HV-B, α*i*I 3/10000HV-B
β*i*I 3/12000-B, β*i*I 6/12000-B, β*i*I 3/12000HV-B, β*i*I 6/12000HV-B, β*i*IC 3/6000-B, β*i*IC 6/6000-B
3.3.4 Models α*i*I 6/10000-B, α*i*I 6/12000-B, α*i*I 6/15000-B, α*i*I 8/8000-B, α*i*I 8/10000-B, α*i*I 8/12000-B, α*i*I 6/10000HV-B, α*i*I 8/8000HV-B, α*i*I 8/10000HV-B, α*i*I 8/12000HV-B, β*i*I 8/12000-B, β*i*I 12/10000-B, β*i*I 8/12000HV-B, β*i*I 12/10000HV-B, β*i*IP 8/6000-B, β*i*IP 12/6000-B, β*i*IC 8/6000-B
3.3.5 Models α*i*I 12/8000-B, α*i*I 12/12000-B, α*i*I 15/8000-B, α*i*I 15/12000-B, α*i*I 18/8000-B, α*i*I 18/12000-B, α*i*I 22/8000-B, α*i*I 22/12000-B, α*i*I 12/8000HV-B, α*i*I 12/12000HV-B, α*i*I 15/8000HV-B, α*i*I 15/12000HV-B, α*i*I 22/8000HV-B, α*i*I 22/12000HV-B, α*i*IP 12/8000-B, α*i*IP 15/8000-B, α*i*IP 18/8000-B, α*i*IP 22/8000-B, α*i*IP 15/8000HV-B, α*i*IP 22/8000HV-B,
β*i*I 15/8000-B, β*i*I 15/8000HV-B, β*i*IP 15/8000-B, β*i*IP 18/8000-B, β*i*IP 22/8000-B, β*i*IP 30/8000-B
3.3.6 Models α*i*I 30/7000-B, α*i*I 40/7000-B, α*i*I 30/7000HV-B, α*i*I 40/7000HV-B, α*i*IP 30/6000-B, α*i*IP 40/6000-B, α*i*IP 50/6000-B, α*i*IP 40/6000HV-B, α*i*IP 50/6000HV-B, β*i*IP 40/6000-B
3.3.7 Models α*i*I 50/5000-B, α*i*I 50/5000HV-B, α*i*I 60/5000HV-B, α*i*I 75/5000HV-B, α*i*I 100/5000HV-B, α*i*I 150/5000HV-B, α*i*IP 60/5000-B, α*i*IP 60/5000HV-B
3.3.8 Model α*i*S 2000/2000HV-B
3.3.9 Models α*i*IT 1/24000-B, α*i*IT 1.5/20000-B,α*i*IT 1.5/20000HV-B
3.3.10 Models α*i*IT 2/20000-B, α*i*IT 3/12000-B, α*i*IT 3/15000-B, α*i*IT 2/20000HV-B, α*i*IT 3/12000HV-B
3.3.11 Models α*i*IT 6/12000-B, α*i*IT 6/15000-B, α*i*IT 8/12000-B, α*i*IT 8/15000-B, α*i*IT 6/12000HV-B, α*i*IT 8/12000HV-B, α*i*IT 8/15000HV-B, β*i*IT 12/10000-B
3.3.12 Models α*i*IT 12/12000-B, α*i*IT 15/12000-B, α*i*IT 15/15000-B, α*i*IT 22/12000-B, α*i*IPT 22/8000-B, α*i*IT 12/12000HV-B, α*i*IT 15/12000HV-B, α*i*IT 15/15000HV-B, α*i*IT 22/12000HV-B, β*i*IT 15/8000-B
3.3.13 Model α*i*S 1/12000-B
3.3.14 Model α*i*ST 1/12000-B
3.3.15 Models α*i*IL 8/20000-B, α*i*IL 8/20000HV-B
3.3.16 Models α*i*IL 15/15000-B, α*i*IL 26/15000-B, α*i*IL 15/15000HV-B, α*i*IL 26/15000HV-B
3.3.17 Model α*i*I 0.5/10000-B(IP65)
3.3.18 Models α*i*I 1/8000-B(IP65), α*i*I 1.5/8000-B(IP65)
3.3.19 Models α*i*I 2/8000-B(IP65), α*i*I 3/8000-B(IP65)
3.3.20 Model α*i*I 6/8000-B(IP65)

JR AUTOMATION TECHNOLOGIES INC*
JEWLING

3.3.1 Models αiI 0.5/10000-B, αiI 0.5/15000-B, αiI 0.5/10000HV-B

3.3.1.1 External dimensions

(1) Flange mounting type



3.3.1.2 Shaft figure

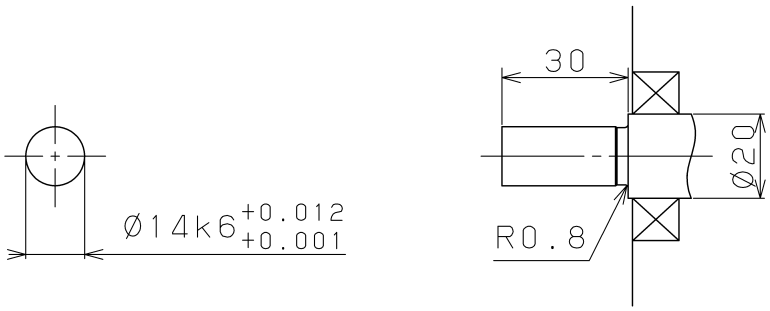
(1) Shaft figure types

The shaft figure for each motor is as given below.

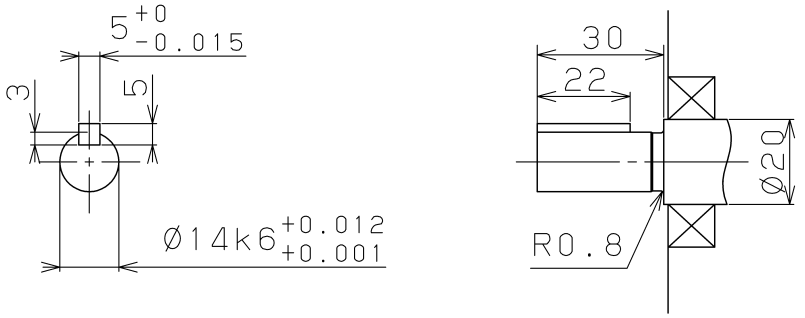
Model	Shaft without keyway		Shaft with keyway	
	Shaft diameter	Details	Shaft diameter	Details
αiI 0.5/10000-B, αiI 0.5/15000-B, αiI 0.5/10000HV-B	ϕ14	(2) (a)	ϕ14	(2) (b)

(2) Shaft details

(a) ϕ14 Shaft without keyway



(b) ϕ14 Shaft with keyway



3.3.1.3 Allowable radial load

Use the motor output shaft below the allowable radial loads shown in the table below.

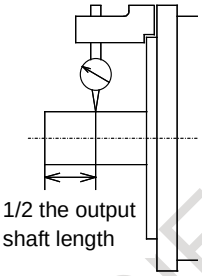
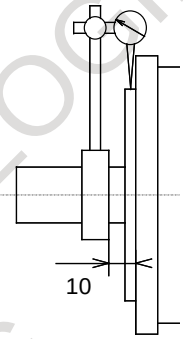
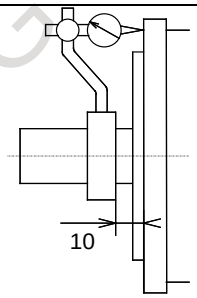
Model	Allowable radial load	
	At output shaft end	At output shaft center
αiI 0.5/10000-B, αiI 0.5/15000-B, αiI 0.5/10000HV-B	294N (30kgf)	323N (33kgf)

NOTE
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.
3 If a thrust load is applied when a helical gear or coupling is mounted, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

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3.3.1.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item	Accuracy	Measuring method
Shaft run-out	20μm or less (10μm or less)	
Run-out of the faucet joint for mounting the flange against the core of the shaft	40μm or less (30μm or less)	
Run-out of the flange mounting surface against the core of the shaft	80μm or less (40μm or less)	

⚠ CAUTION
Values in parentheses represent the assembling accuracies of high-precision models.

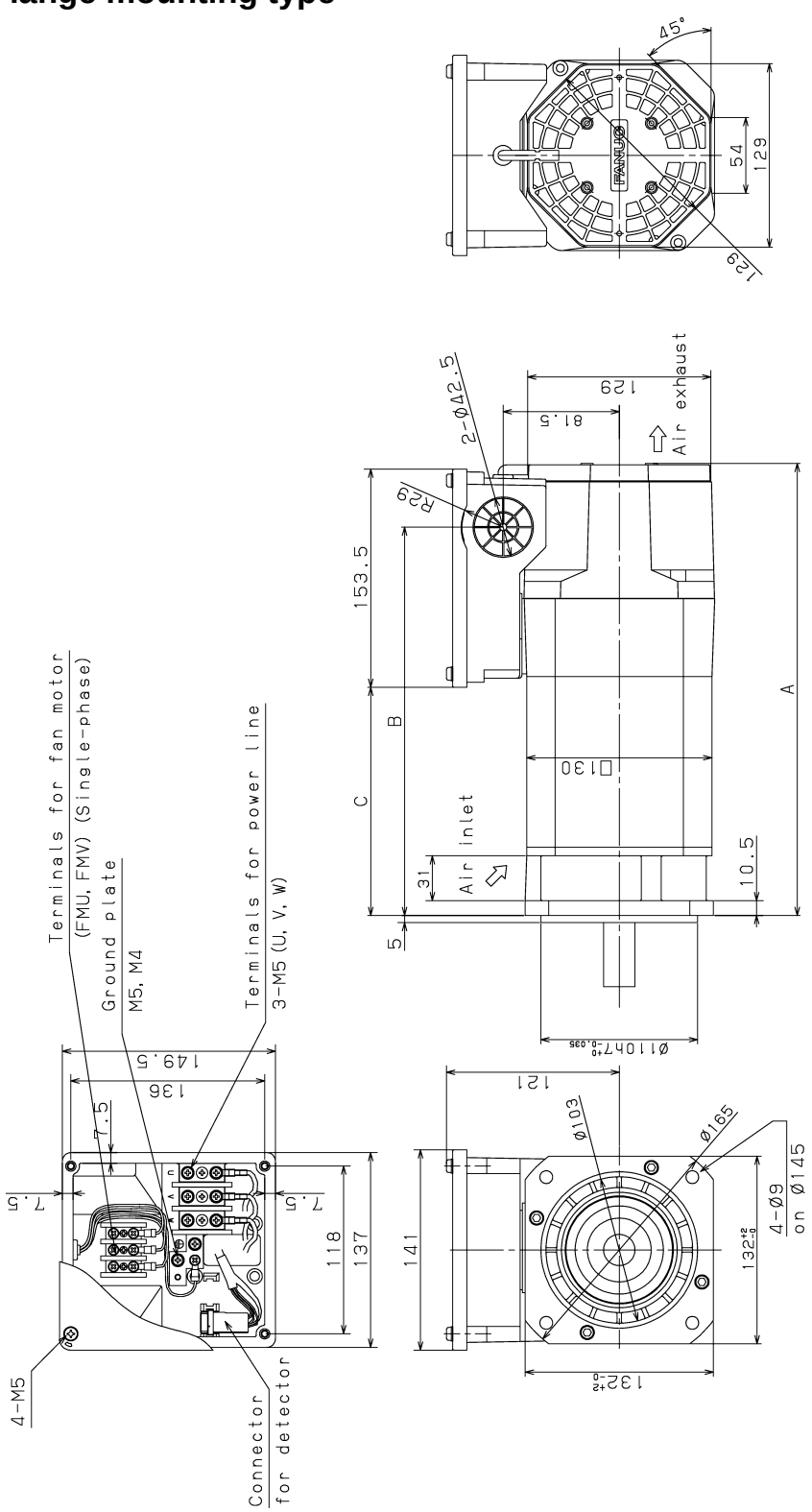
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3.3.2 Models αiI 1/10000-B, αiI 1/15000-B, αiI 1/24000-B, αiI 1.5/10000-B, αiI 1.5/20000-B, αiI 1/10000HV-B, αiI 1.5/10000HV-B

3.3.2.1 External dimensions

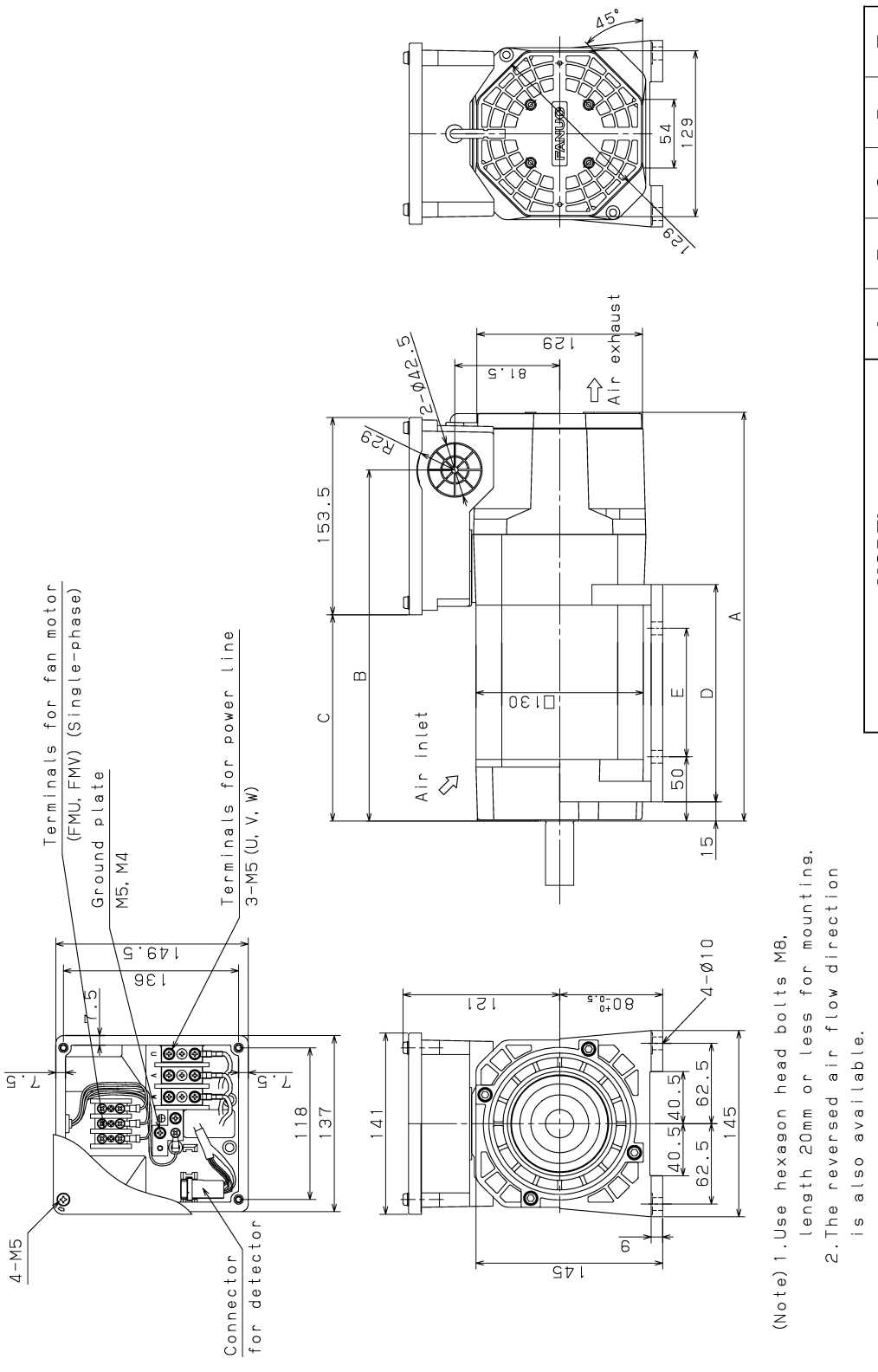
(1) Flange mounting type

MODEL	A	B	C
αiI 1/10000-B, αiI 1/15000-B, αiI 1/10000HV-B	318	273.5	161
αiI 1/24000-B	420	273.5	161
αiI 1.5/10000-B, αiI 1.5/20000-B, αiI 1.5/10000HV-B	368	323.5	211



1. Use hexagon bolts M8, length 30mm or less as mounting bolts.
2. The reversed air flow direction is also available.

(2) Foot mounting type



MODEL	A	B	C	D	E
αiI 1/10000-B, αiI 1/10000HV-B	318	273.5	161	169	100
αiI 1.5/10000-B, αiI 1.5/10000HV-B	368	323.5	211	219	140

(Note) 1. Use hexagon head bolts M8, length 20mm or less for mounting.
2. The reversed air flow direction is also available.

3.3.2.2 Shaft figure

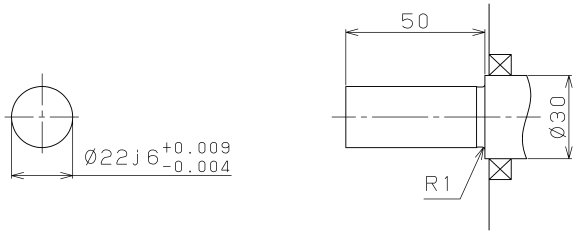
(1) Shaft figure types

The shaft figure for each motor is as given below.

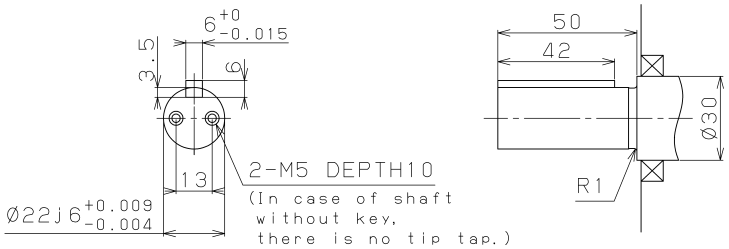
Model	Shaft without keyway		Shaft with keyway	
	Shaft diameter	Details	Shaft diameter	Details
αiI 1/10000-B, αiI 1/10000HV-B	ϕ22	(2) (a)	ϕ22	(2) (b)
αiI 1/15000-B, αiI 1/24000-B	ϕ22	(2) (a)	-	-
αiI 1.5/10000-B, αiI 1.5/10000HV-B	ϕ28	(2) (c)	ϕ28	(2) (d)
αiI 1.5/20000-B	ϕ28	(2) (c)	-	-

(2) Shaft details

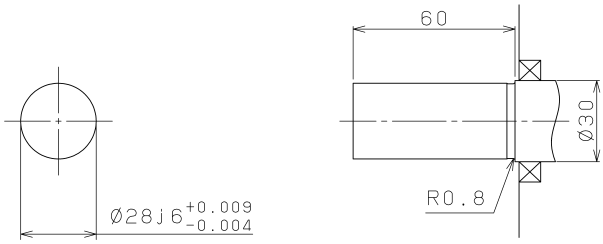
(a) ϕ22 Shaft without keyway



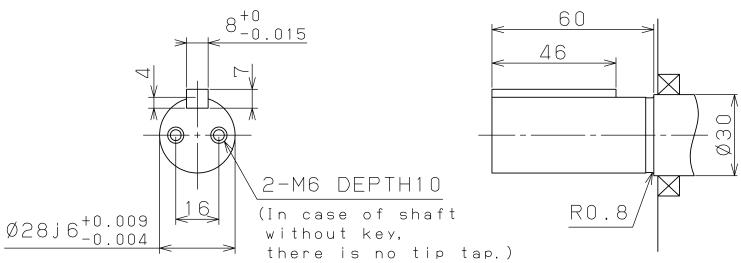
(b) ϕ22 Shaft with keyway



(c) ϕ28 Shaft without keyway



(d) ϕ28 Shaft with keyway



3.3.2.3 Allowable radial load

Use the motor output shaft below the allowable radial loads shown in the table below.

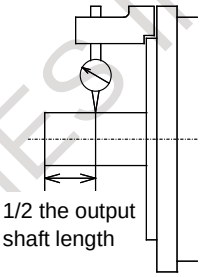
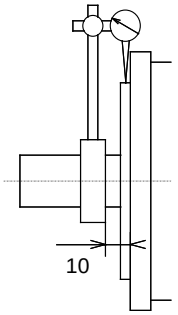
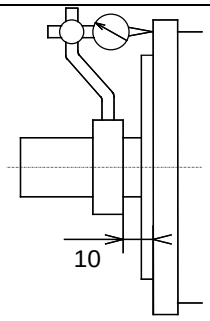
Model	Allowable radial load	
	At output shaft end	At output shaft center
αiI 1/10000-B, αiI 1/10000HV-B	392N (40kgf)	441N (45kgf)
αiI 1.5/10000-B, αiI 1.5/10000HV-B	882N (90kgf)	980N (100kgf)
αiI 1/15000-B, αiI 1/24000-B, αiI 1.5/20000-B	Direct connection to the spindle	

NOTE
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.
3 If a thrust load is applied when a helical gear or coupling is mounted, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

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3.3.2.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item \ Model	αiI 1/10000-B, αiI 1.5/10000-B, αiI 1/10000HV-B, αiI 1.5/10000HV-B	αiI 1/15000-B, αiI 1/24000-B, αiI 1.5/20000-B	Measuring method
Shaft run-out	20μm or less (10μm or less)	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft (only for flange type)	40μm or less (30μm or less)	30μm or less	
Run-out of the flange mounting surface against the core of the shaft (only for flange type)	80μm or less (40μm or less)	40μm or less	

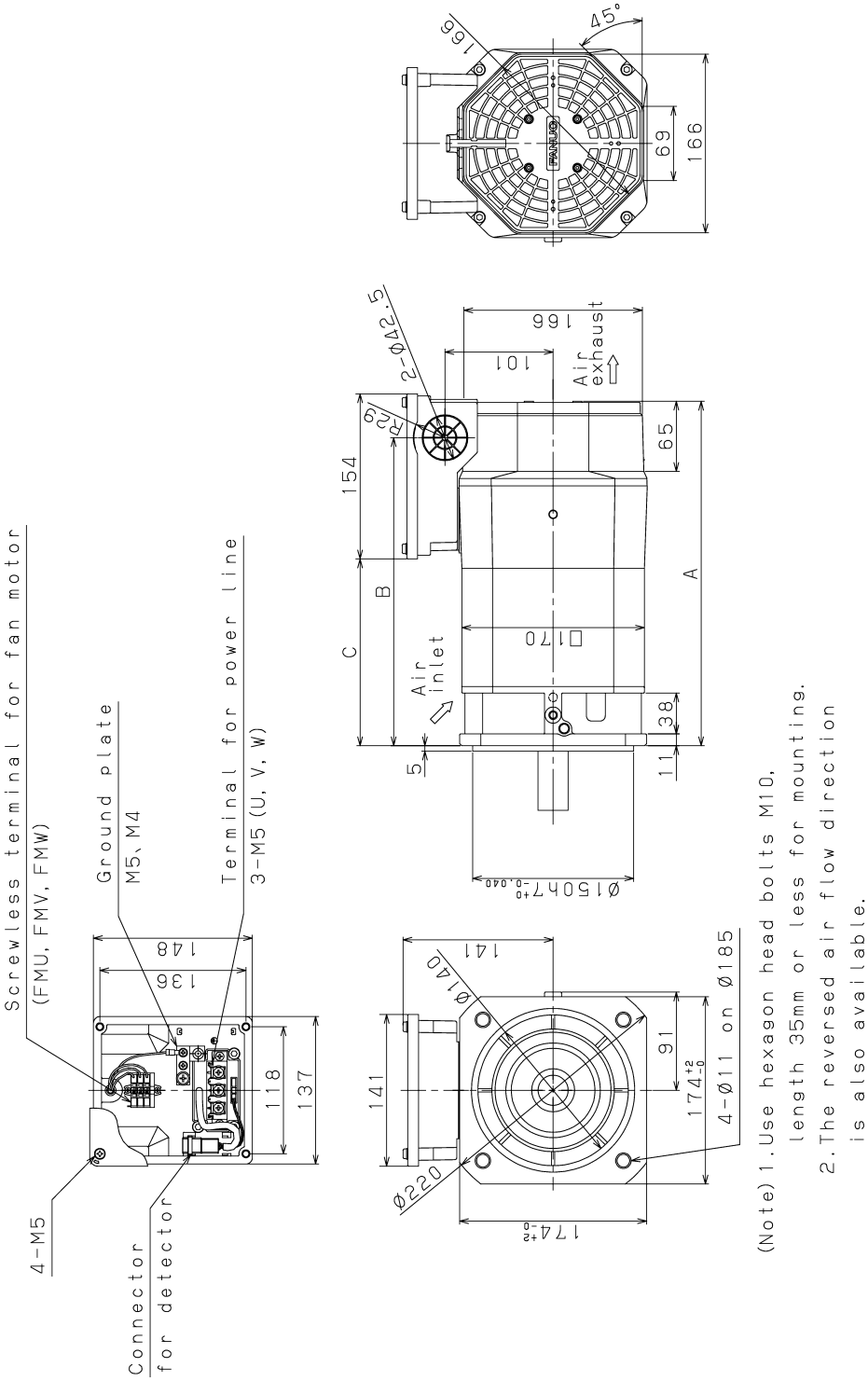
⚠ CAUTION
Values in parentheses represent the assembling accuracies of high-precision models.

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3.3.3 Models αiI 2/10000-B, αiI 2/12000-B, αiI 2/20000-B, αiI 3/10000-B, αiI 3/12000-B, αiI 3/15000-B, αiI 2/10000HV-B, αiI 2/20000HV-B, αiI 3/10000HV-B, βiI 3/12000-B, βiI 6/12000-B, βiI 3/12000HV-B, βiI 6/12000HV-B,βiIc 3/6000-B, βiIc 6/6000-B

3.3.3.1 External dimensions

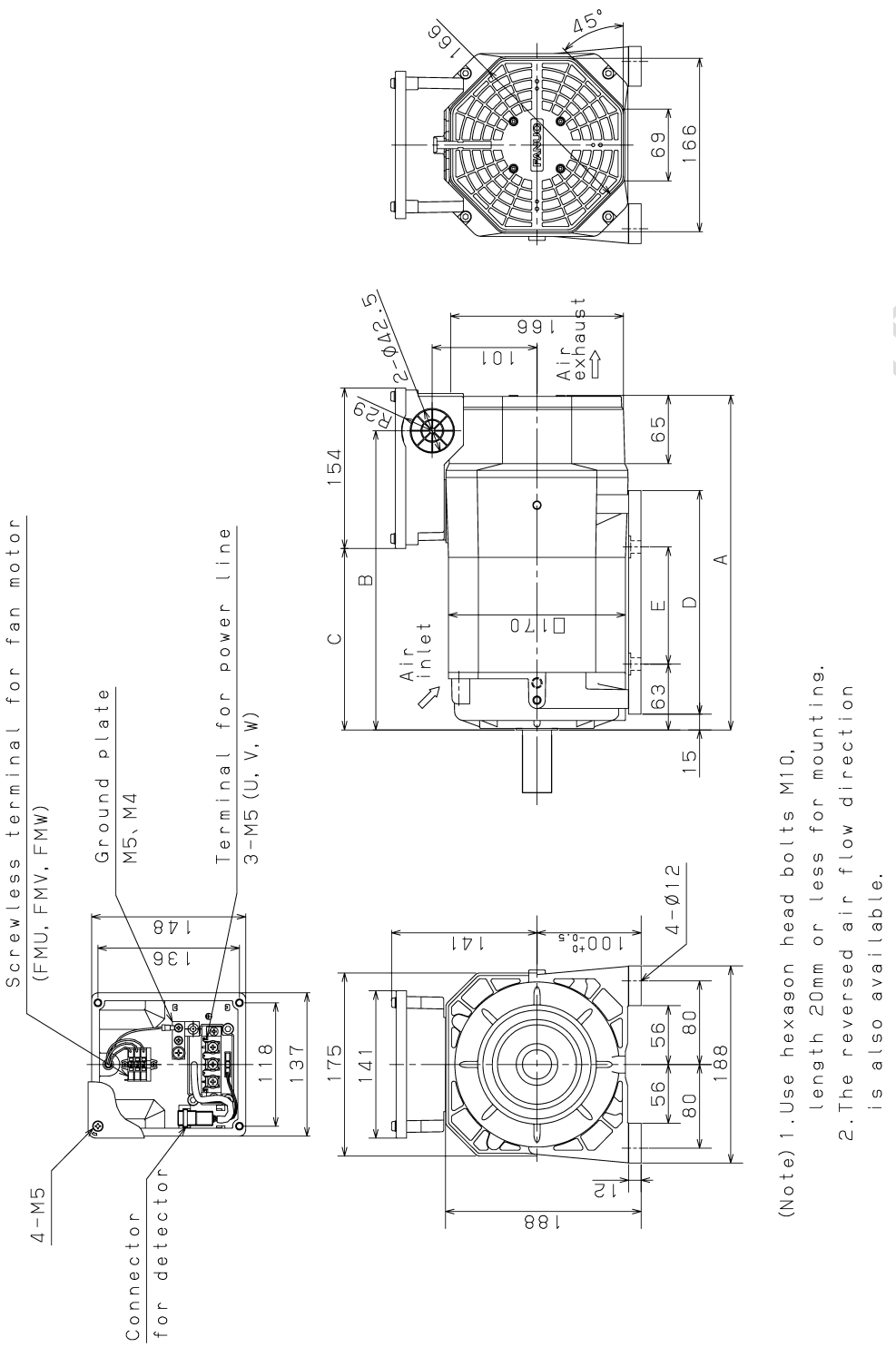
(1) Flange mounting type



MODEL	A	B	C
αiI 2/10000-B, αiI 2/12000-B, αiI 2/20000-B, αiI 2/10000HV-B, αiI 2/20000HV-B, βiI 3/12000-B, βiIc 3/6000-B	320	287	173
αiI 3/10000-B, αiI 3/12000-B, αiI 3/15000-B, αiI 6/12000-B, βiI 6/12000HV-B, βiIc 6/6000-B	420	387	273

(Note) 1. Use hexagon head bolts M10, length 35mm or less for mounting.
2. The reversed air flow direction is also available.

(2) Foot mounting type



(Note) 1. Use hexagon head bolts M10, length 20mm or less for mounting.
2. The reversed air flow direction is also available.

MODEL	A	B	C	D	E
αiI 2/10000-B, αiI 2/10000HV-B, βiI 3/12000-B, βiI 3/12000HV-B, βiIC 3/6000-B	320	287	173	214	112
αiI 3/10000-B, αiI 3/10000HV-B, βiI 6/12000-B, βiI 6/12000HV-B, βiIC 6/6000-B	420	387	273	314	159

3.3.3.2 Shaft figure

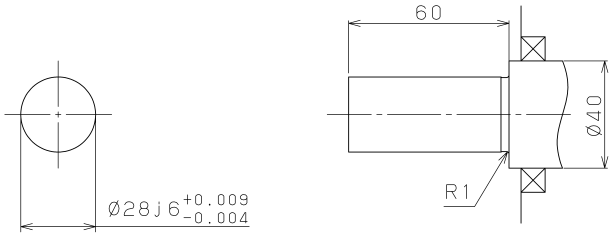
(1) Shaft figure types

The shaft figure for each motor is as given below.

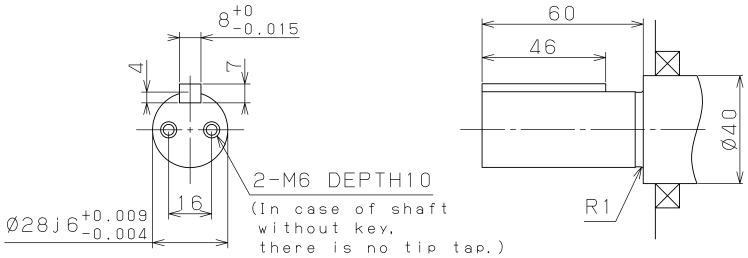
Model	Shaft without keyway		Shaft with keyway	
	Shaft diameter	Details	Shaft diameter	Details
αiI 2/10000-B, αiI 2/10000HV-B, βiI 3/12000-B, βiI 3/12000HV-B, βiIc 3/6000-B	ϕ28	(2) (a)	ϕ28	(2) (b)
αiI 2/12000-B	ϕ28	(2) (a)	-	-
αiI 2/20000-B, αiI 2/20000HV-B	ϕ22	(2) (c)	-	-
αiI 3/10000-B, αiI 3/12000-B, αiI 3/15000-B, αiI 3/10000HV-B, βiI 6/12000-B, βiI 6/12000HV-B βiIc 6/6000-B	ϕ28	(2) (d)	ϕ28	(2) (e)

(2) Shaft details

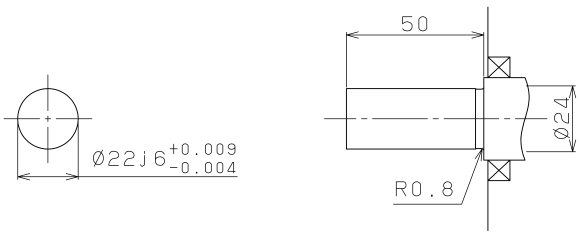
(a) ϕ28 Shaft without keyway



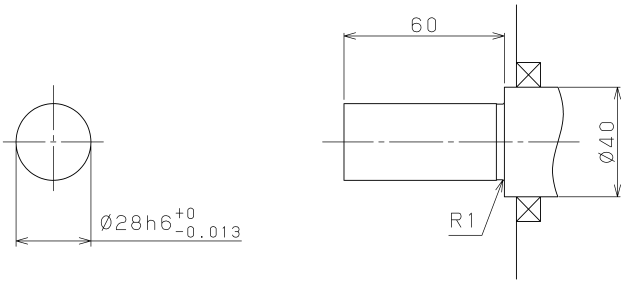
(b) ϕ28 Shaft with keyway



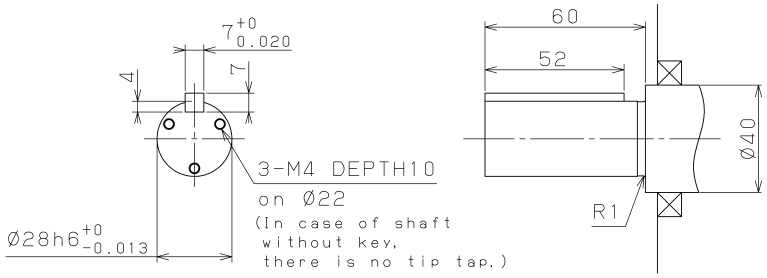
(c) ϕ22 Shaft without keyway



(d) ϕ28 Shaft without keyway



(e) ϕ28 Shaft with keyway



3.3.3.3 Allowable radial load

Use the motor output shaft below the allowable radial loads shown in the table below.

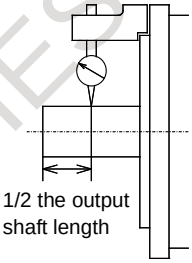
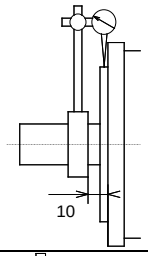
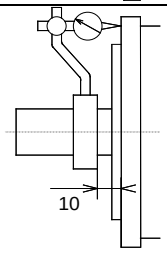
Model	Allowable radial load	
	At output shaft end	At output shaft center
αiI 2/10000-B, αiI 2/10000HV-B, βiI 3/12000-B, βiI 3/12000HV-B, βiIc 3/6000-B	1274N (130kgf)	1445N (147kgf)
αiI 2/12000-B	853N (87kgf)	970N (99kgf)
αiI 3/10000-B, αiI 3/10000HV-B, βiI 6/12000-B, βiI 6/12000HV-B, βiIc 6/6000-B	1470N (150kgf)	1607N (164kgf)
αiI 3/12000-B	980N (100kgf)	1068N (109kgf)
αiI 2/20000-B, αiI 3/15000-B, αiI 2/20000HV-B	Direct connection to the spindle	

NOTE
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.
3 If a thrust load is applied when a helical gear or coupling is mounted, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

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3.3.3.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item \ Model	αiI 2/10000-B, αiI 3/10000-B, αiI 3/12000-B, αiI 2/10000HV-B, αiI 3/10000HV-B, βiI 3/12000-B, βiI 6/12000-B, βiI 3/12000HV-B, βiI 6/12000HV-B, βiIc 3/6000-B, βiIc 6/6000-B	αiI 2/12000-B, αiI 2/20000-B, αiI 3/15000-B, αiI 2/20000HV-B	Measuring method
Shaft run-out	20μm or less (10μm or less)	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft (only for flange type)	40μm or less (30μm or less)	30μm or less	
Run-out of the flange mounting surface against the core of the shaft (only for flange type)	80μm or less (40μm or less)	40μm or less	

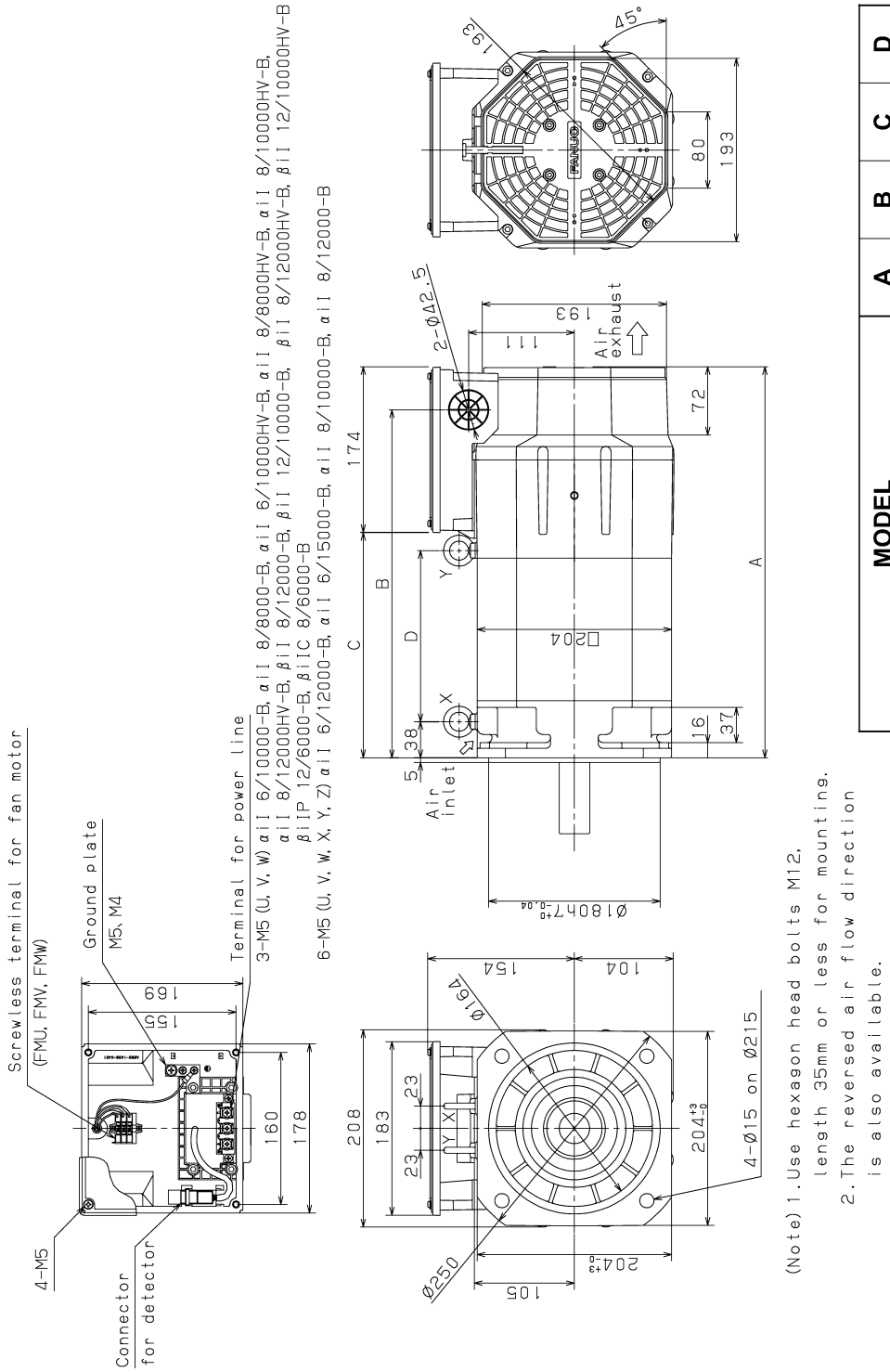
⚠ CAUTION
Values in parentheses represent the assembling accuracies of high-precision models.(There is no high-precision models in βi-B series)

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3.3.4 Models αiI 6/10000-B, αiI 6/12000-B, αiI 6/15000-B, αiI 8/8000-B, αiI 8/10000-B, αiI 8/12000-B, αiI 6/10000HV-B, αiI 8/8000HV-B, αiI 8/10000HV-B, αiI 8/12000HV-B, βiI 8/12000-B, βiI 12/10000-B, βiI 8/12000HV-B, βiI 12/10000HV-B, βiIP 8/6000-B, βiIP 12/6000-B, βiIC 8/6000-B

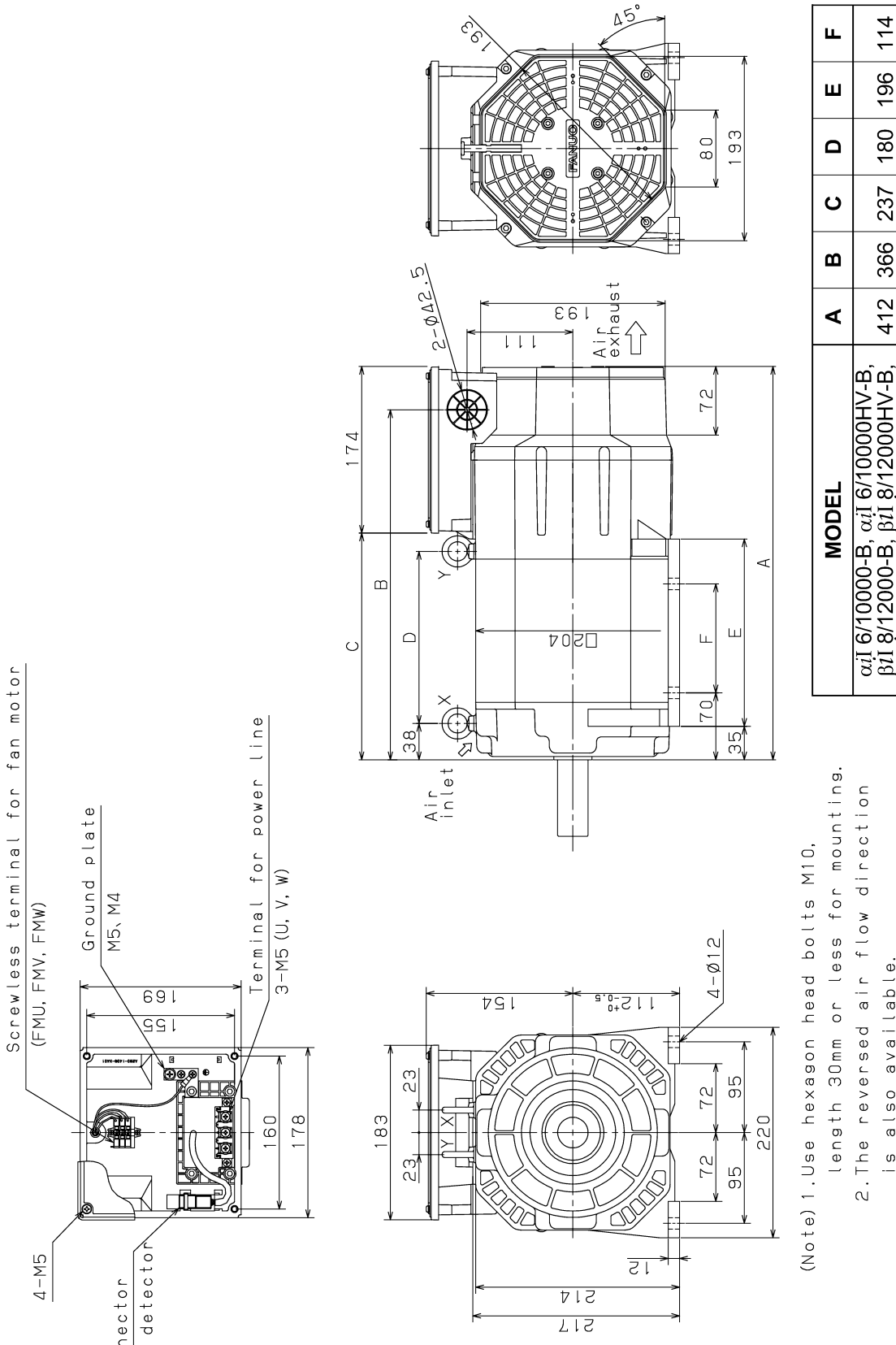
3.3.4.1 External dimensions

(1) Flange mounting type



MODEL	A	B	C	D
αiI 6/10000-B, αiI 6/12000-B, αiI 6/15000-B, αiI 6/10000HV-B, βiI 8/12000-B, βiI 8/12000HV-B, βiIP 8/6000-B, βiIC 8/6000-B	412	366	237	180
αiI 8/8000-B, αiI 8/10000-B, αiI 8/12000-B, αiI 8/8000HV-B, αiI 8/10000HV-B, αiI 8/12000HV-B, βiI 12/10000-B, βiI 12/10000HV-B, βiIP 12/6000-B	488	442	313	256

(2) Foot mounting type



MODEL	A	B	C	D	E	F
αiI 6/10000-B, αiI 6/10000HV-B, βiI 8/12000-B, βiI 8/12000HV-B, βiIP 8/6000-B, βiIc 8/6000-B	412	366	237	180	196	114
αiI 8/8000-B, αiI 8/8000HV-B, βiI 12/10000-B, βiI 12/10000HV-B, βiIP 12/6000-B	488	442	313	256	272	178

3.3.4.2 Shaft figure

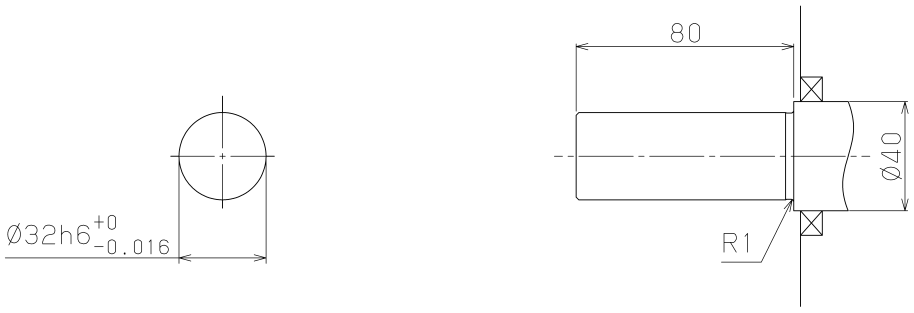
(1) Shaft figure types

The shaft figure for each motor is as given below.

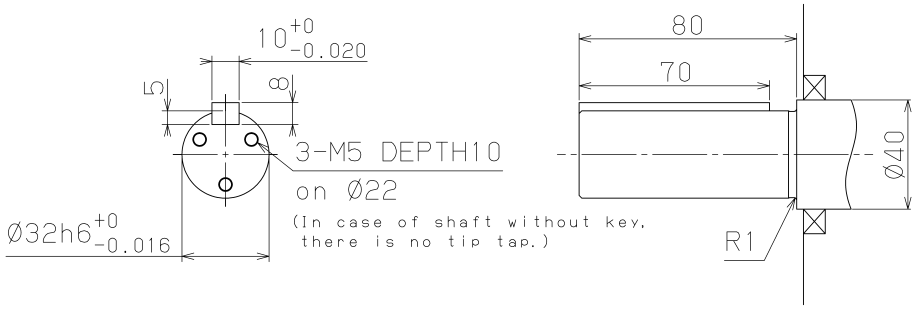
Model	Shaft without keyway		Shaft with keyway	
	Shaft diameter	Details	Shaft diameter	Details
αiI 6/10000-B, αiI 6/12000-B, αiI 6/15000-B, αiI 6/10000HV-B, βiI 8/12000-B, βiI 8/12000HV-B, βiIP 8/6000-B, βiIc 8/6000-B	ϕ32	(2) (a)	ϕ32	(2) (b)
αiI 8/12000-B, αiI 8/12000HV-B	ϕ38	(2) (c)	-	-
αiI 8/8000-B, αiI 8/10000-B, αiI 8/8000HV-B, αiI 8/10000HV-B, βiI 12/10000-B, βiI 12/10000HV-B, βiIP 12/6000-B	ϕ48	(2) (d)	ϕ48	(2) (e)

(2) Shaft details

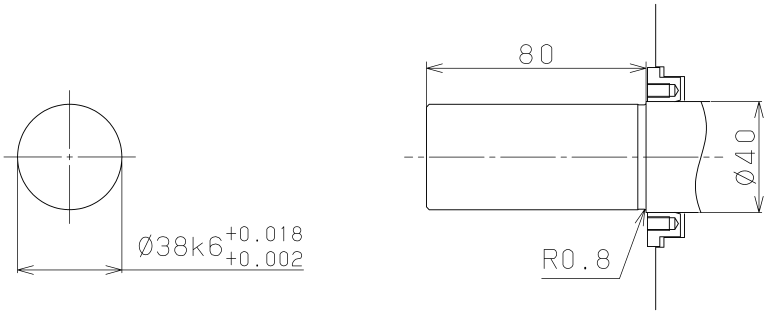
(a) ϕ32 Shaft without keyway



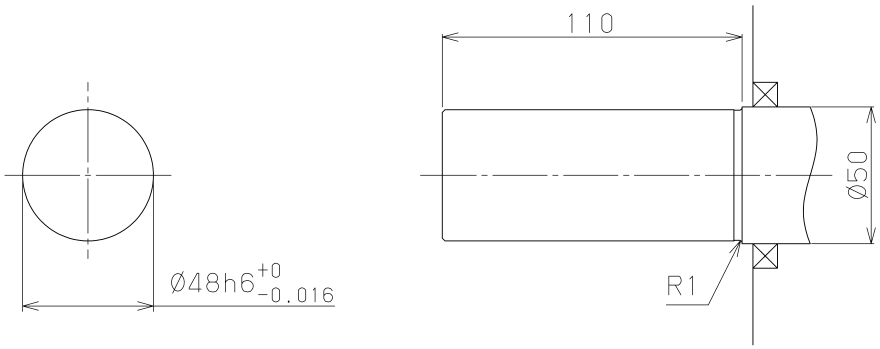
(b) ϕ32 Shaft with keyway



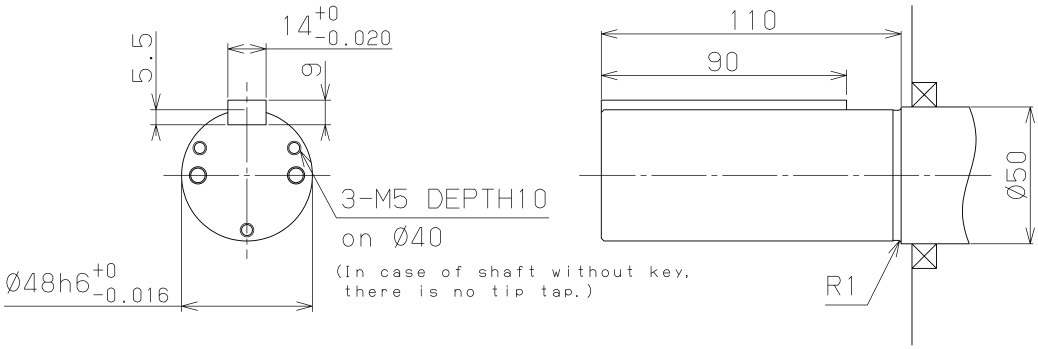
(c) ϕ38 Shaft without keyway



(d) ϕ48 Shaft without keyway



(e) ϕ48 Shaft with keyway



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3.3.4.3 Allowable radial load

Use the motor output shaft below the allowable radial loads shown in the table below.

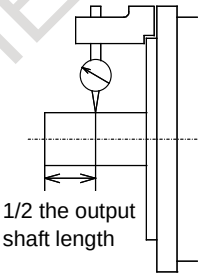
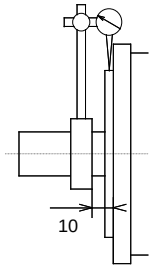
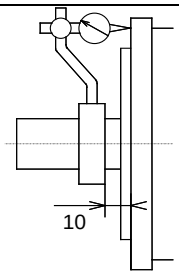
Model	Allowable radial load	
	At output shaft end	At output shaft center
αiI 6/10000-B, αiI 6/10000HV-B, βiI 8/12000-B, βiI 8/12000HV-B, βiIP 8/6000-B, βiIC 8/6000-B	1960N (200kgf)	2205N (225kgf)
αiI 8/8000-B, αiI 8/8000HV-B, βiI 12/10000-B, βiI 12/10000HV-B, βiIP 12/6000-B	2940N (300kgf)	3371N (344kgf)
αiI 6/12000-B	1470N (150kgf)	1656N (169kgf)
αiI 6/15000-B	Direct connection to the spindle	
αiI 8/10000-B, αiI 8/10000HV-B	1960N (200kgf)	2244N (229kgf)
αiI 8/12000-B, αiI 8/12000HV-B	1568N (160kgf)	1764N (180kgf)

NOTE
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.
3 If a thrust load is applied when a helical gear or coupling is mounted, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

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3.3.4.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item \ Model	αiI 6/10000-B, αiI 6/12000-B, αiI 8/8000-B, αiI 8/10000-B, αiI 6/10000-B, αiI 8/8000HV-B, αiI 8/10000HV-B, βiI 8/12000-B, βiI 12/10000-B, βiI 8/12000HV-B, βiI 12/10000HV-B, βiIP 8/6000-B, βiIP 12/6000-B, βiIC 8/6000-B	αiI 6/15000-B, αiI 8/12000-B, αiI 8/12000HV-B	Measuring method
Shaft run-out	20μm or less (10μm or less)	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft (only for flange type)	40μm or less (30μm or less)	30μm or less	
Run-out of the flange mounting surface against the core of the shaft (only for flange type)	80μm or less (40μm or less)	40μm or less	

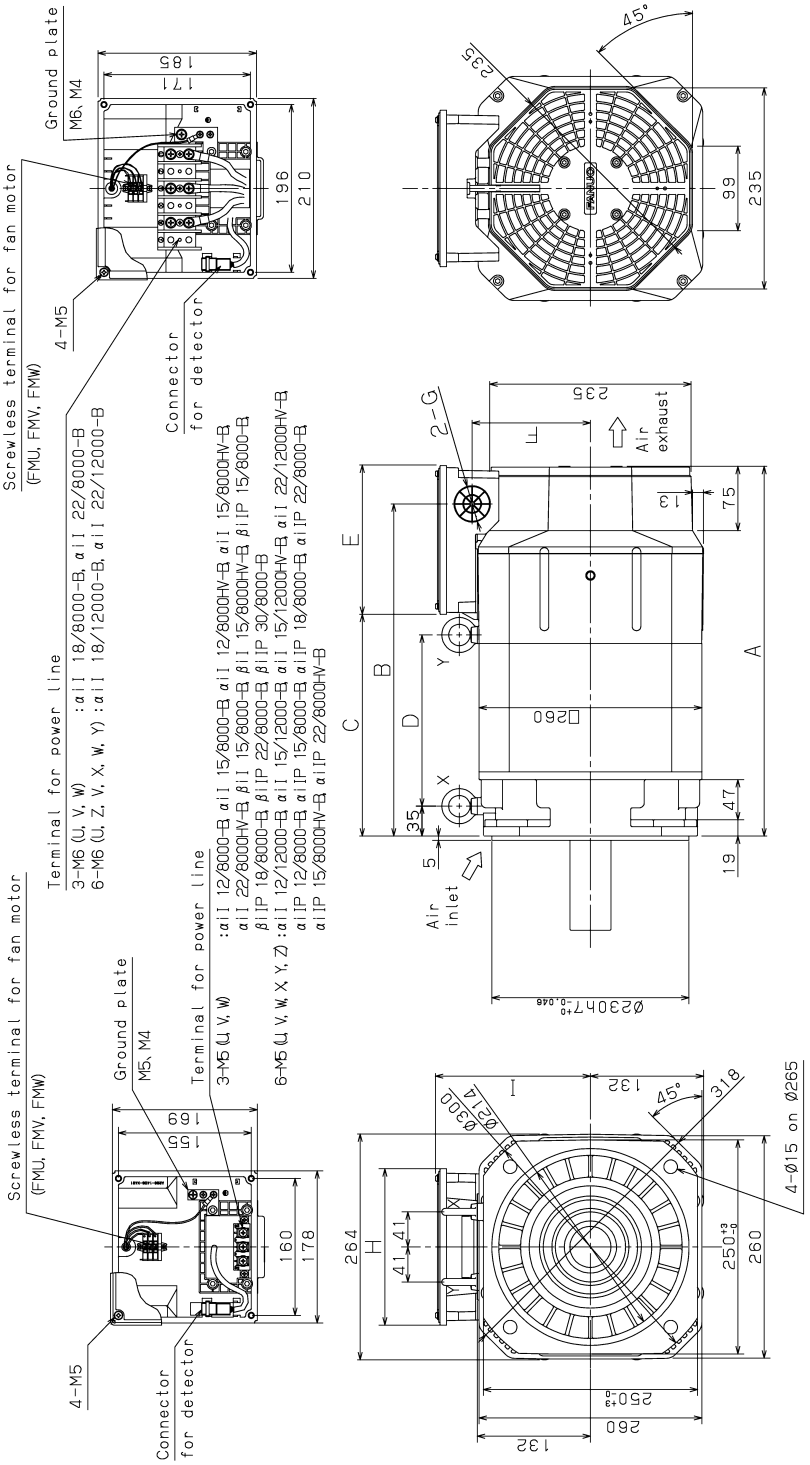
⚠ CAUTION
Values in parentheses represent the assembling accuracies of high-precision models.(There is no high-precision models in βi-B series)

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3.3.5 Models αiI 12/8000-B to αiI 22/8000-B, αiI 12/12000-B to αiI 22/12000-B, αiI 12/8000HV-B to αiI 22/8000HV-B, αiI 12/12000HV-B to αiI 22/12000HV-B, αiIP 12/8000-B to αiIP 22/8000-B, αiIP 15/8000HV-B to αiIP 22/8000HV-B, βiI 15/8000-B, βiI 15/8000HV-B, βiIP 15/8000-B to βiIP 30/8000-B

3.3.5.1 External dimensions

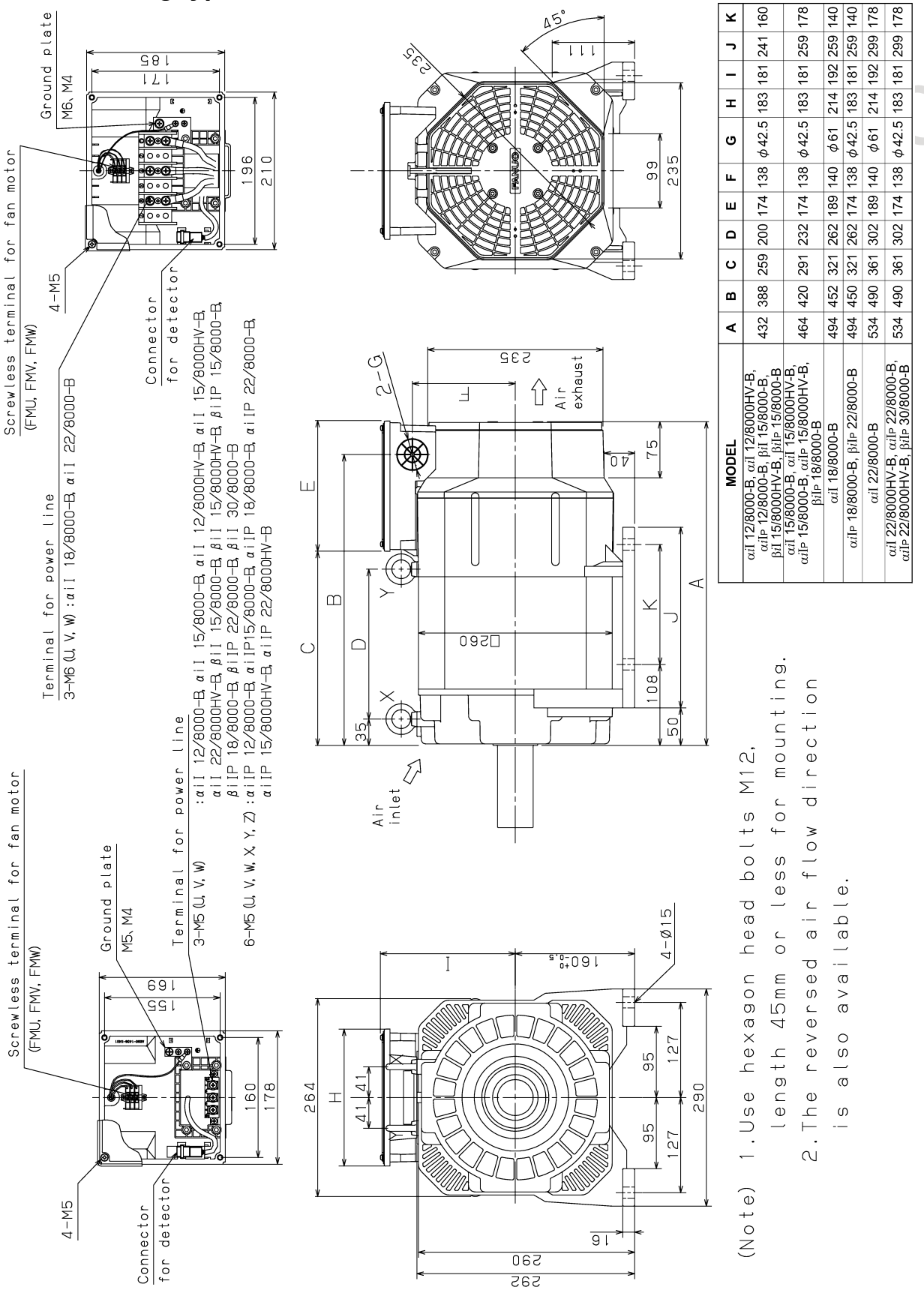
(1) Flange mounting type



MODEL	A	B	C	D	E	F	G	H	I
αiI 12/8000-B, αiI 12/12000-B, αiI 12/8000HV-B, αiIP 12/8000-B, βiI 15/8000-B, βiI 15/8000HV-B, βiIP 15/8000-B	432	388	259	200	174	138	ϕ42.5	183	181
αiI 15/8000-B, αiI 15/12000-B, αiI 15/8000HV-B, αiI 15/8000HV-B, αiIP 15/8000-B, αiIP 15/8000HV-B, βiIP 18/8000-B	464	420	291	232	174	138	ϕ42.5	183	181
αiI 18/8000-B, αiI 18/12000-B	494	452	321	262	189	140	ϕ61	214	192
αiIP 18/8000-B, βiIP 22/8000-B	494	450	321	262	174	138	ϕ42.5	183	181
αiI 22/8000-B, αiI 22/12000-B	534	490	361	302	189	140	ϕ61	214	192
αiI 22/8000HV-B, αiI 22/12000HV-B, αiIP 22/8000-B, αiIP 22/8000HV-B, βiIP 30/8000-B	534	490	361	302	174	138	ϕ42.5	183	181

(Note) 1. Use hexagon head bolts M12, length 45mm or less for mounting.
2. The reversed air flow direction is also available.

(2) Foot mounting type



MODEL	A	B	C	D	E	F	G	H	I	J	K
αiI 12/8000-B, αiI 12/8000HV-B, αiIP 12/8000-B, βiI 15/8000-B, βiI 15/8000HV-B, βiIP 15/8000-B	432	388	259	200	174	138	ϕ42.5	183	181	241	160
αiI 15/8000-B, αiI 15/8000HV-B, αiIP 15/8000-B, αiP 15/8000HV-B, βiIP 18/8000-B	464	420	291	232	174	138	ϕ42.5	183	181	259	178
αiI 18/8000-B	494	452	321	262	189	140	ϕ61	214	192	259	140
αiIP 18/8000-B, βiIP 22/8000-B	494	450	321	262	174	138	ϕ42.5	183	181	259	140
αiI 22/8000-B	534	490	361	302	189	140	ϕ61	214	192	299	178
αiI 22/8000HV-B, αiIP 22/8000-B, αiIP 22/8000HV-B, βiIP 30/8000-B	534	490	361	302	174	138	ϕ42.5	183	181	299	178

(Note) 1. Use hexagon head bolts M12, length 45mm or less for mounting.
2. The reversed air flow direction is also available.

3.3.5.2 Shaft figure

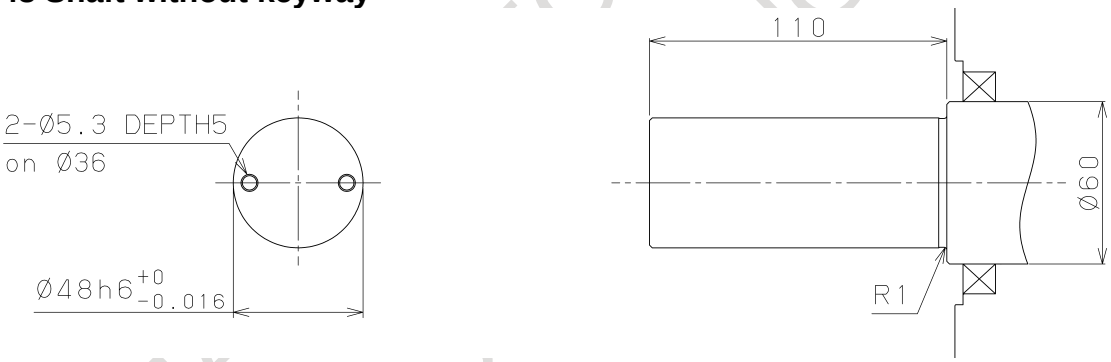
(1) Shaft figure types

The shaft figure for each motor is as given below.

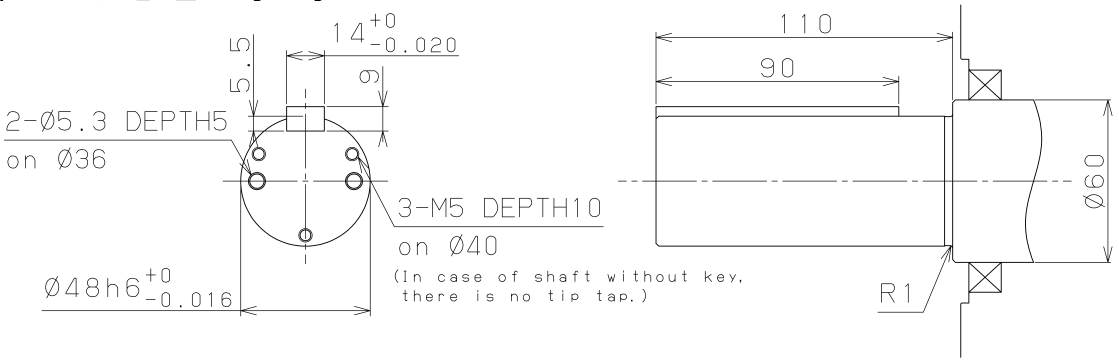
Model	Shaft without keyway		Shaft with keyway	
	Shaft diameter	Details	Shaft diameter	Details
αiI 12/8000-B, αiI 12/12000-B, αiI 15/8000-B, αiI 15/12000-B, αiI 12/8000HV-B, αiI 15/8000HV-B, αiI 15/12000HV-B, αiIP 12/8000-B, αiIP 15/8000-B, αiIP 15/8000HV-B, βiI 15/8000-B, βiI 15/8000HV-B, βiIP 15/8000-B, βiIP 18/8000-B	ϕ48	(2) (a)	ϕ48	(2) (b)
αiI 18/8000-B, αiI 18/12000-B, αiI 22/8000-B, αiI 22/12000-B, αiI 22/8000HV-B, αiI 22/12000HV-B αiIP 18/8000-B, αiIP 22/8000-B, αiIP 22/8000HV-B, βiIP 22/8000-B, βiIP 30/8000-B	ϕ55	(2) (c)	ϕ55	(2) (d)

(2) Shaft details

(a) ϕ48 Shaft without keyway

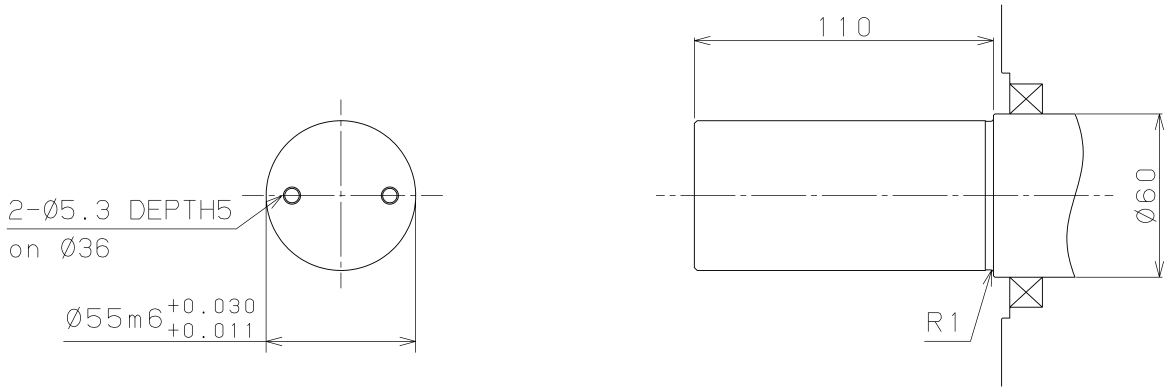


(b) ϕ48 Shaft with keyway

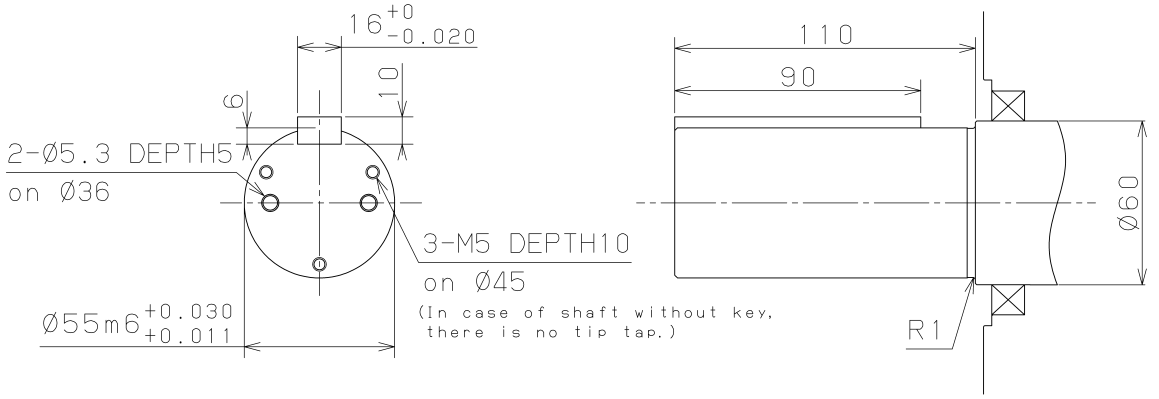


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(c) ϕ55 Shaft without keyway



(d) ϕ55 Shaft with keyway



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3.3.5.3 Allowable radial load

Use the motor output shaft below the allowable radial loads shown in the table below.

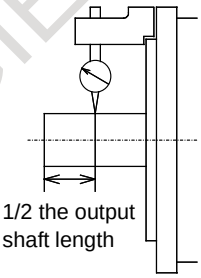
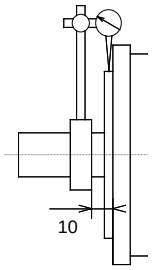
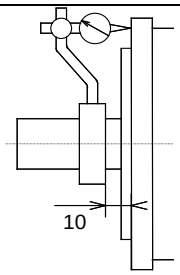
Model	Allowable radial load	
	At output shaft end	At output shaft center
αiI 12/8000-B, αiI 15/8000-B, αiI 12/8000HV-B, αiI 15/8000HV-B, αiIP 12/8000-B, αiIP 15/8000-B, αiIP 15/8000HV-B, βiI 15/8000-B, βiI 15/8000HV-B, βiIP 15/8000-B, βiIP 18/8000-B	2940N (300kgf)	3410N (348kgf)
αiI 18/8000-B, αiI 22/8000-B, αiI 22/8000HV-B, αiIP 18/8000-B, αiIP 22/8000-B, αiIP 22/8000HV-B, βiIP 22/8000-B, βiIP 30/8000-B	4410N (450kgf)	4988N (509kgf)
αiI 12/12000-B, αiI 15/12000-B, αiI 15/12000HV-B	2450N (250kgf)	2842N (290kgf)
αiI 18/12000-B, αiI 22/12000-B, αiI 22/12000HV-B	2940N (300kgf)	3332N (340kgf)

NOTE
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.
3 If a thrust load is applied when a helical gear or coupling is mounted, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

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3.3.5.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item \ Model	αiI 12/8000-B to αiI 22/8000-B, αiI 12/12000-B to αiI 22/12000-B, αiI 12/8000HV-B to αiI 22/8000HV-B, αiI 15/12000HV-B, αiI 22/12000HV-B, αiIP 12/8000-B to αiIP 22/8000-B, αiIP 15/8000HV-B, αiIP 22/8000HV-B βiI 15/8000-B, βiI 15/8000HV-B, βiIP 15/8000-B to βiIP 30/8000-B	αiI 12/12000HV-B	Measuring method
Shaft run-out	20μm or less (10μm or less)	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft (only for flange type)	40μm or less (30μm or less)	30μm or less	
Run-out of the flange mounting surface against the core of the shaft (only for flange type)	80μm or less (40μm or less)	40μm or less	

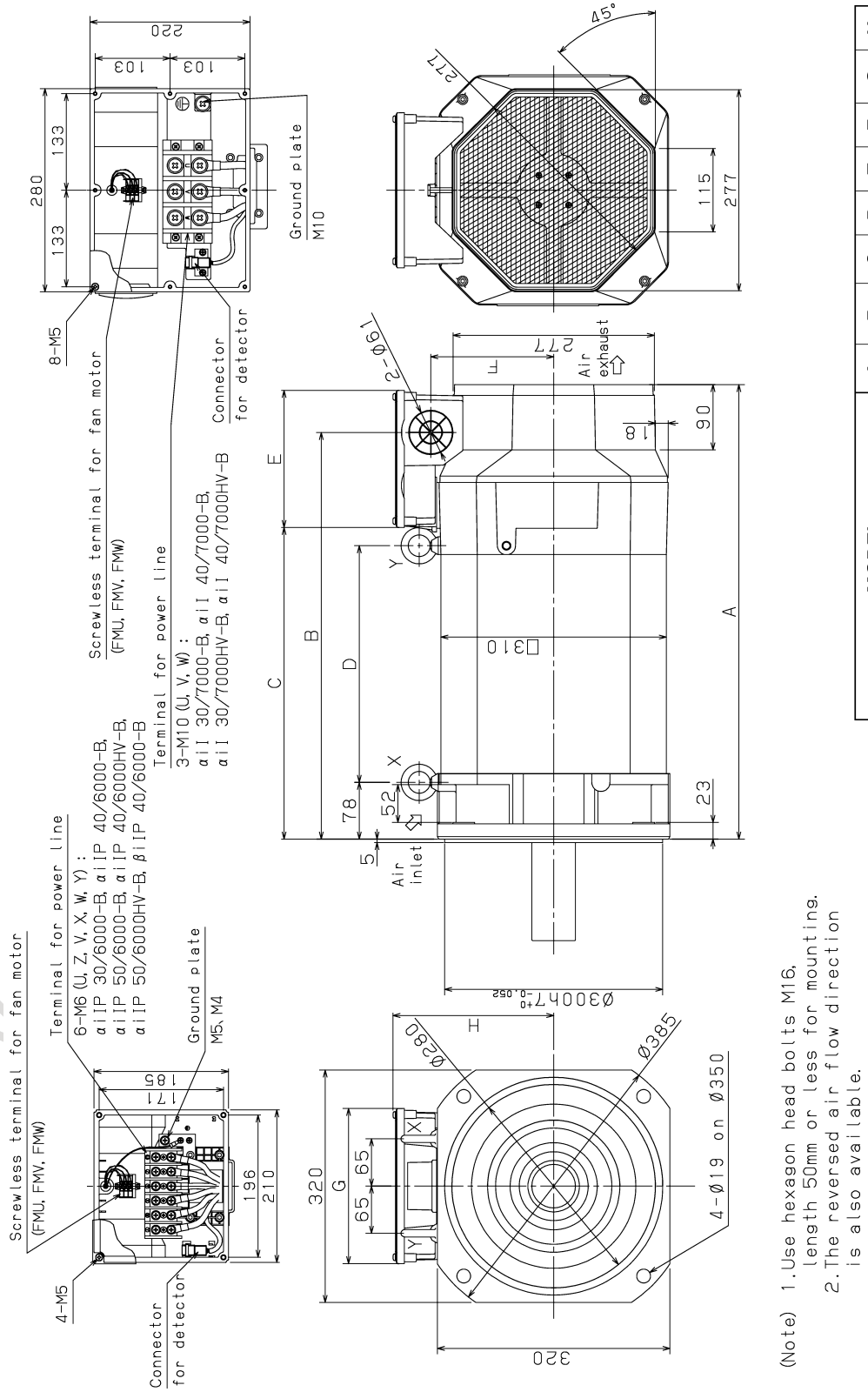
⚠ CAUTION
Values in parentheses represent the assembling accuracies of high-precision models.(There is no high-precision models in βi-B series)

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3.3.6 Models αiI 30/7000-B, αiI 40/7000-B, αiI 30/7000HV-B, αiI 40/7000HV-B, αiIP 30/6000-B to αiIP 50/6000-B, αiIP 40/6000HV-B, αiIP 50/6000HV-B, βiIP 40/6000-B

3.3.6.1 External dimensions

(1) Flange mounting type

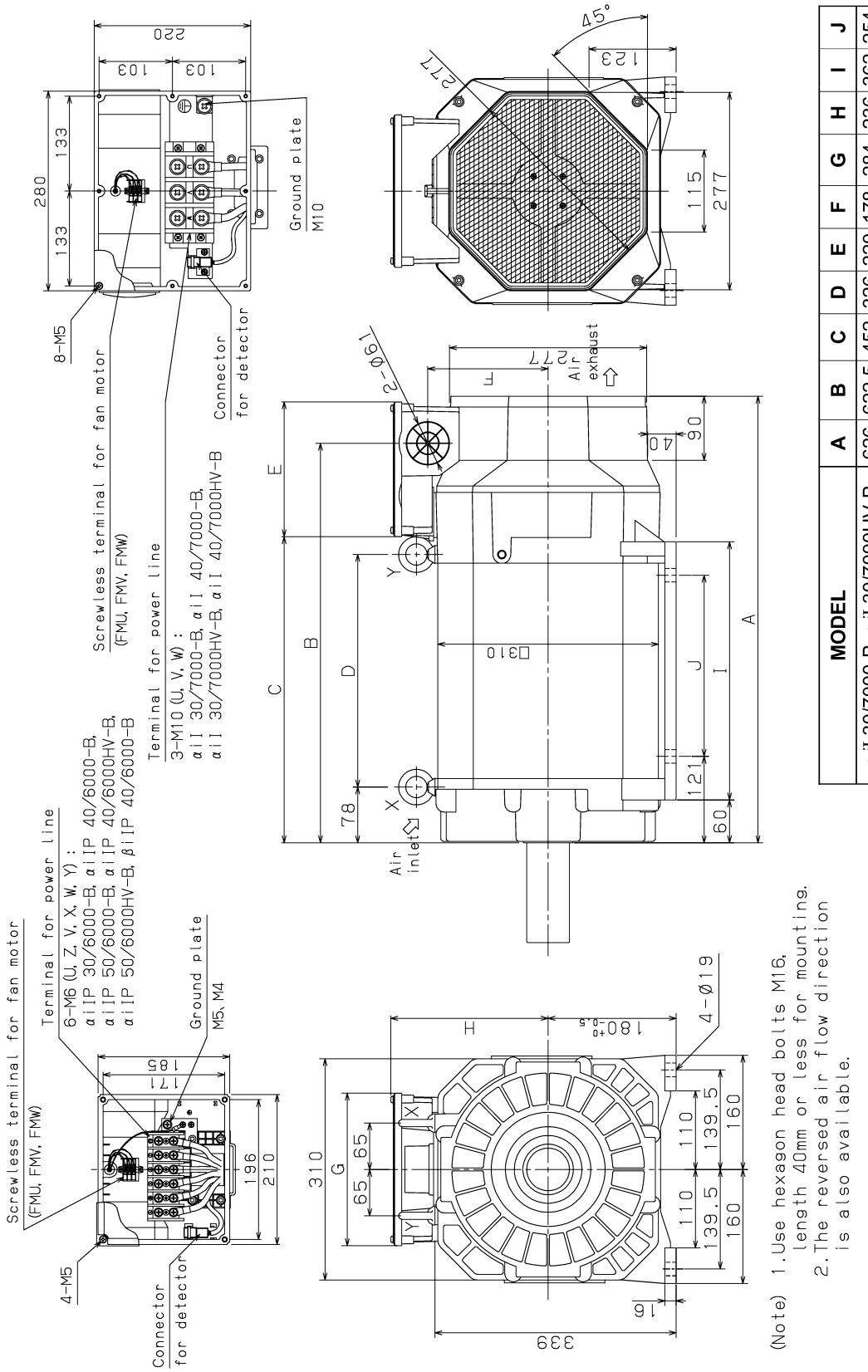


MODEL	A	B	C	D	E	F	G	H
αiI 30/7000-B, αiI 30/7000HV-B	626	622.5	452	326	220	178	284	236
αiIP 30/6000-B,αiIP 40/6000-B, αiIP 40/6000HV-B, βiIP 40/6000-B	626	560	429	326	189	169	214	221
αiI 40/7000-B, αiI 40/7000HV-B	686	682.5	512	386	220	178	284	236
αiIP 50/6000-B	686	620	489	386	189	169	214	221

(Note) 1. Use hexagon head bolts M16, length 50mm or less for mounting.
2. The reversed air flow direction is also available.

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(2) Foot mounting type



MODEL	A	B	C	D	E	F	G	H	I	J
αiI 30/7000-B, αiI 30/7000HV-B	626	622.5	452	326	220	178	284	236	362	254
αiIP 30/6000-B,αiIP 40/6000-B, αiIP 40/6000HV-B, βiIP 40/6000-B	626	560	429	326	189	169	214	221	362	254
αiI 40/7000-B, αiI 40/7000HV-B	686	682.5	512	386	220	178	284	236	422	254
αiIP 50/6000-B	686	620	489	386	189	169	214	221	422	254

(Note) 1. Use hexagon head bolts M16, length 40mm or less for mounting.
2. The reversed air flow direction is also available.

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3.3.6.2 Shaft figure

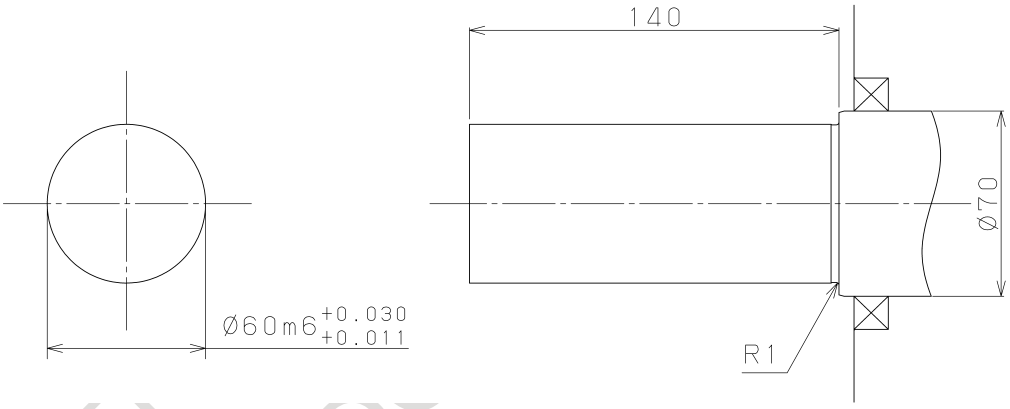
(1) Shaft figure types

The shaft figure for each motor is as given below.

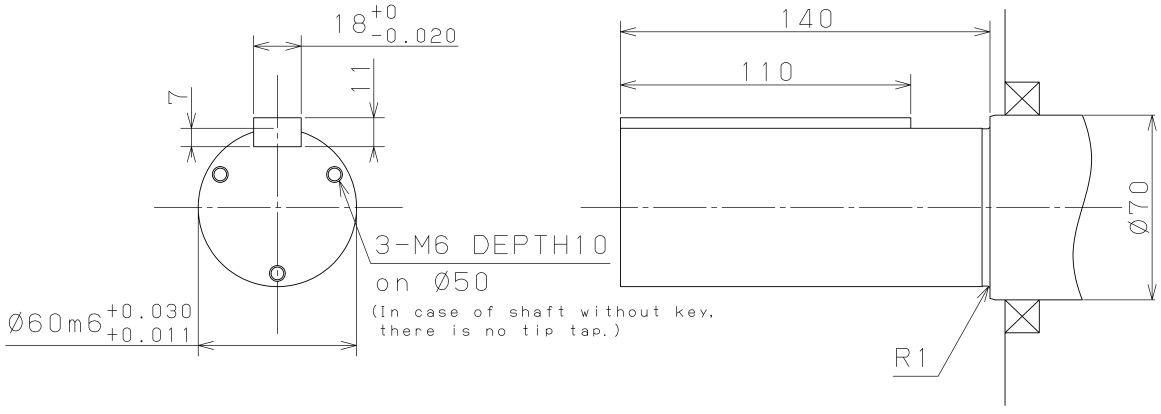
Model	Shaft without keyway		Shaft with keyway	
	Shaft diameter	Details	Shaft diameter	Details
αiI 30/7000-B, αiI 40/7000-B, αiI 30/7000HV-B, αiI 40/7000HV-B, αiIP 30/6000-B, αiIP 40/6000-B, αiIP 50/6000-B, αiIP 40/6000HV-B, αiIP 50/6000HV-B, βiIP 40/6000-B	ϕ60	(2) (a)	ϕ60	(2) (b)

(2) Shaft details

(a) ϕ60 Shaft without keyway



(b) ϕ60 Shaft with keyway



3.3.6.3 Allowable radial load

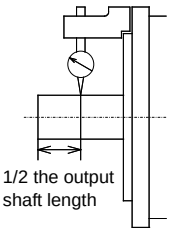
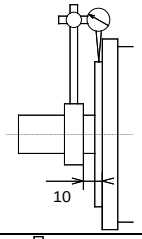
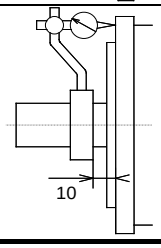
Use the motor output shaft below the allowable radial loads shown in the table below.

Model	Allowable radial load	
	At output shaft end	At output shaft center
αiI 30/7000-B, αiI 40/7000-B, αiI 30/7000HV-B, αiI 40/7000HV-B, αiIP 30/6000-B, αiIP 40/6000-B, αiIP 50/6000-B, αiIP 40/6000HV-B, αiIP 50/6000HV-B, βiIP 40/6000-B	5390N (550kgf)	6134N (626kgf)

NOTE
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.
3 If a thrust load is applied when a helical gear or coupling is mounted, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

3.3.6.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item	Accuracy	Measuring method
Shaft run-out	20μm or less (10μm or less)	
Run-out of the faucet joint for mounting the flange against the core of the shaft (only for flange type)	40μm or less (30μm or less)	
Run-out of the flange mounting surface against the core of the shaft (only for flange type)	80μm or less (40μm or less)	

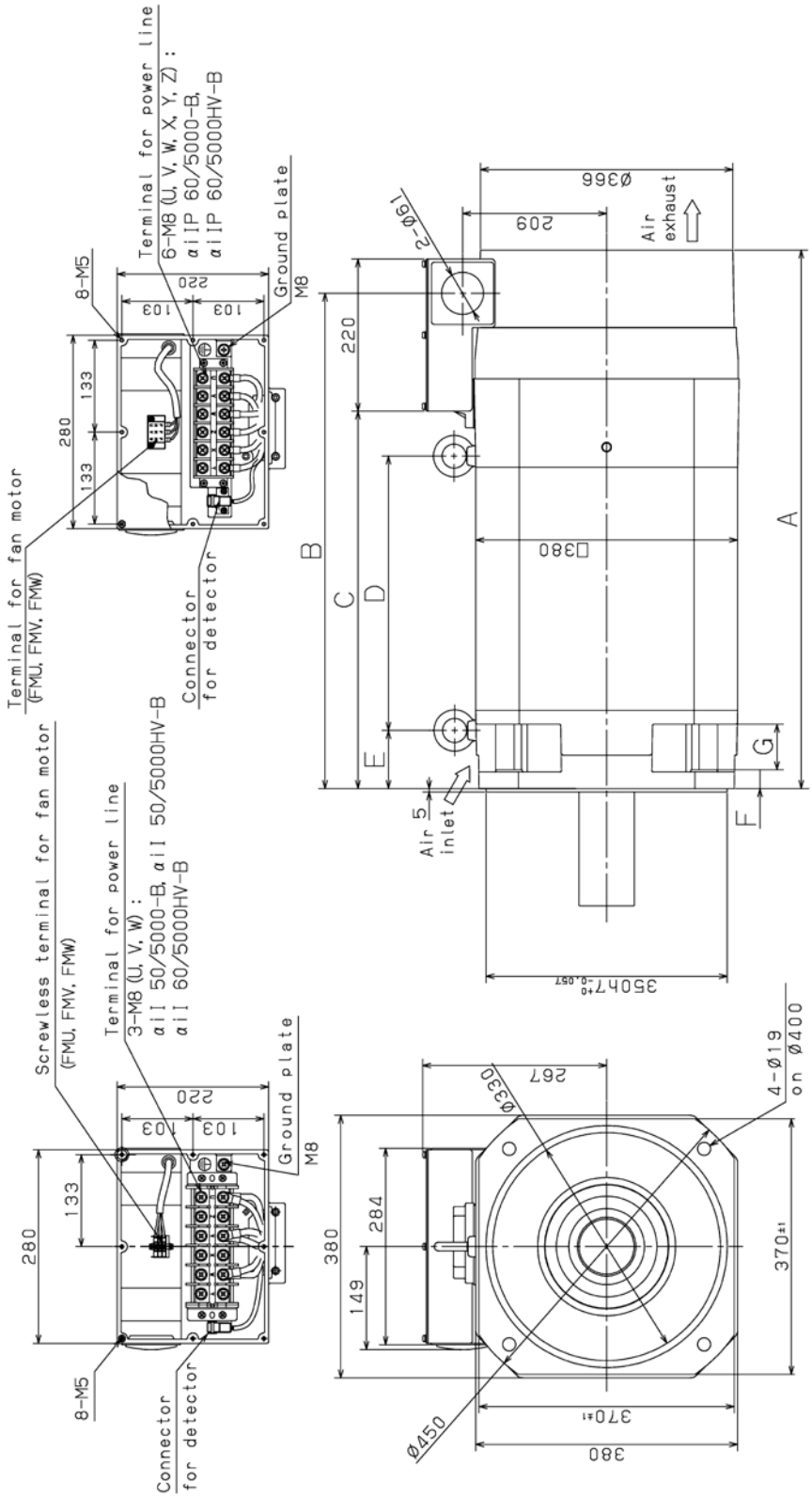
⚠ CAUTION
Values in parentheses represent the assembling accuracies of high-precision models.(There is no high-precision models in βi-B series)

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3.3.7 Models αiI 50/5000-B, αiI 50/5000HV-B, αiI60/5000HV-B, αiI 75/5000HV-B, αiI 100/5000HV-B, αiI 150/5000HV-B, αiIP 60/5000-B, αiIP 60/5000HV-B

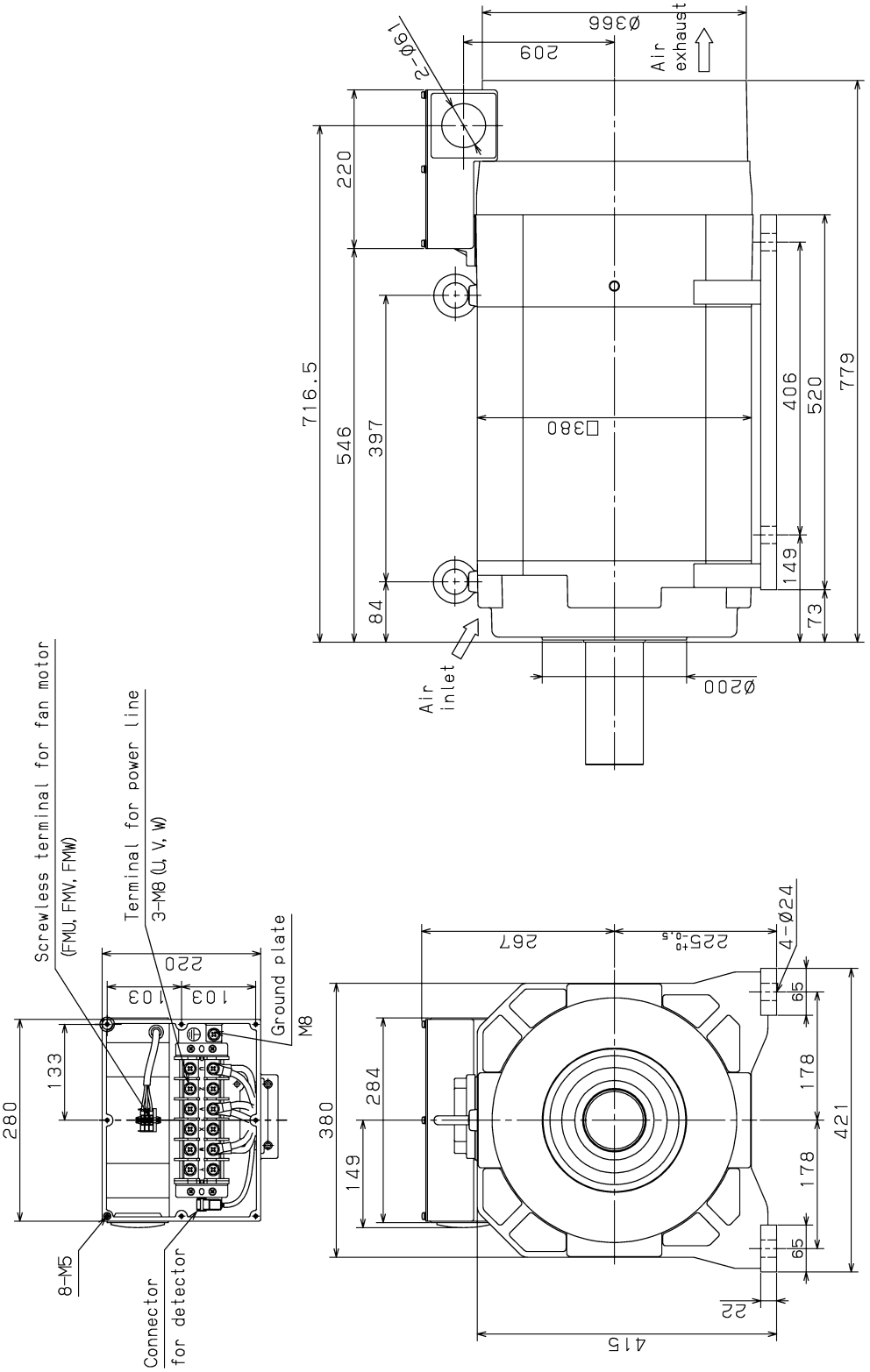
3.3.7.1 External dimensions

(1) Flange mounting type



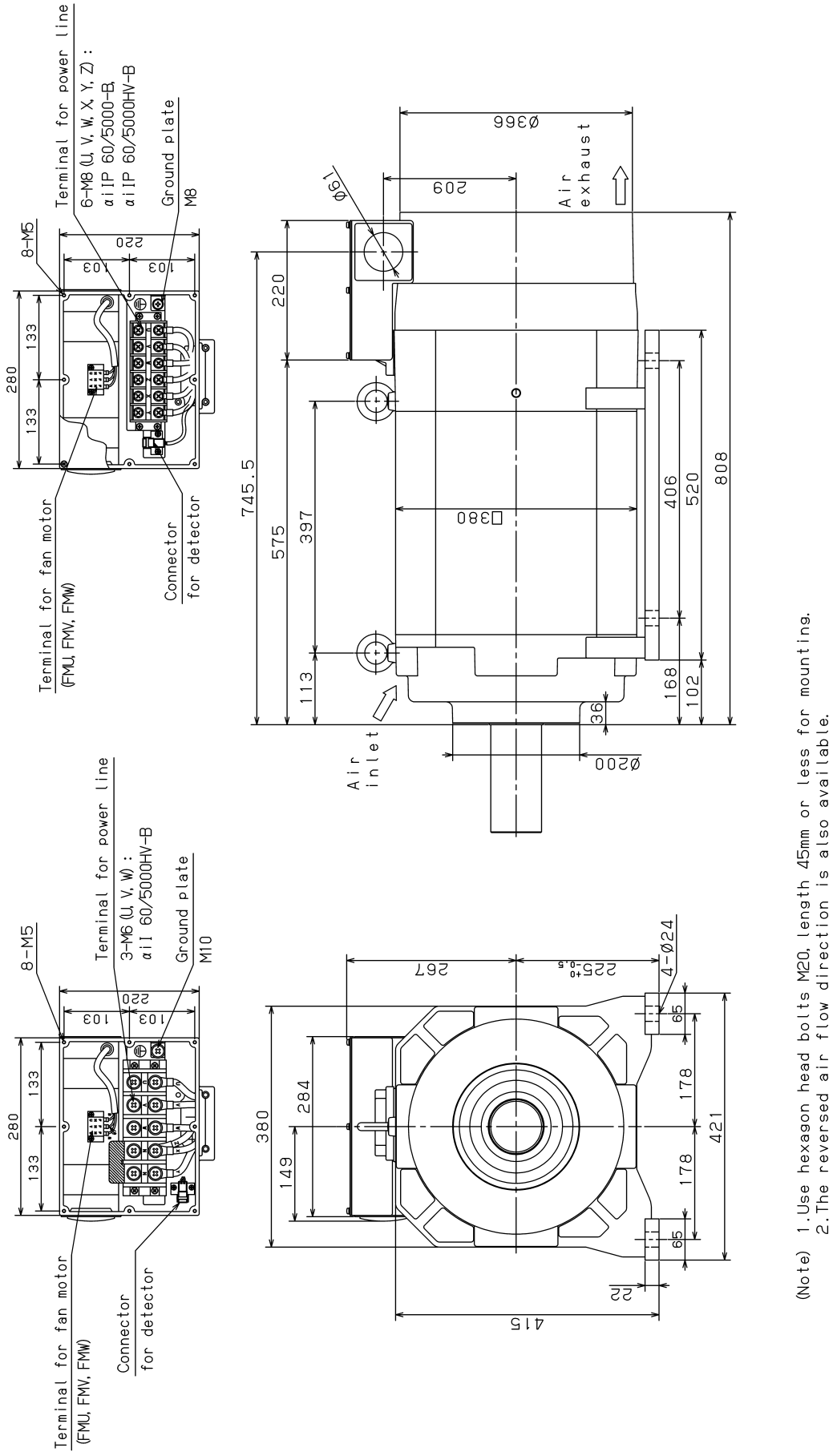
MODEL	A	B	C	D	E	F	G
αiI 50/5000-B, αiI 50/5000HV-B	779	716.5	546	397	84	27	66
αiI 60/5000-B,αiIP 60/5000-B, αiIP 60/5000HV-B	808	745.5	575	397	113	32	73

(2) Foot mounting type (αiI 50/5000-B, αiI 50/5000HV-B)



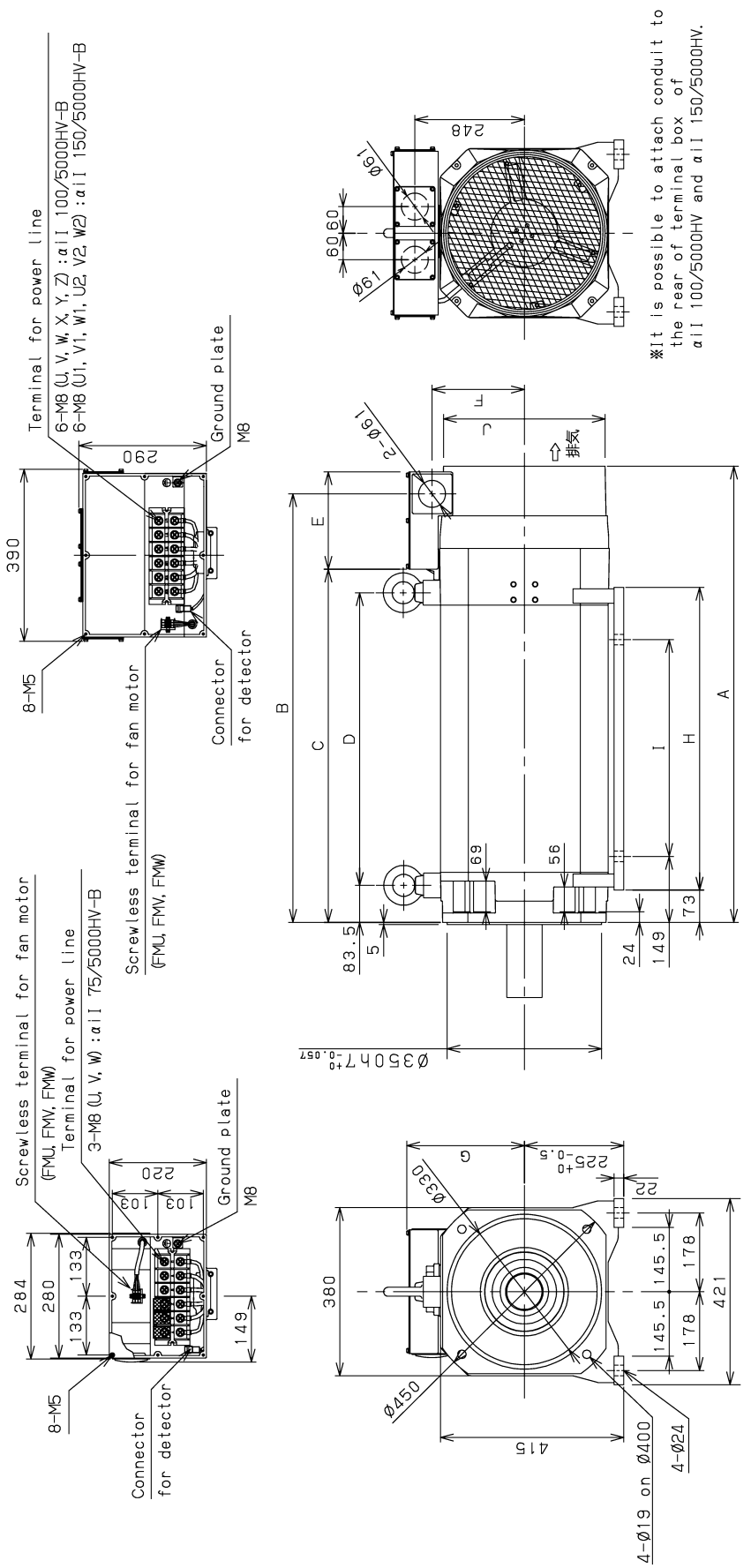
(Note) 1.Use hexagon head bolts M20, length 45mm or less for mounting.
2.The reversed air flow direction is also available.

(3) Foot mounting type (αiI 60/5000HV-B, αiIP 60/5000-B, αiIP 60/5000HV-B)



(Note) 1. Use hexagon head bolts M20, length 45mm or less for mounting.
2. The reversed air flow direction is also available.

(4) Foot flange mounting type



MODEL	A	B	C	D	E	F	G	H	I	J
αiI 75/5000HV-B	1031	968.5	798	661.5	220	209	267	684	490	366
αiI 100/5000HV-B	1171	1153	938	801	290	248	303	824	630	366
αiI 150/5000HV-B	1232	1153	938	801	290	248	303	824	630	357

(Note) 1.Use hexagon head bolts M20, length 45mm or less for foot mounting.
2.Use hexagon head bolts M16, length 55mm or less for flange mounting.

3.3.7.2 Shaft figure

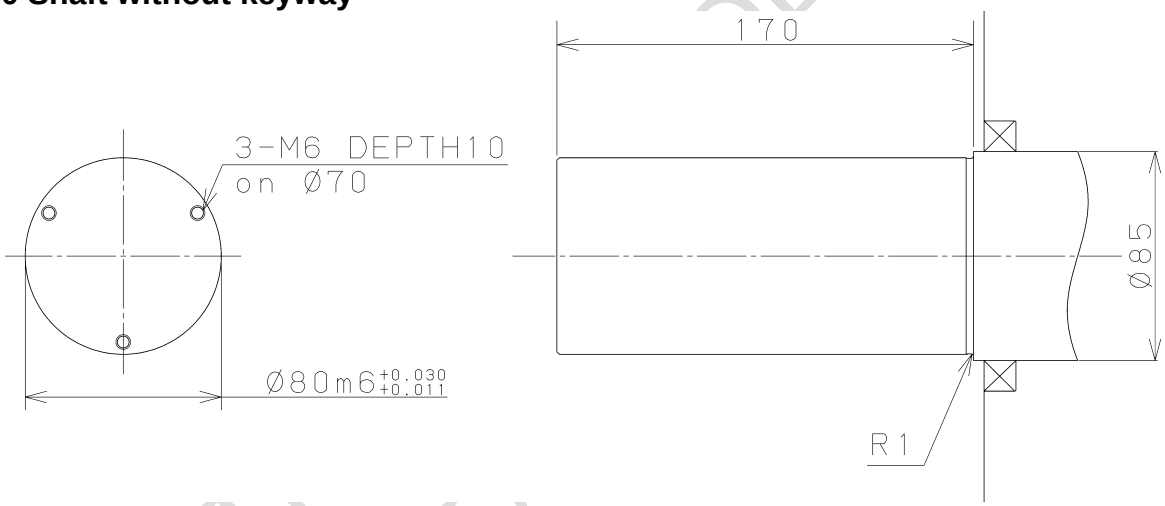
(1) Shaft figure types

The shaft figure for each motor is as given below.

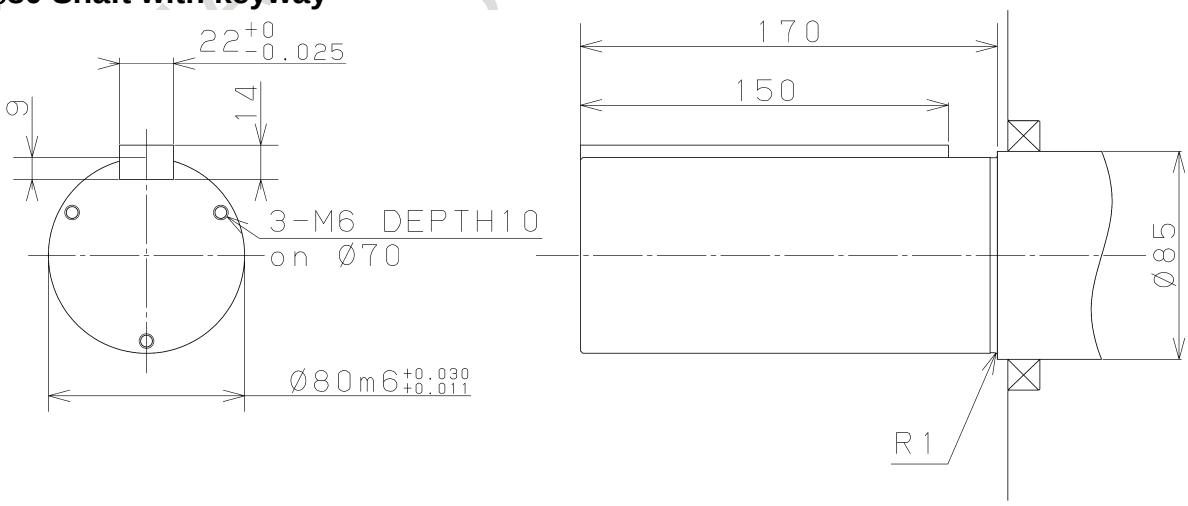
Model	Shaft without keyway		Shaft with keyway	
	Shaft	Details	Shaft	Details
αiI 50/5000-B, αiI 50/5000HV-B, αiI 60/5000HV-B, αiI 75/5000HV-B, αiI 100/5000HV-B, αiI 150/5000HV-B, αiIP 60/5000-B, αiIP 60/5000HV-B	ϕ80	(2) (a)	ϕ80	(2) (b)

(2) Shaft details

(a) ϕ80 Shaft without keyway



(b) ϕ80 Shaft with keyway



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3.3.7.3 Allowable radial load

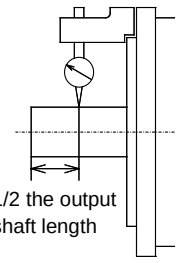
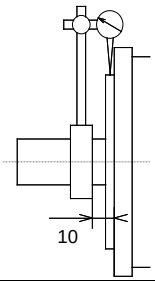
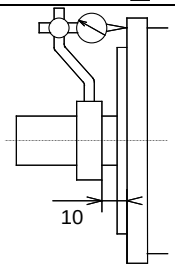
Use the motor output shaft below the allowable radial loads shown in the table below.

Model	Allowable radial load	
	At output shaft end	At output shaft center
αiI 50/5000-B, αiI 50/5000HV-B	10780N (1100kgf)	12300N (1255kgf)
αiI 60/5000HV-B, αiIP 60/5000-B, αiIP 60/5000HV-B	17250N (1760kgf)	19600N (2000kgf)
αiI 75/5000HV-B, αiI 100/5000HV-B, αiI 150/5000HV-B	8820N (900kgf)	9898N (1010kgf)

NOTE
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.
3 If a thrust load is applied when a helical gear or coupling is mounted, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

3.3.7.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item \ Model	αiI 50/5000-B, αiI 50/5000HV-B, αiI 60/5000HV-B, αiIP 60/5000-B, αiIP 60/5000HV-B	αiI 75/5000HV-B, αiI 100/5000HV-B, αiI 150/5000HV-B	Measuring method
Shaft run-out	20μm or less (10μm or less)	40μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft (only for flange type)	60μm or less (50μm or less)	200μm or less	
Run-out of the flange mounting surface against the core of the shaft (only for flange type)	100μm or less (70μm or less)	200μm or less	

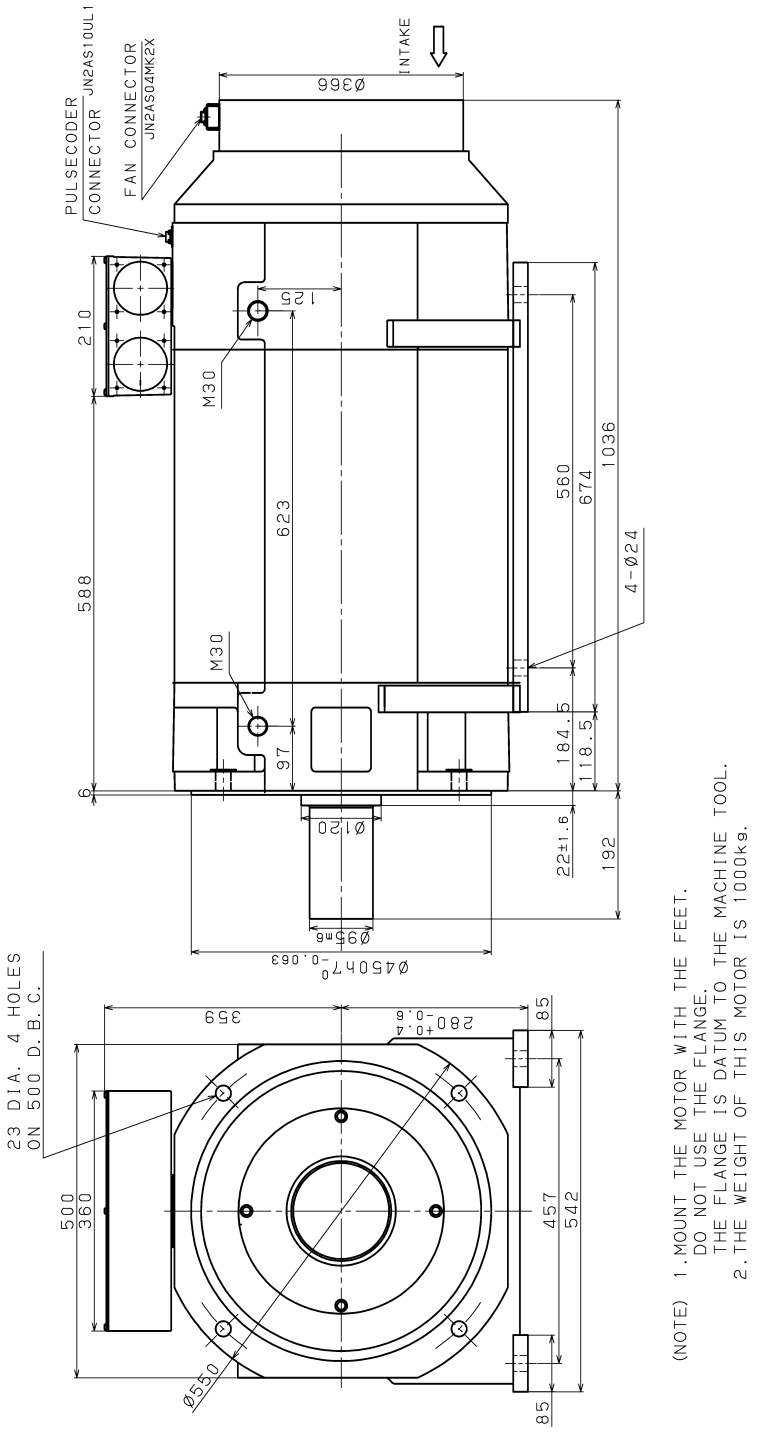
⚠ **CAUTION**
Values in parentheses represent the assembling accuracies of high-precision models.

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3.3.8 Model αiS 2000/2000HV-B

3.3.8.1 External dimensions

(1) Foot flange mounting type



1 The motor does not have any internal circuit breaker for protecting the fan. Prepare the circuit breaker in the power magnetics cabinet.
2 The motor cannot be mounted on the machine with just the flange. Mount the motor so that the shaft is placed horizontally and the foot is placed downward. Support the motor's own weight by securing the foot with bolts. Use the flange as the reference for aligning the motor with the machine.
3 For a mounting method other than the above, consult FANUC.

3.3.8.2 Shaft figure

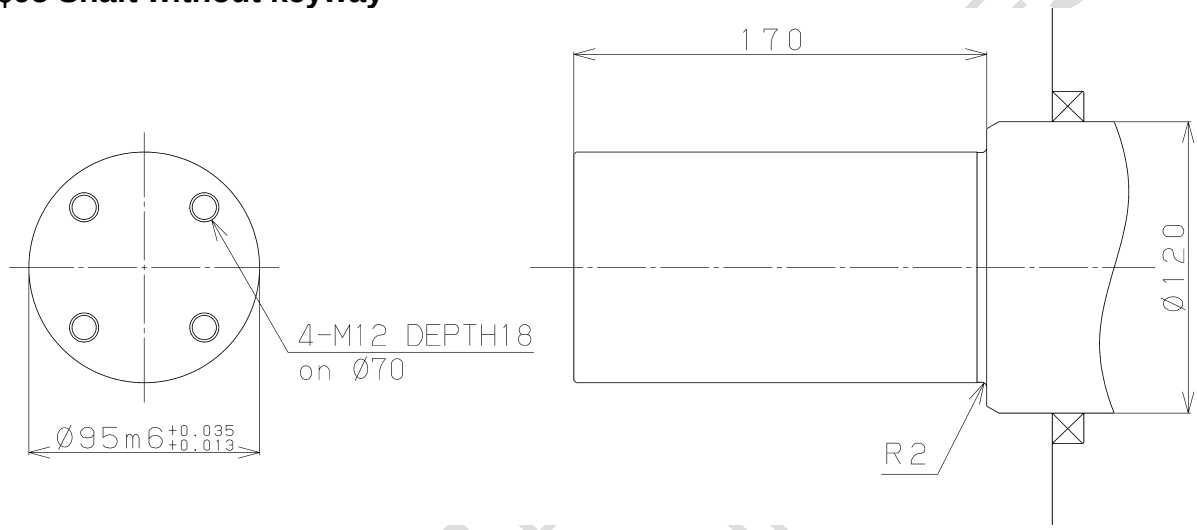
(1) Shaft figure types

The shaft figure for each motor is as given below.

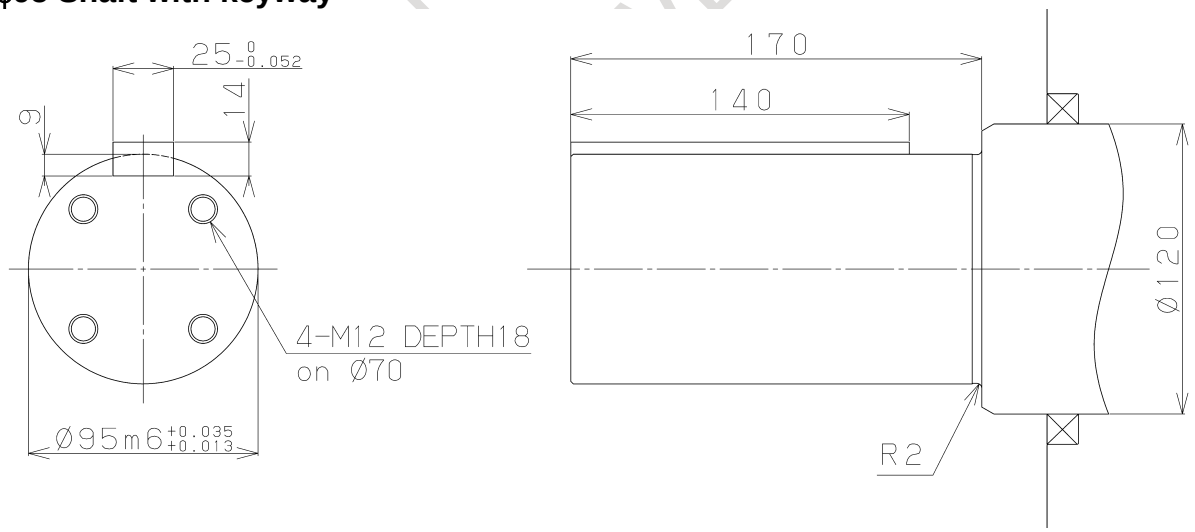
Model	Shaft without keyway		Shaft with keyway	
	Shaft	Details	Shaft	Details
αiS 2000/2000HV-B	ϕ95	(2) (a)	ϕ95	(2) (b)

(2) Shaft details

(a) ϕ95 Shaft without keyway



(b) ϕ95 Shaft with keyway



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3.3.8.3 Allowable radial load

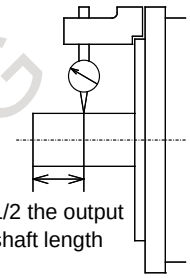
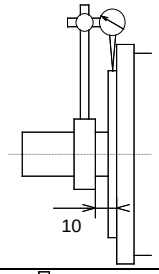
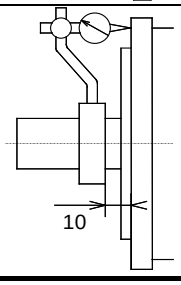
Use the motor output shaft below the allowable radial loads shown in the table below.

Model	Allowable radial load (At output shaft end)	Allowable axial load
αiS 2000/2000HV-B	8820N (900kgf)	1960N (200kgf)

NOTE
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.

3.3.8.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item	Accuracy	Measuring method
Shaft run-out	80μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft (only for flange type)	130μm or less	
Run-out of the flange mounting surface against the core of the shaft (only for flange type)	160μm or less	

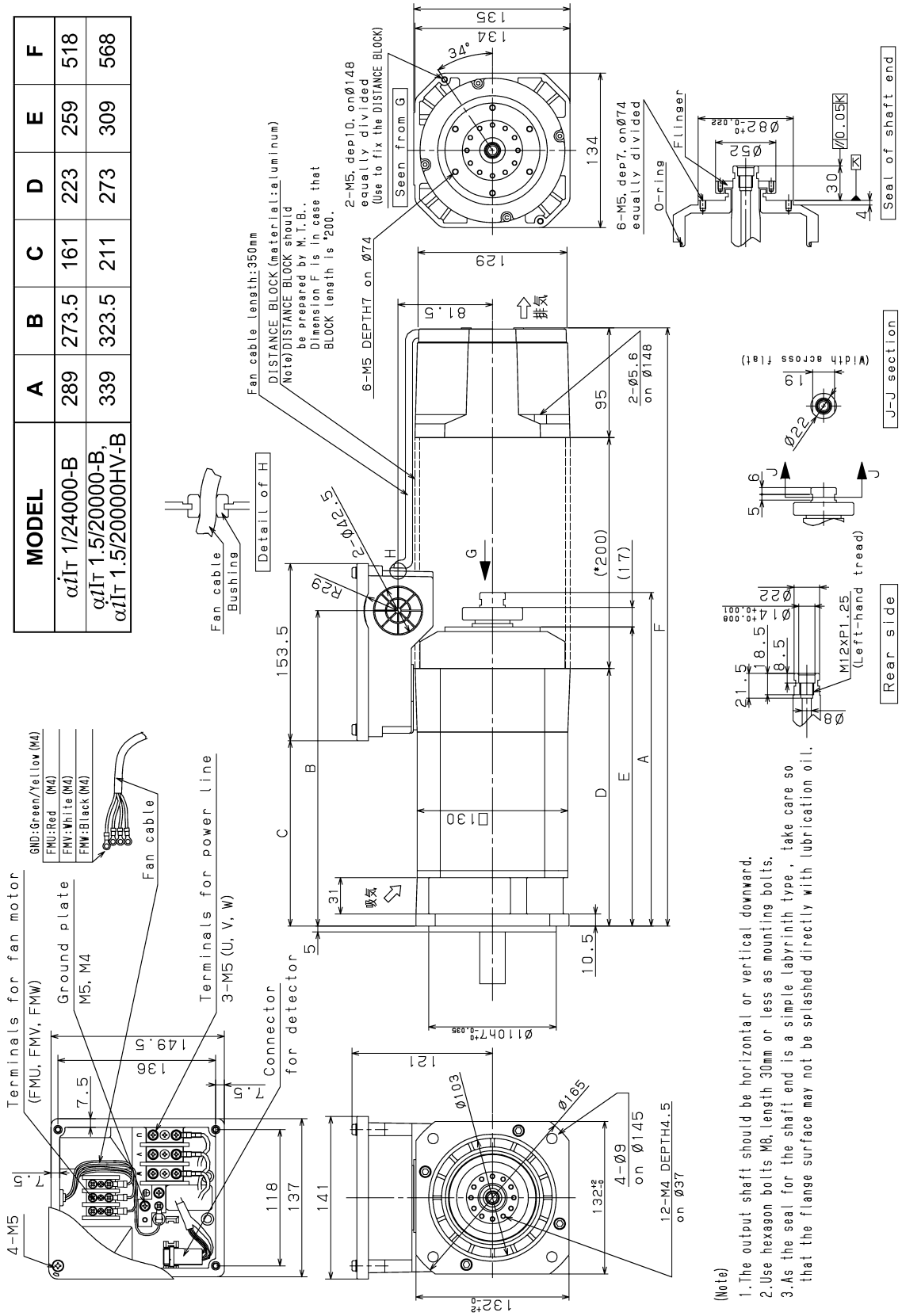
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3.3.9 Models αiIT 1/24000-B, αiIT 1.5/20000-B, αiIT 1.5/20000HV-B

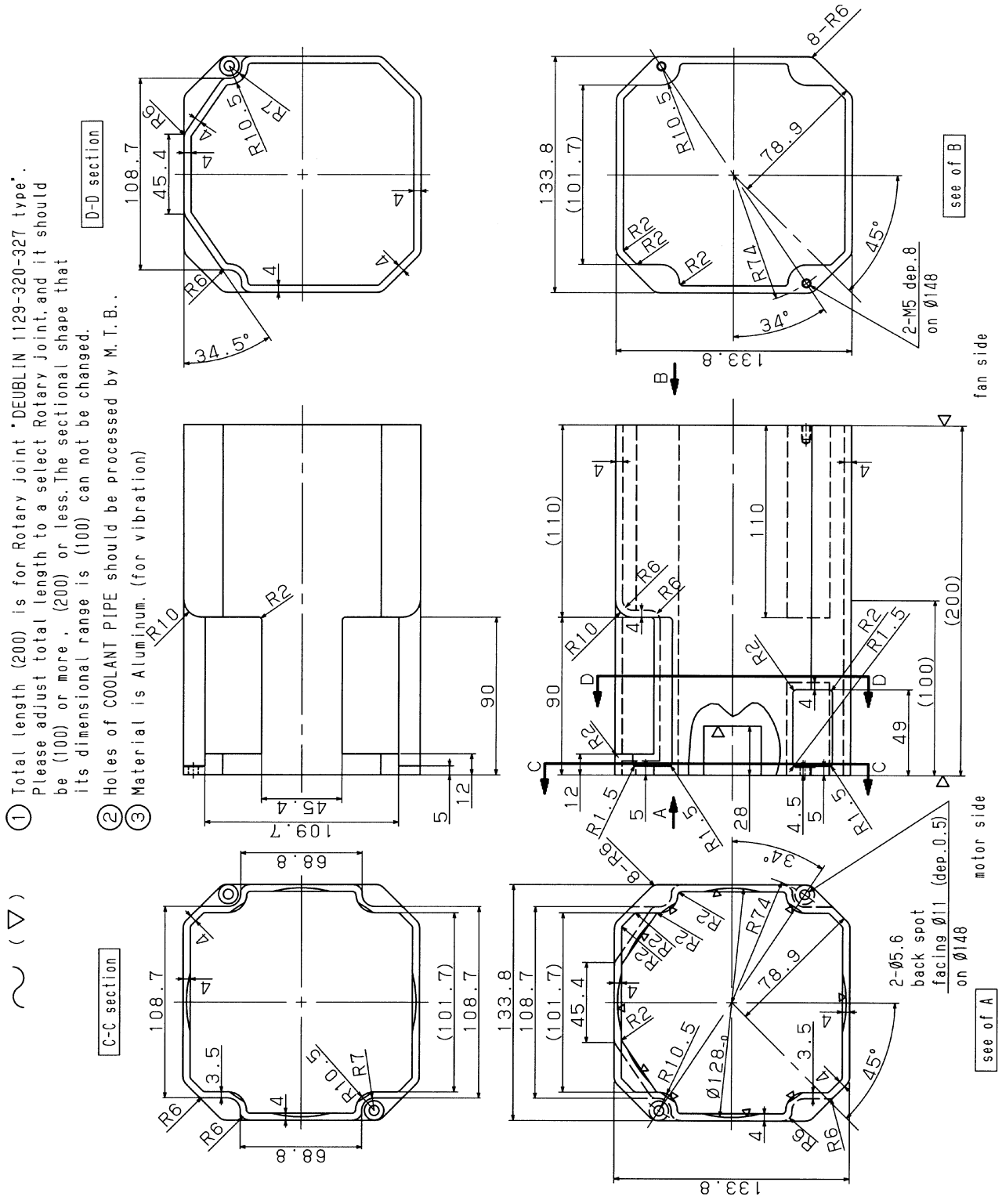
3.3.9.1 External dimensions

(1) Flange mounting type

MODEL	A	B	C	D	E	F
αiIT 1/24000-B	289	273.5	161	223	259	518
αiIT 1.5/20000-B, αiIT 1.5/20000HV-B	339	323.5	211	273	309	568



(2) Distance block type αiIT 1.5 (A06B-1463-K560)



3.3.9.2 Shaft figure

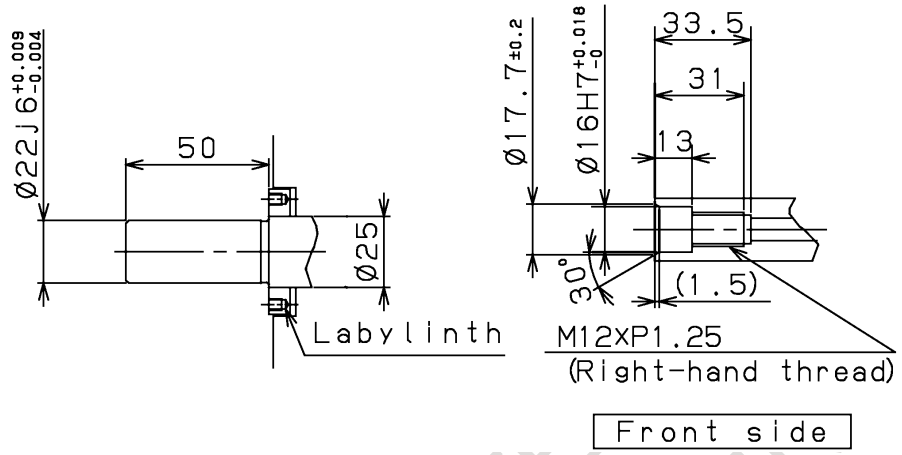
(1) Shaft figure types

The shaft figure for each motor is as given below.

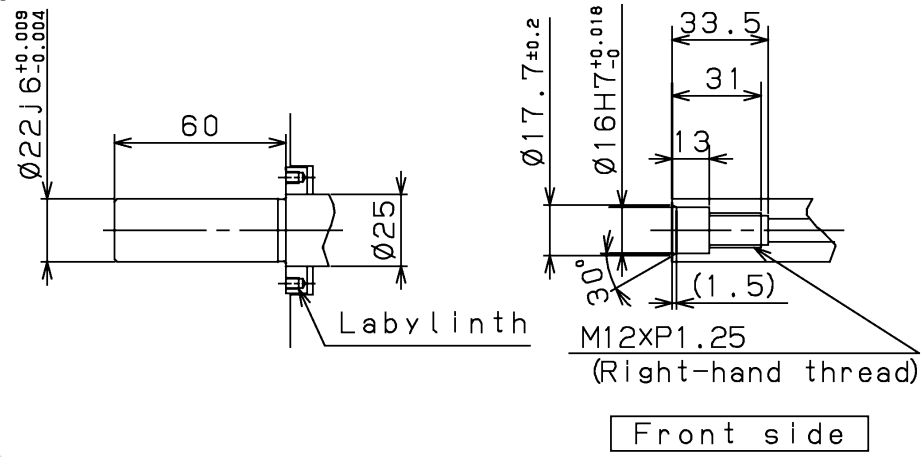
Model	Shaft without keyway	
	Shaft diameter	Details
αiIT 1/24000-B	ϕ22	(2) (a)
αiIT 1.5/20000-B, αiIT 1.5/20000HV-B	ϕ22	(2) (b)

(2) Shaft details

(a) ϕ22 hollow shaft without keyway



(b) ϕ22 hollow shaft without keyway



3.3.9.3 Allowable thrust load

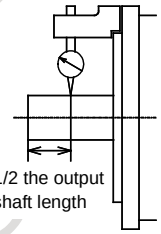
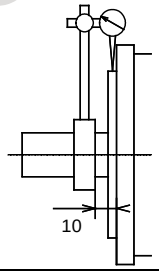
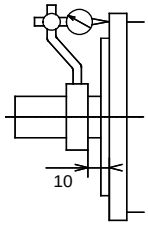
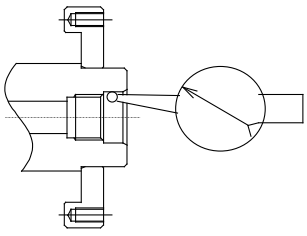
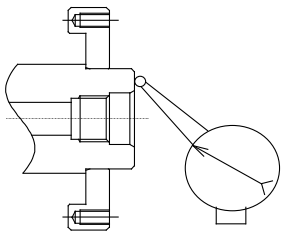
Use the motor so that the thrust load on the output shaft does not exceed the load listed in the table below. (Only in the direction in which the motor shaft is pressed forward)

Model	Allowable thrust load
αiI$_T$ 1/24000-B, αiI$_T$ 1.5/20000-B, αiI$_T$ 1.5/20000HV-B	58.8N (6kgf)

NOTE
1 Directly connect an αiI$_T$-B series spindle motor with the spindle so that no radial load is applied on the output shaft.

3.3.9.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item	Accuracy	Measuring method
Run-out at the end of the output shaft	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	30μm or less	
Run-out of the flange mounting surface against the core of the shaft	40μm or less	
Front shaft end through hole inlet Rear shaft end through hole inlet Run-out of socket and spigot joint	20μm or less	
Run-out of front shaft end face Run-out of rear shaft end face	10μm or less	

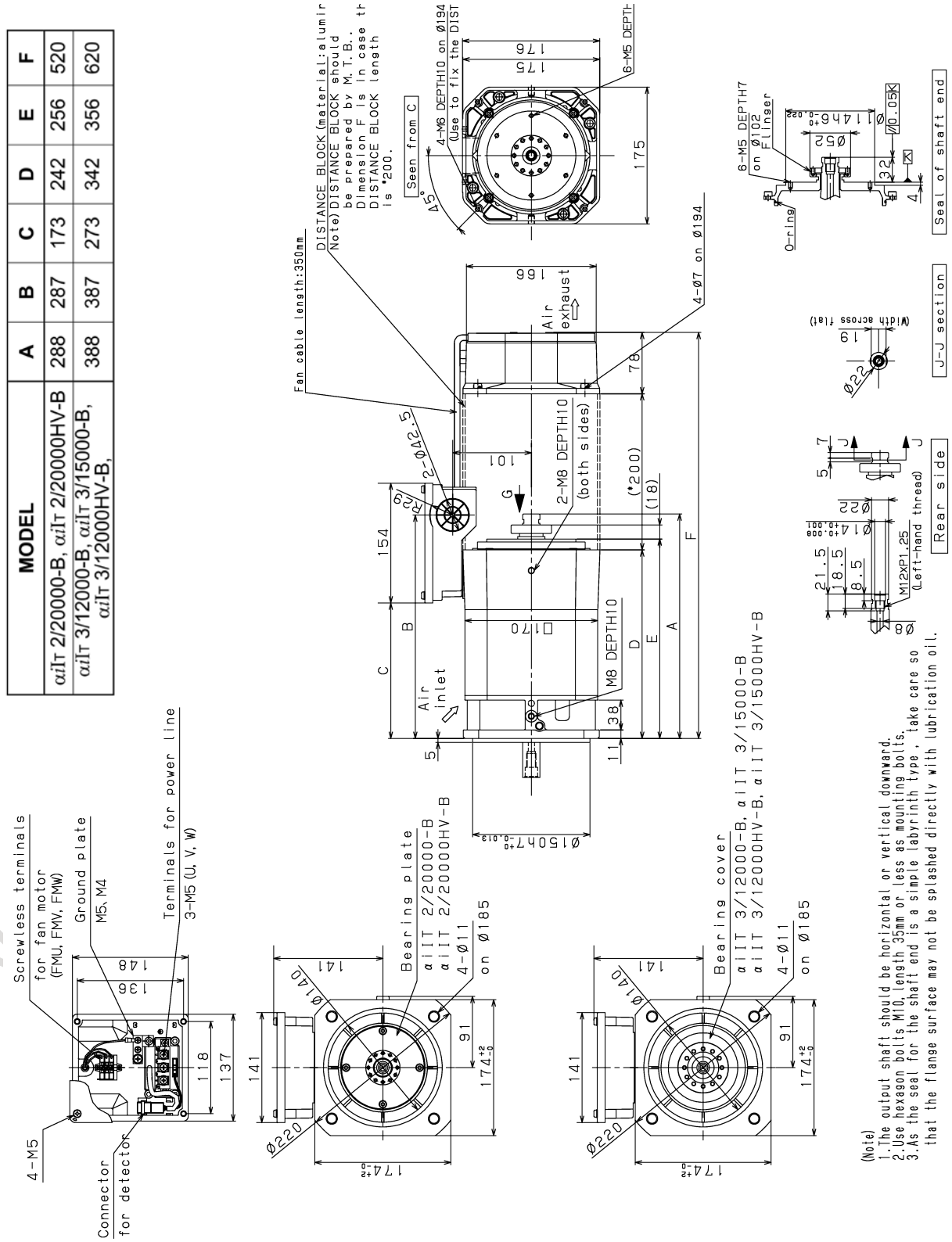
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3.3.10 Models αiIT 2/20000-B, αiIT 3/12000-B, αiIT 3/15000-B, αiIT 2/20000HV-B, αiIT 3/12000HV-B

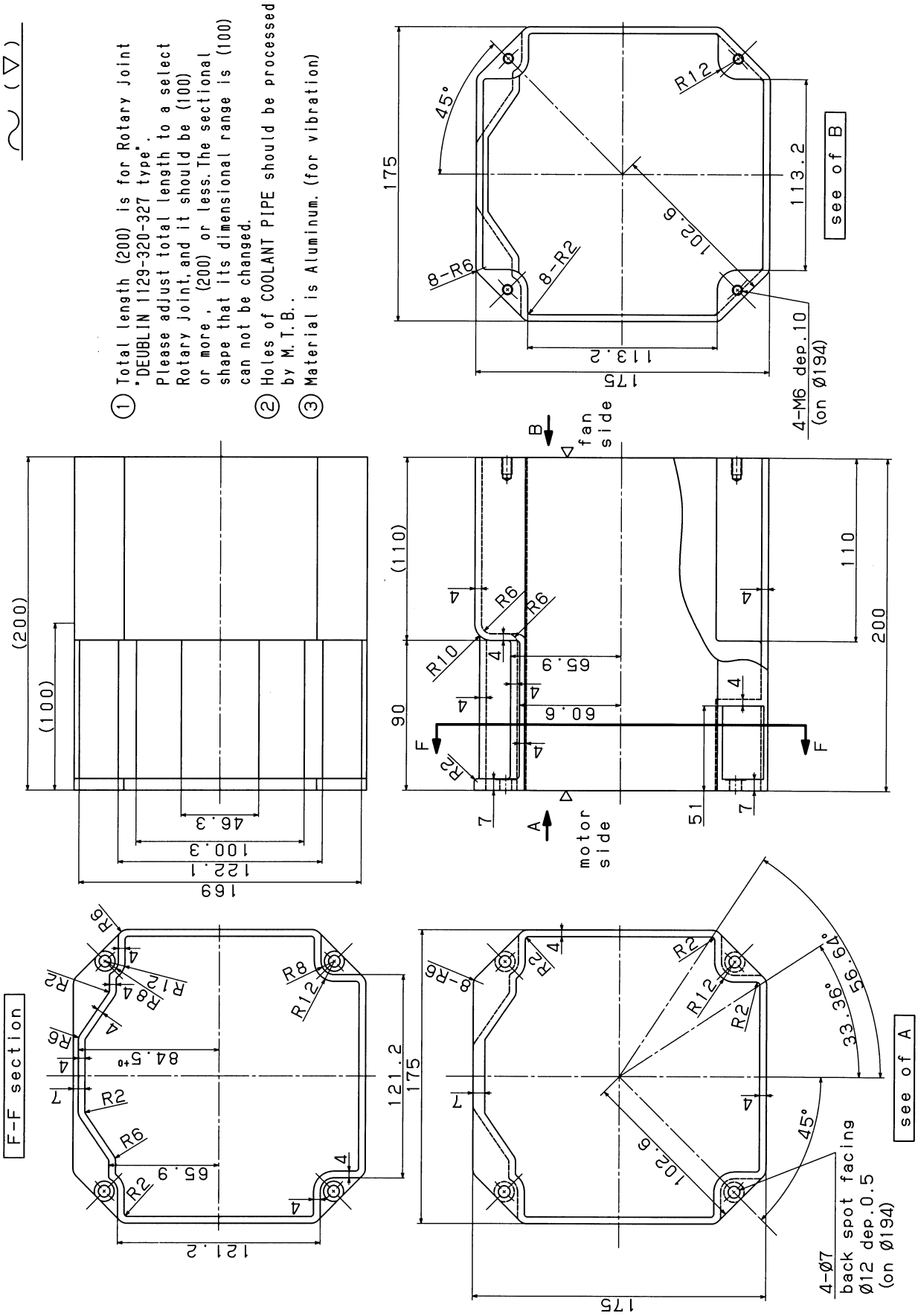
3.3.10.1 External dimensions

(1) Flange mounting type

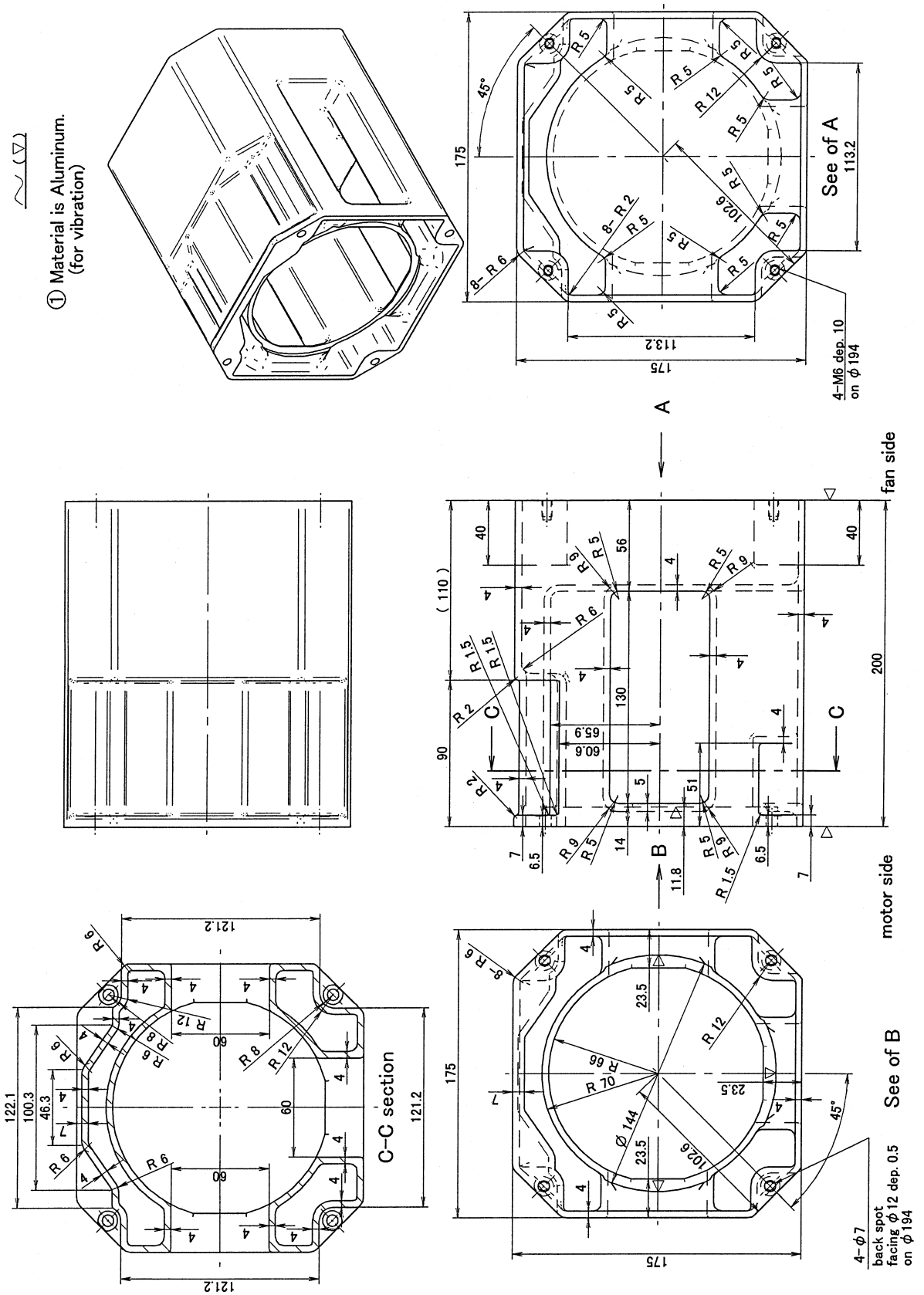
MODEL	A	B	C	D	E	F
αiIT 2/20000-B, αiIT 2/20000HV-B	288	287	173	242	256	520
αiIT 3/12000-B, αiIT 3/15000-B, αiIT 3/12000HV-B,	388	387	273	342	356	620



(2) Distance block type αiIT 2 (A06B-1464-K560)



(3) Distance block with windows type αiIT 2 (A06B-1464-K580)



3.3.10.2 Shaft figure

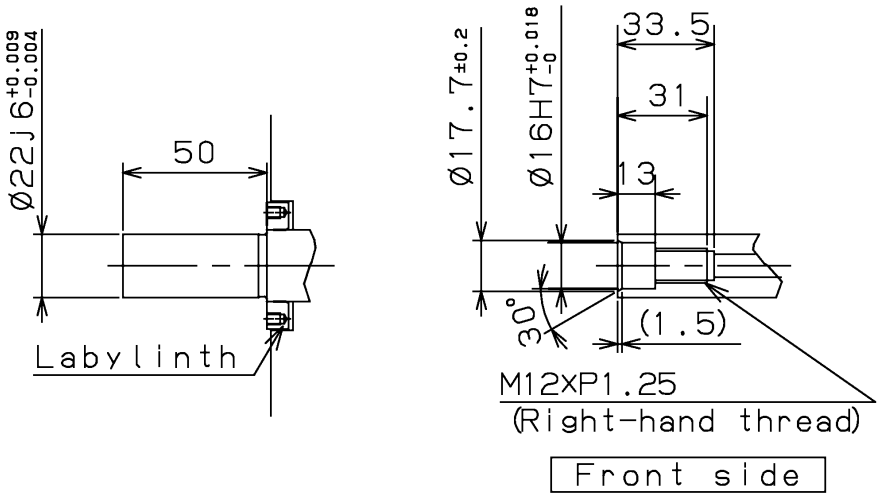
(1) Shaft figure types

The shaft figure for each motor is as given below.

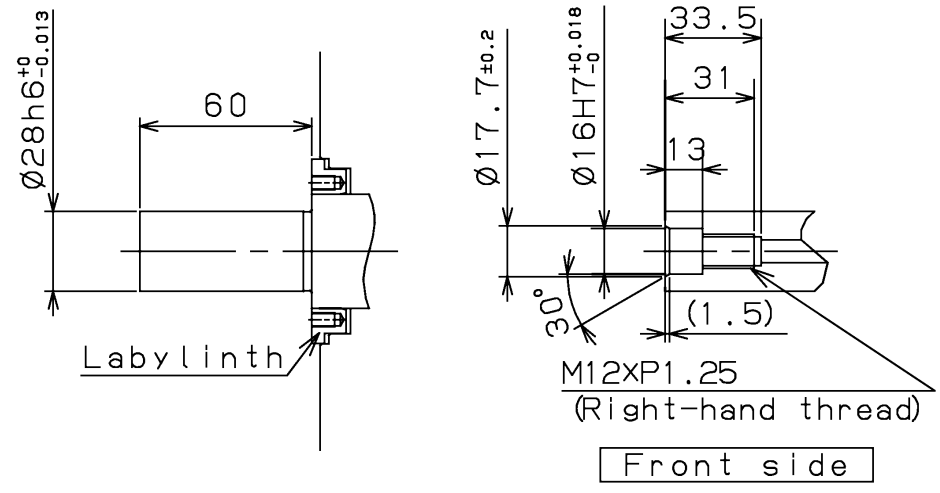
Model	Shaft without keyway	
	Shaft diameter	Details
αiIT 2/20000-B, αiIT 2/20000HV-B	ϕ22	(2) (a)
αiIT 3/12000-B, αiIT 3/15000-B, αiIT 3/12000HV-B	ϕ28	(2) (b)

(2) Shaft details

(a) ϕ22 hollow shaft without keyway



(b) ϕ28 hollow shaft without keyway



3.3.10.3 Allowable thrust load

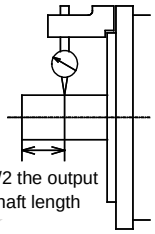
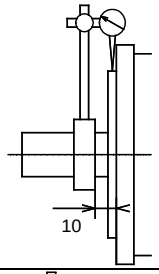
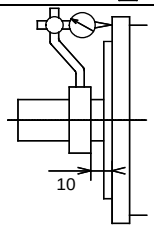
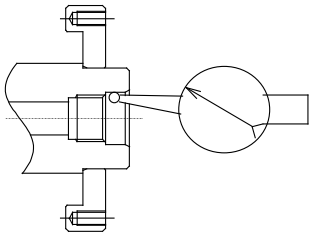
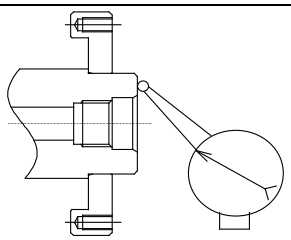
Use the motor so that the thrust load on the output shaft does not exceed the load listed in the table below. (Only in the direction in which the motor shaft is pressed forward)

Model	Allowable thrust load
αiIT 2/20000-B, αiIT 3/12000-B, αiIT 3/15000-B αiIT 2/20000HV-B, αiIT 3/12000HV-B	58.8N (6kgf)

NOTE
1 Directly connect an αiIT-B series spindle motor with the spindle so that no radial load is applied on the output shaft.

3.3.10.4 Assembling accuracy

The following table lists the assembling accuracy values.

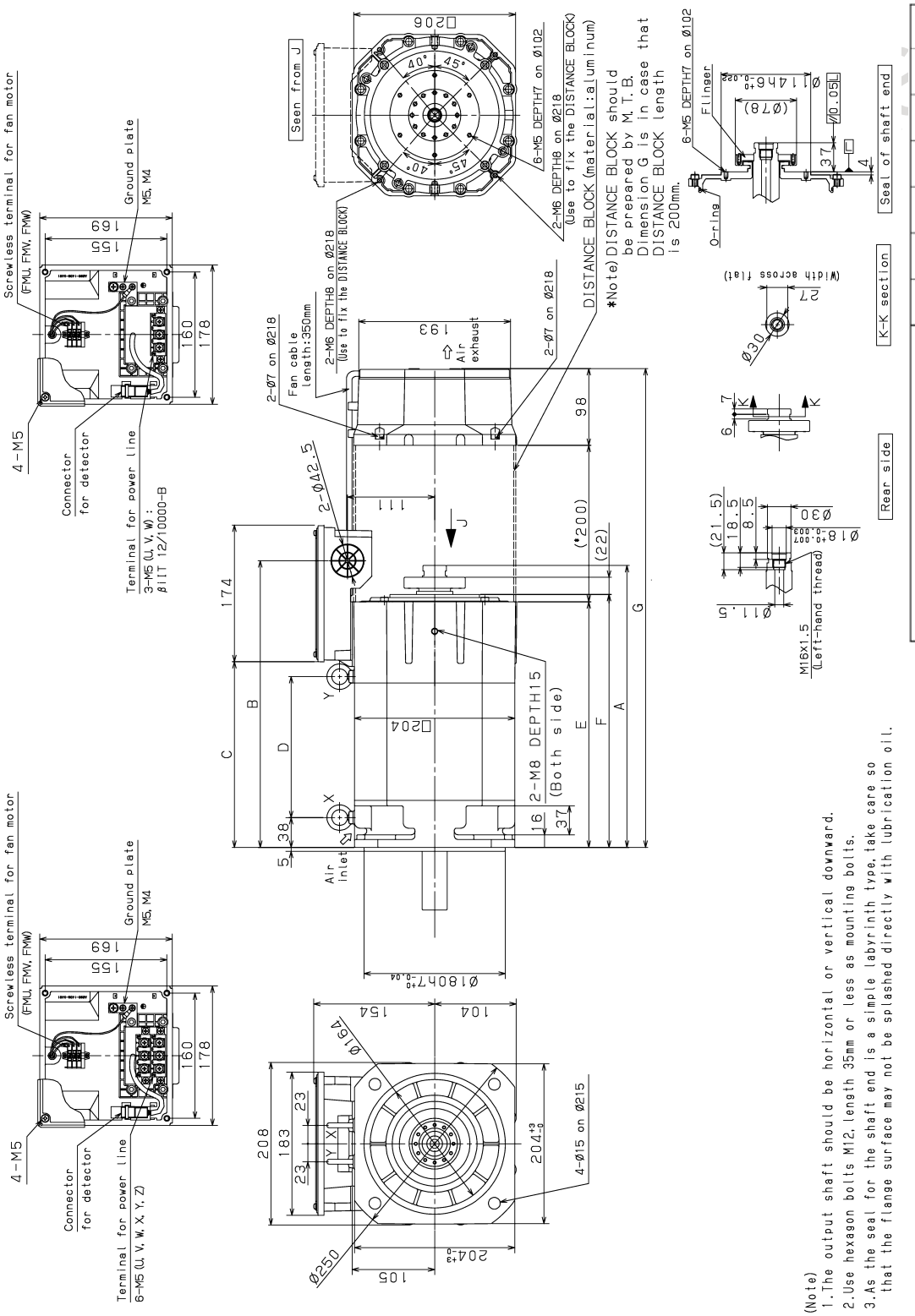
Item	Accuracy	Measuring method
Run-out at the end of the output shaft	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	30μm or less	
Run-out of the flange mounting surface against the core of the shaft	40μm or less	
Front shaft end through hole inlet Rear shaft end through hole inlet Run-out of socket and spigot joint	20μm or less	
Run-out of front shaft end face Run-out of rear shaft end face	10μm or less	

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3.3.11 Models αiIT 6/12000-B, αiIT 6/15000-B, αiIT 8/12000-B, αiIT 8/15000-B, αiIT 6/12000HV-B, αiIT 8/12000HV-B, αiIT 8/15000HV-B, βiIT 12/10000-B

3.3.11.1 External dimensions

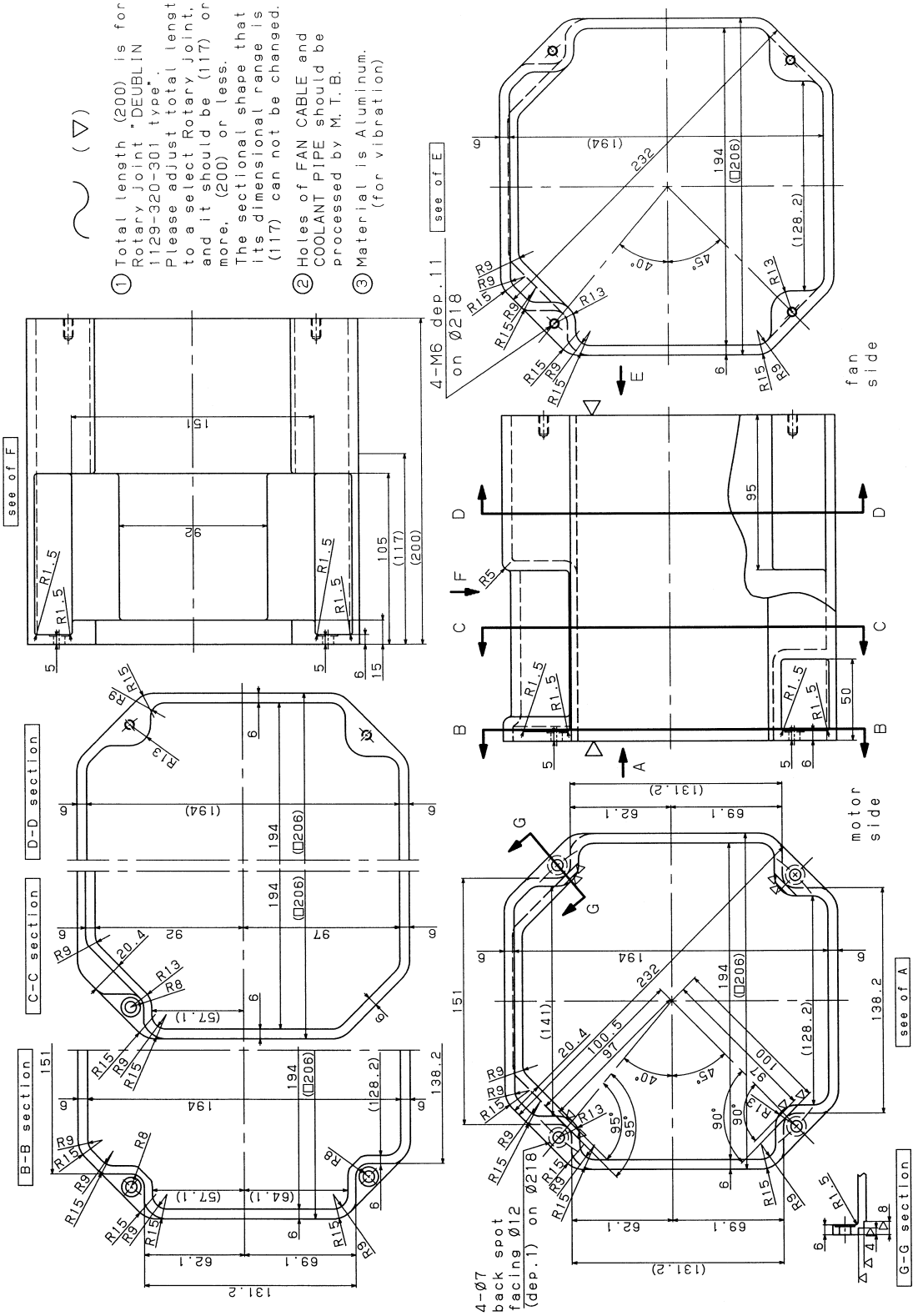
(1) Flange mounting type



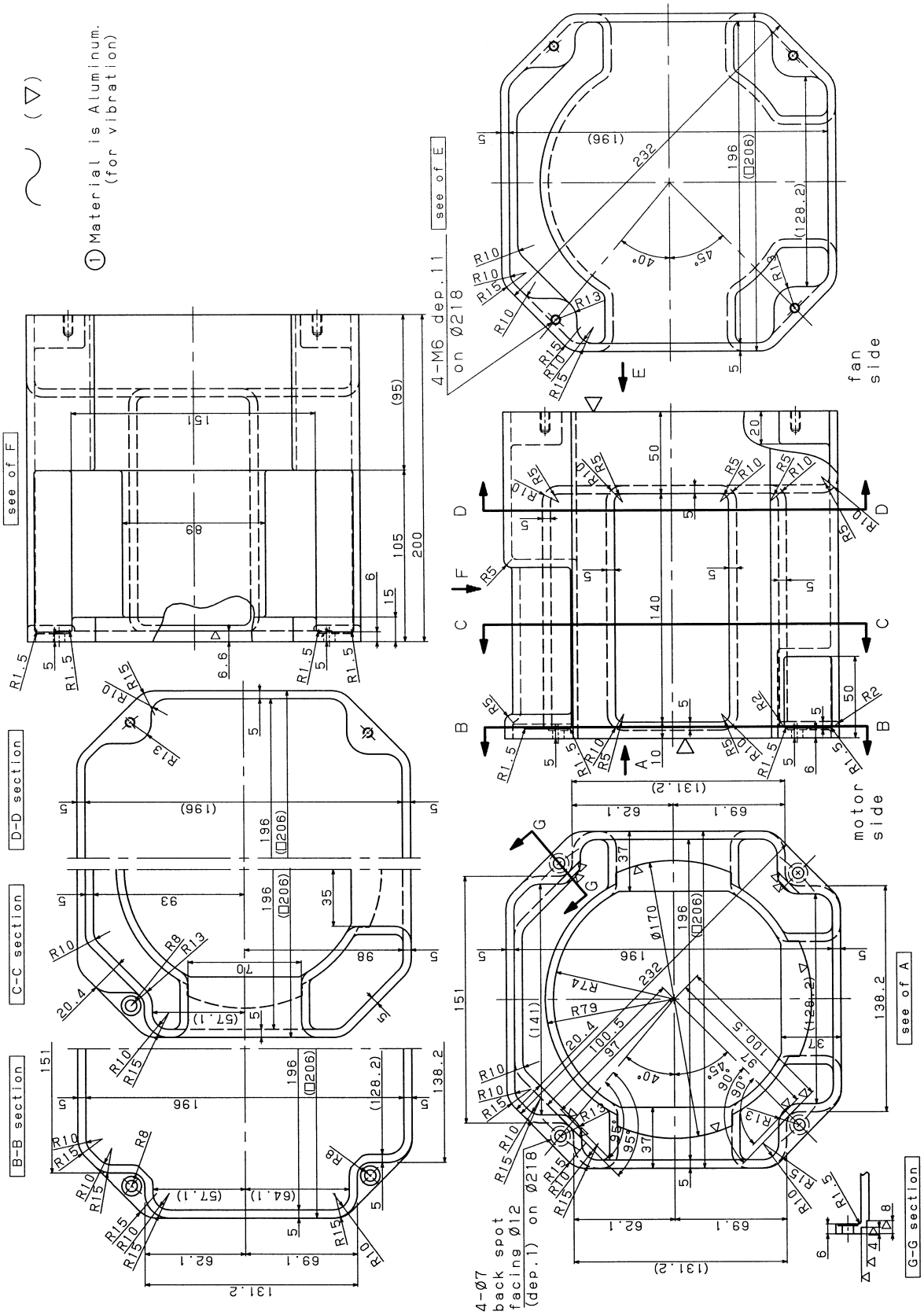
MODEL	A	B	C	D	E	F	G
αiIT 6/12000-B, αiIT 6/15000-B, αiIT 6/12000HV-B,	360	366	237	180	314	323	612
αiIT 8/12000-B, αiIT 8/15000-B, αiIT 8/15000HV-B, αiIT 8/12000HV-B, βiIT 12/10000-B	436	442	313	256	390	399	688

(Note)
1. The output shaft should be horizontal or vertical downward.
2. Use hexagon bolts M12, length 35mm or less as mounting bolts.
3. As the seal for the shaft end is a simple labyrinth type, take care so that the flange surface may not be splashed directly with lubrication oil.

(2) Distance block type αiIT 6 (A06B-1466-K560)



(3) Distance block with windows type αiIT 6 (A06B-1466-K580)



3.3.11.2 Shaft figure

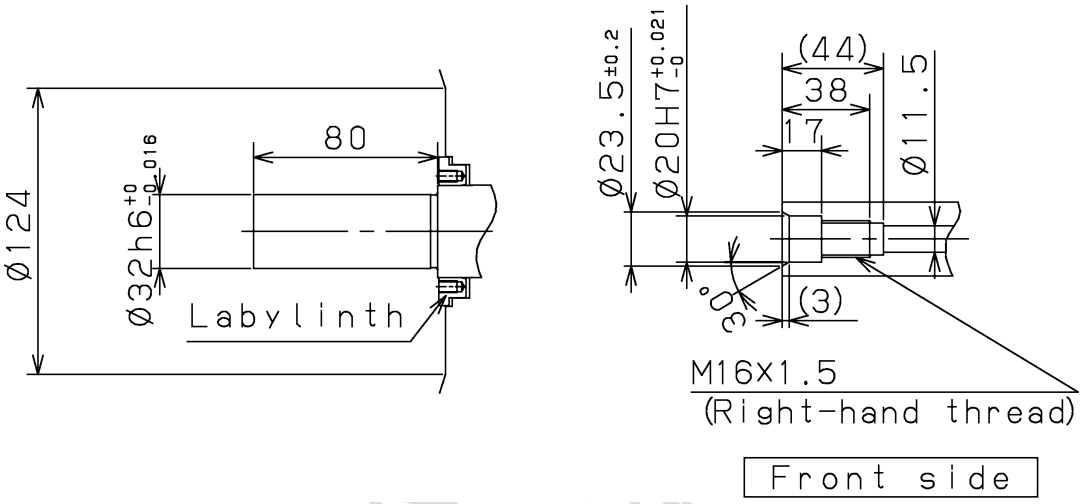
(1) Shaft figure types

The shaft figure for each motor is as given below.

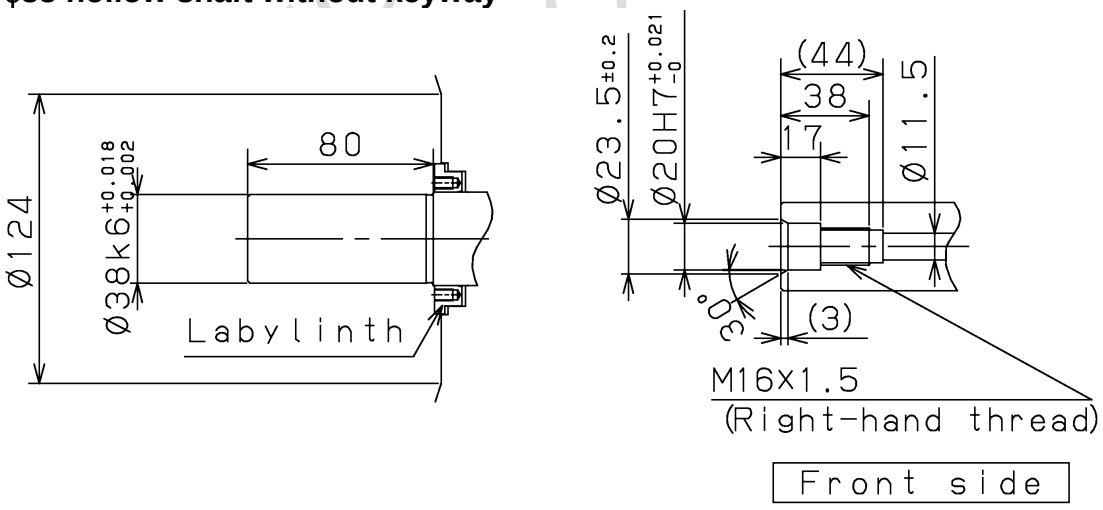
Model	Shaft without keyway	
	Shaft diameter	Details
αiIT 6/12000-B, αiIT 6/15000-B, αiIT 6/12000HV-B	ϕ32	(2) (a)
αiIT 8/12000-B, αiIT 8/15000-B, αiIT 8/1200HV-B, αiIT 8/15000HV-B,	ϕ38	(2) (b)
βiIT 12/10000-B	ϕ48	(2) (c)

(2) Shaft details

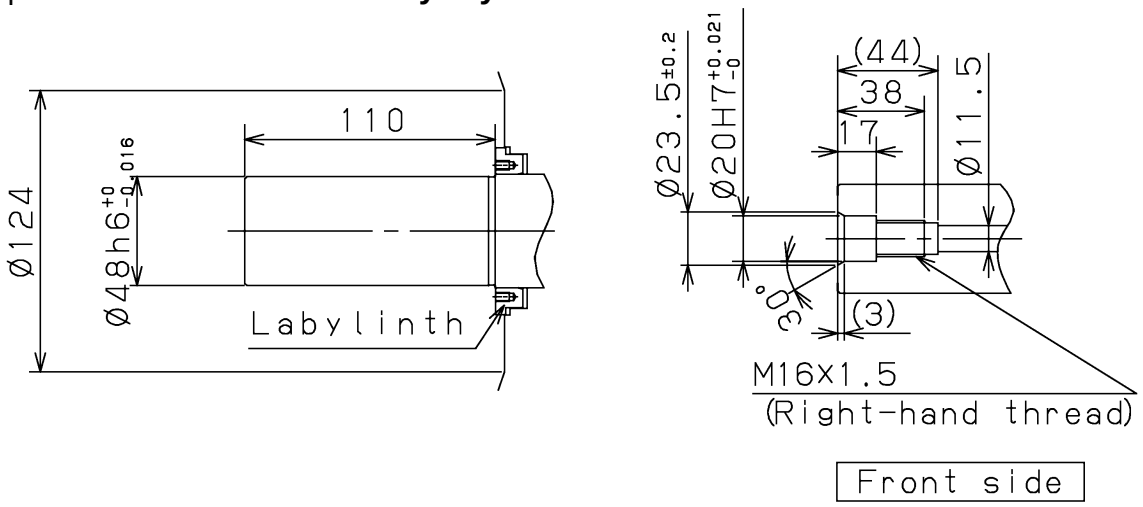
(a) ϕ32 hollow shaft without keyway



(b) ϕ38 hollow shaft without keyway



(c) ϕ48 hollow shaft without keyway



3.3.11.3 Allowable thrust load

Use the motor so that the thrust load on the output shaft does not exceed the load listed in the table below. (Only in the direction in which the motor shaft is pressed forward)

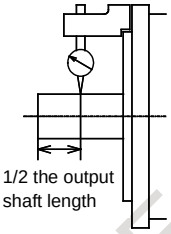
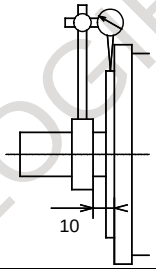
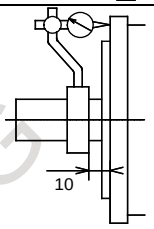
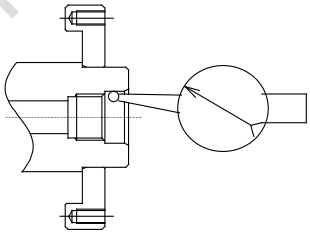
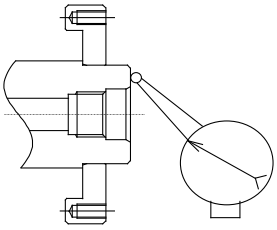
Model	Allowable thrust load
αiIT 6/12000-B, αiIT 6/15000-B, αiIT 8/12000-B, αiIT 8/15000-B, αiIT 6/12000HV-B, αiIT 8/12000HV-B, αiIT 8/15000HV-B, βiIT 12/10000-B	127N (13kgf)

NOTE
1 Directly connect an αiIT-B series or βiIT-B series spindle motor with the spindle so that no radial load is applied on the output shaft.

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3.3.11.4 Assembling accuracy

The following table lists the assembling accuracy values.

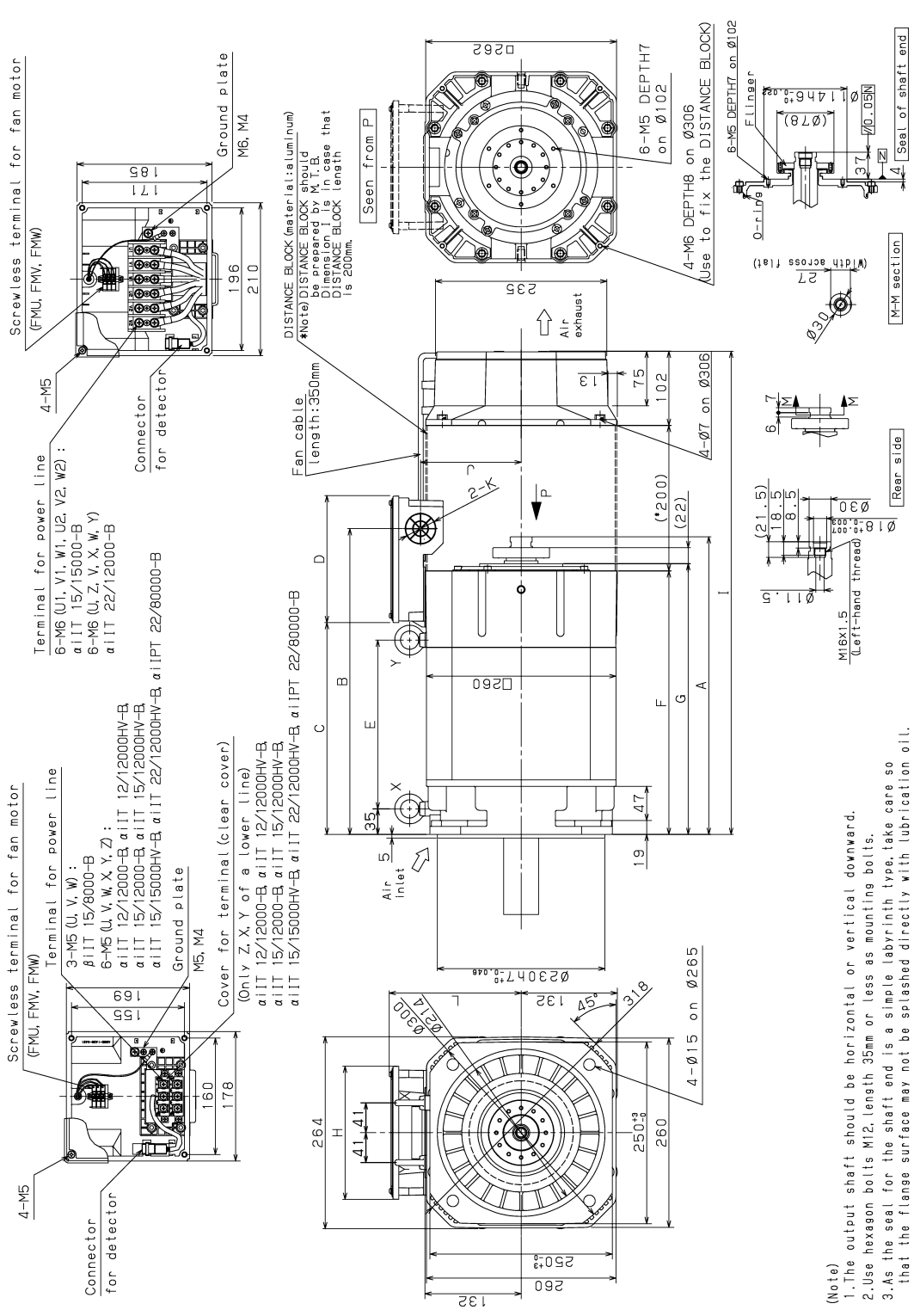
Item	Accuracy	Measuring method
Run-out at the end of the output shaft	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	30μm or less	
Run-out of the flange mounting surface against the core of the shaft	40μm or less	
Front shaft end through hole inlet Rear shaft end through hole inlet Run-out of socket and spigot joint	20μm or less	
Run-out of front shaft end face Run-out of rear shaft end face	10μm or less	

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3.3.12 Models αiIT 12/12000-B, αiIT 15/12000-B, αiIT 15/15000-B, αiIT 22/12000-B, αiIPT 22/8000-B, αiIT 12/12000HV-B, αiIT 15/12000HV-B, αiIT 15/15000HV-B, αiIT 22/12000HV-B, βiIT 15/8000-B

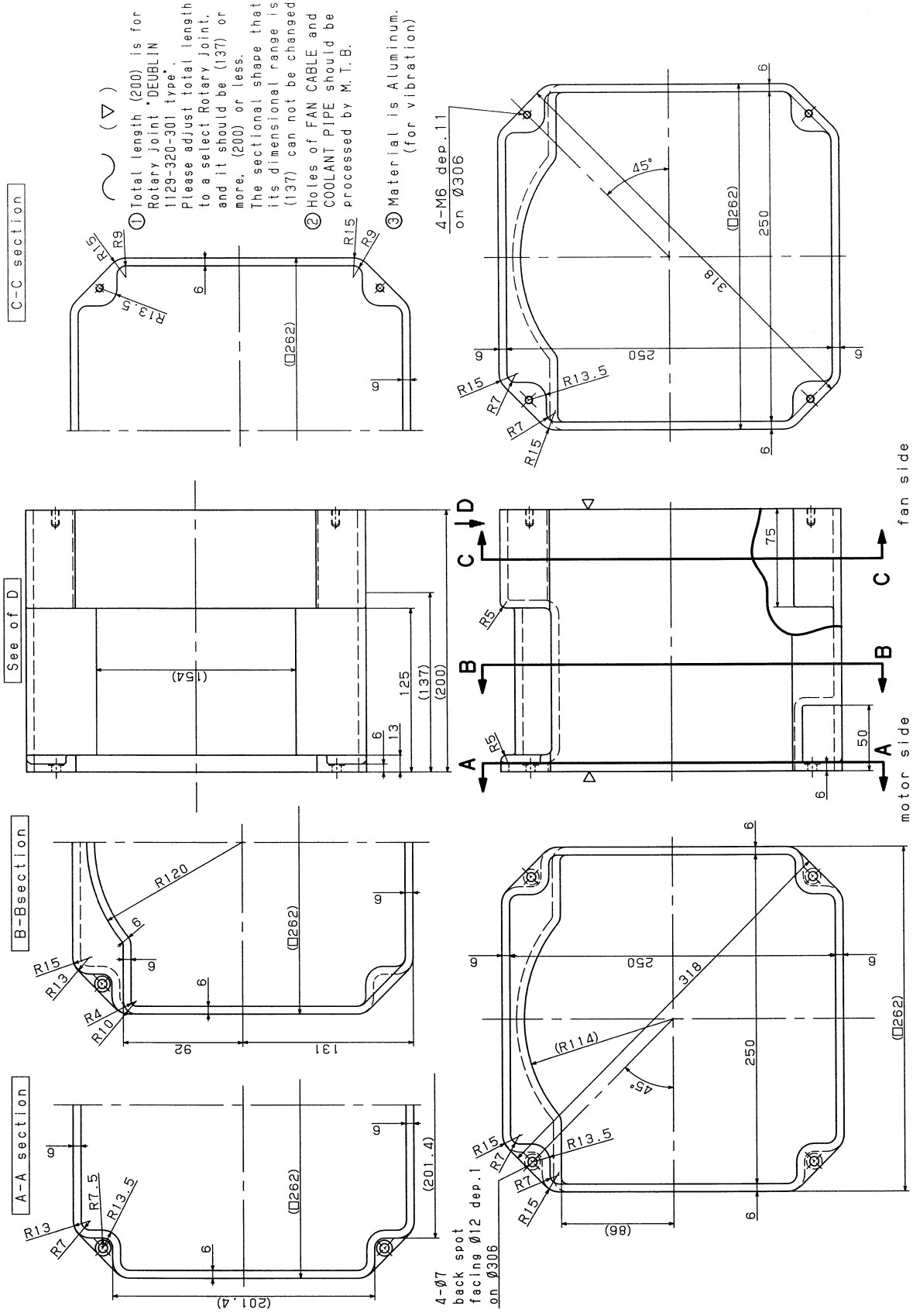
3.3.12.1 External dimensions

(1) Flange mounting type

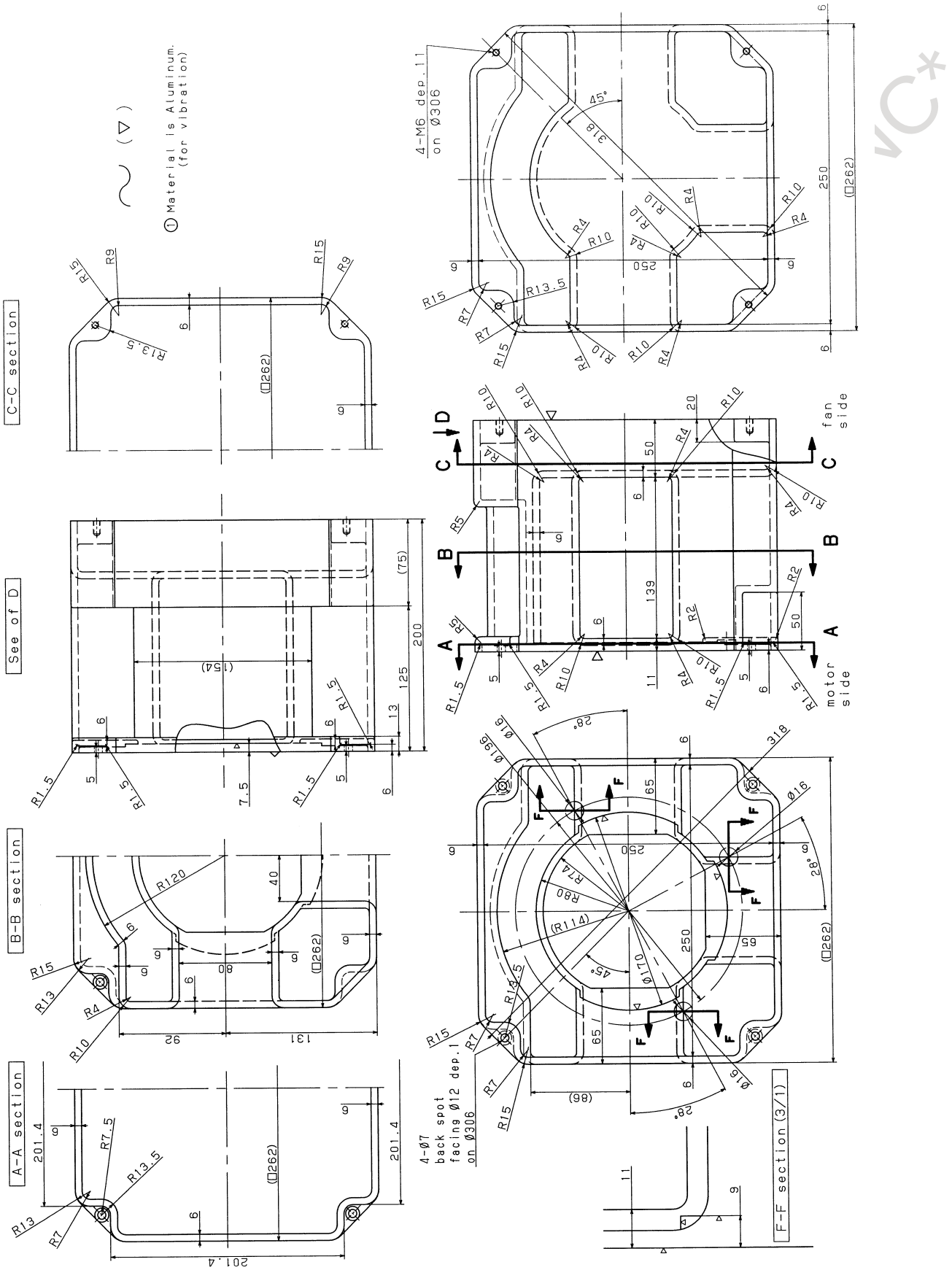


MODEL	A	B	C	D	E	F	G	H	I	J	K	L
αiIT 12/12000-B, αiIT 12/12000HV-B, βiIT 15/8000-B	377	388	259	174	200	330	340	183	632	138	φ42.5	181
αiIT 15/12000-B, αiIT 15/12000HV-B	409	420	291	174	232	362	372	183	664	138	φ42.5	181
αiIT 15/15000-B	453	466	335	189	276	406	416	214	708	140	φ61	192
αiIT 15/15000HV-B	453	464	335	174	276	406	416	183	708	138	φ42.5	181
αiIT 22/12000-B	479	492	361	189	302	432	442	214	734	140	φ61	192
αiIT 22/12000HV-B, αiIPT 22/8000-B	479	490	361	174	302	432	442	183	734	138	φ42.5	181

(2) Distance block type αiI$_T$ 15 (A06B-1469-K560)



(3) Distance block with windows type αiIT 15 (A06B-1469-K580)



3.3.12.2 Shaft figure

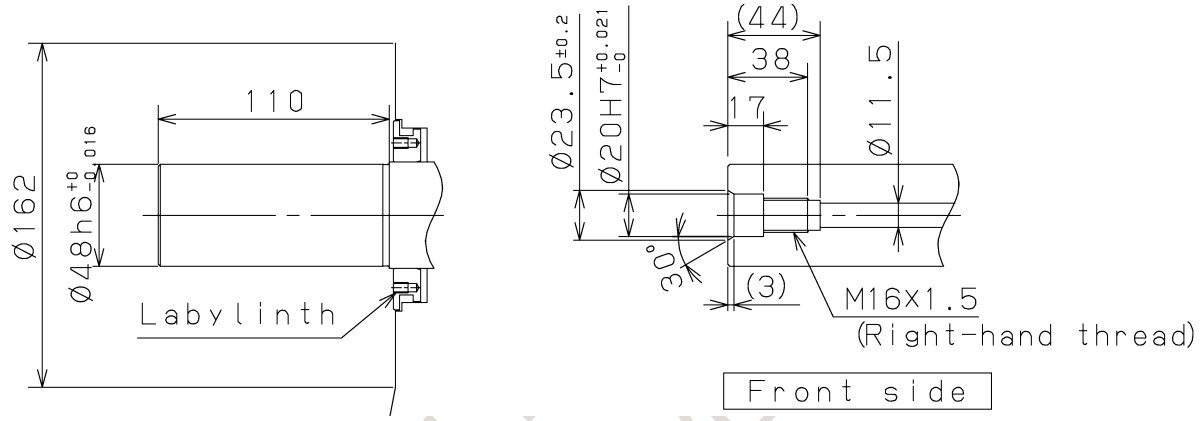
(1) Shaft figure types

The shaft figure for each motor is as given below.

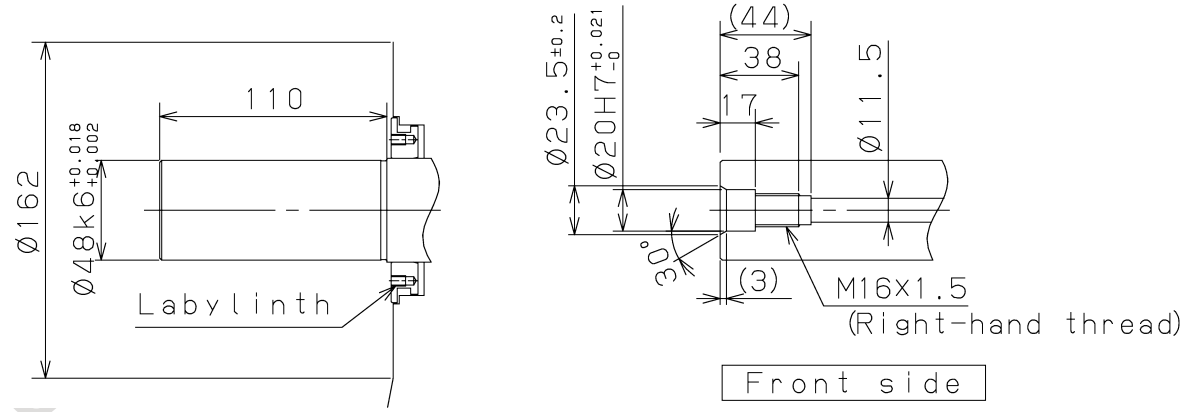
Model	Shaft without keyway	
	Shaft diameter	Details
αiIT 12/12000-B, αiIT 15/12000-B, αiIT 22/12000B, αiIT 12/12000HV-B, αiIT 15/12000HV-B, αiIT 22/12000HV-B, βiIT 15/8000-B	ϕ48	(2) (a)
αiIT 15/15000-B, αiIT 15/15000HV-B	ϕ48	(2) (b)
αiIPT 22/8000-B,	ϕ55	(2) (c)

(2) Shaft details

(a) ϕ48 hollow shaft without keyway

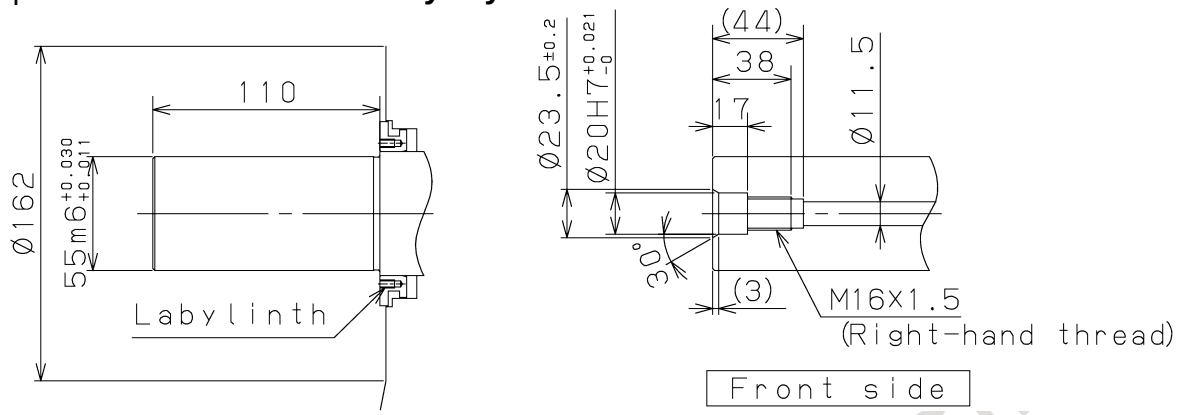


(b) ϕ48 hollow shaft without keyway



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(c) ϕ55 hollow shaft without keyway



3.3.12.3 Allowable thrust load

Use the motor so that the thrust load on the output shaft does not exceed the load listed in the table below. (Only in the direction in which the motor shaft is pressed forward)

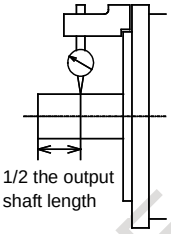
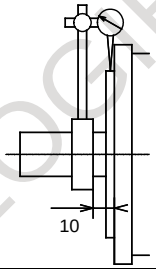
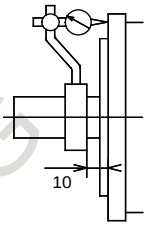
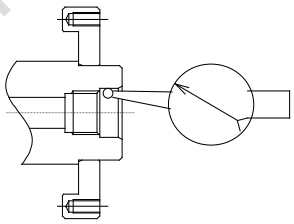
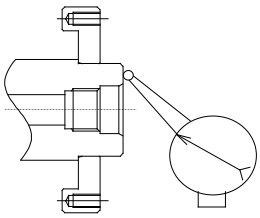
Model	Allowable thrust load
αiIT 12/12000-B, αiIT 15/12000-B, αiIT 15/15000-B, αiIT 22/12000-B, αiIPT 22/8000-B, αiIT 12/12000HV-B, αiIT 15/12000HV-B, αiIT 15/15000HV-B, αiIT 22/12000HV-B, βiIT 15/8000-B	127N (13kgf)

NOTE
1 Directly connect an αiIT-B series, αiIPT-B series or βiIT-B series spindle motor with the spindle so that no radial load is applied on the output shaft.

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3.3.12.4 Assembling accuracy

The following table lists the assembling accuracy values.

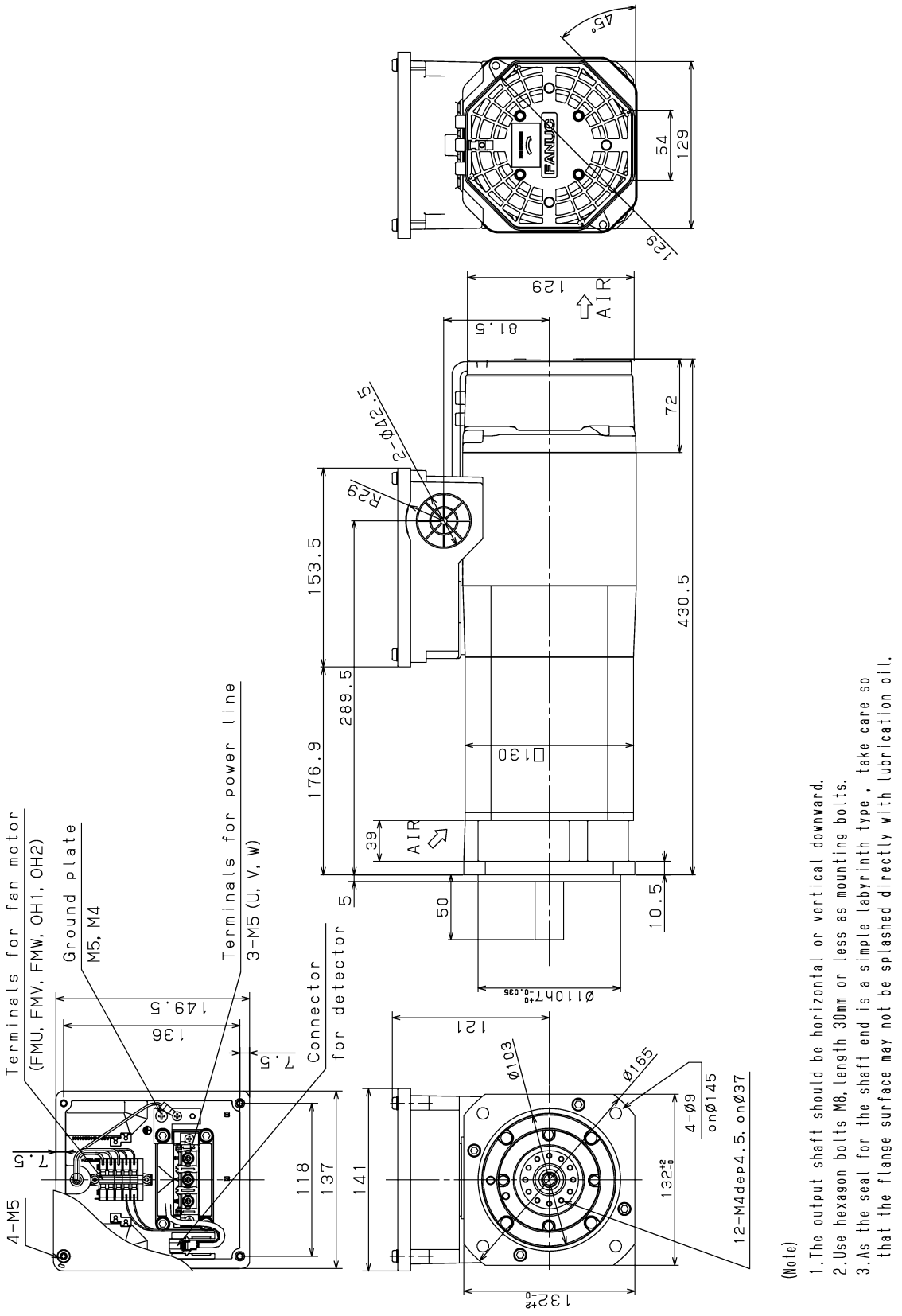
Item	Accuracy	Measuring method
Run-out at the end of the output shaft	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	30μm or less	
Run-out of the flange mounting surface against the core of the shaft	40μm or less	
Front shaft end through hole inlet Rear shaft end through hole inlet Run-out of socket and spigot joint	20μm or less	
Run-out of front shaft end face Run-out of rear shaft end face	10μm or less	

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3.3.13 Model αiS 1/12000-B

3.3.13.1 External dimensions

(1) Flange mounting type



(Note)
1. The output shaft should be horizontal or vertical downward.
2. Use hexagon bolts M8, length 30mm or less as mounting bolts.
3. As the seal for the shaft end is a simple labyrinth type , take care so that the flange surface may not be splashed directly with lubrication oil.

3.3.13.2 Shaft figure

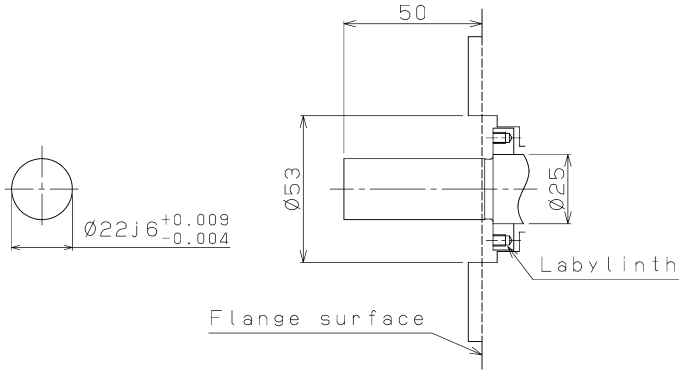
(1) Shaft figure types

The shaft figure for each motor is as given below.

Model	Shaft without keyway	
	Shaft diameter	Details
αiS 1/12000-B	ϕ22	(2) (a)

(2) Shaft details

(a) ϕ22 Shaft without keyway



3.3.13.3 Allowable thrust load

Use the motor so that the thrust load on the output shaft does not exceed the load listed in the table below. (Only in the direction in which the motor shaft is pressed forward)

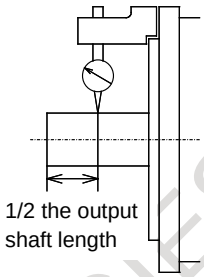
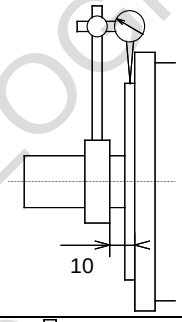
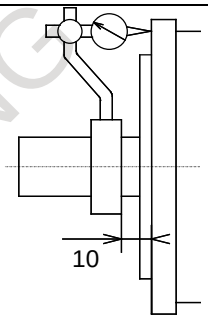
Model	Allowable thrust load
αiS 1/12000-B	58.8N (6kgf)

NOTE
1 Directly connect αiS 1/12000-B with the spindle so that no radial load is applied on the output shaft.

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3.3.13.4 Assembling accuracy

The following table lists the assembling accuracy values.

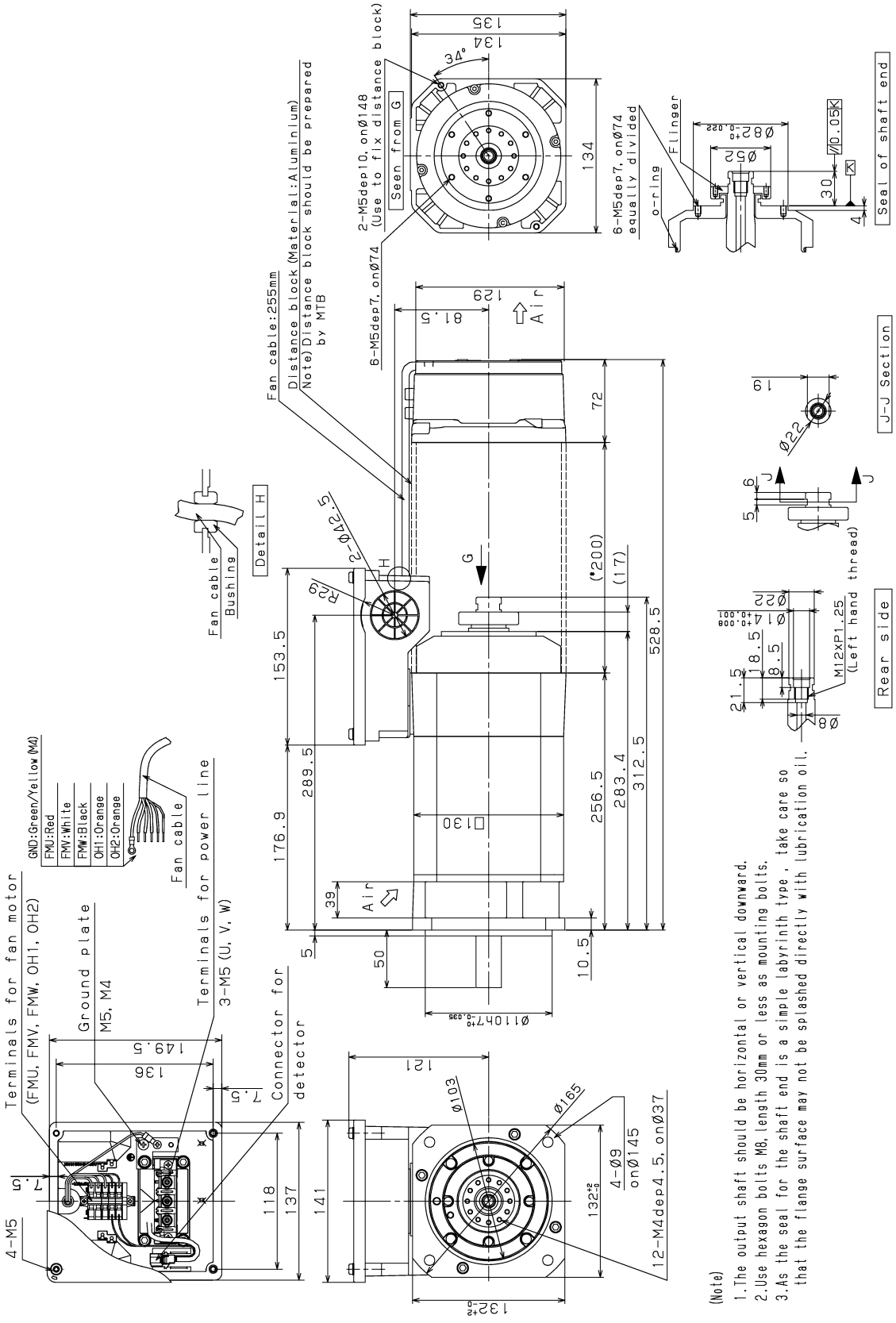
Item	Accuracy	Measuring method
Shaft run-out	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft (only for flange type)	30μm or less	
Run-out of the flange mounting surface against the core of the shaft (only for flange type)	40μm or less	

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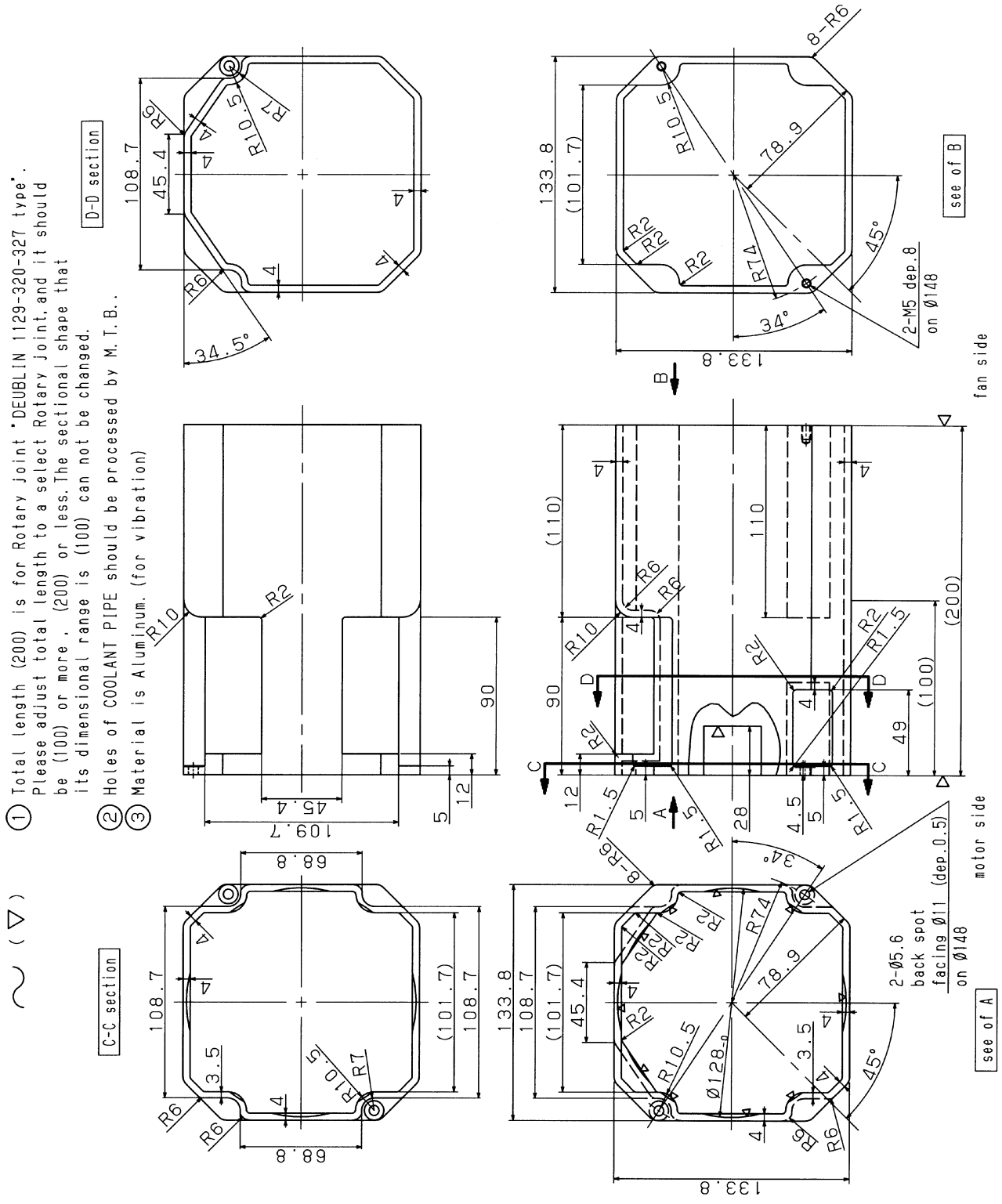
3.3.14 Model αiST 1/12000-B

3.3.14.1 External dimensions

(1) Flange mounting type



(2) Distance block type αiIT 1.5 (A06B-1463-K560)



3.3.14.2 Shaft figure

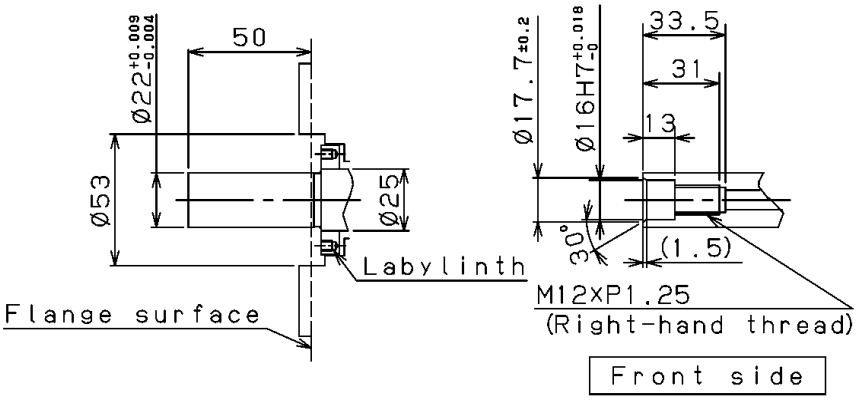
(1) Shaft figure types

The shaft figure for each motor is as given below.

Model	Shaft without keyway	
	Shaft diameter	Details
αiS T 1/12000-B	ϕ22	(2) (a)

(2) Shaft details

(a) ϕ22 hollow shaft without keyway



3.3.14.3 Allowable thrust load

Use the motor so that the thrust load on the output shaft does not exceed the load listed in the table below. (Only in the direction in which the motor shaft is pressed forward)

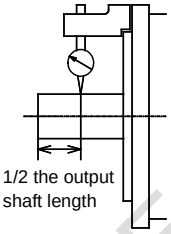
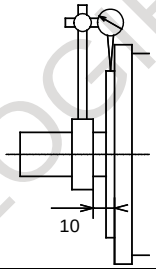
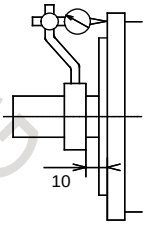
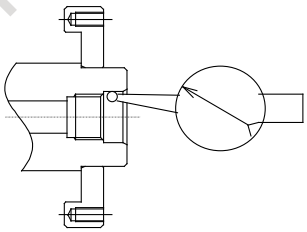
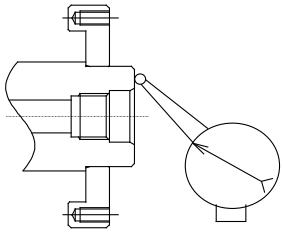
Model	Allowable thrust load
αiS T 1/12000-B	58.8N (6kgf)

NOTE
1 Directly αiS T 1/12000-B with the spindle so that no radial load is applied on the output shaft.

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3.3.14.4 Assembling accuracy

The following table lists the assembling accuracy values.

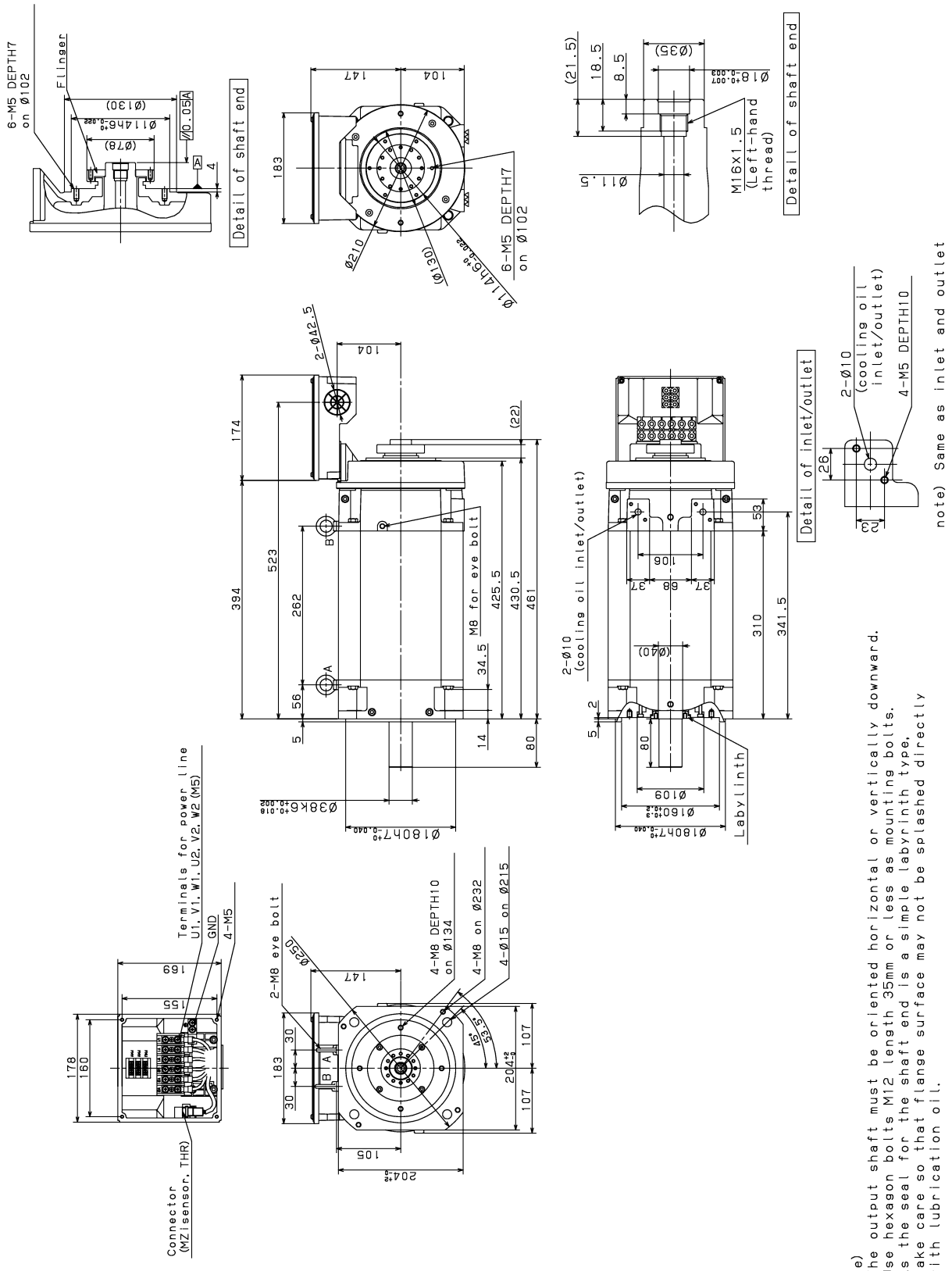
Item	Accuracy	Measuring method
Run-out at the end of the output shaft	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	30μm or less	
Run-out of the flange mounting surface against the core of the shaft	40μm or less	
Front shaft end through hole inlet Rear shaft end through hole inlet Run-out of socket and spigot joint	20μm or less	
Run-out of front shaft end face Run-out of rear shaft end face	10μm or less	

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3.3.15 Models αiIL 8/20000-B, αiIL 8/20000HV-B

3.3.15.1 External dimensions

(1) Flange mounting type



(Note)
1. The output shaft must be oriented horizontal or vertically downward.
2. Use hexagon bolts M12 length 35mm or less as mounting bolts.
3. As the seal for the shaft end is a simple labyrinth type, take care so that flange surface may not be splashed directly with lubrication oil.

3.3.15.2 Shaft figure

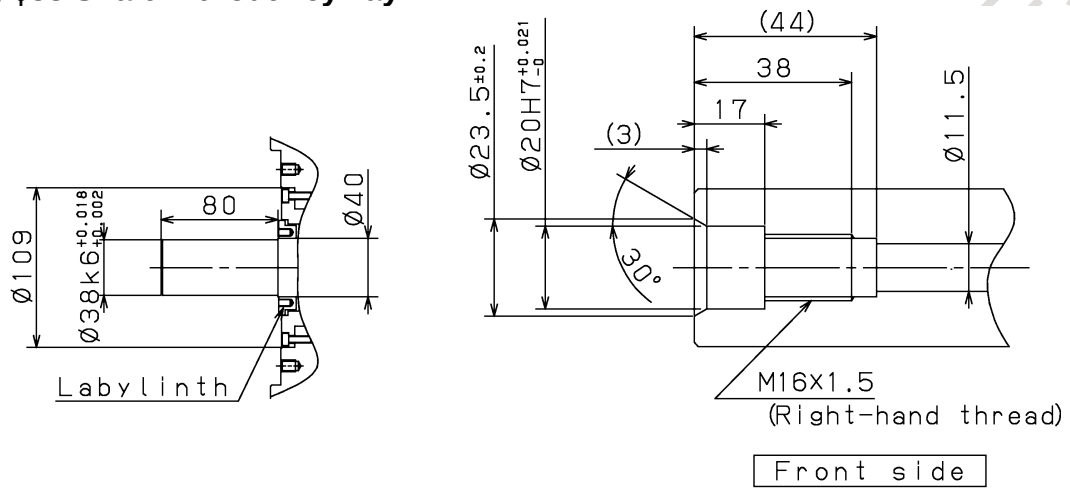
(1) Shaft figure types

The shaft figure for each motor is as given below.

Model	Shaft without keyway	
	Shaft diameter	Details
αi_L 8/20000-B, αi_L 8/20000HV-B	ϕ38	(2) (a)

(2) Shaft details

(a) ϕ38 Shaft without keyway



3.3.15.3 Allowable thrust load

Use the motor so that the thrust load on the output shaft does not exceed the load listed in the table below. (Only in the direction in which the motor shaft is pressed forward)

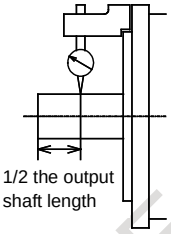
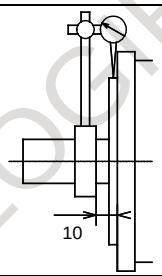
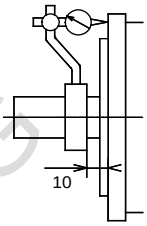
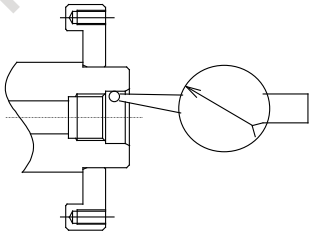
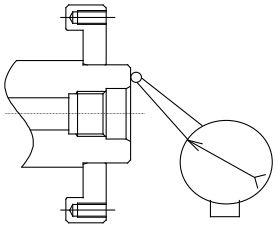
Model	Allowable thrust load
αi_L 8/20000-B, αi_L 8/20000HV-B	58.8N (6kgf)

NOTE
1 Directly connect an αi_L-B series spindle motor with the spindle so that no radial load is applied on the output shaft.

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3.3.15.4 Assembling accuracy

The following table lists the assembling accuracy values.

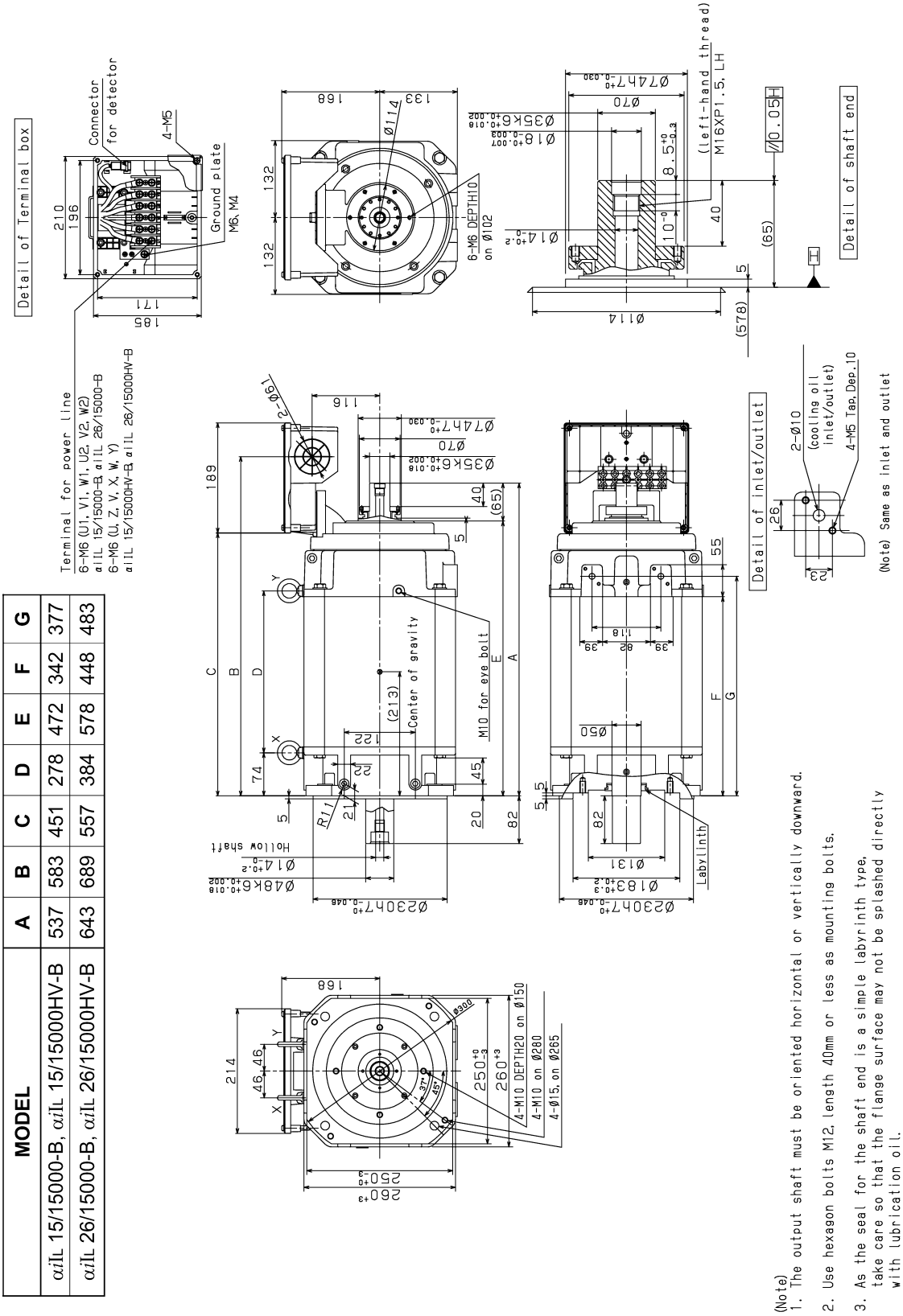
Item	Accuracy	Measuring method
Run-out at the end of the output shaft	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	30μm or less	
Run-out of the flange mounting surface against the core of the shaft	40μm or less	
Front shaft end through hole inlet Rear shaft end through hole inlet Run-out of socket and spigot joint	20μm or less	
Run-out of front shaft end face Run-out of rear shaft end face	10μm or less	

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3.3.16 Models αiIL 15/15000-B, αiIL 26/15000-B, αiIL 15/15000HV-B, αiIL 26/15000HV-B

3.3.16.1 External dimensions

(1) Flange mounting type



MODEL	A	B	C	D	E	F	G
αiIL 15/15000-B, αiIL 15/15000HV-B	537	583	451	278	472	342	377
αiIL 26/15000-B, αiIL 26/15000HV-B	643	689	557	384	578	448	483

(Note)
1. The output shaft must be oriented horizontal or vertically downward.
2. Use hexagon bolts M12, length 40mm or less as mounting bolts.
3. As the seal for the shaft end is a simple labyrinth type, take care so that the flange surface may not be splashed directly with lubrication oil.

3.3.16.2 Shaft figure

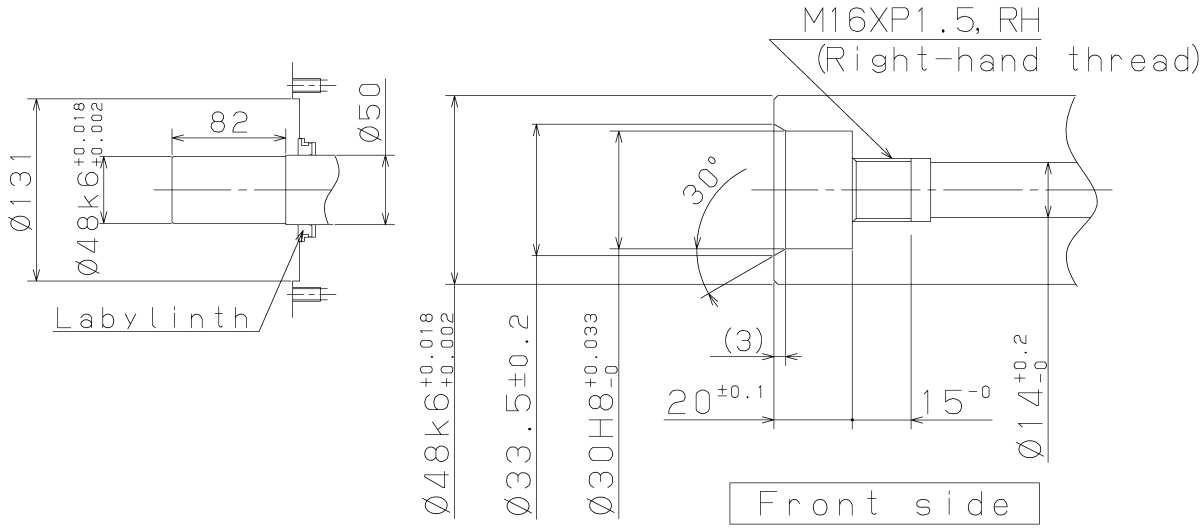
(1) Shaft figure types

The shaft figure for each motor is as given below.

Model	Shaft without keyway	
	Shaft diameter	Details
αiIL 15/15000-B, αiIL 26/15000-B, αiIL 15/15000HV-B, αiIL 26/15000HV-B	ϕ48	(2) (a)

(2) Shaft details

(a) ϕ48 Shaft without keyway



3.3.16.3 Allowable thrust load

Use the motor so that the thrust load on the output shaft does not exceed the load listed in the table below. (Only in the direction in which the motor shaft is pressed forward)

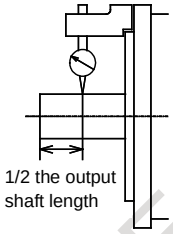
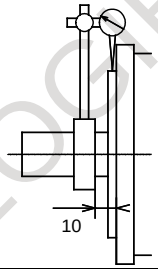
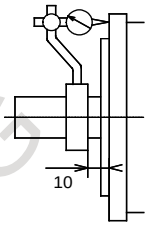
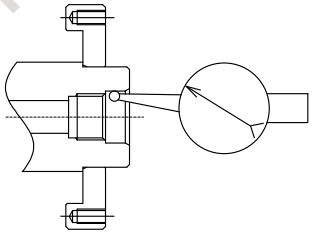
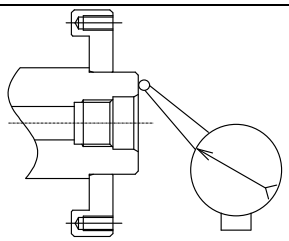
Model	Allowable thrust load
αiIL 15/15000-B, αiIL 26/15000-B, αiIL 15/15000HV-B, αiIL 26/15000HV-B	127N (13kgf)

NOTE
Directly connect an αiIL-B series spindle motor with the spindle so that no radial load is applied on the output shaft.

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3.3.16.4 Assembling accuracy

The following table lists the assembling accuracy values.

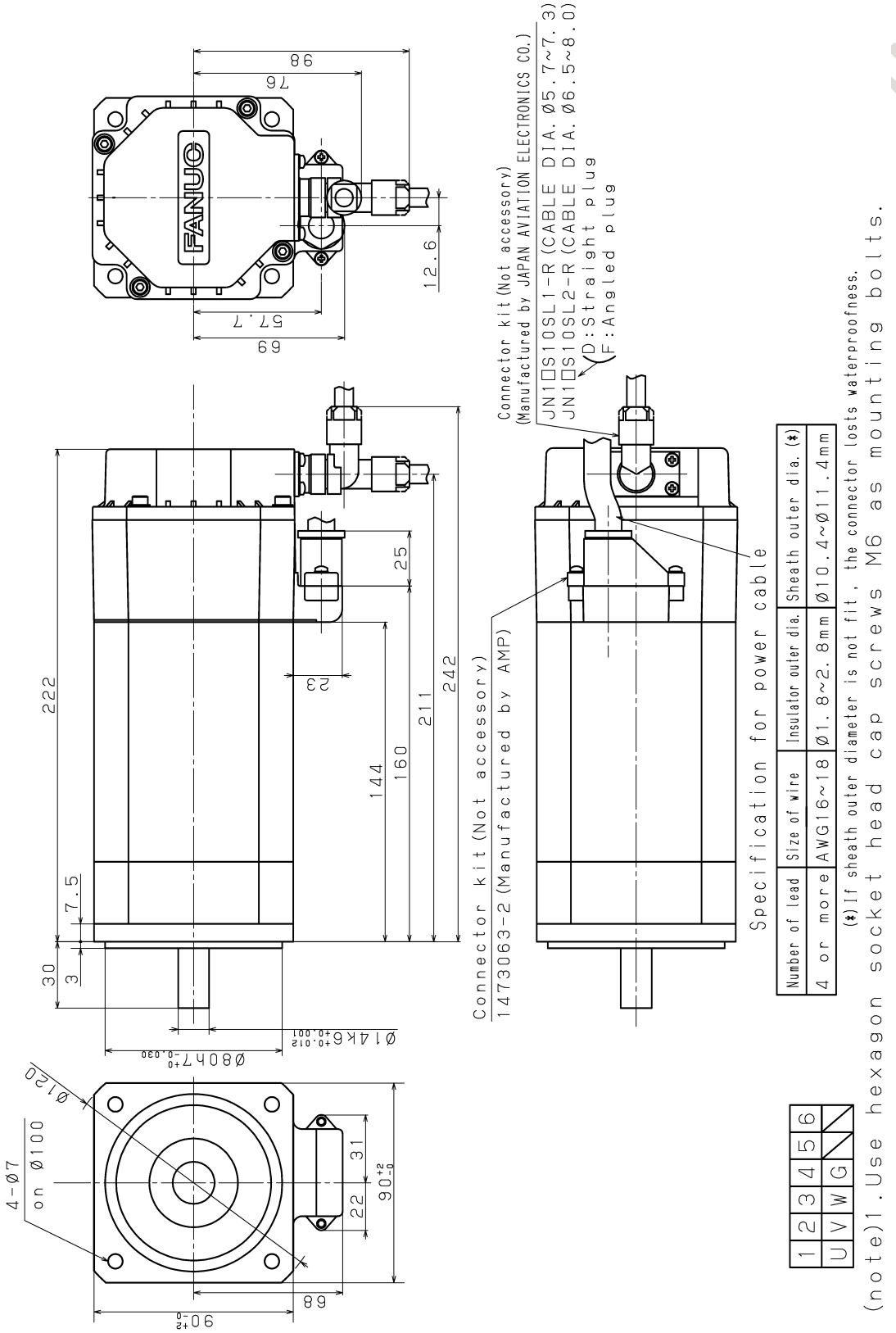
Item	Accuracy	Measuring method
Run-out at the end of the output shaft	10μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	30μm or less	
Run-out of the flange mounting surface against the core of the shaft	40μm or less	
Front shaft end through hole inlet Rear shaft end through hole inlet Run-out of socket and spigot joint	20μm or less	
Run-out of front shaft end face Run-out of rear shaft end face	10μm or less	

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3.3.17 Models αiI 0.5/10000-B (IP65),

3.3.17.1 External dimensions

(1) Flange mounting type



3.3.17.2 Shaft figure

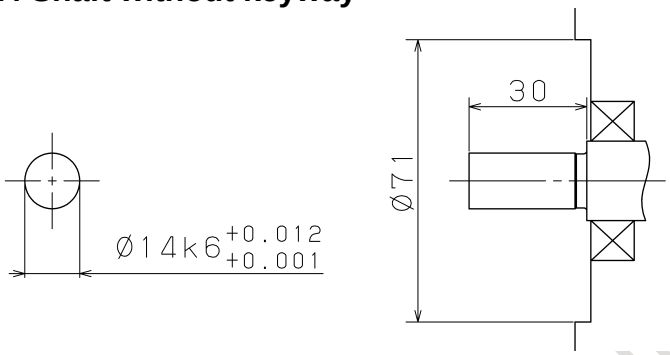
(1) Shaft figure types

The shaft figure for each motor is as given below.

Model	Shaft without keyway	
	Shaft diameter	Details
αiI 0.5/10000-B (IP65)	ϕ14	(2) (a)

(2) Shaft details

(a) ϕ14 Shaft without keyway



3.3.17.3 Allowable radial load

Use the motor output shaft below the allowable radial loads shown in the table below.

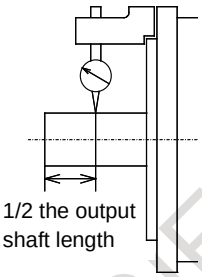
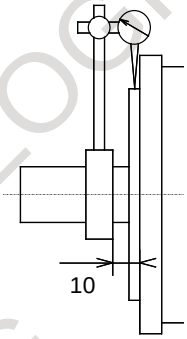
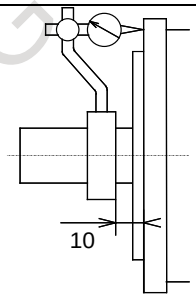
Model	Allowable radial load	
	At output shaft end	At output shaft center
αiI 0.5/10000-B (IP65)	294N (30kgf)	323N (33kgf)

NOTE
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.
3 If a thrust load is applied when a helical gear or coupling is mounted, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

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3.3.17.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item	Accuracy	Measuring method
Shaft run-out	20μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	40μm or less	
Run-out of the flange mounting surface against the core of the shaft	80μm or less	

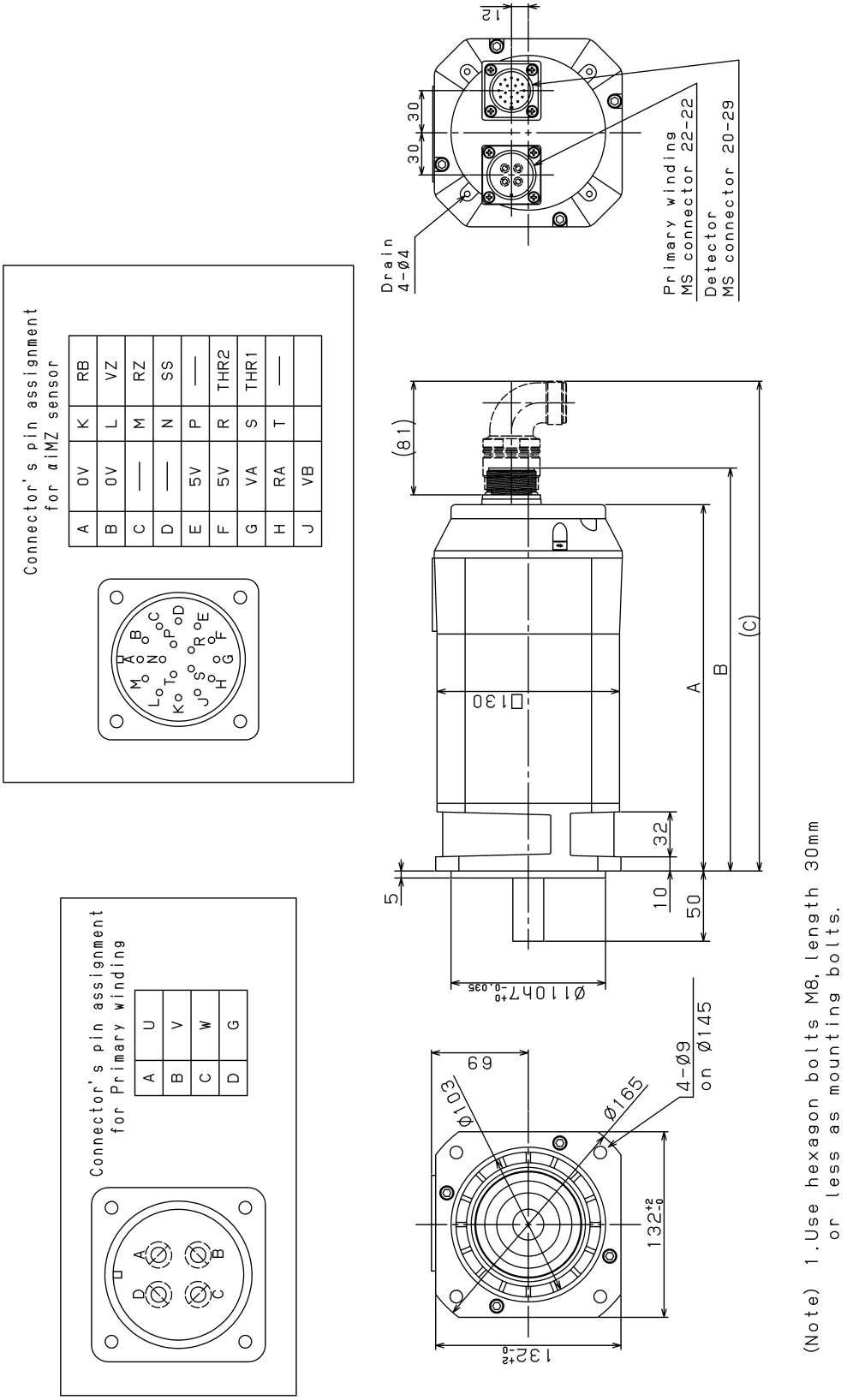
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3.3.18 Models αiI 1/8000-B (IP65), αiI 1.5/8000-B (IP65),

3.3.18.1 External dimensions

Flange mounting type

MODEL	A	B	C
αiI 1/8000-B (IP65)	261	287	349
αiI 1.5/8000-B (IP65)	311	337	399



3.3.18.2 Shaft figure

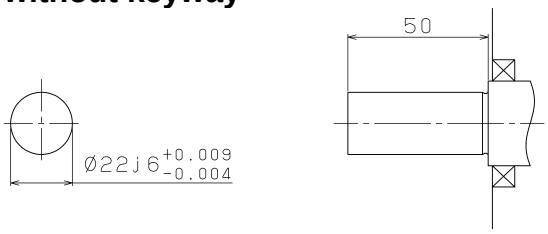
(1) Shaft figure types

The shaft figure for each motor is as given below.

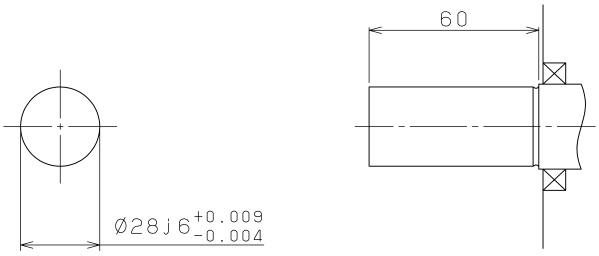
Model	Shaft without keyway	
	Shaft diameter	Details
αiI 1/8000-B (IP65)	ϕ22	(2) (a)
αiI 1.5/8000-B (IP65)	ϕ28	(2) (b)

(2) Shaft details

(a) ϕ22 Shaft without keyway



(b) ϕ28 Shaft without keyway



3.3.18.3 Allowable radial load

Use the motor output shaft below the allowable radial loads shown in the table below.

Model	Allowable radial load	
	At output shaft end	At output shaft center
αiI 1/8000-B (IP65)	392N (40kgf)	441N (45kgf)
αiI 1.5/8000-B (IP65)	882N (90kgf)	980N (100kgf)

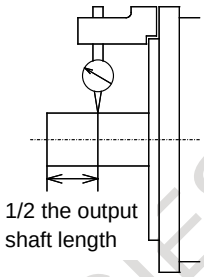
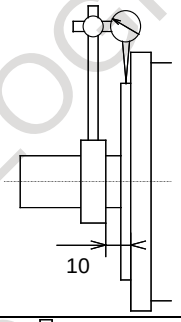
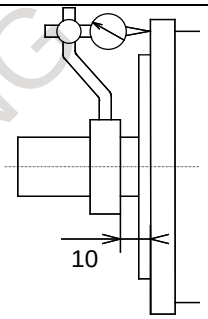
NOTE

1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.
3 If a thrust load is applied when a helical gear or coupling is mounted, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

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3.3.18.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item	Accuracy	Measuring method
Shaft run-out	20μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	40μm or less	
Run-out of the flange mounting surface against the core of the shaft	80μm or less	

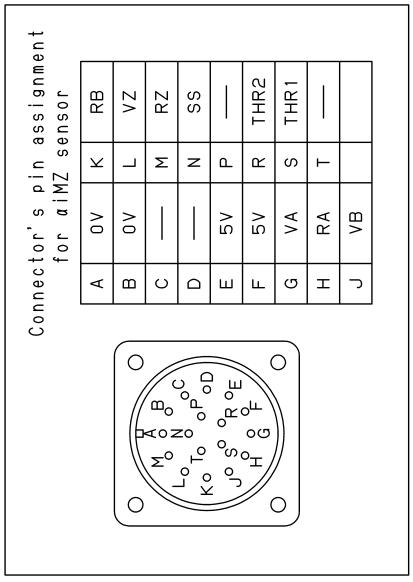
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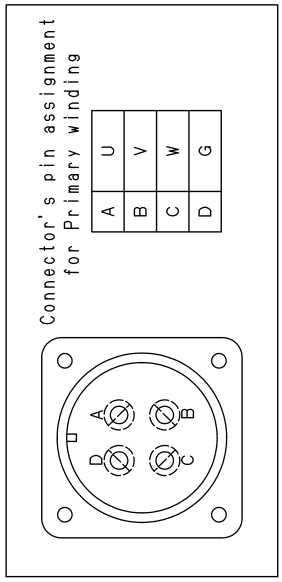
3.3.19 Models αiI 2/8000-B (IP65), αiI 3/8000-B (IP65),

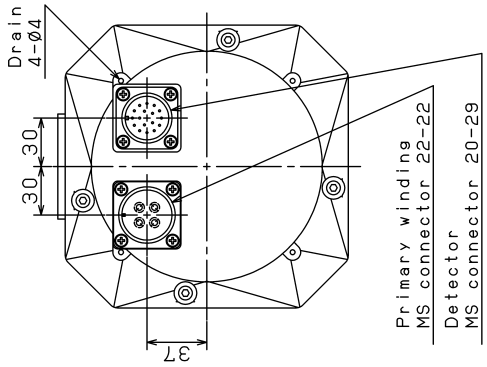
3.3.19.1 External dimensions

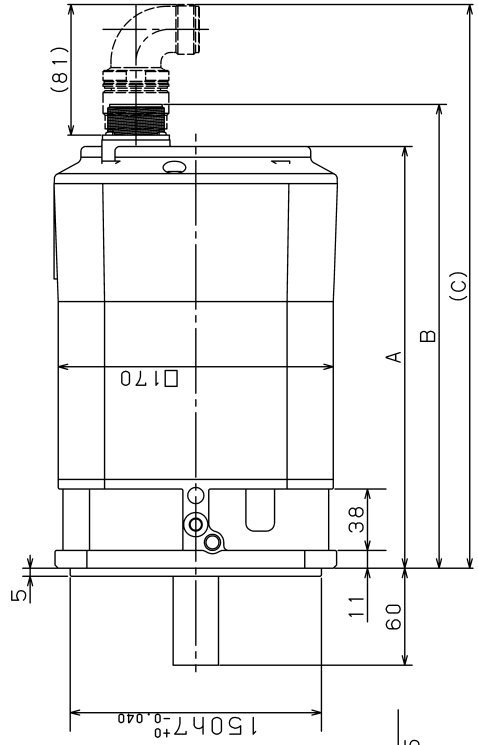
Flange mounting type

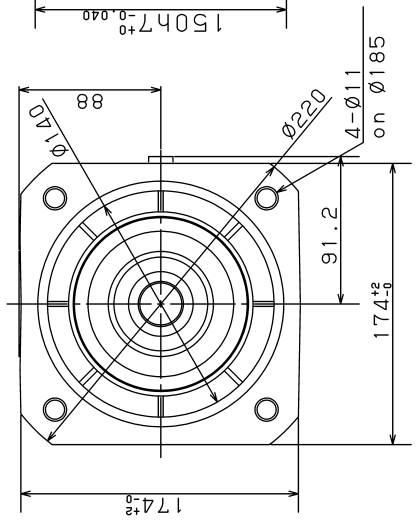
MODEL	A	B	C
αiI 2/8000-B (IP65)	261	287	350
αiI 3/8000-B (IP65)	361	387	450











(Note) 1. Use hexagon bolts M10, length 35mm or less as mounting bolts.

3.3.19.2 Shaft figure

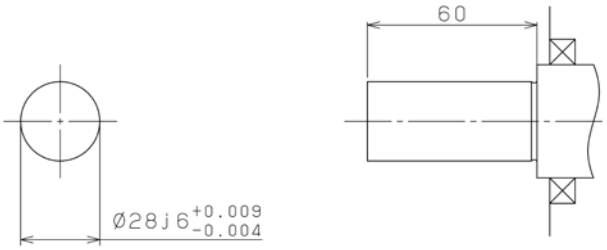
(1) Shaft figure types

The shaft figure for each motor is as given below.

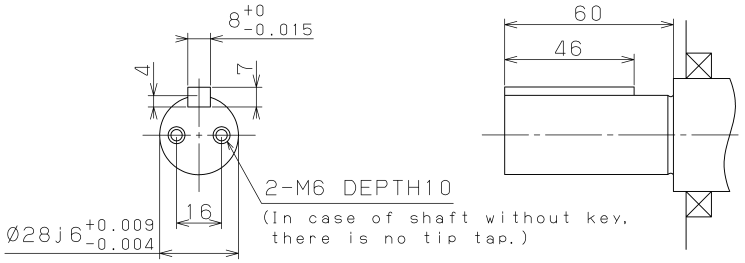
Model	Shaft without keyway		Shaft with keyway	
	Shaft	Details	Shaft	Details
αiI 2/8000-B (IP65)	ϕ28	(2) (a)	ϕ28	(2) (b)
αiI 3/8000-B (IP65)	ϕ28	(2) (c)	ϕ28	(2) (d)

(2) Shaft details

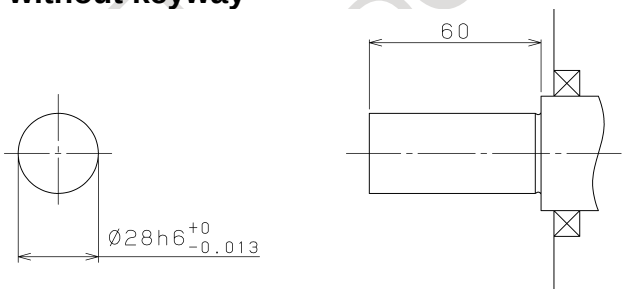
(a) ϕ28 Shaft without keyway



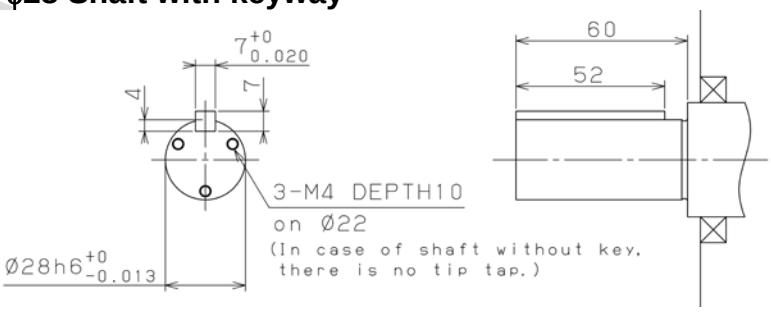
(b) ϕ28 Shaft with keyway



(c) ϕ28 Shaft without keyway



(d) ϕ28 Shaft with keyway



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3.3.19.3 Allowable radial load

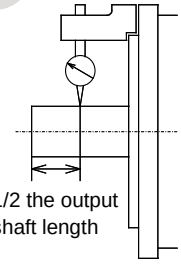
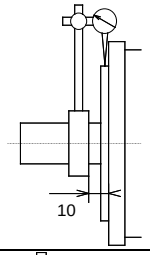
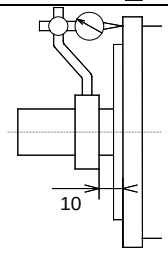
Use the motor output shaft below the allowable radial loads shown in the table below.

Model	Allowable radial load	
	At output shaft end	At output shaft center
αiI 2/8000-B (IP65)	1274N (130kgf)	1445N (147kgf)
αiI 3/8000-B (IP65)	1470N (150kgf)	1607N (164kgf)

NOTE
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.
3 If a thrust load is applied when a helical gear or coupling is mounted, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

3.3.19.4 Assembling accuracy

The following table lists the assembling accuracy values.

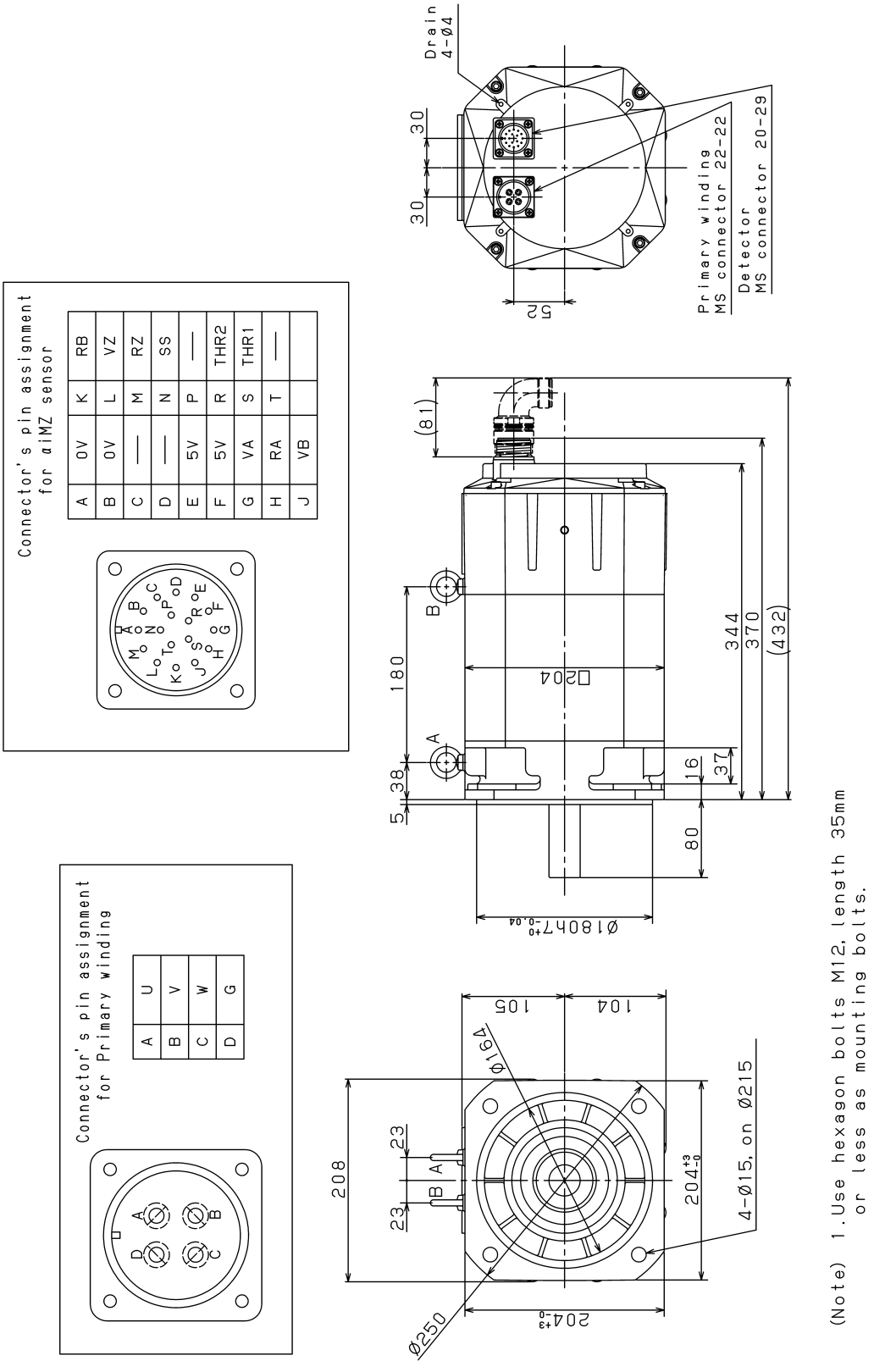
Item	Accuracy	Measuring method
Shaft run-out	20μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	40μm or less	
Run-out of the flange mounting surface against the core of the shaft	80μm or less	

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3.3.20 Models αiI 6/8000-B (IP65)

3.3.20.1 External dimensions

Flange mounting type



(Note) 1. Use hexagon bolts M12, length 35mm or less as mounting bolts.

3.3.20.2 Shaft figure

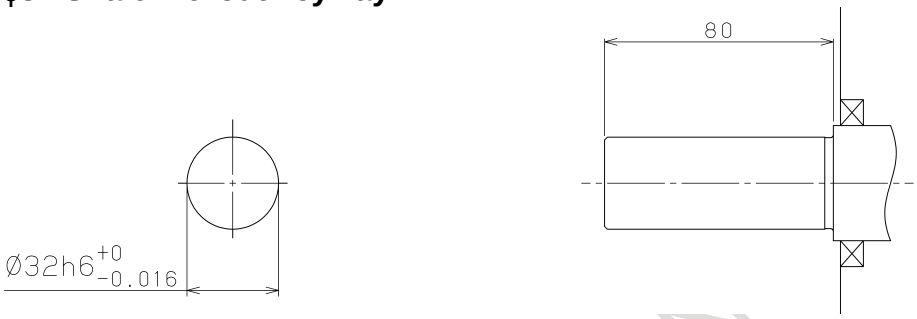
(1) Shaft figure types

The shaft figure for each motor is as given below.

Model	Shaft without keyway	
	Shaft diameter	Details
αiI 6/8000-B (IP65)	ϕ32	(2) (a)

(2) Shaft details

(a) ϕ32 Shaft without keyway



3.3.20.3 Allowable radial load

Use the motor output shaft below the allowable radial loads shown in the table below.

Model	Allowable radial load	
	At output shaft end	At output shaft center
αiI 6/8000-B (IP65)	1960N (200kgf)	2205N (225kgf)

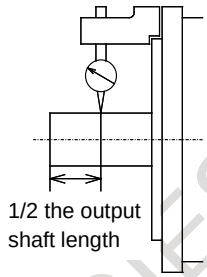
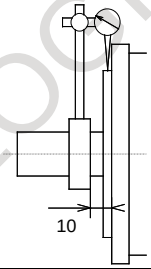
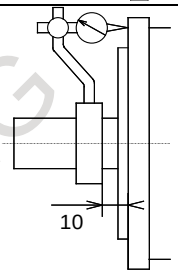
NOTE

1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, an abnormal noise may occur.)
2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.
3 If a thrust load is applied when a helical gear or coupling is mounted, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

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3.3.20.4 Assembling accuracy

The following table lists the assembling accuracy values.

Item	Accuracy	Measuring method
Shaft run-out	20μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	40μm or less	
Run-out of the flange mounting surface against the core of the shaft	80μm or less	

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3.4 COOLING FAN

A cooling fan is mounted to the FANUC AC spindle motor αi-B / βi-B series (other than some models including the αiL-B series and αiI-B (IP65) series). This cooling fan is described in this section.

This section, "COOLING FAN", consists of the following.

3.4.1 Cooling Fan Specifications
3.4.2 Cooling Fan Connection

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3.4.1 Cooling Fan Specifications

Fan motor current values

αiI-B, αiIP-B, αiIT-B, αiIPT-B, αiS-B, αiST-B, βiI-B, βiIP-B, βiIT-B series 200V type	50Hz				60Hz			
	Usable voltage [V]	Rated voltage [V]	Rated current [A]	Surge current [Ap-p]	Usable voltage [V]	Rated voltage [V]	Rated current [A]	Surge current [Ap-p]
αiI 1-B, αiI 1.5-B, αiIT 1-B, αiIT 1.5-B	160-270	200	0.09	0.40	160-270	200	0.10	0.40
αiI 2-B, αiI 3-B, αiIT 2-B, αiIT 3-B, βiI 3-B, βiI 6-B, βiIC 3-B, βiIC 6-B	170-240	200	0.09	0.40	170-240	200	0.10	0.40
αiI 6-B, αiI 8-B, αiIT 6-B, αiIT 8-B, βiI 8-B, βiI 12-B, βiIP 12-B, βiIT 12-B, βiIC 8-B	170-240	200	0.13	0.58	170-240	200	0.14	0.55
αiI 12-B to αiI 22-B, αiIP 12-B to αiIP 22-B, αiIT 12-B to αiIT 22-B, αiIPT 22-B, βiI 15-B, βiIP 15-B to βiIP 30-B, βiIT 15-B	170-240	200	0.20	1.81	170-240	200	0.30	1.69
αiI 30-B,αiI 40-B, αiIP 30-B, αiIP 40-B, αiIP 50-B, βiIP 40-B	170-253	200	0.45	3.12	170-253	200	0.48	3.06
αiI 50-B, αiI 60-B, αiIP 60-B	170-253	200	0.42	3.18	170-253	200	0.55	3.14

αiI-B, αiS-B, αiIP-B, αiIT, -B βiI-B, βiIT-B series 400V type	50Hz				60Hz			
	Usable voltage [V]	Rated voltage [V]	Rated current [A]	Surge current [Ap-p]	Usable voltage [V]	Rated voltage [V]	Rated current [A]	Surge current [Ap-p]
αiI 1HV-B, αiI 1.5HV-B, αiIT 1.5HV-B	170-220	200	0.09	0.37	195-253	230	0.11	0.42
αiI 2HV-B, αiI 3HV-B, αiIT 2HV-B, αiIT 3HV-B, βiI 3HV-B, βiI 6HV-B,	170-220	200	0.11	0.37	195-253	230	0.13	0.42
αiI 6HV-B, αiI 8HV-B,αiIT 6HV-B, αiIT 8HV-B, βiI 8HV-B, βiI 12HV-B	323-440	400	0.07	0.31	391-528	480	0.08	0.35
αiI 12HV-B to αiI 22HV-B, αiIP 15HV-B, αiIP 22HV-B, αiIT 15HV-B, αiIT 22HV-B, βiI 15HV-B	323-440	400	0.15	1.09	391-528	480	0.16	1.26
αiI 30HV-B, αiI 40HV-B, αiIP 40HV-B, αiIP 50HV-B	340-528	380	0.22	1.86	340-528	380	0.26	1.82
αiI 50HV-B, αiI 60HV-B αiIP 60HV-B	340-528	400	0.22	1.84	340-528	400	0.28	1.76
αiI 75HV-B, αiI 100HV-B	320-528	400	0.30	2.06	320-528	400	0.36	2.01
αiI 150HV-B	340-480	400	0.7	6.36	340-528	400	1.2	5.76
αiS 2000HV-B	340-480	400	0.8	6.36	340-528	400	1.3	5.76

NOTE
1 The term "surge current" represents a peak-to-peak current that flows when the power is turned on.
2 The values listed below are a rough standard. They are not guaranteed.

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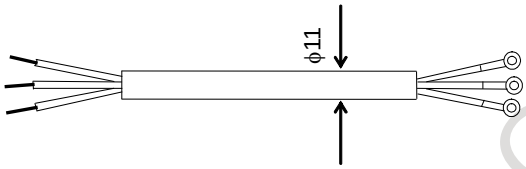
3.4.2 Cooling Fan Connection

Cable for the fan motor

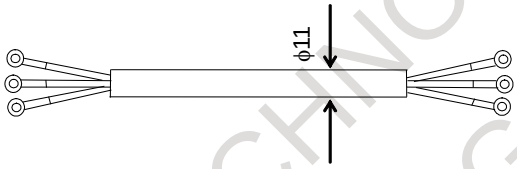
The machine tool builder is to prepare the following cable for the fan motor:

Vinyl heavy-duty power cord JIS C 3312 3-conductor
Conductor: 37/0.26 (2 mm^2)
Sheath: PVCϕ11
Crimp terminal: T2-4S

(1) For a non-screw terminal block (Peel off each wire sheath on the motor side by 8 to 9 mm.)



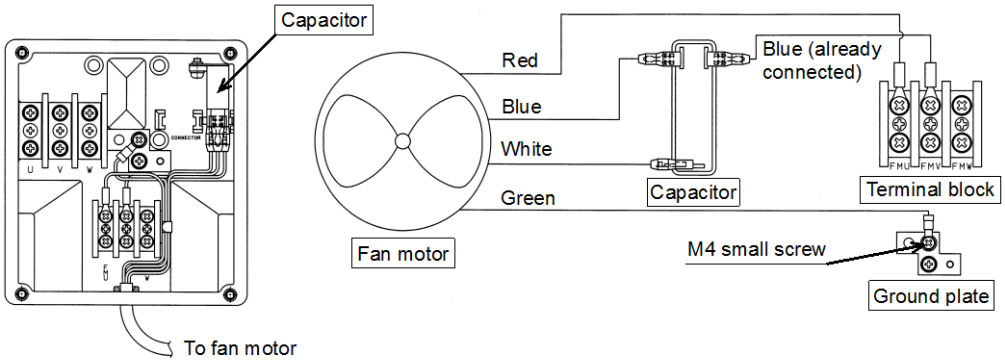
(2) For an M4 or M3.5 screw terminal block (Attach crimp terminals to the both ends.)



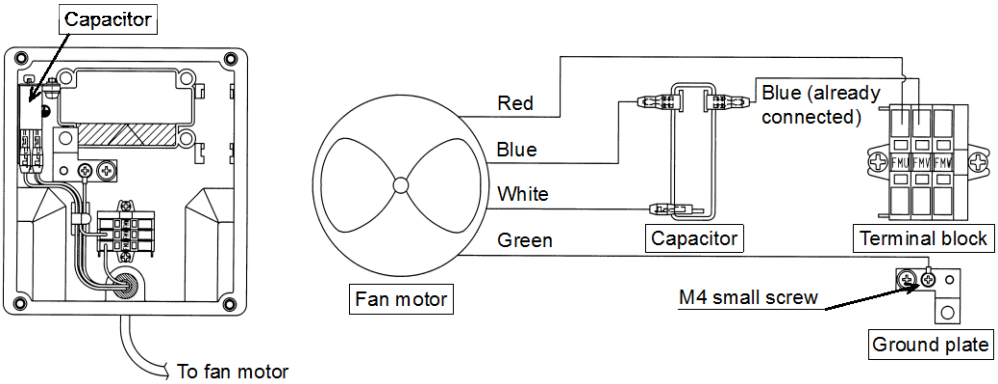
Connection of a single-phase fan motor

The input power requirements of the fan motor for α*i*I 1HV-B to α*i*I 3HV-B or α*i*I$_T$ 1.5HV-B to α*i*I$_T$ 3HV-B or β*i*I 3HV-B or β*i*I 6HV-B are 200/230 VAC +10% -15%, single-phase, and 50/60 Hz±1 Hz.

For α*i*I 1HV-B, α*i*I 1.5HV-B, and α*i*I$_T$ 1.5HV-B

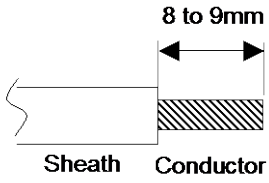


For α*i*I 2HV-B, α*i*I 3HV-B, α*i*I$_T$ 2HV-B, α*i*I$_T$ 3HV-B, β*i*I 3HV-B, and α*i*I 6HV-B



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Method of connection to a non-screw terminal for the fan motor

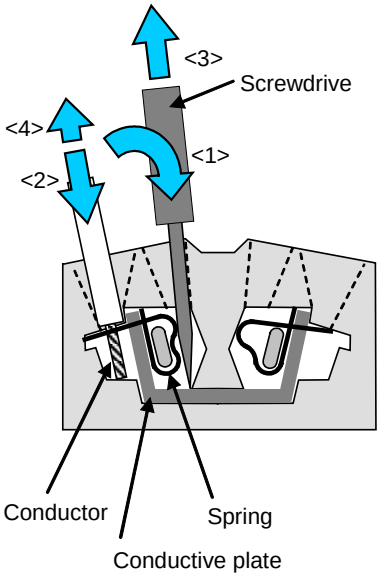


Peel-off length of a wire sheath

By using an appropriate tool, peel off each wire sheath by 8 to 9 mm.

Screwdriver

Use a flat-blade screwdriver with a blade size of 3.5 × 0.5 mm. (210-120J (standard type), 210-350J (short type) manufactured by WAGO)



Connection procedure

<1> Insert the tip of the screwdriver into the screwdriver insertion slot (small rectangular hole) until the tip touches the spring. Next, while tilting the screwdriver toward the inside of the terminal block, push the screwdriver until it butts the conductive plate. In this state, the spring is opened completely, and the screwdriver is held in the terminal block. Ensure that the screwdriver is secured. Otherwise, the next step (wire insertion) cannot be conducted easily.

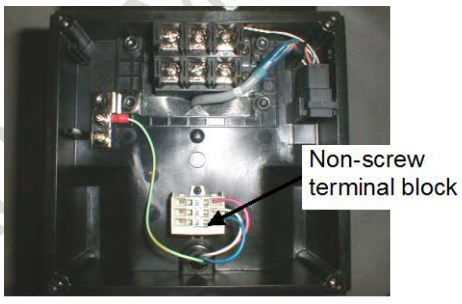
<2> Check the peel-off length (8 to 9 mm), then insert the wire into the wire insertion slot (large rectangular hole) until it stops, by sliding the wire along the outer side of the hole slowly so that the conductor does not become loose. Be careful not to push a thin wire excessively.

<3> While holding down the inserted wire by one hand, extract the screwdriver. The spring is closed to make a connection.

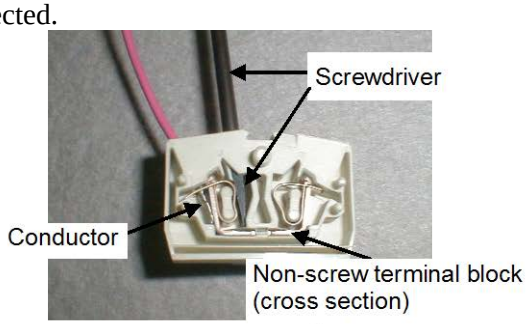
<4> By slightly pulling the wire, check that the wire is connected firmly. The wire need not be pulled intensely.

Cautions

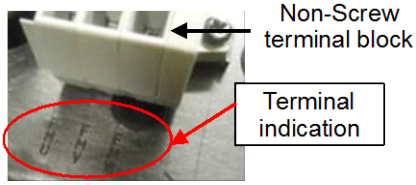
- Only one wire must be connected to one spring.
- A wire, which may be a stranded wire or single conductor, can be directly connected without performing terminal processing if its sheath is peeled off. A wire after ferrule processing can also be connected.



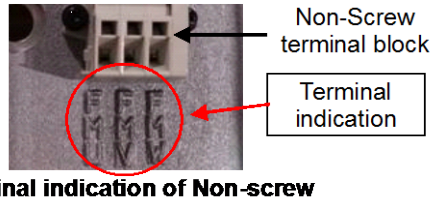
Inside the terminal box



State of cable connection



Terminal indication of Non-screw terminal block(Plastic terminal box)



Terminal indication of Non-screw terminal block(Aluminum terminal box)

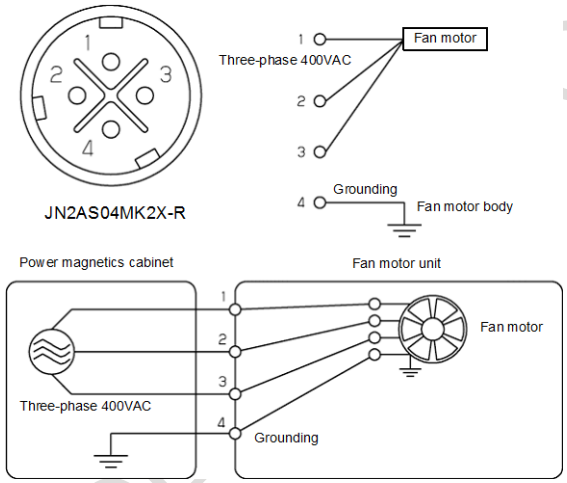
※Terminal indication of the fan motor is indicated on the terminal box from the end of June, 2014.

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Specification of the connector for the αiS 2000/2000HV-B fan motor

To supply power to the αiS 2000/2000HV-B fan, a dedicated connector is used.
The following shows the specification of the connector on the motor side and wiring diagram.

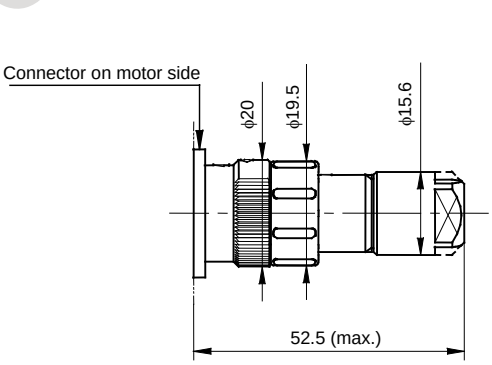
Manufacture : Japan Aviation Electronics Industry
Manufacturer specification: JN2AS04MK2X-R



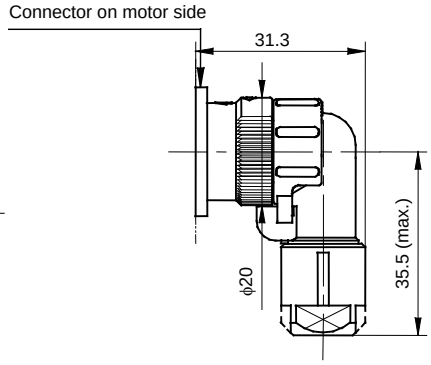
The rotation direction is clockwise (CW) when viewed from the rear side of the motor. Make connections so that the sequence of the three phases, R, S, and T, is correct. If the sequence is not correct, the fan rotates in the reverse direction. In this case, the load current of the fan motor increases, which may cause the fan to overheat and stop. When the fan rotates in the reverse direction, the direction of the wind is the same because of the radial type of fan motor, but the cooling effect deteriorates since the air volume decreases.

The following shows the specification of the connector on the cable side.
This connector is drip-proof and requires no special tool since it is a solder type connector.

Connector specifications	Straight type	JN2DS04FK2X-R (Japan Aviation Electronics Industry) A06B-6114-K214#S (FANUC specification)
	Right angle type	JN2FS04FK2X-R (Japan Aviation Electronics Industry) A06B-6114-K214#E (FANUC specification)
Compatible cable		AWG#16 or less (1.25mm^2 or less) * Solder pot diameter ϕ1.9
Insulation external diameter		ϕ2.7 or less
Compatible cable O.D.		ϕ6.5 to 8.0
Example of applicable wire		600-V rated cable (300/500-V rated cable: IEC standard)
Applicable wire size and cable length		0.5 mm^2 or more (AWG#20)



Straight type



Right angle type

If the cable length is longer than or equal to 50 m, take measures such as installation of repeaters so that the sum of wire resistance (for both ways) becomes 1.5Ω or less.

3.5 LIQUID COOLING

The FANUC AC spindle motor αiIL-B series is liquid-cooled motors. This section describes the liquid cooling method.

Cooling conditions

Item		αiIL 8/20000-B αiIL 8/20000HV-B	αiIL 15/15000-B αiIL 15/15000HV-B	αiIL 26/15000-B αiIL 26/15000HV-B
Cooler capacity	kw (kcal/h)	2.3 to 3.5(*1) (2000 to 3000)	2.9 to 3.5(*1) (2500 to 3000)	2.9 to 4.1(*1) (2500 to 3500)
Liquid coolant		1. Oil 2. Liquid additive (Example: 2% SHELL DONAX CC)(*2)		
Liquid coolant flow	L/min	10 or higher		
Liquid coolant pressure	kPa (kgf/cm^2)	490 or lower (5 or lower) (as measured at the cooling pipe inlet)		
Liquid coolant viscosity	m^2/sec (cSt)	1.0×10^{-5} or lower (10 or lower)		
Liquid coolant specific heat	J/g·K	1.87		
Liquid coolant density	g/cm^3	0.78		
Liquid coolant temperature	(*3)	Room temperature + 0 to +10°C (as measured at the cooling pipe inlet)		

(*1) This cooler capacity meets the corresponding CE marking standard.

(*2) It has been confirmed that a dilute solution with 2% of "SHELL DNAX CC" made by SHELL is usable for cooling.

(*3) If the temperature of the liquid coolant is lower than the room temperature as measured at the cooling pipe inlet, it is likely that condensation may occur in the motor. Be sure to strictly observe the specified temperature.

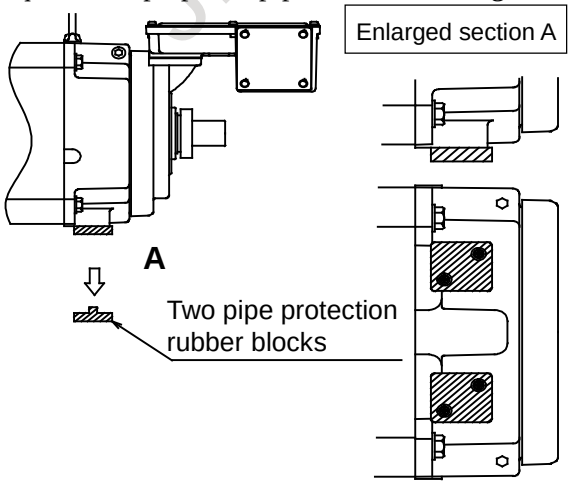
Liquid coolant piping

This motor series needs cooling based on liquid coolant.

- Factory-setting

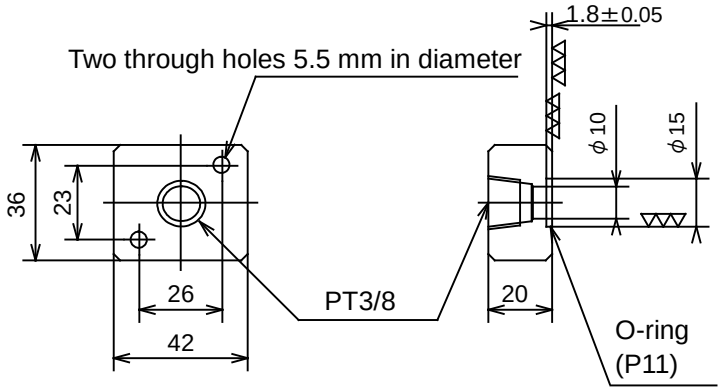
The motor comes with rubber blocks for pipe protection.

The machine tool builder is requested to prepare a pipe block according to the following drawing.



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- Example of a pipe block



⚠ WARNING
To drive this motor series, be sure to cool the motor with coolant. If a motor is driven with a sealed cooling line while the coolant is remaining inside, inner pressure may increase by temperature rise, possibly causing damage to the motor. There is also a danger that motor parts may fly away.

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4 BUILT-IN DETECTOR

This chapter describes detectors built into the standard spindle motor.

4.1 αiM/MZ SENSOR

The αiM/MZ sensor is a detector built into the standard spindle motor.

4.1.1 Type and Specification Method

(Omitted because they depend on which motor is specified.)

(Reference)
The αiM/MZ sensor is available in the types below.

αiM/MZ sensor types

Sensor name	One-rotation signal detection	Number of teeth
αiM sensor	No	64λ, 128λ, 256λ
αiMZ sensor	Yes	

4.1.2 Outline

(Omitted because the sensor is built into the motor.)

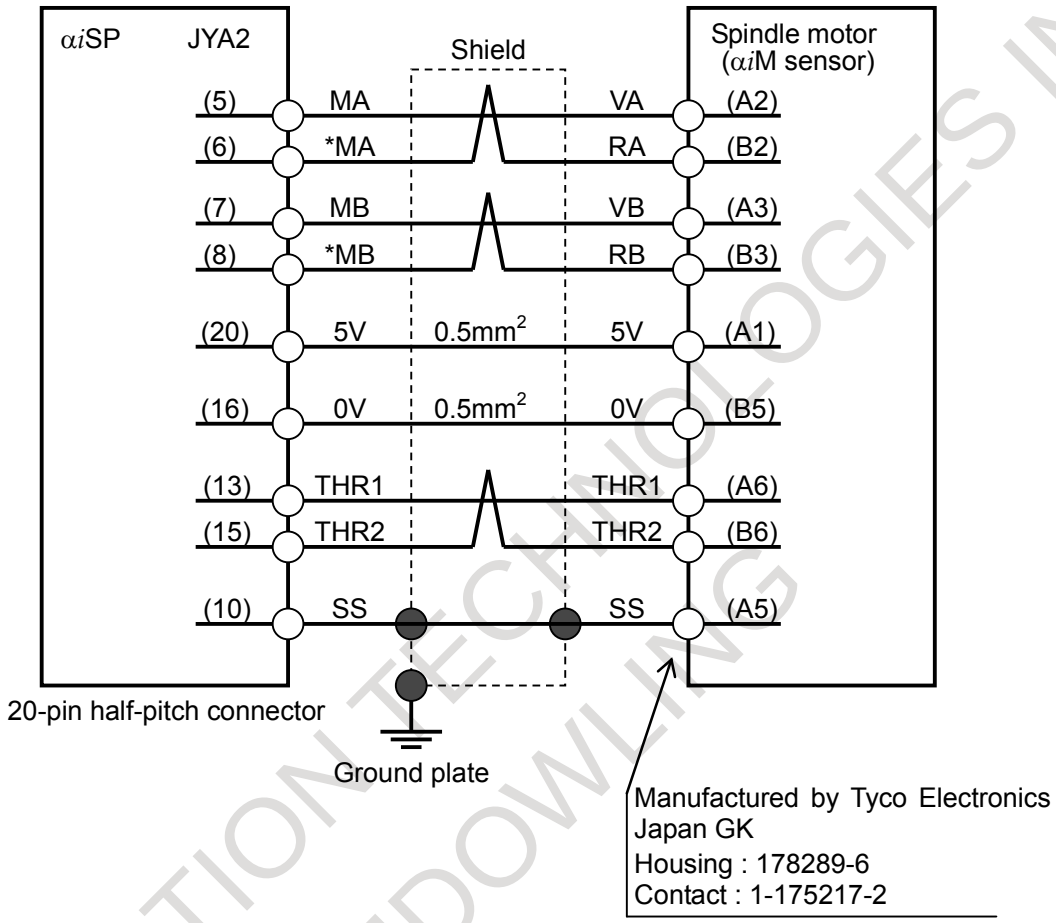
4.1.3 Connection

For the αiM sensor → Cable K14
For the αiMZ sensor → Cable K17

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4.1.4 Details of Cable K14

4.1.4.1 For the spindle motor with αiM sensor (except for model αiI 0.5-B)



Cable specification : 6 common shielded cable (Three 0.18mm^2 twisted pairs + 0.5mm^2 wires)
Recommended cable conductor : A66L-0001-0368

NOTE
1 Use pins 20 and 16 of JYA2 for 5 V and 0 V to prevent the sensor from being damaged if the connector is attached in a wrong way.
2 For the recommended cable conductor, the maximum length is 72 m.
3 If using a cable conductor other than the recommended one, make sure that the sum of the 5V-0V electric wire resistances is 5 Ω or less.
4 For an explanation of the recommended cable and the JYA2-side connector conforming to the recommended cable, refer to the FANUC SERVO AMPLIFIER αi series DESCRIPTIONS (B-65282EN) or FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65412EN).

⚠ **WARNING**
If the feedback signal is connected incorrectly, an unpredictable motor operation may occur.

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Connector pin assignment

JYA2

9	5V	10	SS	19	#	20	5V
7	MB	8	*MB	17	#	18	5V
5	MA	6	*MA	15	THR2	16	0V
3	OH1	4	OH2	13	THR1	14	0V
1	MZ	2	*MZ	11	#	12	0V

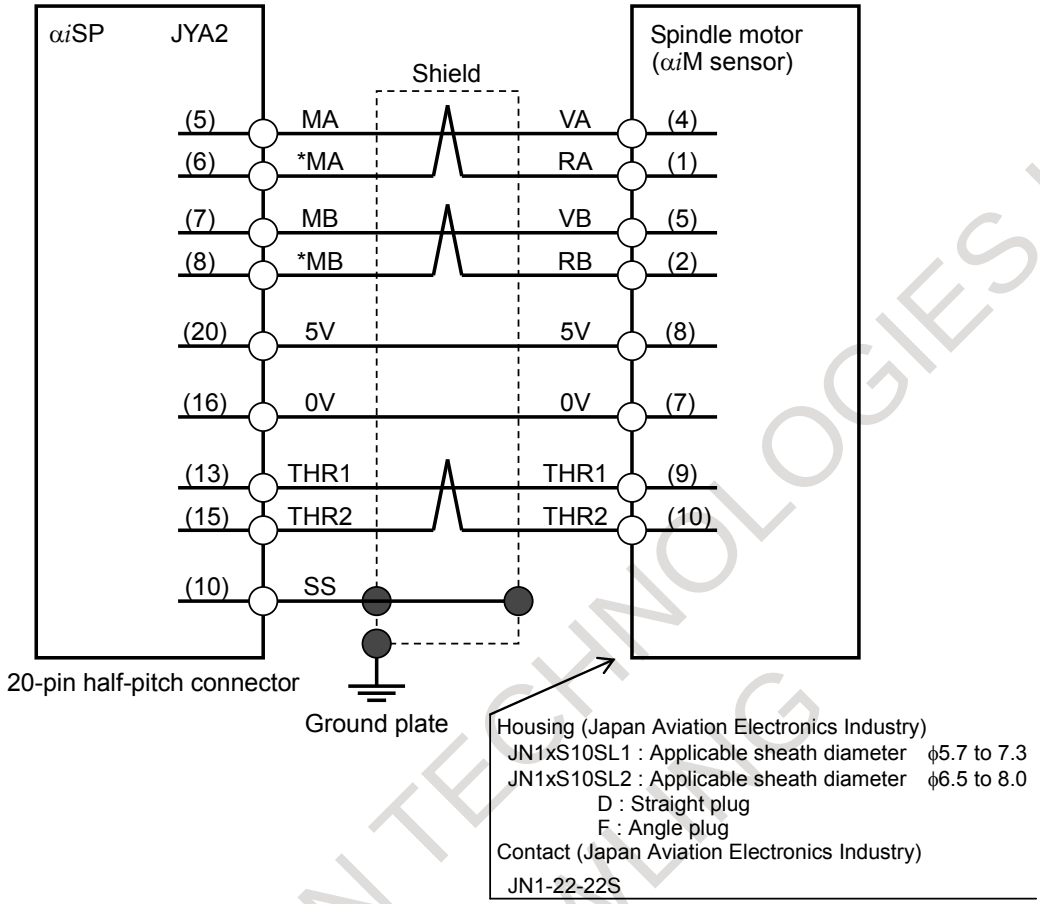
NOTE
Do not use any pin that is marked #, because they may already be in use for input/output signals for an optional PCB.

Pin arrangement of the connector (manufactured by Tyco Electronics Japan GK) on the motor side

A1	+5V	B1	
A2	VA	B2	RA
A3	VB	B3	RB
A4		B4	
A5	SS	B5	0V
A6	THR1	B6	THR2

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4.1.4.2 For the spindle motor with αiM sensor (model αiI 0.5-B)



Cable specification : 2 common shielded cable (Three 0.2mm^2 twisted pairs + 0.3mm^2 wires)
Recommended cable conductor : A66L-0001-0482

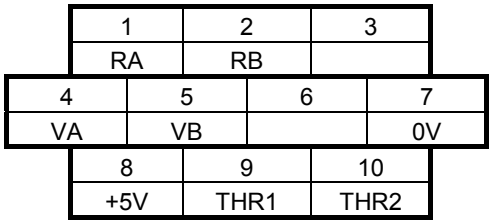
NOTE
1 Use pins 20 and 16 of JYA2 for 5 V and 0 V to prevent the sensor from being damaged if the connector is attached in a wrong way.
2 For the recommended cable conductor, the maximum length is 41 m.
3 If using a cable conductor other than the recommended one, make sure that the sum of the 5V-0V electric wire resistances is 5 Ω or less.
4 For an explanation of the recommended cable and the JYA2-side connector conforming to the recommended cable, refer to the FANUC SERVO AMPLIFIER αi series DESCRIPTIONS (B-65282EN) or FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65412EN).

⚠ WARNING
If the feedback signal is connected incorrectly, an unpredictable motor operation may occur.

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Connector pin assignment

Pin arrangement of the connector (manufactured by Japan Aviation Electronics Industry) on the motor side



- Crimp tool specification

A06B-6114-K201#JN1E (Applicable wire diameter : AWG#21,#23,#25)

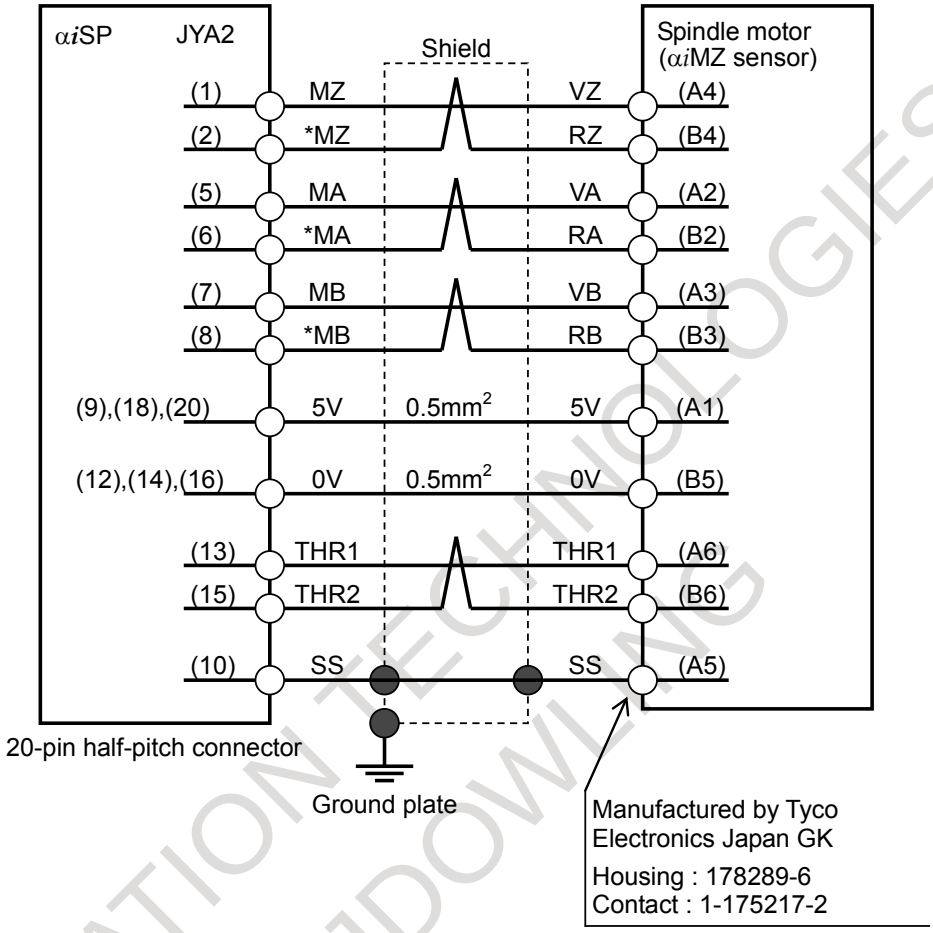
- Connector kit specification

A06B-6114-K200#S: Straight plug (including a contact)
A06B-6114-K200#E: Elbow plug (including a contact)

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4.1.5 Details of Cable K17

4.1.5.1 For the spindle motor with αi MZ sensor (except for model αiI 0.5-B, αiS 1-B, αiST 1-B, and αiI-B(IP65) series)



Cable specification : 6 common shielded cable (Four 0.18mm^2 twisted pairs + 0.5mm^2 wires)
Recommended cable conductor : A66L-0001-0368

NOTE
1 Use pins 20 and 16 of JYA2 for 5 V and 0 V to prevent the sensor from being damaged if the connector is attached in a wrong way.
2 For the recommended cable conductor, the maximum length is 50 m.
3 If using a cable conductor other than the recommended one, make sure that the sum of the 5V-0V electric wire resistances is 4 Ω or less.
4 For an explanation of the recommended cable and the JYA2-side connector conforming to the recommended cable, refer to the FANUC SERVO AMPLIFIER αi series DESCRIPTIONS (B-65282EN) or FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65412EN).

⚠ WARNING
If the feedback signal is connected incorrectly, an unpredictable motor operation may occur.

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Connector pin assignment

JYA2

See Subsection for cable K14.

JYA4

9	5V	10	SS	19	#	20	5V
7	MB	8	*MB	17	#	18	5V
5	MA	6	*MA	15		16	0V
3	#	4	#	13		14	0V
1	MZ	2	*MZ	11	#	12	0V

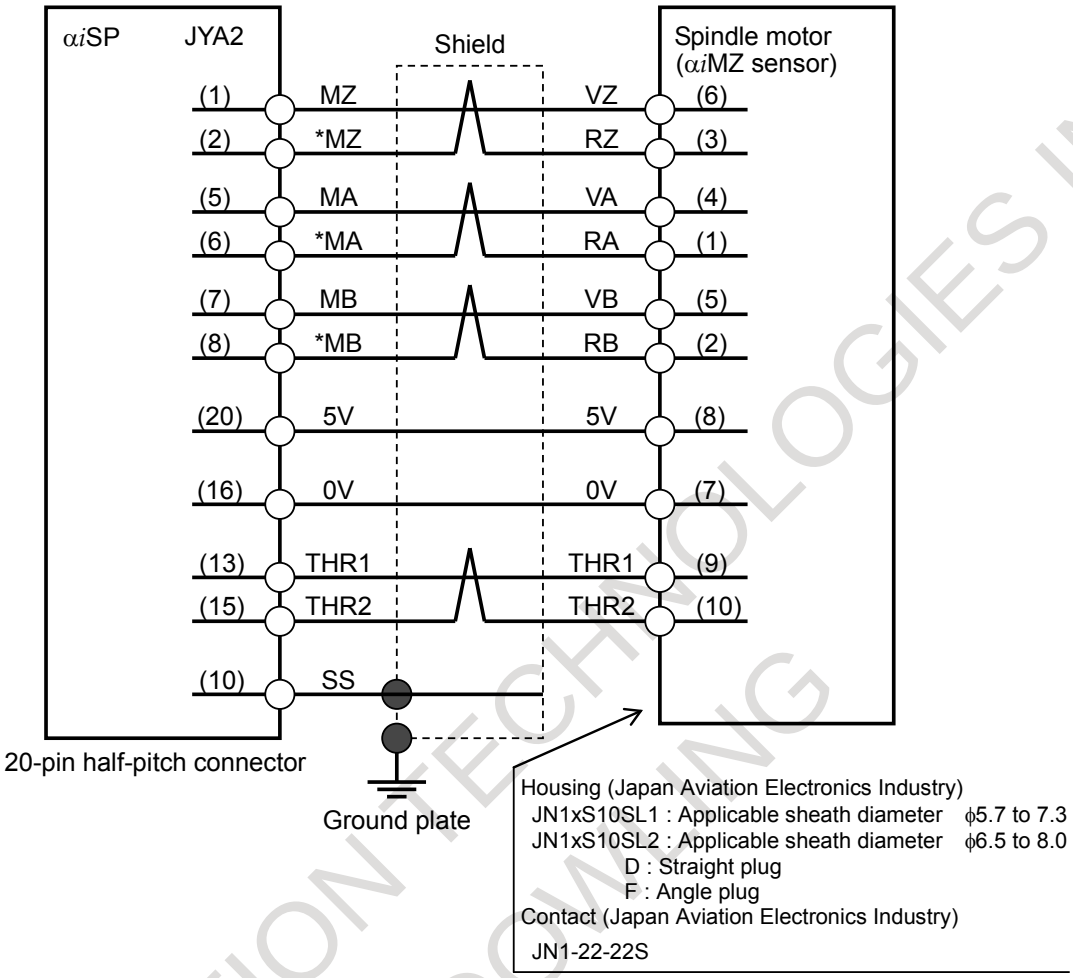
NOTE
Do not use any pin that is marked #, because they may already be in use for input/output signals for an optional PCB.

Pin arrangement of the connector (manufactured by Tyco Electronics Japan GK) on the motor side

A1	+5V	B1	
A2	VA	B2	RA
A3	VB	B3	RB
A4	VZ	B4	RZ
A5	SS	B5	0V
A6	THR1	B6	THR2

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4.1.5.2 For the spindle motor with αi MZ sensor (model αiI 0.5-B, and αiI 0.5-B(IP65))



Cable specification : 2 common shielded cable (Four 0.2mm^2 twisted pairs + 0.3mm^2 wires)
Recommended cable conductor : A66L-0001-0482

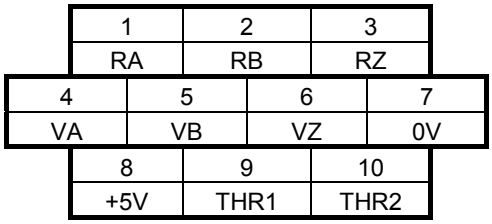
NOTE
1 Use pins 20 and 16 of JYA2 for 5 V and 0 V to prevent the sensor from being damaged if the connector is attached in a wrong way.
2 For the recommended cable conductor, the maximum length is 28 m.
3 If using a cable conductor other than the recommended one, make sure that the sum of the 5V-0V electric wire resistances is 4 Ω or less.
4 For an explanation of the recommended cable and the JYA2-side connector conforming to the recommended cable, refer to the FANUC SERVO AMPLIFIER αi series DESCRIPTIONS (B-65282EN) or FANUC SERVO AMPLIFIER αi–B series DESCRIPTIONS (B-65412EN).

⚠ **WARNING**
If the feedback signal is connected incorrectly, an unpredictable motor operation may occur.

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Connector pin assignment

Pin arrangement of the connector (manufactured by Japan Aviation Electronics Industry) on the motor side

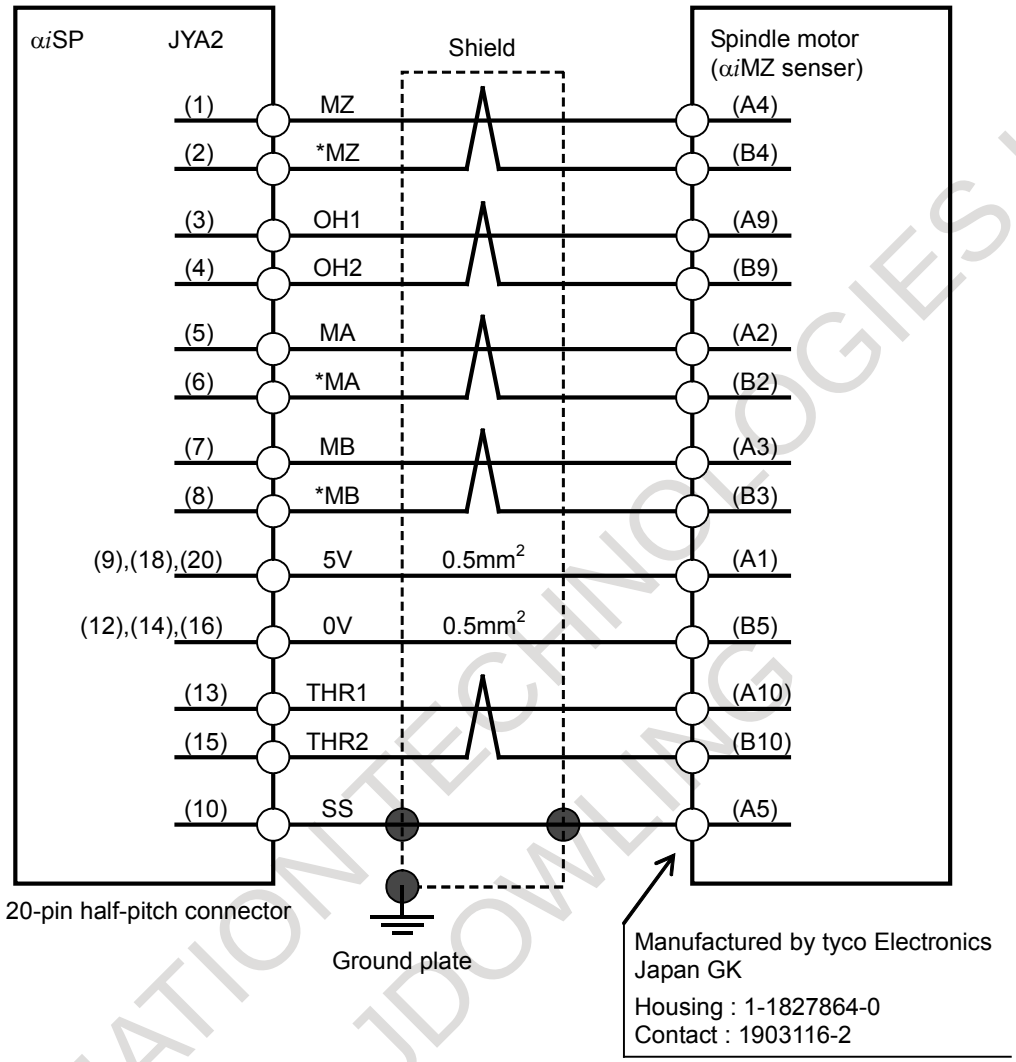


- Crimp tool specification
  A06B-6114-K201#JN1E (Applicable wire diameter : AWG#21,#23,#25)

- Connector kit specification
  A06B-6114-K200#S: Straight plug (including a contact)
  A06B-6114-K200#E: Elbow plug (including a contact)

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4.1.5.3 For the spindle motor with αi MZ sensor (αiS 1/12000-B, αiST 1/12000-B)



Cable specification : 6 common shielded cable (Four 0.18mm^2 twisted pairs + 0.5mm^2 wires)
Recommended cable conductor : A66L-0001-0368

NOTE
1 Use pins 20 and 16 of JYA2 for 5 V and 0 V to prevent the sensor from being damaged if the connector is attached in a wrong way.
2 For the recommended cable conductor, the maximum length is 28 m.
3 If using a cable conductor other than the recommended one, make sure that the sum of the 5V-0V electric wire resistances is 4 Ω or less.
4 For an explanation of the recommended cable and the JYA2-side connector conforming to the recommended cable, refer to the FANUC SERVO AMPLIFIER αi series DESCRIPTIONS (B-65282EN) or FANUC SERVO AMPLIFIER αi–B series DESCRIPTIONS (B-65412EN).

⚠ **WARNING**
If the feedback signal is connected incorrectly, an unpredictable motor operation may occur.

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Connector pin assignment

JYA2

9	5V	10	SS	19	#	20	5V
7	MB	8	*MB	17	#	18	5V
5	MA	6	*MA	15	THR2	16	0V
3	OH1	4	OH2	13	THR1	14	0V
1	MZ	2	*MZ	11	#	12	0V

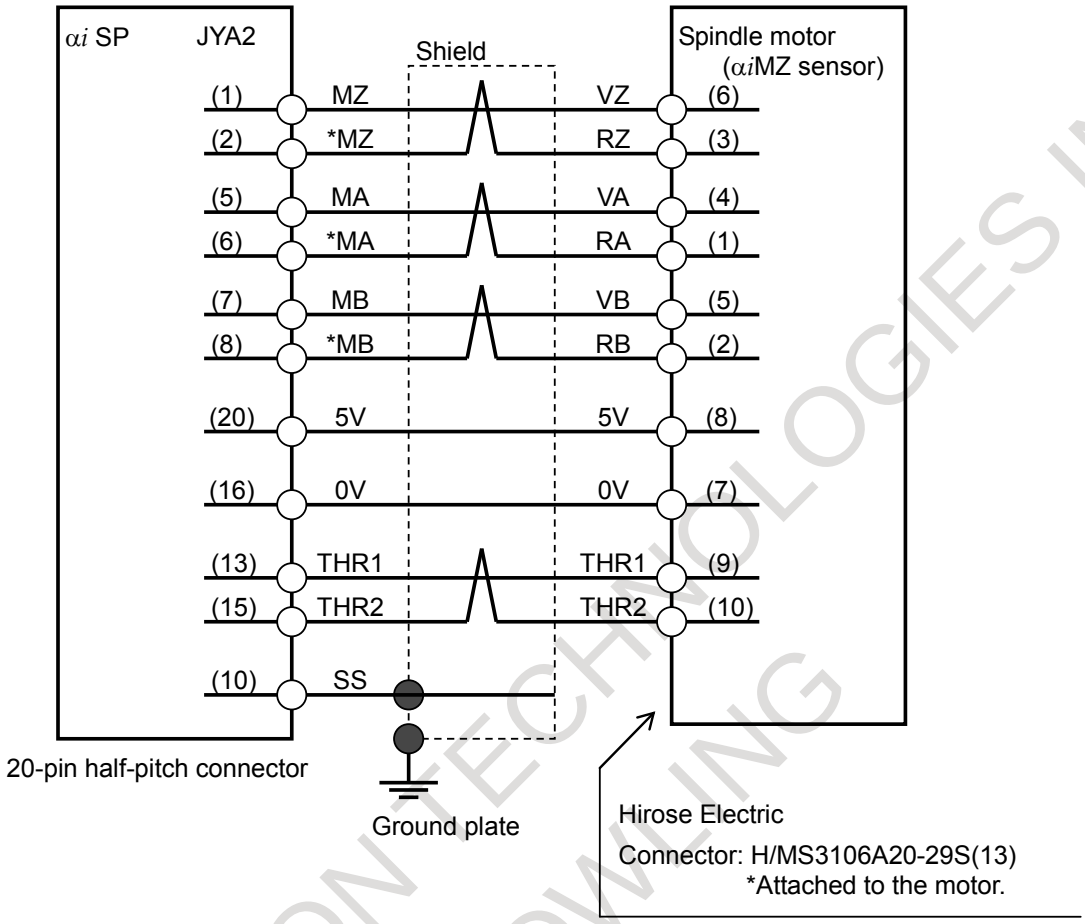
NOTE
Do not use any pin that is marked #, because they may already be in use for input/output signals for an optional PCB.

Pin arrangement of the connector (manufactured by Tyco Electronics Japan GK) on the motor side

A1	+5V	B1	
A2	MA	B2	*MA
A3	MB	B3	*MB
A4	MZ	B4	*MZ
A5	SS	B5	0V
A6		B6	
A7		B7	
A8		B8	
A9	OH1	B9	OH2
A10	THR1	B10	THR2

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4.1.5.4 For the spindle motor with αi MZ sensor (αiI-B(IP65) series except for model and αiI 0.5-B(IP65))



Cable specification : 2 common shielded cable (Four 0.2mm^2 twisted pairs + 0.3mm^2 wires)
Recommended cable conductor : A66L-0001-0482

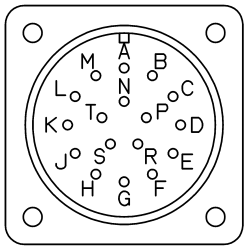
NOTE
1 Use pins 20 and 16 of JYA2 for 5 V and 0 V to prevent the sensor from being damaged if the connector is attached in a wrong way.
2 For the recommended cable conductor, the maximum length is 28 m.
3 If using a cable conductor other than the recommended one, make sure that the sum of the 5V-0V electric wire resistances is 4 Ω or less.
4 For an explanation of the recommended cable and the JYA2-side connector conforming to the recommended cable, refer to the FANUC SERVO AMPLIFIER αi series DESCRIPTIONS (B-65282EN) or FANUC SERVO AMPLIFIER αi–B series DESCRIPTIONS (B-65412EN).
5 The connector itself is not waterproof.
The machine tool manufacturer should prepare a conduit hose seal adapter.

⚠ **WARNING**
If the feedback signal is connected incorrectly, an unpredictable motor operation may occur.

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Connector pin assignment

Pin arrangement of the connector (manufactured by Hirose Electric) on the motor side



A	0V	K	RB
B	0V	L	VZ
C	——	M	RZ
D	——	N	SS
E	5V	P	——
F	5V	R	THR2
G	VA	S	THR1
H	RA	T	——
J	VB		

- Crimp tool specification

Manufacturer	Product number	Applicable wire diameter
Hirose Electric	H/MS/CC-HT	AWG#24 to 28

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4.2 PULSECODER

The FANUC AC spindle motor αiS-B series has an internal Pulsecoder (optical encoder) as a feedback detector which detects the position, speed, and others. The Pulsecoder outputs position information and alarm signal. The Pulsecoder is built into the motor, so its outline drawing is not provided in this section.

4.2.1 Pulsecoder Specification

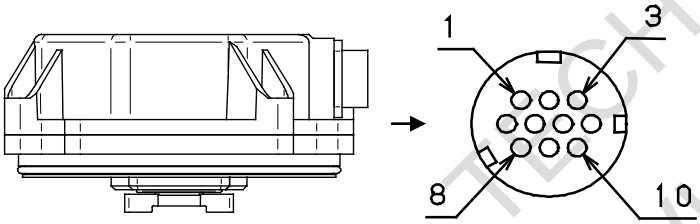
The specification of the Pulsecoder is listed below.

Pulsecoder type	Resolution [Division/rev]	Absolute/incremental	Applicable motor
αiA1000	1,000,000	Absolute	αiS-B series

4.2.2 Connecting Pulsecoder

The Pulsecoder connector specification and signals are shown below.

Manufacture: Japan Aviation Electronics Industry
Manufacturer specification: JN2AS10UL1-R



Signal name	Pin number
RD	6
*RD	5
+5V	8,9
0V	7,10
FG	3
+6V	4

4.2.3 Cable Connector Specification

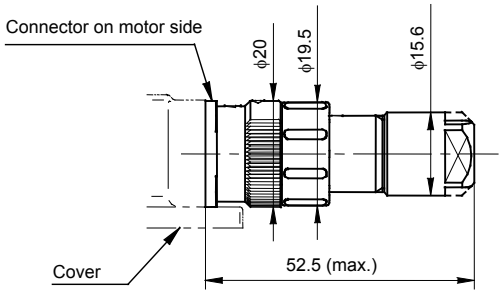
A small dedicated connector common to the αi-B series servo motors is used for the signal connector. This connector is drip-proof when engaged with the connector on the motor side. The following types of cable connection are available: Crimp type and solder type. The crimp type requires a dedicated crimping tool.
Note that there are restrictions on the diameter of used wire, considering cable crimping and voltage drop.
For the cable connecting the Pulsecoder and amplifier, refer to "FANUC SERVO AMPLIFIER αi series DESCRIPTIONS (B-65282EN)" or "FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65412EN)".

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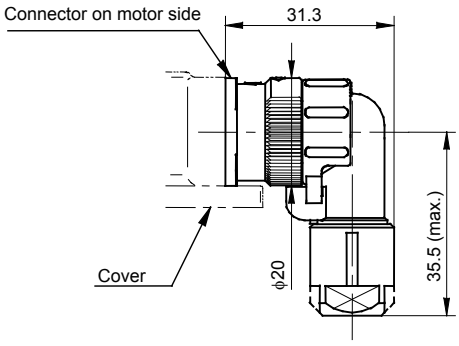
Crimp type connector

		For signal	
Connector specifications	Straight type	JN2DS10SL1-R or JN2DS10SL2-R: Connector, JN1-22-22S: Contact (Japan Aviation Electronics Industry) A06B-6114-K204#S (FANUC specification) * Including the contact	
	Right angle type	JN2FS10SL1-R or JN2FS10SL2-R: Connector, JN1-22-22S: Contact (Japan Aviation Electronics Industry) A06B-6114-K204#E (FANUC specification) * Including the contact	
Insulation external diameter		ϕ1.5 or less	
Compatible cable O.D.		ϕ5.7 to ϕ7.3: JN2DS10SL1-R or JN2FS10SL1-R ϕ6.5 to ϕ8.0: JN2DS10SL2-R or JN2FS10SL2-R * With the FANUC specifications, two types of bushings: for ϕ5.7 to ϕ7.3 and for ϕ6.5 to ϕ8.0 are included.	
Used wire		Cable length: 28 m or less	Cable length: 50 m or less
	5V,0V	0.3 mm^2×2	0.5mm^2×2 * Use a cable of which strand configuration is 20/0.18 or 104/0.08.
	6V	0.3 mm^2	0.5mm^2 * Use a cable of which strand configuration is 20/0.18 or 104/0.08.
	RD,*RD	Twisted pair of at least 0.18 mm^2	
Tool for crimping terminal		AWG#21 (0.5mm^2:20/0.18), AWG#23 (0.3mm^2), AWG#25 (0.18mm^2)	CT150-2-JN1-E (Japan Aviation Electronics Industry) A06B-6114-K201#JN1E (FANUC specification)
		AWG#20 (0.5mm^2:104/0.08), AWG#21 (0.5mm^2:20/0.18), AWG#25 (0.18mm^2)	CT150-2-JN1-D (Japan Aviation Electronics Industry) A06B-6114-K201#JN1D (FANUC specification)
Tool for pulling terminal out		ET-JN1 (Japan Aviation Electronics Industry) A06B-6114-K201#JN1R (FANUC specification)	

The outside dimensions of each type of connector when engaged are shown below:



Straight type



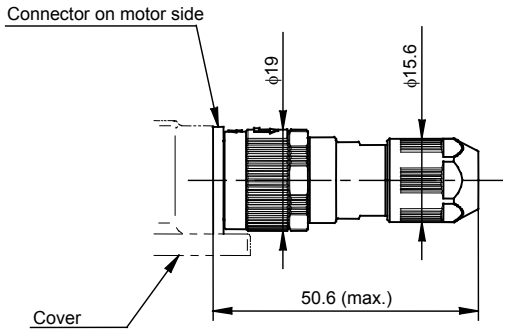
Right angle type

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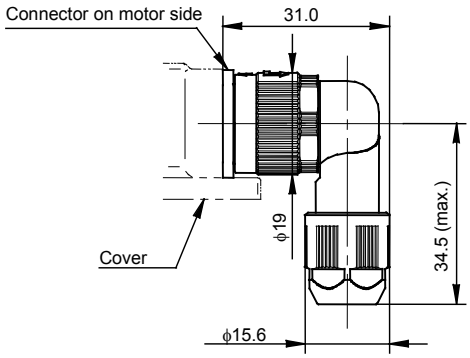
Solder type connector

		For signal	
Connector specifications	Straight type	HR34B-12WPA-10S or HR34B-12WPB-10S (Hirose Electric) A06B-6114-K205#S (FANUC specification)	
	Right angle type	HR34B-12WLPA-10S or HR34B-12WLPB-10S (Hirose Electric) A06B-6114-K205#E (FANUC specification)	
Applicable wire size		AWG#20 or less (ϕ0.8mm or less)	
Compatible cable O.D.		ϕ5.7 to ϕ7.3: HR34B-12WPA-10S or HR34B-12WLPA-10S ϕ6.5 to ϕ8.0: HR34B-12WPB-10S or HR34B-12WLPB-10S * FANUC specification includes two types of bushings and end nuts for ϕ5.7 to ϕ7.3 and for ϕ6.5 to ϕ8.0.	
Used wire		Cable length: 28 m or less	Cable length: 50 m or less
	5V,0V	0.3 $mm^2 \times 2$	0.5$mm^2 \times 2$
	6V	0.3 mm^2	0.5mm^2
	RD,*RD	Twisted pair of at least 0.18 mm^2	

The outside dimensions of each type of connector when engaged are shown below:



Straight type



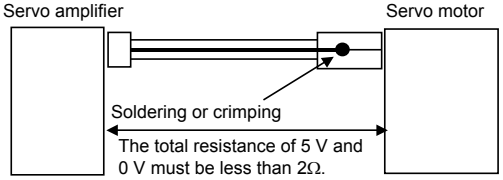
Right angle type

⚠ CAUTION

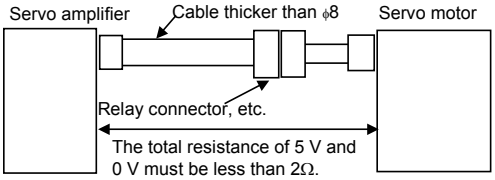
1 In case that the cable is prepared by MTB, total resistance of 5V and 0V must be less than 2Ω.

2 Pulsecoder side connector can accept maximum 0.5mm^2 (wire construction 20/0.18 or 104/0.08, diameter ϕ1.5 or less) wire and sheath diameter is ϕ5.7 to ϕ8.0. In case of using thicker wire or cable, take measures described below.

Case 1] Cable conductor exceeds 0.5mm^2.



[Case 2] Sheath diameter of exceeds ϕ8.

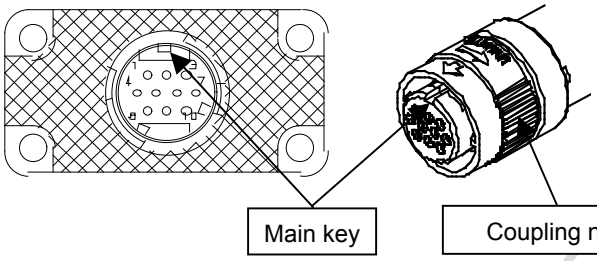


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4.2.4 Procedure for Engaging Feedback Cable Connectors

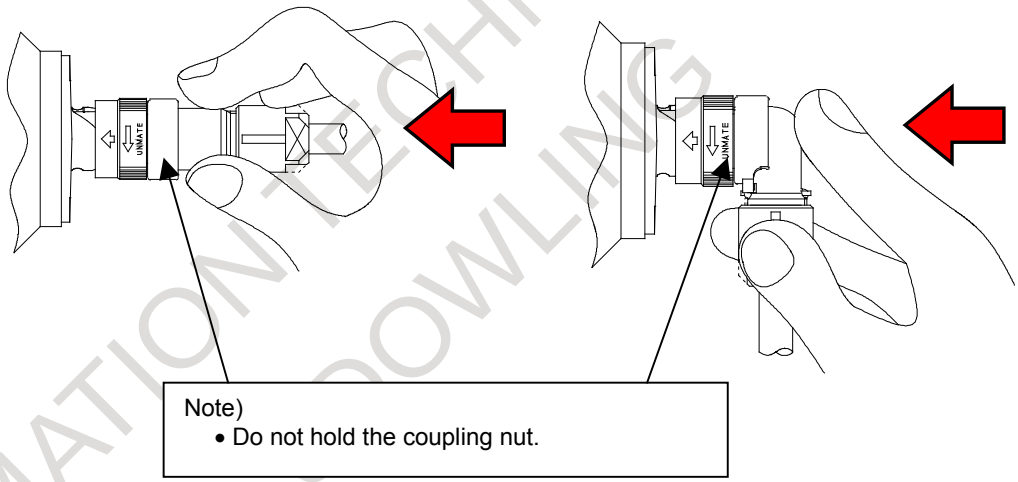
Engage the feedback cable connectors according to the procedure described below, and check that they are engaged securely.

1 Checking the mating surfaces and the key direction
Check that the mating surfaces are free from any substance such as foreign particles or oil.

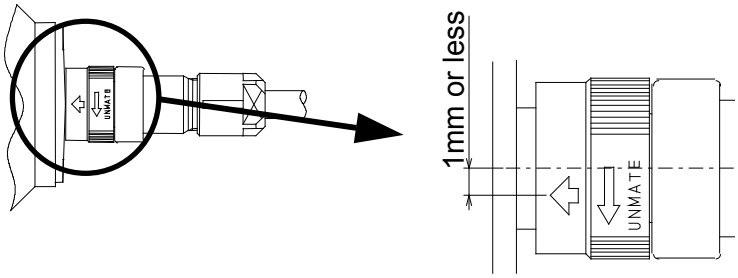


2 Engaging the connectors
Hold the connector at the position shown in the figure, insert it straightforward until it snaps into place.

Straight type Right angle type



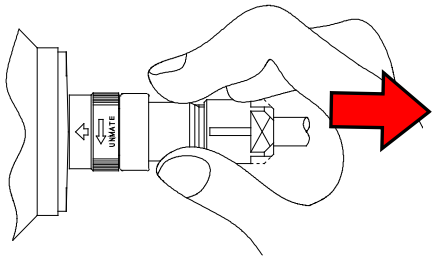
3 Checking the engaged status
<1> Check that the arrow on the connector is positioned at the center as shown in the figure below. If the arrow is not at the center, turn the coupling nut by hand so that the arrow is at the correct position.



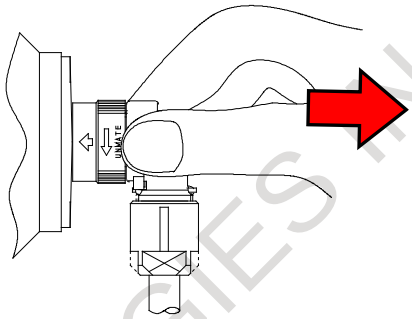
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<2> Hold the connector at the position shown in the following figure, and check that the connector does not come off when it is pulled lightly.

Straight type



Right angle type



Note)
- Do not pull the cable.
- Pull the connector straightforward.

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5 DYNAMIC BRAKE

The FANUC AC spindle motor αiS-B series is synchronous motors using permanent magnets. When an emergency stop, power failure, or alarm occurs, this motor does not enter the free running state, but the motor power leads are automatically placed in the short circuit state, and the motor can be stopped by a dynamic brake. The use of the dynamic brake can greatly reduce the spindle stopping time as compared with that when the motor is stopped only with mechanical friction.

When a dynamic brake is used, high braking torque is generated. Since the braking torque and braking force are transmitted to the machine according to the load inertia ratio, the machine and motor must be strong enough to withstand them.

Even when no dynamic brake is used, the spindle stopping time of a motor using permanent magnets is shorter than that of a general induction motor since a braking effect is obtained with iron loss generated in the free running state.

For the wiring method, refer to the FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65412EN).

5.1 STANDARD STOPPING TIME

This section describes standard times required for stopping a motor if an emergency stop, power failure, or alarm occurs when a dynamic brake is used and when it is not used. For each case, the following main elements affect the stopping time:

With a dynamic brake: Dynamic braking torque
With no dynamic brake: Braking effect of iron loss and deceleration torque by mechanical friction

The standard stopping times are as follows when the motor is running alone.

With a dynamic brake (when the motor is running alone)
αiS 2000/2000HV-B: 0.6sec

With no dynamic brake (when the motor is running alone)
αiS 2000/2000HV-B: 30sec

* The motor stops within a timer shorter than that for a general induction motor because of the braking effect of iron loss specific to synchronous motors.

The above values indicate the time required for stopping the motor running at the maximum rotation speed. When there is load inertia, the following equation can be used to calculate the standard stopping time:

JM: Motor inertia (kg m^2)
JL: Load inertia (kgm^2)
ts: Stopping time (sec)

ts=(stopping time when motor is running alone) × (JM+JL) ÷ JM

The actual stopping time differs depending on mechanical friction and deceleration start speed.

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5.2 NOTES ON USING A DYNAMIC BRAKE

With a dynamic brake, the motor power leads are placed in the short circuit state, the mechanical rotational energy is converted into electric energy, and the energy is consumed as heat by resistors. As a device which automatically places the power leads in the short circuit state, a dynamic brake module is required.

Dynamic brake module specification: A06B-6069-H300
For one servo amplifier, one dynamic brake module is required.

Since the mechanical rotational and kinetic energy are mainly consumed as heat by the resistors in the dynamic brake module with a dynamic brake, it must be used under the resistance of the resistors. For this reason, there are restrictions on load inertia and used rotation speed. When the motor is to run at up to the maximum rotation speed, the load inertia ratio (ratio of the load inertia value to the motor inertia value) must not exceed the following values:

αiS 2000/2000HV-B: 8.5 times

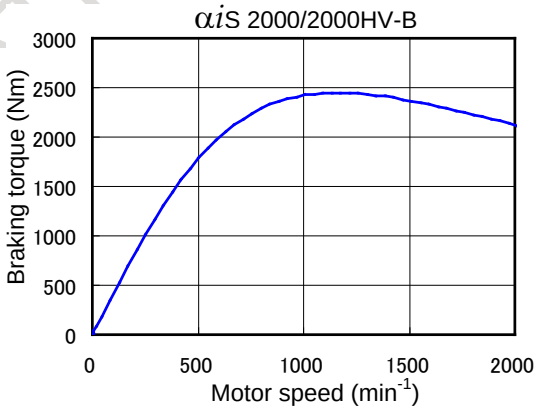
When the motor is not to run at up to the maximum rotation speed, a dynamic brake can be used with a larger load inertia ratio. In this case, the following equation must be satisfied:

JM: Motor inertia (kg m^2)
JL: Load inertia (kg m^2)
V: Maximum rotation speed (min^{-1})

When αiS 2000/2000HV-B is used: $1/2 \times (JM+JL) \times (V/60*2\pi)^2 < 408{,}000$ (J)

5.3 DYNAMIC BRAKING TORQUE

The following graphs show the relationships between the speed and braking torque when a dynamic brake is used. The machine must be strong enough to withstand the braking torque.



The deceleration torque transmitted to the machine through a coupling or the like differs depending on the load inertia, mechanical friction, and other factors since the above torque is also used for decelerating the motor rotor. The torque transmitted to the machine can be calculated using the following equation:
T_{DB}: Dynamic braking torque
T_F: Friction torque

Torque transmitted to the machine $=JL/(JM+JL) \times T_{DB} - JM/(JM+JL) \times T_F$

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II. CONFIGURATION AND SELECTION

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1 CONDITIONS FOR APPROVAL RELATED TO THE IEC60034 STANDARD

This Subsection describes the conditions the following FANUC AC spindle motor α*i*-B / β*i*-B series must clear before they can be approved for the IEC60034 standard. For details on EMC compliance authorization, refer to the separate manual "Compliance with EMC Directives."

This chapter, "CONDITIONS FOR APPROVAL RELATED TO THE IEC60034 STANDARD", consists of the following sections:

1.1 TYPES OF MOTORS TO BE APPROVED
1.2 APPROVED SPECIFICATIONS

1.1 TYPES OF MOTORS TO BE APPROVED

The following FANUC AC Spindle Motor α*i*-B / β*i*-B series can comply with the IEC60034 standard if you follow the descriptions in this chapter.
The CE mark is printed on the nameplate of a motor approved for the standard.
All the motors described in this manual are approved for the standard.

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1.2 APPROVED SPECIFICATIONS

The following specifications are approved for the IEC60034 standard.

(1) Motor speed (IEC60034-1)

The "allowable maximum speed" are given on the data sheet in Chapter 3, “MOTOR TYPES” in Part II
The allowable maximum speeds are specified in such a way that the approval conditions of the IEC60034-1 standard, as they relate to rotational speed, are satisfied.

(2) Output (IEC60034-1)

The "rated output" available with a motor is given on the data sheet in Chapter 3, “MOTOR TYPES” in Part II. This rated output is guaranteed under the insulation class H, as the continuous output (S1), short time use rating (S2), and repeated use rating (S3/S6) in the rated speed range.

(3) Degree of protection (IEC60034-5)

The degree of protection of the motor based on the IEC60034-5 is IP65 for αiI-B (IP65) series and IP54 for other models. However the motor that has labyrinth seal or flinger seal is IP54 except the shaft-though portion.

IP6□ : Machine completely protected from dust
- Ingress of dust is completely prevented.

IP5□ : Machine protected from dust
- Ingress of dust is not totally prevented, but dust does not enter in sufficient quantity to interfere with satisfactory operation of the motor.

IP4□ : Machine protected from introduction of solid foreign matter over 1.0 mm
- Electric cables and wires with a diameter or thickness greater than 1.0 mm do not enter.

IP□5 : Machine protected from direct water jet
- Water directly jetted on the motor from any direction will have no harmful effect.

IP□4 : Machine protected form water spray
- Water sprayed on the motor from any direction will have no harmful effect.

IP□0 : Machine not protected
- No special protection is provided to prevent ingress of water.

Note that these models satisfy the provisions for short-time water immersion, and do not guarantee their water-proof performance in an atmosphere in which cutting fluid is applied directly to the motor.

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(4) Cooling method (IEC60034-6)

The cooling method of the motor is as given below.

Motor model	IC code	Method
αiI 0.5/10000-B, αiI 0.5/10000HV-B, αiI 0.5/10000HV-B, αiI 0.5-B (IP65) to αiI 6-B (IP65)	IC0A0	Totally closed and naturally cooled
αiI 1-B to αiI 50-B, αiI 1HV-B to αiI 150HV-B, αiS 2000/2000HV-B,αiIP 12-B to αiIP 60-B, αiIP 15HV-B to αiIP 60HV-B, αiIT 1.5-B to αiIT 22-B, αiIT 1.5HV-B to αiIT 22HV-B, αiIPT 22/8000-B, αiS 1/12000-B, αiST 1/12000-B, βiI 3-B to βiI 15-B, βiI 3HV-B to βiI 15HV-B, βiIP 8-B to βiIP 40-B, βiIT 12-B, βiIT 15-B, βiIC 3-B to βiIC 8-B	IC0A6	Air cooling with a fully closed, external independent fan
αiIL 8-B to αiIL 26-B, αiIL 8HV-B to αiIL 26HV-B	IC9U7A7	Liquid-cooling method

(5) Mounting method (IEC60034-7)

αiI 0.5-B to αiI 50-B, αiI 0.5HV-B to αiI 150HV-B, αiIP 12-B to αiIP 60-B, and αiIP 15HV-B to αiIP 60HV-B can be mounted as follows:

IMB5: Flange mounting with the shaft facing sideways(from the rear)
IMV1: Flange mounting with the shaft facing downward(from the rear)
IMB6: Shaft facing sideways, foot mounting on the left
IMB7: Shaft facing sideways, foot mounting on the right
IMB8: Shaft facing sideways, foot mounting on the top
IMV5: Shaft facing downward, foot mounting

Use a motor with the output axis being between 45° upward and vertical downward.

αiI 1/15000-B, αiI 1.5/20000-B, αiI 2/12000-B, αiI 2/20000-B, αiS 1/12000-B, and αiI 0.5-B (IP65) to αiI 6-B (IP65) can be mounted as follows:

IMB5: Flange mounting with the shaft facing sideways(from the rear)
IMV1: Flange mounting with the shaft facing downward(from the rear)

Use a motor with the output shaft being horizontal or vertical downward.

αiS 2000/2000HV-B can be mounted as follows. For a mounting method other than that below, consult FANUC.

IMB3: Shaft facing sideways, foot mounting on the bottom

αiIT 1-B to αiIT 22-B, αiIT 1.5HV-B to αiIT 22HV-B, αiIPT 22-B, αiST 1-B, αiIL 8-B to αiIL 26-B, αiIL 8HV-B to αiIL 26HV-B, βiIT 12-B, and βiIT 15-B can be mounted as follows:

IMB5: Flange mounting with the shaft facing sideways(from the rear)
IMV1: Flange mounting with the shaft facing downward(from the rear)

Use a motor with the output shaft being horizontal or vertical downward.

(6) Heat protection (IEC60034-11)

The spindle motor conforms to the heat protection standard (IEC60034-11) by using an overheat protection circuit with temperature detection (overheat alarm).

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(7) Grounding (IEC60204-1)

The spindle motor has been confirmed to conform to the safety standard IEC60204-1 by verifying the continuity between the ground terminal plate of the conductive plate for screwing and the housing inside the terminal box in accordance with the standard.

The ground wire to be connected to the motor must have a diameter not smaller than the diameter of each phase wire.

(8) Remarks

For details on EMC compliance authorization, refer to the separate manual "Compliance with EMC Directives"

Mechanical and electrical safety of each motor should be evaluated after the motor is mounted on the machine.

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2 MOTOR TYPES

2.1 SELECTING MOTOR SPECIFICATIONS ACCORDING TO THE SPINDLE STRUCTURE

Each model includes the types of motors listed below, and the user can make an optimal choice according to the spindle driving structure.
See the chapter 2, “ORDERING SPECIFICATION NUMBER” in the Part I or Order List (B-65451EN) for available motors.

Item	Type	Use	Remarks
Mounting types	Flange mounting type	Connected to spindle via a gear Directly connected to a spindle Connected to spindle via a belt	The motor can be positioned accurately.
	Foot mounting type	Connected to spindle via a belt	
Built-in detector	αiM sensor	When connected to the spindle via a belt or gear at a deceleration ratio other than 1:1 (When the spindle has a sensor)	For a detailed explanation, refer to the following descriptions: FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65412EN)
	αiMZ sensor	When connected to the spindle via a belt, gear, or coupling on a 1:1 basis (When the spindle has no sensor)	
Shaft figure	Without keyway	Connected to a pulley	A shaft with no key is used as standard to facilitate pulley and gear balance correction and acceleration/ deceleration operation. When a shaft with a key is needed, contact your FANUC sales representative.
Cooling air exhaust direction	Rearward exhaust (Exhaust from side opposite the output shaft)	When the machine is positioned at the output shaft side	Direct the exhaust out and away from the machine.
	Forward exhaust (Exhaust from the output shaft side)	When the machine is positioned at the side opposite the output shaft	
Output shaft seal	Oil seal	Gear connection, direct connection, and belt driving	Used in flange mounting type standard-speed models.
	Labyrinth	Belt driving and direct connection (Only when no lubricant or coolant splashes onto the flange surface of the motor)	Used in flange mounting type high-speed models. (Some high-speed models have an oil seal.)
Maximum speed	Standard-speed model	-	Consider the maximum speed of each model and select a model accordingly.
	High-speed model	-	

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2.2 SPINDLE MOTOR SELECTION CONDITIONS

Selecting a spindle motor is based on the acceleration output and cutting output required of the spindle motor and so on. In selecting a motor, calculate these outputs according to this chapter and check that the values meet the selection conditions contained in this chapter.
The spindle motor selection conditions are as described below.

[Selection condition 1] Motor speed

- **The motor speed must not exceed the maximum motor speed.**
  Calculate the motor speed and check that the speed does not exceed the maximum motor speed.

[Selection condition 2] Acceleration time

- **Acceleration can be made with a desired time constant.**
  Since the load torque generally helps deceleration, if acceleration can be executed with a desired time constant, deceleration can be made with the same time constant, through both acceleration and deceleration should be considered in principle. Calculate the acceleration time and check that it does not exceed the desired acceleration time constant.

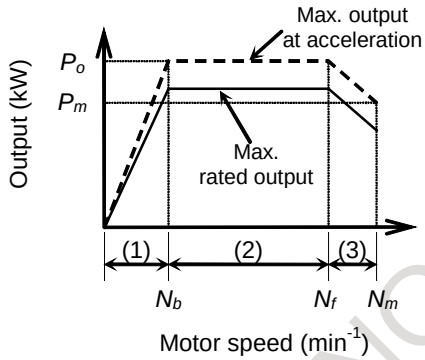
[Selection condition 3] RMS output

- **The RMS output in a single cycle has a value more than enough for the S1 continuous rated output.**
  The motor generates heat in proportion to the square of the output. For a spindle motor, for which load conditions constantly fluctuate, therefore, it is necessary to calculate the RMS output in a single cycle and check that the value is more than enough for the S1 continuous rated output.
  Caution is required, particularly if the cutting output, acceleration/deceleration conditions, and so on vary greatly in a single cycle.
  If the frequency of acceleration/deceleration increases, the ratio that the acceleration/deceleration output accounts for in the total operating time increases, making the RMS torque larger. In this case, increasing the acceleration/deceleration time constant is effective in reducing the RMS output.

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2.3 DETERMINING THE ACCELERATION TIME

The maximum output at acceleration is shown with broken line in a speed-output characteristic chart, such as that in Section 3.2 in Part II.
(The output at acceleration/deceleration for each model is not a guaranteed value but a guideline.)
For output characteristics such as those shown in the figure below, the acceleration time can be calculated as a reference value from the formula below. The load torque of the machine is not included in this calculation, so the actual acceleration time may be slightly longer than the time calculated here.



J_L	: Load inertia converted for the motor shaft [kgm^2]
J_m	: Moment of inertia of the rotor [kgm^2]
P_o , P_m	: Output [kW]
N_b , N_f , N_m	: Motor speed [min^{-1}]

(1) Acceleration time (t_1) in the constant-torque range (0 to N_b)

$$t_1 = 0.01097 \cdot \frac{(J_L + J_m) \cdot N_b^{\,2}}{P_o \cdot 1000} \quad [\text{sec}]$$

(2) Acceleration time (t_2) in the constant-output range (N_b to N_f)

$$t_2 = 0.01097 \cdot \frac{(J_L + J_m) \cdot (N_f^{\,2} - N_b^{\,2})}{2 \cdot P_o \cdot 1000} \quad [\text{sec}]$$

(3) Acceleration time (t_3) in the decreasing-output range (N_f to N_m)

$$t_3 = 0.01097 \cdot \frac{(J_L + J_m) \cdot (N_m - N_f) \cdot \left\{ (N_m - N_f) - \frac{P_o \cdot N_m - P_m \cdot N_f}{P_m - P_o} \cdot \ln \frac{P_m}{P_o} \right\}}{(P_m - P_o) \cdot 1000} \quad [\text{sec}]$$

The total time (t) required for acceleration in the range from 0 to N_m is $t_1+t_2+t_3$ [sec]

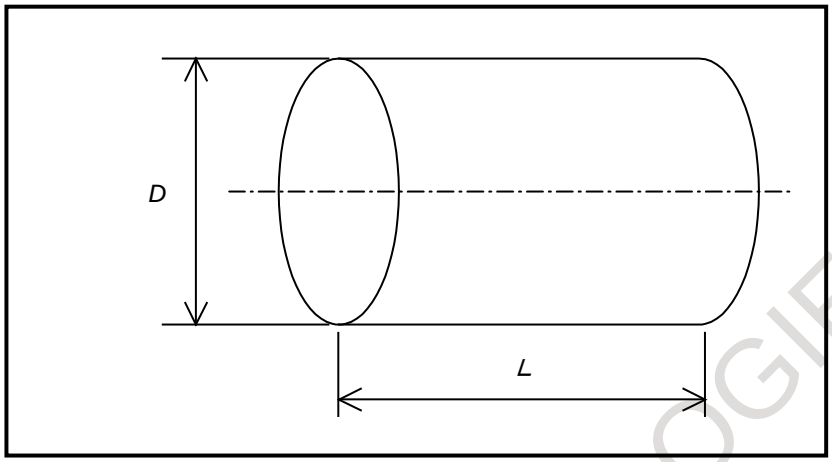
NOTE
This is not a guaranteed value but a guideline.

Deceleration can be controlled so that the time required for deceleration is nearly equal to that for acceleration. When the power voltage is high, or the impedance of the power is high, however, the time required for deceleration may not be made equal to that for acceleration.

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Reference 1

The moment of inertia of a cylindrical object rotating about its central axis is calculated as follows:



-SI unit----------

$$J_b = \frac{\pi \gamma_b}{32} D_b^4 L_b \qquad [kg \cdot m^2]$$

J_b : Moment of inertia [kg·m^2]
γ_b : Weight of the object per unit volume [kg/m^3]
D_b : Diameter of the object [m]
L_b : Length of the object [m]

-Gravitational system of units----------

$$J_b = \frac{\pi \gamma_b}{32 \times 980} D_b^4 L_b \qquad [kgf \cdot cm \cdot s^2]$$

J_b : Moment of inertia [kgf·cm·s^2]
γ_b : Weight of the object per unit volume [kg/cm^3]
D_b : Diameter of the object [cm]
L_b : Length of the object [cm]

Reference 2

The moment of inertia applied to the motor shaft for J_O is calculated as follows:

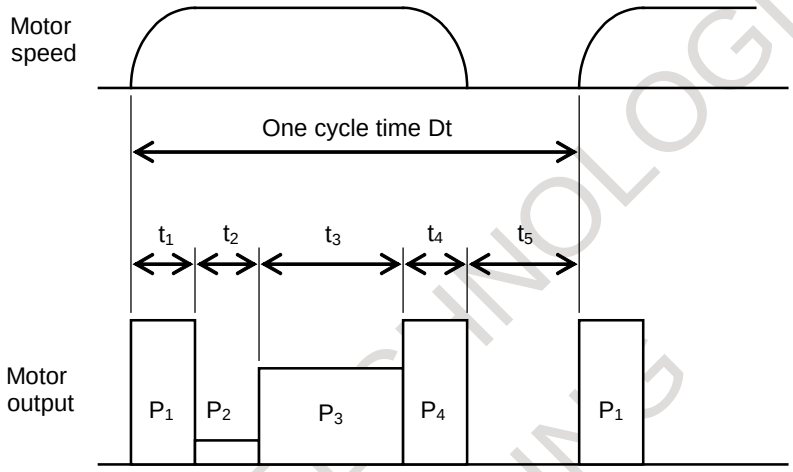
$$J = \left(\frac{Z_1}{Z_2}\right)^2 \times J_0 \quad or \quad \left(\frac{1}{Z}\right)^2 \times J_0$$

J_o : Moment of inertia before deceleration
Z_1 : Number of teeth of the gear on the motor side (for gear connection)
Z_2 : Number of teeth of the gear on the spindle side (for gear connection)
$1/Z$: Deceleration ratio

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2.4 DETERMINING THE RMS OUTPUT

When machining is to be performed with the frequent acceleration/deceleration of the spindle, it is necessary to make sure that the RMS output in a single cycle does not exceed the S1 rated output.
(Comparing the RMS output with the S1 rated output provides a guideline as to whether continuous use is possible or not, but does not guarantee continuous use.)
The following describes how to determine the RMS output for a representative model of an AC spindle motor.
For a cycle such as that shown in the figure below, the RMS output can be calculated as a reference value from the formula below. The load torque of the machine is not included in this calculation, so the actual RMS output may be slightly larger than the RMS output calculated here.



P_1, P_4: Acceleration/deceleration output [kW]
P_2 : Output with no load [kW]
P_3 : Cutting output [kW]

RMS output $Pav = \sqrt{\dfrac{P_1^2 t_1 + P_2^2 t_2 + P_3^2 t_3 + P_4^2 t_4}{Dt}}$ [kW]

NOTE This is not a guaranteed value but a guideline.

NOTE
1 Cutting output P_3 at motor speed N which is lower than base speed Nb shall be calculated by the following equation.
$P_3 = P_C \times Nb/N$ [kW] (P_C: Actual cutting output)

2 In case that P_3 is calculated by the load indicator voltage, use the following equation.
$P_3 = P_1 \times L_3/10$ [kW] (L_3: Load indicator voltage in cutting [V])

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III. HANDLING, INSTALLATION, AND USE ENVIRONMENT OF THE MOTOR

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1 MOTOR HANDLING

This chapter contains notes on handling the FANUC AC spindle motor αi-B / βi-B series.

This chapter, "MOTOR HANDLING", consists of the following sections:

1.1 CHECKING A DELIVERED SPINDLE MOTOR AND STORING A SPINDLE MOTOR
1.2 SEPARATING AND DISPOSING OF A SPINDLE MOTOR

1.1 CHECKING A DELIVERED SPINDLE MOTOR AND STORING A SPINDLE MOTOR

When the spindle motor is delivered, check the following items.

- The motor meets the specifications. (Specifications of the model/shaft/sensor)
- Damage caused by the transportation.
- The shaft is normal when rotated by hand.
- Looseness or play in screws.

FANUC spindle motors are completely checked before shipment, and the inspection at acceptance is normally unnecessary. When an inspection is required, check the specifications (wiring, current, voltage, etc.) of the motor and sensor. Store the motor indoors. The storage temperature is -20°C to +60°C. Avoid storing in the following places.

- Place with high humidity so condensation will form.
- Place with extreme temperature changes.
- Place always exposed to vibration.
  (The bearing may be damaged.)
- Place with much dust.

Note the following point when using a motor after stored for a long time:

- If an oil seal is used as the output shaft seal for the motor, abnormal noise may be generated or load may be larger than usual when the motor is driven. In this case, please use lubricant between the shaft and oil seal.

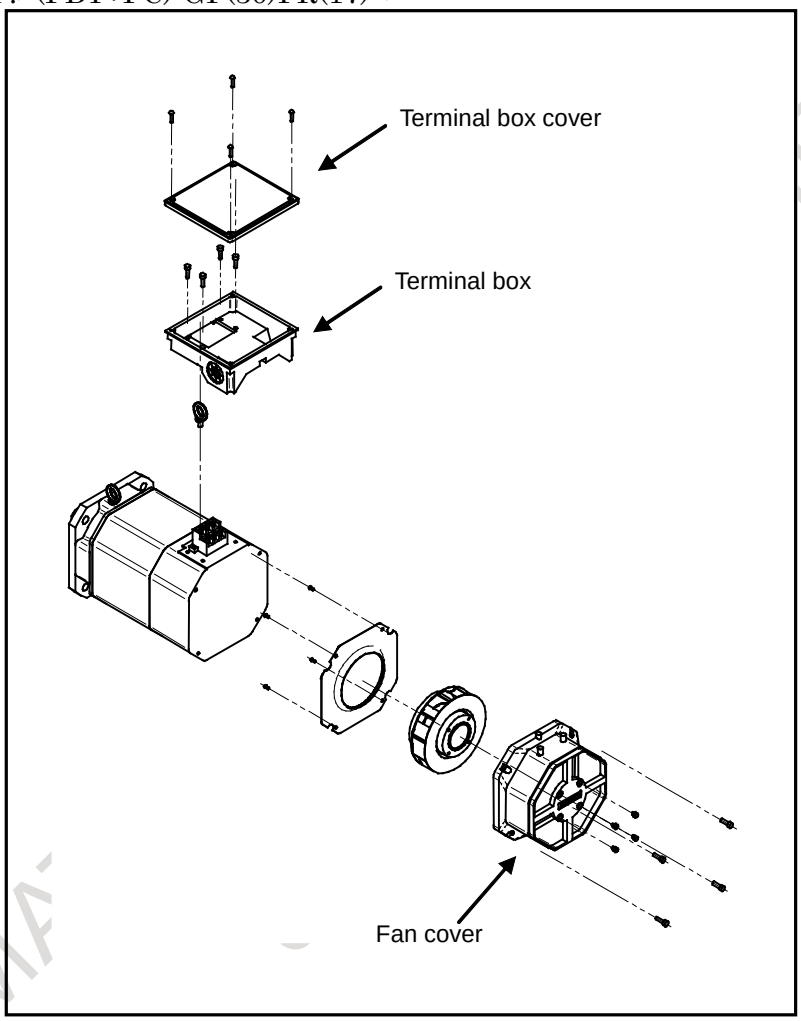
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1.2 SEPARATING AND DISPOSING OF A SPINDLE MOTOR

Separating and disposing of plastic and metal parts of a motor

Separate plastic parts (terminal box, terminal box cover, and fan cover) and dispose of them by disassembling the motor as shown in the figure below. The following plastic material is used:

Plastic material :>(PBT+PC)-GF(30)FR(17)<



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2 NOTES ON INSTALLATION

This chapter contains notes on installing the FANUC AC spindle motor αi-B / βi-B series.

This chapter, "NOTES ON INSTALLATION", consists of the following sections:

2.1 COMMON
2.2 AMBIENT TEMPERATURE, HUMIDITY, INSTALLATION HEIGHT, AND VIBRATION
2.3 USAGE CONSIDERING ENVIRONMENTAL RESISTANCE

2.1 COMMON

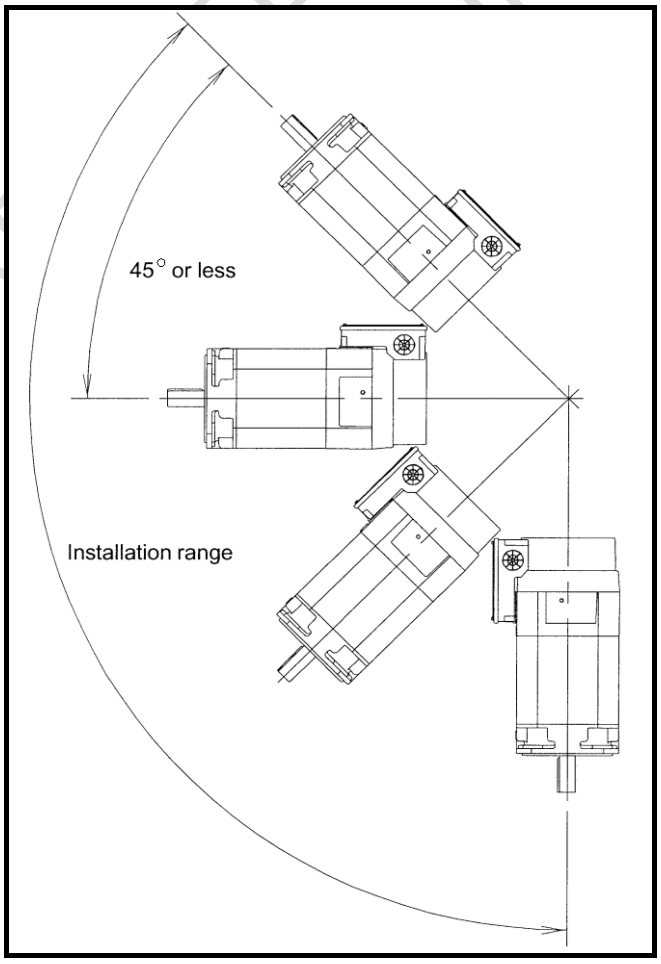
Be sure to observe the following, regardless of the connection method of the motor:

⚠ WARNING

When connecting a metallic conduit to a plastic terminal box, connect the conduit to ground on the power magnetics cabinet side.

⚠ CAUTION

1 Mount the motor so that the output shaft points in a direction ranging within 45 degrees above the horizontal to vertically downwards.
2 When the motor needs to be pointed to more than 45 degrees above the horizontal, consult you FANUC representative.



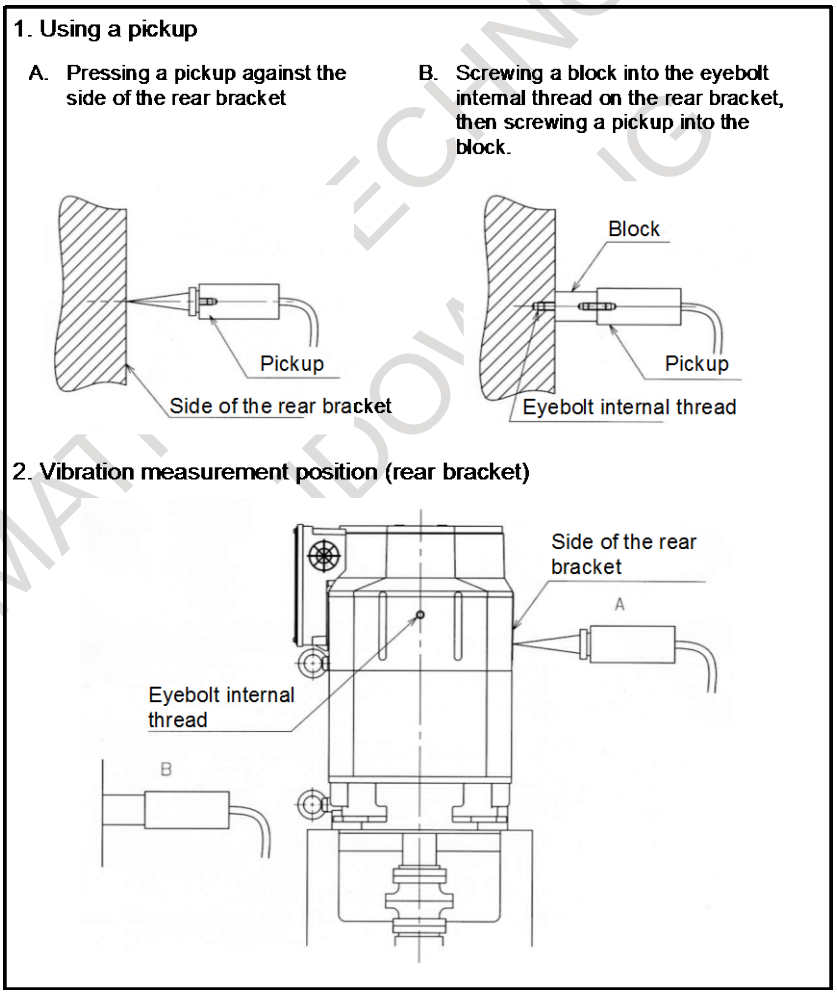
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3 Use the eyebolt of the motor to lift only a single motor, (gear and pulley may be attached).

4 Place a cover over an air-cooled motor to prevent the motor from being exposed to coolant or lubricant.

5 Limit the vibration acceleration at the rear bracket of the motor to 4.9 m/s^2 (0.5 G) to ensure the long-term reliability of each part of the motor.
In particular, to limit the acceleration in the case of direct connection to 4.9 m/s^2 (0.5 G), carefully perform centering with the mating spindle and make the motor shaft parallel with the spindle.

- Details of the measuring method
  Measuring instrument:
  Equivalent to the VM-3024H manufactured by IMV CORPORATION (For details, see Section 3.3, "WHEN A MOTOR IS DIRECTLY CONNECTED TO A SPINDLE VIA A COUPLING" in this part.)
  Condition: At the time of highest-speed rotation with no load
  Measurement frequency range with no load at the highest speed:
  10 to 1000 Hz
  Criteria: 4.9 m/s^2 (0.5 G) or less at the rear bracket



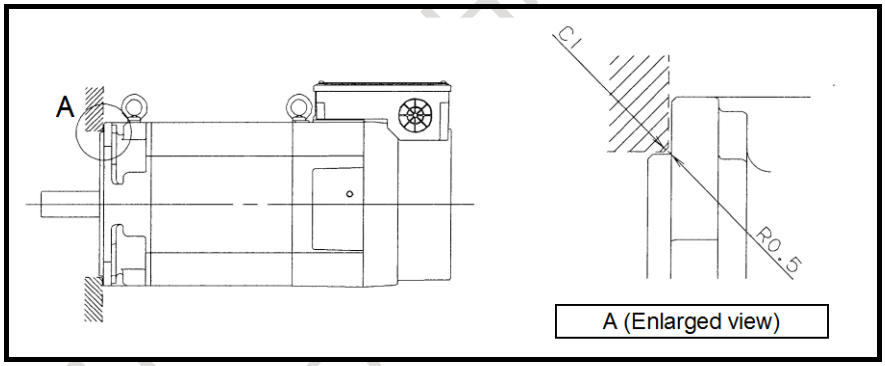
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6 Dynamic balance
During high-speed operation, a small imbalance may cause a large vibration, resulting in an unusual sound, premature bearing damage, or some other abnormality.
Therefore, reduce the amount of the imbalance with the dynamic balance of the other rotation shafts, as well as the gear and pulley mounted on the output shaft of the motor, as much as possible.

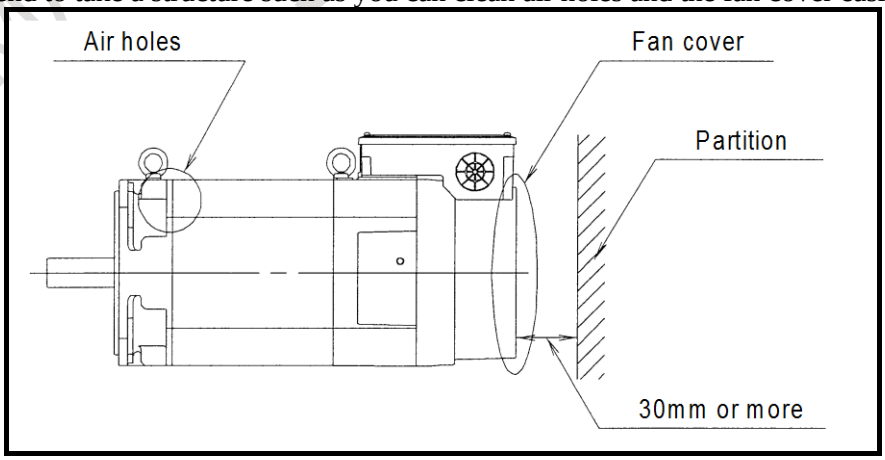
- Balance correction
  With the αi-B / βi-B series, a shaft with no key is used as standard to facilitate the balance correction of a pulley, gear, and coupling attached to the shaft. Use a completely symmetric pulley, gear, or coupling, and use a backlash-less tightening part such as a SPANN ELEMENTE to secure a pulley, gear, or coupling to the shaft. When attaching a pulley to a shaft, for example, adjust the periphery vibration to within 20 μm. This basically eliminates the need for balance correction. To further reduce the vibration level, make a field balance correction, for example, by tightening a screw into the tapped hole for balance correction provided on a component such as a pulley. For the rear side of the motor, follow the balance correction procedure described below to suppress the vibration.

7 Vibrations applied to the motor must be 49 m/s^2 (5 G) or less in a state where the motor is attached to the machine.

8 The edge of the faucet joint to mount the flange mounting type motor should be chamfered about C1.



9 Please space 30 mm or more between the fan cover and the partition to keep the cooling ability well.
We recommend to take a structure such as you can clean air holes and the fan cover easily.



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Balance correction procedure

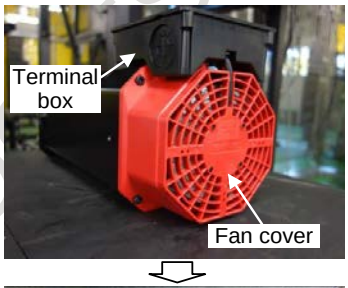
With the FANUC AC spindle motor αi-B / βi-B series except for some models, you can make a balance correction at the rear side of the motor when required.

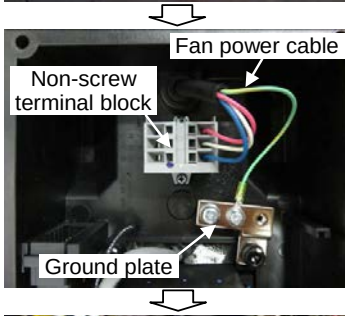
- Balance correction at the fan motor side

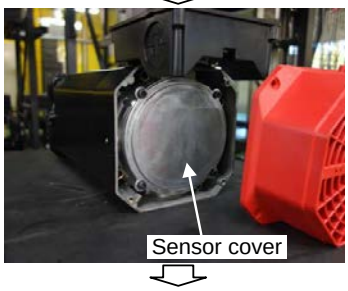
(For other than the αiI 1/24000-B, αiS 1/12000-B, spindle motors with a through hole, and liquid-cooled spindle motors)

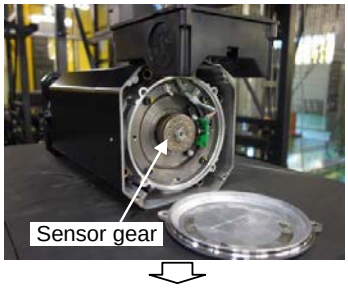
With the FANUC AC spindle motor αi-B / βi-B series, a tapped hole is made for the sensor gear to enable a balance correction to be made at the rear side of the motor. When making the balance correction, it is necessary to remove the fan cover and sensor cover. Follow the procedure below to access the sensor gear with a tapped hole for balance correction.

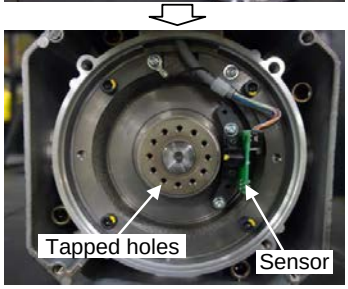
1 Disconnect the fan power cable from the non-screw terminal block and ground plate. (For how to disconnect the fan power cable from the non-screw terminal block, see Section 3.4, "COOLING FAN", in Part I.)
2 Remove the four hexagon socket head bolts fixing the fan cover.
3 While removing the fan cover, pull the fan power cable out of the terminal box. During this operation, be careful not to detach the rubber bushing from the terminal box hole.
4 Remove the four hexagon socket head bolts again and remove the sensor cover.











Now, you can access the sensor gear with a tapped hole.
After you finish the balance correction, fix the screw with screw locking adhesive and restore the fan motor section as before by reversing the procedure above. Tighten the bolts with the torque listed below.

- Tapped hole size

Motor models	Tapped hole size
αiI 1-B to αiI 3-B, αiI 1HV-B to αiI 3HV-B, βiI 3-B, βiI 6-B, βiI 3HV-B, βiI 6HV-B	12-M4 Depth 7 mm
αiI 6-B to αiI 50-B, αiI 6HV-B to αiI 150HV-B, αiIP 12-B to αiIP 60-B, αiIP 15HV-B to αiIP 60HV-B, βiI 8-B to βiI 15-B, βiI 8HV-B to βiI 15HV-B, βiIP 8-B to βiIP 40-B	12-M5 Depth 10 mm

- Tightening torque

Bolt mounting location	Tightening torque [N•m]	
	αiI 1-B, αiI 1.5-B	Other models
Plastic part	1.6 to 2.3	2.8 to 4.0
Aluminum part	0.84 to 1.2	9.6 to 14

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NOTE
1. When mounting the sensor cover again, confirm that the O-ring is mounted securely and attach the sensor cover evenly.
2. The use of lubrication oil enables you to easily pull the fan power cable out of the terminal box and insert it into the box. Carefully use lubrication oil since a problem may occur if the oil is attached to any unnecessary section.
3. For some models, hexagon socket set screws are mounted at the factory. Do not remove these set screws.
4. When making a balance correction, do not move the adjusted sensor.
5. Carefully fix the screw with screw locking adhesive so as not to adhere the adhesive on the sensor detection section.
6. If you want to make a balance correction for the αiI 75HV-B to αiI 150HV-B, consult your FANUC representative.
7. This procedure cannot be applied to the following specifications.
   αiI 0.5-B, αiI 0.5-B (IP65) to αiI 6-B (IP65), and
   αiS 2000HV-B: Inapplicable since they cannot be disassembled.
   βiIc-B: Inapplicable since no sensor gear is provided.

- Balance correction at the fan motor side (for the αiI 1/24000-B, αiS 1/12000-B, spindle motors with a through hole, and liquid-cooled spindle motors)

For details of balance correction for the spindle motors with a through hole and liquid-cooled spindle motors, see Subsection 3.3.1, "Points about the Direct Connection Structure of Spindle Motors with a Through Hole".

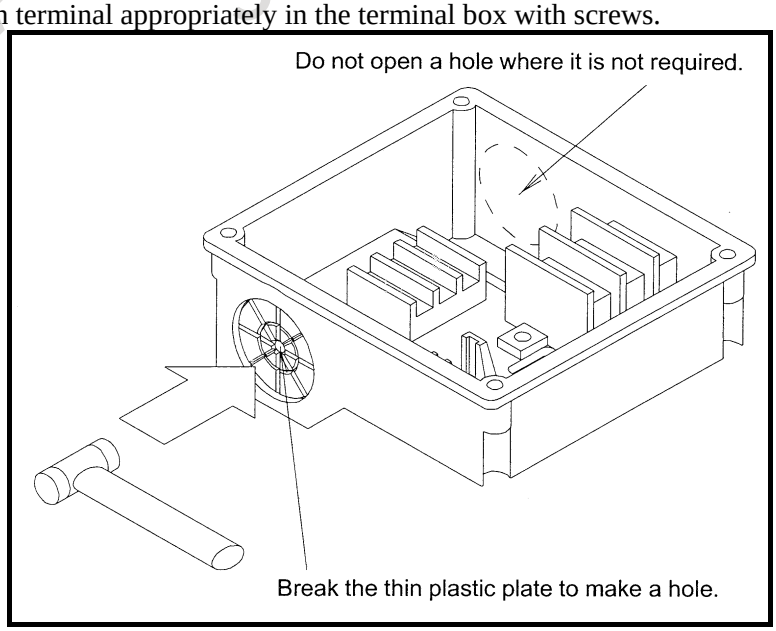
Although the αiI 1/24000-B and αiS 1/12000-B are not spindle motors with a through hole, refer to the same subsection.

NOTE

1 Cable wiring

Follow the procedure below to install the cable. (Except for the αiS-B 400V type motors)

(1) Use a hammer to strike the portion for the cable hole on the terminal box and open the hole. This time, pay attention not to break the other place except hole. (In some models, it is not necessary to make a hole.)
(2) Thread the cable through a conduit. Connect the conduit with the connector. (NOTE1)
(3) Tighten the connector at the cable hole of the terminal box using a nut. (NOTE2)
(4) Connect each terminal appropriately in the terminal box with screws.



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When a hole once made is not used, purchase the following rubber bushing and mount it at the hole.

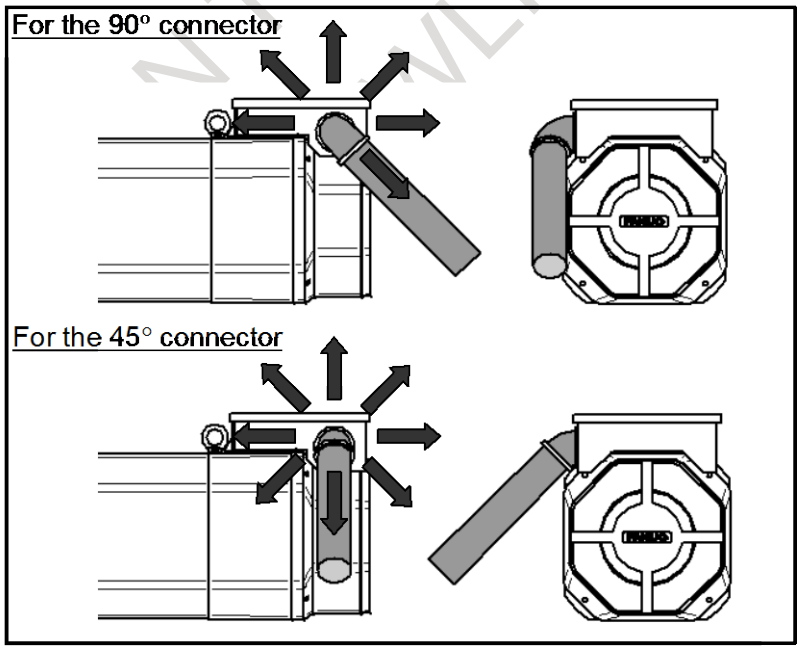
Model	Ordering number
αiI 1-B to αiI 15-B , αiIP 12-B to αiIP 22-B, αiIT 1/24000-B to αiIT 15/12000-B, αiIPT 22/8000-B, αiS 1-B, αiST 1-B, αiI 6HV-B to αiI 22HV-B, αiIP 15HV-B, αiIP 22HV-B, αiIT 1.5/20000HV-B to αiIT 22/12000HV-B, αiIL 8/20000-B, αiIL 8/20000HV-B, βiI 3-B to βiI 15-B, βiI 3HV-B to βiI 15HV-B, βiIP 8-B to βiIP 30-B, βiIT 12-B, βiIT 15-B	A06B-0754-K001
αiI 18-B, αiI 22-B, αiIP 30-B, αiIP 40-B, αiIP 50-B αiIP 40HV-B, αiIP 50HV-B, αiIT 15/15000-B, αiIT 22/12000-B, αiIL 15/15000-B, αiIL 26/15000-B, αiIL 15/15000HV-B, αiIL 26/15000HV-B, βiIP 40/6000-B	A06B-0731-K001

High-speed models are same as above.

NOTE 1

When the 90 degrees connector is used in the following models, the mounting direction of the conduit is restricted to prevent interference between the conduit and the motor. To allow the conduit to be mounted in any direction, use the 45 degrees connector.
(In a model other than the following, the conduit can be mounted in any direction even when the 90 degrees connector is used.)
Applicable models:

αiI 12-B to αiI 15-B, αiIP 12-B to αiIP 22-B, αiIT 15/12000-B, αiIPT 22/8000-B,
αiI 12HV-B to αiI 22HV-B, αiIP 15HV-B to αiIP 22HV-B,
αiIT 15/12000HV-B, αiIT 15/15000HV-B, αiIT 22/12000HV-B, βiI 15/8000-B,
βiIP 15-B to βiIP 30-B, βiI 15/8000HV-B



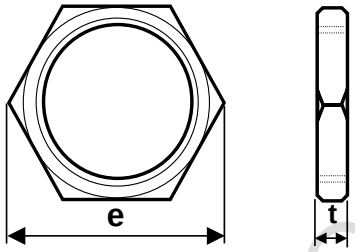
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NOTE 2

The nut used to fasten the connector to the terminal box must be smaller than the size listed below. (Any larger nut interferes with the terminal box.) For the diameter of the cable hole in each model, refer to the outside dimension drawing of the respective models.

Cable hole diameter	Outside diameter e	Width t
ϕ42.5 mm	53 mm (maximum)	9 mm (maximum)
ϕ61 mm	80 mm (maximum)	15 mm (maximum)

Outside dimensions of the conduit-connector retaining nut

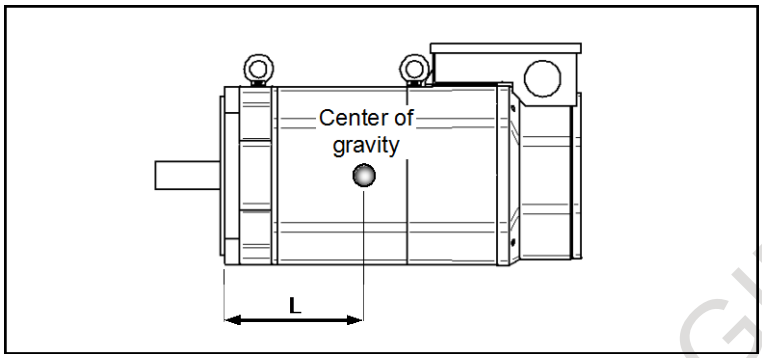


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NOTE

2 Center of gravity

The distance L from the flange end face to the center of gravity in each model is listed below.



- **αiI-B series**

αiI-B series 200V type	αiI-B series 400V type	αiS-B series 400V type	αiIP-B series 200V type	αiIP-B series 400V type	Center of gravity [mm]
αiI 0.5/10000-B αiI 0.5/15000-B	αiI 0.5/10000HV-B	-	-	-	95±5
αiI 1/10000-B αiI 1/15000-B αiI 1/24000-B	αiI 1/10000HV-B	-	-	-	125±5
αiI 1.5/10000-B αiI 1.5/20000-B	αiI 1.5/10000HV-B	-	-	-	145±5
αiI 2/10000-B αiI 2/12000-B αiI 2/20000-B	αiI 2/10000HV-B αiI 2/20000HV-B	-	-	-	125±5
αiI 3/10000-B αiI 3/12000-B αiI 3/15000-B	αiI 3/10000HV-B	-	-	-	170±5
αiI 6/10000-B αiI 6/12000-B αiI 6/15000-B	αiI 6/10000HV-B	-	-	-	150±5
αiI 8/8000-B αiI 8/10000-B	αiI 8/8000HV-B	-	-	-	185±5
αiI 12/8000-B αiI 12/12000-B	αiI 12/8000HV-B	-	αiIP 12/8000-B	-	160±5
αiI 15/8000-B αiI 15/12000-B	αiI 15/8000HV-B	-	αiIP 15/8000-B	αiIP 15/8000HV-B	170±5
αiI 18/8000-B αiI 18/12000-B	-	-	αiIP 18/8000-B	-	190±5
αiI 22/8000-B αiI 22/12000-B	αiI 22/8000HV-B	-	αiIP 22/8000-B	αiIP 22/8000HV-B	205±5
αiI 30/7000-B	αiI 30/7000HV-B	-	αiIP 30/6000-B αiIP 40/6000-B	αiIP 40/6000HV-B	240±5
αiI 40/7000-B	αiI 40/7000HV-B	-	αiIP 50/5000-B	αiIP 50/6000HV-B	265±5
αiI 50/5000-B	αiI 50/5000HV-B	-	-	-	
-	αiI 60/5000HV-B	-	αiIP 60/5000-B	αiIP 60/5000HV-B	
-	αiI 75/5000HV-B	-	-	-	
-	αiI 100/5000HV-B	-	-	-	
-	αiI 150/5000HV-B	-	-	-	
-	-	αiS 2000/2000HV-B	-	-	

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- **βiI-B series**

βiI-B series 200V type	βiI-B series 400V type	βiIP-B series 200V type	βiIC-B series 200V type	Center of gravity [mm]
βiI 3/12000-B	βiI 3/12000HV-B	-	βiIC 3/6000-B	125±5
βiI 6/12000-B	βiI 6/12000HV-B	-	βiIC 6/6000-B	170±5
βiI 8/12000-B	βiI 8/12000HV-B	βiIP 8/6000-B	βiIC 8/6000-B	150±5
βiI 12/10000-B	βiI 12/10000HV-B	βiIP 12/6000-B	-	185±5
βiI 15/8000-B	βiI 15/8000HV-B	βiIP 15/8000-B	-	160±5
-	-	βiIP 18/8000-B	-	170±5
-	-	βiIP 22/8000-B	-	190±5
-	-	βiIP 30/8000-B	-	205±5
-	-	βiIP 40/6000-B	-	240±5

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2.2 AMBIENT TEMPERATURE, HUMIDITY, INSTALLATION HEIGHT, AND VIBRATION

Ambient temperature

The ambient temperature should be 0°C to 40°C. If the ambient temperature exceeds this range, the operating conditions must be eased to prevent the motor and detector from overheating. (The specification values and external dimensions in the data sheet assume an ambient temperature of 20°C.)

Ambient humidity

The ambient humidity should be 80%RH or less and no condensation should not be caused.

Installation height

Up to 1,000 meters above the sea level requires, no particular provision for attitude. When operating the machine at a higher level, special care is unnecessary if the ambient temperature is lowered 1°C at every 100m higher than 1,000m. For example, when the machine is installed at a place of 1,500 meters above sea level, there is no problem if the ambient temperature is 35°C or less.

Vibration

When installed in a machine, the vibration applied to the motor must not exceed $49 m/s^2$ (5G).

If any one of the four environmental conditions (ambient temperature, ambient humidity, installation height, and vibration) specified above is not satisfied, the output must be restricted.

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2.3 USAGE CONSIDERING ENVIRONMENTAL RESISTANCE

⚠ CAUTION

The motor is an electric part, and if the lubricant or cutting fluid falls on the motor, it will enter the inside of the motor, possibly adversely affecting the motor. In particular, if the cutting fluid adheres to the motor, it will deteriorate the resin or rubber sealing members, causing a large amount of cutting fluid to enter the inside of the motor and possibly damaging the motor. When using the motor, note the points described below.

1. Degree of protection of motor

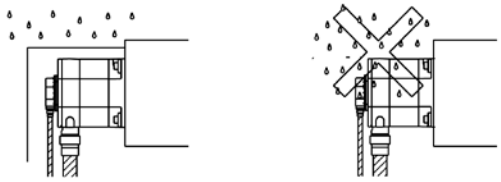
The degree of protection of the motor based on the IEC60034-5 is IP65 for α*i*I-B (IP65) series and IP54 for other models. However the motor that has labyrinth seal or flinger seal is IP54 except the shaft-though portion. α*i*S 2000/2000HV-B complies with IP44.

Note that these models satisfy the provisions for short-time water immersion, and do not guarantee their water-proof performance in an atmosphere in which cutting fluid is applied directly to the motor. Before actual use, note the points described below.

2. Motor periphery

If the cutting fluid or lubricant falls on the motor, it will adversely affect the sealing properties of the motor surface, entering the inside of the motor and possibly damaging the motor.

- Make sure that the motor surface is never wet with the cutting fluid or lubricant, and also make sure that no fluid builds up around the motor. If there is a possibility of the surface being wet, a cover is required.



- If the cutting fluid is misted, the cutting fluid may be condensed on the inside of the cover and fall on the motor. Make sure that no condensed droplets fall on the motor.

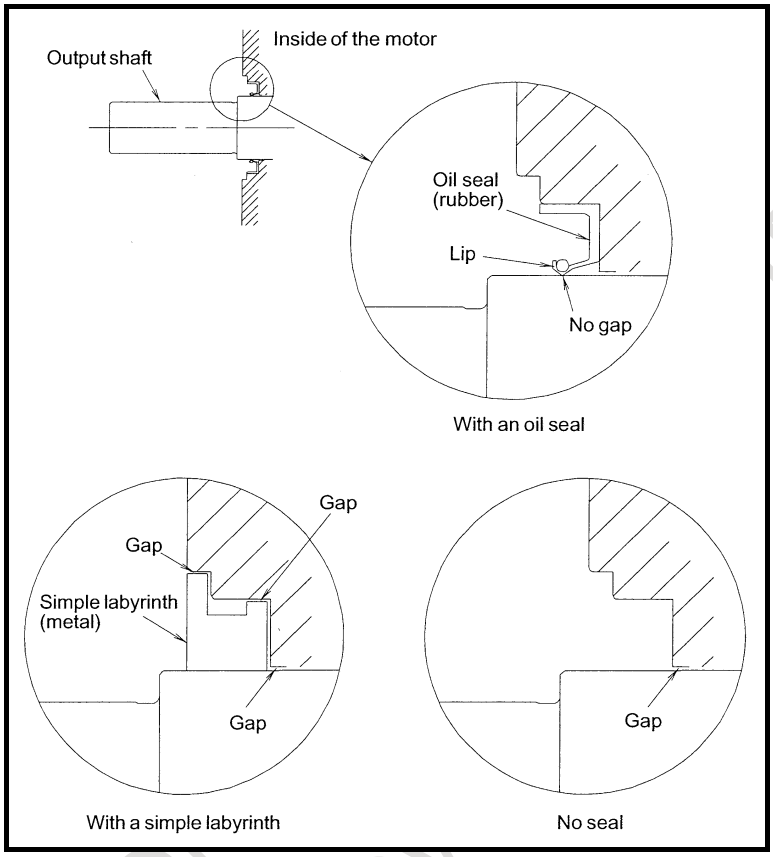
- If the inside of the machine is full of misted cutting fluid, the cutting fluid adhered to the motor can enter the inside of the motor and damage the motor. Install a mist collector with an appropriate capacity to prevent the inside of the machine from becoming full of mist.

- Completely separate the machining area from the motor area, using a telescopic cover, accordion curtain, and so on. Note that partitions such as accordion curtains are consumable and require periodic inspection for damage.

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3. Output shaft seal

To prevent cutting lubricant or dust from penetrating inside the motor, one of the following output shaft seals is provided on the output shaft. (For the use and applicable motors, see Section 2.1, "SELECTING MOTOR SPECIFICATIONS ACCORDING TO THE SPINDLE STRUCTURE" in Part II.)



For those models with an oil seal, ensure that the surface of the lubricant is below the lip of the oil seal.

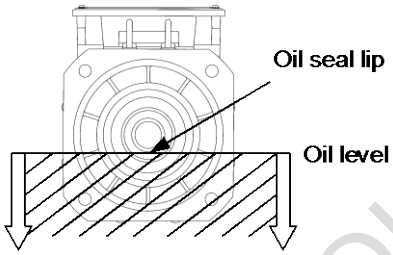
If a simple labyrinth is used as the output shaft seal or if no seal is provided (foot mounting type), ensure that lubricant does not splash onto the flange surface. If such a motor is directly mounted on a gear box, the lubricant may gradually penetrate inside the motor even when no lubricant splashes on flange surface, thus resulting in motor failure. Therefore, do not mount such a motor on a gear box directly.

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3.1 oil seal

The shaft of the motor is provided with an oil seal to prevent entry of lubricant and other fluids into the motor. (The foot mounting type is excluded.) It does not, however, completely prevent the entry of lubricant and other fluids depending on the working conditions.

- When the motor is rotating, the oil seal has an effect of discharging any oil that enters, but if it is pressurized for a long time when the motor is stopped, it may allow oil to enter through the lip. When lubrication with an oil bath is conducted for gear engagement, for example, the oil level must be below the lip of the oil seal of the shaft, and the oil level must be adjusted so that the oil does nothing but splash on the lip.



Diameters of the oil seal lips of motor shafts

Motor model	Oil seal diameter [mm]
αiI 0.5-B, αiI 0.5HV-B, αiI 0.5-B (IP65)	ϕ20
αiI 1-B, αiI 1.5-B, αiI 1HV-B, αiI 1.5HV-B, αiI 1-B (IP65), αiI 1.5-B (IP65)	ϕ30
αiI 2-B, αiI 3-B, αiI 6-B, αiI 2HV-B, αiI 3HV-B, αiI 6HV-B, αiI 2-B (IP65), αiI 3-B (IP65), αiI 6-B (IP65), βiI 3-B, βiI 6-B, βiI 8-B, βiI 3HV-B, βiI 6HV-B, βiI 8HV-B, βiIP 8-B	ϕ40
αiI 8-B, αiI 8HV-B, βiI 12-B, βiI 12HV-B, βiIP 12-B	ϕ50
αiI 12-B, αiI 15-B, αiI 18-B, αiI 22-B, αiI 12HV-B, αiI 15HV-B, αiI 22HV-B, αiIP 12-B, αiIP 15-B, αiIP 18-B, αiIP 22-B, αiIP 15HV-B, αiIP 22HV-B, βiI 15-B, βiI 15HV-B, βiIP 15-B, βiIP 18-B, βiIP 22-B, βiIP 30-B,	ϕ60
αiI 30-B, αiI 40-B, αiI 30HV-B, αiI 40HV-B, αiIP 30-B, αiIP 40-B, αiIP 50-B, αiIP 40HV-B, αiIP 50HV-B, βiIP 40-B	ϕ70
αiI 50-B, αiI 50HV-B, αiI 60HV-B, αiI 75HV-B, αiI 100HV-B, αiI 150HV-B, αiIP 60-B, αiIP 60HV-B	ϕ85
αiS 2000/2000HV-B	ϕ120

- If foreign matter such as cutting chips is caught by the oil seal lip, it will be easily worn, losing its sealing properties. When the motor is used within a splash guard, and so cutting chips may fall on the motor, for example, take measures to prevent cutting chips from entering near the lip.

- In an environment in which dry and wet states alternate, if cutting fluid splashes onto the lip after it has worn in a dry state, the cutting fluid may easily enter the inside of the motor. In this case, provide a cover to prevent cutting fluid from splashing onto the oil seal of the motor.

- Ensure that no pressure is applied to the lip of the oil seal.

- The oil seal shows its sealing effect when a part such as the gear coupling is lubricated by oil bath. Cutting fluid does not provide lubrication for the oil seal lip, so the cutting fluid may easily penetrate the seal. Therefore, provide a cover to prevent cutting fluid from splashing onto the oil seal.

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3.2 When the oil seal is not used

When a simple labyrinth is used (high-speed model) as the output shaft seal or when no seal is provided (foot mounting type), ensure that lubricant does not splash onto the flange surface directly. If such a motor is directly mounted on a gear box, lubricant may gradually enter the inside of the motor even when the flange surface is protected against lubricant splash, therefore resulting in motor failure. So, do not mount such a motor on a gear box directly.

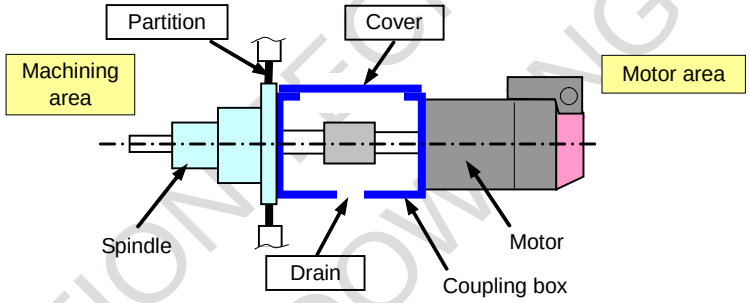
NOTE

When lubricant does not splash onto the oil seal, remove the coil spring of the oil seal to reduce friction between the lip and shaft.
This does not affect sealing from dry dust.
When the area in which the shaft touches the oil seal is dry, turning the shaft at a high speed may generate contact sound (abnormal sound) from that area or may damage the lip.

4. Motor coupling

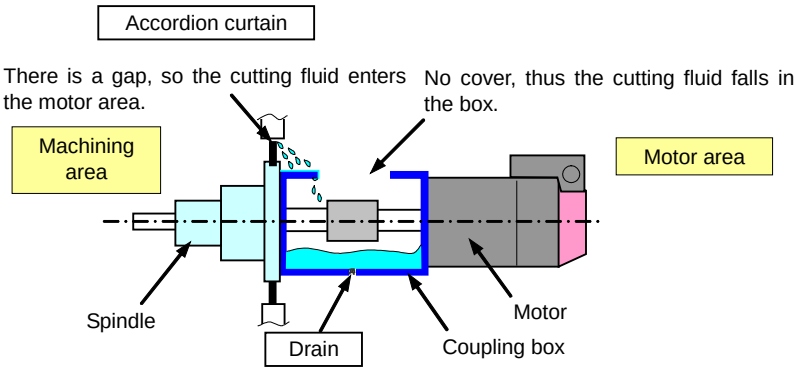
When a coupling box is used to connect the motor to the machine, take measures as follows not to allow leaked cutting fluid to build up in the coupling box.

- Provide a cover for the top and sides of the coupling box.
- Provide a drain hole at the bottom of the coupling box. The hole must be large enough to avoid clogging.



<Fault example>

The cutting fluid leaks from a gap in the accordion curtain to the motor area, and builds up in the coupling box. While the spindle is moving, the cutting fluid ripples, splashing onto the oil seal of the motor. The cutting fluid enters the inside of the motor there in large quantities, deteriorating the insulation of the motor.



The hole is too small, and clogged.

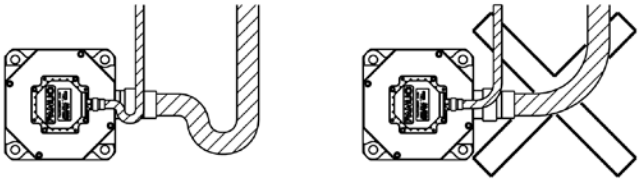
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5. Connectors, terminal box, and their surroundings

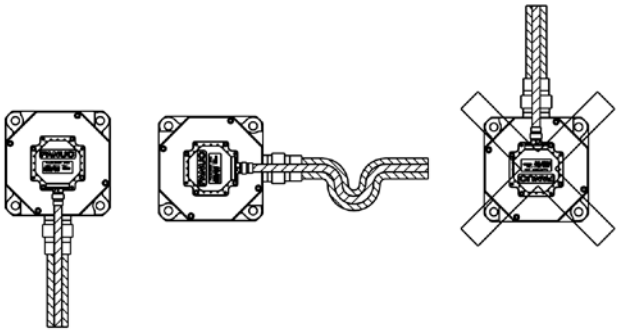
5.1 Connectors

αiI 0.5/10000-B, αiI 0.5/15000-B, αiI 0.5/10000HV-B, and αiI 0.5-B(IP65) to αiI 6-B(IP65) use connectors to connect the power and signal cables.

- Make sure that no cutting fluid is introduced to the motor via cables. If the motor connector is used horizontally, this can be accomplished by forming a slack in the cable.



- If the motor connector is directed upward, the cutting fluid collects into the cable connector. Whenever possible, direct the motor connector sideways or downward.

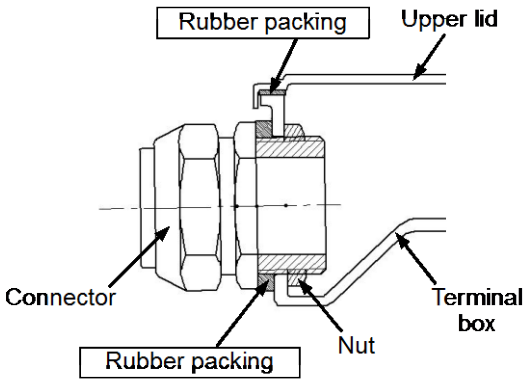


5.2 Terminal box

Models other than αiI 0.5/10000-B, αiI 0.5/15000-B, αiI 0.5/10000HV-B, and αiI 0.5-B(IP65) to αiI 6-B(IP65) use a terminal box to connect the power and signal cables.

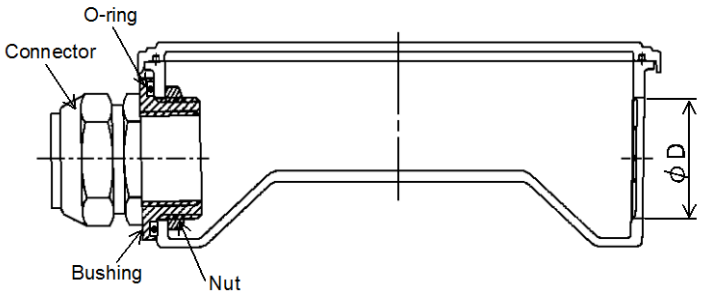
- When a conduit is attached to the terminal box, use a water-proof connector with rubber packing to prevent lubricant and cutting fluid from entering the inside of the terminal box through its cable holes.

- On the inner side of the upper lid of the terminal box, a rubber water-proof packing is installed. Ensure that the packing is not damaged, then install the lid so that no foreign matter is caught.



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- If the connector you want to use is smaller than the cable hole on the terminal box, prepare the bushing, nut, and O-ring shown below.



Cable hole diameter ϕD	O-ring code	
	JIS B 2401	ISO 3601-1
ϕ42.5 mm	P46	C0462G
ϕ61 mm	P65	C0650G

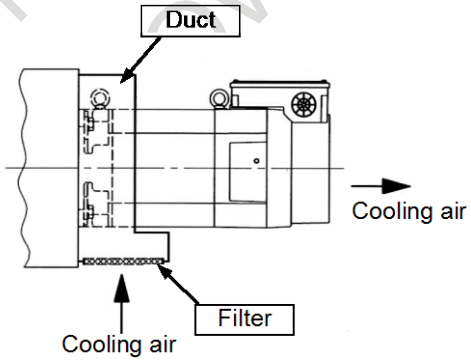
NOTE
For the diameter of the cable hole in each model, refer to the outside dimension drawing of the respective models.

6. Fan motor and its surroundings

If lubricant or cutting fluid mist, particles, or cutting chips are drawn into the fan motor, the air holes in the motor and the blades of the fan motor will clog, causing the cooling capacity to reduce. Employ a machine structure that allows clean, cooling air to be fed into the motor.

Example)

When a duct with a filter is installed on a flange mounting type motor with a rear exhaust (The filter requires periodic cleaning.)



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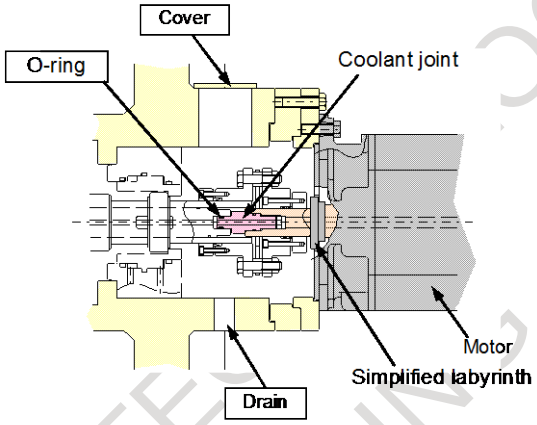
7. Motor with a through hole

The αiIT-B series, αiIPT-B series, αiIL-B, and βiIT-B series motors with a through hole comply with the degree of protection IP54 except the shaft-though portion. When center through coolant machining is performed, employ such a structure that cutting fluid leaked from the coolant joint or rotation joint does not enter the inside of the motor.

7.1 Front side of the motor

A simplified labyrinth is mounted on the shaft on the front side of the motor. Therefore, a splash of cutting fluid or cutting fluid leaked from the coolant joint can enter the inside of the motor.

- Employ such a structure that the O-ring of the coolant joint is not damaged by sliding.
- Provide a drain not to allow leaked cutting fluid to build up in case the O-ring is damaged.



7.2 Rear side of the motor

When a separate external support type rotation joint is installed at the rear end of the shaft, cutting fluid leaks from the seal (where the stationary side and the rotation side come in contact); therefore, employ such a structure that the leaked cutting fluid does not enter the inside of the motor.

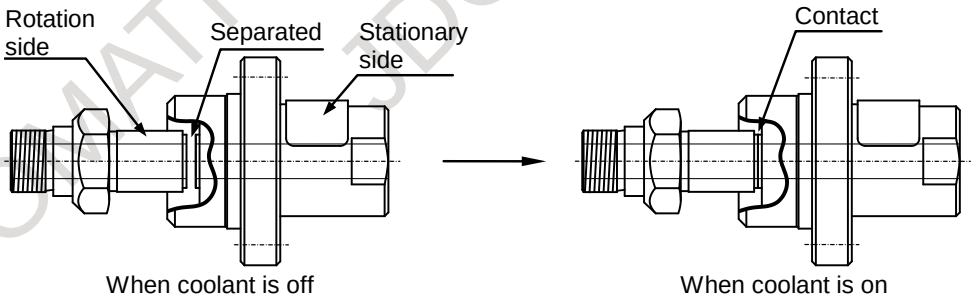
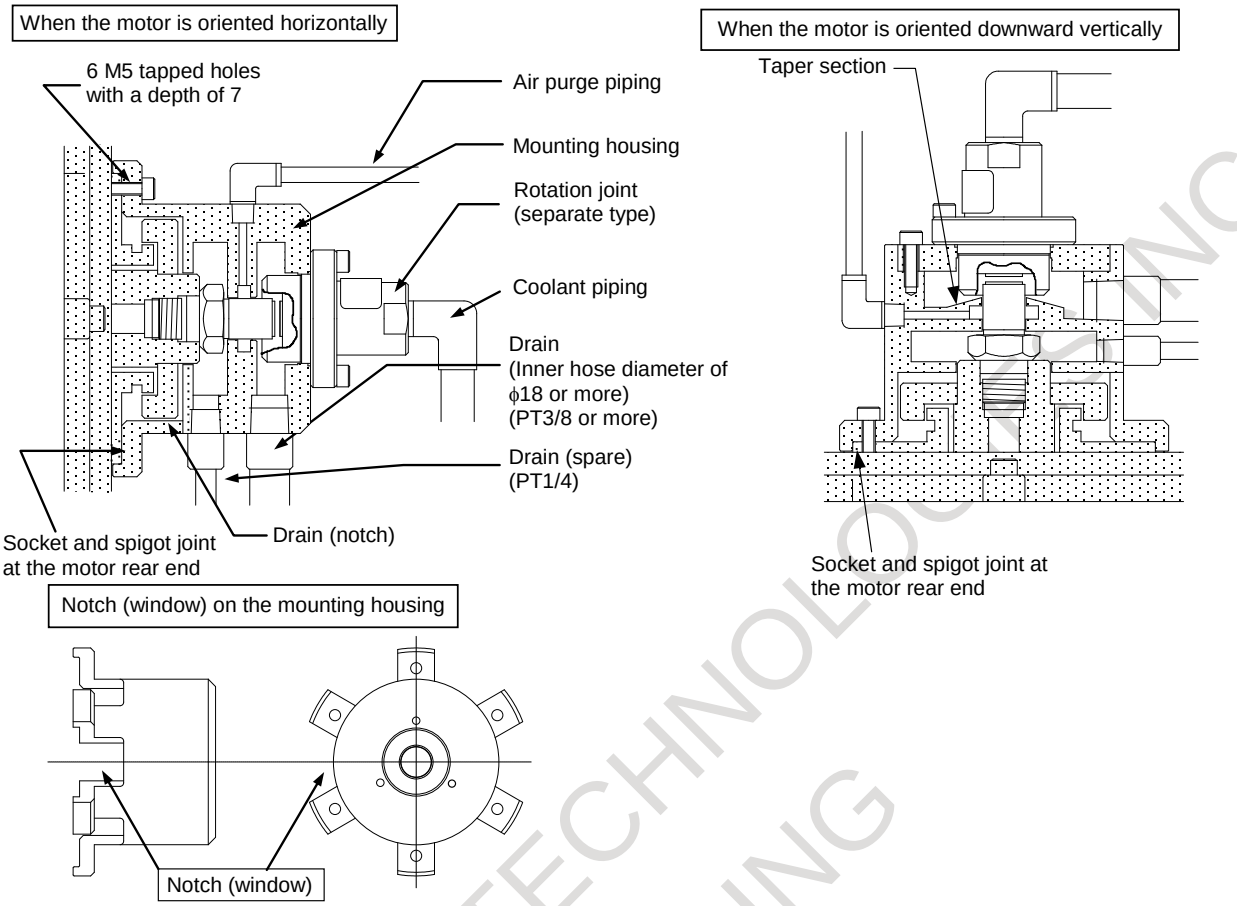


Fig. Example of a separate external support type rotation joint

- Provide the rotation joint mounting housing with notches and drains not to allow leaked cutting fluid to build up in the housing.
- The rotation joint is a consumable part. It requires periodic inspection and replacement.
- If the rotation joint is damaged, a large amount of cutting fluid can leak out. So, provide the mounting housing with many notches.
- When the motor is oriented downward vertically, enhance drainage by means such as air purging.

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8. Notes on cutting fluid

Cutting fluid containing highly active sulfur or chlorine, oil-free cutting fluid called synthetic cutting fluid, and highly alkaline, water-soluble cutting fluid in particular significantly affect the CNC, motor, or amplifier. Even when these components are protected from direct spraying of cutting fluid, problems as described below may arise. So special care should be taken.

- Cutting fluid containing highly active sulfur or chlorine
  Some cutting fluids containing sulfur or chlorine show extremely high activity. Attachment of such cutting fluid to the CNC, motor, or amplifier can cause chemical reaction with plastic and so on, therefore resulting in corrosion or deterioration of them. And ingress of such cutting fluid into the CNC, motor, or amplifier can cause corrosion of copper, silver, and so on used as parts' materials, therefore resulting in parts' failures.

- Synthetic cutting fluid with high permeability
  Some synthetic type cutting fluids that use polyalkylene glycol (PAG) as a lubricant have extremely high permeability. Such cutting fluid can easily penetrate into the motor even if the motor is sealed well. Ingress of such cutting fluid into the CNC, motor, or amplifier can degrade insulation or lead to parts' failures.

- Highly alkaline, water-soluble cutting fluid
  Some cutting fluids that strengthen pH by alkanolamine show strong alkalinity of pH10 or higher when diluted to the standard level. Ingress of such cutting fluid into the CNC, motor, or amplifier can cause chemical reaction with plastic and so on and deteriorate them.

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3 MOTOR INSTALLATION

This chapter describes how to install the FANUC AC spindle motor αi-B / βi-B series.

This chapter, "MOTOR INSTALLATION", consists of the following sections:

3.1 WHEN A MOTOR IS CONNECTED TO A SPINDLE VIA A BELT
3.2 WHEN A MOTOR IS CONNECTED TO A SPINDLE VIA A GEAR
3.3 WHEN A MOTOR IS DIRECTLY CONNECTED TO A SPINDLE VIA A COUPLING

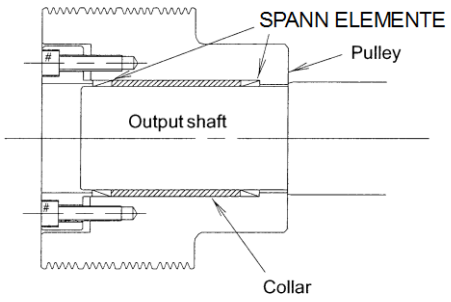
3.1 WHEN A MOTOR IS CONNECTED TO A SPINDLE VIA A BELT

⚠ CAUTION

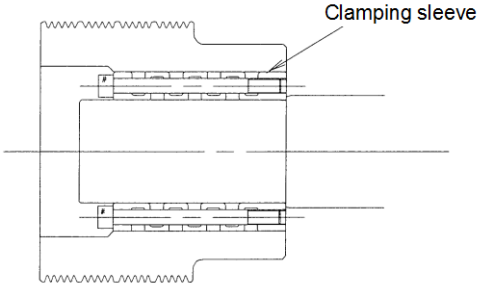
1 Mounting the pulley
- The gap between the inner surface of the motor pulley and output shaft should be 10μm to 15μm.
- If the gap is large when the high-speed rotation, fretting produced at the gap causes a large vibration, resulting in damage to the motor bearing.
- As the vibration is intensified, fretting occurs in the gap mentioned above, and the pulley and shaft can stick to each other.
- To secure a pulley, use a friction-tightening part such as a SPANN ELEMENTE or clamping sleeve.

NOTE
The SPANN ELEMENTE RfN8006 is manufactured by RINGFEDER.
The clamping sleeve DSM is manufactured by SPIETH.

Example 1 Two sets of SPANN ELEMENTE RfN8006 are used.
The collar is pinched at two points by the two sets.



Example 2 Clamping sleeve DSM is used.



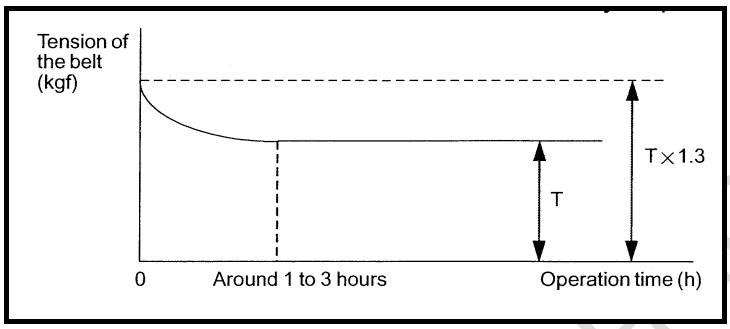
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2 After attaching a pulley to the motor, adjust the runout of the belt groove to within 20 μm (T.I.R).

3 Before the belt is looped, FANUC recommends that the dynamic balance (field balance) be corrected.

4 Limit the radial load applied to the motor output shaft by the tension of the belt to the allowable value described in the manual for each series. If the allowable value is exceeded, the bearing or shaft may fail prematurely.

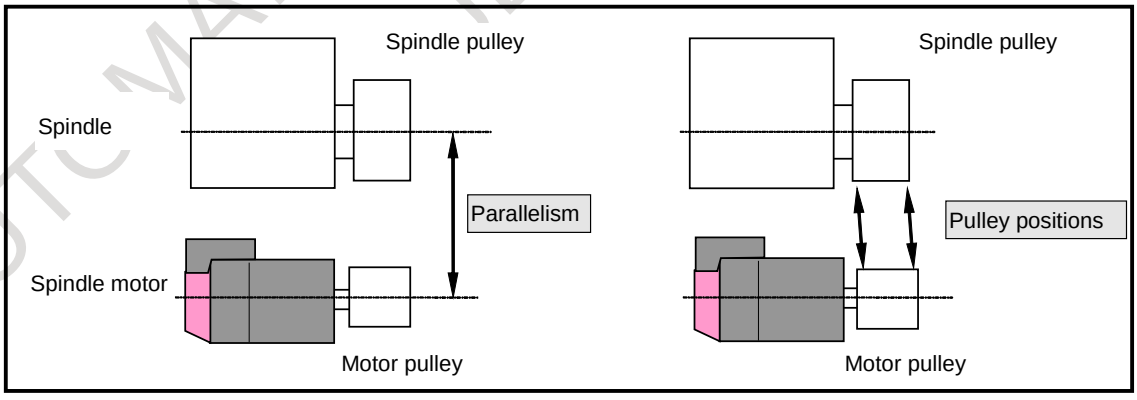
5 The tension of the belt is reduced as a result of abrasion during the initial several hours of operation. To transfer torque normally after this reduction in tension, the initial tension before operation should be set to a value 1.3 times the actually required tension T.



Recommended belts:
Ribace manufactured by BANDO.
Ribstar manufactured by MITSUBOSHI.

6 Use an appropriate tension gage to tension the belt.
Examples
Sonic type: U-305 series manufactured by UNITTA.
CLAVIS belt tension meter by IDS (UK)

7 Reduce the deviation between the positions of the motor and machine pulleys in the shaft direction as much as possible and ensure that the center lines of the shafts are as parallel as possible.



NOTE
1 Prevent oil or dust from entering between the belt and the pulley. Otherwise, the belt may slip.
2 If the allowable radial load is exceeded, reduce the load by using support bearings on the machine side or directly connecting to the machine in order to secure reliability for an extended period of time.

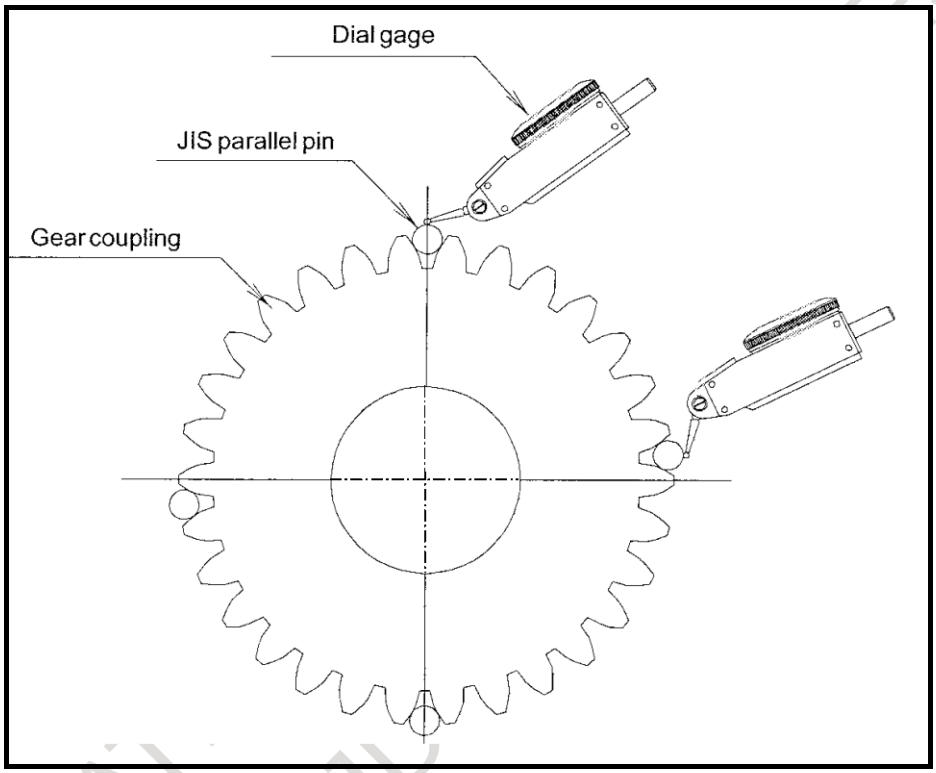
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3.2 WHEN A MOTOR IS CONNECTED TO A SPINDLE VIA A GEAR

⚠ CAUTION

1 Do not use a helical gear which applies a load in the motor axial direction.

2 To prevent unusual gear sounds, apply the following precautions:
(1) The deviation of the gear tooth surface should indicate the proper value.
(Tip) Measuring the deviation of a gear tooth surface



(2) The correct backlash should be provided.
(3) The perpendicularity of the motor flange mounting surface to the machine shaft should indicate the proper value.

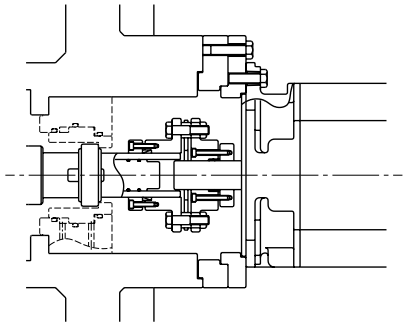
3 Mount the motor on the machine so that the vibration acceleration is 4.9m/s^2(0.5G) or less when it is measured using the method described in CAUTION 5 of Section 2.1, “COMMON”.

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3.3 WHEN A MOTOR IS DIRECTLY CONNECTED TO A SPINDLE VIA A COUPLING

⚠ CAUTION

1 When connecting the spindle and motor shaft, be sure to use a flexible coupling.
(Flexible coupling examples)
- Diaphragm coupling (EAGLE INDUSTRY CO., LTD.)
- Oldham's coupling
- Gear coupling (MIKI PULLEY)



Example of disk coupling

Flexible coupling has three tolerances of degree of freedom: radial, angular, and axial displacement. This enables coupling with less vibration and less noise to achieve high-speed rotation.
- Tolerances of radial and angular displacement: Slight radial and angular displacement that could not be absorbed by centering are absorbed.
- Tolerance of axial displacement: Extension of the spindle and motor shaft due to temperature increase is absorbed.

(Caution)
- These tolerances are criteria for preventing the coupling from being damaged, not criteria for preventing load from being applied to the spindle and motor bearings. Therefore, to perform rotation with low vibration and low noise before high-speed rotation is achieved, the spindle and motor shaft must be centered.
- FANUC has confirmed that with a coupling (disk coupling) that permits only the degrees of freedom of angular and axial displacement, rotation can take place properly if centering has been performed with a concentricity of 5 μm.

2 It is important to perform centering and obtain parallelism to avoid having to recourse to the flexibility of the coupling.
At high speeds, any radial displacement may cause the bearing to fail prematurely.

3 Check all machines before shipping to confirm that the vibration acceleration is 0.5 G ($4.9 m/s^2$) or less when measured using the method described in CAUTION 5 of Section 2.1, “COMMON”.

4 Set the torsional rigidity of the coupling to an appropriate high value. If the torsional rigidity is low, vibration may be produced during orientation.

5 When attaching the coupling to the motor shaft, never use a hammer or the like; otherwise, impact load is applied to the bearing.

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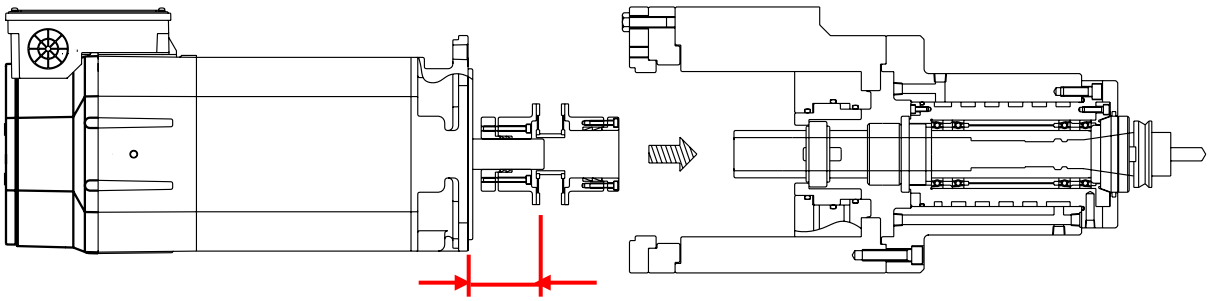
6 When the motor shaft and the spindle are to be connected via a coupling, the motor shaft may remain pressed inside the motor when the motor shaft is inserted into the spindle. (Caution is required particularly for Oldham's coupling which requires large thrust force to be engaged.)
With the motor shaft remaining pressed inside the motor, the precompression load of the built-in bearing of the motor may be lost or become excessive, possibly causing the bearing to be defective.
After connection via a coupling, check that the motor shaft does not remain pressed inside the motor.

NOTE

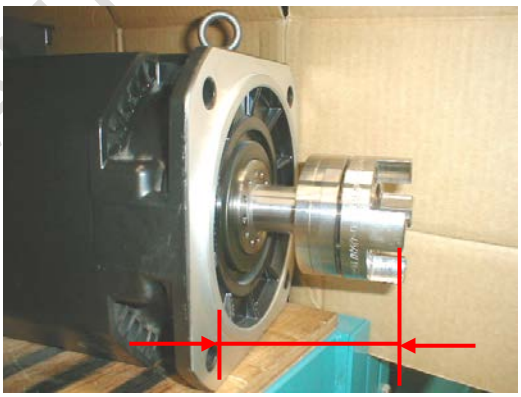
1 **Examples of how to check that the motor shaft does not remain pressed inside the motor**
- After connection via a coupling, check that the axis direction dimension (total length) of the coupling itself is correct.
  * In some cases, if the motor shaft is not inserted correctly, the total length may be longer than the normal dimension.
- Before inserting the coupling, measure the distance between the coupling and a datum plane of the motor (such as the inside low end), and check that the distance does not change after insertion.
  Alternatively, prepare a datum plane on the machine side to facilitate measurement inside the coupling box, check the positional relation between the datum plane of the motor and the datum plane on the machine side first, and then check the position of the coupling from the datum plane on the machine side.

2 **If the motor shaft remains pressed inside the motor**
- Mount a coupling or the like to the motor shaft and pull the coupling to bring the motor shaft back to the original position.

(Reference)

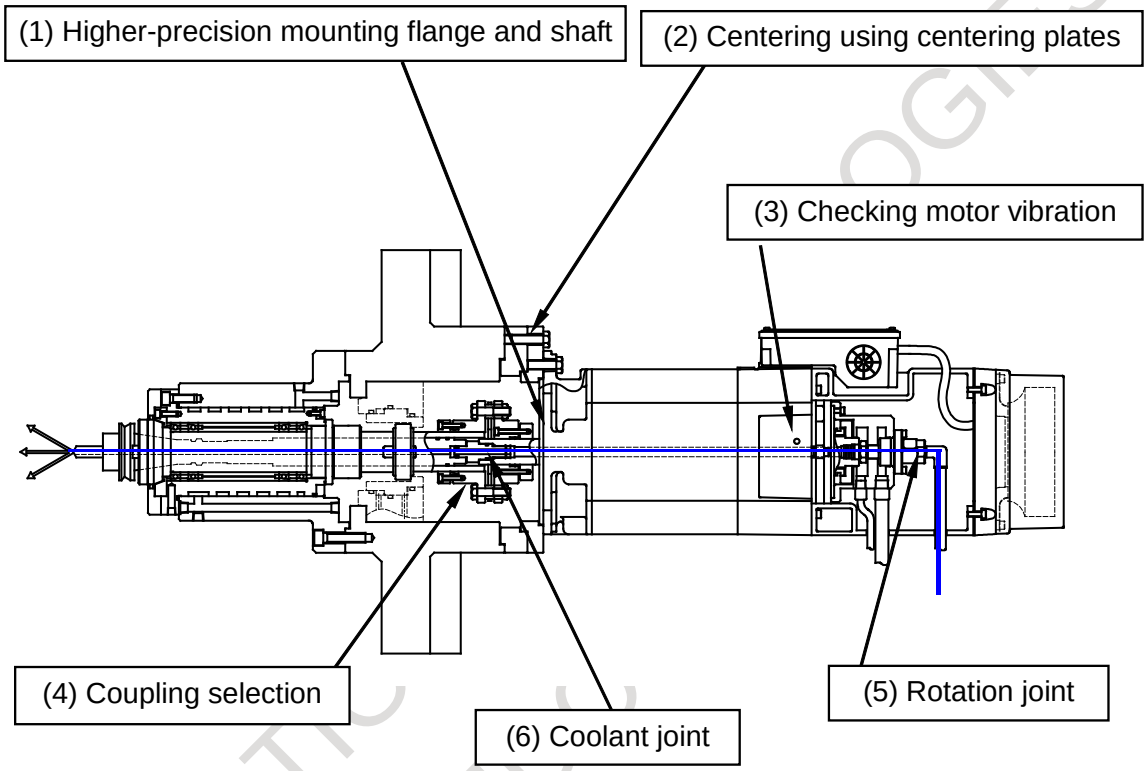


(Example) For a solid shaft motor



3.3.1 Points about the Direct Connection Structure of Spindle Motors with a Through Hole

The αiIT-B series, αiIPT-B series, αiST 1/12000-B, αiIL-B series, βiIT-B series and other series have a structure where the spindle motor with a through hole is directly connected with the spindle. If the centering precision of the motor shaft and the spindle is insufficient, fretting may occur on the motor shaft in a short-time operation or the bearing of the motor shaft may be damaged due to vibration in the coupling section. Six important points for high-speed rotation with low vibration in a direct motor connection structure are described below.



Higher-precision mounting flange and shaft

With high-precision and low-vibration specification motors, and αiIT-B series, αiIPT-B series, αiST 1/12000-B, αiIL-B, and βiIT-B series motors, a mounting flange and shaft are assembled with higher precision for direct connection with the spindle.
For details, see the assembling accuracy list corresponding to each motor.

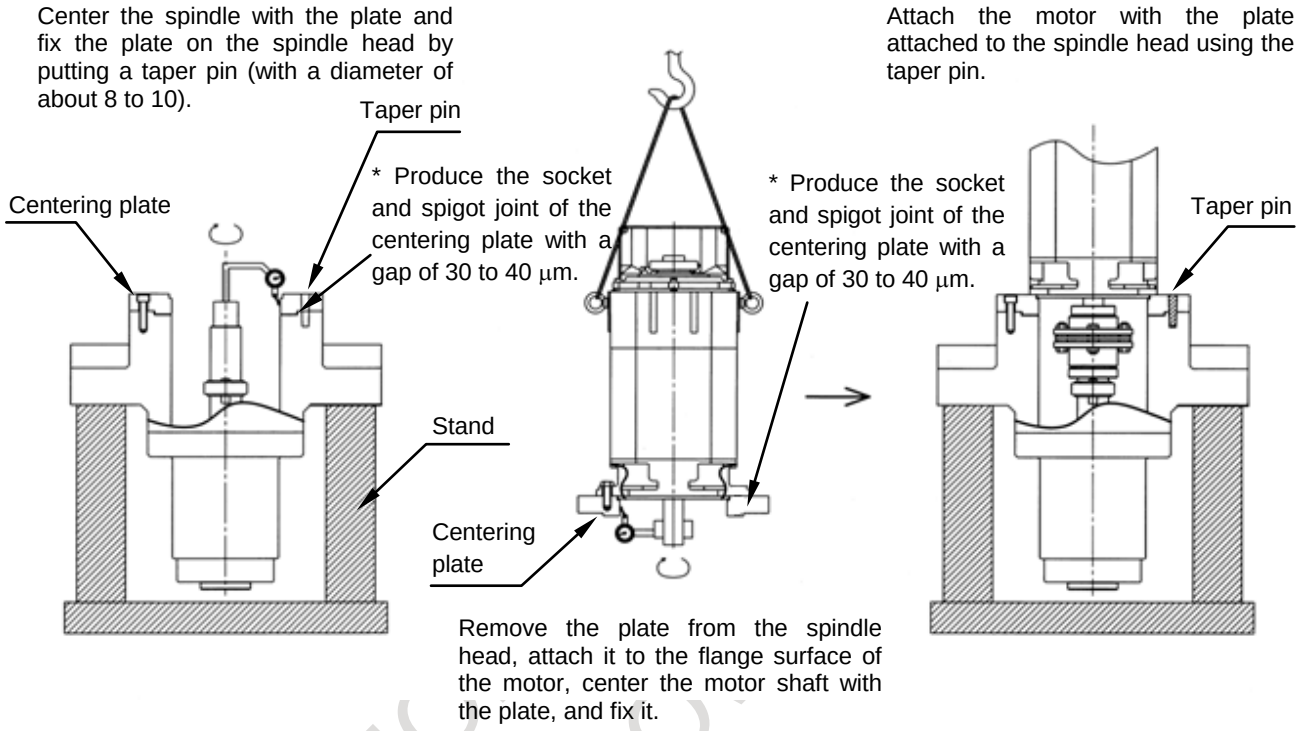
Centering using centering plates

When connecting the spindle with the motor shaft, make centering with a target concentricity of 5μm.
If centering accuracy measurement is difficult, the use of mounting plates for centering (called centering plates below) between the spindle head and motor is recommended. The MTB is requested to prepare centering plates.
When making centering plates, produce a socket and spigot joint on both sides with a target concentricity of 5 μm or less for the spigot joint and inner surface and with a target parallelism of 20 μm or less for both sides.
For centering, it is advisable to prepare a stand and orient the spindle upward.

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1. When one centering plate is used

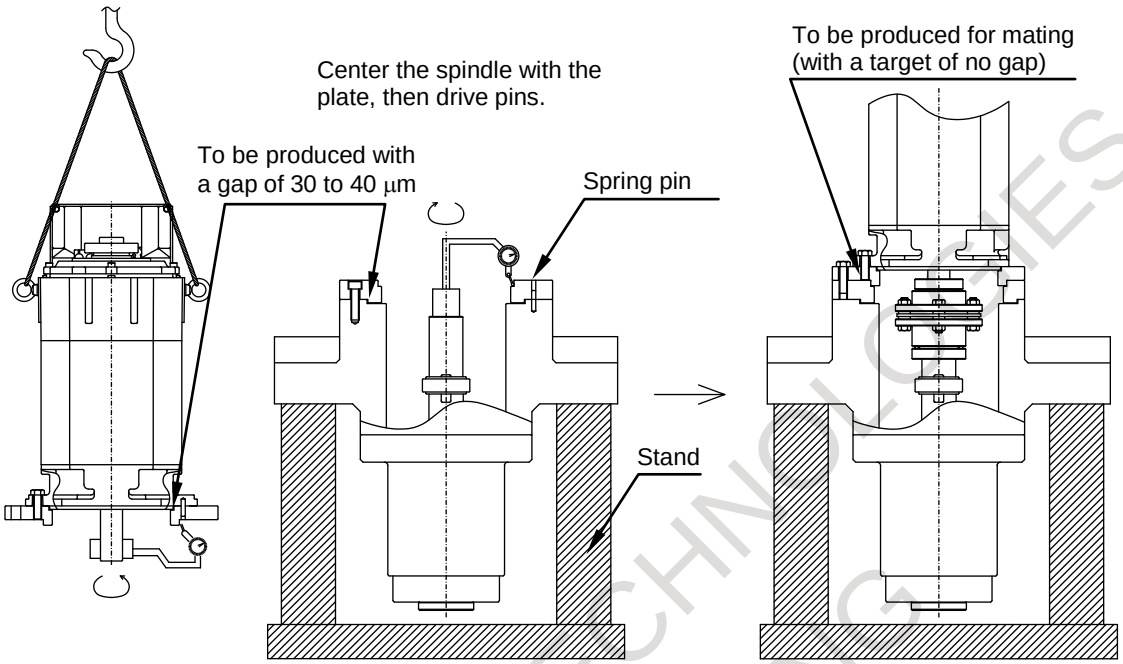
First, attach the centering plate to the spindle head and center the spindle with the inner surface of the centering plate.
Then, position the centering plate by putting a taper pin (with a diameter of about 8 to 10) on the spindle head.
Then, remove the centering plate from the spindle head, attach it to the flange surface of the motor, center the motor shaft with the inner surface of the centering plate, and fix it.
Finally, attach the motor with the centering plate attached to the spindle head using the taper pin.



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2. When two centering plates are used

Prepare two centering plates: one for the motor and the other for the spindle head. Mate the socket and spigot joints of the plates (with a target of no gap). After centering of the plate for the motor with the motor shaft, center the plate for the spindle head with the spindle. Then, attach the motor with the plate to the plate for the spindle head.



This centering structure allows high-precision installation even in the case of motor replacement in the field.

Checking motor vibration (to see whether centering is successful)

To check whether the spindle is centered with the motor successfully, measure the vibration acceleration of the motor.

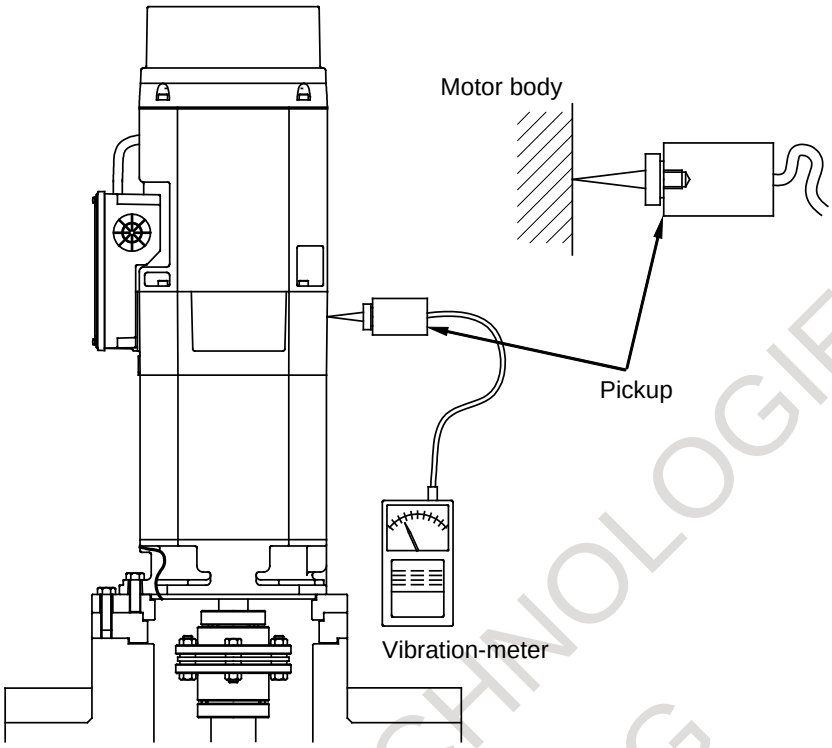
Center the motor shaft with the spindle so that the vibration acceleration of the motor does not exceed 4.9m/s^2(0.5 G) at maximum speed.

(Frequency range: 10 to 1000 Hz)

Before shipping machines, check that the vibration acceleration is 4.9m/s^2(0.5G) or less for all motors.

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Method of motor vibration measurement



Recommended vibration-meter

The following vibration-meter is recommended:

Name : SmartVibro
Model : VM-3024H
Manufacturer : IMVCORPORATION
Setting : The frequency range is fixed to 10 to 1000 Hz, so that this vibration-meter is suitable for the measurement of motor rotation components.
Select EQP (equivalent peak value) for Calculation setting.

An equivalent of the above vibration-meter, for example, the following vibration-meter is also available:

Name : Vibration Analyzer
Model : VA-12
Manufacturer : RION Co., Ltd.
Setting : Set 10 Hz for the high-pass filter and 1 kHz for the low-pass filter to make the vibration-meter suit for the measurement of motor rotation components.
This vibration-meter can display only m/s^2 (RMS) as the acceleration unit, so it is necessary to convert the value to m/s^2 (EQP). (To convert the RMS value to the EQP value, multiply the measurement value by $\sqrt{2}$.)

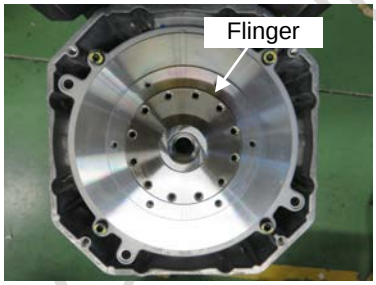
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Balance correction procedure

With the αiIT-B, αiIPT-B, αiST 1/12000-B, αiIL-B, and βiIT-B series, you can make a balance correction with the flinger mounted on the rear side of the motor when required. Please make a balance correction before mounting the distance block or fan unit.

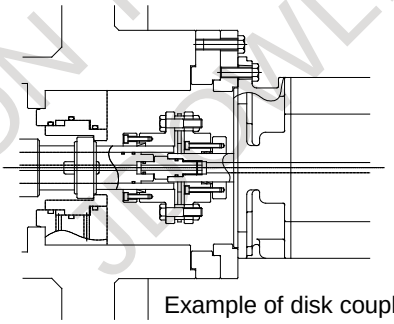
・ Tapped hole size

Motor model(s)	Tapped hole size
αiI 1/24000-B, αiIT 1/24000-B, αiS 1/12000-B, αiST 1/12000-B	12-M4 Depth 7 mm
αiIT 1.5-B to αiIT 3-B, αiIT 1.5HV-B to αiIT 3HV-B	12-M5 Depth 7 mm
αiIT 6-B to αiIT 22-B, αiIT 6HV-B to αiIT 22HV-B, βiIT 12/10000-B, βiIT 15/8000-B	12-M5 Depth 8 mm
αiIL 8/20000-B, αiIL 8/20000HV-B	12-M5 Depth 10 mm
αiIL 15/15000-B, αiIL 26/15000-B, αiIL 15/15000HV-B, αiIL 26/15000HV-B	12-M5 Depth 6 mm



Coupling selection

1. If a thrust load is applied on a motor shaft, the shaft moves in the direction of the thrust. So, it is necessary to select a coupling which does not apply a thrust load on motor shaft (at the time of connecting, with increasing temperature and so on). For that reason, be sure to use a flexible coupling for connecting the spindle and motor shaft.
   (Flexible coupling examples)
   - Diaphragm coupling (EAGLE INDUSTRY CO., LTD.)
   - Oldham's coupling
   - Gear coupling (MIKI PULLEY)



Example of disk coupling

Flexible coupling has three tolerances of degree of freedom: eccentricity, declination, and axial displacement. This enables coupling with less vibration and less noise to achieve high-speed rotation.

- Tolerances of eccentricity and declination: Slight eccentricity and declination that could not be absorbed by centering are absorbed.
- Tolerance of axial displacement: Extension of the spindle and motor shaft due to temperature increase is absorbed.

(Caution)

- These tolerances are criteria for preventing the coupling from being damaged, not criteria for preventing load from being applied to the spindle and motor bearings. Therefore, to perform rotation with low vibration and low noise before high-speed rotation is achieved, the spindle and motor shaft must be centered.
- FANUC has confirmed that with a coupling (disk coupling) that permits only the degrees of freedom of declination and axial displacement, rotation can take place properly if centering has been performed with a concentricity of 5 μm.

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2 It is important to perform centering and obtain parallelism to avoid having to recourse to the flexibility of the coupling.
At high speeds, any eccentricity may cause the bearing to fail prematurely.

3 Use a coupling in which thrust load is not applied to the motor shaft by, for example, an increased temperature, cutting operation, or coolant pressure.

4 Set the torsional rigidity of the coupling to an appropriate high value. If the torsional rigidity is low, vibration may be produced during orientation.

5 When attaching the coupling to the motor shaft, never use a hammer or the like; otherwise, impact load is applied to the bearing.

6 After a motor shaft is inserted into spindle for connecting spindle and a motor shaft with a coupling, a motor shaft may remain pushed inside the motor. (Caution is required particularly for Oldham's coupling which requires large thrust force to be engaged.)
If motor is driven with motor shaft pushed inside the motor, pressure of motor bearings may be too much or too low, and the bearing may be broken.
Please check whether or not motor shaft is pushed inside the motor after connecting the spindle and a motor shaft with a coupling.

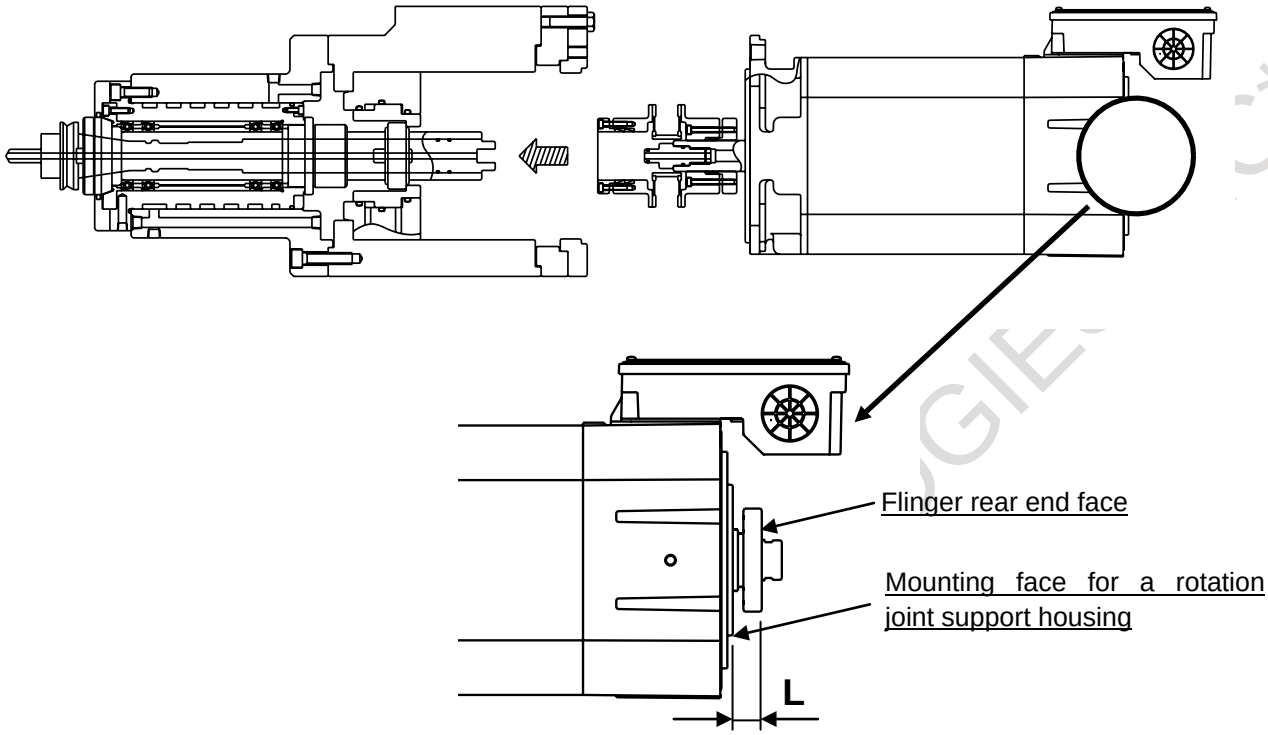
NOTE

1 **How to check whether or not motor shaft is pushed inside the motor**
- When the motor shaft is inserted into the spindle to connect the motor shaft and spindle using a coupling, the motor shaft may remain pushed inside the motor. So, measure the distance (L in the figure below) between the mounting face for a rotation joint support housing and the flinger rear end face before and after insertion, and check that the two measured values are identical.
- Check whether or not the axial length of the coupling (full length) is correct after connecting the spindle and a motor shaft with coupling.
  * The axial length of the coupling may be longer than normal length if connection of a coupling is not correct.

2 **If the motor shaft remains pressed inside the motor**
- The motor shaft of a spindle motor with a through hole protrudes from the rear side of the motor. Push the motor shaft back to the original position.

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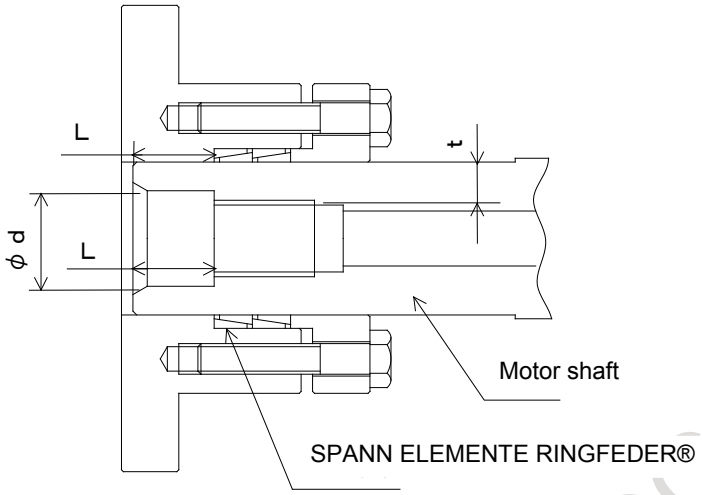
(Reference)



NOTE

Select the SPANN ELEMENTE that withstands the torque that is three times the highest torque at acceleration to prevent slippage at intermittent cutting.
With the models αiI$_T$ 1/24000-B, αiI$_T$ 1.5/20000-B, and αiI$_T$ 2/20000-B, αiS$_T$ 1/12000-B, however, the motor shaft to which a SPANN ELEMENTE is fastened is thin. So, select SPANN ELEMENTE and a fastening method so that the stress applied to the motor shaft does not exceed the yield point of the motor shaft (490 N/mm2). As shown below, provide a space of L mm or more between the SPANN ELEMENTE and the tip of the motor shaft.
For the method of calculation and the location of fastening to the motor shaft, contact the following company:
TAKEDA TRADE CO., LTD. (RINGFEDER®)

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The models αiIT 1.5/20000-B and αiIT 2/20000-B have a less thickness (t).

↓

[Stress applied to motor shaft] ≤ [Motor shaft yield point (490 N/mm^2)]

Model	αiIT 1/24000-B αiIT 1.5/20000-B αiIT 2/20000-B αiIT 3/12000-B αiST 1/12000-B	αiIT 6/12000-B, αiIT 6/15000-B αiIT 8/12000-B, αiIT 8/15000-B αiIT 15/12000-B, αiIT 15/15000-B αiIT 22/120000-B, αiIPT 22/8000-B αiIL 8/20000-B, βiIT 12/100000-B βiIT 15/80000-B	αiIL 15/15000-B αiIL 26/15000-B
ϕd	$\phi 16^{+0.018}_{-0}$	$\phi 20^{+0.021}_{-0}$	$\phi 30^{+0.0233}_{-0}$
L	13	17	20

Rotation joint

When coolant is flown through the through hole of the motor shaft, a coolant pressure acts on the end face of the coolant joint attached to the shaft front end, thus producing a thrust load that pushes the motor shaft backward.
If a rotation joint of separate external support type is attached to the motor shaft rear end, a coolant pressure acts also on the rotation joint to push the motor shaft forward, and therefore the thrust load can be canceled.
(To use a rotation joint of other than the separate external support type, consult with FANUC.)

The αiIT series is designed assuming that a rotation joint indicated in the table below is attached to the shaft rear end:
Rotation joints of separate external support type manufactured by Deublin or Rix.

Motor model	αiIT 1-B to αiIT 3-B, αiST 1-B		αiIT 6-B to αiIT 22-B, αiIPT 22-B, αiIL 8-B to αiIL 26-B βiIT 12/10000-B, βiIT 15/8000-B	
Mounting screw size	M12 × 1.25 (left-hand screw)		M16 × 1.5 (left-hand screw)	
Piping direction	Straight type	Elbow type	Straight type	Elbow type
Specification of Deublin (Caution)	1121-400-327	1121-300-327	1121-400-345	1121-300-345
Specification of Rix (Caution)	ESX20M-S012	ESX20M-E012	ESX20M-S016	ESX20M-E016
Function	Spindle-through coolant during rotation or stopping Air-through during stopping (Air-through disabled during rotation)			

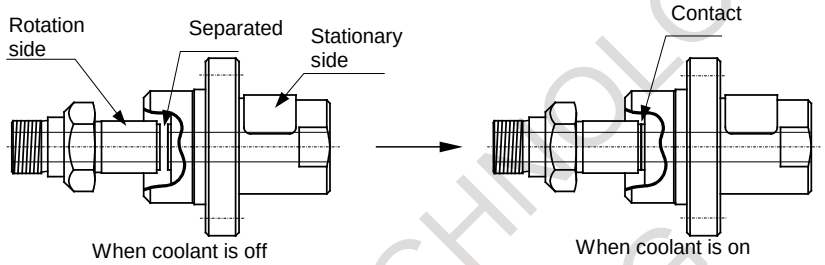
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⚠ CAUTION
For selecting a rotation joint, if the coolant through frequency is high during the tact time when the rotation joint is used on a dedicated machine or line machine, be sure to consult with the rotation joint manufacturer.

NOTE
Inquire the following of the rotation joint manufacturer:
- Details of features of the rotation joint and its installation
- Type for enabling air-through during rotation

For rotation joints and support housings, contact:
Deublin Japan Ltd.
Rotation Joint Div., RIX CORPORATION Co., LTD.

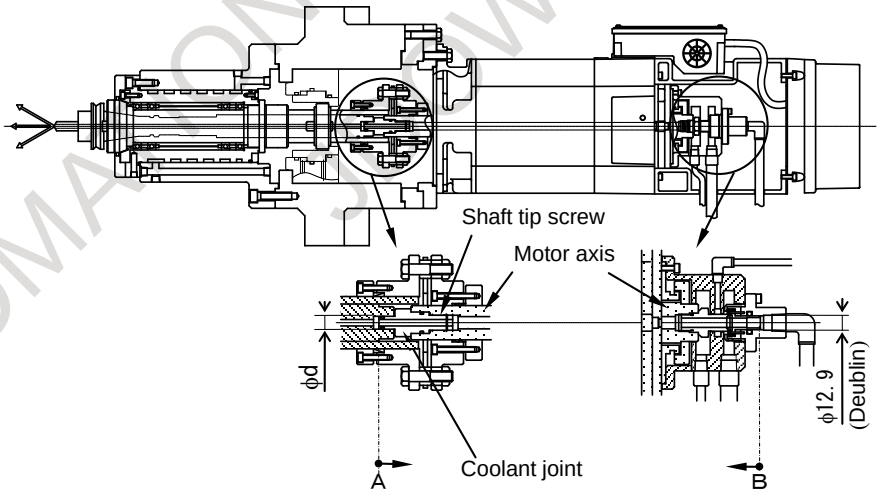
Example of rotation joint (separate external support type)



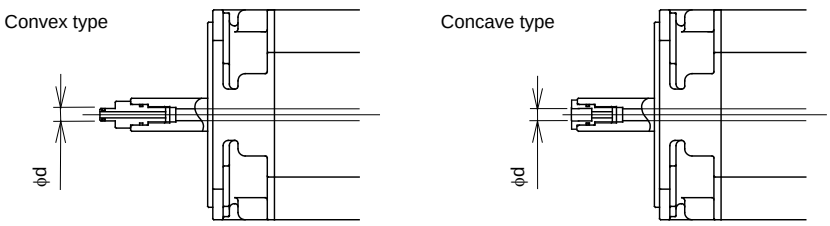
* Before attaching a rotation joint to the motor shaft, apply screw locking adhesive.

COOLANT JOINT

The machine tool builder is to prepare the following coolant joint:



(Figure of coolant joint)



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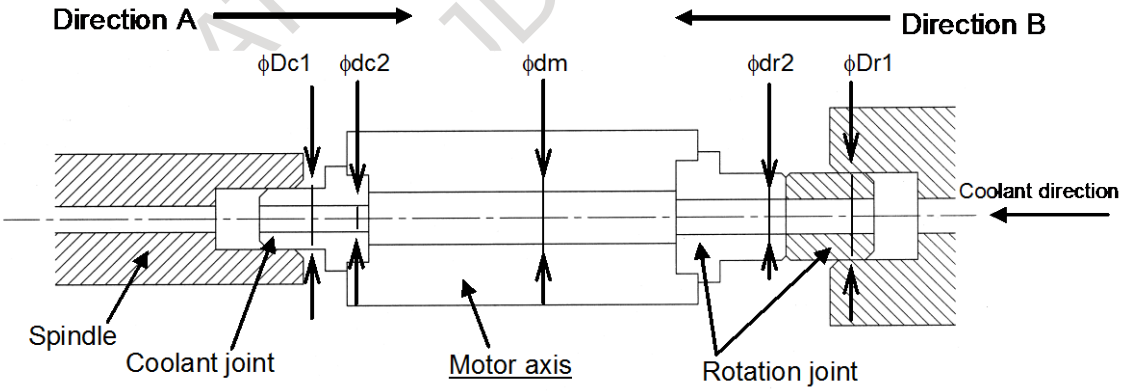
* • When installing the coolant joint, apply thread-locking adhesive to the joint, and be sure to use the screw used at the end of the motor axis.
• Press the coolant joint against the axis end face.

(1) When center-through coolant is used, thrust load due to coolant is applied between the spindle and motor and between the motor and rotation joint. The motor can be made stable without affecting impacts such as pulsation of the coolant pump by setting a slightly larger thrust load in direction B in the above figure than a thrust load in direction A.

(2) When a recommended rotation joint is used, the pressure reception diameter on the rotation joint side is 12.9 (Deublin) or 12.6 (Rix). So, ensure that the pressure reception diameter (ϕd) on the side of a coolant joint attached to the motor shaft tip follows the table below.
* When the coolant pressure is 70 kgf/cm^2 or less (For a coolant pressure of more than 70 kgf/cm^2, consult with FANUC.)

Motor model	Manufacturer	Rotation joint specification	Pressure reception diameter ϕd on coolant joint side	Shaft tip screw size
αiIT 1-B to αiIT 3-B, αiST 1-B	Deublin	1121-400-327 1121-300-327	Φ12.5	M12
	Rix	ESX20M-S012 ESX20M-E012	Φ12.2	
αiIT 6-B to αiIT 22-B, αiIPT 22/8000-B, αiIL 15-B to αiIL 26-B, βiIT 12/10000-B, βiIT 15/8000-B	Deublin	1121-400-345 1121-300-345	Φ12.0	M16
	Rix	ESX20M-S016 ESX20M-E016	Φ11.7	
αiIL 8/20000-B	Deublin	1121-400-345 1121-300-345	Φ12.5	
	Rix	ESX20M-S016 ESX20M-E016	Φ12.2	

(3) Concept of thrust load applied to the motor



<1> In the above figure, calculate the thrust load applied to the motor.
Coolant pressure: P
Outside diameter of coolant joint: ϕDc1, outside area: Sc1
Inside diameter of coolant joint: ϕdc2, inside area: Sc2
Inside diameter of motor axis: ϕdm, inside area: Sm
Outside diameter of rotation joint: ϕDr1, outside area: Sr1
Inside diameter of rotation joint: ϕdr2, inside area: Sr2
• Thrust load applied to the motor in direction A: F_A=P(Sc1-Sc2)+P(Sm-Sr2)

- Thrust load applied to the motor in direction B: F_B=P(Sr1-Sr2)+P(Sm-Sc2)
- Total thrust load applied to the motor:
  F=F_B-F_A= P(Sr1-Sr2)+P(Sm-Sc2)-(P(Sc1-Sc2)+P(Sm-Sr2))
  =P(Sr1-Sc1)=P(π(ϕDr1)^2/4-π (ϕDc1)^2/4)

Therefore, only the coolant pressure, the outside diameter of the rotation joint (ϕDr1), and the outside diameter of the coolant joint (ϕDc1) are related to the calculation of the thrust load applied to the motor.

<2> Example for calculating the thrust load
Assume that the coolant pressure is 70 kgf/cm^2, the pressure reception diameter is ϕDc1=ϕ12.
Also assume that the rotation joint is manufactured by Deublin (ϕDr1=ϕ12.9).
The thrust load applied to the motor is then calculated as follows:
F=70kgf/cm^2×(1.31cm^2 (ϕ12.9)- 1.13cm^2(ϕ12))= 12.6kgf
A thrust load of 12.6 kgf is applied in such a direction that it presses the motor shaft forward.

Also when the pressure reception diameter is ϕDc1=ϕ12.5, a thrust load of 5.6 kgf can be obtained by similar calculation.

(4) Allowable thrust load on the motor (in the direction in which the motor shaft is pressed forward)

Motor model	Allowable thrust load
αiI$_T$ 1-B to αiI$_T$ 3-B, αiS$_T$ 1-B, αiI$_L$ 8/20000-B	58.8N (6kgf)
αiI$_T$ 6-B to αiI$_T$ 22-B, αiI$_{PT}$ 22/8000-B, αiI$_L$ 15-B to αiIL 26-B, βiI$_T$ 12/10000-B, βiI$_T$ 15/8000-B	127N (13kgf)

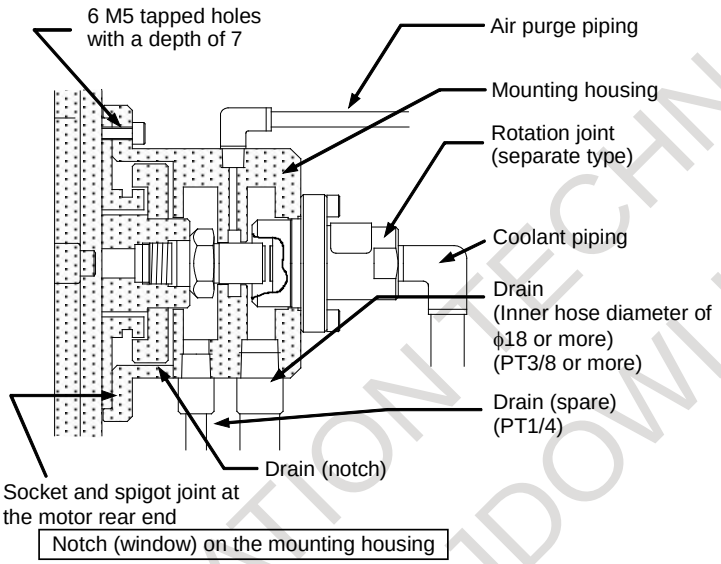
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Rotation joint support housing

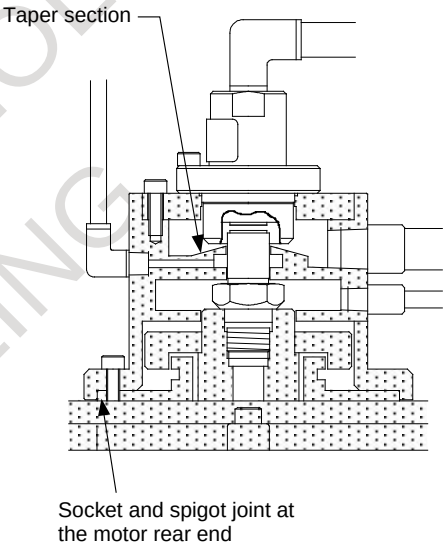
The machine tool builder is to prepare a rotation joint support housing. To secure a housing, use a socket and spigot joint and six M5 tapped holes at the motor rear end. Prepare six M5 bolts to secure a housing.
When a rotation joint of separate external support type is used, cutting fluid leaks from the sealing section (contact section between the stationary side and rotation side). So, be sure to provide a drain on the housing for the rotation joint. A drain of PT3/8 or more is required, and a hose with an inner diameter of ϕ12 mm or more is required.
(To determine the final figure of a drain, be sure to contact the manufacturer of a rotation joint.)
A housing of labyrinth structure for preventing cutting fluid from penetrating into the inside of the motor is required. Particularly when the motor is oriented downward vertically, enhance drainage by means such as air purging.
When the rotation joint is damaged, a large amount of cutting fluid can leak. So, provide many notches on the housing. Moreover, attach a flow rate sensor to the drain to perform periodic flow rate management. For details, refer to the specifications of each rotation joint.

(Example of rotation joint support housing)

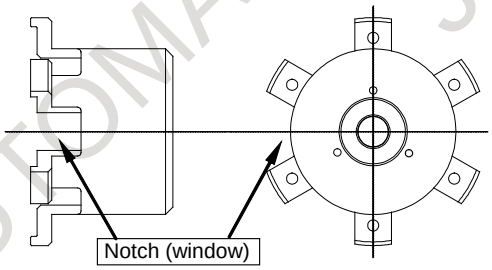
When the motor is oriented horizontally



When the motor is oriented downward vertically



Notch (window) on the mounting housing



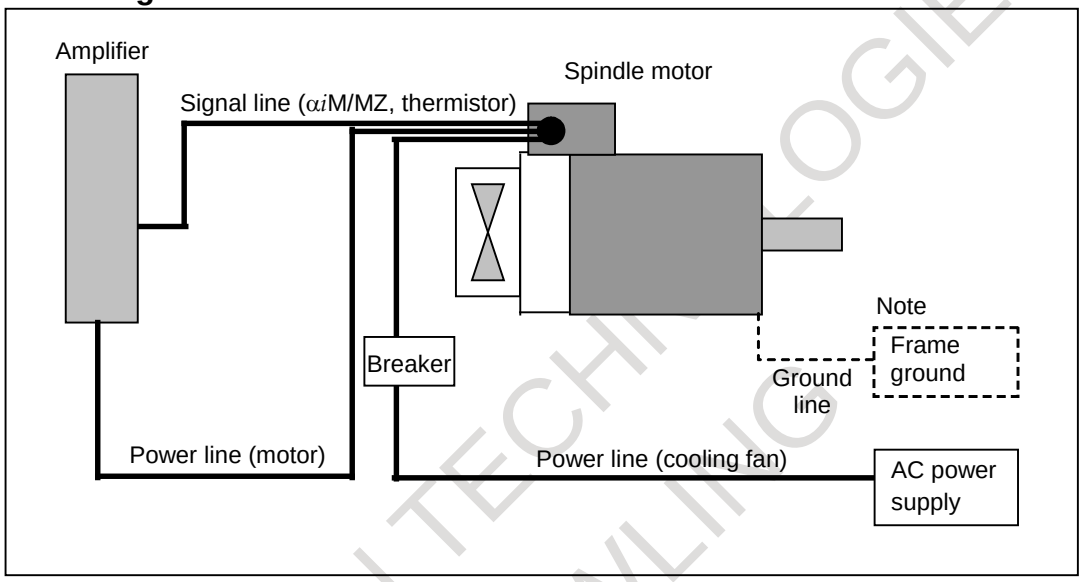
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4 CONNECTING A SPINDLE MOTOR

4.1 CONNECTING A SPINDLE MOTOR

The FANUC AC spindle motor αi-B / βi-B series requires that the power line of the motor and the signal line of the detector be connected to the amplifier. The cooling fan must also be connected to the prescribed power supply.

Connection diagram

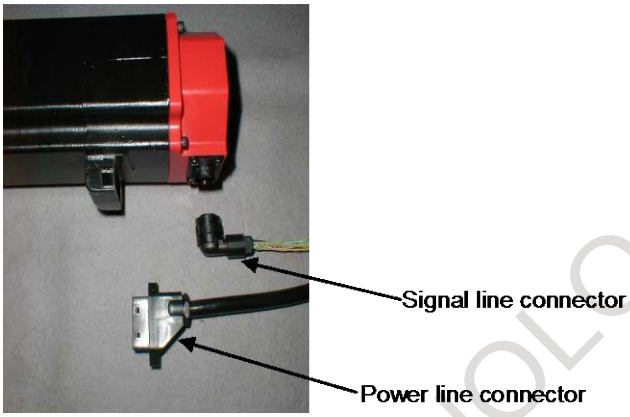


⚠ CAUTION
If a motor is not connected to ground through the machine (cabinet) in which the motor is installed, connect the motor grounding point and the amplifier grounding point to absorb noise. In this case, use a wire with a thickness of at least 1.25 mm^2, other than the GND conductor in the power line. Keep the wire as far from the power line as possible.

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4.1.1 Connecting the Power Line of αiI 0.5-B, αiI 0.5HV-B, and αiI 0.5-B (IP65)

The power line and signal line are connected with the connector. Use the shield cable for the connection. Refer to FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65412EN) for other respects in the connection.



(1) Connection of power lead

Connector parts related to cable side

	Ordering number	Tyco Electronics AMP specification
Connector kit of power lead	A06B-6114-K220/S (FANUC specification : A63L-0001-0875/SC)	1473063-2

Power lead specification

Number of core	Conductor size	Grounding cable cross-section	Sheath diameter (Note)
4 or more	AWG16 to 18	ϕ1.8 to 2.8mm	ϕ9.2 to 11.4mm

NOTE
If the outer sheath diameter is inadequate, the waterproofness can degrade.

Connector pins arrangement

1	2	3	4	5	6
U	V	W	G	-	-

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4.1.2 Connecting the Power Line of Models other than αiI 0.5-B, αiI 0.5HV-B and αiI 0.5-B (IP65)

Connect the cables for the motor power line and fan motor to the terminal block in the terminal box. αiM sensor or αiMZ sensor signal or thermistor signal use a connector manufactured by Tyco Electronics AMP. The connector housing and the connector are attached in the terminal box.

αiI 1-B to αiI 50-B

Size of screws used in the terminal block / Model	Power lead		Fan motor
	U,V,W,G	U,V,W,X,Y,Z,G	FMU,FMV,FMW
αiI 1/10000-B, αiI 1.5/10000-B	M5	-	M4
αiI 2/10000-B to αiI 15/8000-B	M5	-	Screw-less terminal block
αiI 18/8000-B to αiI 22/8000-B	M6	-	Screw-less terminal block
αiI 30/7000-B to αiI 40/7000-B	M10	-	Screw-less terminal block
αiI 50/5000-B	M8	-	Screw-less terminal block
αiI 1/15000-B, αiI 1/24000-B, αiI 1.5/20000-B	M5	-	M4
αiI 2/20000-B, αiI 3/12000-B, αiI 3/15000-B	M5	-	Screw-less terminal block
αiI 6/12000-B to αiI 15/12000-B	-	M5	Screw-less terminal block
αiI 18/12000-B to αiI 22/12000-B	-	M6	Screw-less terminal block

* For αiI 6/15000-B (A06B-2433-B123), it is necessary to order three short bars (A65L-0001-0630#SD) separately. For αiI 6/15000-B (A06B-2433-B123#0101), it is necessary to order one short bar (A65L-0001-0630#SS) separately.

αiI 1HV-B to αiI 50HV-B

Size of screws used in the terminal block / Model	Power lead			Fan motor	
	U,V,W,G	U,V,W, X,Y,Z,G	U_1,V_1,W_1, U_2,V_2,W_2,G	FMU,FMV,FMW	FMU,FMV
αiI 1/10000HV-B to αiI 1.5/10000HV-B	M5	-	-	-	M4
αiI 2/10000HV-B to αiI 3/10000HV-B	M5	-	-	-	Screw-less terminal block
αiI 6/10000HV-B to αiI 22/8000HV-B	M5	-	-	Screw-less terminal block	-
αiI 30/7000HV-B, αiI 40/7000HV-B	M10	-	-	Screw-less terminal block	-
αiI 50/5000HV-B	M8	-	-	Screw-less terminal block	-
αiI 60/5000HV-B	M10	-	-	M3.5	-
αiI 75/5000HV-B	M8	-	-	Screw-less terminal block	-
αiI 100/5000HV-B	-	M8	-	Screw-less terminal block	-
αiI 150/5000HV-B	-	-	M8	Screw-less terminal block	-
αiI 2/20000HV-B	M5	-	-	-	Screw-less terminal block
αiI 8/10000HV-B to αiI 22/12000HV-B	-	M5	-	Screw-less terminal block	-

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αiIP 12-B to αiIP 60-B

Size of screws used in the terminal block / Model	Power lead	Cooling fan
	U,V,W,X,Y,Z,G	FMU,FMV,FMW
αiIP 12/8000-B to αiIP 22/8000-B	M5	Screw-less terminal block
αiIP 30/6000-B to αiIP 50/6000-B	M6	Screw-less terminal block
αiIP 60/5000-B	M8	M3.5

αiIP 15HV-B to αiIP 60HV-B

Size of screws used in the terminal block / Model	Power lead	Cooling fan
	U,V,W,X,Y,Z,G	FMU,FMV,FMW
αiIP 15/6000HV-B, αiIP 22/6000HV-B	M5	Screw-less terminal block
αiIP 40/6000HV-B, αiIP 50/6000HV-B	M6	Screw-less terminal block
αiIP 60/5000HV-B	M8	M3.5

αiIT 1-B to αiIT 22-B

Size of screws used in the terminal block / Model	Power lead			Cooling fan
	U,V,W,G	U,V,W, X,Y,Z,G	U1,V1,W1, U2,V2,W2,G	FMU,FMV,FMW
αiIT 1/24000-B, αiIT 1.5/20000-B	M5	-	-	M4
αiIT 2/20000-B, αiIT 3/12000-B, αiIT 3/15000-B	M5	-	-	Screw-less terminal block
αiIT 6/12000-B to αiIT 15/12000-B, αiIPT 22/8000-B	-	M5	-	Screw-less terminal block
αiIT 15/15000-B	-	-	M6	Screw-less terminal block
αiIT 22/12000-B	-	M6	-	Screw-less terminal block

αiIT 1.5HV-B to αiIT 22HV-B

Size of screws used in the terminal block / Model	Power lead		Cooling fan	
	U,V,W,G	U,V,W, X,Y,Z,G	FMU,FMV,FMW	FMU,FMV
αiIT 1.5/20000HV-B	M5	-	-	M4
αiIT 2/20000HV-B, αiIT 3/12000HV-B	M5	-	-	Screw-less terminal block
αiIT 6/12000HV-B to αiIT 22/12000HV-B	-	M5	Screw-less terminal block	-

αiS 1-B, αiST 1-B

Size of screws used in the terminal block / Model	Power lead	Cooling fan
	U,V,W,G	FMU,FMV,FMW
αiS 1/12000-B, αiST 1/12000-B	M5	Screw-less terminal block

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αiIL 8-B to αiIL 26-B

Size of screws used in the terminal block / Model	Power lead
	U1,V1,W1,U2,V2,W2,G
αiIL 8/20000-B	M5
αiIL 15/15000-B, αiIL 26/15000-B	M6

αiIL 8HV-B to αiIL 26HV-B

Size of screws used in the terminal block / Model	Power lead
	U,V,W,X,Y,Z,G
αiIL 8/20000HV-B	M5
αiIL 15/15000HV-B, αiIL 26/15000HV-B	M6

βiI 3-B to βiI 15-B

Size of screws used in the terminal block / Model	Power leed	Cooling fan
	U,V,W,G	FMU,FMV,FMW
βiI 3/12000-B to βiI 15/8000-B	M5	Screw-less terminal block

βiI 3HV-B to βiI 15HV-B

Size of screws used in the terminal block / Model	Power leed	Cooling fan
	U,V,W,G	FMU,FMV,FMW
βiI 3/12000HV-B to βiI 15/8000HV-B	M5	Screw-less terminal block

βiIP 8-B to βiIP 40-B

Size of screws used in the terminal block / Model	Power leed	Cooling fan
	U,V,W,X,Y,Z,G	FMU,FMV,FMW
βiIP 8/6000-B to βiIP 30/8000-B	M5	Screw-less terminal block
βiIP 40/6000-B	M6	Screw-less terminal block

βiIT 12-B, βiIT 15-B

Size of screws used in the terminal block / Model	Power leed	Cooling fan
	U,V,W,G	FMU,FMV,FMW
βiIT 12-B, βiIT 15-B	M5	Screw-less terminal block

βiIC 3-B to βiIC 8-B

Size of screws used in the terminal block / Model	Power leed	Cooling fan
	U,V,W,G	FMU,FMV,FMW
βiIC 3-B to βiIC 8-B	M5	Screw-less terminal block

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(1) Cable for the power lead

For the power lead cable specification, refer to "FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65412EN)".

FANUC recommends the following cables with a small cable diameter:

LMFC power lead : Fire-retardant Polyflex power cable (Heat resistance: 105°C)
Flonlex power lead : Manufactured by HITACHI CABLE, Ltd. (Heat resistance: 200°C)
FLUBON WIRE : Manufactured by KURABE (Heat resistance: 200°C)

(2) Cable for the fan motor

For the fan motor current value and cable specifications, refer to Section I.3.4, "FAN MOTOR CONNECTION" in this manual.

(3) Connection of power leads to the terminal block

⚠ WARNING

To attach the power leads and short bars, follow the procedure described in this section to make connections with specified torque. And wire not to loosen the screws. Driving a motor with terminals loosened could result in the terminal board overheating and causing a fire. In addition, it may remove terminal to cause a ground fault, short circuit, or electric shock.

⚠ CAUTION

1. When attaching the power leads and short bars to the terminal board of a motor, tighten the screws with torque specified in the table. For the terminal size of a terminal block, see Section 4.1.2 of PART III.

Terminal size	Tightening torque [N·m]
M4	1.1 to 1.5
M5	2.0 to 2.5
M6	3.5 to 4.5
M8	8 to 10
M10	15 to 16

2. To maintain the required isolation distance, observe the following:
   - When attaching a crimp terminal at the end of a power lead, cover the crimped portion of the crimp terminal with insulating tube.
   - If the terminal board is provided with an insulating cover, fasten the power leads with the screws, and then put back the insulating cover in place.

3. If you want to energize an output switching type motor only with the low- or high-speed winding rather than switching its output, short bar the low- or high-speed winding, whichever is applicable, and then connect three power leads (the U-, V-, and W-phase wires) to the motor (except for the αiI$_T$ 15/15000-B, αiI$_L$-B series motors).

For the following motors, a short bar is provided as standard in the terminal block.

Model name	Type of supplied short bar
αiI 6/12000-B, αiI 8/10000-B αiI 12/12000-B, αiI 15/12000-B αiI 18/12000-B, αiI 22/12000-B αiI$_P$ 50/6000-B	For low-speed winding (Y connection)
αiI$_P$ 12/8000-B, αiI$_P$ 15/8000-B αiI$_P$ 18/8000-B, αiI$_P$ 22/8000-B αiI$_P$ 30/6000-B, αiI$_P$ 40/6000-B αiI$_P$ 15/8000HV-B, αiI$_P$ 22/8000HV-B αiI$_P$ 40/6000HV-B αiI$_{PT}$ 22/8000-B	For High-speed winding (Δ connection)

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αiI 6/15000-B (A06B-2433-B123 or A06B-2433-B123#0101) is a motor energized only with the high-speed winding (Δ connection) or low-speed winding (Y connection) rather than switching its output. Order the following short bar or short bars separately.

Terminal size	Specification number	Specification of the winding to be used	Ordering number	Required quantity
αiI 6/15000-B	A06B-2433-B123	High-speed winding	A65L-0001-0630/SD	3
αiI 6/15000-B	A06B-2433-B123#0101	Low-speed winding	A65L-0001-0630/SS	1

If you want to any other output switching type motor, place an order for short bars according to the following list.

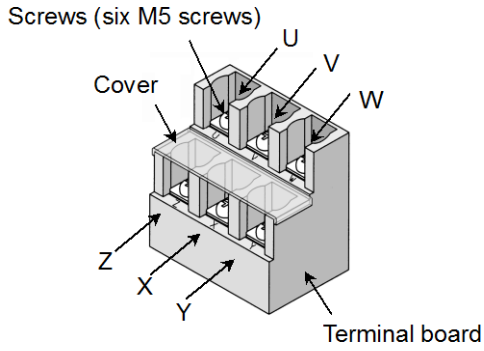
Terminal size	Specification of the winding to be used	Ordering number	Required quantity
M5	Low-speed winding	A65L-0001-0630/SS	1
M5	High-speed winding	A65L-0001-0630/SD	3
M6	Low-speed winding	A290-1410-X416	1
M6	High-speed winding	A290-1410-X417	3

4. How to connect power leads to output switching type motors

For output switching type motors, six power leads (the U-, V-, W-, X-, Y-, and Z-phase wires) can be connected on the terminal board.

- **Detailed descriptions of an M5 type terminal board**

  The terminal board has two rows. The U-, V-, and W-phase leads can be connected to the upper row, while the Z-, X-, and Y-phase wires can be connected to the lower row.

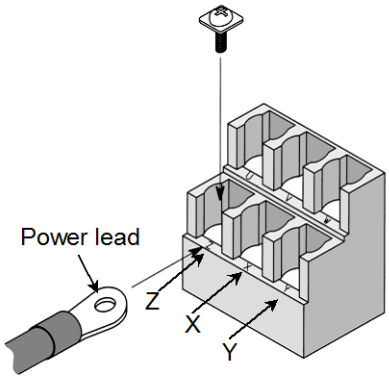


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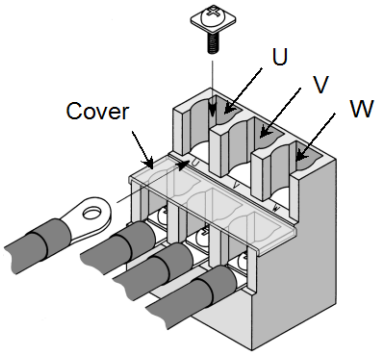
1) Using the motor by switching its output
To use the motor by switching its output, connect the six power leads (the U-, V-, W-, X-, Y-, and Z-phase wires) respectively to the terminal board screws marked U, V, W, X, Y, and Z. (For the αiIT 15/15000-B and αiIL-B series motors, the terminal board screws are marked U_1, V_1, W_1, U_2, V_2, and W_2.)

• Connecting power wires to an M5 type terminal board

<1> Connecting power leads to the lower row
Attach the Z-, X-, and Y-phase power leads to the lower row and fasten them with the screws.



<2> Attaching power leads to the upper row
After putting the cover on the lower row, attach the U-, V-, and W-phase power leads to the upper row and fasten them with the screws.

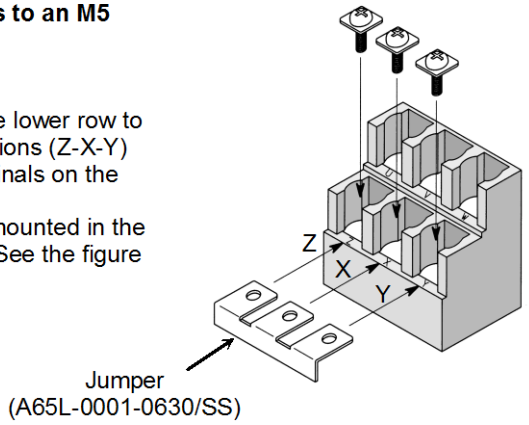


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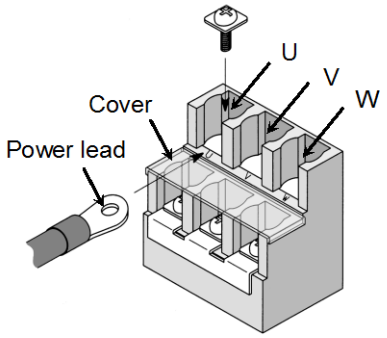
2) Using the motor by energizing it only with the low-speed winding (Y connection) rather than switching its output

• Connecting power leads to an M5 type terminal board

<1> Mounting a jumper
Mount a jumper on the lower row to make electric connections (Z-X-Y) among the three terminals on the lower row.
The jumper must be mounted in the specified orientation. See the figure at the right.

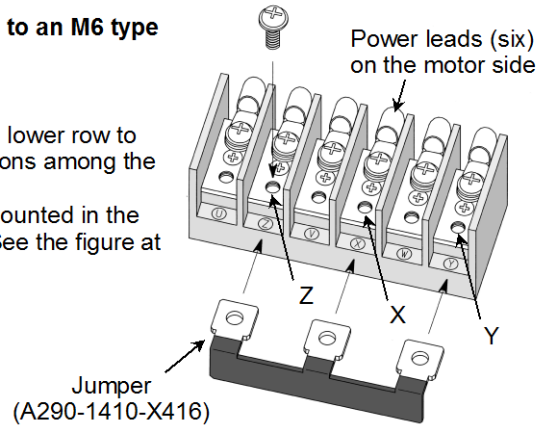


<2> Attaching power leads
After putting the cover on the lower row, attach the U-, V-, and W-phase power leads to the upper row and fasten them with the screws.

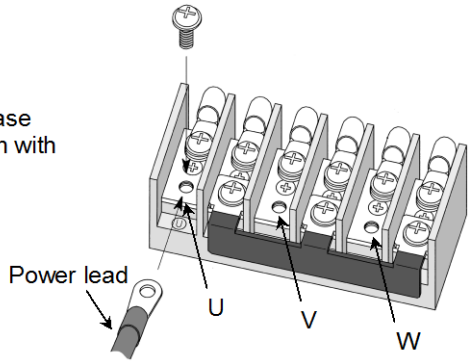


• Connecting power leads to an M6 type terminal board

<1> Mounting a jumper
Mount a jumper on the lower row to make electric connections among the Z, X, and Y terminals.
The jumper must be mounted in the specified orientation. See the figure at the right.



<2> Attaching power leads
Attach the U-, V-, and W-phase power leads and fasten them with the screws.

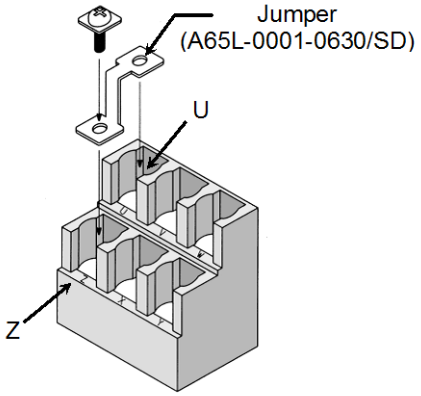


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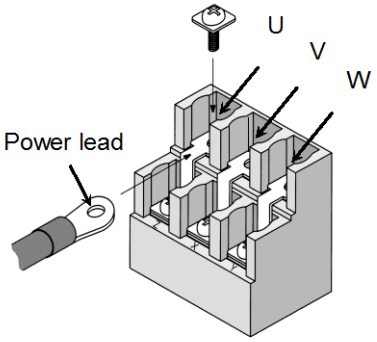
3) Using the motor by energizing it only with the high-speed winding (Δ connection) rather than switching its output

• Connecting power leads to an M5 type terminal board

<1> Mounting jumpers
Mount three jumpers between the upper and lower rows to make electric connections between U and Z, between V and X, and between W and Y.
The jumper must be mounted in the specified orientation. See the figure at the right.

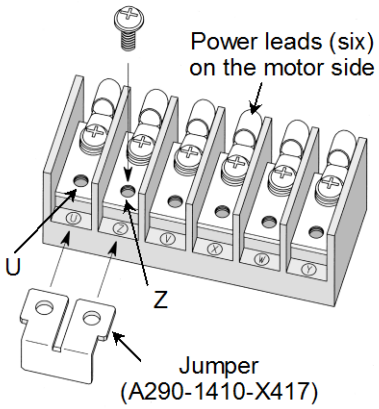


<2> Attaching power leads
Attach the U-, V-, and W-phase power leads to the upper row and fasten them with the screws.
No cover need be put on the lower row.

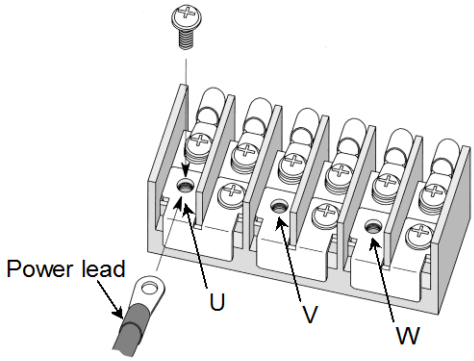


• Connecting power leads to an M6 type terminal board

<1> Mounting jumpers
Mount three jumpers to make an electric connection in each pair of adjacent terminals (between U and Z, between V and X, and between W and Y).
The jumper must be mounted in the specified orientation. See the figure at the right.



<2> Attaching power leads
Attach the U-, V-, and W-phase power leads and fasten them with the screws.

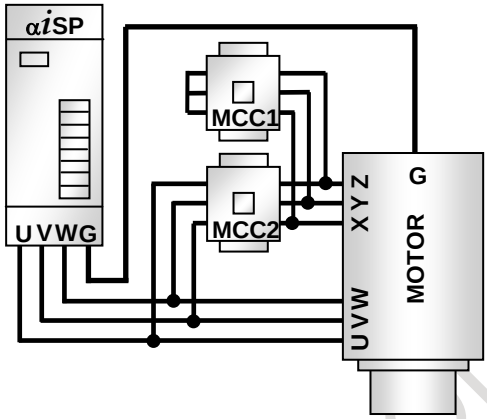


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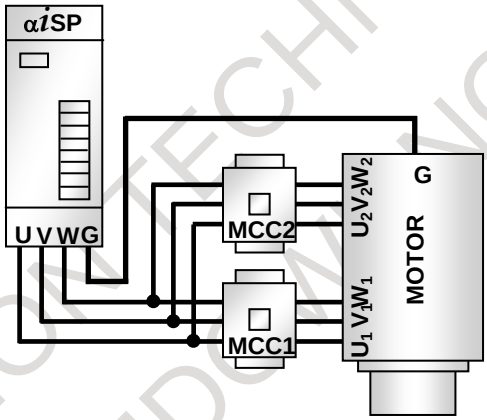
5. Connection between the motor and amplifier when winding switching is used

When winding switching is used, connect the motor and amplifier as shown in the figure below. The switching method varies depending on the model used. Confirm the switching method by referring to Chapter 2, "SPECIFICATIONS", in each series.

1) Y-Δ switching



2) Y-Y switching



Relationship between the magnetic contactors (MCC) and the low- and high-speed windings

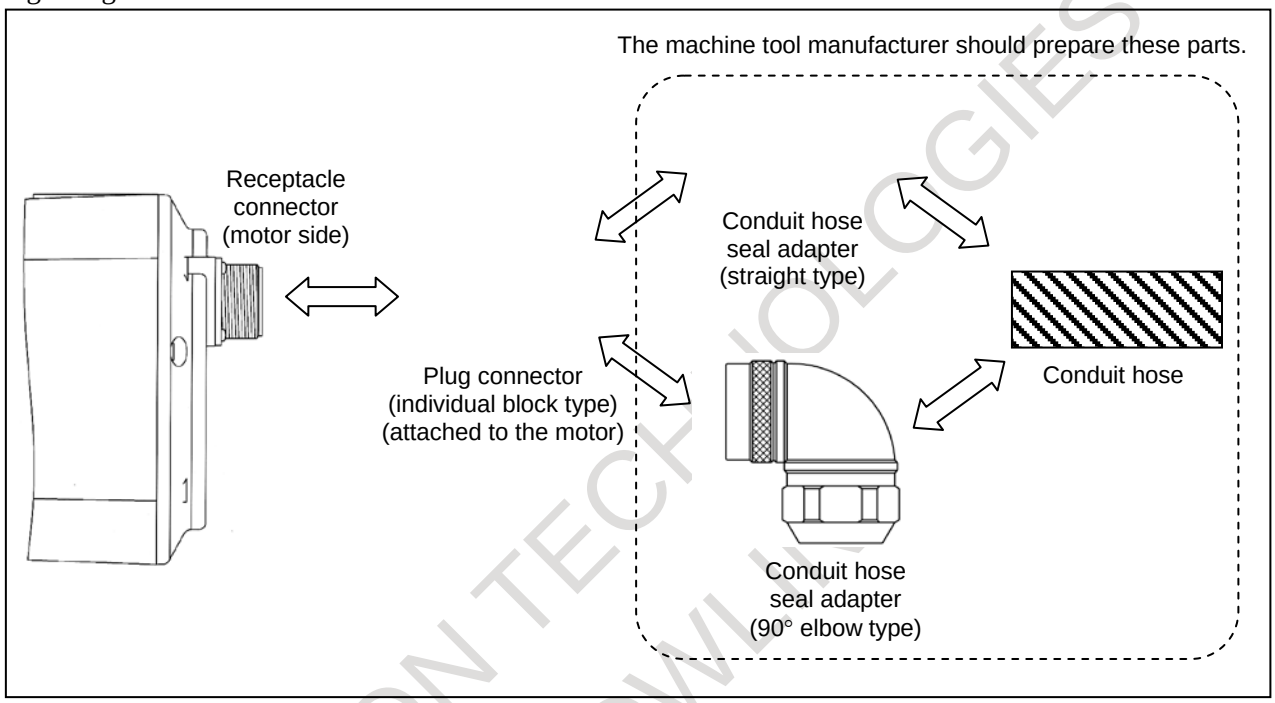
	Low-speed winding	High-speed winding
MCC1	ON	OFF
MCC2	OFF	ON

NOTE
1 For explanations about the switching unit and the low-/high-speed winding switching sequence, refer to the FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65412EN).

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4.1.3 Connecting the Power Line of αiI-B(IP65) series (except for model αiI 0.5-B(IP65))

Use a connector to connect the power line.
Strictly speaking, this connector does not conform to the MS standard. However, it is effectively compatible with the MS standard round-type connector that has the size shown below.
Use the shield cable for the connection.
Refer to FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65412EN) for other aspects regarding the connection.



(1) Connection of power line

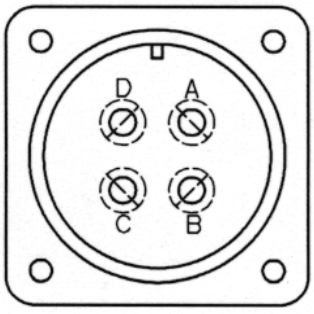
Connector parts related to cable side

Product name	Model number
Plug connector	JL04V-6A22-22SE (Japan Aviation Electronics Industry)

Power cable specifications

Number of cores	Conductor size
4 or more	AWG#8 to 12

Connector pins arrangement

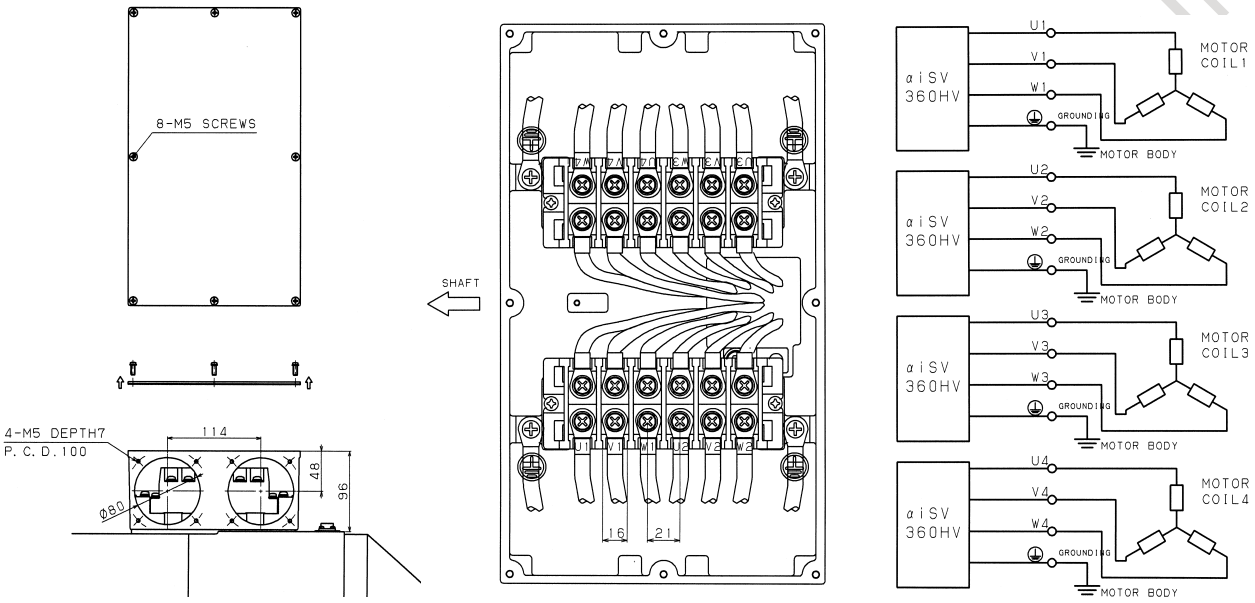


A	U
B	V
C	W
D	G

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4.1.4 Connecting the Power Line of αiS 2000/2000HV-B

For wiring, the eight M5 pan head machine screws can be removed to take apart the terminal box. For mounting, tighten the screws with a tightening torque of "2.0 to 2.5 Nm" with no foreign matter caught after ensuring that the rubber water-proof packing is not damaged.
This motor is driven by four αiSV 360HV-B servo amplifiers. To four sets of U, V, and W terminals in the motor terminal block, one set of U, V, and W terminals is connected for each amplifier.



Power terminal size, grounding terminal size: M6
Screw tightening torque: 3.5Nm to 4.5Nm

⚠ CAUTION
1 When attaching the power leads and short bars to the terminal block, follow the procedure described in this section to make connections with the specified torque properly. Driving a motor with a loose terminal could result in the terminal block overheating and causing a fire. In addition, it may remove a terminal to cause a ground fault, short circuit, or electric shock.
2 To maintain the required isolation distance, observe the following points. When attaching a crimp terminal at the end of a power lead, be sure to cover the crimped portion of the crimp terminal with insulating tube. When the terminal block is provided with an insulating cover, fasten the power leads with the screws, and then put the insulating cover back in place.

(1) Cable for the power lead

For the power lead cable specifications, refer to the FANUC SERVO AMPLIFIER αi-B series DESCRIPTIONS (B-65282EN).

(2) Cable for the fan motor

For the fan motor current value and cable specifications, refer to Section I. 3.4, "COOLING FAN" in this manual.

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4.1.5 Connection of Signal Lead

The αiM sensor or αiMZ sensor signal or thermistor signal use a connector manufactured by Tyco Electronics AMP. The connector housing and the connector are attached in the terminal box.

(1) Connector attachment for a motor with a built-in αiM/αiMZ sensor

For the signal connectors, see Section 4.1 "αiM/αiMZ SENSOR" in Part I.

(2) Connection to the Pulsecoder

αiS 2000/2000HV-B has an internal Pulsecoder (optical encoder) as a feedback detector which detects the position, speed, and others. The Pulsecoder outputs position information and alarm signal. The Pulsecoder is built into the motor. For the signal connector, see Section 4.2, "PULSECODER" in Part I.

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5 NOTES ON OPERATION

⚠ WARNING

1 When supplying voltage to the spindle motor or the fan motor, ensure that the earth cable is connected to the earth terminal and secure that the spindle motor is put to earth certainly. In addition, be sure to check that the power cable and short bar are secured to the terminal block.

⚠ CAUTION

1 After a continuous and long operation, the temperature of model α*i*I 0.5-B, α*i*I 0.5-B (IP65) to α*i*I 6-B (IP65) to may rise higher than other motors because they have no fan motor. So please treat them carefully.

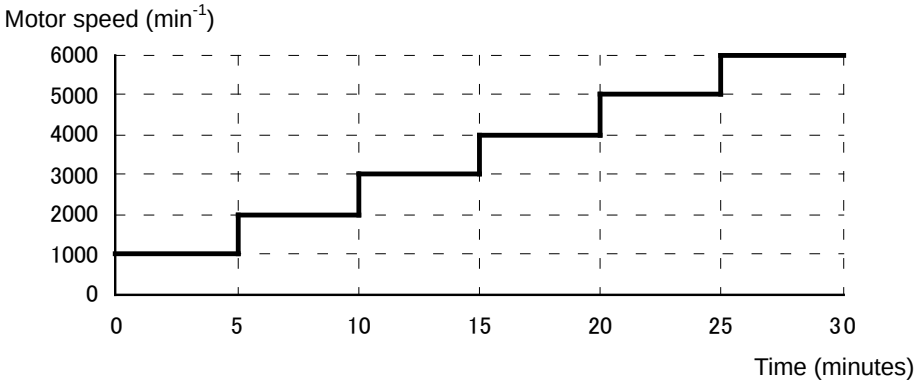
2 Sound and vibration
Check that there is no abnormal sound or vibration.

3 Cooling
Clean off dust from the cooling air inlet and outlet of the stator every year, and check the flow of air carefully. The table given below indicates the direction of the rotation of the cooling fan when viewed from the rear side of the motor. Check that the actual rotating direction is correct.

Model names	Rear exhaust (Exhaust on side opposite to load axis)	Front exhaust (Exhaust on load axis side)
α*i*I 1-B, α*i*I 1.5-B α*i*I 1HV-B, α*i*I 1.5HV-B α*i*I$_T$ 1-B, α*i*I$_T$ 1.5-B, α*i*I$_T$ 1.5HV-B α*i*S 1-B, α*i*S$_T$ 1-B	Clockwise (CW)	Clockwise (CW)
Models other than the above	Counterclockwise (CCW)	Clockwise (CW)

NOTE

1. When a motor is driven for the first time, after a motor has been stored for a long time, or after the machine is moved or transported, be sure to break in the motor. As break-in, increase the speed of the motor from 1000 min^{-1} to its maximum speed in 1000 min^{-1} increments, and operate the motor at each speed for about 5 minutes.
Grease is filled in motor bearings for lubrication. In a motor in the initial status or motor after stored for a long time, the grease is not filled uniformly in bearings. The use of the motor without break-in may cause unusual sound, vibration, or premature bearing damage.



Break-in driving pattern

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6 CAUTIONS FOR SYNCHRONOUS MOTOR

When applying the AC spindle motor αiS 1/12000-B or $\alpha i S_T$ 1/12000-B, carefully read the following description.

(Caution)

• First, read the part describing the B*i*S series in the latest edition of the PARAMETER MANUAL (B-65280EN). However, it is not necessary to read this part in the case of SSM.

(Notes on handling)

Because the rotor in the synchronous motor incorporates magnets, note the following points:

• Unlike the induction motor, the rotor does not smoothly rotate when manually turned because of the cogging torque.
• Even when the motor is coasting, the motor power line terminal has a high voltage. Do not touch the terminal until the motor stops.
• An overheat alarm may occur depending on machining conditions even if the calculated RMS output for one cycle is equal to or lower than the continuous rated output.
• Heat generated when the motor rotates with no load is higher than that of the induction motor.

(Pole position detection)

• For a synchronous motor, the control software must always catch the pole position of the motor. The pole position is lost by power-off and some alarms. Each time the pole position is lost, it must be detected again.
• During pole position detection in the DC current mode, the spindle is damped while vibrating right and left in the rotation direction and stops. The spindle repeats this motion twice. (It takes at least about 15 seconds. The time becomes longer according to the moment of inertia.) At first glance, this motion is strange, but is not abnormal.
For details, refer to the part describing the B*i*S series in the PARAMETER MANUAL (B-65280EN).

(Notes on pole position detection)

• When the pole position has not been detected and a rotation command is issued, the spindle first starts pole position detection. After the completion of pole position detection, the spindle is suddenly accelerated from the stopped state to the specified speed. Never look into the spindle or touch it during pole position detection for your protection.
• For safety, specify 0 min^{-1} for the spindle speed for pole position detection.

(Notes on using the AMR off set function)

Note the following point when using the AMR offset function. For details, refer to the PARAMETER MANUAL (B-65280EN).

• The AMR offset (parameter No. 4084) is specific to each spindle. For this reason, the setting must be obtained for each spindle even with the same specification. The AMR offset copied from another machine cannot be used. Obtain the setting for each machine. After replacing the spindle, rotor, or sensor (the phase of the sensor ring and rotor in the rotation direction changes), also obtain the setting for parameter No. 4084 and set it again. The same applies when a rotor slip may occur due to a cause such as a collision of the spindle at high speed. In this case, obtain the AMR offset again and check whether the new value is different from the original value. If the value changes, set the AMR value again.

* In the description, parameter Nos. for the 30*i* series are used.

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APPENDIX

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A PARAMETER TABLE FOR EACH MOTOR MODEL

For FANUC spindle motors, each model has specific drive parameters predetermined for it.
Use caution because if a motor is driven with other than the prescribed parameters, this will cause the motor to be defective.
For an explanation of any matters that are not contained in this document, refer to the descriptions below.

FANUC AC SPINDLE MOTOR αi series
FANUC AC SPINDLE MOTOR βi series
FANUC BUILT-IN SPINDLE MOTOR B*i* series
PARAMETER MANUAL (B-65280EN)

NOTE
1 For an explanation of the parameter numbers for those models that are not contained here, refer to the Parameter Manual (B-65280EN).
2 For those models for which no parameter tables are provided, such as models under development, contact a FANUC service representative.

Automatic setting of parameters according to the model code

When automatically setting the parameters described later according to the model code, confirm that the spindle software supports them. The applicable spindle software series and edition shown in the parameter list and later support the parameters.

Selection of the loadmeter to be displayed

The following three types of loadmeters can be displayed: the maximum output standard loadmeter (A), the continuous output standard loadmeter (B), and the smart loadmeter (C). For their usage, refer to FANUC AC SPINDLE MOTOR PARAMETER MANUAL (B-65280EN).
You must set parameters to use each loadmeter. Set the parameters with the following procedure.

(A) When using the maximum output standard loadmeter
- Enter the values (A) in the parameter list shown below.
- Enter 4352#3 = 0, 4542#7 = 0.

(B) When using the continuous output standard loadmeter
- Enter the values (B) in the parameter list shown below.
- Enter 4352#3 = 1, 4542#7 = 0.

(C) When using the smart loadmeter
- Enter 4352#3 = 0, 4542#7 =1.

NOTE
The maximum output standard loadmeter is displayed with the parameters entered according to the model code.
Manually enter the parameters to use another loadmeter.

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To fix low-speed winding

With the FANUC AC spindle motor αi-B/βi-B series, a specification for switching between low-speed winding and high-speed winding is available. If you want to use the motor with fixing low-speed winding, replace some parameters as listed below when inputting them.

Parameter using low-speed winding only		Parameter of output switching type motor
4007	←	4007
4008	←	4008
4009	←	4009
4010	←	4010
4011	←	4011
4012	←	4012
4013	←	4013
4019	←	4019
4398	←	4398
4400	←	4400
4020	←	Max. speed in low-speed winding
4023		
4039	←	4039
4040	←	4041
4041		
4048	←	4049
4049		
4080	←	4166
4083	←	4136
4093		
4100	←	4138
4101	←	4139
4102	←	4140
4103	←	4141
4104	←	4142
4105	←	4107
4106	←	4143
4107		
4108	←	4144
4109	←	4145
4110	←	4146
4111	←	4147
4112	←	4148
4113	←	4149
4114	←	4150
4115	←	4151
4116	←	4152
4117	←	4153
4118	←	4154
4119	←	4165
4120	←	4120
4124	←	4155
4127	←	4093
4128	←	4158
4129	←	4159
4130	←	4161
4134	←	4134
4136		
4138		
4139		
4140		
4141		
4142		
4143		
4144		
4145		
4146		
4147		
4148		
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4151		
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4154		
4155		
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4158		
4159		
4161		
4165		
4166		
4167		
4168		
4169		
4170	←	4168
4362	←	4365
4363	←	4366
4364	←	4367
4365		
4366		
4367		
4453	←	4453
4454		
4612	←	4614
4613	←	4615
4614		

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A.1 SPINDLE MOTOR αiI-B series

Motor model	αiI 0.5/10000-B	αiI 0.5/10000-B	αiI 0.5/10000-B	αiI 0.5/10000-B	αiI 0.5/10000-B	αiI 0.5/10000-B	αiI 0.5/10000-B	αiI 0.5/10000-B
Applicable amplifier	αiSP 2.2-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 2.2-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B
Output specification nameplate	K401#S00	K401#S00	K401#S00	K401#S00	K401#S0P	K401#S0P	K401#S0P	K401#S0P
Model code	5000	6000	7000	8000	5001	6001	7001	8001
Parameter ID	2954	-	-	-	2810	-	-	-
Series and editions of applicable spindle sofutware	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-
High-speed winding characteristics	0.55/1.1 kW 3000/10000 min^{-1}	0.55/1.1 kW 3000/10000 min^{-1}	0.55/1.1 kW 3000/10000 min^{-1}	0.55/1.1 kW 3000/10000 min^{-1}	0.55/1.1/1.5 kW 3000/10000 min^{-1}	0.55/1.1/1.5 kW 3000/10000 min^{-1}	0.55/1.1/1.5 kW 3000/10000 min^{-1}	0.55/1.1/1.5 kW 3000/10000 min^{-1}
characteristics	00000000	←	←	←	00000000	←	←	←
4008	00000000	←	←	←	00010000	←	←	←
4009	00000000	←	←	←	00000000	←	←	←
4010	00000000	←	←	←	00000000	←	←	←
4011	00011000	←	←	←	00001000	←	←	←
4012	10000010	←	←	←	10000010	←	←	←
4013	00001100	←	←	←	00001100	←	←	←
4019	00000100	←	←	←	00000100	←	←	←
4398	10000000	←	←	←	10000000	←	←	←
4400	00000000	←	←	←	00000000	←	←	←
4020	10000	←	←	←	10000	←	←	←
4023	30	←	←	←	30	←	←	←
4039	0	←	←	←	0	←	←	←
4040	2 (*1)	←	←	←	1 (*1)	←	←	←
4041	10	←	←	←	10	←	←	←
4048	8 (*1)	←	←	←	6 (*1)	←	←	←
4049	10	←	←	←	10	←	←	←
4080	90	←	←	←	20560	←	←	←
4083	30	←	←	←	30	←	←	←
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	←	←	←
4100	3400	←	←	←	3400	←	←	←
4101	100	←	←	←	100	←	←	←
4102	6500	←	←	←	6500	←	←	←
4103	46	←	←	←	0	←	←	←
4104	3000	←	←	←	3000	←	←	←
4105	46	←	←	←	46	←	←	←
4106	7500	←	←	←	7500	←	←	←
4107	0	←	←	←	0	←	←	←
4108	0	←	←	←	0	←	←	←
4109	25	←	←	←	25	←	←	←
4110	1571	2514	3142	4713	1571	2514	3142	4713
4111	260	←	←	←	361	←	←	←
4112	200	←	←	←	200	←	←	←
4113	2077	←	←	←	2077	←	←	←
4114	23040	←	←	←	24320	←	←	←
4115	100	←	←	←	100	←	←	←
4116	13760	←	←	←	13760	←	←	←
4117	90	←	←	←	90	←	←	←
4118	100	←	←	←	100	←	←	←
4119	5	←	←	←	5	←	←	←
4120	0	←	←	←	0	←	←	←
4124	24570	←	←	←	24575	←	←	←
4127	286(B) 240(A)	←	←	←	392(B) 240(A)	←	←	←
4128	120	←	←	←	105	←	←	←
4129	0	←	←	←	0	←	←	←
4130	25700	←	←	←	25700	←	←	←
4134	110	←	←	←	110	←	←	←
4136	30	←	←	←	30	←	←	←
4138	0	←	←	←	0	←	←	←
4139	0	←	←	←	0	←	←	←
4140	0	←	←	←	0	←	←	←
4141	0	←	←	←	0	←	←	←
4142	0	←	←	←	0	←	←	←
4143	0	←	←	←	0	←	←	←
4144	0	←	←	←	0	←	←	←
4145	0	←	←	←	0	←	←	←
4146	0	←	←	←	0	←	←	←
4147	0	←	←	←	0	←	←	←
4148	0	←	←	←	0	←	←	←
4149	0	←	←	←	0	←	←	←
4150	0	←	←	←	0	←	←	←
4151	0	←	←	←	0	←	←	←
4152	0	←	←	←	0	←	←	←
4153	0	←	←	←	0	←	←	←
4154	0	←	←	←	0	←	←	←
4155	0	←	←	←	0	←	←	←
4156	0	←	←	←	0	←	←	←
4158	0	←	←	←	0	←	←	←
4159	0	←	←	←	0	←	←	←
4161	0	←	←	←	0	←	←	←
4165	0	←	←	←	0	←	←	←
4166	0	←	←	←	0	←	←	←
4167	0	←	←	←	0	←	←	←
4168	0	←	←	←	0	←	←	←
4169	0	←	←	←	0	←	←	←
4170	784	←	←	←	784	←	←	←
4362	0	←	←	←	0	←	←	←
4363	0	←	←	←	0	←	←	←
4364	0	←	←	←	0	←	←	←
4365	0	←	←	←	0	←	←	←
4366	0	←	←	←	0	←	←	←
4367	0	←	←	←	0	←	←	←
4453	2100	←	←	←	2100	←	←	←
4454	0	←	←	←	0	←	←	←
4612	107	←	←	←	78	←	←	←
4613	10889	←	←	←	10891	←	←	←
4614	0	←	←	←	0	←	←	←
4615	0	←	←	←	0	←	←	←
Maximum output during acceleration (for PS selection)	1.32kW	1.32kW	1.32kW	1.32kW	1.8kW	1.8kW	1.8kW	1.8kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 0.5/15000-B	αiI 0.5/15000-B	αiI 0.5/15000-B	αiI 0.5/15000-B	αiI 1/10000-B	αiI 1/10000-B	αiI 1/10000-B	αiI 1/10000-B
Applicable amplifier	αiSP 2.2-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 2.2-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B
Output specification nameplate	K400#S0P	K400#S0P	K400#S0P	K400#S0P	K402#S00	K402#S00	K402#S00	K402#S00
Model code	5002	6002	7002	8002	5003	6003	7003	8003
Parameter ID	2828	-	-	-	2979	-	-	-
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-
High-speed winding characteristics	0.55/1.1/1.5 kW 3000/15000 min^{-1}	0.55/1.1/1.5 kW 3000/15000 min^{-1}	0.55/1.1/1.5 kW 3000/15000 min^{-1}	0.55/1.1/1.5 kW 3000/15000 min^{-1}	1.5/2.2 kW 3000/10000 min^{-1}	1.5/2.2 kW 3000/10000 min^{-1}	1.5/2.2 kW 3000/10000 min^{-1}	1.5/2.2 kW 3000/10000 min^{-1}
4007	00000000	←	←	←	00000000	←	←	←
4008	00010000	←	←	←	00000000	←	←	←
4009	00000000	←	←	←	00000000	←	←	←
4010	00000000	←	←	←	00000000	←	←	←
4011	00001000	←	←	←	00011001	←	←	←
4012	10000010	←	←	←	10000010	←	←	←
4013	00001100	←	←	←	00001100	←	←	←
4019	00000100	←	←	←	00000100	←	←	←
4398	10000000	←	←	←	10000000	←	←	←
4400	00000000	←	←	←	00000000	←	←	←
4020	15000	←	←	←	10000	←	←	←
4023	30	←	←	←	30	←	←	←
4039	0	←	←	←	0	←	←	←
4040	1 (*1)	←	←	←	5 (*1)	←	←	←
4041	10	←	←	←	10	←	←	←
4048	6 (*1)	←	←	←	25 (*1)	←	←	←
4049	10	←	←	←	10	←	←	←
4080	20570	←	←	←	83	←	←	←
4083	30	←	←	←	30	←	←	←
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	←	←	←
4100	3300	←	←	←	3100	←	←	←
4101	100	←	←	←	100	←	←	←
4102	8226	←	←	←	3557	←	←	←
4103	0	←	←	←	87	←	←	←
4104	2000	←	←	←	6000	←	←	←
4105	46	←	←	←	45	←	←	←
4106	6000	←	←	←	6000	←	←	←
4107	0	←	←	←	0	←	←	←
4108	0	←	←	←	0	←	←	←
4109	25	←	←	←	25	←	←	←
4110	1508	2413	3016	4524	690	1104	1380	2070
4111	346	←	←	←	102	←	←	←
4112	200	←	←	←	200	←	←	←
4113	2078	←	←	←	2100	←	←	←
4114	0	←	←	←	17920	←	←	←
4115	100	←	←	←	100	←	←	←
4116	13770	←	←	←	10018	←	←	←
4117	90	←	←	←	90	←	←	←
4118	100	←	←	←	100	←	←	←
4119	5	←	←	←	5	←	←	←
4120	0	←	←	←	0	←	←	←
4124	24575	←	←	←	24448	←	←	←
4127	327(B) 327(A)	←	←	←	176(B) 176(A)	←	←	←
4128	110	←	←	←	0	←	←	←
4129	0	←	←	←	0	←	←	←
4130	25700	←	←	←	25700	←	←	←
4134	110	←	←	←	110	←	←	←
4136	30	←	←	←	30	←	←	←
4138	0	←	←	←	0	←	←	←
4139	0	←	←	←	0	←	←	←
4140	0	←	←	←	0	←	←	←
4141	0	←	←	←	0	←	←	←
4142	0	←	←	←	0	←	←	←
4143	0	←	←	←	0	←	←	←
4144	0	←	←	←	0	←	←	←
4145	0	←	←	←	0	←	←	←
4146	0	←	←	←	0	←	←	←
4147	0	←	←	←	0	←	←	←
4148	0	←	←	←	0	←	←	←
4149	0	←	←	←	0	←	←	←
4150	0	←	←	←	0	←	←	←
4151	0	←	←	←	0	←	←	←
4152	0	←	←	←	0	←	←	←
4153	0	←	←	←	0	←	←	←
4154	0	←	←	←	0	←	←	←
4155	0	←	←	←	0	←	←	←
4156	0	←	←	←	0	←	←	←
4158	0	←	←	←	0	←	←	←
4159	0	←	←	←	0	←	←	←
4161	0	←	←	←	0	←	←	←
4165	0	←	←	←	0	←	←	←
4166	0	←	←	←	0	←	←	←
4167	0	←	←	←	0	←	←	←
4168	0	←	←	←	0	←	←	←
4169	0	←	←	←	0	←	←	←
4170	784	←	←	←	1520	←	←	←
4362	0	←	←	←	0	←	←	←
4363	0	←	←	←	0	←	←	←
4364	0	←	←	←	0	←	←	←
4365	0	←	←	←	0	←	←	←
4366	0	←	←	←	0	←	←	←
4367	0	←	←	←	0	←	←	←
4453	2100	←	←	←	1900	←	←	←
4454	0	←	←	←	0	←	←	←
4612	78	←	←	←	145	←	←	←
4613	19976	←	←	←	26637	←	←	←
4614	0	←	←	←	0	←	←	←
4615	0	←	←	←	0	←	←	←
Maximum output during acceleration (for PS selection)	1.8kW	1.8kW	1.8kW	1.8kW	2.64kW	2.64kW	2.64kW	2.64kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 1/10000-B	αiI 1/10000-B	αiI 1/10000-B	αiI 1/10000-B	αiI 1/10000-B	αiI 1/10000-B	αiI 1/10000-B	αiI 1/10000-B
Applicable amplifier	αiSP 2.2-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 5.5-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B
Output specification nameplate	K402#S0P	K402#S0P	K402#S0P	K402#S0P	K402#S0S	K402#S0S	K402#S0S	K402#S0S
Model code	5004	6004	7004	8004	5005	6005	7005	8005
Parameter ID	2911	-	-	-	2676	-	-	-
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-
High-speed winding characteristics	1.5/2.2/3.7 kW 3000/10000 min^{-1}	1.5/2.2/3.7 kW 3000/10000 min^{-1}	1.5/2.2/3.7 kW 3000/10000 min^{-1}	1.5/2.2/3.7 kW 3000/10000 min^{-1}	1.5/2.2/3.7/6 kW 3000/10000 min^{-1}	1.5/2.2/3.7/6 kW 3000/10000 min^{-1}	1.5/2.2/3.7/6 kW 3000/10000 min^{-1}	1.5/2.2/3.7/6 kW 3000/10000 min^{-1}
4007	00000000	←	←	←	00000000	←	←	←
4008	00010000	←	←	←	00010000	←	←	←
4009	00000000	←	←	←	00000000	←	←	←
4010	00000000	←	←	←	00000000	←	←	←
4011	00001001	←	←	←	00001001	←	←	←
4012	10000010	←	←	←	10000010	←	←	←
4013	00001100	←	←	←	00001100	←	←	←
4019	00000100	←	←	←	00000100	←	←	←
4398	10000000	←	←	←	10000000	←	←	←
4400	00000000	←	←	←	00000000	←	←	←
4020	10000	←	←	←	10000	←	←	←
4023	30	←	←	←	30	←	←	←
4039	0	←	←	←	0	←	←	←
4040	3 (*1)	←	←	←	2 (*1)	←	←	←
4041	10	←	←	←	10	←	←	←
4048	15 (*1)	←	←	←	9 (*1)	←	←	←
4049	10	←	←	←	10	←	←	←
4080	7770	←	←	←	1887	←	←	←
4083	30	←	←	←	30	←	←	←
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	←	←	←
4100	3100	←	←	←	3310	←	←	←
4101	100	←	←	←	100	←	←	←
4102	3557	←	←	←	3566	←	←	←
4103	0	←	←	←	0	←	←	←
4104	4300	←	←	←	5750	←	←	←
4105	45	←	←	←	45	←	←	←
4106	15000	←	←	←	9500	←	←	←
4107	0	←	←	←	0	←	←	←
4108	0	←	←	←	0	←	←	←
4109	25	←	←	←	25	←	←	←
4110	690	1104	1380	2070	692	1107	1384	2076
4111	164	←	←	←	286	←	←	←
4112	200	←	←	←	200	←	←	←
4113	2100	←	←	←	2100	←	←	←
4114	23040	←	←	←	0	←	←	←
4115	100	←	←	←	100	←	←	←
4116	10018	←	←	←	6296	←	←	←
4117	90	←	←	←	90	←	←	←
4118	100	←	←	←	100	←	←	←
4119	5	←	←	←	5	←	←	←
4120	0	←	←	←	0	←	←	←
4124	24492	←	←	←	24575	←	←	←
4127	296(B) 296(A)	←	←	←	480(B) 480(A)	←	←	←
4128	0	←	←	←	0	←	←	←
4129	0	←	←	←	0	←	←	←
4130	25700	←	←	←	25700	←	←	←
4134	110	←	←	←	110	←	←	←
4136	30	←	←	←	30	←	←	←
4138	0	←	←	←	0	←	←	←
4139	0	←	←	←	0	←	←	←
4140	0	←	←	←	0	←	←	←
4141	0	←	←	←	0	←	←	←
4142	0	←	←	←	0	←	←	←
4143	0	←	←	←	0	←	←	←
4144	0	←	←	←	0	←	←	←
4145	0	←	←	←	0	←	←	←
4146	0	←	←	←	0	←	←	←
4147	0	←	←	←	0	←	←	←
4148	0	←	←	←	0	←	←	←
4149	0	←	←	←	0	←	←	←
4150	0	←	←	←	0	←	←	←
4151	0	←	←	←	0	←	←	←
4152	0	←	←	←	0	←	←	←
4153	0	←	←	←	0	←	←	←
4154	0	←	←	←	0	←	←	←
4155	0	←	←	←	0	←	←	←
4156	0	←	←	←	0	←	←	←
4158	0	←	←	←	0	←	←	←
4159	0	←	←	←	0	←	←	←
4161	0	←	←	←	0	←	←	←
4165	0	←	←	←	0	←	←	←
4166	0	←	←	←	0	←	←	←
4167	0	←	←	←	90	←	←	←
4168	0	←	←	←	0	←	←	←
4169	0	←	←	←	0	←	←	←
4170	1520	←	←	←	1520	←	←	←
4362	-26474	←	←	←	-26524	←	←	←
4363	-24276	←	←	←	-28372	←	←	←
4364	-24076	←	←	←	31220	←	←	←
4365	0	←	←	←	0	←	←	←
4366	0	←	←	←	0	←	←	←
4367	0	←	←	←	0	←	←	←
4453	1900	←	←	←	1900	←	←	←
4454	0	←	←	←	0	←	←	←
4612	86	←	←	←	52	←	←	←
4613	13837	←	←	←	13837	←	←	←
4614	0	←	←	←	0	←	←	←
4615	0	←	←	←	0	←	←	←
Maximum output during acceleration (for PS selection)	4.44kW	4.44kW	4.44kW	4.44kW	7.2kW	7.2kW	7.2kW	7.2kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 1/15000-B	αiI 1/15000-B	αiI 1/15000-B	αiI 1/15000-B	αiI 1/24000-B	αiI 1.5/10000-B	αiI 1.5/10000-B	αiI 1.5/10000-B	αiI 1.5/10000-B
Applicable amplifier	αiSP 5.5-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 5.5-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B
Output specification nameplate	K422#S00	K422#S00	K422#S00	K422#S00	K420#S0S	K403#S0P	K403#S0P	K403#S0P	K403#S0P
Model code	5006	6006	7006	8006	5007	5008	6008	7008	8008
Parameter ID	2632	-	-	-	2711	2355	-	-	-
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-	-
High-speed winding characteristics	1.5/2.2 kW 3000/15000 min^{-1}	1.5/2.2 kW 3000/15000 min^{-1}	1.5/2.2 kW 3000/15000 min^{-1}	1.5/2.2 kW 3000/15000 min^{-1}	2.2/3.7/5.5/11 kW 6000/24000 min^{-1}	2.2/3.7/5.5 kW 3000/10000 min^{-1}	2.2/3.7/5.5 kW 3000/10000 min^{-1}	2.2/3.7/5.5 kW 3000/10000 min^{-1}	2.2/3.7/5.5 kW 3000/10000 min^{-1}
4007	00000000	←	←	←	00000000	00000000	←	←	←
4008	00000000	←	←	←	00000000	00010000	←	←	←
4009	00000000	←	←	←	00000000	00000000	←	←	←
4010	00000001	←	←	←	00000001	00000000	←	←	←
4011	00011001	←	←	←	00011001	00001001	←	←	←
4012	10000010	←	←	←	10000010	10000010	←	←	←
4013	00001100	←	←	←	00001100	00001100	←	←	←
4019	00000100	←	←	←	00000100	00000100	←	←	←
4398	10000000	←	←	←	10000000	10000000	←	←	←
4400	00000000	←	←	←	00000000	00000000	←	←	←
4020	15000	←	←	←	24000	10000	←	←	←
4023	30	←	←	←	30	30	←	←	←
4039	0	←	←	←	0	0	←	←	←
4040	5 (*1)	←	←	←	2 (*1)	3 (*1)	←	←	←
4041	10	←	←	←	10	10	←	←	←
4048	25 (*1)	←	←	←	10 (*1)	14 (*1)	←	←	←
4049	10	←	←	←	10	10	←	←	←
4080	85	←	←	←	15447	14174	←	←	←
4083	30	←	←	←	10	30	←	←	←
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	0(B) 0(A)	←	←	←
4100	3100	←	←	←	6100	3200	←	←	←
4101	93	←	←	←	99	75	←	←	←
4102	8015	←	←	←	11558	3708	←	←	←
4103	70	←	←	←	66	0	←	←	←
4104	2000	←	←	←	1300	4500	←	←	←
4105	51	←	←	←	48	58	←	←	←
4106	7000	←	←	←	2800	9500	←	←	←
4107	0	←	←	←	0	0	←	←	←
4108	0	←	←	←	0	0	←	←	←
4109	25	←	←	←	25	25	←	←	←
4110	343	549	686	1029	915	754	1206	1508	2262
4111	102	←	←	←	299	325	←	←	←
4112	200	←	←	←	200	200	←	←	←
4113	1870	←	←	←	1978	1635	←	←	←
4114	0	←	←	←	0	0	←	←	←
4115	100	←	←	←	90	100	←	←	←
4116	9669	←	←	←	10318	9598	←	←	←
4117	90	←	←	←	90	90	←	←	←
4118	100	←	←	←	28260	100	←	←	←
4119	5	←	←	←	5	5	←	←	←
4120	0	←	←	←	0	0	←	←	←
4124	24448	←	←	←	24575	24575	←	←	←
4127	161(B) 176(A)	←	←	←	550(B) 600(A)	456(B) 300(A)	←	←	←
4128	80	←	←	←	0	0	←	←	←
4129	0	←	←	←	0	0	←	←	←
4130	25700	←	←	←	25700	25700	←	←	←
4134	110	←	←	←	110	110	←	←	←
4136	30	←	←	←	30	30	←	←	←
4138	0	←	←	←	0	0	←	←	←
4139	0	←	←	←	0	0	←	←	←
4140	0	←	←	←	0	0	←	←	←
4141	0	←	←	←	0	0	←	←	←
4142	0	←	←	←	0	0	←	←	←
4143	0	←	←	←	0	0	←	←	←
4144	0	←	←	←	0	0	←	←	←
4145	0	←	←	←	0	0	←	←	←
4146	0	←	←	←	0	0	←	←	←
4147	0	←	←	←	0	0	←	←	←
4148	0	←	←	←	0	0	←	←	←
4149	0	←	←	←	0	0	←	←	←
4150	0	←	←	←	0	0	←	←	←
4151	0	←	←	←	0	0	←	←	←
4152	0	←	←	←	0	0	←	←	←
4153	0	←	←	←	0	0	←	←	←
4154	0	←	←	←	0	0	←	←	←
4155	0	←	←	←	0	0	←	←	←
4156	0	←	←	←	0	0	←	←	←
4158	0	←	←	←	0	0	←	←	←
4159	0	←	←	←	0	0	←	←	←
4161	0	←	←	←	0	0	←	←	←
4165	0	←	←	←	0	0	←	←	←
4166	0	←	←	←	0	0	←	←	←
4167	0	←	←	←	0	0	←	←	←
4168	0	←	←	←	0	0	←	←	←
4169	0	←	←	←	0	0	←	←	←
4170	1520	←	←	←	1008	1440	←	←	←
4362	0	←	←	←	0	-24276	←	←	←
4363	0	←	←	←	0	-26224	←	←	←
4364	0	←	←	←	0	-30220	←	←	←
4365	0	←	←	←	0	0	←	←	←
4366	0	←	←	←	0	0	←	←	←
4367	0	←	←	←	0	0	←	←	←
4453	1900	←	←	←	800	2500	←	←	←
4454	0	←	←	←	0	0	←	←	←
4612	135	←	←	←	42	64	←	←	←
4613	20488	←	←	←	16390	11168	←	←	←
4614	0	←	←	←	0	0	←	←	←
4615	0	←	←	←	0	0	←	←	←
Maximum output during acceleration (for PS selection)	5.6kW	5.6kW	5.6kW	5.6kW	22kW	6.6kW	6.6kW	6.6kW	6.6kW

(*1) Set this value as the initial value of the velocity loop gain.

JRM FORMATION DE FANUC CORPORATION*

Motor model	αiI 1.5/10000-B	αiI 1.5/10000-B	αiI 1.5/10000-B	αiI 1.5/10000-B	αiI1.5/20000-B	αiI1.5/20000-B	αiI1.5/20000-B
Applicable amplifier	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K403#S0S	K403#S0S	K403#S0S	K403#S0S	K423#S00	K423#S00	K423#S0S
Model code	5009	6009	7009	8009	5010	6010	5011
Parameter ID	2472	-	-	-	2359	-	2270
Series and editions of applicable spindle sofutware	9DAA/N 9DB0/N	9DAA/N 9DB0/N	9DAA/N 9DB0/N	9DAA/N 9DB0/N	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-
High-speed winding characteristics	2.2/3.7/5.5/7.5 kW 3000/10000 min^{-1}	2.2/3.7/5.5/7.5kW 3000/10000 min^{-1}	2.2/3.7/5.5/7.5kW 3000/10000 min^{-1}	2.2/3.7/5.5/7.5kW 3000/10000 min^{-1}	1.5/2.2 kW 3000/20000 min^{-1}	1.5/2.2kW 3000/20000 min^{-1}	2.2/3.7/5.5/9 kW 3000/20000 min^{-1}
4007	00000000	←	←	←	00000000	←	00000000
4008	00010000	←	←	←	00000000	←	00000000
4009	00000000	←	←	←	00000000	←	00000000
4010	00000000	←	←	←	00000001	←	00000001
4011	00001001	←	←	←	00011001	←	00011001
4012	10000010	←	←	←	10000010	←	10000010
4013	00001100	←	←	←	00001100	←	00001100
4019	00000100	←	←	←	00000100	←	00000100
4398	10000000	←	←	←	10000000	←	10000000
4400	00000000	←	←	←	00000000	←	00000000
4020	10000	←	←	←	20000	←	20000
4023	30	←	←	←	30	←	30
4039	0	←	←	←	0	←	0
4040	2 (*1)	←	←	←	3 (*1)	←	2 (*1)
4041	10	←	←	←	10	←	10
4048	11 (*1)	←	←	←	15 (*1)	←	9 (*1)
4049	10	←	←	←	10	←	10
4080	15962	←	←	←	14165	←	5981
4083	30	←	←	←	10	←	10
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	←	0(B) 0(A)
4100	3350	←	←	←	3250	←	3300
4101	66	←	←	←	33	←	87
4102	3708	←	←	←	7145	←	7145
4103	0	←	←	←	75	←	70
4104	4500	←	←	←	2300	←	3000
4105	58	←	←	←	43	←	43
4106	9500	←	←	←	8700	←	3000
4107	0	←	←	←	0	←	0
4108	0	←	←	←	0	←	0
4109	25	←	←	←	25	←	25
4110	1207	1509	2263	3018	629	839	838
4111	490	←	←	←	180	←	260
4112	200	←	←	←	200	←	200
4113	1635	←	←	←	2227	←	2227
4114	0	←	←	←	0	←	0
4115	100	←	←	←	90	←	90
4116	9598	←	←	←	10289	←	10289
4117	90	←	←	←	90	←	90
4118	100	←	←	←	100	←	100
4119	5	←	←	←	5	←	1
4120	0	←	←	←	0	←	0
4124	24575	←	←	←	24505	←	24570
4127	457(B) 409(A)	←	←	←	176(B) 176(A)	←	491(B) 490(A)
4128	0	←	←	←	73	←	102
4129	0	←	←	←	0	←	0
4130	25700	←	←	←	25700	←	25700
4134	110	←	←	←	110	←	110
4136	30	←	←	←	30	←	30
4138	0	←	←	←	0	←	0
4139	0	←	←	←	0	←	0
4140	0	←	←	←	0	←	0
4141	0	←	←	←	0	←	0
4142	0	←	←	←	0	←	0
4143	0	←	←	←	0	←	0
4144	0	←	←	←	0	←	0
4145	0	←	←	←	0	←	0
4146	0	←	←	←	0	←	0
4147	0	←	←	←	0	←	0
4148	0	←	←	←	0	←	0
4149	0	←	←	←	0	←	0
4150	0	←	←	←	0	←	0
4151	0	←	←	←	0	←	0
4152	0	←	←	←	0	←	0
4153	0	←	←	←	0	←	0
4154	0	←	←	←	0	←	0
4155	0	←	←	←	0	←	0
4156	0	←	←	←	0	←	0
4158	0	←	←	←	0	←	0
4159	0	←	←	←	0	←	0
4161	0	←	←	←	0	←	0
4165	0	←	←	←	0	←	0
4166	0	←	←	←	0	←	0
4167	0	←	←	←	0	←	0
4168	0	←	←	←	0	←	0
4169	0	←	←	←	0	←	0
4170	1440	←	←	←	1232	←	1232
4362	-24351	←	←	←	0	←	-23826
4363	-28372	←	←	←	0	←	-27772
4364	-26224	←	←	←	0	←	-31768
4365	0	←	←	←	0	←	0
4366	0	←	←	←	0	←	0
4367	0	←	←	←	0	←	0
4453	2500	←	←	←	600	←	600
4454	0	←	←	←	0	←	0
4612	41	←	←	←	48	←	45
4613	11170	←	←	←	26886	←	20354
4614	0	←	←	←	0	←	0
4615	0	←	←	←	0	←	0
Maximum output during acceleration (for PS selection)	9kW	9kW	9kW	9kW	13kW	13kW	22kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 2/10000-B	αiI 2/10000-B	αiI 2/10000-B	αiI 2/10000-B	αiI 2/10000-B	αiI 2/10000-B	αiI 2/10000-B	αiI 2/10000-B
Applicable amplifier	αiSP 5.5-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K404#S00	K404#S00	K404#S00	K404#S00	K404#S0P	K404#S0P	K404#S0P	K404#S0P
Model code	5012	6012	7012	8012	5013	6013	7013	8013
Parameter ID	2310	-	-	-	2631	-	-	-
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O
Low-speed winding characteristics	-	-	-	-	-	-	-	-
High-speed winding characteristics	2.2/3.7 kW 1500/10000 min^{-1}	2.2/3.7 kW 1500/10000 min^{-1}	2.2/3.7 kW 1500/10000 min^{-1}	2.2/3.7 kW 1500/10000 min^{-1}	2.2/3.7/5.5 kW 1500/10000 min^{-1}	2.2/3.7/5.5 kW 1500/10000 min^{-1}	2.2/3.7/5.5 kW 1500/10000 min^{-1}	2.2/3.7/5.5 kW 1500/10000 min^{-1}
4007	00000000	←	←	←	00000000	←	←	←
4008	00000000	←	←	←	00010000	←	←	←
4009	00000000	←	←	←	00000000	←	←	←
4010	00000000	←	←	←	00000000	←	←	←
4011	00011001	←	←	←	00001001	←	←	←
4012	10000010	←	←	←	10000010	←	←	←
4013	00001100	←	←	←	00001100	←	←	←
4019	00000100	←	←	←	00000100	←	←	←
4398	10000000	←	←	←	10000000	←	←	←
4400	00000000	←	←	←	00000000	←	←	←
4020	10000	←	←	←	10000	←	←	←
4023	30	←	←	←	30	←	←	←
4039	0	←	←	←	0	←	←	←
4040	4 (*1)	←	←	←	3 (*1)	←	←	←
4041	10	←	←	←	10	←	←	←
4048	19 (*1)	←	←	←	13 (*1)	←	←	←
4049	10	←	←	←	10	←	←	←
4080	77	←	←	←	20575	←	←	←
4083	30	←	←	←	30	←	←	←
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	←	←	←
4100	1550	←	←	←	1550	←	←	←
4101	100	←	←	←	85	←	←	←
4102	2567	←	←	←	2567	←	←	←
4103	68	←	←	←	0	←	←	←
4104	6000	←	←	←	4500	←	←	←
4105	80	←	←	←	96	←	←	←
4106	6000	←	←	←	15000	←	←	←
4107	0	←	←	←	0	←	←	←
4108	0	←	←	←	0	←	←	←
4109	25	←	←	←	25	←	←	←
4110	474	758	948	1422	759	949	1423	1898
4111	175	←	←	←	298	←	←	←
4112	200	←	←	←	200	←	←	←
4113	1192	←	←	←	992	←	←	←
4114	0	←	←	←	0	←	←	←
4115	100	←	←	←	100	←	←	←
4116	9300	←	←	←	9300	←	←	←
4117	90	←	←	←	90	←	←	←
4118	100	←	←	←	100	←	←	←
4119	8	←	←	←	10	←	←	←
4120	0	←	←	←	0	←	←	←
4124	24501	←	←	←	24575	←	←	←
4127	202(B) 202(A)	←	←	←	300(B) 300(A)	←	←	←
4128	90	←	←	←	107	←	←	←
4129	0	←	←	←	0	←	←	←
4130	25700	←	←	←	25700	←	←	←
4134	110	←	←	←	110	←	←	←
4136	30	←	←	←	30	←	←	←
4138	0	←	←	←	0	←	←	←
4139	0	←	←	←	0	←	←	←
4140	0	←	←	←	0	←	←	←
4141	0	←	←	←	0	←	←	←
4142	0	←	←	←	0	←	←	←
4143	0	←	←	←	0	←	←	←
4144	0	←	←	←	0	←	←	←
4145	0	←	←	←	0	←	←	←
4146	0	←	←	←	0	←	←	←
4147	0	←	←	←	0	←	←	←
4148	0	←	←	←	0	←	←	←
4149	0	←	←	←	0	←	←	←
4150	0	←	←	←	0	←	←	←
4151	0	←	←	←	0	←	←	←
4152	0	←	←	←	0	←	←	←
4153	0	←	←	←	0	←	←	←
4154	0	←	←	←	0	←	←	←
4155	0	←	←	←	0	←	←	←
4156	0	←	←	←	0	←	←	←
4158	0	←	←	←	0	←	←	←
4159	0	←	←	←	0	←	←	←
4161	0	←	←	←	0	←	←	←
4165	0	←	←	←	0	←	←	←
4166	0	←	←	←	0	←	←	←
4167	0	←	←	←	0	←	←	←
4168	0	←	←	←	0	←	←	←
4169	0	←	←	←	0	←	←	←
4170	864	←	←	←	864	←	←	←
4362	0	←	←	←	-24176	←	←	←
4363	0	←	←	←	-24176	←	←	←
4364	0	←	←	←	-32268	←	←	←
4365	0	←	←	←	0	←	←	←
4366	0	←	←	←	0	←	←	←
4367	0	←	←	←	0	←	←	←
4453	1200	←	←	←	1200	←	←	←
4454	0	←	←	←	0	←	←	←
4612	127	←	←	←	73	←	←	←
4613	26893	←	←	←	27136	←	←	←
4614	0	←	←	←	0	←	←	←
4615	0	←	←	←	0	←	←	←
Maximum output during acceleration (for PS selection)	4.44kW	4.44kW	4.44kW	4.44kW	6.6kW	6.6kW	6.6kW	6.6kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 2/10000-B	αiI 2/10000-B	αiI 2/10000-B	αiI 2/12000-B	αiI 2/20000-B	αiI 3/10000-B	αiI 3/10000-B	αiI 3/10000-B	αiI 3/10000-B
Applicable amplifier	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B βiSVSP* 18-B	αiSP 5.5-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B
Output specification nameplate	K404#S0S	K404#S0S	K404#S0S	K418#S0S	K424#S0S	K405#S00	K405#S00	K405#S00	K405#S00
Model code	5014	6014	7014	5112	5015	5016	6016	7016	8016
Parameter ID	2872	-	-	2514	2447	2145	-	-	-
Series and editions of applicable spindle sofutware	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/P 9DB0/P	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	–	-	-	-	-	-
High-speed winding characteristics	2.2/3.7/5.5/10 kW 1500/10000 min^{-1}	2.2/3.7/5.5/10kW 1500/10000 min^{-1}	2.2/3.7/5.5/10kW 1500/10000 min^{-1}	3.7/5.5/9 kW 3000/12000 min^{-1}	3.7/5.5/9 kW 3000/20000 min^{-1}	3.7/5.5 kW 1500/10000 min^{-1}	3.7/5.5 kW 1500/10000 min^{-1}	3.7/5.5 kW 1500/10000 min^{-1}	3.7/5.5 kW 1500/10000 min^{-1}
4007	00000000	←	←	00000000	00000000	00000000	←	←	←
4008	00010000	←	←	00000000	00000000	00010000	←	←	←
4009	00000000	←	←	00000000	00000000	00000000	←	←	←
4010	00000000	←	←	00000001	00000001	00000000	←	←	←
4011	00001001	←	←	00011001	00011001	00011001	←	←	←
4012	10000111	←	←	10000010	10000000	10000010	←	←	←
4013	00001100	←	←	00001100	00001100	00001100	←	←	←
4019	00000100	←	←	00000100	00000100	00000100	←	←	←
4398	10000000	←	←	10000000	10000000	10000000	←	←	←
4400	00000001	←	←	00000000	00000000	00000000	←	←	←
4020	10000	←	←	12000	20000	10000	←	←	←
4023	30	←	←	30	30	30	←	←	←
4039	0	←	←	0	0	0	←	←	←
4040	2 (*1)	←	←	2 (*1)	3 (*1)	5 (*1)	←	←	←
4041	10	←	←	10	10	10	←	←	←
4048	7 (*1)	←	←	11 (*1)	15 (*1)	25 (*1)	←	←	←
4049	10	←	←	10	10	10	←	←	←
4080	15711	←	←	20575	92	60	←	←	←
4083	30	←	←	30	10	30	←	←	←
4093	0(B) 0(A)	←	←	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	←	←	←
4100	1650	←	←	3100	3100	1600	←	←	←
4101	98	←	←	61	100	100	←	←	←
4102	2567	←	←	4911	6432	1967	←	←	←
4103	0	←	←	80	92	75	←	←	←
4104	2400	←	←	2550	1700	7000	←	←	←
4105	96	←	←	83	53	89	←	←	←
4106	6800	←	←	10500	2500	7000	←	←	←
4107	0	←	←	0	0	0	←	←	←
4108	0	←	←	0	0	0	←	←	←
4109	25	←	←	25	25	25	←	←	←
4110	949	1424	1898	1044	588	475	760	950	1425
4111	396	←	←	331	175	200	←	←	←
4112	200	←	←	200	200	19400	←	←	←
4113	992	←	←	1150	1800	1077	←	←	←
4114	0	←	←	0	0	0	←	←	←
4115	100	←	←	100	80	100	←	←	←
4116	9300	←	←	10677	16564	7950	←	←	←
4117	90	←	←	90	90	28250	←	←	←
4118	100	←	←	90	100	110	←	←	←
4119	10	←	←	2	2	5	←	←	←
4120	0	←	←	0	0	0	←	←	←
4124	24575	←	←	24575	24501	24521	←	←	←
4127	545(B) 545(A)	←	←	292(B) 292(A)	293(B) 292(A)	178(B) 178(A)	←	←	←
4128	113	←	←	0	0	0	←	←	←
4129	0	←	←	0	0	0	←	←	←
4130	25700	←	←	25700	25700	25700	←	←	←
4134	110	←	←	110	110	110	←	←	←
4136	30	←	←	30	30	30	←	←	←
4138	0	←	←	0	0	0	←	←	←
4139	0	←	←	0	0	0	←	←	←
4140	0	←	←	0	0	0	←	←	←
4141	0	←	←	0	0	0	←	←	←
4142	0	←	←	0	0	0	←	←	←
4143	0	←	←	0	0	0	←	←	←
4144	0	←	←	0	0	0	←	←	←
4145	0	←	←	0	0	0	←	←	←
4146	0	←	←	0	0	0	←	←	←
4147	0	←	←	0	0	0	←	←	←
4148	0	←	←	0	0	0	←	←	←
4149	0	←	←	0	0	0	←	←	←
4150	0	←	←	0	0	0	←	←	←
4151	0	←	←	0	0	0	←	←	←
4152	0	←	←	0	0	0	←	←	←
4153	0	←	←	0	0	0	←	←	←
4154	0	←	←	0	0	0	←	←	←
4155	0	←	←	0	0	0	←	←	←
4156	0	←	←	0	0	0	←	←	←
4158	0	←	←	0	0	0	←	←	←
4159	0	←	←	0	0	0	←	←	←
4161	0	←	←	0	0	0	←	←	←
4165	0	←	←	0	0	0	←	←	←
4166	0	←	←	0	0	0	←	←	←
4167	0	←	←	0	0	0	←	←	←
4168	0	←	←	0	0	0	←	←	←
4169	0	←	←	0	0	0	←	←	←
4170	864	←	←	1008	1296	528	←	←	←
4362	-24526	←	←	0	-23826	0	←	←	←
4363	-28272	←	←	0	-29845	0	←	←	←
4364	31220	←	←	0	31720	0	←	←	←
4365	0	←	←	0	0	0	←	←	←
4366	0	←	←	0	0	0	←	←	←
4367	0	←	←	0	0	0	←	←	←
4453	850	←	←	1300	1200	2100	←	←	←
4454	0	←	←	0	0	0	←	←	←
4612	46	←	←	6215	88	144	←	←	←
4613	26893	←	←	12299	20357	19842	←	←	←
4614	0	←	←	0	0	0	←	←	←
4615	0	←	←	0	0	0	←	←	←
Maximum output during acceleration (for PS selection)	12kW	12kW	12kW	22kW	20kW	6.6kW	6.6kW	6.6kW	6.6kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 3/10000-B	αiI 3/10000-B	αiI 3/10000-B	αiI 3/10000-B	αiI 3/10000-B	αiI 3/10000-B	αiI 3/10000-B
Applicable amplifier	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K405#S0P	K405#S0P	K405#S0P	K405#S0P	K405#S0S	K405#S0S	K405#S0S
Model code	5017	6017	7017	8017	5018	6018	7018
Parameter ID	2275	-	-	-	2692	-	-
Series and editions of applicable spindle sofutware	9DAA/N 9DB0/N	9DAA/N 9DB0/N	9DAA/N 9DB0/N	9DAA/N 9DB0/N	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-
High-speed winding characteristics	3.7/5.5/7.5 kW 1500/10000 min^{-1}	3.7/5.5/7.5 kW 1500/10000 min^{-1}	3.7/5.5/7.5 kW 1500/10000 min^{-1}	3.7/5.5/7.5 kW 1500/10000 min^{-1}	3.7/5.5/7.5/11 kW 1500/10000 min^{-1}	3.7/5.5/7.5/11kW 1500/10000 min^{-1}	3.7/5.5/7.5/11kW 1500/10000 min^{-1}
4007	00000000	←	←	←	00000000	←	←
4008	00010000	←	←	←	00000000	←	←
4009	00000000	←	←	←	00000000	←	←
4010	00000000	←	←	←	00000000	←	←
4011	00001001	←	←	←	00011001	←	←
4012	10000010	←	←	←	10000010	←	←
4013	00001100	←	←	←	00001100	←	←
4019	00000100	←	←	←	00000100	←	←
4398	10000000	←	←	←	10000000	←	←
4400	00000000	←	←	←	00000000	←	←
4020	10000	←	←	←	10000	←	←
4023	30	←	←	←	30	←	←
4039	0	←	←	←	0	←	←
4040	4 (*1)	←	←	←	3 (*1)	←	←
4041	10	←	←	←	10	←	←
4048	18 (*1)	←	←	←	12 (*1)	←	←
4049	10	←	←	←	10	←	←
4080	15445	←	←	←	12895	←	←
4083	30	←	←	←	30	←	←
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	←	←
4100	1600	←	←	←	1700	←	←
4101	100	←	←	←	100	←	←
4102	1967	←	←	←	1967	←	←
4103	0	←	←	←	0	←	←
4104	6000	←	←	←	6500	←	←
4105	89	←	←	←	89	←	←
4106	13000	←	←	←	17000	←	←
4107	0	←	←	←	0	←	←
4108	0	←	←	←	0	←	←
4109	25	←	←	←	25	←	←
4110	759	949	1423	1898	949	1424	1898
4111	258	←	←	←	377	←	←
4112	19400	←	←	←	19400	←	←
4113	1077	←	←	←	1077	←	←
4114	0	←	←	←	0	←	←
4115	100	←	←	←	80	←	←
4116	7950	←	←	←	7950	←	←
4117	28250	←	←	←	28250	←	←
4118	110	←	←	←	110	←	←
4119	5	←	←	←	5	←	←
4120	0	←	←	←	0	←	←
4124	24569	←	←	←	24575	←	←
4127	243(B) 243(A)	←	←	←	357(B) 357(A)	←	←
4128	0	←	←	←	0	←	←
4129	0	←	←	←	0	←	←
4130	25700	←	←	←	25700	←	←
4134	110	←	←	←	110	←	←
4136	30	←	←	←	30	←	←
4138	0	←	←	←	0	←	←
4139	0	←	←	←	0	←	←
4140	0	←	←	←	0	←	←
4141	0	←	←	←	0	←	←
4142	0	←	←	←	0	←	←
4143	0	←	←	←	0	←	←
4144	0	←	←	←	0	←	←
4145	0	←	←	←	0	←	←
4146	0	←	←	←	0	←	←
4147	0	←	←	←	0	←	←
4148	0	←	←	←	0	←	←
4149	0	←	←	←	0	←	←
4150	0	←	←	←	0	←	←
4151	0	←	←	←	0	←	←
4152	0	←	←	←	0	←	←
4153	0	←	←	←	0	←	←
4154	0	←	←	←	0	←	←
4155	0	←	←	←	0	←	←
4156	0	←	←	←	0	←	←
4158	0	←	←	←	0	←	←
4159	0	←	←	←	0	←	←
4161	0	←	←	←	0	←	←
4165	0	←	←	←	0	←	←
4166	0	←	←	←	0	←	←
4167	0	←	←	←	0	←	←
4168	0	←	←	←	0	←	←
4169	0	←	←	←	0	←	←
4170	528	←	←	←	528	←	←
4362	0	←	←	←	0	←	←
4363	0	←	←	←	0	←	←
4364	0	←	←	←	0	←	←
4365	0	←	←	←	0	←	←
4366	0	←	←	←	0	←	←
4367	0	←	←	←	0	←	←
4453	2100	←	←	←	2100	←	←
4454	0	←	←	←	0	←	←
4612	105	←	←	←	72	←	←
4613	19842	←	←	←	19586	←	←
4614	0	←	←	←	0	←	←
4615	0	←	←	←	0	←	←
Maximum output during acceleration (for PS selection)	9kW	9kW	9kW	9kW	13.2kW	13.2kW	13.2kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 3/12000-B	αiI 3/12000-B	αiI 3/12000-B	αiI 3/12000-B	αiI 3/15000-B	αiI 6/10000-B	αiI 6/10000-B	αiI 6/10000-B
Applicable amplifier	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K425#S00	K425#S00	K425#S00	K425#S0S	K419#S0S	K406#S00	K406#S00	K406#S00
Model code	5019	6019	7019	5020	5021	5022	6022	7022
Parameter ID	2319	-	-	2268	2030	2314	-	-
Series and editions of applicable spindle sofutware	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-
High-speed winding characteristics	3.7/5.5 kW 1500/12000 min^{-1}	3.7/5.5 kW 1500/12000 min^{-1}	3.7/5.5 kW 1500/12000 min^{-1}	3.7/5.5/7.5/13 kW 1500/12000 min^{-1}	5.5/7.5/11/15 kW 3000/15000 min^{-1}	5.5/7.5 kW 1500/10000 min^{-1}	5.5/7.5 kW 1500/10000 min^{-1}	5.5/7.5 kW 1500/10000 min^{-1}
4007	00000000	←	←	00000000	00000000	00000000	←	←
4008	00000000	←	←	00000000	00000000	00000000	←	←
4009	00000000	←	←	00000000	00000000	00000000	←	←
4010	00000000	←	←	00000000	00000001	00000000	←	←
4011	00011001	←	←	00011001	00001001	00011010	←	←
4012	10000010	←	←	10000000	10000010	10000010	←	←
4013	00001100	←	←	00001100	00001100	00001100	←	←
4019	00000100	←	←	00000100	00000100	00000100	←	←
4398	10000000	←	←	10000000	10000000	10000000	←	←
4400	00000000	←	←	00000000	00000000	00000000	←	←
4020	12000	←	←	12000	15000	10000	←	←
4023	30	←	←	30	30	30	←	←
4039	0	←	←	0	0	0	←	←
4040	5 (*1)	←	←	2 (*1)	4 (*1)	5 (*1)	←	←
4041	10	←	←	10	10	10	←	←
4048	25 (*1)	←	←	10 (*1)	18 (*1)	22 (*1)	←	←
4049	10	←	←	10	10	10	←	←
4080	16720	←	←	20570	7700	66	←	←
4083	30	←	←	30	30	30	←	←
4093	0(B) 0(A)	←	←	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	←	←
4100	1500	←	←	1600	3150	1550	←	←
4101	87	←	←	100	100	96	←	←
4102	3015	←	←	3015	4725	2630	←	←
4103	82	←	←	4939	0	60	←	←
4104	3200	←	←	1700	2000	6000	←	←
4105	106	←	←	106	106	154	←	←
4106	7500	←	←	4000	7000	6000	←	←
4107	0	←	←	0	0	0	←	←
4108	0	←	←	0	0	0	←	←
4109	25	←	←	25	25	25	←	←
4110	559	839	1118	1117	614	754	1131	1508
4111	190	←	←	399	229	260	←	←
4112	200	←	←	200	200	200	←	←
4113	900	←	←	900	904	620	←	←
4114	19200	←	←	19200	0	20480	←	←
4115	100	←	←	80	100	100	←	←
4116	7376	←	←	7376	7375	8803	←	←
4117	90	←	←	90	90	90	←	←
4118	100	←	←	90	100	100	←	←
4119	9	←	←	9	10	15	←	←
4120	0	←	←	0	0	0	←	←
4124	24513	←	←	24575	24544	24570	←	←
4127	178(B) 178(A)	←	←	422(B) 421(A)	327(B) 327(A)	178(B) 164(A)	←	←
4128	0	←	←	110	0	109	←	←
4129	0	←	←	0	0	0	←	←
4130	25700	←	←	25700	25700	25700	←	←
4134	110	←	←	110	110	130	←	←
4136	30	←	←	30	30	30	←	←
4138	0	←	←	0	0	0	←	←
4139	0	←	←	0	0	0	←	←
4140	0	←	←	0	0	0	←	←
4141	0	←	←	0	0	0	←	←
4142	0	←	←	0	0	0	←	←
4143	0	←	←	0	0	0	←	←
4144	0	←	←	0	0	0	←	←
4145	0	←	←	0	0	0	←	←
4146	0	←	←	0	0	0	←	←
4147	0	←	←	0	0	0	←	←
4148	0	←	←	0	0	0	←	←
4149	0	←	←	0	0	0	←	←
4150	0	←	←	0	0	0	←	←
4151	0	←	←	0	0	0	←	←
4152	0	←	←	0	0	0	←	←
4153	0	←	←	0	0	0	←	←
4154	0	←	←	0	0	0	←	←
4155	0	←	←	0	0	0	←	←
4156	0	←	←	0	0	0	←	←
4158	0	←	←	0	0	0	←	←
4159	0	←	←	0	0	0	←	←
4161	0	←	←	0	0	0	←	←
4165	0	←	←	0	0	0	←	←
4166	0	←	←	0	0	0	←	←
4167	0	←	←	0	0	0	←	←
4168	0	←	←	0	0	0	←	←
4169	0	←	←	0	0	0	←	←
4170	1120	←	←	1120	1696	400	←	←
4362	0	←	←	-24176	0	0	←	←
4363	0	←	←	-30245	0	0	←	←
4364	0	←	←	-30120	0	0	←	←
4365	0	←	←	0	0	0	←	←
4366	0	←	←	0	0	0	←	←
4367	0	←	←	0	0	0	←	←
4453	3000	←	←	3000	2800	2100	←	←
4454	0	←	←	0	0	0	←	←
4612	125	←	←	61	78	150	←	←
4613	32256	←	←	32267	20489	22411	←	←
4614	0	←	←	0	0	0	←	←
4615	0	←	←	0	0	0	←	←
Maximum output during acceleration (for PS selection)	12kW	12kW	12kW	22kW	18kW	9kW	9kW	9kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 6/10000-B	αiI 6/10000-B	αiI 6/10000-B	αiI 6/10000-B	αiI 6/10000-B	αiI 6/12000-B	αiI 6/12000-B	αiI 6/12000-B
Applicable amplifier	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K406#S0P	K406#S0P	K406#S0P	K406#S0S	K406#S0S	K426#S0P	K426#S0P	K426#S0P
Model code	5023	6023	7023	5024	6024	5201	6201	7201
Parameter ID	2124	-	-	2700	-	2989	-	-
Series and editions of applicable spindle sofutware	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	5.5/7.5/11 kW 1500/12000 min^{-1}	5.5/7.5/11 kW 1500/12000 min^{-1}	5.5/7.5/11 kW 1500/12000 min^{-1}
High-speed winding characteristics	5.5/7.5/11 kW 1500/10000 min^{-1}	5.5/7.5/11 kW 1500/10000 min^{-1}	5.5/7.5/11 kW 1500/10000 min^{-1}	5.5/7.5/11/15 kW 1500/10000 min^{-1}	5.5/7.5/11/15 kW 1500/10000 min^{-1}	5.5/7.5/11 kW 4000/12000 min^{-1}	5.5/7.5/11 kW 4000/12000 min^{-1}	5.5/7.5/11 kW 4000/12000 min^{-1}
4007	00000000	←	←	00000000	←	00000000	←	←
4008	00010000	←	←	00010000	←	00010000	←	←
4009	00000000	←	←	00000000	←	00000000	←	←
4010	00000000	←	←	00000000	←	00000000	←	←
4011	00001010	←	←	00001010	←	00001010	←	←
4012	10000111	←	←	10000111	←	10000111	←	←
4013	00001100	←	←	00001100	←	00001100	←	←
4019	00000100	←	←	00000100	←	00000100	←	←
4398	10000000	←	←	10000000	←	10000000	←	←
4400	00000001	←	←	00000001	←	00010001	←	←
4020	10000	←	←	10000	←	12000	←	←
4023	30	←	←	30	←	333 (*2)	←	←
4039	0	←	←	0	←	0	←	←
4040	3 (*1)	←	←	3 (*1)	←	9 (*1)	←	←
4041	10	←	←	10	←	3 (*1)	←	←
4048	15 (*1)	←	←	11 (*1)	←	40 (*1)	←	←
4049	10	←	←	10	←	15 (*1)	←	←
4080	16710	←	←	16191	←	75	←	←
4083	30	←	←	30	←	30	←	←
4093	0(B) 0(A)	←	←	0(B) 0(A)	←	240(B) 240(A)	←	←
4100	1570	←	←	1600	←	4400	←	←
4101	100	←	←	97	←	100	←	←
4102	2016	←	←	2016	←	4838	←	←
4103	0	←	←	0	←	0	←	←
4104	3000	←	←	3000	←	1200	←	←
4105	138	←	←	138	←	119	←	←
4106	6000	←	←	6000	←	2500	←	←
4107	0	←	←	0	←	138	←	←
4108	0	←	←	0	←	0	←	←
4109	25	←	←	25	←	25	←	←
4110	603	905	1206	905	1207	479	719	958
4111	261	←	←	358	←	198	←	←
4112	200	←	←	200	←	200	←	←
4113	690	←	←	690	←	800	←	←
4114	0	←	←	0	←	17920	←	←
4115	100	←	←	90	←	100	←	←
4116	6500	←	←	6500	←	6500	←	←
4117	90	←	←	90	←	90	←	←
4118	100	←	←	100	←	100	←	←
4119	527	←	←	527	←	15	←	←
4120	0	←	←	0	←	0	←	←
4124	24571	←	←	24575	←	24519	←	←
4127	240(B) 240(A)	←	←	327(B) 327(A)	←	240(B) 240(A)	←	←
4128	6505	←	←	115	←	105	←	←
4129	0	←	←	0	←	0	←	←
4130	25700	←	←	25700	←	25700	←	←
4134	130	←	←	130	←	130	←	←
4136	30	←	←	30	←	30	←	←
4138	0	←	←	0	←	1570	←	←
4139	0	←	←	0	←	100	←	←
4140	0	←	←	0	←	2016	←	←
4141	0	←	←	0	←	0	←	←
4142	0	←	←	0	←	3000	←	←
4143	0	←	←	0	←	6000	←	←
4144	0	←	←	0	←	0	←	←
4145	0	←	←	0	←	25	←	←
4146	0	←	←	0	←	603	905	1206
4147	0	←	←	0	←	261	←	←
4148	0	←	←	0	←	200	←	←
4149	0	←	←	0	←	690	←	←
4150	0	←	←	0	←	0	←	←
4151	0	←	←	0	←	100	←	←
4152	0	←	←	0	←	6500	←	←
4153	0	←	←	0	←	90	←	←
4154	0	←	←	0	←	100	←	←
4155	0	←	←	0	←	24571	←	←
4156	0	←	←	0	←	0	←	←
4158	0	←	←	0	←	6505	←	←
4159	0	←	←	0	←	0	←	←
4161	0	←	←	0	←	25700	←	←
4165	0	←	←	0	←	527	←	←
4166	0	←	←	0	←	12870	←	←
4167	0	←	←	0	←	0	←	←
4168	0	←	←	0	←	400	←	←
4169	0	←	←	0	←	0	←	←
4170	400	←	←	400	←	1424	←	←
4362	0	←	←	-24301	←	0	←	←
4363	0	←	←	-26324	←	0	←	←
4364	0	←	←	31230	←	0	←	←
4365	0	←	←	0	←	0	←	←
4366	0	←	←	0	←	0	←	←
4367	0	←	←	0	←	0	←	←
4453	2100	←	←	2100	←	2100	←	←
4454	0	←	←	0	←	2100	←	←
4612	107	←	←	76	←	107	←	←
4613	22411	←	←	22155	←	12288	←	←
4614	0	←	←	0	←	107	←	←
4615	0	←	←	0	←	22157	←	←
Maximum output during acceleration (for PS selection)	13.2kW	13.2kW	13.2kW	18kW	18kW	13.2kW	13.2kW	13.2kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

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Motor model	αiI 6/15000-B	αiI 6/15000-B	αiI 6/15000-B	αiI 6/15000-B	αiI 8/8000-B	αiI 8/8000-B	αiI 8/8000-B	αiI 8/8000-B	αiI 8/8000-B
Applicable amplifier	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K433#S00	K433#S00	K433#S00	K433#S0S	K407#S00	K407#S00	K407#S00	K407#S0P	K407#S0P
Model code	5025	6025	7025	5026	5027	6027	7027	5028	6028
Parameter ID	2235	-	-	2125	2294	-	-	2993	-
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-	-
High-speed winding characteristics	5.5/7.5 kW 1500/15000 min^{-1}	5.5/7.5 kW 1500/15000 min^{-1}	5.5/7.5 kW 1500/15000 min^{-1}	7.5/11/15/18 kW 3000/15000 min^{-1}	7.5/11 kW 1500/8000 min^{-1}	7.5/11 kW 1500/8000 min^{-1}	7.5/11 kW 1500/8000 min^{-1}	7.5/11/15 kW 1500/8000 min^{-1}	7.5/11/15 kW 1500/8000 min^{-1}
4007	00000000	←	←	00000000	00000000	←	←	00000000	←
4008	00010000	←	←	00000000	00000000	←	←	00010000	←
4009	00000000	←	←	00000000	00000000	←	←	00000000	←
4010	00010001	←	←	00000001	00000000	←	←	00000000	←
4011	00011010	←	←	00011010	00011010	←	←	00001010	←
4012	10000000	←	←	10000010	10000010	←	←	10000010	←
4013	00001100	←	←	00001100	00001100	←	←	00001100	←
4019	00000100	←	←	00000100	00000100	←	←	00000100	←
4398	10000000	←	←	10000000	10000000	←	←	10000000	←
4400	00000000	←	←	00000000	00000000	←	←	00000000	←
4020	15000	←	←	15000	8000	←	←	8000	←
4023	30	←	←	30	30	←	←	30	←
4039	0	←	←	0	0	←	←	0	←
4040	4 (*1)	←	←	4 (*1)	5 (*1)	←	←	4 (*1)	←
4041	10	←	←	10	10	←	←	10	←
4048	16 (*1)	←	←	18 (*1)	23 (*1)	←	←	17 (*1)	←
4049	10	←	←	10	10	←	←	10	←
4080	10332	←	←	10325	75	←	←	20565	←
4083	30	←	←	30	30	←	←	30	←
4093	0(B) 0(A)	←	←	0(B) 0(A)	0(B) 0(A)	←	←	0(B) 0(A)	←
4100	1570	←	←	3100	1600	←	←	1600	←
4101	93	←	←	100	100	←	←	94	←
4102	2885	←	←	4853	1656	←	←	1656	←
4103	88	←	←	0	0	←	←	0	←
4104	2300	←	←	2600	8000	←	←	6000	←
4105	143	←	←	137	121	←	←	121	←
4106	4400	←	←	6000	8000	←	←	20000	←
4107	0	←	←	0	0	←	←	0	←
4108	0	←	←	0	0	←	←	0	←
4109	25	←	←	25	25	←	←	25	←
4110	586	879	1172	702	503	755	1006	754	1005
4111	240	←	←	275	170	←	←	265	←
4112	200	←	←	200	200	←	←	200	←
4113	670	←	←	700	790	←	←	790	←
4114	0	←	←	0	19200	←	←	19200	←
4115	100	←	←	100	100	←	←	100	←
4116	7647	←	←	7157	8118	←	←	8118	←
4117	28250	←	←	90	90	←	←	90	←
4118	100	←	←	100	100	←	←	100	←
4119	29	←	←	29	12	←	←	12	←
4120	0	←	←	0	0	←	←	0	←
4124	24554	←	←	24575	24497	←	←	24574	←
4127	180(B) 164(A)	←	←	288(B) 288(A)	176(B) 176(A)	←	←	240(B) 240(A)	←
4128	110	←	←	110	117	←	←	117	←
4129	0	←	←	0	0	←	←	0	←
4130	25700	←	←	25700	25700	←	←	25700	←
4134	130	←	←	130	130	←	←	130	←
4136	0	←	←	0	30	←	←	30	←
4138	0	←	←	0	0	←	←	0	←
4139	0	←	←	0	0	←	←	0	←
4140	0	←	←	0	0	←	←	0	←
4141	0	←	←	0	0	←	←	0	←
4142	0	←	←	0	0	←	←	0	←
4143	0	←	←	0	0	←	←	0	←
4144	0	←	←	0	0	←	←	0	←
4145	0	←	←	0	0	←	←	0	←
4146	0	←	←	0	0	←	←	0	←
4147	0	←	←	0	0	←	←	0	←
4148	0	←	←	0	0	←	←	0	←
4149	0	←	←	0	0	←	←	0	←
4150	0	←	←	0	0	←	←	0	←
4151	0	←	←	0	0	←	←	0	←
4152	0	←	←	0	0	←	←	0	←
4153	0	←	←	0	0	←	←	0	←
4154	0	←	←	0	0	←	←	0	←
4155	0	←	←	0	0	←	←	0	←
4156	0	←	←	0	0	←	←	0	←
4158	0	←	←	0	0	←	←	0	←
4159	0	←	←	0	0	←	←	0	←
4161	0	←	←	0	0	←	←	0	←
4165	0	←	←	0	0	←	←	0	←
4166	0	←	←	0	0	←	←	0	←
4167	0	←	←	0	0	←	←	0	←
4168	0	←	←	0	0	←	←	0	←
4169	0	←	←	0	0	←	←	0	←
4170	528	←	←	1072	832	←	←	832	←
4362	0	←	←	0	0	←	←	-26424	←
4363	0	←	←	0	0	←	←	-24351	←
4364	0	←	←	0	0	←	←	-30320	←
4365	0	←	←	0	0	←	←	0	←
4366	0	←	←	0	0	←	←	0	←
4367	0	←	←	0	0	←	←	0	←
4453	2100	←	←	2700	2700	←	←	2700	←
4454	0	←	←	0	0	←	←	0	←
4612	145	←	←	89	145	←	←	100	←
4613	32256	←	←	20489	16513	←	←	16514	←
4614	0	←	←	0	0	←	←	0	←
4615	0	←	←	0	0	←	←	0	←
Maximum output during acceleration (for PS selection)	12kW	12kW	12kW	30kW	13.2kW	13.2kW	13.2kW	18kW	18kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 8/8000-B	αiI 8/8000-B	αiI 8/10000-B	αiI 8/10000-B	αiI 8/10000-B	αiI 8/10000-B	αiI 8/10000-B	αiI 8/12000-B	αiI 8/12000-B
Applicable amplifier	αiSP 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K407#S0S	K407#S0S	K427#S00	K427#S00	K427#S00	K427#S0P	K427#S0P	K427#S01	K427#S01
Model code	5029	6029	5202	6202	7202	5203	6203	5204	6204
Parameter ID	2330	-	2705	-	-	2741	-	2239	-
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	7.5/11 kW 1500/10000 min^{-1}	7.5/11 kW 1500/10000 min^{-1}	7.5/11 kW 1500/10000 min^{-1}	7.5/11/15 kW 1500/10000 min^{-1}	7.5/11/15 kW 1500/10000 min^{-1}	7.5/11 kW 1500/12000 min^{-1}	7.5/11 kW 1500/12000 min^{-1}
High-speed winding characteristics	7.5/11/15/18.5kW 1500/8000 min^{-1}	7.5/11/15/18.5kW 1500/8000 min^{-1}	7.5/11 kW 4000/10000 min^{-1}	7.5/11 kW 4000/10000 min^{-1}	7.5/11 kW 4000/10000 min^{-1}	7.5/11/15 kW 4000/10000 min^{-1}	7.5/11/15 kW 4000/10000 min^{-1}	7.5/11 kW 4000/12000 min^{-1}	7.5/11 kW 4000/12000 min^{-1}
4007	00000000	←	00000000	←	←	00000000	←	00000000	←
4008	00000000	←	00000000	←	←	00010000	←	00000000	←
4009	00000000	←	00000000	←	←	00000000	←	00000000	←
4010	00000000	←	00000000	←	←	00000000	←	00000001	←
4011	00011010	←	00011010	←	←	00001010	←	00011010	←
4012	10000010	←	10000010	←	←	10000010	←	10000010	←
4013	00001100	←	00001100	←	←	00001100	←	00001100	←
4019	00000100	←	00000100	←	←	00000100	←	00000100	←
4398	10000000	←	10000000	←	←	10000000	←	10000000	←
4400	00000000	←	00000000	←	←	00000000	←	00000000	←
4020	8000	←	10000	←	←	10000	←	12000	←
4023	30	←	400 (*2)	←	←	400 (*2)	←	333 (*2)	←
4039	0	←	0	←	←	0	←	0	←
4040	4 (*1)	←	13 (*1)	←	←	10 (*1)	←	13 (*1)	←
4041	10	←	5 (*1)	←	←	4 (*1)	←	5 (*1)	←
4048	16 (*1)	←	61 (*1)	←	←	45 (*1)	←	61 (*1)	←
4049	10	←	23 (*1)	←	←	17 (*1)	←	23 (*1)	←
4080	16720	←	12880	←	←	12877	←	70	←
4083	30	←	30	←	←	30	←	30	←
4093	0(B) 0(A)	←	176(B) 176(A)	←	←	240(B) 240(A)	←	176(B) 176(A)	←
4100	1656	←	3538	←	←	4006	←	3580	←
4101	100	←	100	←	←	82	←	100	←
4102	1656	←	3538	←	←	4006	←	3580	←
4103	0	←	0	←	←	0	←	0	←
4104	5500	←	2200	←	←	2050	←	2300	←
4105	121	←	199	←	←	160	←	97	←
4106	18000	←	8000	←	←	7600	←	2300	←
4107	0	←	121	←	←	121	←	88	←
4108	0	←	0	←	←	0	←	0	←
4109	25	←	25	←	←	25	←	25	←
4110	755	1007	503	755	1006	854	1139	421	561
4111	285	←	165	←	←	305	←	100	←
4112	200	←	200	←	←	200	←	200	←
4113	790	←	480	←	←	598	←	980	←
4114	0	←	0	←	←	0	←	0	←
4115	100	←	100	←	←	100	←	100	←
4116	6118	←	5734	←	←	5734	←	11031	←
4117	90	←	100	←	←	100	←	90	←
4118	100	←	100	←	←	100	←	100	←
4119	12	←	20	←	←	16	←	522	←
4120	0	←	0	←	←	0	←	0	←
4124	24575	←	24493	←	←	24575	←	24447	←
4127	296(B) 296(A)	←	176(B) 176(A)	←	←	240(B) 240(A)	←	176(B) 176(A)	←
4128	0	←	0	←	←	0	←	0	←
4129	0	←	0	←	←	0	←	0	←
4130	25700	←	25700	←	←	25700	←	25700	←
4134	130	←	130	←	←	130	←	130	←
4136	30	←	30	←	←	30	←	30	←
4138	0	←	1600	←	←	1600	←	1500	←
4139	0	←	100	←	←	94	←	89	←
4140	0	←	1656	←	←	1656	←	1642	←
4141	0	←	0	←	←	0	←	77	←
4142	0	←	6000	←	←	6000	←	5000	←
4143	0	←	18000	←	←	20000	←	5000	←
4144	0	←	0	←	←	0	←	0	←
4145	0	←	25	←	←	25	←	25	←
4146	0	←	503	755	1006	754	1005	566	755
4147	0	←	170	←	←	265	←	162	←
4148	0	←	200	←	←	200	←	200	←
4149	0	←	790	←	←	790	←	1090	←
4150	0	←	19200	←	←	19200	←	19200	←
4151	0	←	100	←	←	100	←	100	←
4152	0	←	8118	←	←	8118	←	8000	←
4153	0	←	90	←	←	90	←	90	←
4154	0	←	100	←	←	100	←	100	←
4155	0	←	24497	←	←	24574	←	24491	←
4156	0	←	0	←	←	0	←	0	←
4158	0	←	117	←	←	117	←	0	←
4159	0	←	0	←	←	0	←	0	←
4161	0	←	25700	←	←	25700	←	25700	←
4165	0	←	12	←	←	12	←	521	←
4166	0	←	14168	←	←	17749	←	49	←
4167	0	←	0	←	←	0	←	0	←
4168	0	←	832	←	←	832	←	832	←
4169	0	←	0	←	←	0	←	0	←
4170	832	←	328	←	←	328	←	328	←
4362	-24501	←	0	←	←	0	←	0	←
4363	-28372	←	0	←	←	0	←	0	←
4364	-32368	←	0	←	←	0	←	0	←
4365	0	←	0	←	←	0	←	0	←
4366	0	←	0	←	←	0	←	0	←
4367	0	←	0	←	←	0	←	0	←
4453	2700	←	2700	←	←	2700	←	2700	←
4454	0	←	2700	←	←	2700	←	2700	←
4612	86	←	145	←	←	87	←	145	←
4613	17026	←	10240	←	←	10240	←	12288	←
4614	0	←	145	←	←	100	←	129	←
4615	0	←	16517	←	←	16517	←	19201	←
Maximum output during acceleration (for PS selection)	22.2kW	22.2kW	13.2kW	13.2kW	13.2kW	18kW	18kW	13.2kW	13.2kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

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Motor model	αiI 8/12000-B	αiI 8/12000-B	αiI 12/8000-B	αiI 12/8000-B	αiI 12/8000-B	αiI 12/8000-B	αiI 12/8000-B	αiI 12/12000-B	αiI 12/12000-B
Applicable amplifier	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K427#S0R	K427#S0R	K408#S00	K408#S00	K408#S0P	K408#S0P	K408#S0S	K428#S00	K428#S00
Model code	5205	6205	5030	6030	5031	6031	5032	5206	6206
Parameter ID	2215	-	2491	-	2704	-	2085	2937	-
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	7.5/11/15 kW 1500/12000 min^{-1}	7.5/11/15 kW 1500/12000 min^{-1}	-	-	-	-	-	11/15 kW 1500/12000 min^{-1}	11/15 kW 1500/12000 min^{-1}
High-speed winding characteristics	7.5/11/15 kW 4000/12000 min^{-1}	7.5/11/15 kW 4000/12000 min^{-1}	11/15 kW 1500/8000 min^{-1}	11/15 kW 1500/8000 min^{-1}	11/15/18.5 kW 1500/8000 min^{-1}	11/15/18.5 kW 1500/8000 min^{-1}	11/15/18.5/25 kW 1500/8000 min^{-1}	11/15 kW 4000/12000 min^{-1}	11/15 kW 4000/12000 min^{-1}
4007	00000000	←	00000000	←	00000000	←	00000000	00000000	←
4008	00010000	←	00000000	←	00010000	←	00010000	00000000	←
4009	00000000	←	00000000	←	00000000	←	00000000	00000000	←
4010	00000001	←	00000000	←	00000000	←	00010000	00000000	←
4011	00001010	←	00011010	←	00001010	←	00001010	00011010	←
4012	10000010	←	10000010	←	10000010	←	10000010	10000010	←
4013	00001100	←	00001100	←	00001100	←	00001100	00001100	←
4019	00000100	←	00000100	←	00000100	←	00000100	00000100	←
4398	10000000	←	10000000	←	10000000	←	10000000	10000000	←
4400	00000000	←	00000000	←	00000000	←	00000000	00000000	←
4020	12000	←	8000	←	8000	←	8000	12000	←
4023	333 (*2)	←	30	←	30	←	30	333 (*2)	←
4039	0	←	0	←	0	←	0	0	←
4040	10 (*1)	←	9 (*1)	←	7 (*1)	←	5 (*1)	25 (*1)	←
4041	4 (*1)	←	10	←	10	←	10	9 (*1)	←
4048	45 (*1)	←	43 (*1)	←	35 (*1)	←	40 (*1)	114 (*1)	←
4049	17 (*1)	←	10	←	10	←	10	42 (*1)	←
4080	15186	←	70	←	16735	←	15201	75	←
4083	30	←	30	←	30	←	30	30	←
4093	240(B) 240(A)	←	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)	164(B) 164(A)	←
4100	3580	←	1500	←	1550	←	1570	3900	←
4101	71	←	100	←	100	←	98	80	←
4102	3580	←	1500	←	1922	←	1922	3593	←
4103	0	←	0	←	0	←	0	90	←
4104	4000	←	7000	←	3000	←	4450	1800	←
4105	97	←	307	←	324	←	323	341	←
4106	14000	←	7000	←	10000	←	6000	6500	←
4107	88	←	0	←	0	←	0	307	←
4108	0	←	0	←	0	←	0	0	←
4109	25	←	25	←	25	←	25	25	←
4110	421	561	595	793	905	1207	1207	595	793
4111	157	←	173	←	337	←	490	173	←
4112	200	←	200	←	200	←	200	200	←
4113	980	←	311	←	295	←	295	280	←
4114	22528	←	23040	←	0	←	24320	0	←
4115	100	←	100	←	100	←	100	100	←
4116	11031	←	5000	←	5279	←	5279	5280	←
4117	90	←	90	←	90	←	90	90	←
4118	100	←	100	←	100	←	100	100	←
4119	522	←	31	←	32	←	32	34	←
4120	0	←	0	←	0	←	0	0	←
4124	24487	←	24499	←	24575	←	24575	24499	←
4127	240(B) 240(A)	←	189(B) 164(A)	←	202(B) 202(A)	←	273(B) 273(A)	176(B) 164(A)	←
4128	0	←	0	←	0	←	0	0	←
4129	0	←	0	←	0	←	0	0	←
4130	25700	←	25700	←	25700	←	25700	25700	←
4134	130	←	130	←	130	←	130	130	←
4136	30	←	30	←	30	←	30	30	←
4138	1505	←	0	←	0	←	0	1500	←
4139	74	←	0	←	0	←	0	100	←
4140	1642	←	0	←	0	←	0	1500	←
4141	0	←	0	←	0	←	0	0	←
4142	8000	←	0	←	0	←	0	7000	←
4143	24000	←	0	←	0	←	0	7000	←
4144	0	←	0	←	0	←	0	0	←
4145	25	←	0	←	0	←	0	25	←
4146	566	755	0	←	0	←	0	595	793
4147	229	←	0	←	0	←	0	173	←
4148	200	←	0	←	0	←	0	200	←
4149	1090	←	0	←	0	←	0	311	←
4150	21760	←	0	←	0	←	0	23040	←
4151	100	←	0	←	0	←	0	100	←
4152	8000	←	0	←	0	←	0	5000	←
4153	90	←	0	←	0	←	0	90	←
4154	100	←	0	←	0	←	0	100	←
4155	24544	←	0	←	0	←	0	24499	←
4156	0	←	0	←	0	←	0	0	←
4158	0	←	0	←	0	←	0	0	←
4159	0	←	0	←	0	←	0	0	←
4161	25700	←	0	←	0	←	0	25700	←
4165	521	←	0	←	0	←	0	31	←
4166	15693	←	0	←	0	←	0	70	←
4167	0	←	0	←	0	←	0	0	←
4168	832	←	0	←	0	←	0	704	←
4169	0	←	0	←	0	←	0	0	←
4170	328	←	704	←	704	←	704	704	←
4362	0	←	0	←	0	←	-24426	0	←
4363	0	←	0	←	0	←	-28447	0	←
4364	0	←	0	←	0	←	-24276	0	←
4365	0	←	0	←	0	←	0	0	←
4366	0	←	0	←	0	←	0	0	←
4367	0	←	0	←	0	←	0	0	←
4453	2700	←	2100	←	2100	←	2100	2100	←
4454	2700	←	0	←	0	←	0	2100	←
4612	76	←	156	←	127	←	92	125	←
4613	12299	←	16522	←	16522	←	16777	10380	←
4614	79	←	0	←	0	←	0	156	←
4615	19201	←	0	←	0	←	0	16517	←
Maximum output during acceleration (for PS selection)	18kW	18kW	18kW	18kW	22.2kW	22.2kW	30kW	18kW	18kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

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Motor model	αiI 8/12000-B	αiI 8/12000-B	αiI 12/8000-B	αiI 12/8000-B	αiI 12/8000-B	αiI 12/8000-B	αiI 12/8000-B	αiI 12/12000-B	αiI 12/12000-B
Applicable amplifier	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K427#S0R	K427#S0R	K408#S00	K408#S00	K408#S0P	K408#S0P	K408#S0S	K428#S00	K428#S00
Model code	5205	6205	5030	6030	5031	6031	5032	5206	6206
Parameter ID	2215	-	2491	-	2704	-	2085	2937	-
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	7.5/11/15 kW 1500/12000 min^{-1}	7.5/11/15 kW 1500/12000 min^{-1}	-	-	-	-	-	11/15 kW 1500/12000 min^{-1}	11/15 kW 1500/12000 min^{-1}
High-speed winding characteristics	7.5/11/15 kW 4000/12000 min^{-1}	7.5/11/15 kW 4000/12000 min^{-1}	11/15 kW 1500/8000 min^{-1}	11/15 kW 1500/8000 min^{-1}	11/15/18.5 kW 1500/8000 min^{-1}	11/15/18.5 kW 1500/8000 min^{-1}	11/15/18.5/25 kW 1500/8000 min^{-1}	11/15 kW 4000/12000 min^{-1}	11/15 kW 4000/12000 min^{-1}
4007	00000000	←	00000000	←	00000000	←	00000000	00000000	←
4008	00010000	←	00000000	←	00010000	←	00010000	00000000	←
4009	00000000	←	00000000	←	00000000	←	00000000	00000000	←
4010	00000001	←	00000000	←	00000000	←	00010000	00000000	←
4011	00001010	←	00011010	←	00001010	←	00001010	00011010	←
4012	10000010	←	10000010	←	10000010	←	10000010	10000010	←
4013	00001100	←	00001100	←	00001100	←	00001100	00001100	←
4019	00000100	←	00000100	←	00000100	←	00000100	00000100	←
4398	10000000	←	10000000	←	10000000	←	10000000	10000000	←
4400	00000000	←	00000000	←	00000000	←	00000000	00000000	←
4020	12000	←	8000	←	8000	←	8000	12000	←
4023	333 (*2)	←	30	←	30	←	30	333 (*2)	←
4039	0	←	0	←	0	←	0	0	←
4040	10 (*1)	←	9 (*1)	←	7 (*1)	←	5 (*1)	25 (*1)	←
4041	4 (*1)	←	10	←	10	←	10	9 (*1)	←
4048	45 (*1)	←	43 (*1)	←	35 (*1)	←	40 (*1)	114 (*1)	←
4049	17 (*1)	←	10	←	10	←	10	42 (*1)	←
4080	15186	←	70	←	16735	←	15201	75	←
4083	30	←	30	←	30	←	30	30	←
4093	240(B) 240(A)	←	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)	164(B) 164(A)	←
4100	3580	←	1500	←	1550	←	1570	3900	←
4101	71	←	100	←	100	←	98	80	←
4102	3580	←	1500	←	1922	←	1922	3593	←
4103	0	←	0	←	0	←	0	90	←
4104	4000	←	7000	←	3000	←	4450	1800	←
4105	97	←	307	←	324	←	323	341	←
4106	14000	←	7000	←	10000	←	6000	6500	←
4107	88	←	0	←	0	←	0	307	←
4108	0	←	0	←	0	←	0	0	←
4109	25	←	25	←	25	←	25	25	←
4110	421	561	595	793	905	1207	1207	595	793
4111	157	←	173	←	337	←	490	173	←
4112	200	←	200	←	200	←	200	200	←
4113	980	←	311	←	295	←	295	280	←
4114	22528	←	23040	←	0	←	24320	0	←
4115	100	←	100	←	100	←	100	100	←
4116	11031	←	5000	←	5279	←	5279	5280	←
4117	90	←	90	←	90	←	90	90	←
4118	100	←	100	←	100	←	100	100	←
4119	522	←	31	←	32	←	32	34	←
4120	0	←	0	←	0	←	0	0	←
4124	24487	←	24499	←	24575	←	24575	24499	←
4127	240(B) 240(A)	←	189(B) 164(A)	←	202(B) 202(A)	←	273(B) 273(A)	176(B) 164(A)	←
4128	0	←	0	←	0	←	0	0	←
4129	0	←	0	←	0	←	0	0	←
4130	25700	←	25700	←	25700	←	25700	25700	←
4134	130	←	130	←	130	←	130	130	←
4136	30	←	30	←	30	←	30	30	←
4138	1505	←	0	←	0	←	0	1500	←
4139	74	←	0	←	0	←	0	100	←
4140	1642	←	0	←	0	←	0	1500	←
4141	0	←	0	←	0	←	0	0	←
4142	8000	←	0	←	0	←	0	7000	←
4143	24000	←	0	←	0	←	0	7000	←
4144	0	←	0	←	0	←	0	0	←
4145	25	←	0	←	0	←	0	25	←
4146	566	755	0	←	0	←	0	595	793
4147	229	←	0	←	0	←	0	173	←
4148	200	←	0	←	0	←	0	200	←
4149	1090	←	0	←	0	←	0	311	←
4150	21760	←	0	←	0	←	0	23040	←
4151	100	←	0	←	0	←	0	100	←
4152	8000	←	0	←	0	←	0	5000	←
4153	90	←	0	←	0	←	0	90	←
4154	100	←	0	←	0	←	0	100	←
4155	24544	←	0	←	0	←	0	24499	←
4156	0	←	0	←	0	←	0	0	←
4158	0	←	0	←	0	←	0	0	←
4159	0	←	0	←	0	←	0	0	←
4161	25700	←	0	←	0	←	0	25700	←
4165	521	←	0	←	0	←	0	31	←
4166	15693	←	0	←	0	←	0	70	←
4167	0	←	0	←	0	←	0	0	←
4168	832	←	0	←	0	←	0	704	←
4169	0	←	0	←	0	←	0	0	←
4170	328	←	704	←	704	←	704	704	←
4362	0	←	0	←	0	←	-24426	0	←
4363	0	←	0	←	0	←	-28447	0	←
4364	0	←	0	←	0	←	-24276	0	←
4365	0	←	0	←	0	←	0	0	←
4366	0	←	0	←	0	←	0	0	←
4367	0	←	0	←	0	←	0	0	←
4453	2700	←	2100	←	2100	←	2100	2100	←
4454	2700	←	0	←	0	←	0	2100	←
4612	76	←	156	←	127	←	92	125	←
4613	12299	←	16522	←	16522	←	16777	10380	←
4614	79	←	0	←	0	←	0	156	←
4615	19201	←	0	←	0	←	0	16517	←
Maximum output during acceleration (for PS selection)	18kW	18kW	18kW	18kW	22.2kW	22.2kW	30kW	18kW	18kW

(*1) Set this value as the initial value of the velocity loop gain.

(*2) When using the SDT signal, manually change the parameters that were automatically set.

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Motor model	αiI 12/12000-B	αiI 12/12000-B	αiI 12/12000-B	αiI 15/8000-B	αiI 15/8000-B	αiI 15/8000-B	αiI 15/12000-B	αiI 15/12000-B	αiI 15/12000-B
Applicable amplifier	αiSP 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B	αiSP 22-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B	αiSP 22-B
Output specification nameplate	K428#S0P	K428#S0P	K428#S0S	K409#S00	K409#S0P	K409#S0S	K429#S00	K429#S0P	K429#S0S
Model code	5207	6207	5208	5033	5034	5035	5209	5210	5211
Parameter ID	2246	-	2478	2202	2048	2585	2886	2323	2771
Series and editions of applicable spindle sofutware	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	11/15/18.5 kW 1500/12000 min^{-1}	11/15/18.5 kW 1500/12000 min^{-1}	11/15/20/25 kW 1500/12000 min^{-1}	-	-	-	15/18.5 kW 1500/12000 min^{-1}	15/18.5/25 kW 1500/12000 min^{-1}	15/18.5/25/30 kW 1500/12000 min^{-1}
High-speed winding characteristics	11/15/18.5 kW 4000/12000 min^{-1}	11/15/18.5 kW 4000/12000 min^{-1}	11/15/18.5/28 kW 4000/12000 min^{-1}	15/18.5 kW 1500/8000 min^{-1}	15/18.5/25 kW 1500/8000 min^{-1}	15/18.5/25/30 kW 1500/8000 min^{-1}	15/18.5 kW 4000/12000 min^{-1}	15/18.5/25 kW 4000/12000 min^{-1}	15/18.5/25/33 kW 4000/12000 min^{-1}
4007	00000000	←	00000100	00000000	00000000	00000000	00000000	00000000	00000000
4008	00010000	←	00000000	00000000	00010000	00010000	00000000	00010000	00000000
4009	00000000	←	00000000	00000000	00000000	00000000	00000000	00000000	00000000
4010	00000000	←	00010000	00000000	00000000	00000000	00000000	00000000	00000000
4011	00001010	←	00011010	00011010	00001010	00001010	00011010	00001010	00011010
4012	10000010	←	10000010	10000010	10000010	10000000	10000010	10000010	10000000
4013	00001100	←	00001100	00001100	00001100	00001100	00001100	00001100	00001100
4019	00000100	←	00000100	00000100	00000100	00000100	00000100	00000100	00000100
4398	10000000	←	10000000	10000000	10000000	10000000	10000000	10000000	10000000
4400	00000000	←	00000000	00000000	00000000	00000000	00000000	00000000	00000000
4020	12000	←	12000	8000	8000	8000	12000	12000	12000
4023	333 (*2)	←	333 (*2)	30	30	30	333 (*2)	333 (*2)	333 (*2)
4039	0	←	0	0	0	0	0	0	0
4040	20 (*1)	←	13 (*1)	10 (*1)	7 (*1)	6 (*1)	26 (*1)	19 (*1)	14 (*1)
4041	7 (*1)	←	6 (*1)	10	10	10	10 (*1)	7 (*1)	6 (*1)
4048	93 (*1)	←	61 (*1)	45 (*1)	33 (*1)	28 (*1)	119 (*1)	88 (*1)	67 (*1)
4049	35 (*1)	←	26 (*1)	10	10	10	45 (*1)	33 (*1)	28 (*1)
4080	75	←	12883	20555	24410	16989	80	15445	5205
4083	30	←	30	30	30	30	30	30	30
4093	202(B) 202(A)	←	273(B) 273(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	148(B) 148(A)	202(B) 200(A)	240(B) 240(A)
4100	3800	←	4100	1500	1500	1625	4000	4200	4570
4101	80	←	87	95	100	100	62	85	100
4102	3593	←	3593	1710	1710	1625	3482	3482	4570
4103	0	←	0	0	0	0	75	0	80
4104	1800	←	1800	5500	5500	1800	1700	1700	700
4105	341	←	307	314	314	314	347	347	398
4106	6000	←	6000	5500	5500	4400	5500	5500	2000
4107	324	←	307	0	0	0	314	314	314
4108	0	←	0	0	0	0	0	0	0
4109	25	←	25	25	25	25	25	25	25
4110	595	793	794	794	794	754	575	575	754
4111	223	←	311	243	305	333	193	212	320
4112	200	←	200	200	200	200	200	200	200
4113	280	←	311	304	304	304	275	275	240
4114	0	←	0	23040	23040	24320	23040	23040	0
4115	100	←	100	100	100	100	100	100	100
4116	5280	←	5280	5177	5177	5177	5126	5126	5126
4117	90	←	100	90	90	90	90	29530	90
4118	100	←	28772	100	100	100	90	100	100
4119	34	←	31	31	31	31	35	35	35
4120	0	←	0	0	0	0	0	0	0
4124	24539	←	24575	24556	24575	24575	24515	24530	24575
4127	240(B) 202(A)	←	305(B) 305(A)	175(B) 148(A)	234(B) 200(A)	240(B) 240(A)	161(B) 148(A)	219(B) 200(A)	273(B) 264(A)
4128	0	←	0	105	105	0	0	0	0
4129	0	←	0	0	0	0	0	0	0
4130	25700	←	25700	25700	25700	25700	25700	25700	25700
4134	130	←	130	130	130	130	130	130	130
4136	30	←	30	30	30	30	30	30	30
4138	1550	←	1600	0	0	0	1500	1500	1625
4139	100	←	100	0	0	0	95	100	100
4140	1922	←	1922	0	0	0	1710	1710	1625
4141	0	←	0	0	0	0	70	0	0
4142	3000	←	3000	0	0	0	5500	5500	1800
4143	10000	←	10000	0	0	0	5500	5500	4400
4144	0	←	0	0	0	0	0	0	0
4145	25	←	25	0	0	0	25	25	25
4146	905	1207	1207	0	0	0	794	794	754
4147	337	←	486	0	0	0	243	305	333
4148	200	←	200	0	0	0	200	200	200
4149	295	←	311	0	0	0	304	304	304
4150	0	←	0	0	0	0	23040	23040	24320
4151	100	←	100	0	0	0	100	100	100
4152	5279	←	5015	0	0	0	5177	5177	5177
4153	90	←	90	0	0	0	90	90	90
4154	100	←	100	0	0	0	100	100	100
4155	24575	←	24575	0	0	0	24556	24575	24575
4156	0	←	0	0	0	0	0	0	0
4158	0	←	0	0	0	0	105	105	0
4159	0	←	0	0	0	0	0	0	0
4161	25700	←	25700	0	0	0	25700	25700	25700
4165	32	←	31	0	0	0	31	31	31
4166	16735	←	15450	0	0	0	20555	17498	16725
4167	0	←	0	0	0	0	0	0	0
4168	704	←	704	0	0	0	560	560	560
4169	0	←	0	0	0	0	0	0	0
4170	704	←	704	560	560	560	1024	1024	1024
4362	0	←	-24426	0	0	0	0	-24326	0
4363	0	←	-28172	0	0	0	0	-26124	0
4364	0	←	-30120	0	0	0	0	-32168	0
4365	0	←	-26424	0	0	0	0	0	-24276
4366	0	←	-26174	0	0	0	0	0	-28172
4367	0	←	-32168	0	0	0	0	0	-30120
4453	2100	←	2100	1500	1500	1500	2100	2100	2100
4454	2100	←	2100	0	0	0	1500	1500	1500
4612	101	←	73	164	128	107	107	109	97
4613	10380	←	10379	16791	16790	16791	10375	10376	10376
4614	127	←	94	0	0	0	164	128	107
4615	16518	←	16774	0	0	0	16772	16531	16774
Maximum output during acceleration (for PS selection)	22.2kW	22.2kW	33.6kW	22.2kW	30kW	36kW	22.2kW	30kW	36kW

(*1) Set this value as the initial value of the velocity loop gain.

(*2) When using the SDT signal, manually change the parameters that were automatically set.

JR AUTOMATION TECHNOLOGIES, INC*

Motor model	αiI 18/8000-B	αiI 18/8000-B	αiI 18/12000-B	αiI 18/12000-B	αiI 22/8000-B	αiI 22/8000-B	αiI 22/8000-B	αiI 22/12000-B	αiI 22/12000-B
Applicable amplifier	αiSP 22-B	αiSP 22-B	αiSP 22-B	αiSP 22-B	αiSP 26-B	αiSP 26-B	αiSP 30-B	αiSP 26-B	αiSP 26-B
Output specification nameplate	K410#S00	K410#S0P	K430#S00	K430#S0P	K411#S00	K411#S0P	K411#S0S	K431#S00	K431#S0P
Model code	5036	5037	5212	5213	5039	5040	5041	5214	5215
Parameter ID	2231	2453	2360	2576	2379	2240	2788	2033	2173
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	18.5/22 kW 1500/12000 min^{-1}	18.5/22/30 kW 1500/12000 min^{-1}	-	-	-	22/26 kW 1500/12000 min^{-1}	22/26/35 kW 1500/12000 min^{-1}
High-speed winding characteristics	18.5/22 kW 1500/8000 min^{-1}	18.5/22/30 kW 1500/8000 min^{-1}	18.5/22 kW 4000/12000 min^{-1}	18.5/22/30 kW 4000/12000 min^{-1}	22/26 kW 1500/8000 min^{-1}	22/26/35 kW 1500/8000 min^{-1}	22/26/35/45 kW 1500/8000 min^{-1}	22/26 kW 4000/12000 min^{-1}	22/26/35 kW 4000/12000 min^{-1}
4007	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
4008	00000000	00010000	00000000	00010000	00000000	00010000	00010000	00000000	00010000
4009	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
4010	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
4011	00011010	00001010	00011010	00001010	00011010	00001010	00001010	00011010	00001010
4012	10000010	10000111	10000010	10000111	10000010	10000111	10000010	10000010	10000111
4013	00001100	00001100	00001100	00001100	00001100	00001100	00001100	00001100	00001100
4019	00000100	00000100	00000100	00000100	00000100	00000100	00000100	00000100	00000100
4398	10000000	10000000	10000000	10000000	10000000	10000000	10000000	10000000	10000000
4400	00000000	00000001	00000000	00010001	00000000	00000001	00000000	00000000	00010001
4020	8000	8000	12000	12000	8000	8000	8000	12000	12000
4023	30	30	333 (*2)	333 (*2)	30	30	30	333 (*2)	333 (*2)
4039	0	0	0	0	0	0	0	0	0
4040	9 (*1)	7 (*1)	25 (*1)	18 (*1)	10 (*1)	7 (*1)	6 (*1)	26 (*1)	19 (*1)
4041	10	10	9 (*1)	7 (*1)	10	10	10	10 (*1)	7 (*1)
4048	44 (*1)	32 (*1)	117 (*1)	86 (*1)	45 (*1)	34 (*1)	26 (*1)	121 (*1)	90 (*1)
4049	10	10	44 (*1)	32 (*1)	10	10	10	45 (*1)	34 (*1)
4080	11615	18005	80	15439	80	15460	19295	75	80
4083	30	30	30	30	30	30	30	30	30
4093	0(B) 0(A)	0(B) 0(A)	143(B) 143(A)	195(B) 195(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	155(B) 142(A)	191(B) 191(A)
4100	1520	1700	4100	4050	1500	1550	1500	4000	4000
4101	100	100	100	98	95	100	100	83	78
4102	1813	1909	4582	4582	1756	1756	1756	3504	3504
4103	84	0	89	0	0	0	0	0	0
4104	3000	1600	1300	900	4500	1500	3800	2800	1400
4105	310	310	299	299	329	329	329	360	360
4106	10000	5000	5000	2200	4500	5000	9500	2800	1400
4107	0	0	310	310	0	0	0	318	318
4108	0	0	0	0	0	0	0	0	0
4109	25	25	25	25	25	25	25	25	25
4110	943	943	754	754	924	924	1231	603	604
4111	333	418	260	330	252	353	427	143	218
4112	200	200	200	200	200	200	200	200	200
4113	308	308	319	319	290	290	290	265	265
4114	0	0	0	0	0	23040	0	24320	0
4115	100	100	100	100	100	100	100	100	100
4116	3600	4500	4100	4100	5564	5000	5564	5523	5523
4117	90	90	90	90	29530	90	90	90	90
4118	100	100	100	100	110	100	100	100	100
4119	31	31	30	30	29	29	33	36	36
4120	0	0	0	0	0	0	0	0	0
4124	24575	24575	24570	24575	24564	24575	24575	24477	24535
4127	164(B) 143(A)	195(B) 195(A)	148(B) 143(A)	209(B) 195(A)	149(B) 142(A)	191(B) 191(A)	245(B) 245(A)	142(B) 142(A)	193(B) 191(A)
4128	0	0	102	0	105	0	0	0	0
4129	0	0	0	0	0	0	0	0	0
4130	25700	25700	25700	25700	25700	25700	25700	25700	25700
4134	130	130	130	130	130	130	130	130	130
4136	30	30	30	30	30	30	30	30	30
4138	0	0	1520	1700	0	0	0	1440	1520
4139	0	0	100	100	0	0	0	96	94
4140	0	0	1813	1909	0	0	0	1709	1709
4141	0	0	84	0	0	0	0	96	0
4142	0	0	3000	1600	0	0	0	5000	2200
4143	0	0	10000	5000	0	0	0	5000	4600
4144	0	0	0	0	0	0	0	0	0
4145	0	0	25	25	0	0	0	25	25
4146	0	0	943	943	0	0	0	823	823
4147	0	0	333	418	0	0	0	213	312
4148	0	0	200	200	0	0	0	200	200
4149	0	0	308	308	0	0	0	300	300
4150	0	0	0	0	0	0	0	19200	19200
4151	0	0	100	100	0	0	0	100	100
4152	0	0	3600	4500	0	0	0	5593	5593
4153	0	0	90	90	0	0	0	90	90
4154	0	0	100	100	0	0	0	100	100
4155	0	0	24575	24575	0	0	0	24531	24575
4156	0	0	0	0	0	0	0	0	0
4158	0	0	0	0	0	0	0	0	108
4159	0	0	0	0	0	0	0	0	0
4161	0	0	25700	25700	0	0	0	25700	25700
4165	0	0	31	31	0	0	0	341	32
4166	0	0	11615	15714	0	0	0	56	16735
4167	0	0	0	0	0	0	0	0	0
4168	0	0	320	320	0	0	0	496	496
4169	0	0	0	0	0	0	0	0	0
4170	320	320	320	320	496	496	496	568	568
4362	0	0	0	0	0	0	-28522	0	0
4363	0	0	0	0	0	0	-30520	0	0
4364	0	0	0	0	0	0	-24276	0	0
4365	0	0	0	-26324	0	0	0	0	0
4366	0	0	0	-24176	0	0	0	0	0
4367	0	0	0	-32168	0	0	0	0	0
4453	2100	2100	2100	2100	2300	2300	2300	2300	2300
4454	0	0	2100	2100	0	0	0	2300	2300
4612	179	132	179	129	171	134	104	150	105
4613	16782	16782	10370	10370	16775	16517	16774	10241	10241
4614	0	0	179	132	0	0	0	173	126
4615	0	0	16772	16771	0	0	0	16385	16385
Maximum output during acceleration (for PS selection)	26.4kW	36kW	26.4kW	36kW	31.2kW	42kW	54kW	31.2kW	42kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

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Motor model	αiI 22/12000-B	αiI 30/7000-B	αiI 30/7000-B	αiI 40/7000-B	αiI 40/7000-B	αiI 50/5000-B	αiI 50/5000-B
Applicable amplifier	αiSP 30-B	αiSP 37-B	αiSP 37-B	αiSP 45-B	αiSP 45-B	αiSP 55-B	αiSP 55-B
Output specification nameplate	K431#S0S	K412#S00	K412#S0P	K413#S00	K413#S0P	K414#S00	K414#S0P
Model code	5216	5042	5043	5044	5045	5046	5047
Parameter ID	2082	2005	2051	2093	2798	2831	2864
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O
Low-speed winding characteristics	22/26/35/45 kW 1500/12000 min^{-1}	-	-	-	-	-	-
High-speed winding characteristics	22/26/35/48 kW 4000/12000 min^{-1}	30/37 kW 1150/7000 min^{-1}	30/37/45 kW 1150/7000 min^{-1}	37/45 kW 1150/7000 min^{-1}	37/45/55 kW 1150/7000 min^{-1}	45/55 kW 1150/5000 min^{-1}	45/55/65 kW 1150/5000 min^{-1}
4007	00000000	00000000	00000000	00000000	00000000	00000000	00000000
4008	00010000	00000000	00010000	00000000	00010000	00000000	00010000
4009	00000000	00000000	00000000	00000000	00000000	00000000	00000000
4010	00000000	00000000	00010000	00000000	00010000	00000000	00000000
4011	00001010	00011010	00001010	00011010	00001010	00011010	00001010
4012	10000010	10000010	10000000	10000000	10000000	10000000	10000000
4013	00001100	00001100	00001100	00001100	00001100	00001100	00001100
4019	00000100	00000100	00000100	00000100	00000100	00000100	00000100
4398	10000000	10000000	10000000	10000000	10000000	10000000	10000000
4400	00000000	00000000	00000000	00000000	00000000	00000000	00000000
4020	12000	7000	7000	7000	7000	5000	5000
4023	333 (*2)	30	30	30	30	30	30
4039	0	0	0	0	0	0	0
4040	14 (*1)	12 (*1)	10 (*1)	12 (*1)	10 (*1)	13 (*1)	11 (*1)
4041	6 (*1)	10	10	10	10	10	10
4048	65 (*1)	56 (*1)	46 (*1)	56 (*1)	45 (*1)	63 (*1)	53 (*1)
4049	26 (*1)	10	10	10	10	10	10
4080	80	77	16734	80	16208	80	21840
4083	30	30	30	30	30	30	30
4093	245(B) 245(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)
4100	4050	1387	1260	1740	1230	1200	1185
4101	94	100	100	100	100	85	74
4102	4348	1387	1886	1740	1611	1201	1201
4103	0	0	0	0	0	89	0
4104	1700	6000	2500	3000	3000	3000	3400
4105	357	505	516	503	461	562	439
4106	4400	6000	4000	3000	4000	4500	5400
4107	339	0	0	0	0	0	0
4108	0	0	0	0	0	0	0
4109	25	25	25	25	25	25	25
4110	1006	1018	1341	970	771	1260	1260
4111	335	286	524	286	312	320	443
4112	200	200	200	200	200	200	200
4113	255	189	185	190	207	170	218
4114	0	20480	0	23040	0	23040	23552
4115	100	100	100	100	100	100	100
4116	3438	6071	4526	6128	4614	5800	5500
4117	90	90	90	90	90	90	90
4118	100	100	100	100	100	100	100
4119	37	51	52	48	46	56	56
4120	0	0	0	0	0	0	0
4124	24575	24575	24575	24575	24575	24575	24575
4127	271(B) 262(A)	148(B) 148(A)	193(B) 180(A)	146(B) 146(A)	182(B) 178(A)	147(B) 146(A)	173(B) 173(A)
4128	0	0	90	0	0	114	108
4129	0	0	0	0	0	0	0
4130	25700	25700	25700	25700	25700	25700	25700
4134	130	130	130	130	130	130	130
4136	30	30	30	30	30	30	30
4138	1550	0	0	0	0	0	0
4139	95	0	0	0	0	0	0
4140	1725	0	0	0	0	0	0
4141	0	0	0	0	0	0	0
4142	4700	0	0	0	0	0	0
4143	9000	0	0	0	0	0	0
4144	0	0	0	0	0	0	0
4145	25	0	0	0	0	0	0
4146	1077	0	0	0	0	0	0
4147	371	0	0	0	0	0	0
4148	200	0	0	0	0	0	0
4149	285	0	0	0	0	0	0
4150	0	0	0	0	0	0	0
4151	100	0	0	0	0	0	0
4152	3696	0	0	0	0	0	0
4153	90	0	0	0	0	0	0
4154	100	0	0	0	0	0	0
4155	24575	0	0	0	0	0	0
4156	0	0	0	0	0	0	0
4158	0	0	0	0	0	0	0
4159	0	0	0	0	0	0	0
4161	25700	0	0	0	0	0	0
4165	34	0	0	0	0	0	0
4166	16735	0	0	0	0	0	0
4167	0	0	0	0	0	0	0
4168	496	0	0	0	0	0	0
4169	0	0	0	0	0	0	0
4170	568	336	336	544	544	272	272
4362	0	0	-24476	0	-24516	0	-24526
4363	0	0	-28472	0	-28447	0	-28522
4364	0	0	-28372	0	31020	0	-24376
4365	-24501	0	0	0	0	0	0
4366	-30420	0	0	0	0	0	0
4367	31320	0	0	0	0	0	0
4453	2300	3000	3000	2800	2800	2500	2500
4454	2300	0	0	0	0	0	0
4612	92	173	142	175	144	148	109
4613	10241	12547	12291	14084	14084	12560	12677
4614	99	0	0	0	0	0	0
4615	16384	0	0	0	0	0	0
Maximum output during acceleration (for PS selection)	57.6kW	44.4kW	54kW	54kW	66kW	66kW	78kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

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Motor model	αiI 0.5/10000HV-B	αiI 0.5/10000HV-B	αiI 1/10000HV-B	αiI 1/10000HV-B	αiI 1.5/10000HV-B	αiI 1.5/10000HV-B	αiI 2/10000HV-B	αiI 2/10000HV-B	αiI 2/20000HV-B
Applicable amplifier	αiSP 5.5HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 5.5HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 5.5HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 5.5HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 30HV-B
Output specification nameplate	K501#S00	K501#S00	K502#S00	K502#S00	K503#S00	K503#S00	K504#S00	K504#S00	K524#S00
Model code	5048	6048	5049	6049	5050	6050	5051	6051	5052
Parameter ID	2714	-	2040	-	2092	-	2353	-	2204
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-	-
High-speed winding characteristics	0.55/1.1 kW 3000/10000 min^{-1}	0.55/1.1 kW 3000/10000 min^{-1}	1.5/2.2 kW 3000/10000 min^{-1}	1.5/2.2 kW 3000/10000 min^{-1}	1.1/3.7 kW 1500/10000 min^{-1}	1.1/3.7 kW 1500/10000 min^{-1}	2.2/3.7 kW 1500/10000 min^{-1}	2.2/3.7 kW 1500/10000 min^{-1}	2.2/3.7 kW 3000/20000 min^{-1}
4007	00000000	←	00000000	←	00000000	←	00000000	←	00000000
4008	00000000	←	00000000	←	00000000	←	00000000	←	00000000
4009	00000000	←	00000000	←	00000000	←	00000000	←	00000000
4010	00000000	←	00000000	←	00000000	←	00000000	←	00000001
4011	00011000	←	00011001	←	00011001	←	00011001	←	00011001
4012	10000010	←	10000010	←	10000010	←	10000010	←	10000010
4013	00001100	←	00001100	←	00001100	←	00001100	←	00001100
4019	00000100	←	00000100	←	00000100	←	00000100	←	00000100
4398	10000000	←	10000000	←	10000000	←	10000000	←	10000000
4400	00000000	←	00000000	←	00000000	←	00000000	←	00000000
4020	10000	←	10000	←	10000	←	10000	←	20000
4023	30	←	30	←	30	←	30	←	30
4039	0	←	0	←	0	←	0	←	0
4040	2 (*1)	←	5 (*1)	←	2 (*1)	←	4 (*1)	←	3 (*1)
4041	10	←	10	←	10	←	10	←	10
4048	8 (*1)	←	25 (*1)	←	11 (*1)	←	19 (*1)	←	16 (*1)
4049	10	←	10	←	10	←	10	←	10
4080	85	←	20565	←	14173	←	80	←	11605
4083	30	←	30	←	30	←	30	←	10
4093	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)
4100	3250	←	2600	←	1610	←	1500	←	3400
4101	100	←	85	←	100	←	100	←	41
4102	6503	←	3600	←	2745	←	4421	←	6612
4103	45	←	83	←	65	←	50	←	92
4104	4500	←	6000	←	5000	←	5000	←	2700
4105	46	←	43	←	40	←	102	←	56
4106	4500	←	6000	←	12000	←	5000	←	4500
4107	0	←	0	←	0	←	0	←	0
4108	0	←	0	←	0	←	0	←	0
4109	25	←	25	←	25	←	25	←	25
4110	3143	6286	1423	2846	1109	2218	1397	2794	1052
4111	245	←	103	←	220	←	318	←	235
4112	200	←	200	←	200	←	200	←	200
4113	2058	←	2200	←	2400	←	935	←	1700
4114	23040	←	14080	←	17920	←	110	←	0
4115	100	←	100	←	100	←	100	←	100
4116	13641	←	17300	←	10218	←	10519	←	11131
4117	90	←	90	←	90	←	90	←	90
4118	100	←	100	←	100	←	100	←	100
4119	5	←	4	←	4	←	10	←	5
4120	0	←	0	←	0	←	0	←	0
4124	24558	←	24449	←	24537	←	24575	←	24549
4127	286(B) 240(A)	←	176(B) 176(A)	←	404(B) 404(A)	←	202(B) 202(A)	←	202(B) 202(A)
4128	120	←	75	←	107	←	90	←	88
4129	0	←	0	←	0	←	0	←	0
4130	25700	←	25700	←	25700	←	25700	←	25700
4134	110	←	110	←	110	←	110	←	110
4136	30	←	30	←	30	←	30	←	30
4138	0	←	0	←	0	←	0	←	0
4139	0	←	0	←	0	←	0	←	0
4140	0	←	0	←	0	←	0	←	0
4141	0	←	0	←	0	←	0	←	0
4142	0	←	0	←	0	←	0	←	0
4143	0	←	0	←	0	←	0	←	0
4144	0	←	0	←	0	←	0	←	0
4145	0	←	0	←	0	←	0	←	0
4146	0	←	0	←	0	←	0	←	0
4147	0	←	0	←	0	←	0	←	0
4148	0	←	0	←	0	←	0	←	0
4149	0	←	0	←	0	←	0	←	0
4150	0	←	0	←	0	←	0	←	0
4151	0	←	0	←	0	←	0	←	0
4152	0	←	0	←	0	←	0	←	0
4153	0	←	0	←	0	←	0	←	0
4154	0	←	0	←	0	←	0	←	0
4155	0	←	0	←	0	←	0	←	0
4156	0	←	0	←	0	←	0	←	0
4158	0	←	0	←	0	←	0	←	0
4159	0	←	0	←	0	←	0	←	0
4161	0	←	0	←	0	←	0	←	0
4165	0	←	0	←	0	←	0	←	0
4166	0	←	0	←	0	←	0	←	0
4167	0	←	0	←	0	←	0	←	0
4168	0	←	0	←	0	←	0	←	0
4169	0	←	0	←	0	←	0	←	0
4170	752	←	1536	←	1664	←	416	←	1296
4362	0	←	0	←	0	←	0	←	0
4363	0	←	0	←	0	←	0	←	0
4364	0	←	0	←	0	←	0	←	0
4365	0	←	0	←	0	←	0	←	0
4366	0	←	0	←	0	←	0	←	0
4367	0	←	0	←	0	←	0	←	0
4453	1900	←	2100	←	3200	←	1700	←	1200
4454	0	←	0	←	0	←	0	←	0
4612	107	←	124	←	63	←	127	←	52
4613	10889	←	13581	←	21504	←	26637	←	26886
4614	0	←	0	←	0	←	0	←	0
4615	0	←	0	←	0	←	0	←	0
Maximum output during acceleration (for PS selection)	1.32kW	1.32kW	2.64kW	2.64kW	4.44kW	4.44kW	4.44kW	4.44kW	20kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 3/10000HV-B	αiI 3/10000HV-B	αiI 6/10000HV-B	αiI 6/10000HV-B	αiI 6/10000HV-B	αiI 6/10000HV-B	αiI 8/8000HV-B	αiI 8/8000HV-B	αiI 8/8000HV-B
Applicable amplifier	αiSP 5.5HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 11HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 11HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 11HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 15 HV-B βiSVSP* 15HV-B
Output specification nameplate	K505#S00	K505#S00	K506#S00	K506#S00	K506#S0P	K506#S0P	K507#S00	K507#S00	K507#S0P
Model code	5053	6053	5054	6054	5055	6055	5057	6057	5056
Parameter ID	2037	-	2938	-	2159	-	2813	-	2276
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-	-
High-speed winding characteristics	3.7/5.5 kW 1500/10000 min^{-1}	3.7/5.5 kW 1500/10000 min^{-1}	5.5/7.5 kW 1500/10000 min^{-1}	5.5/7.5 kW 1500/10000 min^{-1}	5.5/7.5/9 kW 1500/10000 min^{-1}	5.5/7.5/9 kW 1500/10000 min^{-1}	7.5/11 kW 1500/8000 min^{-1}	7.5/11 kW 1500/8000 min^{-1}	7.5/11/15 kW 1500/8000 min^{-1}
4007	00000000	←	00000000	←	00000100	←	00000000	←	00000000
4008	00000000	←	00000000	←	00000000	←	00000000	←	00000000
4009	00000000	←	00000000	←	00000000	←	00000000	←	00000000
4010	00000000	←	00000000	←	00000000	←	00000000	←	00000000
4011	00011001	←	00011010	←	00011010	←	00011010	←	00011010
4012	10000010	←	10000010	←	10000000	←	10000010	←	10000010
4013	00001100	←	00001100	←	00001100	←	00001100	←	00001100
4019	00000100	←	00000100	←	00000100	←	00000100	←	00000100
4398	10000000	←	10000000	←	10000000	←	10000000	←	10000000
4400	00000000	←	00000000	←	00000000	←	00000000	←	00000000
4020	10000	←	10000	←	10000	←	8000	←	8000
4023	30	←	30	←	30	←	30	←	30
4039	0	←	0	←	0	←	0	←	0
4040	5 (*1)	←	5 (*1)	←	3 (*1)	←	5 (*1)	←	4 (*1)
4041	10	←	10	←	10	←	10	←	10
4048	25 (*1)	←	22 (*1)	←	15 (*1)	←	23 (*1)	←	17 (*1)
4049	10	←	10	←	10	←	10	←	10
4080	85	←	85	←	73	←	70	←	14180
4083	30	←	30	←	30	←	30	←	30
4093	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)
4100	1400	←	1500	←	1650	←	1800	←	1750
4101	100	←	100	←	100	←	100	←	95
4102	2288	←	3000	←	2236	←	2323	←	2323
4103	61	←	58	←	0	←	85	←	0
4104	7000	←	5000	←	2300	←	7000	←	7000
4105	109	←	109	←	109	←	132	←	132
4106	7000	←	5000	←	4600	←	7000	←	7000
4107	0	←	0	←	0	←	0	←	0
4108	0	←	0	←	0	←	0	←	0
4109	25	←	25	←	25	←	25	←	25
4110	1077	2154	754	1508	539	1078	629	1258	1257
4111	237	←	272	←	229	←	229	←	344
4112	200	←	200	←	200	←	200	←	200
4113	873	←	878	←	880	←	723	←	723
4114	20480	←	23040	←	22528	←	23040	←	0
4115	100	←	100	←	100	←	100	←	100
4116	9908	←	9016	←	9016	←	8734	←	8734
4117	90	←	90	←	90	←	90	←	90
4118	100	←	100	←	100	←	100	←	100
4119	11	←	11	←	11	←	13	←	13
4120	0	←	0	←	0	←	0	←	0
4124	24551	←	24575	←	24545	←	24544	←	24575
4127	178(B) 178(A)	←	176(B) 164(A)	←	240(B) 240(A)	←	176(B) 176(A)	←	240(B) 240(A)
4128	90	←	0	←	0	←	0	←	0
4129	0	←	0	←	0	←	0	←	0
4130	25700	←	25700	←	25700	←	25700	←	25700
4134	110	←	130	←	130	←	130	←	130
4136	30	←	30	←	30	←	30	←	0
4138	0	←	0	←	0	←	0	←	0
4139	0	←	0	←	0	←	0	←	0
4140	0	←	0	←	0	←	0	←	0
4141	0	←	0	←	0	←	0	←	0
4142	0	←	0	←	0	←	0	←	0
4143	0	←	0	←	0	←	0	←	0
4144	0	←	0	←	0	←	0	←	0
4145	0	←	0	←	0	←	0	←	0
4146	0	←	0	←	0	←	0	←	0
4147	0	←	0	←	0	←	0	←	0
4148	0	←	0	←	0	←	0	←	0
4149	0	←	0	←	0	←	0	←	0
4150	0	←	0	←	0	←	0	←	0
4151	0	←	0	←	0	←	0	←	0
4152	0	←	0	←	0	←	0	←	0
4153	0	←	0	←	0	←	0	←	0
4154	0	←	0	←	0	←	0	←	0
4155	0	←	0	←	0	←	0	←	0
4156	0	←	0	←	0	←	0	←	0
4158	0	←	0	←	0	←	0	←	0
4159	0	←	0	←	0	←	0	←	0
4161	0	←	0	←	0	←	0	←	0
4165	0	←	0	←	0	←	0	←	0
4166	0	←	0	←	0	←	0	←	0
4167	0	←	0	←	0	←	0	←	0
4168	0	←	0	←	0	←	0	←	0
4169	0	←	0	←	0	←	0	←	0
4170	512	←	416	←	1792	←	832	←	832
4362	0	←	0	←	-24501	←	0	←	-26399
4363	0	←	0	←	-26474	←	0	←	-28347
4364	0	←	0	←	-24351	←	0	←	31145
4365	0	←	0	←	0	←	0	←	0
4366	0	←	0	←	0	←	0	←	0
4367	0	←	0	←	0	←	0	←	0
4453	2300	←	2900	←	1500	←	2700	←	2700
4454	0	←	0	←	0	←	0	←	0
4612	144	←	156	←	107	←	145	←	101
4613	19073	←	21898	←	22154	←	16513	←	16514
4614	0	←	0	←	0	←	0	←	0
4615	0	←	0	←	0	←	0	←	0
Maximum output during acceleration (for PS selection)	6.66kW	6.66kW	9kW	9kW	13.2kW	13.2kW	13.2kW	13.2kW	18kW

(*1) Set this value as the initial value of the velocity loop gain.

Motor model	αiI 8/10000HV-B	αiI 8/10000HV-B	αiI 8/12000HV-B	αiI 12/8000HV-B	αiI 12/8000HV-B	αiI 12/12000HV-B	αiI 15/8000HV-B	αiI 15/8000HV-B	αiI 15/8000HV-B
Applicable amplifier	αiSP 11HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 15HV-B βiSVSP* 18HV-B	αiSP 22HV-B	αiSP 22HV-B	αiSP 30HV-B
Output specification nameplate	K527#S00	K527#S00	K527#S01	K508#S00	K508#S0P	K528#S0P	K509#S00	K509#S0P	K509#S0S
Model code	5217	6217	5218	5058	5059	5219	5060	5061	5062
Parameter ID	2735	-	2603	2484	2836	2290	2842	2908	2916
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/P 9DB0/P	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O
Low-speed winding characteristics	7.5/11 kW 1500/10000 min^{-1}	7.5/11 kW 1500/10000 min^{-1}	7.5/11 kW 1500/12000 min^{-1}	-	–	11/15/18.5 kW 1500/12000 min^{-1}	-	-	-
High-speed winding characteristics	7.5/11 kW 4000/10000 min^{-1}	7.5/11 kW 4000/10000 min^{-1}	7.5/11 kW 4000/12000 min^{-1}	11/15 kW 1500/8000 min^{-1}	11/15/18.5 kW 1500/8000 min^{-1}	11/15/18.5 kW 4000/12000 min^{-1}	15/18.5 kW 1500/8000 min^{-1}	15/18.5/25 kW 1500/8000 min^{-1}	15/18.5/25/30 kW 1500/8000 min^{-1}
4007	00000000	←	00000000	00000000	00000100	00000100	00000000	00000000	00000000
4008	00000000	←	00000000	00000000	00000000	00000000	00000000	00010000	00010000
4009	00000000	←	00000000	00000000	00000000	00000000	00000000	00000000	00000000
4010	00000000	←	00000001	00000000	00000000	00010001	00000000	00000000	00000000
4011	00011010	←	00011010	00011010	00001010	00011010	00011010	00001010	00001010
4012	10000010	←	10000010	10000000	10000010	10000010	10000010	10000111	10000010
4013	00001100	←	00001100	00001100	00001100	00001100	00001100	00001100	00001100
4019	00000100	←	00000100	00000100	00000100	00000100	00000100	00000100	00000100
4398	10000000	←	10000000	10000000	10000000	10000000	10000000	10000000	10000000
4400	00000000	←	00000000	00000000	00000000	00000000	00000000	00000001	00000000
4020	10000	←	12000	8000	8000	12000	8000	8000	8000
4023	400 (*2)	←	333 (*2)	30	30	333 (*2)	30	30	30
4039	0	←	0	0	0	0	0	0	0
4040	13 (*1)	←	13 (*1)	9 (*1)	7 (*1)	20 (*1)	10 (*1)	7 (*1)	6 (*1)
4041	5 (*1)	←	5 (*1)	10	10	7 (*1)	10	10	10
4048	61 (*1)	←	61 (*1)	43 (*1)	35 (*1)	93 (*1)	45 (*1)	33 (*1)	26 (*1)
4049	23 (*1)	←	23 (*1)	10	10	35 (*1)	10	10	10
4080	90	←	9050	88	79	88	65	21840	21840
4083	30	←	30	30	30	30	30	30	30
4093	176(B) 176(A)	←	176(B) 176(A)	0(B) 0(A)	0(B) 0(A)	202(B) 202(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)
4100	4000	←	3750	1550	1493	4032	1500	1550	1530
4101	97	←	85	100	100	84	73	100	94
4102	4524	←	3798	1754	1913	3253	1972	1972	1972
4103	90	←	89	88	0	95	65	0	0
4104	2000	←	3800	2000	4000	900	4500	1700	3300
4105	140	←	101	347	363	381	341	341	341
4106	7000	←	10000	4500	11000	2300	4500	3800	10000
4107	132	←	95	0	0	379	0	0	0
4108	0	←	0	0	0	0	0	0	0
4109	25	←	25	25	25	25	25	25	25
4110	471	942	569	1077	1207	754	999	999	1499
4111	150	←	100	250	329	190	425	450	554
4112	200	←	200	200	200	200	200	200	200
4113	680	←	950	275	263	250	280	280	280
4114	0	←	0	0	0	0	23040	21760	21760
4115	100	←	100	100	100	100	100	100	100
4116	6321	←	8736	5800	4345	4701	5153	5153	5153
4117	90	←	90	90	23130	90	90	90	90
4118	100	←	90	100	100	19300	100	100	100
4119	14	←	10	35	36	38	34	34	34
4120	0	←	0	0	0	0	0	0	0
4124	24482	←	24447	24562	24575	24513	24575	24575	24575
4127	176(B) 176(A)	←	176(B) 176(A)	185(B) 164(A)	202(B) 202(A)	236(B) 202(A)	196(B) 148(A)	272(B) 200(A)	273(B) 240(A)
4128	0	←	0	108	90	0	0	105	0
4129	0	←	0	0	0	0	0	0	0
4130	25700	←	25700	25700	25700	25700	25700	25700	25700
4134	130	←	130	130	130	130	130	130	130
4136	30	←	30	30	30	30	30	30	30
4138	1800	←	1550	0	0	1550	0	0	0
4139	100	←	84	0	0	100	0	0	0
4140	2323	←	1957	0	0	1615	0	0	0
4141	85	←	74	0	0	88	0	0	0
4142	5000	←	7000	0	0	3000	0	0	0
4143	14000	←	18000	0	0	9000	0	0	0
4144	0	←	0	0	0	0	0	0	0
4145	25	←	25	0	0	25	0	0	0
4146	629	1258	838	0	0	1160	0	0	0
4147	229	←	186	0	0	315	0	0	0
4148	200	←	200	0	0	200	0	0	0
4149	723	←	1000	0	0	252	0	0	0
4150	23040	←	0	0	0	0	0	0	0
4151	100	←	100	0	0	100	0	0	0
4152	8734	←	8737	0	0	4463	0	0	0
4153	90	←	90	0	0	90	0	0	0
4154	100	←	90	0	0	100	0	0	0
4155	24544	←	24510	0	0	24575	0	0	0
4156	0	←	0	0	0	0	0	0	0
4158	0	←	0	0	0	0	0	0	0
4159	0	←	0	0	0	0	0	0	0
4161	25700	←	25700	0	0	25700	0	0	0
4165	13	←	266	0	0	38	0	0	0
4166	20568	←	14938	0	0	61	0	0	0
4167	0	←	0	0	121	0	0	0	0
4168	592	←	816	0	0	550	0	0	0
4169	0	←	0	0	0	0	0	0	0
4170	328	←	1136	336	336	1488	312	312	312
4362	0	←	0	0	-24501	0	0	0	0
4363	0	←	0	0	-30605	0	0	0	0
4364	0	←	0	0	-24376	0	0	0	0
4365	0	←	0	0	0	0	0	0	0
4366	0	←	0	0	0	0	0	0	0
4367	0	←	0	0	0	0	0	0	0
4453	2700	←	774	1600	1600	840	2200	2200	2200
4454	2500	←	612	0	0	600	0	0	0
4612	141	←	124	156	127	107	126	128	100
4613	10253	←	12299	16521	16521	10379	16537	16537	16537
4614	145	←	122	0	0	127	0	0	0
4615	16517	←	19201	0	0	16518	0	0	0
Maximum output during acceleration (for PS selection)	13.2kW	13.2kW	13.2kW	18kW	22.2kW	22.2kW	22.2kW	30kW	36kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

JR AUTOMATION TECHNOLOGY, LLC*

Motor model	αiI 15/12000HV-B	αiI 22/8000HV-B	αiI 22/8000HV-B	αiI 22/12000HV-B	αiI 22/12000HV-B	αiI 30/7000HV-B	αiI 30/7000HV-B	αiI 40/7000HV-B	αiI 40/7000HV-B
Applicable amplifier	αiSP 22HV-B	αiSP 30HV-B	αiSP 30 HV-B	αiSP 30HV-B	αiSP 30HV-B	αiSP 45HV-B	αiSP 45HV-B	αiSP 45HV-B	αiSP 75HV-B
Output specification nameplate	K529#S00	K511#S00	K511#S0P	K531#S00	K531#S0P	K512#S00	K512#S0P	K513#S00	K513#S0P
Model code	5220	5063	5064	5221	5222	5065	5066	5067	5068
Parameter ID	2400	2117	2127	2586	2076	2888	2266	2673	2967
Series and editions of applicable spindle sofutware	9DAA/N 9DB0/N	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/P 9DB0/P	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	15/18.5 kW 1500/12000 min^{-1}	-	-	22/26 kW 1500/12000 min^{-1}	22/26/35 kW 1500/12000 min^{-1}	-	-	-	-
High-speed winding characteristics	15/18.5 kW 4000/12000 min^{-1}	22/26 kW 1500/8000 min^{-1}	22/26/35 kW 1500/8000 min^{-1}	22/26 kW 4000/12000 min^{-1}	22/26/35 kW 4000/12000 min^{-1}	30/37 kW 1150/7000 min^{-1}	30/37/45 kW 1150/7000 min^{-1}	37/45 kW 1150/7000 min^{-1}	37/45/70 kW 1150/7000 min^{-1}
4007	00000000	00000000	00000000	00000000	00000000	00000000	00000100	00000000	00000000
4008	00000000	00000000	00010000	00000000	00010000	00000000	00000000	00010000	00010000
4009	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
4010	00000001	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00010000
4011	00011010	00011010	00001010	00011010	00001010	00011010	00001010	00001010	00001010
4012	10000010	10000010	10000010	10000010	10000010	10000000	10000010	10000000	10000000
4013	00001100	00001100	00001100	00001100	00001100	00001100	00001100	00001100	00001100
4019	00000100	00000100	00000100	00000100	00000100	00000100	00000100	00000100	00000100
4398	10000000	10000000	10000000	10000000	10000000	10000000	10000000	10000000	10000000
4400	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
4020	12000	8000	8000	12000	12000	7000	7000	7000	7000
4023	333 (*2)	30	30	333 (*2)	333 (*2)	30	30	30	30
4039	0	0	0	0	0	0	0	0	0
4040	26 (*1)	10 (*1)	7 (*1)	26 (*1)	19 (*1)	12 (*1)	10 (*1)	12 (*1)	8 (*1)
4041	10 (*1)	10	10	10 (*1)	7 (*1)	10	10	10	10
4048	119 (*1)	45 (*1)	34 (*1)	121 (*1)	90 (*1)	56 (*1)	46 (*1)	56 (*1)	36 (*1)
4049	45 (*1)	10	10	45 (*1)	34 (*1)	10	10	10	10
4080	80	75	23125	83	19280	98	70	82	20560
4083	30	30	30	30	30	30	30	30	30
4093	153(B) 148(A)	0(B) 0(A)	0(B) 0(A)	142(B) 142(A)	191(B) 191(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)
4100	4000	1595	1520	3630	4000	1230	1190	1600	1170
4101	53	100	100	74	75	85	100	100	100
4102	3464	1595	1794	3318	3318	1617	1617	1940	1940
4103	70	0	0	93	0	55	0	0	0
4104	2800	5000	4000	2100	2500	2500	5100	2500	2500
4105	341	294	318	360	360	597	564	546	544
4106	2800	5000	15000	6300	5000	4000	11500	2800	5000
4107	341	0	0	347	347	0	0	0	0
4108	0	0	0	0	0	0	0	0	0
4109	25	25	25	25	25	25	25	25	25
4110	571	838	870	666	666	1257	1257	718	1437
4111	229	223	295	160	236	455	469	252	478
4112	200	200	200	200	200	200	200	200	200
4113	280	325	300	265	265	160	169	175	175
4114	0	20480	0	0	20480	0	23040	0	0
4115	100	100	100	100	100	100	100	100	100
4116	5184	5572	4295	5000	5000	5056	5056	6212	6800
4117	90	90	90	90	90	90	90	90	90
4118	100	100	100	90	100	100	100	100	100
4119	34	29	32	50	50	60	56	54	54
4120	0	0	0	0	0	0	0	0	0
4124	24544	24539	24575	24489	24550	24575	24575	24564	24575
4127	164(B) 148(A)	142(B) 142(A)	191(B) 191(A)	142(B) 142(A)	193(B) 191(A)	148(B) 148(A)	196(B) 180(A)	146(B) 146(A)	227(B) 227(A)
4128	0	0	102	98	110	110	0	115	103
4129	0	0	0	0	0	0	0	0	0
4130	25700	25700	25700	25700	25700	25700	25700	25700	25700
4134	130	130	130	130	130	130	130	130	130
4136	30	30	30	30	30	30	30	30	30
4138	1500	0	0	1500	1550	0	0	0	0
4139	73	0	0	84	90	0	0	0	0
4140	1972	0	0	1669	1669	0	0	0	0
4141	65	0	0	82	0	0	0	0	0
4142	4500	0	0	4000	4000	0	0	0	0
4143	4500	0	0	12000	12000	0	0	0	0
4144	0	0	0	0	0	0	0	0	0
4145	25	0	0	25	25	0	0	0	0
4146	999	0	0	984	984	0	0	0	0
4147	425	0	0	270	365	0	0	0	0
4148	200	0	0	200	200	0	0	0	0
4149	280	0	0	275	275	0	0	0	0
4150	23040	0	0	0	24320	0	0	0	0
4151	100	0	0	100	100	0	0	0	0
4152	5153	0	0	4991	4991	0	0	0	0
4153	90	0	0	90	90	0	0	0	0
4154	100	0	0	90	28260	0	0	0	0
4155	24575	0	0	24575	24575	0	0	0	0
4156	0	0	0	0	0	0	0	0	0
4158	0	0	0	103	110	0	0	0	0
4159	0	0	0	0	0	0	0	0	0
4161	25700	0	0	25700	25700	0	0	0	0
4165	34	0	0	70	35	0	0	0	0
4166	65	0	0	18517	19280	0	0	0	0
4167	0	0	0	0	0	0	121	0	0
4168	560	0	0	530	530	0	0	0	0
4169	0	0	0	0	0	0	0	0	0
4170	996	496	496	1102	1102	336	336	318	318
4362	0	0	-24501	0	-26424	0	-24526	0	0
4363	0	0	-26424	0	-26324	0	-30570	0	0
4364	0	0	31120	0	-26274	0	-24276	0	0
4365	0	0	0	0	-26349	0	0	0	0
4366	0	0	0	0	-32443	0	0	0	0
4367	0	0	0	0	-26274	0	0	0	0
4453	2100	2300	2300	2400	2400	3000	3000	3700	3700
4454	1500	0	0	2600	2600	0	0	0	0
4612	92	181	134	134	101	147	142	175	96
4613	10376	16517	16517	10241	10241	12291	12546	14082	14340
4614	126	0	0	152	121	0	0	0	0
4615	16517	0	0	16514	16771	0	0	0	0
Maximum output during acceleration (for PS selection)	22.2kW	31.2kW	42kW	31.2kW	42kW	44.4kW	54kW	54kW	84kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

JRAUTOMATION FANUC*

Motor model	αiI 50/5000HV-B	αiI 60/5000HV-B	αiI 75/5000HV-B	αiI 100/5000HV-B	αiI 150/5000HV-B
Applicable amplifier	αiSP 45HV-B	αiSP 75HV-B	αiSP 75HV-B	αiSP 100HV-B	αiSP 75HV-Bx2
Output specification nameplate	K514#S00	K515#S00	K516#S00	K518#S00	K532#S00
Model code	5069	5070	5071	5223	5072
Parameter ID	2090	2957	2187	2688	2800
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	100 kW 1000/5000 min^{-1}	-
High-speed winding characteristics	45/55 kW 1150/5000 min^{-1}	60/75 kW 1380/5000 min^{-1}	75/90 kW 1050/5000 min^{-1}	100 kW 3000/5000 min^{-1}	150/180 kW 1500/5000 min^{-1}
4007	00000000	00000000	00000000	00000000	00000000
4008	00010000	00000000	00010000	00010000	00000000
4009	00000000	00000000	00000000	00000000	00000000
4010	00000000	00000000	00010001	00010001	00010001
4011	00001010	00011010	00001010	00001010	00001010
4012	10000000	10000000	10000000	10000000	10000000
4013	00001100	00001100	00001100	00001100	00001100
4019	00000100	00000100	00000100	00000100	00000100
4398	10000000	10000000	10000000	10000000	10000000
4400	00000000	00000000	00000000	00000000	00000000
4020	5000	5000	5000	5000	5000
4023	30	30	30	600 (*2)	30
4039	0	0	0	0	0
4040	14 (*1)	10 (*1)	12 (*1)	39 (*1)	11 (*1)
4041	10	10	10	13 (*1)	10
4048	63 (*1)	46 (*1)	57 (*1)	180 (*1)	50 (*1)
4049	10	10	10	60 (*1)	10
4080	18000	90	20560	85	10591
4083	30	30	30	30	30
4093	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	120(B) 120(A)	0(B) 0(A)
4100	1150	1130	1100	3050	1520
4101	85	100	100	90	100
4102	1175	1491	1254	3210	1551
4103	0	85	0	0	0
4104	4000	3500	2500	1400	2500
4105	492	495	531	555	554
4106	6000	7000	4000	2300	4000
4107	0	0	0	555	0
4108	0	0	0	0	0
4109	25	25	25	25	25
4110	678	1174	887	1131	973
4111	274	345	292	379	324
4112	200	200	200	200	200
4113	194	193	180	172	172
4114	0	0	0	0	0
4115	100	100	100	100	100
4116	5045	5042	4794	4691	4691
4117	90	90	90	90	90
4118	100	100	100	100	100
4119	49	49	53	55	55
4120	0	0	0	0	0
4124	24575	24575	24575	24575	24575
4127	147(B) 147(A)	179(B) 150(A)	151(B) 144(A)	120(B) 120(A)	146(B) 144(A)
4128	0	0	110	0	120
4129	0	0	0	0	0
4130	25700	25700	25700	25700	25700
4134	130	130	130	130	130
4136	30	30	30	30	30
4138	0	0	0	1020	0
4139	0	0	0	79	0
4140	0	0	0	1042	0
4141	0	0	0	0	0
4142	0	0	0	4000	0
4143	0	0	0	7000	0
4144	0	0	0	0	0
4145	0	0	0	25	0
4146	0	0	0	993	0
4147	0	0	0	352	0
4148	0	0	0	200	0
4149	0	0	0	172	0
4150	0	0	0	0	0
4151	0	0	0	100	0
4152	0	0	0	4691	0
4153	0	0	0	90	0
4154	0	0	0	100	0
4155	0	0	0	24575	0
4156	0	0	0	0	0
4158	0	0	0	0	0
4159	0	0	0	0	0
4161	0	0	0	25700	0
4165	0	0	0	55	0
4166	0	0	0	16730	0
4167	0	0	0	0	0
4168	0	0	0	275	0
4169	0	0	0	0	0
4170	272	336	283	150	341
4362	0	0	0	0	0
4363	0	0	0	0	0
4364	0	0	0	0	0
4365	0	0	0	0	0
4366	0	0	0	0	0
4367	0	0	0	0	0
4453	2500	5000	3800	4700	2500
4454	0	0	0	3300	0
4612	148	9871	178	192	178
4613	12559	12550	13580	6938	12298
4614	0	0	0	169	0
4615	0	0	0	12288	0
Maximum output during acceleration (for PS selection)	66kW	90kW	108kW	120kW	216kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

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A.2 SPINDLE MOTOR αiIP-B series

Motor model	αiIP 12/8000-B	αiIP 12/8000-B	αiIP 12/8000-B	αiIP 12/8000-B	αiIP 12/8000-B	αiIP 12/8000-B	αiIP 15/8000-B	αiIP 15/8000-B	αiIP 15/8000-B	αiIP 15/8000-B
Applicable amplifier	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K448#S00	K448#S00	K448#S00	K448#S0P	K448#S0P	K448#S0P	K449#S00	K449#S00	K449#S0P	K449#S0P
Model code	5224	6224	7224	5225	6225	7225	5226	6226	5227	6227
Parameter ID	2041	-	-	2910	-	-	2903	-	2295	-
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	3.7/7.5 kW 500/1500 min^{-1}	3.7/7.5 kW 500/1500 min^{-1}	3.7/7.5 kW 500/1500 min^{-1}	3.7/7.5 kW 500/1500 min^{-1}	3.7/7.5 kW 500/1500 min^{-1}	3.7/7.5 kW 500/1500 min^{-1}	5/9 kW 500/1500 min^{-1}	5/9 kW 500/1500 min^{-1}	5/9 kW 500/1500 min^{-1}	5/9 kW 500/1500 min^{-1}
High-speed winding characteristics	5.5/7.5 kW 750/8000 min^{-1}	5.5/7.5 kW 750/8000 min^{-1}	5.5/7.5 kW 750/8000 min^{-1}	5.5/7.5/9 kW 750/8000 min^{-1}	5.5/7.5/9 kW 750/8000 min^{-1}	5.5/7.5/9 kW 750/8000 min^{-1}	7.5/9 kW 750/8000 min^{-1}	7.5/9 kW 750/8000 min^{-1}	7.5/9/12 kW 750/8000 min^{-1}	7.5/9/12 kW 750/8000 min^{-1}
4007	00000000	←	←	00000000	←	←	00000000	←	00000000	←
4008	00000000	←	←	00010000	←	←	00000000	←	00010000	←
4009	00000000	←	←	00000000	←	←	00000000	←	00000000	←
4010	00000000	←	←	00010000	←	←	00000000	←	00000000	←
4011	00011010	←	←	00011010	←	←	00011010	←	00001010	←
4012	10000010	←	←	10000000	←	←	10000010	←	10000010	←
4013	00001100	←	←	00001100	←	←	00001100	←	00001100	←
4019	00000100	←	←	00000100	←	←	00000100	←	00000100	←
4398	10000000	←	←	10000000	←	←	10000000	←	10000000	←
4400	00000000	←	←	00000000	←	←	00000000	←	00000000	←
4020	8000	←	←	8000	←	←	8000	←	8000	←
4023	94 (*2)	←	←	94 (*2)	←	←	94 (*2)	←	94 (*2)	←
4039	0	←	←	0	←	←	0	←	0	←
4040	9 (*1)	←	←	8 (*1)	←	←	10 (*1)	←	7 (*1)	←
4041	6 (*1)	←	←	6 (*1)	←	←	7 (*1)	←	7 (*1)	←
4048	43 (*1)	←	←	36 (*1)	←	←	46 (*1)	←	34 (*1)	←
4049	29 (*1)	←	←	29 (*1)	←	←	31 (*1)	←	31 (*1)	←
4080	11610	←	←	60	←	←	16730	←	18778	←
4083	30	←	←	30	←	←	30	←	30	←
4093	243(B) 243(A)	←	←	243(B) 243(A)	←	←	216(B) 216(A)	←	216(B) 216(A)	←
4100	750	←	←	792	←	←	750	←	850	←
4101	100	←	←	100	←	←	90	←	95	←
4102	1488	←	←	1488	←	←	1431	←	1431	←
4103	75	←	←	0	←	←	65	←	0	←
4104	4000	←	←	2600	←	←	3800	←	4200	←
4105	398	←	←	397	←	←	354	←	353	←
4106	10000	←	←	4500	←	←	11000	←	12500	←
4107	354	←	←	354	←	←	341	←	340	←
4108	0	←	←	0	←	←	0	←	0	←
4109	25	←	←	25	←	←	25	←	25	←
4110	815	1223	1630	815	1223	1630	1043	1391	1043	1391
4111	297	←	←	348	←	←	326	←	412	←
4112	200	←	←	200	←	←	200	←	200	←
4113	240	←	←	240	←	←	270	←	270	←
4114	23040	←	←	23040	←	←	23040	←	0	←
4115	100	←	←	100	←	←	100	←	100	←
4116	5307	←	←	5307	←	←	5171	←	5171	←
4117	90	←	←	90	←	←	90	←	90	←
4118	100	←	←	100	←	←	100	←	100	←
4119	40	←	←	40	←	←	35	←	35	←
4120	0	←	←	0	←	←	0	←	0	←
4124	24575	←	←	24575	←	←	24575	←	24575	←
4127	178(B) 164(A)	←	←	196(B) 196(A)	←	←	161(B) 144(A)	←	192(B) 192(A)	←
4128	105	←	←	105	←	←	105	←	107	←
4129	0	←	←	0	←	←	0	←	0	←
4130	25700	←	←	25700	←	←	25700	←	25700	←
4134	130	←	←	130	←	←	130	←	130	←
4136	30	←	←	30	←	←	30	←	30	←
4138	530	←	←	530	←	←	560	←	560	←
4139	90	←	←	90	←	←	100	←	100	←
4140	887	←	←	887	←	←	1143	←	1143	←
4141	0	←	←	0	←	←	80	←	80	←
4142	6500	←	←	3700	←	←	5000	←	5000	←
4143	15000	←	←	8000	←	←	13000	←	13000	←
4144	0	←	←	0	←	←	0	←	0	←
4145	25	←	←	25	←	←	25	←	25	←
4146	1494	2241	2988	1494	2241	2988	2514	3352	2514	3352
4147	565	←	←	565	←	←	816	←	816	←
4148	200	←	←	200	←	←	200	←	200	←
4149	270	←	←	270	←	←	280	←	280	←
4150	23040	←	←	23040	←	←	23040	←	23040	←
4151	100	←	←	100	←	←	100	←	100	←
4152	5268	←	←	5268	←	←	5170	←	5170	←
4153	90	←	←	90	←	←	90	←	90	←
4154	100	←	←	100	←	←	100	←	100	←
4155	24575	←	←	24575	←	←	24575	←	24575	←
4156	0	←	←	0	←	←	0	←	0	←
4158	110	←	←	110	←	←	0	←	105	←
4159	0	←	←	0	←	←	0	←	0	←
4161	25700	←	←	25700	←	←	25700	←	25700	←
4165	15	←	←	35	←	←	10	←	34	←
4166	70	←	←	62	←	←	70	←	70	←
4167	0	←	←	0	←	←	0	←	0	←
4168	384	←	←	384	←	←	56	←	56	←
4169	0	←	←	0	←	←	0	←	0	←
4170	448	←	←	448	←	←	232	←	232	←
4362	0	←	←	-24476	←	←	0	←	-24351	←
4363	0	←	←	31110	←	←	0	←	-30420	←
4364	0	←	←	27024	←	←	0	←	-26174	←
4365	0	←	←	0	←	←	0	←	0	←
4366	0	←	←	0	←	←	0	←	0	←
4367	0	←	←	0	←	←	0	←	0	←
4453	2100	←	←	2100	←	←	900	←	900	←
4454	2500	←	←	2500	←	←	900	←	900	←
4612	156	←	←	130	←	←	160	←	127	←
4613	32391	←	←	32391	←	←	32641	←	32642	←
4614	95	←	←	95	←	←	255	←	255	←
4615	12117	←	←	12117	←	←	11604	←	11604	←
Maximum output during acceleration (for PS selection)	9kW	9kW	9kW	10.8kW	10.8kW	10.8kW	10.8kW	10.8kW	14.4kW	14.4kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

JR AUTOMATION TECHNOLOGY, INC*

Motor model	αiIP 18/8000-B	αiIP 18/8000-B	αiIP 18/8000-B	αiIP 18/8000-B	αiIP 22/8000-B	αiIP 22/8000-B	αiIP 30/6000-B	αiIP 30/6000-B	αiIP 40/6000-B
Applicable amplifier	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP *18-B	αiSP 22-B	αiSP 22-B	αiSP 22-B	αiSP 22-B	αiSP 26-B
Output specification nameplate	K456#S00	K456#S00	K456#S0P	K456#S0P	K451#S00	K451#S0P	K452#S00	K452#S0P	K453#S00
Model code	5228	6228	5229	6229	5230	5231	5232	5233	5234
Parameter ID	2808	-	2530	-	2975	2065	2551	2455	2255
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	6/11 kW 500/1500 min^{-1}	6/11 kW 500/1500 min^{-1}	6/11 kW 500/1500 min^{-1}	6/11 kW 500/1500 min^{-1}	7.5/15 kW 500/1500 min^{-1}	7.5/15 kW 500/1500 min^{-1}	11/18.5 kW 400/1500 min^{-1}	11/18.5 kW 400/1500 min^{-1}	13/22 kW 400/1500 min^{-1}
High-speed winding characteristics	9/11 kW 750/8000 min^{-1}	9/11 kW 750/8000 min^{-1}	9/11/15 kW 750/8000 min^{-1}	9/11/15 kW 750/8000 min^{-1}	11/15 kW 750/8000 min^{-1}	11/15/18.5 kW 750/8000 min^{-1}	15/18.5 kW 575/6000 min^{-1}	15/18.5/22 kW 575/6000 min^{-1}	18.5/22 kW 575/6000 min^{-1}
4007	00000000	←	00000000	←	00000000	00000000	00000000	00000000	00000000
4008	00000000	←	00010000	←	00000000	00010000	00000000	00000000	00000000
4009	00000000	←	00000000	←	00000000	00000000	00000000	00000000	00000000
4010	00000000	←	00000000	←	00000000	00000000	00000000	00000000	00000000
4011	00011010	←	00001010	←	00011010	00001010	00011010	00011010	00011010
4012	10000010	←	10000111	←	10000010	10000111	10000010	10000000	10000000
4013	00001100	←	00001100	←	00001100	00001100	00001100	00001100	00001100
4019	00000100	←	00000100	←	00000100	00000100	00000100	00000100	00000100
4398	10000000	←	10000000	←	10000000	10000000	10000000	10000000	10000000
4400	00000000	←	00000001	←	00000000	00000001	00000000	00000000	00000000
4020	8000	←	8000	←	8000	8000	6000	6000	6000
4023	94 (*2)	←	94 (*2)	←	94 (*2)	94 (*2)	96 (*2)	96 (*2)	96 (*2)
4039	0	←	0	←	0	0	0	0	0
4040	9 (*1)	←	7 (*1)	←	8 (*1)	7 (*1)	12 (*1)	10 (*1)	10 (*1)
4041	6 (*1)	←	6 (*1)	←	6 (*1)	6 (*1)	8 (*1)	8 (*1)	7 (*1)
4048	44 (*1)	←	32 (*1)	←	39 (*1)	32 (*1)	56 (*1)	47 (*1)	47 (*1)
4049	29 (*1)	←	29 (*1)	←	26 (*1)	26 (*1)	39 (*1)	39 (*1)	33 (*1)
4080	75	←	25153	←	18000	21062	19280	70	65
4083	30	←	30	←	30	30	30	30	30
4093	220(B) 220(A)	←	220(B) 220(A)	←	240(B) 240(A)	240(B) 240(A)	202(B) 202(A)	202(B) 202(A)	203(B) 203(A)
4100	740	←	1261	←	800	800	590	575	590
4101	100	←	100	←	100	100	100	100	100
4102	1261	←	1261	←	1342	1342	889	889	835
4103	70	←	0	←	65	0	85	56	80
4104	5500	←	3200	←	5500	2500	10000	4200	3500
4105	318	←	318	←	318	318	482	483	562
4106	17000	←	7000	←	5500	2500	10000	7500	6500
4107	303	←	292	←	292	292	579	580	477
4108	0	←	0	←	0	0	0	0	0
4109	25	←	25	←	25	25	25	25	25
4110	754	1005	755	1007	914	914	750	750	1052
4111	225	←	311	←	300	387	267	320	312
4112	200	←	200	←	200	200	150	200	200
4113	300	←	300	←	300	300	198	198	170
4114	0	←	0	←	23040	23040	21760	0	0
4115	100	←	100	←	100	100	100	100	100
4116	5671	←	5671	←	6196	6196	6050	6050	4500
4117	90	←	90	←	90	90	90	90	90
4118	100	←	90	←	100	100	100	100	100
4119	32	←	32	←	301	301	48	48	56
4120	0	←	0	←	0	0	0	0	0
4124	24541	←	24575	←	24575	24575	24575	24575	24575
4127	147(B) 147(A)	←	200(B) 200(A)	←	164(B) 164(A)	202(B) 202(A)	148(B) 148(A)	176(B) 176(A)	143(B) 143(A)
4128	105	←	0	←	110	0	105	0	85
4129	0	←	0	←	0	0	0	0	0
4130	25700	←	25700	←	25700	25700	25700	25700	25700
4134	130	←	130	←	130	130	130	130	130
4136	30	←	30	←	30	30	30	30	30
4138	500	←	500	←	530	530	400	400	430
4139	90	←	90	←	100	100	100	100	100
4140	755	←	755	←	930	930	684	684	713
4141	60	←	60	←	0	0	0	0	56
4142	8000	←	8000	←	6500	6500	13000	4700	5000
4143	23000	←	23000	←	15000	15000	13000	7800	7000
4144	0	←	0	←	0	0	0	0	0
4145	25	←	25	←	25	25	25	25	25
4146	1489	1985	1489	1985	1886	1886	2011	2011	2155
4147	476	←	476	←	617	617	733	733	655
4148	200	←	200	←	200	200	200	200	200
4149	315	←	315	←	327	327	165	165	200
4150	0	←	0	←	20480	20480	0	0	0
4151	100	←	100	←	100	100	100	100	100
4152	5660	←	5660	←	4813	4813	6008	6008	5200
4153	90	←	90	←	90	90	28250	28250	90
4154	115	←	115	←	110	110	100	100	100
4155	24575	←	24575	←	24575	24575	24575	24575	24575
4156	0	←	0	←	0	0	0	0	0
4158	0	←	0	←	90	90	90	90	0
4159	0	←	0	←	0	0	0	0	0
4161	25700	←	25700	←	25700	25700	25700	25700	25700
4165	10	←	10	←	20	20	58	58	48
4166	77	←	77	←	75	75	50	50	17232
4167	0	←	0	←	0	0	0	0	0
4168	448	←	448	←	240	240	48	48	133
4169	0	←	0	←	0	0	0	0	0
4170	592	←	592	←	432	432	480	480	336
4362	0	←	0	←	0	0	0	0	0
4363	0	←	0	←	0	0	0	0	0
4364	0	←	0	←	0	0	0	0	0
4365	0	←	0	←	0	0	0	0	0
4366	0	←	0	←	0	0	0	0	0
4367	0	←	0	←	0	0	0	0	0
4453	1800	←	1800	←	2300	2300	5000	5000	3500
4454	2000	←	2000	←	1800	1800	700	700	1700
4612	175	←	128	←	156	127	173	145	179
4613	-32761	←	-32760	←	32518	32518	24709	24711	24709
4614	105	←	102	←	107	107	127	127	126
4615	12371	←	12544	←	12114	12114	9991	9991	10056
Maximum output during acceleration (for PS selection)	13.2kW	13.2kW	18kW	18kW	18kW	22.2kW	22.2kW	26.4kW	26.4kW

(*1) Set this value as the initial value of the velocity loop gain.

(*2) When using the SDT signal, manually change the parameters that were automatically set.

JR AUTOMATION TECHNOLOGIES, INC*

Motor model	αiIP 40/6000-B	αiIP 50/6000-B	αiIP 50/6000-B	αiIP 60/5000-B
Applicable amplifier	αiSP 26-B	αiSP 26-B	αiSP 26-B	αiSP 30-B
Output specification nameplate	K453#S0P	K454#S00	K454#S0P	K455#S00
Model code	5235	5236	5237	5238
Parameter ID	2488	2722	2612	2753
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	13/22 kW 400/1500 min^{-1}	22/30 kW 575/1500 min^{-1}	22/30/37 kW 575/1500 min^{-1}	18.5/30 kW 400/1500 min^{-1}
High-speed winding characteristics	18.5/22/26 kW 575/6000 min^{-1}	22/30 kW 1200/6000 min^{-1}	22/30/37 kW 1200/6000 min^{-1}	22/30 kW 750/5000 min^{-1}
4007	00000100	00000000	00000000	00000000
4008	00000000	00000000	00010000	00000000
4009	00000000	00000000	00000000	00000000
4010	00010000	00000000	00000000	00000000
4011	00011010	00011010	00001010	00011010
4012	10000010	10000010	10000111	10000000
4013	00001100	00001100	00001100	00001100
4019	00000100	00000100	00000100	00000100
4398	10000000	10000000	10000000	10000000
4400	00000000	00000000	00010001	00000000
4020	6000	6000	6000	5000
4023	96 (*2)	200 (*2)	200 (*2)	150 (*2)
4039	0	0	0	0
4040	7 (*1)	19 (*1)	13 (*1)	16 (*1)
4041	9 (*1)	9 (*1)	6 (*1)	9 (*1)
4048	40 (*1)	87 (*1)	59 (*1)	75 (*1)
4049	39 (*1)	42 (*1)	28 (*1)	40 (*1)
4080	38	75	16738	75
4083	30	30	30	30
4093	203(B) 203(A)	164(B) 164(A)	202(B) 202(A)	195(B) 195(A)
4100	675	1107	1230	750
4101	99	100	100	84
4102	835	1107	1491	861
4103	0	0	0	80
4104	3500	8000	4000	5000
4105	475	531	464	487
4106	6500	8000	6500	9000
4107	478	490	438	490
4108	0	0	0	0
4109	25	25	25	25
4110	1052	686	924	1018
4111	363	175	326	280
4112	200	200	200	200
4113	199	180	206	196
4114	0	25600	0	0
4115	100	100	100	100
4116	3600	6150	6156	5050
4117	24154	90	90	90
4118	100	100	100	100
4119	48	53	46	49
4120	0	0	0	0
4124	24575	24501	24575	24575
4127	169(B) 169(A)	172(B) 164(A)	202(B) 202(A)	164(B) 164(A)
4128	110	100	0	0
4129	0	0	0	0
4130	25700	25700	25700	25700
4134	130	130	130	130
4136	30	30	30	30
4138	430	608	630	420
4139	100	100	100	85
4140	713	608	881	497
4141	73	0	0	0
4142	5000	21000	6000	8000
4143	7000	21000	10000	12000
4144	0	0	0	0
4145	25	25	25	25
4146	2155	1131	1508	1764
4147	655	317	609	510
4148	200	200	200	200
4149	200	195	218	195
4150	0	23040	0	0
4151	100	100	100	100
4152	5200	6191	5000	5045
4153	90	90	90	90
4154	100	100	100	100
4155	24575	24575	24575	24575
4156	0	0	0	0
4158	0	110	85	0
4159	0	0	0	0
4161	25700	25700	25700	25700
4165	48	49	44	20
4166	65	65	95	45
4167	0	0	0	0
4168	133	280	280	214
4169	0	0	0	0
4170	336	443	443	248
4362	0	0	-24516	0
4363	0	0	-28472	0
4364	0	0	-24276	0
4365	0	0	-26595	0
4366	0	0	28732	0
4367	0	0	26694	0
4453	3500	2800	2800	4500
4454	1700	2800	2800	2800
4612	150	156	127	131
4613	24969	13827	11011	16651
4614	126	156	127	112
4615	10051	8553	10752	10513
Maximum output during acceleration (for PS selection)	31.2kW	36kW	44.4kW	36kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

JR AUTOMATION TECHNOLOGIES INC*

Motor model	αiI$_P$ 15/8000HV-B	αiI$_P$ 22/8000HV-B	αiI$_P$ 40/6000HV-B	αiI$_P$ 50/6000HV-B	αiI$_P$ 60/5000HV-B
Applicable amplifier	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 22HV-B	αiSP 30HV-B	αiSP 30HV-B	αiSP 30HV-B
Output specification nameplate	K549#S00	K551#S00	K553#S00	K554#S00	K555#S00
Model code	5239	5240	5241	5242	5243
Parameter ID	2657	2548	2729	2591	2387
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	5/9 kW 500/1500 min^{-1}	7.5/15 kW 500/1500 min^{-1}	13/22 kW 400/1500 min^{-1}	22/30 kW 575/1500 min^{-1}	18.5/30 kW 400/1500 min^{-1}
High-speed winding characteristics	7.5/9 kW 750/8000 min^{-1}	11/15 kW 750/8000 min^{-1}	18.5/22 kW 575/6000 min^{-1}	22/30 kW 1200/6000 min^{-1}	22/30 kW 750/5000 min^{-1}
4007	00000000	00000000	00000000	00000000	00000000
4008	00000000	00010000	00000000	00000000	00000000
4009	00000000	00000000	00000000	00000000	00000000
4010	00000000	00000000	00000000	00000000	00000000
4011	00011010	00001010	00011010	00011010	00001010
4012	10000010	10000010	10000000	10000010	10000000
4013	00001100	00001100	00001100	00001100	00001100
4019	00000100	00000100	00000100	00000100	00000100
4398	10000000	10000000	10000000	10000000	10000000
4400	00000000	00000000	00000000	00000000	00000000
4020	8000	8000	6000	6000	5000
4023	94 (*2)	94 (*2)	96 (*2)	200 (*2)	150 (*2)
4039	0	0	0	0	0
4040	10 (*1)	8 (*1)	10 (*1)	19 (*1)	16 (*1)
4041	7 (*1)	6 (*1)	7 (*1)	9 (*1)	9 (*1)
4048	46 (*1)	39 (*1)	47 (*1)	87 (*1)	75 (*1)
4049	31 (*1)	26 (*1)	33 (*1)	42 (*1)	40 (*1)
4080	95	75	73	80	80
4083	30	30	30	30	30
4093	216(B) 216(A)	240(B) 240(A)	203(B) 203(A)	0(B) 164(A)	195(B) 195(A)
4100	760	760	600	1120	863
4101	90	88	100	100	100
4102	1460	1240	889	1356	863
4103	60	0	75	85	0
4104	5000	5000	6400	6000	6000
4105	368	286	530	475	495
4106	12000	15000	6400	16000	14000
4107	289	288	516	508	492
4108	0	0	0	0	0
4109	25	25	25	25	25
4110	1384	903	1098	838	764
4111	330	382	304	225	229
4112	200	200	200	200	200
4113	260	334	180	201	193
4114	0	20480	20480	0	0
4115	100	100	100	100	100
4116	4600	4500	6043	6202	5045
4117	90	90	90	90	90
4118	100	90	90	100	100
4119	37	29	53	48	49
4120	0	0	0	0	0
4124	24575	24575	24575	24541	24544
4127	162(B) 144(A)	164(B) 164(A)	143(B) 143(A)	0(B) 164(A)	164(B) 164(A)
4128	103	105	115	104	0
4129	0	0	0	0	0
4130	25700	25700	25700	25700	25700
4134	130	130	130	130	130
4136	30	30	30	30	30
4138	530	500	430	699	500
4139	75	60	100	95	100
4140	726	717	661	699	500
4141	75	0	60	95	0
4142	10000	8500	8600	10000	11000
4143	28000	19000	8600	24000	22000
4144	0	0	0	0	0
4145	25	25	25	25	25
4146	1934	1571	2514	1374	1331
4147	465	620	726	395	424
4148	200	200	200	200	200
4149	330	332	185	188	194
4150	0	23040	23040	0	0
4151	100	100	100	100	100
4152	5167	5542	6040	6203	5045
4153	90	90	90	90	90
4154	100	90	90	100	100
4155	24575	24575	24575	24575	24575
4156	0	0	0	0	0
4158	0	0	0	120	0
4159	0	0	0	0	0
4161	25700	25700	25700	25700	25700
4165	29	29	52	51	49
4166	80	85	65	63	70
4167	0	0	0	0	0
4168	278	0	74	0	0
4169	0	0	0	0	0
4170	240	0	288	0	0
4362	0	0	0	0	0
4363	0	0	0	0	0
4364	0	0	0	0	0
4365	0	0	0	0	0
4366	0	0	0	0	0
4367	0	0	0	0	0
4453	470	0	3300	0	0
4454	1100	0	1500	0	0
4612	160	138	179	0	125
4613	32385	32518	24453	0	16395
4614	89	64	126	0	92
4615	12365	12288	10053	0	7758
Maximum output during acceleration (for PS selection)	13.5kW	18kW	26.4kW	36kW	36kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

JR AUTOMATION TECHNOLOGIES INC*

A.3 SPINDLE MOTOR αiIT-B series

Motor model	αiIT 1/24000-B	αiIT 1.5/20000-B	αiIT 2/20000-B	αiIT 3/12000-B	αiIT 3/12000-B	αiIT 3/12000-B	αiIT 3/12000-B	αiIT 3/15000-B
Applicable amplifier	αiSP 22-B βiSVSP* 18-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B
Output specification nameplate	K460#S0S	K463#S0S	K464#S0S	K465#S00	K465#S00	K465#S00	K465#S0S	K475#S0U
Model code	5073	5074	5075	5076	6076	7076	5077	5078
Parameter ID	2593	2638	2762	2545	-	-	2556	2069
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-
High-speed winding characteristics	2.2/3.7/5.5/11 kW 6000/24000 min^{-1}	2.2/3.7/5.5/9 kW 3000/20000 min^{-1}	3.7/5.5/9/11 kW 3000/20000 min^{-1}	3.7/5.5 kW 1500/12000 min^{-1}	3.7/5.5 kW 1500/12000 min^{-1}	3.7/5.5 kW 1500/12000 min^{-1}	3.7/5.5/7.5/13 kW 1500/12000 min^{-1}	5.5/7.5/11/15 kW 3000/15000 min^{-1}
4007	00000000	00000000	00000000	00000000	←	←	00000000	00000100
4008	00000000	00000000	00000000	00000000	←	←	00000000	00000000
4009	00000000	00000000	00000000	00000000	←	←	00000000	00000000
4010	00000001	00000001	00000001	00000001	←	←	00000001	00010001
4011	00011001	00011001	00011001	00011001	←	←	00011001	00001001
4012	10000010	10000010	10000010	10000010	←	←	10000000	10000010
4013	00001100	00001100	00001100	00001100	←	←	00001100	00001100
4019	00000100	00000100	00000100	00000100	←	←	00000100	00000100
4398	10000000	10000000	10000000	10000000	←	←	10000000	10000000
4400	00000000	00000000	00000000	00000000	←	←	00000000	00000000
4020	24000	20000	20000	12000	←	←	12000	15000
4023	30	30	30	30	←	←	30	30
4039	0	0	0	0	←	←	0	0
4040	2 (*1)	2 (*1)	3 (*1)	5 (*1)	←	←	2 (*1)	4 (*1)
4041	10	10	10	10	←	←	10	10
4048	10 (*1)	9 (*1)	13 (*1)	25 (*1)	←	←	10 (*1)	18 (*1)
4049	10	10	10	10	←	←	10	10
4080	15447	5981	24410	16720	←	←	20570	12870
4083	10	10	10	30	←	←	30	30
4093	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	←	←	0(B) 0(A)	0(B) 0(A)
4100	6100	3300	3200	1500	←	←	1600	3150
4101	99	87	100	87	←	←	100	100
4102	11558	7145	6432	3015	←	←	3015	4725
4103	66	70	75	82	←	←	4939	0
4104	1300	3000	2700	3200	←	←	1700	2000
4105	49	43	53	106	←	←	106	103
4106	2800	3000	5300	7500	←	←	4000	7000
4107	0	0	0	0	←	←	0	0
4108	0	0	0	0	←	←	0	0
4109	25	25	25	25	←	←	25	25
4110	915	838	588	559	839	1118	1117	614
4111	299	260	222	190	←	←	399	229
4112	200	200	200	200	←	←	200	200
4113	1978	2227	1800	900	←	←	900	904
4114	0	0	0	19200	←	←	19200	0
4115	90	90	80	100	←	←	80	100
4116	10318	10289	16564	7376	←	←	7376	7375
4117	90	90	90	90	←	←	90	90
4118	28260	100	100	100	←	←	90	100
4119	5	1	2	9	←	←	9	10
4120	0	0	0	0	←	←	0	0
4124	24575	24570	24539	24513	←	←	24575	24544
4127	550(B) 600(A)	491(B) 490(A)	327(B) 357(A)	178(B) 178(A)	←	←	422(B) 421(A)	327(B) 327(A)
4128	0	102	105	0	←	←	110	0
4129	0	0	0	0	←	←	0	0
4130	25700	25700	25700	25700	←	←	25700	25700
4134	110	110	110	110	←	←	110	110
4136	30	30	30	30	←	←	30	30
4138	0	0	0	0	←	←	0	0
4139	0	0	0	0	←	←	0	0
4140	0	0	0	0	←	←	0	0
4141	0	0	0	0	←	←	0	0
4142	0	0	0	0	←	←	0	0
4143	0	0	0	0	←	←	0	0
4144	0	0	0	0	←	←	0	0
4145	0	0	0	0	←	←	0	0
4146	0	0	0	0	←	←	0	0
4147	0	0	0	0	←	←	0	0
4148	0	0	0	0	←	←	0	0
4149	0	0	0	0	←	←	0	0
4150	0	0	0	0	←	←	0	0
4151	0	0	0	0	←	←	0	0
4152	0	0	0	0	←	←	0	0
4153	0	0	0	0	←	←	0	0
4154	0	0	0	0	←	←	0	0
4155	0	0	0	0	←	←	0	0
4156	0	0	0	0	←	←	0	0
4158	0	0	0	0	←	←	0	0
4159	0	0	0	0	←	←	0	0
4161	0	0	0	0	←	←	0	0
4165	0	0	0	0	←	←	0	0
4166	0	0	0	0	←	←	0	0
4167	0	0	0	0	←	←	0	0
4168	0	0	0	0	←	←	0	0
4169	0	0	0	0	←	←	0	0
4170	1008	1232	1296	1120	←	←	1120	896
4362	0	-23826	-23826	0	←	←	-24176	0
4363	0	-27772	-27797	0	←	←	-30245	0
4364	0	-31768	31720	0	←	←	-30120	0
4365	0	0	0	0	←	←	0	0
4366	0	0	0	0	←	←	0	0
4367	0	0	0	0	←	←	0	0
4453	800	600	1200	3000	←	←	3000	1400
4454	0	0	0	0	←	←	0	0
4612	42	45	72	125	←	←	61	78
4613	16390	20354	20357	32256	←	←	32267	20489
4614	0	0	0	0	←	←	0	0
4615	0	0	0	0	←	←	0	0
Maximum output during acceleration (for PS selection)	22kW	22kW	26kW	13kW	13kW	13kW	22kW	18kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiIT 6/12000-B	αiIT 6/12000-B	αiIT 6/12000-B	αiIT 6/15000-B	αiIT 8/12000-B	αiIT 8/12000-B	αiIT 8/12000-B	αiIT 8/12000-B	αiIT 8/12000-B
Applicable amplifier	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K466#S0P	K466#S0P	K466#S0P	K476#S0S	K467#S00	K467#S00	K467#S0P	K467#S0P	K467#S0S
Model code	5244	6244	7244	5245	5246	6246	5247	6247	5248
Parameter ID	2893	-	-	2575	2982	-	2600	-	2931
Series and editions of applicable spindle sofutware	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	5.5/7.5/11 kW 1500/12000 min^{-1}	5.5/7.5/11 kW 1500/12000 min^{-1}	5.5/7.5/11 kW 1500/12000 min^{-1}	5.5/7.5/11/15 kW 1500/15000 min^{-1}	7.5/11 kW 1500/12000 min^{-1}	7.5/11 kW 1500/12000 min^{-1}	7.5/11/15 kW 1500/12000 min^{-1}	7.5/11/15 kW 1500/12000 min^{-1}	7.5/11/15/18.5 kW 1500/12000 min^{-1}
High-speed winding characteristics	5.5/7.5/11 kW 4000/12000 min^{-1}	5.5/7.5/11 kW 4000/12000 min^{-1}	5.5/7.5/11 kW 4000/12000 min^{-1}	7.5/11/15/18 kW 3000/15000 min^{-1}	7.5/11 kW 4000/12000 min^{-1}	7.5/11 kW 4000/12000 min^{-1}	7.5/11/15 kW 4000/12000 min^{-1}	7.5/11/15 kW 4000/12000 min^{-1}	7.5/11/15/18.5 kW 4000/12000 min^{-1}
4007	00000000	←	←	00000000	00000000	←	00000000	←	00000000
4008	00010000	←	←	00000000	00000000	←	00010000	←	00000000
4009	00000000	←	←	00000000	00000000	←	00000000	←	00000000
4010	00000001	←	←	00000001	00000001	←	00000001	←	00000001
4011	00001010	←	←	00011010	00011010	←	00001010	←	00011010
4012	10000111	←	←	10000010	10000010	←	10000010	←	10000010
4013	00001100	←	←	00001100	00001100	←	00001100	←	00001100
4019	00000100	←	←	00000100	00000100	←	00000100	←	00000100
4398	10000000	←	←	10000000	10000000	←	10000000	←	10000000
4400	00010001	←	←	00000000	00000000	←	00000000	←	00000000
4020	12000	←	←	15000	12000	←	12000	←	12000
4023	333 (*2)	←	←	200 (*2)	333 (*2)	←	333 (*2)	←	333 (*2)
4039	0	←	←	0	0	←	0	←	0
4040	9 (*1)	←	←	4 (*1)	13 (*1)	←	10 (*1)	←	8 (*1)
4041	3 (*1)	←	←	2 (*1)	5 (*1)	←	4 (*1)	←	3 (*1)
4048	40 (*1)	←	←	18 (*1)	61 (*1)	←	45 (*1)	←	36 (*1)
4049	15 (*1)	←	←	9 (*1)	23 (*1)	←	17 (*1)	←	14 (*1)
4080	75	←	←	10325	70	←	15186	←	75
4083	30	←	←	30	30	←	30	←	30
4093	240(B) 240(A)	←	←	327(B) 327(A)	176(B) 176(A)	←	240(B) 240(A)	←	296(B) 296(A)
4100	4400	←	←	3100	3580	←	3580	←	4614
4101	100	←	←	100	100	←	71	←	100
4102	4838	←	←	4853	3580	←	3580	←	4614
4103	0	←	←	0	0	←	0	←	0
4104	1200	←	←	2600	2300	←	4000	←	3300
4105	119	←	←	137	97	←	97	←	83
4106	2500	←	←	6000	2300	←	14000	←	10000
4107	138	←	←	143	88	←	88	←	88
4108	0	←	←	0	0	←	0	←	0
4109	25	←	←	25	25	←	25	←	25
4110	479	719	958	702	421	561	421	561	603
4111	198	←	←	275	100	←	157	←	148
4112	200	←	←	200	200	←	200	←	200
4113	800	←	←	700	980	←	980	←	1150
4114	17920	←	←	0	0	←	22528	←	17920
4115	100	←	←	100	100	←	100	←	100
4116	6500	←	←	7157	11031	←	11031	←	10000
4117	90	←	←	90	90	←	90	←	90
4118	100	←	←	100	100	←	100	←	100
4119	15	←	←	29	522	←	522	←	522
4120	0	←	←	0	0	←	0	←	0
4124	24519	←	←	24575	24447	←	24487	←	24480
4127	240(B) 240(A)	←	←	288(B) 288(A)	176(B) 176(A)	←	240(B) 240(A)	←	296(B) 296(A)
4128	105	←	←	0	0	←	0	←	0
4129	0	←	←	0	0	←	0	←	0
4130	25700	←	←	25700	25700	←	25700	←	25700
4134	130	←	←	130	130	←	130	←	130
4136	30	←	←	30	30	←	30	←	30
4138	1570	←	←	1600	1500	←	1505	←	1642
4139	100	←	←	90	89	←	74	←	100
4140	2016	←	←	2885	1642	←	1642	←	1642
4141	0	←	←	0	77	←	0	←	0
4142	3000	←	←	4500	5000	←	8000	←	8000
4143	6000	←	←	9000	5000	←	24000	←	20000
4144	0	←	←	0	0	←	0	←	0
4145	25	←	←	25	25	←	25	←	25
4146	603	905	1206	1172	566	755	566	755	754
4147	261	←	←	479	162	←	229	←	220
4148	200	←	←	200	200	←	200	←	200
4149	690	←	←	670	1090	←	1090	←	1090
4150	0	←	←	0	19200	←	21760	←	21760
4151	100	←	←	100	100	←	100	←	100
4152	6500	←	←	7647	8000	←	8000	←	8000
4153	90	←	←	90	90	←	90	←	90
4154	100	←	←	95	100	←	100	←	100
4155	24571	←	←	24575	24491	←	24544	←	24537
4156	0	←	←	0	0	←	0	←	0
4158	6505	←	←	0	0	←	0	←	0
4159	0	←	←	0	0	←	0	←	0
4161	25700	←	←	25700	25700	←	25700	←	25700
4165	527	←	←	14	521	←	521	←	9
4166	12870	←	←	21855	49	←	15693	←	19285
4167	0	←	←	0	0	←	0	←	0
4168	400	←	←	528	832	←	832	←	832
4169	0	←	←	0	0	←	0	←	0
4170	1424	←	←	1072	328	←	328	←	328
4362	0	←	←	0	0	←	0	←	-24176
4363	0	←	←	0	0	←	0	←	-24176
4364	0	←	←	0	0	←	0	←	-30120
4365	0	←	←	-24476	0	←	0	←	0
4366	0	←	←	-28522	0	←	0	←	0
4367	0	←	←	-24076	0	←	0	←	0
4453	2100	←	←	2700	2700	←	2700	←	2700
4454	2100	←	←	2100	2700	←	2700	←	2700
4612	107	←	←	89	145	←	76	←	86
4613	12288	←	←	20489	12299	←	12299	←	12299
4614	107	←	←	70	129	←	79	←	86
4615	22156	←	←	32512	19201	←	19201	←	19202
Maximum output during acceleration (for PS selection)	13.2kW	13.2kW	13.2kW	33kW	13.2kW	13.2kW	18kW	18kW	22kW

(*1) Set this value as the initial value of the velocity loop gain.

(*2) When using the SDT signal, manually change the parameters that were automatically set.

JR AUTOMATION TECHNOLOGIES, INC*

Motor model	αiIT 8/15000-B	αiIT 12/12000-B	αiIT 12/12000-B	αiIT 12/12000-B	αiIT 15/12000-B	αiIT 15/12000-B	αiIT 15/12000-B	αiIT 15/15000-B	αiIT 15/15000-B
Applicable amplifier	αiSP 30-B	αiSP 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B	αiSP 22-B	αiSP 30-B	αiSP 30-B
Output specification nameplate	K477#S0S	K468#S0P	K468#S0P	K468#S0S	K469#S00	K469#S0P	K469#S0S	K479#S00	K479#S0P
Model code	5249	5250	6250	5251	5252	5253	5254	5255	5256
Parameter ID	2786	2059	-	2392	2948	2386	2791	2761	2857
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/M 9DB0/M
Low-speed winding characteristics	7.5/11/18.5/26 kW 1500/4000 min^{-1}	11/15/18.5 kW 1500/12000 min^{-1}	11/15/18.5 kW 1500/12000 min^{-1}	11/15/20/25 kW 1500/12000 min^{-1}	15/18.5 kW 1500/12000 min^{-1}	15/18.5/25 kW 1500/12000 min^{-1}	15/18.5/25/30 kW 1500/12000 min^{-1}	15/18.5/22 kW 1400/4000 min^{-1}	15/18.5/22/26 kW 1400/4000 min^{-1}
High-speed winding characteristics	11/15/26/33 kW 4000/15000 min^{-1}	11/15/18.5 kW 4000/12000 min^{-1}	11/15/18.5 kW 4000/12000 min^{-1}	11/15/18.5/28 kW 4000/12000 min^{-1}	15/18.5 kW 4000/12000 min^{-1}	15/18.5/25 kW 1500/12000 min^{-1}	15/18.5/25/33 kW 1500/12000 min^{-1}	15/18.5/22 kW 5000/15000 min^{-1}	15/18.5/22/26 kW 5000/15000 min^{-1}
4007	00000000	00000000	←	00000100	00000000	00000000	00000100	00000000	00000100
4008	00000000	00010000	←	00000000	00000000	00010000	00000000	00000000	00000000
4009	00000000	00000000	←	00000000	00000000	00000000	00000000	00000000	00000000
4010	00000001	00000001	←	00010001	00000001	00000001	00010001	00000001	00010001
4011	00011010	00001010	←	00011010	00011010	00001010	00011010	00011010	00011010
4012	10000010	10000010	←	10000010	10000010	10000010	10000000	10000010	10000010
4013	00001100	00001100	←	00001100	00001100	00001100	00001100	00001100	00001100
4019	00000100	00000100	←	00000100	00000100	00000100	00000100	00000100	00000100
4398	10000000	10000000	←	10000000	10000000	10000000	10000000	10000000	10000000
4400	00000000	00000000	←	00000000	00000000	00000000	00000000	00000000	00000000
4020	15000	12000	←	12000	12000	12000	12000	15000	15000
4023	267 (*2)	333 (*2)	←	333 (*2)	333 (*2)	333 (*2)	283 (*2)	233 (*2)	233 (*2)
4039	0	0	←	0	0	0	0	0	0
4040	4 (*1)	20 (*1)	←	13 (*1)	26 (*1)	19 (*1)	14 (*1)	12 (*1)	10 (*1)
4041	2 (*1)	7 (*1)	←	6 (*1)	10 (*1)	7 (*1)	6 (*1)	5 (*1)	4 (*1)
4048	18 (*1)	93 (*1)	←	61 (*1)	119 (*1)	88 (*1)	67 (*1)	58 (*1)	45 (*1)
4049	9 (*1)	35 (*1)	←	26 (*1)	45 (*1)	32 (*1)	28 (*1)	21 (*1)	18 (*1)
4080	15962	75	←	12883	80	15445	70	10583	15956
4083	30	30	←	30	30	30	30	30	30
4093	416(B) 416(A)	202(B) 202(A)	←	273(B) 273(A)	148(B) 148(A)	202(B) 200(A)	240(B) 240(A)	229(B) 176(A)	230(B) 208(A)
4100	4200	3800	←	4100	4000	4200	4570	4500	5100
4101	90	80	←	87	62	85	100	65	59
4102	5161	3593	←	3593	3482	3482	4570	5392	5392
4103	90	0	←	0	75	0	80	82	78
4104	2700	1800	←	1800	1700	1700	700	3500	2700
4105	78	341	←	307	347	347	398	251	251
4106	9200	6000	←	6000	5500	5500	2000	3500	7700
4107	75	324	←	307	314	314	314	252	252
4108	0	0	←	0	0	0	0	0	0
4109	25	25	←	25	25	25	25	25	25
4110	669	595	793	794	575	575	754	887	887
4111	208	223	←	311	193	212	320	255	300
4112	200	200	←	200	200	200	200	200	200
4113	1232	280	←	311	275	275	240	380	380
4114	28160	0	←	0	23040	23040	0	0	0
4115	100	100	←	100	100	100	100	100	100
4116	10984	5280	←	5280	5126	5126	5126	9314	9314
4117	90	90	←	100	90	29530	90	90	21850
4118	100	100	←	28772	90	100	100	90	28250
4119	3	34	←	31	35	35	35	25	25
4120	0	0	←	0	0	0	0	0	0
4124	24527	24539	←	24575	24515	24530	24575	24566	24575
4127	394(B) 360(A)	236(B) 202(A)	←	305(B) 305(A)	161(B) 148(A)	219(B) 200(A)	273(B) 264(A)	234(B) 176(A)	288(B) 208(A)
4128	105	0	←	0	0	0	0	0	105
4129	0	0	←	0	0	0	0	0	0
4130	25700	25700	←	25700	25700	25700	25700	25700	25700
4134	130	130	←	130	130	130	130	130	130
4136	30	30	←	30	30	30	30	30	30
4138	1700	1550	←	1600	1500	1500	1625	1450	1450
4139	90	100	←	100	95	100	100	70	70
4140	2592	1922	←	1922	1710	1710	1625	1783	1783
4141	0	0	←	0	70	0	0	93	0
4142	5000	3000	←	3000	5500	5500	1800	7000	7400
4143	16000	10000	←	10000	5500	5500	4400	7000	14800
4144	0	0	←	0	0	0	0	0	0
4145	25	25	←	25	25	25	25	25	25
4146	1003	905	1207	1207	794	794	754	2155	2155
4147	335	337	←	486	243	305	333	650	761
4148	200	200	←	200	200	200	200	200	200
4149	1277	295	←	311	304	304	304	380	380
4150	0	0	←	0	23040	23040	24320	0	0
4151	100	100	←	100	100	100	100	100	100
4152	11083	5279	←	5015	5177	5177	5177	2000	7955
4153	90	90	←	90	90	90	90	90	26970
4154	100	100	←	100	100	100	100	90	90
4155	24575	24575	←	24575	24556	24575	24575	24575	24575
4156	0	0	←	0	0	0	0	0	0
4158	103	0	←	0	105	105	0	0	0
4159	0	0	←	0	0	0	0	0	0
4161	25700	25700	←	25700	25700	25700	25700	25700	25700
4165	7	32	←	31	31	31	31	25	25
4166	83	16735	←	15450	20555	17498	53	65	17488
4167	0	0	←	0	0	0	0	0	0
4168	1328	704	←	704	560	560	560	192	192
4169	0	0	←	0	0	0	0	0	0
4170	2744	704	←	704	1024	1024	1024	1008	1008
4362	-24076	0	←	-24426	0	-24326	0	0	0
4363	-26024	0	←	-28172	0	-26124	0	0	0
4364	-25874	0	←	-30120	0	-32168	0	0	0
4365	-24501	0	←	-26424	0	0	-24276	0	0
4366	-28572	0	←	-26174	0	0	-28172	0	0
4367	-30520	0	←	-32168	0	0	-30120	0	0
4453	2700	2100	←	2100	2100	2100	2100	2000	2000
4454	2700	2100	←	2100	1500	1500	1500	1000	1000
4612	64	101	←	73	107	109	97	95	73
4613	12421	10379	←	10379	10375	10376	10376	8326	8326
4614	55	127	←	94	164	128	107	102	86
4615	4179	16518	←	16774	16772	16531	16773	7568	7569
Maximum output during acceleration (for PS selection)	48kW	22.2kW	22.2kW	33.6kW	22.2kW	30kW	39.6kW	38kW	50kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

JR AUTOMATION TECHNOLOGIES, INC*

Motor model	αiI$_T$ 15/15000-B	αiI$_T$ 22/12000-B	αiI$_T$ 22/12000-B	αiI$_T$ 22/12000-B	αiI$_{PT}$ 22/8000-B
Applicable amplifier	αi SP 30-B	αi SP 26-B	αi SP 26-B	αi SP 30-B	αi SP 22-B
Output specification nameplate	K479#S0S	K471#S00	K471#S0P	K471#S0S	K472#S00
Model code	5257	5258	5259	5260	5261
Parameter ID	2998	2854	2440	2553	2740
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/N 9DB0/N	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/M 9DB0/M
Low-speed winding characteristics	15/18.5/22/26/30kW 1400/4000 min^{-1}	22/26 kW 1500/12000 min^{-1}	22/26/35 kW 1500/12000 min^{-1}	22/26/35/45 kW 1500/12000 min^{-1}	7.5/15 kW 500/1500 min^{-1}
High-speed winding characteristics	15/18.5/22/26/37kW 5000/15000 min^{-1}	22/26 kW 4000/12000 min^{-1}	22/26/35 kW 4000/12000 min^{-1}	22/26/35/48 kW 4000/12000 min^{-1}	11/15 kW 750/8000 min^{-1}
4007	00000100	00000000	00000000	00000000	00000000
4008	00000000	00000000	00010000	00010000	00000000
4009	00000000	00000000	00000000	00000000	00000000
4010	00010001	00000001	00000001	00000001	00000001
4011	00011010	00011010	00001010	00001010	00011010
4012	10000010	10000010	10000111	10000010	10000010
4013	00001100	00001100	00001100	00001100	00001100
4019	00000100	00000100	00000100	00000100	00000100
4398	10000000	10000000	10000000	10000000	10000000
4400	00000000	00000000	00010001	00000000	00000000
4020	15000	12000	12000	12000	8000
4023	267 (*2)	333 (*2)	333 (*2)	333 (*2)	94 (*2)
4039	0	0	0	0	0
4040	10 (*1)	26 (*1)	19 (*1)	14 (*1)	8 (*1)
4041	3 (*1)	10 (*1)	7 (*1)	6 (*1)	6 (*1)
4048	44 (*1)	121 (*1)	90 (*1)	65 (*1)	38 (*1)
4049	13 (*1)	45 (*1)	34 (*1)	26 (*1)	26 (*1)
4080	13396	75	80	80	18000
4083	30	30	30	30	30
4093	292(B) 240(A)	155(B) 142(A)	191(B) 191(A)	245(B) 245(A)	240(B) 240(A)
4100	5100	4000	4000	4050	800
4101	80	83	78	94	100
4102	5392	3504	3504	4348	1342
4103	83	0	0	0	65
4104	2700	2800	1400	1700	5500
4105	251	360	360	357	318
4106	7700	2800	1400	4400	5500
4107	252	318	318	339	292
4108	0	0	0	0	0
4109	25	25	25	25	25
4110	887	603	604	1006	914
4111	300	143	218	335	300
4112	200	200	200	200	200
4113	380	265	265	255	300
4114	0	24320	0	0	23040
4115	100	100	100	100	100
4116	9314	5523	5523	3438	6196
4117	23898	90	90	90	90
4118	26202	100	100	100	100
4119	25	36	36	37	301
4120	0	0	0	0	0
4124	24575	24477	24535	24575	24575
4127	342(B) 296(A)	142(B) 142(A)	191(B) 191(A)	271(B) 262(A)	164(B) 164(A)
4128	114	0	0	0	110
4129	0	0	0	0	0
4130	25700	25700	25700	25700	25700
4134	130	130	130	130	130
4136	30	30	30	30	30
4138	1300	1440	1520	1550	530
4139	93	96	94	95	100
4140	1783	1709	1709	1725	930
4141	0	96	0	0	0
4142	7400	5000	2200	4700	6500
4143	17900	5000	4600	9000	15000
4144	0	0	0	0	0
4145	25	25	25	25	25
4146	2155	823	823	1077	1886
4147	761	213	312	371	617
4148	200	200	200	200	200
4149	380	300	300	285	327
4150	0	19200	19200	0	20480
4151	100	100	100	100	100
4152	7955	5593	5593	3696	4813
4153	28250	90	90	90	90
4154	28270	100	100	100	110
4155	24575	24531	24575	24575	24575
4156	0	0	0	0	0
4158	0	0	108	0	90
4159	0	0	0	0	0
4161	25700	25700	25700	25700	25700
4165	25	341	32	34	20
4166	17494	56	16735	19290	75
4167	0	0	0	0	0
4168	192	496	496	496	240
4169	0	0	0	0	0
4170	1008	568	568	568	432
4362	0	0	0	0	0
4363	0	0	0	0	0
4364	0	0	0	0	0
4365	0	0	0	-24501	0
4366	0	0	0	-30420	0
4367	0	0	0	31320	0
4453	2000	2300	2300	2300	2300
4454	1000	2300	2300	2300	1800
4612	69	150	105	92	156
4613	8326	10241	10241	10241	32518
4614	10066	173	126	99	107
4615	9104	16385	16385	16385	12114
Maximum output during acceleration (for PS selection)	50kW	31.2kW	42kW	57.6kW	20kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

JR AUTOMATION TECHNOLOGIES INC*

Motor model	αiIT 1.5/20000HV-B	αiIT 2/20000HV-B	αiIT 3/12000HV-B	αiIT 3/12000HV-B	αiIT 6/12000HV-B	αiIT 8/12000HV-B	αiIT 8/15000HV-B	αiIT 12/12000HV-B	αiIT 15/12000HV-B
Applicable amplifier	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 30HV-B	αiSP 11HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 30HV-B	αiSP 15HV-B βiSVSP* 18HV-B	αiSP 22HV-B
Output specification nameplate	K563#S00	K564#S00	K565#S00	K565#S00	K566#S00	K567#S00	K577#S00	K568#S0P	K569#S00
Model code	5079	5080	5081	6081	5262	5263	5264	5265	5266
Parameter ID	2121	2968	2990	-	2900	2409	2852	2506	2992
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/N 9DB0/N
Low-speed winding characteristics	-	-	-	-	5.5/7.5 kW 1500/12000 min^{-1}	7.5/11 kW 1500/12000 min^{-1}	7.5/11/15 kW 1500/4000 min^{-1}	11/15/18.5 kW 1500/12000 min^{-1}	15/18.5 kW 1500/12000 min^{-1}
High-speed winding characteristics	1.5/2.2 kW 3000/20000 min^{-1}	2.2/3.7 kW 3000/20000 min^{-1}	3.7/5.5 kW 1500/12000 min^{-1}	3.7/5.5 kW 1500/12000 min^{-1}	5.5/7.5 kW 4000/12000 min^{-1}	7.5/11 kW 4000/12000 min^{-1}	7.5/11/15 kW 4000/15000 min^{-1}	11/15/18.5 kW 4000/12000 min^{-1}	15/18.5 kW 4000/12000 min^{-1}
4007	00000000	00000000	00000000	←	00000000	00000000	00000000	00000100	00000000
4008	00000000	00000000	00000000	←	00000000	00000000	00000000	00000000	00000000
4009	00000000	00000000	00000000	←	00000000	00000000	00000000	00000000	00000000
4010	00000001	00000001	00000001	←	00000001	00000001	00000001	00010001	00000001
4011	00011001	00011001	00011001	←	00011010	00011010	00011010	00011010	00011010
4012	10000010	10000010	10000010	←	10000010	10000010	10000010	10000010	10000010
4013	00001100	00001100	00001100	←	00001100	00001100	00001100	00001100	00001100
4019	00000100	00000100	00000100	←	00000100	00000100	00000100	00000100	00000100
4398	10000000	10000000	10000000	←	10000000	10000000	10000000	10000000	10000000
4400	00000000	00000000	00000000	←	00000000	00000000	00000000	00000000	00000000
4020	20000	20000	12000	←	12000	12000	15000	12000	12000
4023	30	30	30	←	333 (*2)	333 (*2)	267 (*2)	333 (*2)	333 (*2)
4039	0	0	0	←	0	0	0	0	0
4040	3 (*1)	3 (*1)	5 (*1)	←	7 (*1)	13 (*1)	7 (*1)	20 (*1)	26 (*1)
4041	10	10	10	←	3 (*1)	5 (*1)	4 (*1)	7 (*1)	10 (*1)
4048	15 (*1)	16 (*1)	25 (*1)	←	30 (*1)	61 (*1)	32 (*1)	93 (*1)	119 (*1)
4049	10	10	10	←	15 (*1)	23 (*1)	17 (*1)	35 (*1)	45 (*1)
4080	9045	11605	90	←	96	9050	98	88	80
4083	10	10	30	←	30	30	30	30	30
4093	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	←	188(B) 164(A)	176(B) 176(A)	240(B) 240(A)	202(B) 202(A)	153(B) 148(A)
4100	3500	3400	1550	←	4030	3750	4000	4032	4000
4101	33	41	82	←	51	85	81	84	53
4102	7257	6612	2864	←	4526	3798	5660	3253	3464
4103	80	92	90	←	67	89	86	95	70
4104	3500	2700	4000	←	2700	3800	3000	900	2800
4105	48	56	112	←	127	101	101	381	341
4106	3500	4500	14000	←	7000	10000	3000	2300	2800
4107	0	0	0	←	131	95	87	379	341
4108	0	0	0	←	0	0	0	0	0
4109	25	25	25	←	25	25	25	25	25
4110	1005	1052	559	1118	862	569	646	754	571
4111	233	235	190	←	190	100	166	190	229
4112	200	200	200	←	200	200	200	200	200
4113	2000	1700	850	←	750	950	950	250	280
4114	0	0	0	←	19200	0	0	0	0
4115	100	100	100	←	100	100	100	100	100
4116	9815	11131	7377	←	8202	8736	8703	4701	5184
4117	90	90	90	←	90	90	90	90	90
4118	100	100	110	←	90	90	90	19300	100
4119	5	5	11	←	13	10	266	38	34
4120	0	0	0	←	0	0	0	0	0
4124	24548	24549	24513	←	24513	24447	24494	24513	24544
4127	176(B) 176(A)	202(B) 202(A)	178(B) 178(A)	←	164(B) 164(A)	176(B) 176(A)	240(B) 240(A)	236(B) 202(A)	164(B) 148(A)
4128	90	88	0	←	105	0	105	0	0
4129	0	0	0	←	0	0	0	0	0
4130	25700	25700	25700	←	25700	25700	25700	25700	25700
4134	110	110	110	←	130	130	130	130	130
4136	30	30	30	←	30	30	30	30	30
4138	0	0	0	←	1570	1550	1630	1550	1500
4139	0	0	0	←	67	84	93	100	73
4140	0	0	0	←	2475	1957	2913	1615	1972
4141	0	0	0	←	68	74	85	88	65
4142	0	0	0	←	4600	7000	5500	3000	4500
4143	0	0	0	←	12000	18000	5500	9000	4500
4144	0	0	0	←	0	0	0	0	0
4145	0	0	0	←	25	25	25	25	25
4146	0	0	0	←	1508	838	984	1160	999
4147	0	0	0	←	360	186	282	315	425
4148	0	0	0	←	200	200	200	200	200
4149	0	0	0	←	730	1000	1100	252	280
4150	0	0	0	←	19200	0	0	0	23040
4151	0	0	0	←	100	100	100	100	100
4152	0	0	0	←	8202	8737	8708	4463	5153
4153	0	0	0	←	90	90	90	90	90
4154	0	0	0	←	100	90	90	100	100
4155	0	0	0	←	24575	24510	24575	24575	24575
4156	0	0	0	←	0	0	0	0	0
4158	0	0	0	←	113	0	106	0	0
4159	0	0	0	←	0	0	0	0	0
4161	0	0	0	←	25700	25700	25700	25700	25700
4165	0	0	0	←	13	266	9	38	34
4166	0	0	0	←	19807	14938	92	61	65
4167	0	0	0	←	0	0	0	0	0
4168	0	0	0	←	400	816	794	550	560
4169	0	0	0	←	0	0	0	0	0
4170	1232	1296	1120	←	1440	1136	1635	1488	996
4362	0	0	0	←	0	0	0	0	0
4363	0	0	0	←	0	0	0	0	0
4364	0	0	0	←	0	0	0	0	0
4365	0	0	0	←	0	0	0	0	0
4366	0	0	0	←	0	0	0	0	0
4367	0	0	0	←	0	0	0	0	0
4453	600	1200	3000	←	2000	774	3000	840	2100
4454	0	0	0	←	2100	612	3500	600	1500
4612	48	52	118	←	80	124	86	107	92
4613	26886	26886	32523	←	12299	12299	15369	10379	10376
4614	0	0	0	←	105	122	99	127	126
4615	0	0	0	←	21644	19201	10784	16518	16517
Maximum output during acceleration (for PS selection)	13kW	20kW	13kW	13kW	13kW	13.2kW	28kW	22.2kW	22.2kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

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Motor model	αiI$_T$ 15/15000HV-B		αiI$_T$ 15/15000HV-B		αiI$_T$ 15/15000HV-B		αiI$_T$ 22/12000HV-B		αiI$_T$ 22/12000HV-B	
Applicable amplifier	αiSP 30HV-B		αiSP 30HV-B		αiSP 45HV-B		αiSP 30HV-B		αiSP 30HV-B	
Output specification nameplate	K579#S00		K579#S0P		K579#S0S		K571#S00		K571#S0P	
Model code	5267		5268		5269		5270		5271	
Parameter ID	2308		2344		2354		2571		2080	
Series and editions of applicable spindle sofutware	9DAA/O 9DB0/O		9DAA/M 9DB0/M		9DAA/M 9DB0/M		9DAA/M 9DB0/M		9DAA/O 9DB0/O	
Low-speed winding characteristics	15/18.5/22 kW 1400/4000 min^{-1}		15/18.5/22/26 kW 1400/4000 min^{-1}		15/18.5/22/26/30kW 1400/4000 min^{-1}		22/26 kW 1500/12000 min^{-1}		22/26/35 kW 1500/12000 min^{-1}	
High-speed winding characteristics	15/18.5/22 kW 5000/15000 min^{-1}		15/18.5/22/26 kW 5000/15000 min^{-1}		15/18.5/22/26/30kW 5000/15000 min^{-1}		22/26 kW 4000/12000 min^{-1}		22/26/35 kW 4000/12000 min^{-1}	
4007	00000000		00000000		00000100		00000000		00000000	
4008	00000000		00000000		00000000		00000000		00010000	
4009	00000000		00000000		00000000		00000000		00000000	
4010	00000001		00000001		00010001		00000001		00000001	
4011	00011010		00011010		00011010		00011010		00001010	
4012	10000000		10000111		10000010		10000010		10000010	
4013	00001100		00001100		00001100		00001100		00001100	
4019	00000100		00000100		00000100		00000100		00000100	
4398	10000000		10000000		10000000		10000000		10000000	
4400	00000000		00010001		00000000		00000000		00000000	
4020	15000		15000		15000		12000		12000	
4023	233 (*2)		233 (*2)		233 (*2)		333 (*2)		333 (*2)	
4039	0		0		0		0		0	
4040	10 (*1)		8 (*1)		6 (*1)		26 (*1)		19 (*1)	
4041	5 (*1)		4 (*1)		3 (*1)		10 (*1)		7 (*1)	
4048	46 (*1)		36 (*1)		27 (*1)		121 (*1)		90 (*1)	
4049	21 (*1)		18 (*1)		14 (*1)		45 (*1)		34 (*1)	
4080	19270		18005		20572		83		19280	
4083	30		30		30		30		30	
4093	228(B)	176(A)	281(B)	208(A)	334(B)	240(A)	142(B)	142(A)	191(B)	191(A)
4100	4600		4600		5100		3630		4000	
4101	59		50		48		74		75	
4102	4937		4279		4279		3318		3318	
4103	94		0		0		93		0	
4104	1800		2000		4000		2100		2500	
4105	239		239		239		360		360	
4106	3000		3400		9000		6300		5000	
4107	217		222		222		347		347	
4108	0		0		0		0		0	
4109	25		25		25		25		25	
4110	870		755		1006		666		666	
4111	295		310		370		160		236	
4112	120		200		200		200		200	
4113	400		400		400		265		265	
4114	0		0		0		0		20480	
4115	100		100		100		100		100	
4116	9570		9570		9570		5000		5000	
4117	90		90		26458		90		90	
4118	90		100		28260		90		100	
4119	1048		24		24		50		50	
4120	0		0		0		0		0	
4124	24575		24575		24575		24489		24550	
4127	233(B)	176(A)	236(B)	208(A)	240(B)	240(A)	142(B)	142(A)	191(B)	191(A)
4128	0		95		0		98		110	
4129	0		0		0		0		0	
4130	25700		25700		25700		25750		25700	
4134	130		130		130		130		130	
4136	30		30		30		30		30	
4138	1500		1480		1480		1500		1550	
4139	96		100		100		84		90	
4140	2494		2232		2232		1669		1669	
4141	0		0		0		82		0	
4142	3600		4000		7500		4000		4000	
4143	5500		6500		15000		12000		12000	
4144	0		0		0		0		0	
4145	25		25		25		25		25	
4146	1331		1191		1588		984		984	
4147	470		463		527		270		365	
4148	200		200		200		200		200	
4149	440		430		430		275		275	
4150	0		0		0		0		24320	
4151	100		100		100		100		100	
4152	9567		9567		7967		4991		4991	
4153	90		90		90		90		90	
4154	90		90		100		90		28260	
4155	24575		24575		24575		24575		24575	
4156	0		0		0		0		0	
4158	0		103		0		103		110	
4159	0		0		0		0		0	
4161	25700		25700		25700		25700		25700	
4165	22		22		22		70		35	
4166	11354		12895		18778		18517		19280	
4167	0		0		0		0		0	
4168	288		288		288		366		2094	
4169	0		0		0		0		0	
4170	928		928		928		763		3174	
4362	0		0		0		0		-26424	
4363	0		0		0		0		-26324	
4364	0		0		0		0		-26274	
4365	0		0		-24526		0		-26349	
4366	0		0		-28522		0		-32443	
4367	0		0		-24326		0		-26274	
4453	3100		3100		3100		1200		1200	
4454	1600		1600		1600		1200		1200	
4612	86		62		51		134		101	
4613	8326		8326		8326		10241		10253	
4614	140		123		107		152		121	
4615	7310		7310		7310		16514		16771	
Maximum output during acceleration (for PS selection)	38kW		50kW		58kW		31.2kW		42kW	

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

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A.4 SPINDLE MOTOR αiS 1/12000-B, αiST 1/12000-B

Motor model	αiS 1/12000-B	αiST 1/12000-B
Applicable amplifier	αiSP 26-B	αiSP 26-B
Output specification nameplate	K462#S00	K478#S00
Model code	-	-
Parameter ID	2084	2522
Series and editions of applicable spindle sofutware	-	-
Low-speed winding characteristics	-	-
High-speed winding characteristics	7.5/15/19/36 kW 6000/12000 min^{-1}	7.5/15/19/36 kW 6000/12000 min^{-1}
4007	00000100	00000100
4008	00001000	00001000
4009	00000001	00000001
4010	00000001	00000001
4011	00011001	00011001
4012	11000010	11000010
4013	00001100	00001100
4019	00000100	00000100
4398	10000000	10000000
4400	00000000	00000000
4020	12000	12000
4023	30	30
4039	4000	4000
4040	8 (*1)	8 (*1)
4041	10	10
4048	8 (*1)	8 (*1)
4049	10	10
4080	100	100
4083	2340	2340
4084	(*2)	(*2)
4085	0	0
4086	1547	1547
4093	0(B) 0(A)	0(B) 0(A)
4100	10000	10000
4101	0	0
4102	6000	6000
4103	10000	10000
4104	3000	3000
4105	12000	12000
4106	3200	3200
4107	0	0
4108	0	0
4109	0	0
4110	1024	1024
4111	378	378
4112	120	120
4113	334	334
4114	0	0
4115	110	110
4116	468	468
4117	361	361
4118	0	0
4119	300	300
4120	0	0
4124	0	0
4127	576(B) 576(A)	576(B) 576(A)
4128	0	0
4129	0	0
4130	100	100
4134	130	130
4136	30	30
4138	0	0
4139	0	0
4140	0	0
4141	0	0
4142	0	0
4143	0	0
4144	0	0
4145	0	0
4146	0	0
4147	0	0
4148	0	0
4149	0	0
4150	0	0
4151	0	0
4152	0	0
4153	0	0
4154	0	0
4155	0	0
4156	0	0
4158	0	0
4159	0	0
4161	0	0
4165	0	0
4166	0	0
4167	0	0
4168	0	0
4169	0	0
4170	2058	2058
4362	0	0
4363	0	0
4364	0	0
4365	0	0
4366	0	0
4367	0	0
4526	2000	2000
4453	0	0
4454	200	200
4612	6203	6203
4613	6144	6144
4614	0	0
4615	0	0
Maximum output during acceleration (for PS selection)	45kW	45kW

(*1) Set this value as the initial value of the velocity loop gain.
(*2) Refer to the Chapter III 1.5 POLE POSITION DETECTION of PARAMETER MANUAL B-65280EN and adjust the AMR Offset values and set it.

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A.5 SPINDLE MOTOR αiIL-B series

Motor model	αiIL 8/20000-B		αiIL 15/15000-B		αiIL 26/15000-B	
Applicable amplifier	αiSP 30-B		αiSP 30-B		αiSP 30-B	
Output specification nameplate	K497#S0N		K495#S01		K494#S01	
Model code	5272		5273		5274	
Parameter ID	2669		2476		2540	
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M		9DAA/M 9DB0/M		9DAA/M 9DB0/M	
Low-speed winding characteristics	11/15 kW 1500/4000 min^{-1}		18.5/22 kW 1400/4000 min^{-1}		15/22 kW 600/2000 min^{-1}	
High-speed winding characteristics	15/18.5 kW 5000/20000 min^{-1}		18.5/22 kW 6000/15000 min^{-1}		26/30 kW 2500/15000 min^{-1}	
4007	00000000		00000000		00000000	
4008	00000000		00000000		00000000	
4009	00000000		00000000		00000000	
4010	00000001		00000001		00000001	
4011	00011001		00011001		00011001	
4012	10000010		10000010		10000010	
4013	00001100		00001100		00001100	
4019	00000100		00000100		00000100	
4398	10000000		10000000		10000000	
4400	00000000		00000000		00000000	
4020	20000		15000		15000	
4023	200 (*2)		267 (*2)		120 (*2)	
4039	0		0		0	
4040	12 (*1)		24 (*1)		12 (*1)	
4041	5 (*1)		6 (*1)		4 (*1)	
4048	56 (*1)		109 (*1)		56 (*1)	
4049	23 (*1)		26 (*1)		19 (*1)	
4080	11856		12115		12875	
4083	20		30		30	
4093	210(B)	164(A)	160(B)	143(A)	176(B)	176(A)
4100	5070		6000		2470	
4101	69		52		70	
4102	6960		6153		2580	
4103	0		89		97	
4104	2100		1800		2100	
4105	95		318		298	
4106	3900		2800		4600	
4107	83		318		227	
4108	0		0		0	
4109	25		25		25	
4110	805		1207		1207	
4111	217		343		344	
4112	200		200		200	
4113	1005		300		320	
4114	0		0		0	
4115	100		100		100	
4116	9613		7537		4716	
4117	90		90		90	
4118	100		90		100	
4119	778		32		286	
4120	0		0		0	
4124	24535		24575		24575	
4127	148(B)	148(A)	158(B)	143(A)	143(B)	138(A)
4128	0		0		0	
4129	0		0		0	
4130	25700		25700		25700	
4134	130		130		130	
4136	30		30		30	
4138	1350		1470		700	
4139	75		79		67	
4140	2605		2573		873	
4141	0		0		0	
4142	5600		4000		7000	
4143	7000		6000		12000	
4144	0		0		0	
4145	25		25		25	
4146	1724		2011		2321	
4147	504		585		685	
4148	200		200		200	
4149	1145		300		420	
4150	0		0		19200	
4151	100		100		100	
4152	10911		7536		4711	
4153	90		90		90	
4154	110		100		120	
4155	24575		24575		24575	
4156	0		0		0	
4158	110		107		105	
4159	0		0		0	
4161	25700		25700		25700	
4165	8		32		23	
4166	12893		75		60	
4167	0		0		0	
4168	368		109		352	
4169	0		0		0	
4170	784		512		304	
4362	0		0		0	
4363	0		0		0	
4364	0		0		0	
4365	0		0		0	
4366	0		0		0	
4367	0		0		0	
4453	350		1500		1000	
4454	240		1500		350	
4612	119		93		129	
4613	16384		7042		16770	
4614	10588		8586		97	
4615	13824		9114		13373	
Maximum output during acceleration (for PS selection)	41kW		41kW		43kW	

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

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DOWNLOADING

Motor model	αiI$_L$ 8/20000HV-B		αiI$_L$ 15/15000HV-B		αiI$_L$ 26/15000HV-B	
Applicable amplifier	αiSP 45HV-B		αiSP 45HV-B		αiSP 45HV-B	
Output specification nameplate	K597#S0N		K595#S01		K594#S01	
Model code	5275		5276		5277	
Parameter ID	2019		2666		2541	
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M		9DAA/M 9DB0/M		9DAA/M 9DB0/M	
Low-speed winding characteristics	11/15 kW 1500/4000 min^{-1}		18.5/22 kW 1400/4000 min^{-1}		15/22 kW 700/2000 min^{-1}	
High-speed winding characteristics	15/18.5 kW 5000/20000 min^{-1}		18.5/22 kW 6000/15000 min^{-1}		26/30 kW 2000/15000 min^{-1}	
4007	00000000		00000000		00000000	
4008	00000000		00000000		00000000	
4009	00000000		00000000		00000000	
4010	00000001		00000001		00000001	
4011	00011001		00011001		00011001	
4012	10000010		10000010		10000010	
4013	00001100		00001100		00001100	
4019	00000100		00000100		00000100	
4398	10000000		10000000		10000000	
4400	00000000		00000000		00000000	
4020	20000		15000		15000	
4023	200 (*2)		267 (*2)		100 (*2)	
4039	0		0		0	
4040	5 (*1)		8 (*1)		12 (*1)	
4041	3 (*1)		5 (*1)		7 (*1)	
4048	24 (*1)		38 (*1)		55 (*1)	
4049	13 (*1)		21 (*1)		33 (*1)	
4080	95		19792		14165	
4083	30		30		30	
4093	210(B)	164(A)	160(B)	143(A)	176(B)	176(A)
4100	5050		5500		2030	
4101	53		44		79	
4102	6274		5335		2633	
4103	0		94		95	
4104	3400		2300		3500	
4105	105		298		245	
4106	5000		2600		5500	
4107	84		251		212	
4108	0		0		0	
4109	25		25		25	
4110	862		1437		1508	
4111	255		456		475	
4112	200		200		200	
4113	907		320		390	
4114	0		0		0	
4115	100		90		100	
4116	9345		8423		4525	
4117	90		90		90	
4118	90		90		90	
4119	523		30		24	
4120	0		0		0	
4124	24566		24575		24575	
4127	169(B)	148(A)	157(B)	143(A)	153(B)	138(A)
4128	112		95		98	
4129	0		0		0	
4130	25700		25700		25700	
4134	130		130		130	
4136	30		30		30	
4138	1320		1480		810	
4139	88		92		77	
4140	3163		2777		1248	
4141	0		0		0	
4142	7000		4800		6500	
4143	10000		5200		12000	
4144	0		0		0	
4145	25		25		25	
4146	1207		2011		2011	
4147	375		632		639	
4148	200		200		200	
4149	1140		380		450	
4150	0		0		0	
4151	100		100		100	
4152	12110		9785		4525	
4153	90		90		85	
4154	90		90		85	
4155	24575		24575		24575	
4156	0		0		0	
4158	123		0		0	
4159	0		0		0	
4161	25700		25700		25700	
4165	8		10		21	
4166	95		14180		60	
4167	0		0		0	
4168	420		61		142	
4169	0		0		0	
4170	459		98		114	
4362	0		0		0	
4363	0		0		0	
4364	0		0		0	
4365	0		0		0	
4366	0		0		0	
4367	0		0		0	
4453	350		1500		1000	
4454	240		1500		350	
4612	92		79		146	
4613	12424		7042		14725	
4614	10603		165		112	
4615	13600		8859		11581	
Maximum output during acceleration (for PS selection)	48kW		48kW		50kW	

(*1) Set this value as the initial value of the velocity loop gain.
(*2) When using the SDT signal, manually change the parameters that were automatically set.

JR AUTOMATION TECHNOLOGIES INC*
DOWLING

A.6 SPINDLE MOTOR αiI-B (IP65) series

Motor model	αiI 0.5/10000-B (IP65)	αiI 0.5/10000-B (IP65)	αiI 0.5/10000-B (IP65)	αiI 0.5/10000-B (IP65)	αiI 1/8000-B (IP65)	αiI 1/8000-B (IP65)	αiI 1/8000-B (IP65)	αiI 1/8000-B (IP65)
Applicable amplifier	αiSP 2.2-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 2.2-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B
Output specification nameplate	K481#S00	K481#S00	K481#S00	K481#S00	K482#S00	K482#S00	K482#S00	K482#S00
Model code	5113	6113	7113	8113	5114	6114	7114	8114
Parameter ID	2819	-	-	-	2211	-	-	-
Series and editions of applicable spindle sofutware	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P
Low-speed winding characteristics	-	-	-	-	-	-	-	-
High-speed winding characteristics	0.55/1.1 kW 3000/10000 min^{-1}	0.55/1.1 kW 3000/10000 min^{-1}	0.55/1.1 kW 3000/10000 min^{-1}	0.55/1.1 kW 3000/10000 min^{-1}	0.9/2.2 kW 3000/8000 min^{-1}	0.9/2.2 kW 3000/8000 min^{-1}	0.9/2.2 kW 3000/8000 min^{-1}	0.9/2.2 kW 3000/8000 min^{-1}
4007	00000000	←	←	←	00000000	←	←	←
4008	00000000	←	←	←	00000000	←	←	←
4009	00000000	←	←	←	00000000	←	←	←
4010	00000001	←	←	←	00000001	←	←	←
4011	00011000	←	←	←	00011001	←	←	←
4012	10000010	←	←	←	10000010	←	←	←
4013	00001100	←	←	←	00001100	←	←	←
4019	00000100	←	←	←	00000100	←	←	←
4398	10000000	←	←	←	10000000	←	←	←
4400	00000000	←	←	←	00000000	←	←	←
4020	10000	←	←	←	8000	←	←	←
4023	30	←	←	←	30	←	←	←
4039	0	←	←	←	0	←	←	←
4040	2 (*1)	←	←	←	5 (*1)	←	←	←
4041	10	←	←	←	10	←	←	←
4048	8 (*1)	←	←	←	25 (*1)	←	←	←
4049	10	←	←	←	10	←	←	←
4080	90	←	←	←	83	←	←	←
4083	30	←	←	←	30	←	←	←
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	←	←	←
4100	3400	←	←	←	3100	←	←	←
4101	100	←	←	←	100	←	←	←
4102	6500	←	←	←	3557	←	←	←
4103	46	←	←	←	87	←	←	←
4104	3000	←	←	←	6000	←	←	←
4105	46	←	←	←	45	←	←	←
4106	7500	←	←	←	6000	←	←	←
4107	0	←	←	←	0	←	←	←
4108	0	←	←	←	0	←	←	←
4109	25	←	←	←	25	←	←	←
4110	1571	2514	3142	4713	690	1104	1380	2070
4111	260	←	←	←	102	←	←	←
4112	200	←	←	←	200	←	←	←
4113	2077	←	←	←	2100	←	←	←
4114	23040	←	←	←	17920	←	←	←
4115	100	←	←	←	100	←	←	←
4116	13760	←	←	←	10018	←	←	←
4117	90	←	←	←	90	←	←	←
4118	100	←	←	←	100	←	←	←
4119	5	←	←	←	5	←	←	←
4120	0	←	←	←	0	←	←	←
4124	24570	←	←	←	24448	←	←	←
4127	286(B) 240(A)	←	←	←	293(B) 293(A)	←	←	←
4128	120	←	←	←	0	←	←	←
4129	0	←	←	←	0	←	←	←
4130	25700	←	←	←	25700	←	←	←
4134	110	←	←	←	110	←	←	←
4136	30	←	←	←	30	←	←	←
4138	0	←	←	←	0	←	←	←
4139	0	←	←	←	0	←	←	←
4140	0	←	←	←	0	←	←	←
4141	0	←	←	←	0	←	←	←
4142	0	←	←	←	0	←	←	←
4143	0	←	←	←	0	←	←	←
4144	0	←	←	←	0	←	←	←
4145	0	←	←	←	0	←	←	←
4146	0	←	←	←	0	←	←	←
4147	0	←	←	←	0	←	←	←
4148	0	←	←	←	0	←	←	←
4149	0	←	←	←	0	←	←	←
4150	0	←	←	←	0	←	←	←
4151	0	←	←	←	0	←	←	←
4152	0	←	←	←	0	←	←	←
4153	0	←	←	←	0	←	←	←
4154	0	←	←	←	0	←	←	←
4155	0	←	←	←	0	←	←	←
4156	0	←	←	←	0	←	←	←
4158	0	←	←	←	0	←	←	←
4159	0	←	←	←	0	←	←	←
4161	0	←	←	←	0	←	←	←
4165	0	←	←	←	0	←	←	←
4166	0	←	←	←	0	←	←	←
4167	0	←	←	←	0	←	←	←
4168	0	←	←	←	0	←	←	←
4169	0	←	←	←	0	←	←	←
4170	784	←	←	←	1472	←	←	←
4362	0	←	←	←	0	←	←	←
4363	0	←	←	←	0	←	←	←
4364	0	←	←	←	0	←	←	←
4365	0	←	←	←	0	←	←	←
4366	0	←	←	←	0	←	←	←
4367	0	←	←	←	0	←	←	←
4453	2100	←	←	←	3200	←	←	←
4454	0	←	←	←	0	←	←	←
4612	107	←	←	←	87	←	←	←
4613	10889	←	←	←	11024	←	←	←
4614	0	←	←	←	0	←	←	←
4615	0	←	←	←	0	←	←	←
Maximum output during acceleration (for PS selection)	1.32kW	1.32kW	1.32kW	1.32kW	2.64kW	2.64kW	2.64kW	2.64kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 1.5/8000-B (IP65)	αiI 1.5/8000-B (IP65)	αiI 1.5/8000-B (IP65)	αiI 1.5/8000-B (IP65)	αiI 2/8000-B (IP65)	αiI 2/8000-B (IP65)	αiI 2/8000-B (IP65)	αiI 2/8000-B (IP65)
Applicable amplifier	αiSP 5.5-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 5.5-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B
Output specification nameplate	K483#S00	K483#S00	K483#S00	K483#S00	K484#S00	K484#S00	K484#S00	K484#S00
Model code	5115	6115	7115	8115	5116	6116	7116	8116
Parameter ID	2496	-	-	-	2161	-	-	-
Series and editions of applicable spindle sofutware	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P
Low-speed winding characteristics	-	-	-	-	-	-	-	-
High-speed winding characteristics	0.9/3.7 kW 1500/8000 min^{-1}	0.9/3.7 kW 1500/8000 min^{-1}	0.9/3.7 kW 1500/8000 min^{-1}	0.9/3.7 kW 1500/8000 min^{-1}	1.5/3.7 kW 1500/8000 min^{-1}	1.5/3.7 kW 1500/8000 min^{-1}	1.5/3.7 kW 1500/8000 min^{-1}	1.5/3.7 kW 1500/8000 min^{-1}
4007	00000000	←	←	←	00000000	←	←	←
4008	00000000	←	←	←	00000000	←	←	←
4009	00000000	←	←	←	00000000	←	←	←
4010	00000001	←	←	←	00000001	←	←	←
4011	00011001	←	←	←	00011001	←	←	←
4012	10000010	←	←	←	10000010	←	←	←
4013	00001100	←	←	←	00001100	←	←	←
4019	00000100	←	←	←	00000100	←	←	←
4398	10000000	←	←	←	10000000	←	←	←
4400	00000000	←	←	←	00000000	←	←	←
4020	8000	←	←	←	8000	←	←	←
4023	30	←	←	←	30	←	←	←
4039	0	←	←	←	0	←	←	←
4040	2 (*1)	←	←	←	4 (*1)	←	←	←
4041	10	←	←	←	10	←	←	←
4048	11 (*1)	←	←	←	19 (*1)	←	←	←
4049	10	←	←	←	10	←	←	←
4080	85	←	←	←	77	←	←	←
4083	30	←	←	←	30	←	←	←
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	←	←	←
4100	1650	←	←	←	1550	←	←	←
4101	100	←	←	←	100	←	←	←
4102	2767	←	←	←	2567	←	←	←
4103	60	←	←	←	68	←	←	←
4104	6000	←	←	←	6000	←	←	←
4105	58	←	←	←	80	←	←	←
4106	6000	←	←	←	6000	←	←	←
4107	0	←	←	←	0	←	←	←
4108	0	←	←	←	0	←	←	←
4109	25	←	←	←	25	←	←	←
4110	563	901	1126	1689	474	758	948	1422
4111	217	←	←	←	175	←	←	←
4112	200	←	←	←	200	←	←	←
4113	1635	←	←	←	1192	←	←	←
4114	0	←	←	←	0	←	←	←
4115	100	←	←	←	100	←	←	←
4116	9598	←	←	←	9300	←	←	←
4117	90	←	←	←	90	←	←	←
4118	100	←	←	←	100	←	←	←
4119	5	←	←	←	8	←	←	←
4120	0	←	←	←	0	←	←	←
4124	24535	←	←	←	24501	←	←	←
4127	493(B) 493(A)	←	←	←	296(B) 296(A)	←	←	←
4128	115	←	←	←	90	←	←	←
4129	0	←	←	←	0	←	←	←
4130	25700	←	←	←	25700	←	←	←
4134	110	←	←	←	110	←	←	←
4136	30	←	←	←	30	←	←	←
4138	0	←	←	←	0	←	←	←
4139	0	←	←	←	0	←	←	←
4140	0	←	←	←	0	←	←	←
4141	0	←	←	←	0	←	←	←
4142	0	←	←	←	0	←	←	←
4143	0	←	←	←	0	←	←	←
4144	0	←	←	←	0	←	←	←
4145	0	←	←	←	0	←	←	←
4146	0	←	←	←	0	←	←	←
4147	0	←	←	←	0	←	←	←
4148	0	←	←	←	0	←	←	←
4149	0	←	←	←	0	←	←	←
4150	0	←	←	←	0	←	←	←
4151	0	←	←	←	0	←	←	←
4152	0	←	←	←	0	←	←	←
4153	0	←	←	←	0	←	←	←
4154	0	←	←	←	0	←	←	←
4155	0	←	←	←	0	←	←	←
4156	0	←	←	←	0	←	←	←
4158	0	←	←	←	0	←	←	←
4159	0	←	←	←	0	←	←	←
4161	0	←	←	←	0	←	←	←
4165	0	←	←	←	0	←	←	←
4166	0	←	←	←	0	←	←	←
4167	0	←	←	←	0	←	←	←
4168	0	←	←	←	0	←	←	←
4169	0	←	←	←	0	←	←	←
4170	1440	←	←	←	928	←	←	←
4362	0	←	←	←	0	←	←	←
4363	0	←	←	←	0	←	←	←
4364	0	←	←	←	0	←	←	←
4365	0	←	←	←	0	←	←	←
4366	0	←	←	←	0	←	←	←
4367	0	←	←	←	0	←	←	←
4453	2050	←	←	←	2500	←	←	←
4454	0	←	←	←	0	←	←	←
4612	52	←	←	←	86	←	←	←
4613	21776	←	←	←	16257	←	←	←
4614	0	←	←	←	0	←	←	←
4615	0	←	←	←	0	←	←	←
Maximum output during acceleration (for PS selection)	4.44kW	4.44kW	4.44kW	4.44kW	4.44kW	4.44kW	4.44kW	4.44kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	αiI 3/8000-B (IP65)	αiI 3/8000-B (IP65)	αiI 3/8000-B (IP65)	αiI 3/8000-B (IP65)	αiI 6/8000-B (IP65)	αiI 6/8000-B (IP65)	αiI 6/8000-B (IP65)
Applicable amplifier	αiSP 5.5-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K485#S00	K485#S00	K485#S00	K485#S00	K486#S00	K486#S00	K486#S00
Model code	5117	6117	7117	8117	5118	6118	7118
Parameter ID	2109	-	-	-	2191	-	-
Series and editions of applicable spindle sofutware	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P
Low-speed winding characteristics	-	-	-	-	-	-	-
High-speed winding characteristics	2.2/5.5 kW 1500/8000 min^{-1}	2.2/5.5 kW 1500/8000 min^{-1}	2.2/5.5 kW 1500/8000 min^{-1}	2.2/5.5 kW 1500/8000 min^{-1}	3/7.5 kW 1500/8000 min^{-1}	3/7.5 kW 1500/8000 min^{-1}	3/7.5 kW 1500/8000 min^{-1}
4007	00000000	←	←	←	00000000	←	←
4008	00000000	←	←	←	00000000	←	←
4009	00000000	←	←	←	00000000	←	←
4010	00000001	←	←	←	00000001	←	←
4011	00011001	←	←	←	00011010	←	←
4012	10000010	←	←	←	10000010	←	←
4013	00001100	←	←	←	00001100	←	←
4019	00000100	←	←	←	00000100	←	←
4398	10000000	←	←	←	10000000	←	←
4400	00000000	←	←	←	00000000	←	←
4020	8000	←	←	←	8000	←	←
4023	30	←	←	←	30	←	←
4039	0	←	←	←	0	←	←
4040	5 (*1)	←	←	←	5	←	←
4041	10	←	←	←	10	←	←
4048	25 (*1)	←	←	←	22	←	←
4049	10	←	←	←	10	←	←
4080	60	←	←	←	66	←	←
4083	30	←	←	←	30	←	←
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	←	←
4100	1600	←	←	←	1550	←	←
4101	100	←	←	←	96	←	←
4102	1967	←	←	←	2630	←	←
4103	75	←	←	←	60	←	←
4104	7000	←	←	←	6000	←	←
4105	89	←	←	←	154	←	←
4106	7000	←	←	←	6000	←	←
4107	0	←	←	←	0	←	←
4108	0	←	←	←	0	←	←
4109	25	←	←	←	25	←	←
4110	475	760	950	1425	754	1131	1508
4111	200	←	←	←	260	←	←
4112	19400	←	←	←	200	←	←
4113	1077	←	←	←	620	←	←
4114	0	←	←	←	20480	←	←
4115	100	←	←	←	100	←	←
4116	7950	←	←	←	8803	←	←
4117	28250	←	←	←	90	←	←
4118	110	←	←	←	100	←	←
4119	5	←	←	←	15	←	←
4120	0	←	←	←	0	←	←
4124	24521	←	←	←	24571	←	←
4127	300(B) 300(A)	←	←	←	300(B) 300(A)	←	←
4128	0	←	←	←	109	←	←
4129	0	←	←	←	0	←	←
4130	25700	←	←	←	25700	←	←
4134	110	←	←	←	130	←	←
4136	30	←	←	←	30	←	←
4138	0	←	←	←	0	←	←
4139	0	←	←	←	0	←	←
4140	0	←	←	←	0	←	←
4141	0	←	←	←	0	←	←
4142	0	←	←	←	0	←	←
4143	0	←	←	←	0	←	←
4144	0	←	←	←	0	←	←
4145	0	←	←	←	0	←	←
4146	0	←	←	←	0	←	←
4147	0	←	←	←	0	←	←
4148	0	←	←	←	0	←	←
4149	0	←	←	←	0	←	←
4150	0	←	←	←	0	←	←
4151	0	←	←	←	0	←	←
4152	0	←	←	←	0	←	←
4153	0	←	←	←	0	←	←
4154	0	←	←	←	0	←	←
4155	0	←	←	←	0	←	←
4156	0	←	←	←	0	←	←
4158	0	←	←	←	0	←	←
4159	0	←	←	←	0	←	←
4161	0	←	←	←	0	←	←
4165	0	←	←	←	0	←	←
4166	0	←	←	←	0	←	←
4167	0	←	←	←	0	←	←
4168	0	←	←	←	0	←	←
4169	0	←	←	←	0	←	←
4170	944	←	←	←	1088	←	←
4362	0	←	←	←	0	←	←
4363	0	←	←	←	0	←	←
4364	0	←	←	←	0	←	←
4365	0	←	←	←	0	←	←
4366	0	←	←	←	0	←	←
4367	0	←	←	←	0	←	←
4453	8500	←	←	←	5500	←	←
4454	0	←	←	←	0	←	←
4612	85	←	←	←	82	←	←
4613	16142	←	←	←	21776	←	←
4614	0	←	←	←	0	←	←
4615	0	←	←	←	0	←	←
Maximum output during acceleration (for PS selection)	6.6kW	6.6kW	6.6kW	6.6kW	9kW	9kW	9kW

(*1) Set this value as the initial value of the velocity loop gain.

JRAUTOMATION TECHNOLOGIES INC*

A.7 SPINDLE MOTOR βiI-B series

Motor model	βiI 3/12000-B	βiI 3/12000-B	βiI 3/12000-B	βiI 3/12000-B	βiI 3/12000-B	βiI 3/12000-B	βiI 3/12000-B	βiI 3/12000-B
Applicable amplifier	αiSP 5.5-B	βiSVSP 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	βiSVSP 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K444#S00	K444#S00	K444#S00	K444#S00	K444#S0P	K444#S0P	K444#S0P	K444#S0P
Model code	5082	6082	7082	8082	5083	6083	7083	8083
Parameter ID	2060	-	-	-	2450	-	-	-
Series and editions of applicable spindle sofutware	9DAA/N 9DB0/N	9DAA/N 9DB0/N	9DAA/N 9DB0/N	9DAA/N 9DB0/N	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O	9DAA/O 9DB0/O
Low-speed winding characteristics	-	-	-	-	-	-	-	-
High-speed winding characteristics	3.7/5.5 kW 2000/12000 min^{-1}	3.7/5.5 kW 2000/12000 min^{-1}	3.7/5.5 kW 2000/12000 min^{-1}	3.7/5.5 kW 2000/12000 min^{-1}	3.7/5.5/7.5 kW 2000/12000 min^{-1}	3.7/5.5/7.5 kW 2000/12000 min^{-1}	3.7/5.5/7.5 kW 2000/12000 min^{-1}	3.7/5.5/7.5 kW 2000/12000 min^{-1}
4007	00000000	←	←	←	00000000	←	←	←
4008	00000000	←	←	←	00010000	←	←	←
4009	00000000	←	←	←	00000000	←	←	←
4010	00000000	←	←	←	00000000	←	←	←
4011	00011001	←	←	←	00001001	←	←	←
4012	10000000	←	←	←	10000010	←	←	←
4013	00001100	←	←	←	00001100	←	←	←
4019	00000100	←	←	←	00000100	←	←	←
4398	10000000	←	←	←	10000000	←	←	←
4400	00000000	←	←	←	00000000	←	←	←
4020	12000	←	←	←	12000	←	←	←
4023	30	←	←	←	30	←	←	←
4039	0	←	←	←	0	←	←	←
4040	3 (*1)	←	←	←	2 (*1)	←	←	←
4041	10	←	←	←	10	←	←	←
4048	14 (*1)	←	←	←	10 (*1)	←	←	←
4049	10	←	←	←	10	←	←	←
4080	13412	←	←	←	13408	←	←	←
4083	30	←	←	←	30	←	←	←
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	←	←	←
4100	1700	←	←	←	1830	←	←	←
4101	90	←	←	←	100	←	←	←
4102	2154	←	←	←	2154	←	←	←
4103	72	←	←	←	0	←	←	←
4104	2500	←	←	←	2500	←	←	←
4105	112	←	←	←	95	←	←	←
4106	6600	←	←	←	6600	←	←	←
4107	0	←	←	←	0	←	←	←
4108	0	←	←	←	0	←	←	←
4109	25	←	←	←	25	←	←	←
4110	718	1149	1436	2154	1149	1436	2154	2873
4111	318	←	←	←	417	←	←	←
4112	200	←	←	←	200	←	←	←
4113	850	←	←	←	1007	←	←	←
4114	21760	←	←	←	20480	←	←	←
4115	100	←	←	←	100	←	←	←
4116	7978	←	←	←	7978	←	←	←
4117	90	←	←	←	90	←	←	←
4118	100	←	←	←	100	←	←	←
4119	11	←	←	←	9	←	←	←
4120	0	←	←	←	0	←	←	←
4124	24575	←	←	←	24575	←	←	←
4127	237(B) 164(A)	←	←	←	297(B) 223(A)	←	←	←
4128	120	←	←	←	125	←	←	←
4129	0	←	←	←	0	←	←	←
4130	25700	←	←	←	25700	←	←	←
4134	110	←	←	←	110	←	←	←
4136	0	←	←	←	0	←	←	←
4138	0	←	←	←	0	←	←	←
4139	0	←	←	←	0	←	←	←
4140	0	←	←	←	0	←	←	←
4141	0	←	←	←	0	←	←	←
4142	0	←	←	←	0	←	←	←
4143	0	←	←	←	0	←	←	←
4144	0	←	←	←	0	←	←	←
4145	0	←	←	←	0	←	←	←
4146	0	←	←	←	0	←	←	←
4147	0	←	←	←	0	←	←	←
4148	0	←	←	←	0	←	←	←
4149	0	←	←	←	0	←	←	←
4150	0	←	←	←	0	←	←	←
4151	0	←	←	←	0	←	←	←
4152	0	←	←	←	0	←	←	←
4153	0	←	←	←	0	←	←	←
4154	0	←	←	←	0	←	←	←
4155	0	←	←	←	0	←	←	←
4156	0	←	←	←	0	←	←	←
4158	0	←	←	←	0	←	←	←
4159	0	←	←	←	0	←	←	←
4161	0	←	←	←	0	←	←	←
4165	0	←	←	←	0	←	←	←
4166	0	←	←	←	0	←	←	←
4167	0	←	←	←	0	←	←	←
4168	0	←	←	←	0	←	←	←
4169	0	←	←	←	0	←	←	←
4170	456	←	←	←	456	←	←	←
4362	0	←	←	←	0	←	←	←
4363	0	←	←	←	0	←	←	←
4364	0	←	←	←	0	←	←	←
4365	0	←	←	←	0	←	←	←
4366	0	←	←	←	0	←	←	←
4367	0	←	←	←	0	←	←	←
4453	1200	←	←	←	1200	←	←	←
4454	0	←	←	←	0	←	←	←
4612	11114	←	←	←	11094	←	←	←
4613	12297	←	←	←	12291	←	←	←
4614	0	←	←	←	0	←	←	←
4615	0	←	←	←	0	←	←	←
Maximum output during acceleration (for PS selection)	6.1kW	6.1kW	6.1kW	6.1kW	8.3kW	8.3kW	8.3kW	8.3kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	βiI 6/12000-B	βiI 6/12000-B	βiI 6/12000-B	βiI 6/12000-B	βiI 6/12000-B	βiI 8/12000-B	βiI 8/12000-B	βiI 8/12000-B
Applicable amplifier	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K445#S00	K445#S00	K445#S00	K445#S0P	K445#S0P	K446#S00	K446#S00	K446#S00
Model code	5084	6084	7084	5085	6085	5086	6086	7086
Parameter ID	2261	-	-	2851	-	2132	-	-
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-
High-speed winding characteristics	5.5/7.5 kW 2000/12000 min^{-1}	5.5/7.5 kW 2000/12000 min^{-1}	5.5/7.5 kW 2000/12000 min^{-1}	5.5/7.5/11 kW 2000/12000 min^{-1}	5.5/7.5/11 kW 2000/12000 min^{-1}	7.5/11 kW 2000/12000 min^{-1}	7.5/11 kW 2000/12000 min^{-1}	7.5/11 kW 2000/12000 min^{-1}
4007	00000000	←	←	00000000	←	00000000	←	←
4008	00000000	←	←	00010000	←	00000000	←	←
4009	00000000	←	←	00000000	←	00000000	←	←
4010	00010000	←	←	00000000	←	00010000	←	←
4011	00011001	←	←	00001001	←	00011010	←	←
4012	10000000	←	←	10000010	←	10000000	←	←
4013	00001100	←	←	00001100	←	00001100	←	←
4019	00000100	←	←	00000100	←	00000100	←	←
4398	10000000	←	←	10000000	←	10000000	←	←
4400	00000000	←	←	00000000	←	00000000	←	←
4020	12000	←	←	12000	←	12000	←	←
4023	30	←	←	30	←	30	←	←
4039	0	←	←	0	←	0	←	←
4040	4 (*1)	←	←	5 (*1)	←	4 (*1)	←	←
4041	10	←	←	10	←	10	←	←
4048	20 (*1)	←	←	20 (*1)	←	16 (*1)	←	←
4049	10	←	←	10	←	10	←	←
4080	14170	←	←	15957	←	75	←	←
4083	30	←	←	30	←	30	←	←
4093	0(B) 0(A)	←	←	0(B) 0(A)	←	0(B) 0(A)	←	←
4100	1550	←	←	1600	←	1500	←	←
4101	90	←	←	87	←	95	←	←
4102	2621	←	←	2621	←	2602	←	←
4103	58	←	←	0	←	64	←	←
4104	2000	←	←	4550	←	2000	←	←
4105	119	←	←	119	←	191	←	←
4106	5500	←	←	7000	←	6000	←	←
4107	0	←	←	0	←	0	←	←
4108	0	←	←	0	←	0	←	←
4109	25	←	←	25	←	25	←	←
4110	520	780	1040	780	1040	887	1331	1774
4111	208	←	←	301	←	381	←	←
4112	200	←	←	200	←	200	←	←
4113	800	←	←	800	←	500	←	←
4114	0	←	←	32000	←	0	←	←
4115	100	←	←	100	←	100	←	←
4116	7395	←	←	8874	←	8000	←	←
4117	90	←	←	90	←	90	←	←
4118	100	←	←	100	←	100	←	←
4119	12	←	←	12	←	19	←	←
4120	0	←	←	0	←	0	←	←
4124	24527	←	←	24575	←	24575	←	←
4127	199(B) 150(A)	←	←	291(B) 220(A)	←	213(B) 161(A)	←	←
4128	115	←	←	103	←	78	←	←
4129	0	←	←	0	←	0	←	←
4130	25700	←	←	25700	←	25700	←	←
4134	110	←	←	110	←	110	←	←
4136	0	←	←	0	←	0	←	←
4138	0	←	←	0	←	0	←	←
4139	0	←	←	0	←	0	←	←
4140	0	←	←	0	←	0	←	←
4141	0	←	←	0	←	0	←	←
4142	0	←	←	0	←	0	←	←
4143	0	←	←	0	←	0	←	←
4144	0	←	←	0	←	0	←	←
4145	0	←	←	0	←	0	←	←
4146	0	←	←	0	←	0	←	←
4147	0	←	←	0	←	0	←	←
4148	0	←	←	0	←	0	←	←
4149	0	←	←	0	←	0	←	←
4150	0	←	←	0	←	0	←	←
4151	0	←	←	0	←	0	←	←
4152	0	←	←	0	←	0	←	←
4153	0	←	←	0	←	0	←	←
4154	0	←	←	0	←	0	←	←
4155	0	←	←	0	←	0	←	←
4156	0	←	←	0	←	0	←	←
4158	0	←	←	0	←	0	←	←
4159	0	←	←	0	←	0	←	←
4161	0	←	←	0	←	0	←	←
4165	0	←	←	0	←	0	←	←
4166	0	←	←	0	←	0	←	←
4167	0	←	←	150	←	0	←	←
4168	0	←	←	0	←	0	←	←
4169	0	←	←	0	←	0	←	←
4170	1120	←	←	1120	←	456	←	←
4362	0	←	←	-24276	←	0	←	←
4363	0	←	←	-28272	←	0	←	←
4364	0	←	←	-30120	←	0	←	←
4365	0	←	←	0	←	0	←	←
4366	0	←	←	0	←	0	←	←
4367	0	←	←	0	←	0	←	←
4453	3000	←	←	3000	←	1800	←	←
4454	0	←	←	0	←	0	←	←
4612	10858	←	←	10828	←	10866	←	←
4613	12298	←	←	12298	←	12422	←	←
4614	0	←	←	0	←	0	←	←
4615	0	←	←	0	←	0	←	←
Maximum output during acceleration (for PS selection)	8.3kW	8.3kW	8.3kW	12.1kW	12.1kW	12.1kW	12.1kW	12.1kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	βiI 8/12000-B	βiI 8/12000-B	βiI 12/10000-B	βiI 12/10000-B	βiI 12/10000-B	βiI 12/10000-B	βiI 15/8000-B	βiI 15/8000-B
Applicable amplifier	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B
Output specification nameplate	K446#S0P	K446#S0P	K447#S00	K447#S00	K447#S0P	K447#S0P	K498#S00	K498#S0P
Model code	5087	6087	5088	6088	5089	6089	5090	5091
Parameter ID	2818	-	2936	-	2419	-	2495	2015
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-
High-speed winding characteristics	7.5/11/15 kW 2000/12000 min^{-1}	7.5/11/15 kW 2000/12000 min^{-1}	11/15 kW 2000/10000 min^{-1}	11/15 kW 2000/10000 min^{-1}	11/15/18.5 kW 2000/10000 min^{-1}	11/15/18.5 kW 2000/10000 min^{-1}	15/18.5 kW 2000/8000 min^{-1}	15/18.5/22 kW 2000/8000 min^{-1}
4007	00000000	←	00000000	←	00000100	←	00000000	00000000
4008	00000000	←	00000000	←	00000000	←	00000000	00000000
4009	00000000	←	00000000	←	00000000	←	00000000	00000000
4010	00000000	←	00010000	←	00010000	←	00010000	00000000
4011	00011010	←	00011010	←	00011010	←	00011010	00011010
4012	10000010	←	10000010	←	10000010	←	10000000	10000010
4013	00001100	←	00001100	←	00001100	←	00001100	00001100
4019	00000100	←	00000100	←	00000100	←	00000100	00000100
4398	10000000	←	10000000	←	10000000	←	10000000	10000000
4400	00000000	←	00000000	←	00000000	←	00000000	00000000
4020	12000	←	10000	←	10000	←	8000	8000
4023	30	←	30	←	30	←	30	30
4039	0	←	0	←	0	←	0	0
4040	3 (*1)	←	4 (*1)	←	3 (*1)	←	3 (*1)	5 (*1)
4041	10	←	10	←	10	←	10	10
4048	12 (*1)	←	9 (*1)	←	15 (*1)	←	12 (*1)	21 (*1)
4049	10	←	10	←	10	←	10	10
4080	16220	←	12895	←	19513	←	15445	15455
4083	30	←	30	←	30	←	30	30
4093	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)	0(B) 0(A)
4100	1680	←	1550	←	1550	←	1550	1550
4101	95	←	82	←	89	←	81	70
4102	2602	←	1844	←	1844	←	1610	1610
4103	0	←	80	←	0	←	0	0
4104	4300	←	3500	←	3500	←	2500	4500
4105	134	←	135	←	135	←	320	321
4106	10000	←	10000	←	10000	←	5000	11500
4107	0	←	0	←	0	←	0	0
4108	0	←	0	←	0	←	0	0
4109	25	←	25	←	25	←	25	25
4110	1331	1775	1031	1375	1031	1375	1426	1426
4111	532	←	355	←	414	←	389	577
4112	200	←	200	←	200	←	200	200
4113	714	←	705	←	705	←	298	298
4114	21760	←	23040	←	0	←	0	0
4115	90	←	100	←	100	←	100	100
4116	8000	←	6300	←	6300	←	4344	4344
4117	23130	←	90	←	28762	←	90	90
4118	100	←	100	←	100	←	100	90
4119	13	←	14	←	14	←	32	32
4120	0	←	0	←	0	←	0	0
4124	24575	←	24575	←	24575	←	24575	24575
4127	290(B) 220(A)	←	203(B) 150(A)	←	248(B) 185(A)	←	175(B) 136(A)	208(B) 161(A)
4128	110	←	95	←	0	←	0	0
4129	0	←	0	←	0	←	0	0
4130	25700	←	25700	←	25700	←	25700	25700
4134	110	←	110	←	110	←	130	130
4136	0	←	0	←	0	←	0	0
4138	0	←	0	←	0	←	0	0
4139	0	←	0	←	0	←	0	0
4140	0	←	0	←	0	←	0	0
4141	0	←	0	←	0	←	0	0
4142	0	←	0	←	0	←	0	0
4143	0	←	0	←	0	←	0	0
4144	0	←	0	←	0	←	0	0
4145	0	←	0	←	0	←	0	0
4146	0	←	0	←	0	←	0	0
4147	0	←	0	←	0	←	0	0
4148	0	←	0	←	0	←	0	0
4149	0	←	0	←	0	←	0	0
4150	0	←	0	←	0	←	0	0
4151	0	←	0	←	0	←	0	0
4152	0	←	0	←	0	←	0	0
4153	0	←	0	←	0	←	0	0
4154	0	←	0	←	0	←	0	0
4155	0	←	0	←	0	←	0	0
4156	0	←	0	←	0	←	0	0
4158	0	←	0	←	0	←	0	0
4159	0	←	0	←	0	←	0	0
4161	0	←	0	←	0	←	0	0
4165	0	←	0	←	0	←	0	0
4166	0	←	0	←	0	←	0	0
4167	0	←	0	←	0	←	0	0
4168	0	←	0	←	0	←	0	0
4169	0	←	0	←	0	←	0	0
4170	456	←	405	←	405	←	405	405
4362	-24426	←	0	←	-24451	←	0	-24451
4363	-24076	←	0	←	30870	←	0	-30545
4364	13038	←	0	←	-28472	←	0	-24326
4365	0	←	0	←	0	←	0	0
4366	0	←	0	←	0	←	0	0
4367	0	←	0	←	0	←	0	0
4453	1800	←	2000	←	2000	←	2000	2000
4454	0	←	0	←	0	←	0	0
4612	10836	←	11112	←	11106	←	10614	10582
4613	12423	←	9730	←	9730	←	9476	9478
4614	0	←	0	←	0	←	0	0
4615	0	←	0	←	0	←	0	0
Maximum output during acceleration (for PS selection)	16.5kW	16.5kW	16.5kW	16.5kW	20.4kW	20.4kW	20.4kW	24.2kW

(*1) Set this value as the initial value of the velocity loop gain.

JR AUTOMATION TECHNOLOGIES INC*

Motor model	βiI 3/12000HV-B	βiI 3/12000HV-B	βiI 3/12000HV-B	βiI 3/12000HV-B	βiI 6/12000HV-B	βiI 6/12000HV-B	βiI 6/12000HV-B	βiI 8/12000HV-B	βiI 8/12000HV-B
Applicable amplifier	αiSP 5.5HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 11HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 11HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 11HV-B βiSVSP* 11HV-B	αiSP 15HV-B βiSVSP* 15HV-B
Output specification nameplate	K544#S00	K544#S00	K544#S0P	K544#S0P	K545#S00	K545#S00	K545#S0P	K546#S00	K546#S00
Model code	5092	6092	5093	6093	5094	6094	5095	5096	6096
Parameter ID	2859	-	2424	-	2271	-	2617	2042	-
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-	-
High-speed winding characteristics	3.7/5.5 kW 2000/12000 min^{-1}	3.7/5.5 kW 2000/12000 min^{-1}	3.7/5.5/7.5 kW 2000/12000 min^{-1}	3.7/5.5/7.5 kW 2000/12000 min^{-1}	5.5/7.5 kW 2000/12000 min^{-1}	5.5/7.5 kW 2000/12000 min^{-1}	5.5/7.5/11 kW 2000/12000 min^{-1}	7.5/11 kW 2000/12000 min^{-1}	7.5/11 kW 2000/12000 min^{-1}
4007	00000000	←	00000000	←	00000000	←	00000000	00000000	←
4008	00010000	←	00010000	←	00010000	←	00010000	00010000	←
4009	00000000	←	00000000	←	00000000	←	00000000	00000000	←
4010	00000000	←	00000000	←	00000000	←	00000000	00000000	←
4011	00001001	←	00001001	←	00001001	←	00001001	00001010	←
4012	10000010	←	10000010	←	10000010	←	10000010	10000010	←
4013	00001100	←	00001100	←	00001100	←	00001100	00001100	←
4019	00000100	←	00000100	←	00000100	←	00000100	00000100	←
4398	10000000	←	10000000	←	10000000	←	10000000	10000000	←
4400	00000000	←	00000000	←	00000000	←	00000000	00000000	←
4020	12000	←	12000	←	12000	←	12000	12000	←
4023	30	←	30	←	30	←	30	30	←
4039	0	←	0	←	0	←	0	0	←
4040	3 (*1)	←	2 (*1)	←	4 (*1)	←	3 (*1)	4 (*1)	←
4041	10	←	10	←	10	←	10	10	←
4048	14 (*1)	←	10 (*1)	←	18 (*1)	←	12 (*1)	16 (*1)	←
4049	10	←	10	←	10	←	10	10	←
4080	14180	←	14180	←	15450	←	17242	13914	←
4083	30	←	30	←	30	←	30	30	←
4093	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)	0(B) 0(A)	←
4100	1590	←	1650	←	1550	←	1580	1600	←
4101	57	←	76	←	0	←	93	100	←
4102	1922	←	1924	←	2712	←	2712	1893	←
4103	0	←	0	←	0	←	0	0	←
4104	8000	←	8000	←	4100	←	4100	7500	←
4105	95	←	95	←	107	←	107	107	←
4106	18000	←	18000	←	14000	←	14000	15500	←
4107	0	←	0	←	0	←	0	0	←
4108	0	←	0	←	0	←	0	0	←
4109	25	←	25	←	25	←	25	25	←
4110	1078	2156	1077	2154	460	920	920	603	1206
4111	328	←	328	←	153	←	236	223	←
4112	200	←	200	←	200	←	200	200	←
4113	1000	←	1000	←	895	←	895	890	←
4114	0	←	0	←	0	←	0	0	←
4115	100	←	100	←	100	←	100	100	←
4116	7982	←	7982	←	7398	←	7398	6919	←
4117	90	←	90	←	90	←	90	90	←
4118	100	←	100	←	100	←	100	100	←
4119	10	←	10	←	11	←	11	11	←
4120	0	←	0	←	0	←	0	0	←
4124	24575	←	24575	←	24484	←	24550	24539	←
4127	218(B) 164(A)	←	272(B) 223(A)	←	199(B) 150(A)	←	291(B) 220(A)	197(B) 161(A)	←
4128	105	←	107	←	107	←	111	106	←
4129	0	←	0	←	0	←	0	0	←
4130	25700	←	25700	←	25700	←	25700	25700	←
4134	110	←	110	←	110	←	110	130	←
4136	0	←	0	←	30	←	30	30	←
4138	0	←	0	←	0	←	0	0	←
4139	0	←	0	←	0	←	0	0	←
4140	0	←	0	←	0	←	0	0	←
4141	0	←	0	←	0	←	0	0	←
4142	0	←	0	←	0	←	0	0	←
4143	0	←	0	←	0	←	0	0	←
4144	0	←	0	←	0	←	0	0	←
4145	0	←	0	←	0	←	0	0	←
4146	0	←	0	←	0	←	0	0	←
4147	0	←	0	←	0	←	0	0	←
4148	0	←	0	←	0	←	0	0	←
4149	0	←	0	←	0	←	0	0	←
4150	0	←	0	←	0	←	0	0	←
4151	0	←	0	←	0	←	0	0	←
4152	0	←	0	←	0	←	0	0	←
4153	0	←	0	←	0	←	0	0	←
4154	0	←	0	←	0	←	0	0	←
4155	0	←	0	←	0	←	0	0	←
4156	0	←	0	←	0	←	0	0	←
4158	0	←	0	←	0	←	0	0	←
4159	0	←	0	←	0	←	0	0	←
4161	0	←	0	←	0	←	0	0	←
4165	0	←	0	←	0	←	0	0	←
4166	0	←	0	←	0	←	0	0	←
4167	0	←	0	←	0	←	0	0	←
4168	0	←	0	←	0	←	0	0	←
4169	0	←	0	←	0	←	0	0	←
4170	456	←	456	←	1488	←	1488	896	←
4362	-24526	←	-24426	←	-24326	←	-24326	-24176	←
4363	-30220	←	-32543	←	-26324	←	-26324	-30220	←
4364	31320	←	-30320	←	31345	←	23153	25176	←
4365	0	←	0	←	0	←	0	0	←
4366	0	←	0	←	0	←	0	0	←
4367	0	←	0	←	0	←	0	0	←
4453	1200	←	1200	←	7500	←	7500	1800	←
4454	0	←	0	←	0	←	0	0	←
4612	11075	←	11057	←	10881	←	10834	11127	←
4613	12547	←	12547	←	12296	←	12298	12422	←
4614	0	←	0	←	0	←	0	0	←
4615	0	←	0	←	0	←	0	0	←
Maximum output during acceleration (for PS selection)	6.1kW	6.1kW	8.3kW	8.3kW	8.3kW	8.3kW	12.1kW	12.1kW	12.1kW

(*1) Set this value as the initial value of the velocity loop gain.

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Motor model	βiI 8/12000HV-B	βiI 12/10000HV-B	βiI 12/10000HV-B	βiI 15/8000HV-B	βiI 15/8000HV-B
Applicable amplifier	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 15HV-B βiSVSP* 15HV-B	αiSP 22HV-B βiSVSP* 18HV-B	αiSP 22HV-B βiSVSP* 18HV-B	αiSP 22HV-B
Output specification nameplate	K546#S0P	K547#S00	K547#S0P	K598#S00	K598#S0P
Model code	5097	5098	5099	5100	5101
Parameter ID	2180	2528	2925	2278	2227
Series and editions of applicable spindle sofutware	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/N 9DB0/N	9DAA/N 9DB0/N
Low-speed winding characteristics	-	-	-	-	-
High-speed winding characteristics	7.5/11/15 kW 2000/12000 min^{-1}	11/15 kW 2000/10000 min^{-1}	11/15/18.5 kW 2000/10000 min^{-1}	15/18.5 kW 2000/8000 min^{-1}	15/18.5/22 kW 2000/8000 min^{-1}
4007	00000000	0	00000000	00000000	00000000
4008	00010000	00010000	00010000	00000000	00000000
4009	00000000	00000000	00000000	00000000	00000000
4010	00000000	00000000	00000000	00000000	00000000
4011	00001010	00001010	00001010	00001010	00001010
4012	10000010	10000010	10000010	10000010	10000010
4013	00001100	00001100	00001100	00001100	00001100
4019	00000100	00000100	00000100	00000100	00000100
4398	10000000	10000000	10000000	10000000	10000000
4400	00000000	00000000	00000000	00000000	00000000
4020	12000	10000	10000	8000	8000
4023	30	30	30	30	30
4039	0	0	0	0	0
4040	3 (*1)	4 (*1)	3 (*1)	8 (*1)	7 (*1)
4041	10	10	10	10	10
4048	12 (*1)	18 (*1)	15 (*1)	38 (*1)	32 (*1)
4049	10	10	10	10	10
4080	14163	13412	13156	13412	15204
4083	30	30	30	30	30
4093	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)	0(B) 0(A)
4100	1650	1583	1578	1558	1570
4101	82	85	80	78	77
4102	1999	1716	1712	1791	1791
4103	0	0	0	0	0
4104	7000	7000	7000	4600	4600
4105	107	129	129	343	343
4106	13500	14500	14500	12500	12500
4107	0	0	0	0	0
4108	0	0	0	0	0
4109	25	25	25	25	25
4110	1371	1375	1371	1508	1508
4111	443	360	453	490	602
4112	200	200	200	200	200
4113	870	741	741	278	278
4114	0	20480	20480	20480	20480
4115	100	100	100	100	100
4116	5700	6500	6500	4344	4344
4117	90	90	90	90	73
4118	100	100	100	100	100
4119	11	13	13	34	34
4120	0	0	0	0	0
4124	24575	24575	24575	24575	24575
4127	294(B) 220(A)	202(B) 150(A)	250(B) 185(A)	182(B) 136(A)	199(B) 161(A)
4128	103	110	105	0	110
4129	0	0	0	0	0
4130	25700	25700	25700	25700	25700
4134	130	130	130	130	130
4136	30	30	30	30	30
4138	0	0	0	0	0
4139	0	0	0	0	0
4140	0	0	0	0	0
4141	0	0	0	0	0
4142	0	0	0	0	0
4143	0	0	0	0	0
4144	0	0	0	0	0
4145	0	0	0	0	0
4146	0	0	0	0	0
4147	0	0	0	0	0
4148	0	0	0	0	0
4149	0	0	0	0	0
4150	0	0	0	0	0
4151	0	0	0	0	0
4152	0	0	0	0	0
4153	0	0	0	0	0
4154	0	0	0	0	0
4155	0	0	0	0	0
4156	0	0	0	0	0
4158	0	0	0	0	0
4159	0	0	0	0	0
4161	0	0	0	0	0
4165	0	0	0	0	0
4166	0	0	0	0	0
4167	0	0	0	0	0
4168	0	0	0	0	0
4169	0	0	0	0	0
4170	336	480	480	288	288
4362	-24401	-24326	-24476	-24401	-24476
4363	-28222	-28322	-32593	-28472	-26449
4364	25176	12788	-28372	-32368	-24276
4365	0	0	0	0	0
4366	0	0	0	0	0
4367	0	0	0	0	0
4453	1500	2400	2400	2000	2000
4454	0	0	0	0	0
4612	11079	11116	11090	11118	11099
4613	12935	9729	9729	9735	9734
4614	0	0	0	0	0
4615	0	0	0	0	0
Maximum output during acceleration (for PS selection)	16.5kW	16.5kW	20.4kW	20.4kW	24.2kW

(*1) Set this value as the initial value of the velocity loop gain.

JR AUTOMATION TECHNOLOGIES INC*

A.8 SPINDLE MOTOR βiIP-B series

Motor model	βiIP 8/6000-B	βiIP 8/6000-B	βiIP 8/6000-B	βiIP 8/6000-B	βiIP 12/6000-B	βiIP 12/6000-B	βiIP 12/6000-B	βiIP 12/6000-B	βiIP 15/8000-B	βiIP 15/8000-B	βiIP 15/8000-B
Applicable amplifier	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	βiSVSP* 7.5-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K457#S00	K457#S00	K457#S00	K457#S00	K458#S00	K458#S00	K458#S00	K458#S00	K442#S00	K442#S00	K442#S00
Model code	5119	6119	7119	8119	5102	6102	7102	8102	5103	6103	7103
Parameter ID	2374	-	-	-	2466	-	-	-	2220	-	-
Series and editions of applicable spindle softwtare	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/P 9DB0/P	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/M 9DB0/M
Low-speed winding characteristics	-	-	-	-	-	-	-	-	-	-	-
High-speed winding characteristics	3.7/5.5 kW 1000/6000 min^{-1}	3.7/5.5 kW 1000/6000 min^{-1}	3.7/5.5 kW 1000/6000 min^{-1}	3.7/5.5 kW 1000/6000 min^{-1}	5.5/7.5 kW 1200/6000 min^{-1}	5.5/7.5 kW 1200/6000 min^{-1}	5.5/7.5 kW 1200/6000 min^{-1}	5.5/7.5 kW 1200/6000 min^{-1}	7.5/9 kW 1200/8000 min^{-1}	7.5/9 kW 1200/8000 min^{-1}	7.5/9 kW 1200/8000 min^{-1}
4007	00000000	←	←	←	00000000	←	←	←	00000000	←	←
4008	00010000	←	←	←	00010000	←	←	←	00010000	←	←
4009	00000000	←	←	←	00000000	←	←	←	00000000	←	←
4010	00010000	←	←	←	00010000	←	←	←	00010000	←	←
4011	00001010	←	←	←	00001010	←	←	←	00001010	←	←
4012	10000000	←	←	←	10000000	←	←	←	10000000	←	←
4013	00001100	←	←	←	00001100	←	←	←	00001100	←	←
4019	00000100	←	←	←	00000100	←	←	←	00000100	←	←
4398	10000000	←	←	←	10000000	←	←	←	10000000	←	←
4400	00000000	←	←	←	00000000	←	←	←	00000000	←	←
4020	6000	←	←	←	6000	←	←	←	8000	←	←
4023	30	←	←	←	30	←	←	←	30	←	←
4039	0	←	←	←	0	←	←	←	0	←	←
4040	4 (*1)	←	←	←	4 (*1)	←	←	←	8 (*1)	←	←
4041	10	←	←	←	10	←	←	←	10	←	←
4048	16 (*1)	←	←	←	18 (*1)	←	←	←	39 (*1)	←	←
4049	10	←	←	←	10	←	←	←	10	←	←
4080	16474	←	←	←	18000	←	←	←	20575	←	←
4083	30	←	←	←	30	←	←	←	30	←	←
4093	0(B) 0(A)	←	←	←	0(B) 0(A)	←	←	←	0(B) 0(A)	←	←
4100	800	←	←	←	800	←	←	←	750	←	←
4101	65	←	←	←	78	←	←	←	79	←	←
4102	1345	←	←	←	1059	←	←	←	1566	←	←
4103	0	←	←	←	0	←	←	←	0	←	←
4104	4500	←	←	←	5000	←	←	←	2000	←	←
4105	131	←	←	←	122	←	←	←	418	←	←
4106	7500	←	←	←	11000	←	←	←	7000	←	←
4107	0	←	←	←	0	←	←	←	0	←	←
4108	0	←	←	←	0	←	←	←	0	←	←
4109	25	←	←	←	25	←	←	←	25	←	←
4110	1106	1383	2074	2765	927	1159	1738	2318	943	1415	1886
4111	503	←	←	←	403	←	←	←	503	←	←
4112	200	←	←	←	200	←	←	←	200	←	←
4113	730	←	←	←	780	←	←	←	228	←	←
4114	23552	←	←	←	20480	←	←	←	0	←	←
4115	100	←	←	←	100	←	←	←	100	←	←
4116	6255	←	←	←	6000	←	←	←	5307	←	←
4117	90	←	←	←	90	←	←	←	90	←	←
4118	100	←	←	←	100	←	←	←	100	←	←
4119	13	←	←	←	12	←	←	←	42	←	←
4120	0	←	←	←	0	←	←	←	0	←	←
4124	24575	←	←	←	24575	←	←	←	24575	←	←
4127	211(B) 164(A)	←	←	←	242(B) 150(A)	←	←	←	209(B) 132(A)	←	←
4128	110	←	←	←	0	←	←	←	90	←	←
4129	0	←	←	←	0	←	←	←	0	←	←
4130	25700	←	←	←	25700	←	←	←	25700	←	←
4134	110	←	←	←	110	←	←	←	130	←	←
4136	30	←	←	←	30	←	←	←	30	←	←
4138	0	←	←	←	0	←	←	←	0	←	←
4139	0	←	←	←	0	←	←	←	0	←	←
4140	0	←	←	←	0	←	←	←	0	←	←
4141	0	←	←	←	0	←	←	←	0	←	←
4142	0	←	←	←	0	←	←	←	0	←	←
4143	0	←	←	←	0	←	←	←	0	←	←
4144	0	←	←	←	0	←	←	←	0	←	←
4145	0	←	←	←	0	←	←	←	0	←	←
4146	0	←	←	←	0	←	←	←	0	←	←
4147	0	←	←	←	0	←	←	←	0	←	←
4148	0	←	←	←	0	←	←	←	0	←	←
4149	0	←	←	←	0	←	←	←	0	←	←
4150	0	←	←	←	0	←	←	←	0	←	←
4151	0	←	←	←	0	←	←	←	0	←	←
4152	0	←	←	←	0	←	←	←	0	←	←
4153	0	←	←	←	0	←	←	←	0	←	←
4154	0	←	←	←	0	←	←	←	0	←	←
4155	0	←	←	←	0	←	←	←	0	←	←
4156	0	←	←	←	0	←	←	←	0	←	←
4158	0	←	←	←	0	←	←	←	0	←	←
4159	0	←	←	←	0	←	←	←	0	←	←
4161	0	←	←	←	0	←	←	←	0	←	←
4165	0	←	←	←	0	←	←	←	0	←	←
4166	0	←	←	←	0	←	←	←	0	←	←
4167	0	←	←	←	0	←	←	←	0	←	←
4168	0	←	←	←	0	←	←	←	0	←	←
4169	0	←	←	←	0	←	←	←	0	←	←
4170	456	←	←	←	320	←	←	←	397	←	←
4362	0	←	←	←	0	←	←	←	0	←	←
4363	0	←	←	←	0	←	←	←	0	←	←
4364	0	←	←	←	0	←	←	←	0	←	←
4365	0	←	←	←	0	←	←	←	0	←	←
4366	0	←	←	←	0	←	←	←	0	←	←
4367	0	←	←	←	0	←	←	←	0	←	←
4453	1800	←	←	←	1700	←	←	←	4000	←	←
4454	0	←	←	←	0	←	←	←	0	←	←
4612	10575	←	←	←	13395	←	←	←	13153	←	←
4613	18690	←	←	←	14080	←	←	←	-30047	←	←
4614	0	←	←	←	0	←	←	←	0	←	←
4615	0	←	←	←	0	←	←	←	0	←	←
Maximum output during acceleration (for PS selection)	6.1kW	6.1kW	6.1kW	6.1kW	8.3kW	8.3kW	8.3kW	8.3kW	9.9kW	9.9kW	9.9kW

(*1) Set this value as the initial value of the velocity loop gain.

JRAUTOMATION FANUC*

Motor model	βiIP 18/8000-B	βiIP 18/8000-B	βiIP 18/8000-B	βiIP 22/8000-B	βiIP 22/8000-B	βiIP 30/8000-B	βiIP 40/6000-B
Applicable amplifier	αiSP 11-B βiSVSP* 11-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B βiSVSP* 18-B
Output specification nameplate	K443#S00	K443#S00	K443#S00	K459#S00	K459#S00	K499#S00	K480#S00
Model code	5104	6104	7104	5105	6105	5106	5107
Parameter ID	2434	-	-	2538	-	2871	2690
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/N 9DB0/N
Low-speed winding characteristics	-	-	-	-	-	-	-
High-speed winding characteristics	9/11 kW 1000/8000 min^{-1}	9/11 kW 1000/8000 min^{-1}	9/11 kW 1000/8000 min^{-1}	11/15 kW 1000/8000 min^{-1}	11/15 kW 1000/8000 min^{-1}	15/18.5 kW 1000/8000 min^{-1}	15/18.5 kW 600/6000 min^{-1}
4007	00000000	←	←	00000000	←	00000000	00000000
4008	00010000	←	←	00010000	←	00010000	00010000
4009	00000000	←	←	00000000	←	00000000	00000000
4010	00010000	←	←	00010000	←	00010000	00010000
4011	00001010	←	←	00001010	←	00001010	00001010
4012	10000000	←	←	10000000	←	10000000	10000000
4013	00001100	←	←	00001100	←	00001100	00001100
4019	00000100	←	←	00000100	←	00000100	00000100
4398	10000000	←	←	10000000	←	10000000	10000000
4400	00000000	←	←	00000000	←	00000000	00000000
4020	8000	←	←	8000	←	8000	6000
4023	30	←	←	30	←	30	30
4039	0	←	←	0	←	0	0
4040	9 (*1)	←	←	8 (*1)	←	10 (*1)	15 (*1)
4041	10	←	←	10	←	10	10
4048	41 (*1)	←	←	35 (*1)	←	10 (*1)	69 (*1)
4049	10	←	←	10	←	10	10
4080	21845	←	←	19275	←	16730	16228
4083	30	←	←	30	←	30	30
4093	0(B) 0(A)	←	←	0(B) 0(A)	←	0(B) 0(A)	0(B) 0(A)
4100	750	←	←	770	←	750	670
4101	79	←	←	100	←	100	72
4102	1191	←	←	953	←	1007	775
4103	0	←	←	0	←	0	0
4104	3000	←	←	4000	←	3500	6500
4105	356	←	←	318	←	318	494
4106	7000	←	←	9000	←	8000	7500
4107	0	←	←	0	←	0	0
4108	0	←	←	0	←	0	0
4109	25	←	←	25	←	25	25
4110	793	1190	1586	1077	1436	1143	849
4111	410	←	←	333	←	334	299
4112	200	←	←	200	←	200	200
4113	268	←	←	300	←	300	193
4114	0	←	←	20480	←	0	0
4115	100	←	←	100	←	100	100
4116	4194	←	←	4408	←	4298	4983
4117	90	←	←	90	←	90	90
4118	100	←	←	100	←	100	100
4119	36	←	←	32	←	32	49
4120	0	←	←	0	←	0	0
4124	24575	←	←	24575	←	24575	24575
4127	176(B) 134(A)	←	←	201(B) 150(A)	←	181(B) 136(A)	158(B) 136(A)
4128	105	←	←	103	←	0	108
4129	0	←	←	0	←	0	0
4130	25700	←	←	25700	←	25700	25700
4134	130	←	←	130	←	130	130
4136	0	←	←	30	←	30	30
4138	0	←	←	0	←	0	0
4139	0	←	←	0	←	0	0
4140	0	←	←	0	←	0	0
4141	0	←	←	0	←	0	0
4142	0	←	←	0	←	0	0
4143	0	←	←	0	←	0	0
4144	0	←	←	0	←	0	0
4145	0	←	←	0	←	0	0
4146	0	←	←	0	←	0	0
4147	0	←	←	0	←	0	0
4148	0	←	←	0	←	0	0
4149	0	←	←	0	←	0	0
4150	0	←	←	0	←	0	0
4151	0	←	←	0	←	0	0
4152	0	←	←	0	←	0	0
4153	0	←	←	0	←	0	0
4154	0	←	←	0	←	0	0
4155	0	←	←	0	←	0	0
4156	0	←	←	0	←	0	0
4158	0	←	←	0	←	0	0
4159	0	←	←	0	←	0	0
4161	0	←	←	0	←	0	0
4165	0	←	←	0	←	0	0
4166	0	←	←	0	←	0	0
4167	0	←	←	0	←	0	0
4168	0	←	←	0	←	0	0
4169	0	←	←	0	←	0	0
4170	224	←	←	453	←	309	304
4362	0	←	←	0	←	0	-24526
4363	0	←	←	0	←	0	-28572
4364	0	←	←	0	←	0	-30420
4365	0	←	←	0	←	0	0
4366	0	←	←	0	←	0	0
4367	0	←	←	0	←	0	0
4453	1000	←	←	1800	←	1800	3700
4454	0	←	←	0	←	0	0
4612	10867	←	←	11136	←	11149	136
4613	27528	←	←	16524	←	16775	18945
4614	0	←	←	0	←	0	0
4615	0	←	←	0	←	0	0
Maximum output during acceleration (for PS selection)	12.1kW	12.1kW	12.1kW	16.5kW	16.5kW	20.4kW	20.4kW

(*1) Set this value as the initial value of the velocity loop gain.

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A.9 SPINDLE MOTOR βiIT-B series

Motor model	βiIT 12/10000-B	βiIT 12/10000-B	βiIT 12/10000-B	βiIT 12/10000-B	βiIT 15/8000-B	βiIT 15/8000-B
Applicable amplifier	αiSP 15-B βiSVSP* 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 15-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B βiSVSP* 18-B	αiSP 22-B
Output specification nameplate	K490#S00	K490#S00	K490#S0P	K490#S0P	K491#S00	K491#S0P
Model code	5108	6108	5109	6109	5110	5111
Parameter ID	2744	-	2515	-	2420	2649
Series and editions of applicable spindle sofutware	9DAA/M 9DB0/M	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/M 9DB0/M	9DAA/O 9DB0/O	9DAA/O 9DB0/O
Low-speed winding characteristics	-	-	-	-	-	-
High-speed winding characteristics	11/15 kW 2000/10000 min^{-1}	11/15 kW 2000/10000 min^{-1}	11/15/18.5 kW 2000/10000 min^{-1}	11/15/18.5 kW 2000/10000 min^{-1}	15/18.5 kW 2000/8000 min^{-1}	15/18.5/22 kW 2000/8000 min^{-1}
4007	00000000	←	00000100	←	00000000	00000000
4008	00000000	←	00000000	←	00000000	00000000
4009	00000000	←	00000000	←	00000000	00000000
4010	00010001	←	00010001	←	00010001	00000001
4011	00011010	←	00011010	←	00011010	00011010
4012	10000010	←	10000010	←	10000000	10000010
4013	00001100	←	00001100	←	00001100	00001100
4019	00000100	←	00000100	←	00000100	00000100
4398	10000000	←	10000000	←	10000000	10000000
4400	00000000	←	00000000	←	00000000	00000000
4020	10000	←	10000	←	8000	8000
4023	30	←	30	←	30	30
4039	0	←	0	←	0	0
4040	4 (*1)	←	3 (*1)	←	8 (*1)	7 (*1)
4041	10	←	10	←	10	10
4048	18 (*1)	←	15 (*1)	←	38 (*1)	32 (*1)
4049	10	←	10	←	10	10
4080	12895	←	19513	←	15445	15455
4083	30	←	30	←	30	30
4093	0(B) 0(A)	←	0(B) 0(A)	←	0(B) 0(A)	0(B) 0(A)
4100	1550	←	1550	←	1550	1550
4101	82	←	89	←	81	70
4102	1844	←	1844	←	1610	1610
4103	80	←	0	←	0	0
4104	3500	←	3500	←	2500	4500
4105	135	←	135	←	321	321
4106	10000	←	10000	←	5000	11500
4107	0	←	0	←	0	0
4108	0	←	0	←	0	0
4109	25	←	25	←	25	25
4110	1031	1375	1031	1375	1426	1426
4111	355	←	414	←	389	577
4112	200	←	200	←	200	200
4113	705	←	705	←	298	298
4114	23040	←	0	←	0	0
4115	100	←	100	←	100	100
4116	6300	←	6300	←	4344	4344
4117	90	←	28762	←	90	90
4118	100	←	100	←	100	90
4119	14	←	14	←	32	32
4120	0	←	0	←	0	0
4124	24575	←	24575	←	24575	24575
4127	202(B) 150(A)	←	249(B) 185(A)	←	175(B) 136(A)	208(B) 161(A)
4128	95	←	0	←	0	0
4129	0	←	0	←	0	0
4130	25700	←	25700	←	25700	25700
4134	110	←	110	←	130	130
4136	30	←	30	←	30	30
4138	0	←	0	←	0	0
4139	0	←	0	←	0	0
4140	0	←	0	←	0	0
4141	0	←	0	←	0	0
4142	0	←	0	←	0	0
4143	0	←	0	←	0	0
4144	0	←	0	←	0	0
4145	0	←	0	←	0	0
4146	0	←	0	←	0	0
4147	0	←	0	←	0	0
4148	0	←	0	←	0	0
4149	0	←	0	←	0	0
4150	0	←	0	←	0	0
4151	0	←	0	←	0	0
4152	0	←	0	←	0	0
4153	0	←	0	←	0	0
4154	0	←	0	←	0	0
4155	0	←	0	←	0	0
4156	0	←	0	←	0	0
4158	0	←	0	←	0	0
4159	0	←	0	←	0	0
4161	0	←	0	←	0	0
4165	0	←	0	←	0	0
4166	0	←	0	←	0	0
4167	0	←	110	←	0	0
4168	0	←	0	←	0	0
4169	0	←	0	←	0	0
4170	405	←	405	←	405	405
4362	0	←	-24451	←	0	-24451
4363	0	←	30870	←	0	-30545
4364	0	←	-28472	←	0	-24326
4365	0	←	0	←	0	0
4366	0	←	0	←	0	0
4367	0	←	0	←	0	0
4453	2000	←	2000	←	2000	2000
4454	0	←	0	←	0	0
4612	11112	←	11100	←	11122	10837
4613	9730	←	9730	←	9735	9734
4614	0	←	0	←	0	0
4615	0	←	0	←	0	0
Maximum output during acceleration (for PS selection)	16.5kW	16.5kW	20.4kW	20.4kW	20.4kW	24.2kW

(*1) Set this value as the initial value of the velocity loop gain.

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A.10 SPINDLE MOTOR βiIc-B series

Motor model	βiIc 3/6000-B		βiIc 6/6000-B		βiIc 8/6000-B	
Applicable amplifier	βiSVSP* 7.5-B		βiSVSP* 7.5-B		βiSVSP* 11-B	
Output specification nameplate	K415#S00		K416#S00		K417#S00	
Model code	271		272		273	
Parameter ID	271		272		273	
Series and editions of applicable spindle sofutware	9DB0/B		9DB0/B		9DB0/B	
Low-speed winding characteristics	-		-		-	
High-speed winding characteristics	3.7/5.5 kW 2000/6000 min^{-1}		5.5/7.5 kW 2000/6000 min^{-1}		7.5/11 kW 2000/6000 min^{-1}	
4000	00000000		00000000		00000000	
4001	00000001		00000001		00000001	
4002	00000010 (*3)		00000010 (*3)		00000010 (*3)	
4003	00000000		00000000		00000000	
4004	00000000		00000000		00000000	
4005	00000001		00000001		00000001	
4006	00000000		00000000		00000000	
4007	00000000		00000000		00000000	
4008	00001000		00001000		00001000	
4009	00000000		00000000		00000000	
4010	00000000		00000000		00000000	
4011	00001000		00001000		00001000	
4012	00000000		00000000		00000000	
4013	00001100		00001100		00001100	
4019	00000000		00000000		00000000	
4398	10000000		10000000		10000000	
4400	00000000		00000000		00000000	
4020	6000		6000		6000	
4023	30		30		30	
4039	0		0		0	
4040~4045	24 (*4)		34 (*4)		28 (*4)	
4048~4053	607 (*4)		844 (*4)		696 (*4)	
4080	75		75		80	
4083	60		60		60	
4093	0(B)	0(A)	0(B)	0(A)	0(B)	0(A)
4100	1600		1607		1450	
4101	90		65		90	
4102	1800		1607		1799	
4103	53		53		36	
4104	400		300		400	
4105	25		25		25	
4106	100		100		100	
4107	0		0		0	
4108	200		200		200	
4109	25		25		25	
4110	929		623		580	
4111	250		276		250	
4112	200		200		200	
4113	1000		897		680	
4114	0		0		0	
4115	100		100		100	
4116	8500		7393		8001	
4117	29530		120		32090	
4118	120		120		100	
4119	10		21		12	
4120	15		15		15	
4124	24562		24575		24562	
4127	218(B)	164(A)	199(B)	150(A)	215(B)	161(A)
4128	0		90		90	
4129	0		0		0	
4130	100		100		100	
4131	12900		12900		12900	
4134	110		110		110	
4138	1500		1700		4350	
4139	150		150		450	
4140	5600		6000		5800	
4141	680		650		600	
4142	0		0		0	
4143	0		0		0	
4168	0		0		0	
4170	677 (*5)		949 (*5)		728 (*5)	
4362	-28572		-32693		-32693	
4363	-30495		-26424		-26424	
4364	-28972		26924		26924	
4453	1650 (*5)		1900 (*5)		1510 (*5)	
4454	0		0		0	
4612	11114		10836		11115	
4613	9493		12295		11022	
4614	0		0		0	
4615	0		0		0	
Maximum output during acceleration (for PS selection)	6.1kW		8.3kW		12.1kW	

(*3) This setting is applied to when the position coder is attached to the spindle.
When using the αiBZ sensor, set bits 3, 2, 1, 0 of parameter No.4002 to 0, 0, 1, 1 respectively, and set bits 7, 6, 5, 4 of parameter No.4003 or parameter No.4361 depending on the number of sensor teeth.

(*4) Since these values are the standard values for the motor alone, they need to be changed as shown below depending on the load state of an actual machine.
Setting = (machine load inertia / motor inertia + 1) * standard value of motor alone

(*5) When the smart load meter is used, please change parameters manually according to the table after load parameters automatically with the model code.

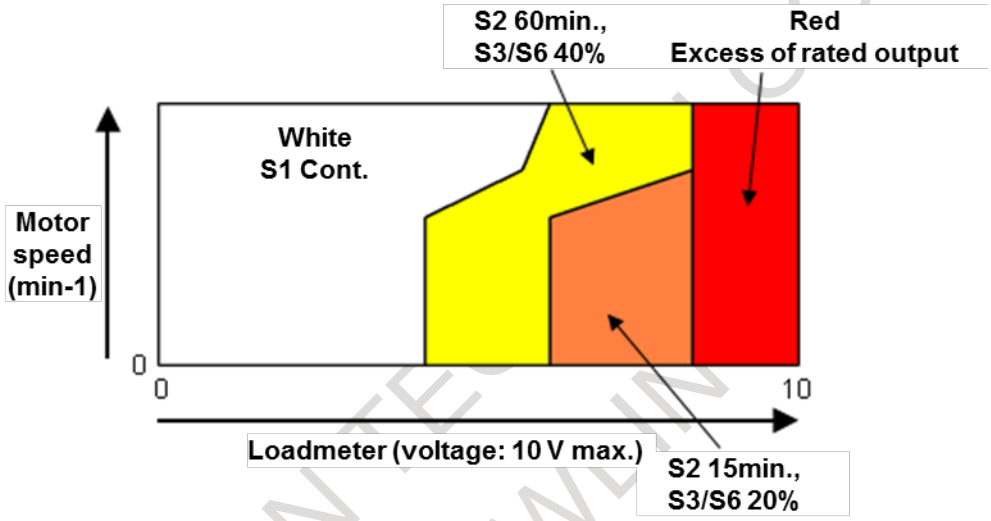
JR AUTOMATION TECHNOLOGIES INC*
DOWLING

B LOADMETER

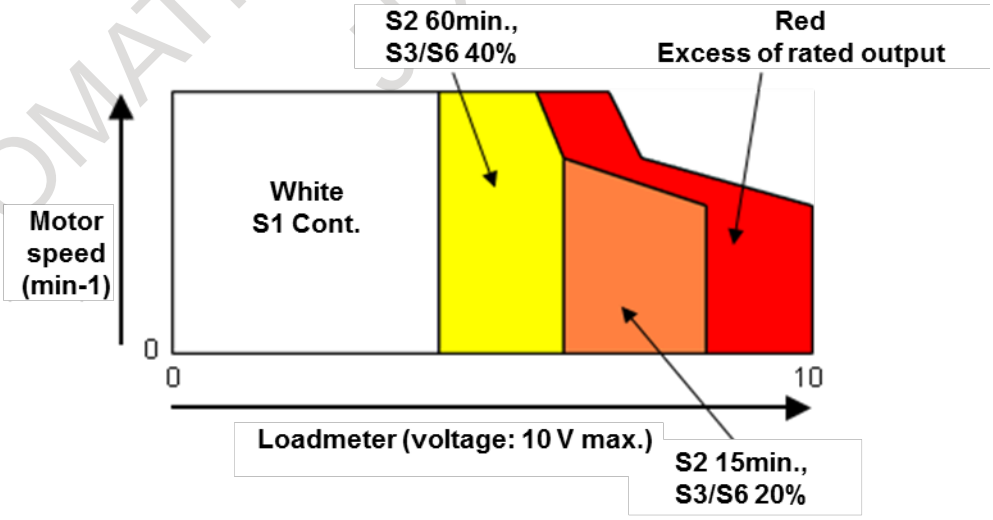
The loadmeter (dynamometer) shows the percentage of the load (load factor) to the maximum output that the motor can produce. At the maximum output, 10 V is output. It is output on pin 16 of the JY1 connector of the spindle amplifier (α*i*SP). (For details, refer to "FANUC SERVO AMPLIFIER α*i*-B series Descriptions" (B-65412EN).) Two types of loadmeter are available : Load meter (Normalized by max. output) and Load meter (Normalized by cont. rated output). (For details, refer to PARAMETER MANUAL (B-65280EN/10) , or ask FANUC.)

Example

- **Load meter (Normalized by max. output)**



- **Load meter (Normalized by cont. rated output)**



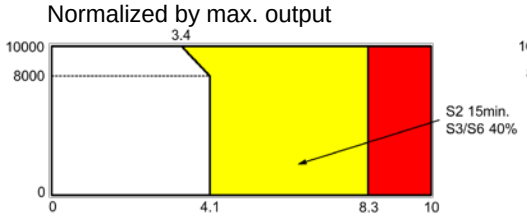
JR AUTOMATION TECHNOLOGIES INC*

B.1 αiI-B series 200V type

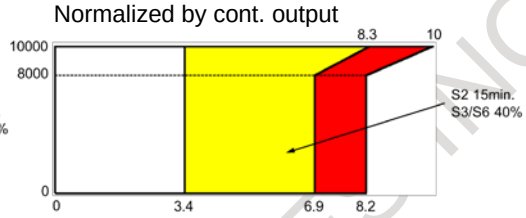
αiI 0.5/10000-B (A06B-2401-Bxxx)

A06B-1230-K401#S00

Normalized by max. output

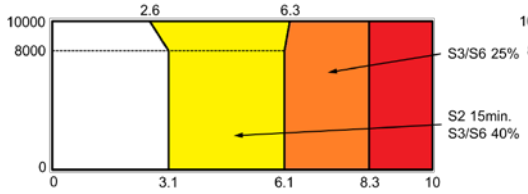


Normalized by cont. output

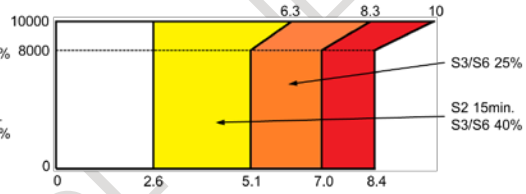


A06B-1230-K401#S0P

Normalized by max. output



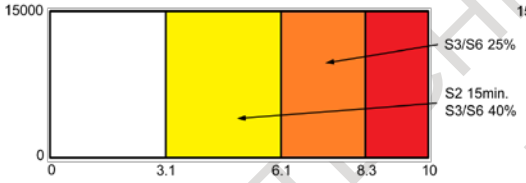
Normalized by cont. output



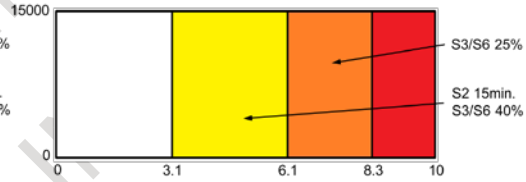
αiI 0.5/15000-B (A06B-2400-Bxxx)

A06B-1230-K400#S0P

Normalized by max. output



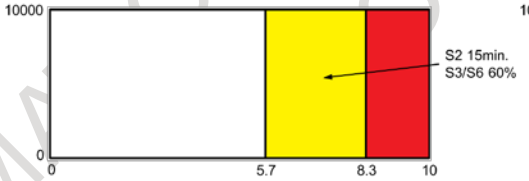
Normalized by cont. output



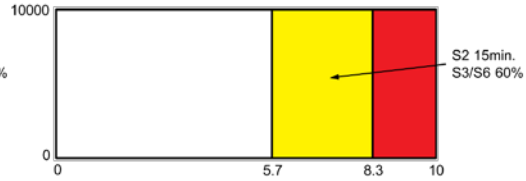
αiI 1/10000-B (A06B-2402-Bxxx)

A06B-1230-K402#S00

Normalized by max. output

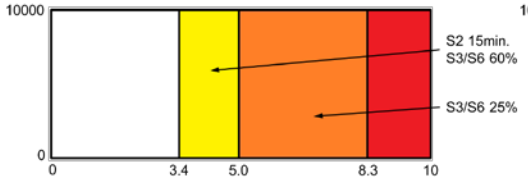


Normalized by cont. output

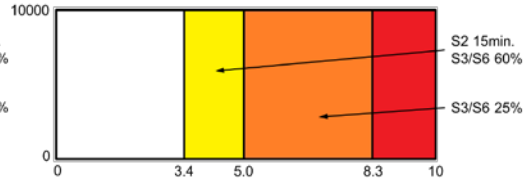


A06B-1230-K402#S0P

Normalized by max. output

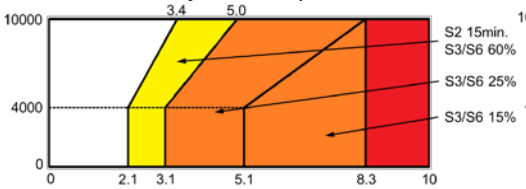


Normalized by cont. output

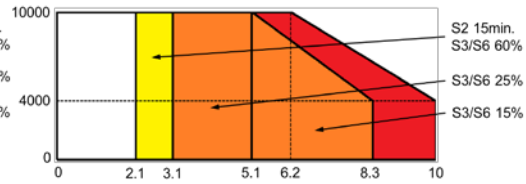


A06B-1230-K402#S0S

Normalized by max. output



Normalized by cont. output

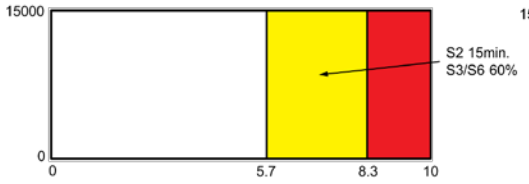


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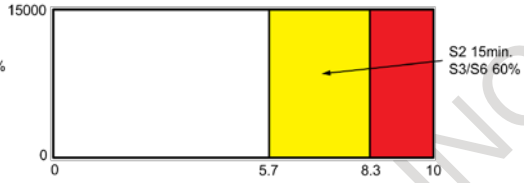
αiI 1/15000-B (A06B-2422-B123)

A06B-1230-K422#S0P

Normalized by max. output



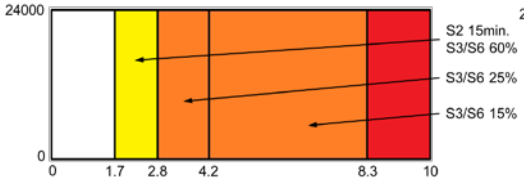
Normalized by cont. output



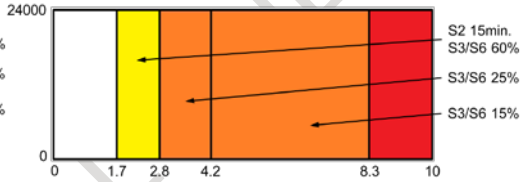
αiI 1/24000-B (A06B-2420-B123)

A06B-1230-K420#S0S

Normalized by max. output



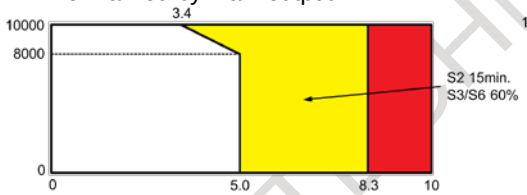
Normalized by cont. output



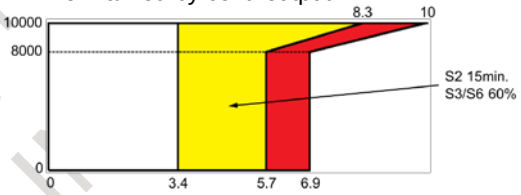
αiI 1.5/10000-B (A06B-2403-Bxxx)

A06B-1230-K403#S00

Normalized by max. output

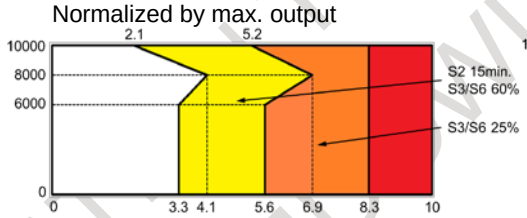


Normalized by cont. output

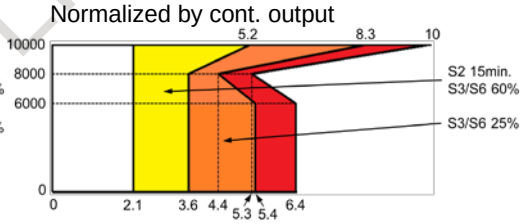


A06B-1230-K403#S0P

Normalized by max. output

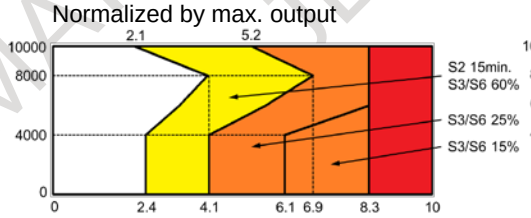


Normalized by cont. output

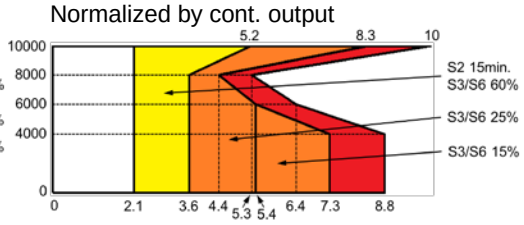


A06B-1230-K403#S0S

Normalized by max. output



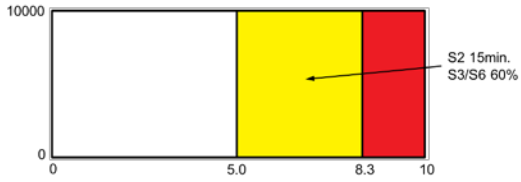
Normalized by cont. output



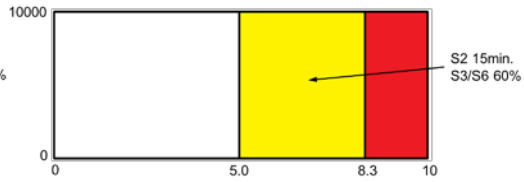
αiI 1.5/20000-B (A06B-2423-B123#0101)

A06B-1230-K423#S00

Normalized by max. output



Normalized by cont. output

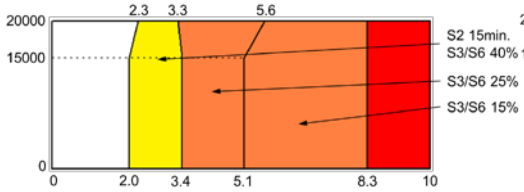


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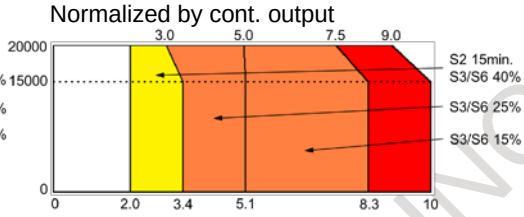
αiI 1.5/20000-B (A06B-2423-B123)

A06B-1230-K423#S0S

Normalized by max. output



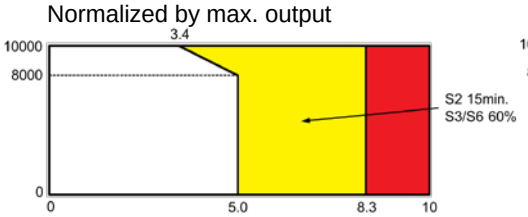
Normalized by cont. output



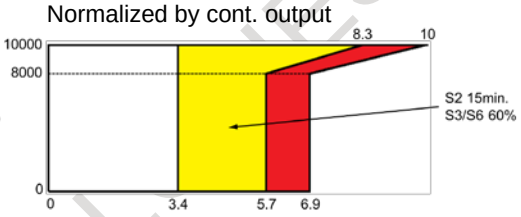
αiI 2/10000-B (A06B-2404-Bxxx)

A06B-1230-K404#S00

Normalized by max. output

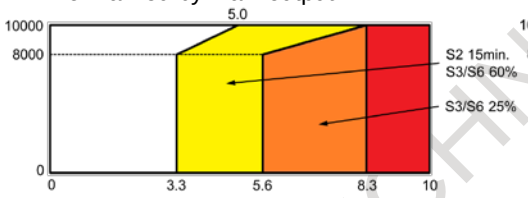


Normalized by cont. output

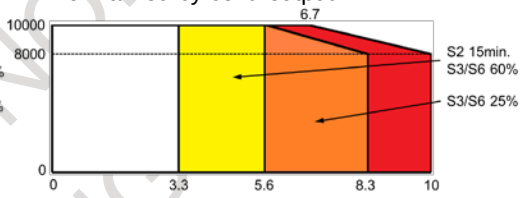


A06B-1230-K404#S0P

Normalized by max. output

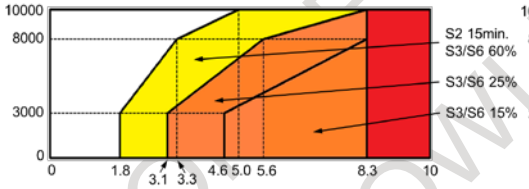


Normalized by cont. output

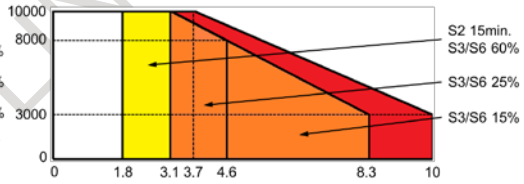


A06B-1230-K404#S0S

Normalized by max. output



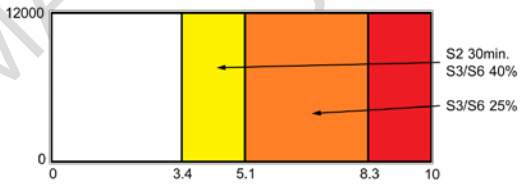
Normalized by cont. output



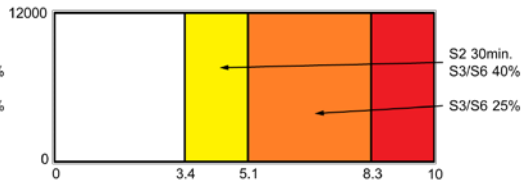
αiI 2/12000-B (A06B-2418-B123)

A06B-1230-K418#S0S

Normalized by max. output



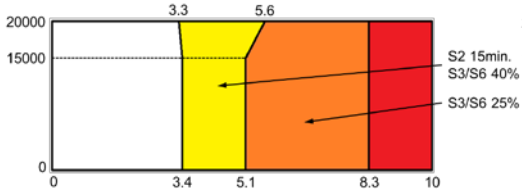
Normalized by cont. output



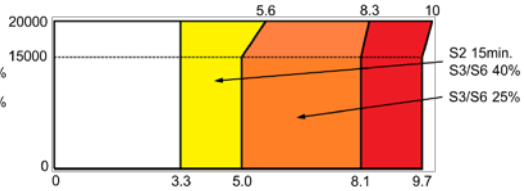
αiI 2/20000-B (A06B-2424-B123)

A06B-1230-K424#S0S

Normalized by max. output



Normalized by cont. output

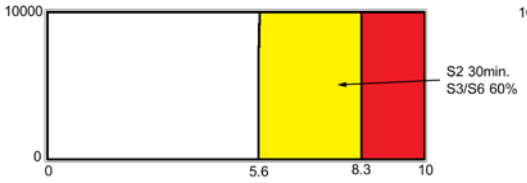


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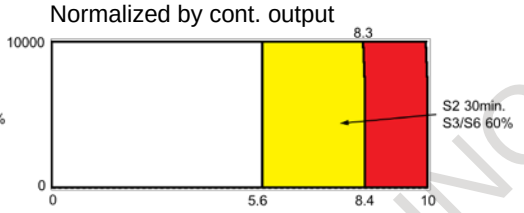
αiI 3/10000-B (A06B-2405-Bxxx)

A06B-1230-K405#S00

Normalized by max. output

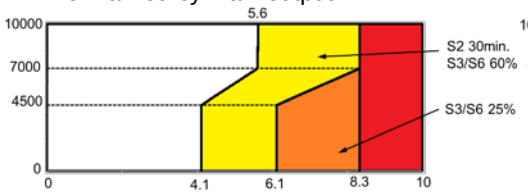


Normalized by cont. output

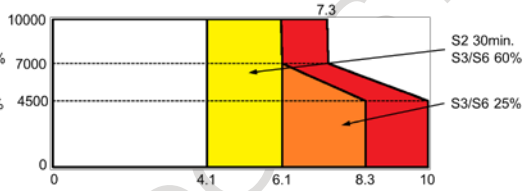


A06B-1230-K405#S0P

Normalized by max. output

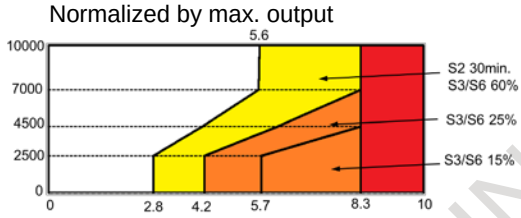


Normalized by cont. output

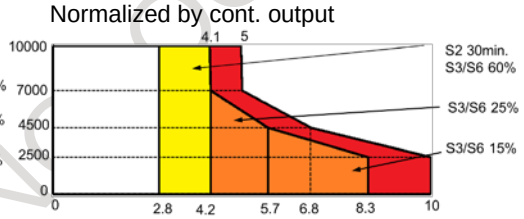


A06B-1230-K405#S0S

Normalized by max. output



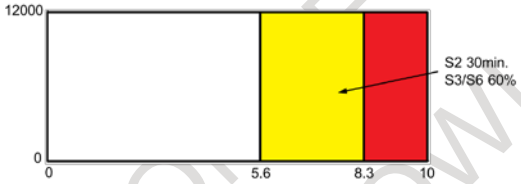
Normalized by cont. output



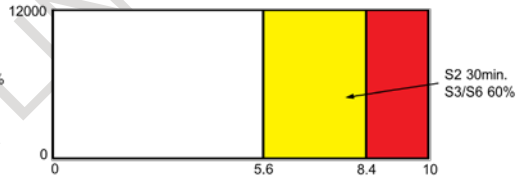
αiI 3/12000-B (A06B-2425-Bxxx)

A06B-1230-K425#S00

Normalized by max. output

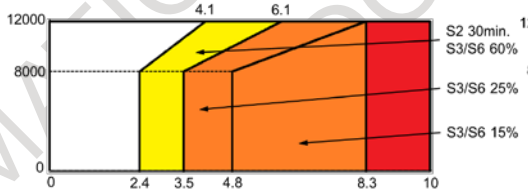


Normalized by cont. output

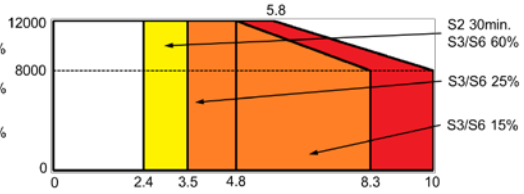


A06B-1230-K425#S0S

Normalized by max. output



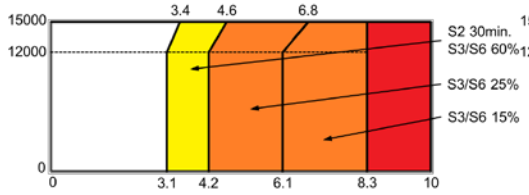
Normalized by cont. output



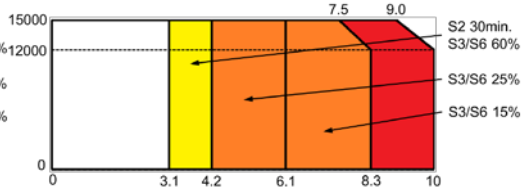
αiI 3/15000-B (A06B-2419-B123)

A06B-1230-K419#S0S

Normalized by max. output



Normalized by cont. output

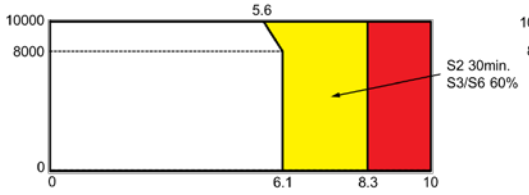


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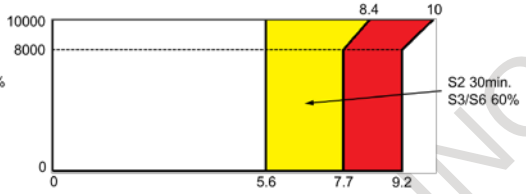
αiI 6/10000-B (A06B-2406-Bxxx)

A06B-1230-K406#S00

Normalized by max. output

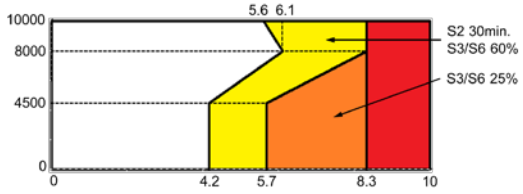


Normalized by cont. output

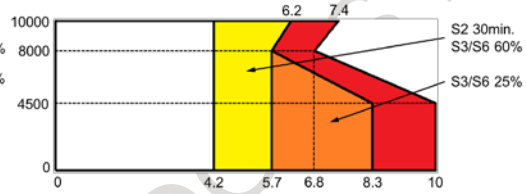


A06B-1230-K406#S0P

Normalized by max. output

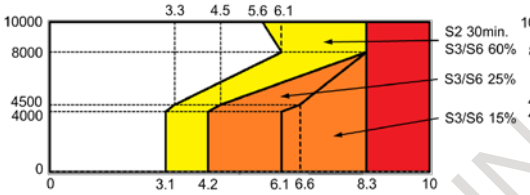


Normalized by cont. output

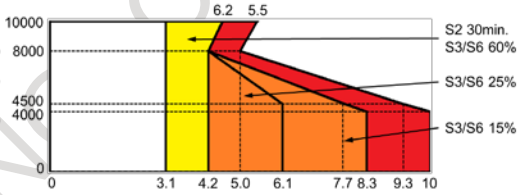


A06B-1230-K406#S0S

Normalized by max. output



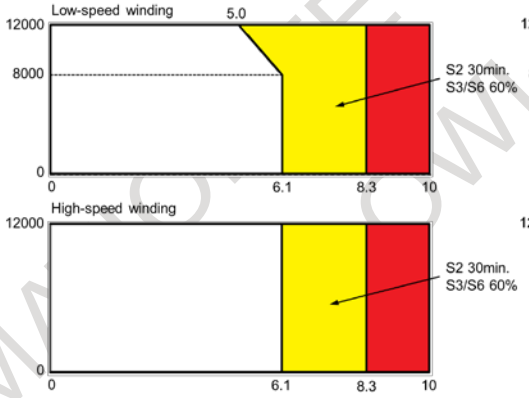
Normalized by cont. output



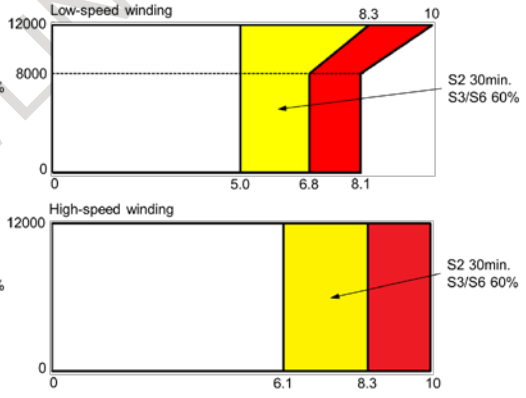
αiI 6/12000-B (A06B-2426-Bxxx)

A06B-1230-K426#S00

Normalized by max. output

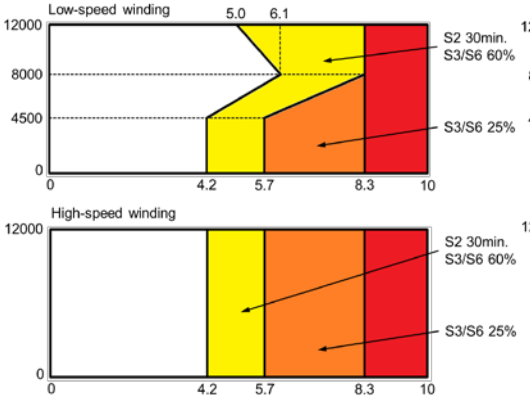


Normalized by cont. output

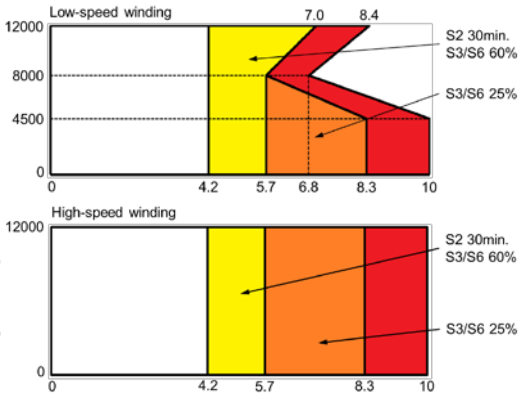


A06B-1230-K426#S0P

Normalized by max. output



Normalized by cont. output

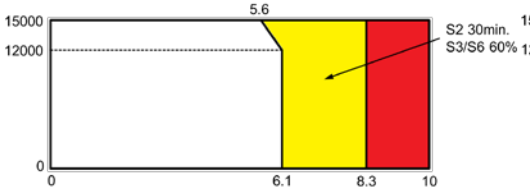


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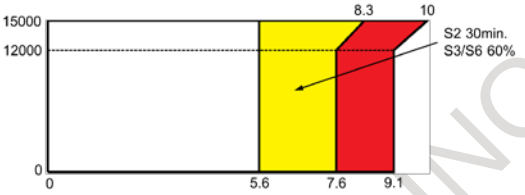
αiI 6/15000-B (A06B-2433-B123#0101)

A06B-1230-K433#S00

Normalized by max. output



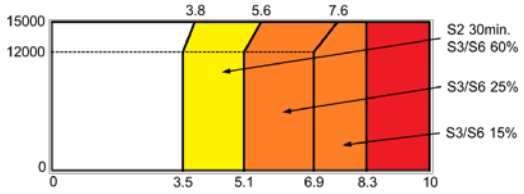
Normalized by cont. output



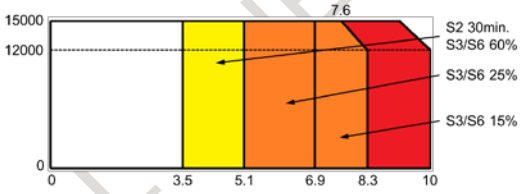
αiI 6/15000-B (A06B-2433-B123)

A06B-1230-K433#S0S

Normalized by max. output



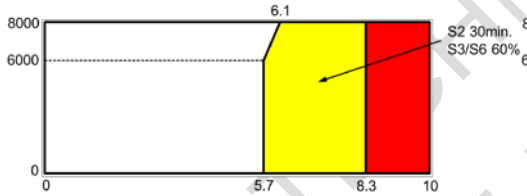
Normalized by cont. output



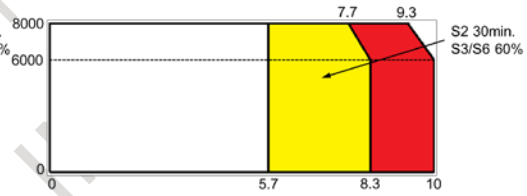
αiI 8/8000-B (A06B-2407-Bxxx)

A06B-1230-K407#S00

Normalized by max. output

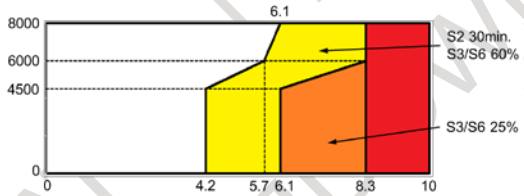


Normalized by cont. output

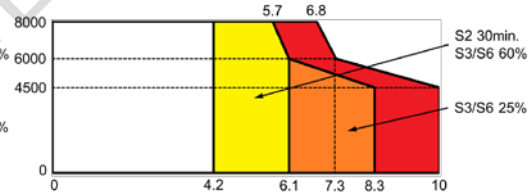


A06B-1230-K407#S0P

Normalized by max. output

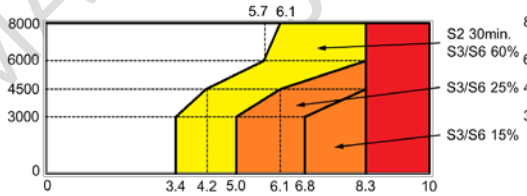


Normalized by cont. output

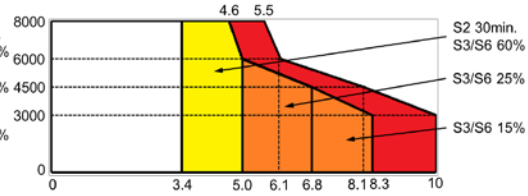


A06B-1230-K407#S0S

Normalized by max. output



Normalized by cont. output

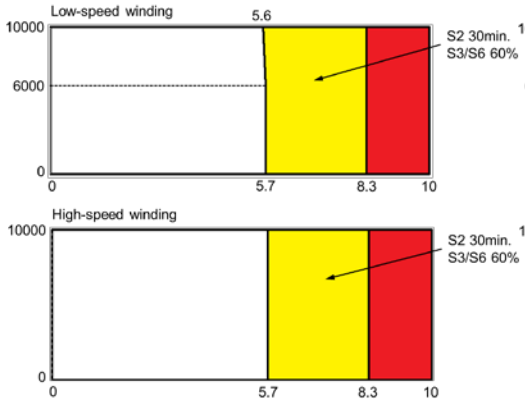


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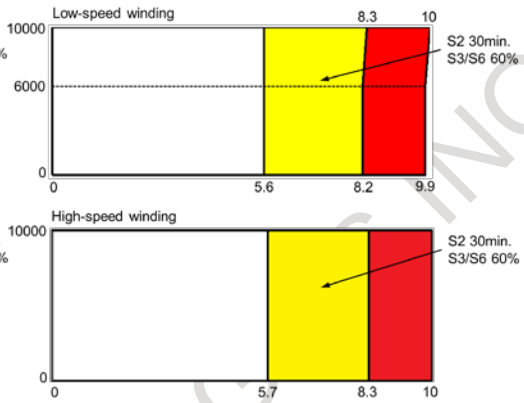
αiI 8/10000-B (A06B-2427-Bxxx)

A06B-1230-K427#S00

Normalized by max. output

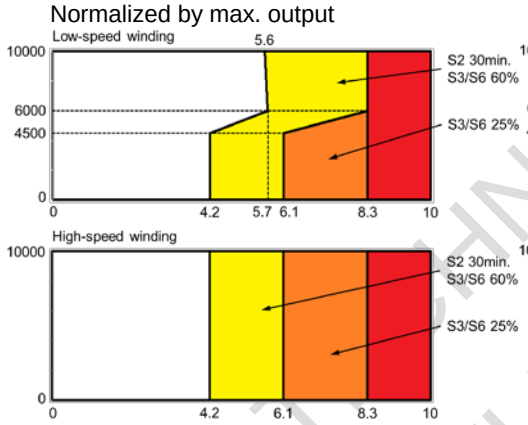


Normalized by cont. output

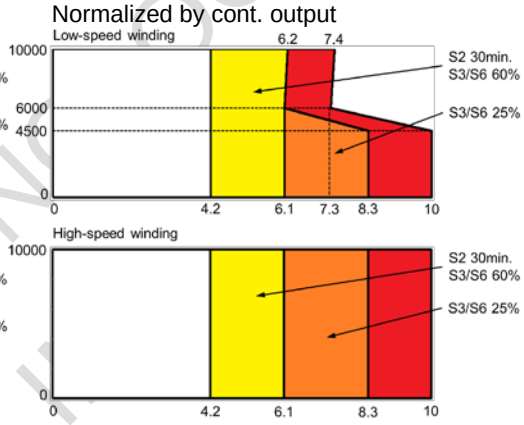


A06B-1230-K427#S0P

Normalized by max. output



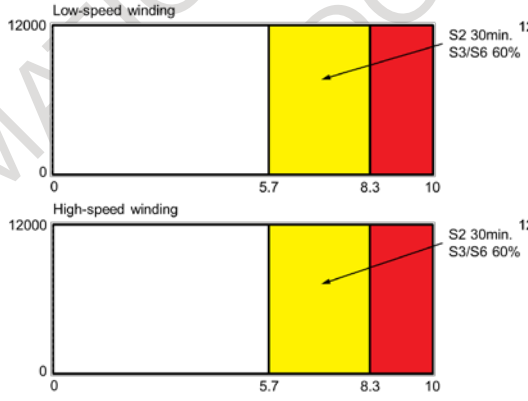
Normalized by cont. output



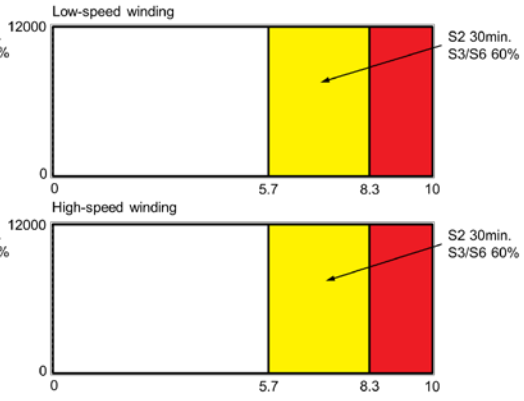
αiI 8/12000-B (A06B-2427-B13x#0101)

A06B-1230-K427#S01

Normalized by max. output



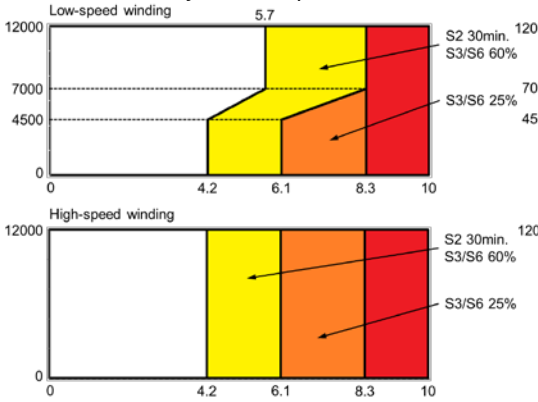
Normalized by cont. output



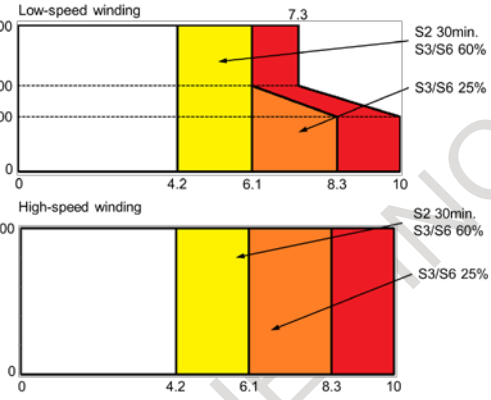
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A06B-1230-K427#S0R

Normalized by max. output



Normalized by cont. output



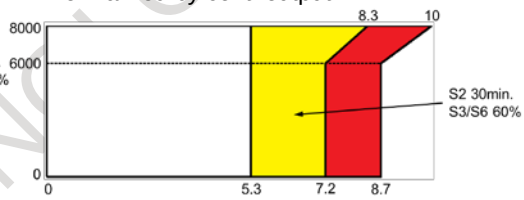
αiI 12/8000-B (A06B-2408-Bxxx)

A06B-1230-K408#S00

Normalized by max. output

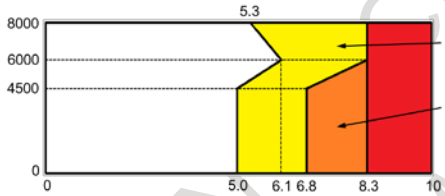


Normalized by cont. output

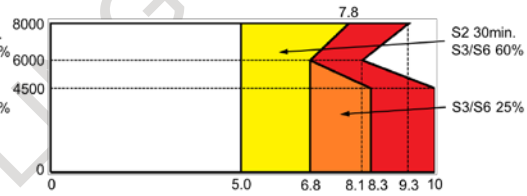


A06B-1230-K408#S0P

Normalized by max. output

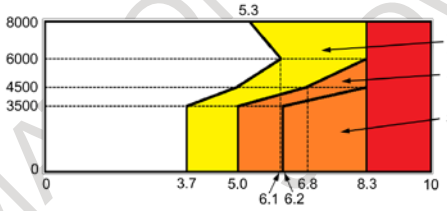


Normalized by cont. output

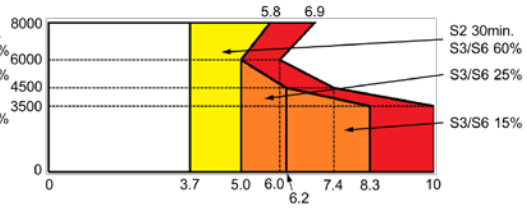


A06B-1230-K408#S0S

Normalized by max. output



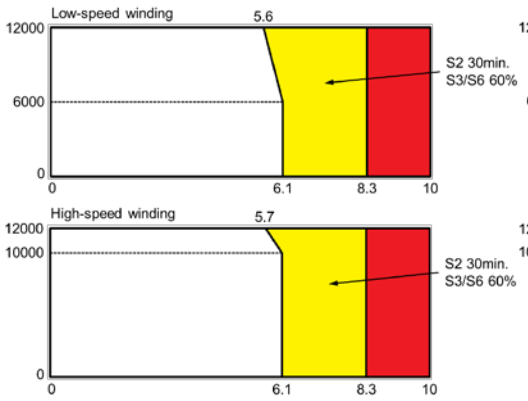
Normalized by cont. output



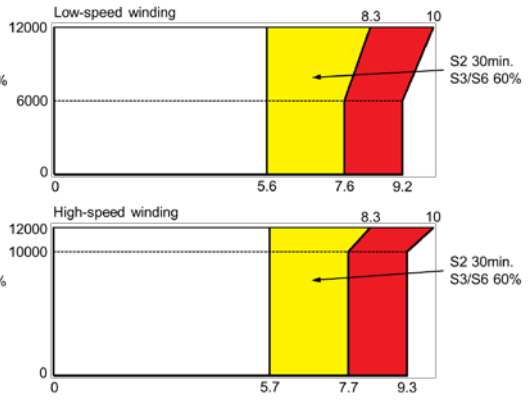
αiI 12/12000-B (A06B-2428-B12x)

A06B-1230-K428#S00

Normalized by max. output

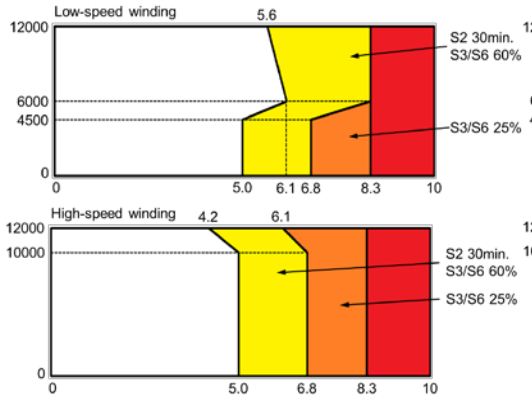


Normalized by cont. output

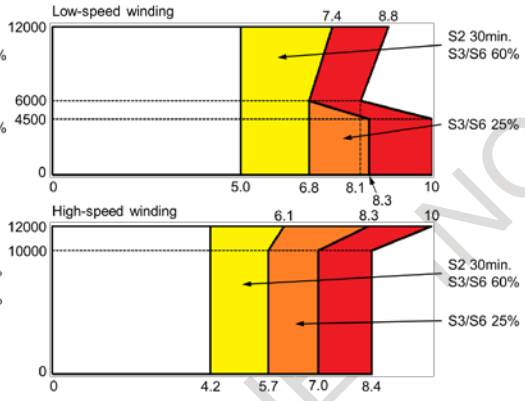


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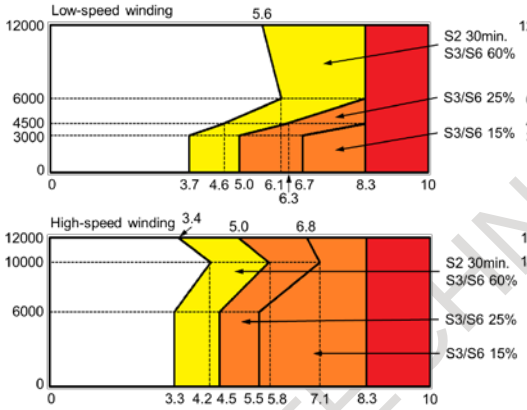
A06B-1230-K428#S0P Normalized by max. output



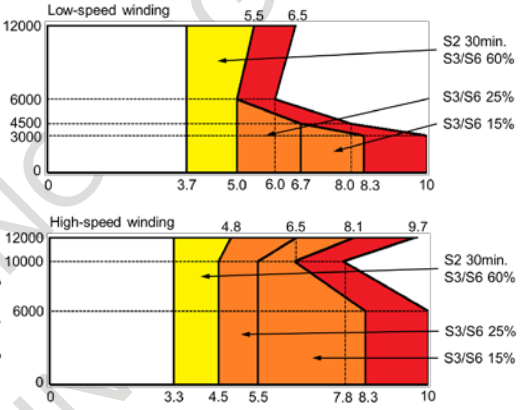
Normalized by cont. output



A06B-1230-K428#S00 Normalized by max. output

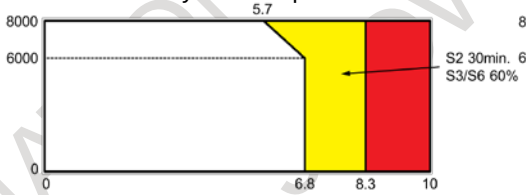


Normalized by cont. output

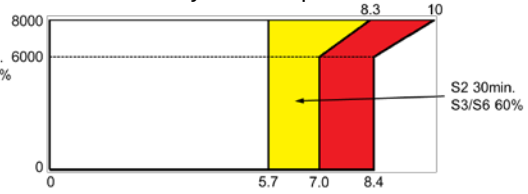


αiI 15/8000-B (A06B-2409-Bxxx)

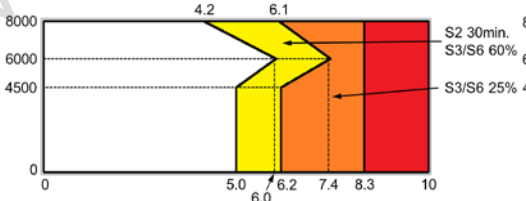
A06B-1230-K409#S00 Normalized by max. output



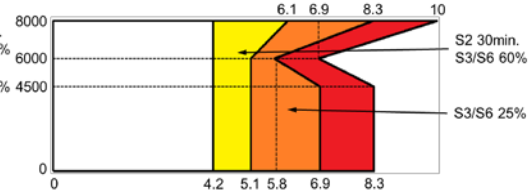
Normalized by cont. output



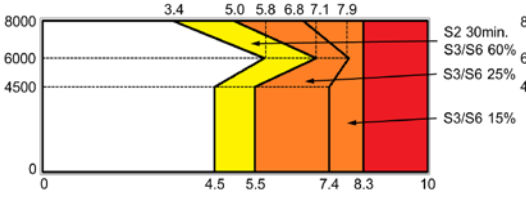
A06B-1230-K409#S0P Normalized by max. output



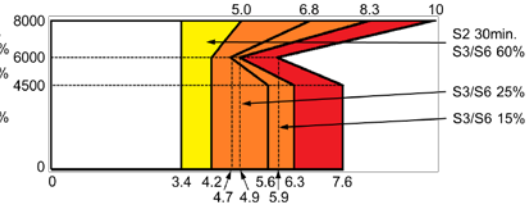
Normalized by cont. output



A06B-1230-K409#S0S Normalized by max. output



Normalized by cont. output

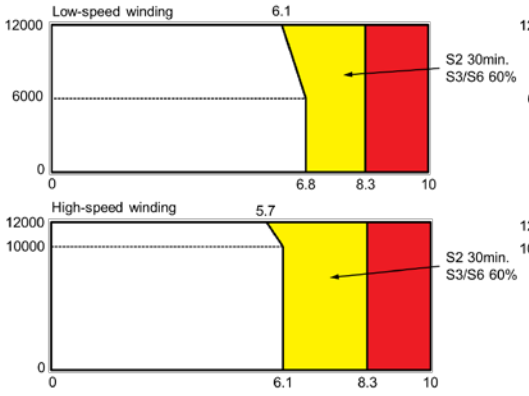


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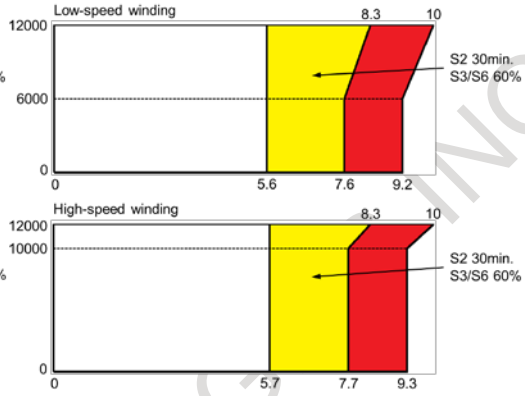
αiI 15/12000-B (A06B-2429-B12x)

A06B-1230-K429#S00

Normalized by max. output

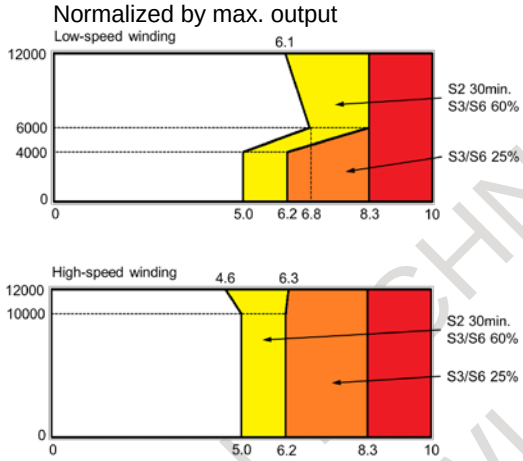


Normalized by cont. output

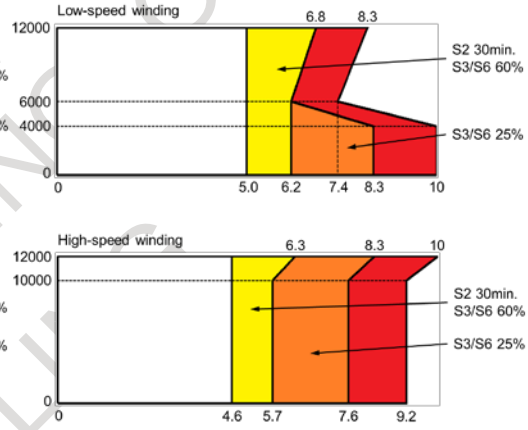


A06B-1230-K429#S0P

Normalized by max. output

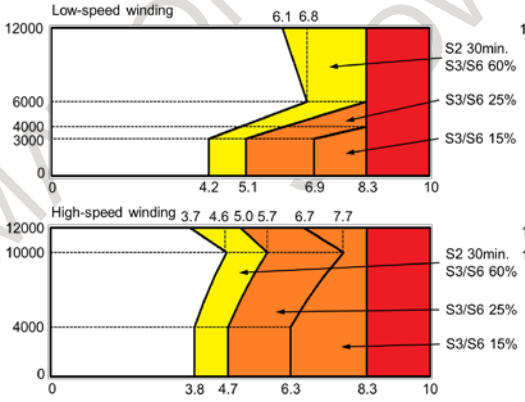


Normalized by cont. output

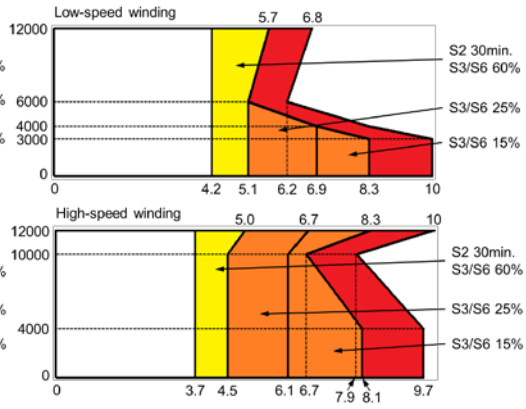


A06B-1230-K429#S00

Normalized by max. output



Normalized by cont. output

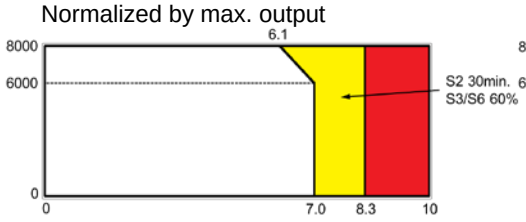


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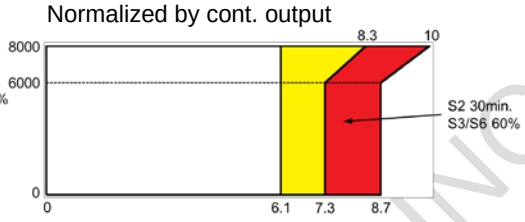
αiI 18/8000-B (A06B-2410-Bxxx)

A06B-1230-K410#S00

Normalized by max. output

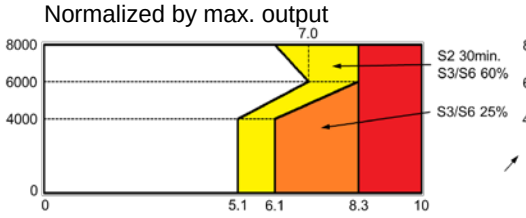


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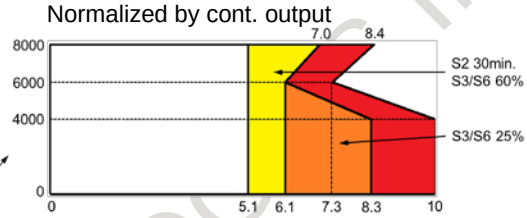


A06B-1230-K410#S0P

Normalized by max. output

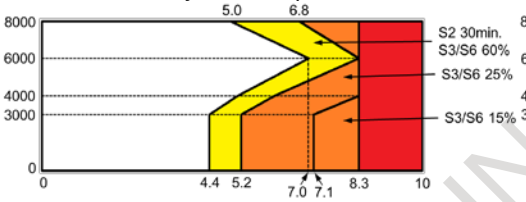


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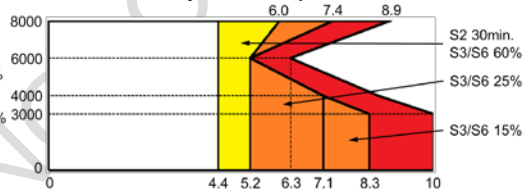


A06B-1230-K410#S0S

Normalized by max. output



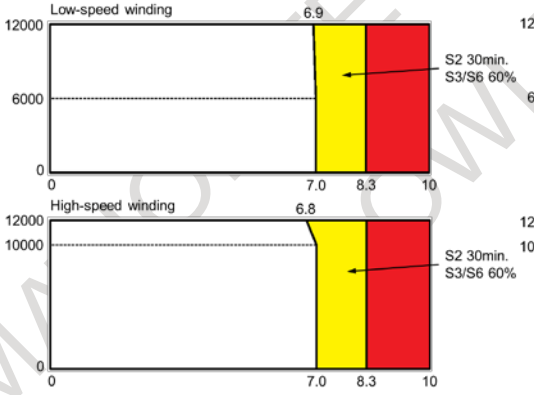
Normalized by cont. output



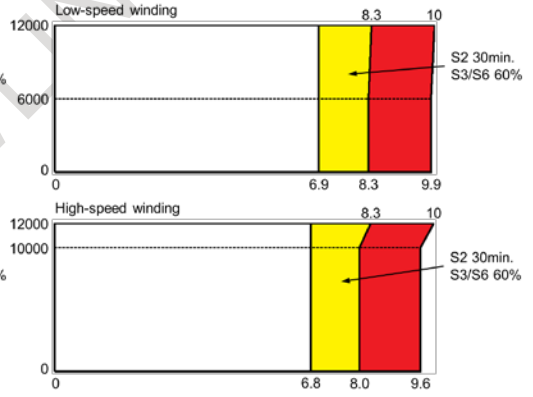
αiI 18/12000-B (A06B-2430-B12x)

A06B-1230-K430#S00

Normalized by max. output

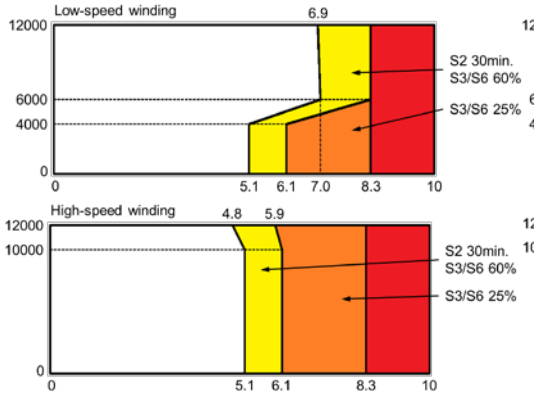


Normalized by cont. output

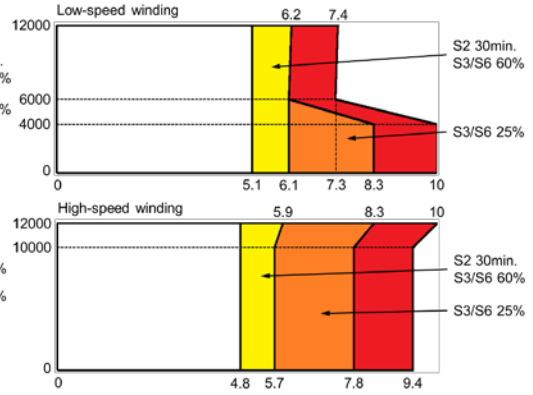


A06B-1230-K430#S0P

Normalized by max. output



Normalized by cont. output

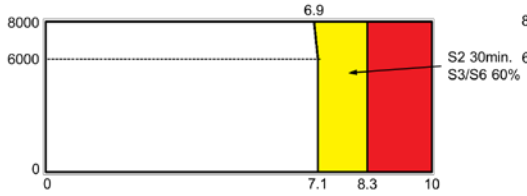


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αiI 22/8000-B (A06B-2411-Bxxx)

A06B-1230-K411#S00

Normalized by max. output

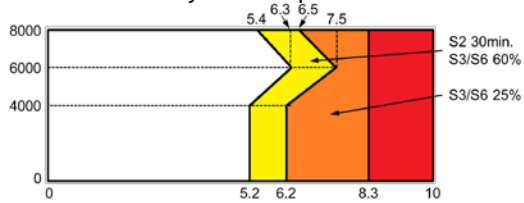


Normalized by cont. output

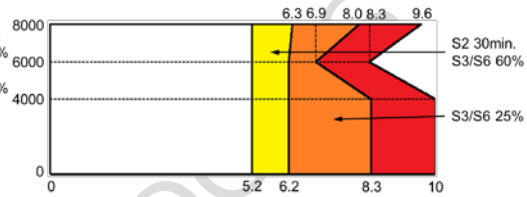


A06B-1230-K411#S0P

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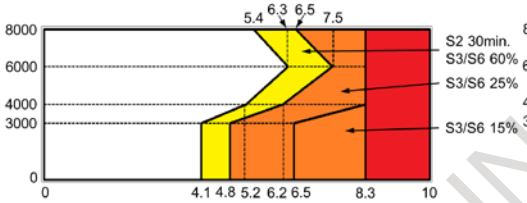


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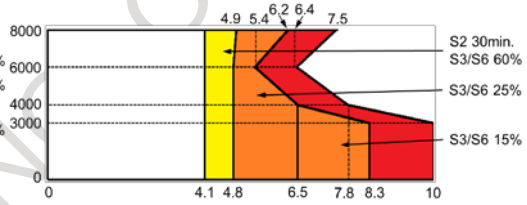


A06B-1230-K411#S0S

Normalized by max. output



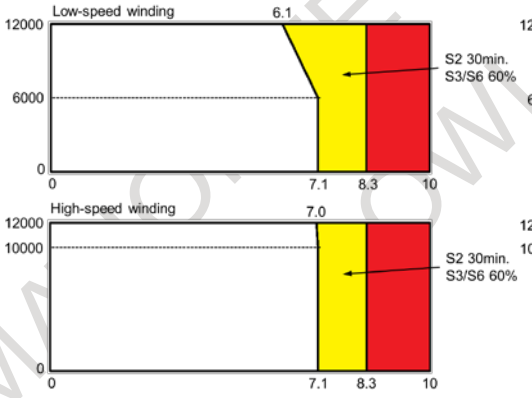
Normalized by cont. output



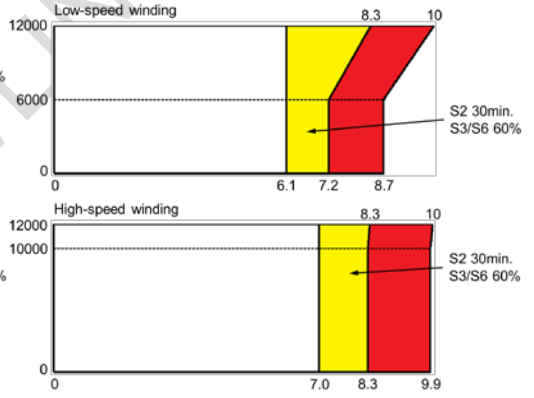
αiI 22/12000-B (A06B-2431-B12x)

A06B-1230-K431#S00

Normalized by max. output

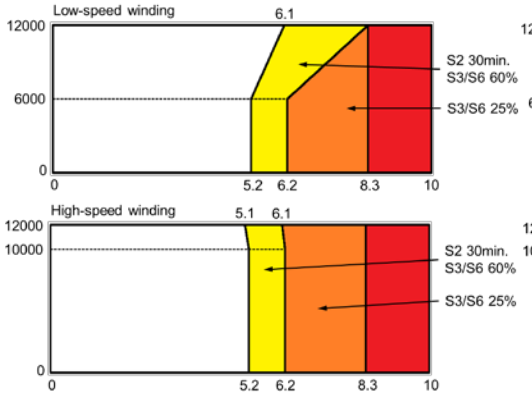


Normalized by cont. output

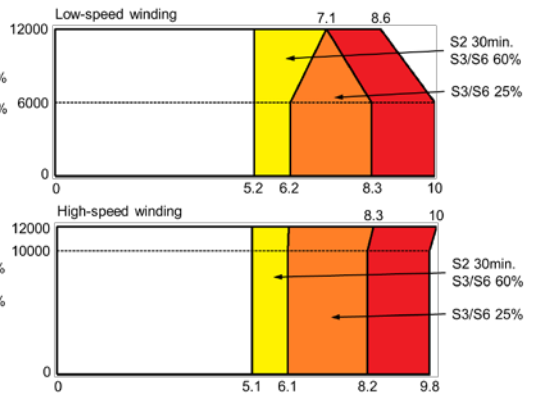


A06B-1230-K431#S0P

Normalized by max. output



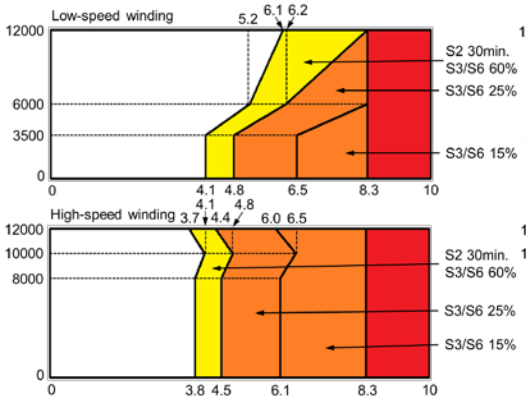
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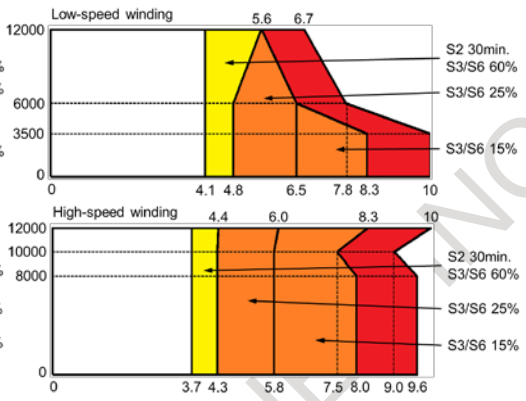
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A06B-1230-K431#S00

Normalized by max. output



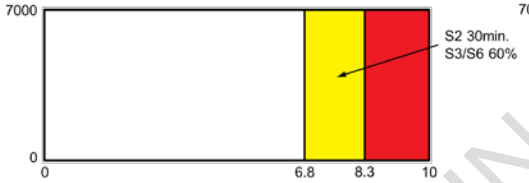
Normalized by cont. output



αiI 30/7000-B (A06B-2412-Bxxx)

A06B-1230-K412#S00

Normalized by max. output

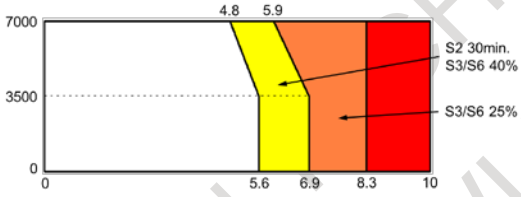


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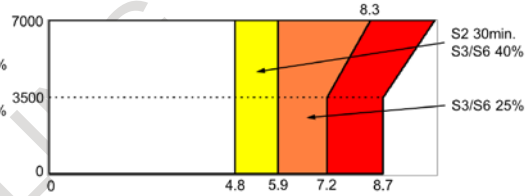


A06B-1230-K412#S0P

Normalized by max. output



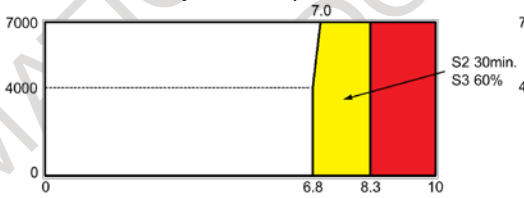
Normalized by cont. output



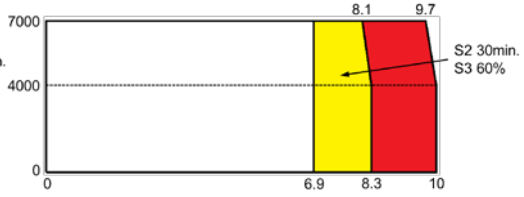
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A06B-1230-K413#S00

Normalized by max. output

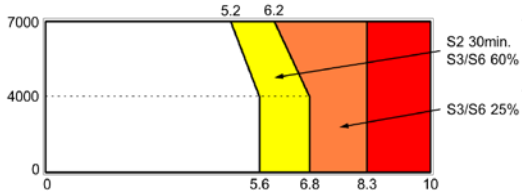


Normalized by cont. output

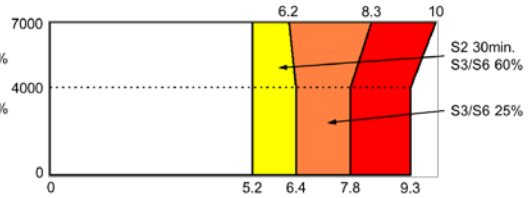


A06B-1230-K413#S0P

Normalized by max. output



Normalized by cont. output

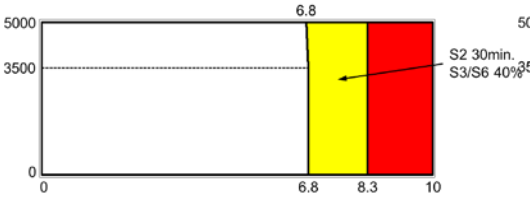


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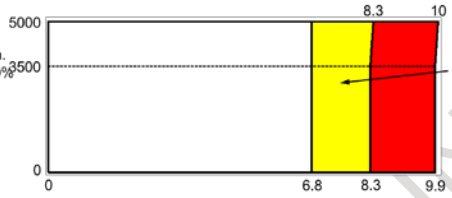
αiI 50/5000-B (A06B-2414-Bxxx)

A06B-1230-K414#S00

Normalized by max. output

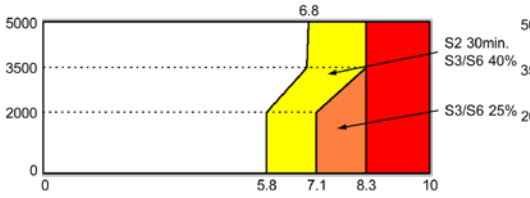


Normalized by cont. output

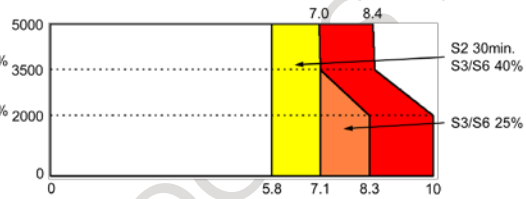


A06B-1230-K414#S0P

Normalized by max. output



Normalized by cont. output



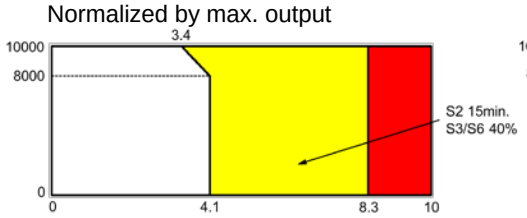
JR AUTOMATION TECHNOLOGIES, INC*
JDOWLING

B.2 αiI-B series 400V type

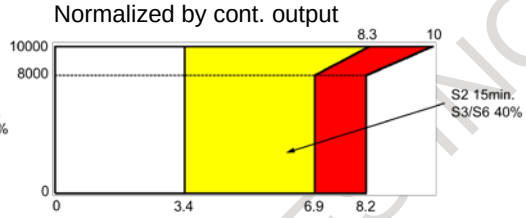
αiI 0.5/10000HV-B (A06B-2501-Bxxx)

A06B-1230-K501#S00

Normalized by max. output



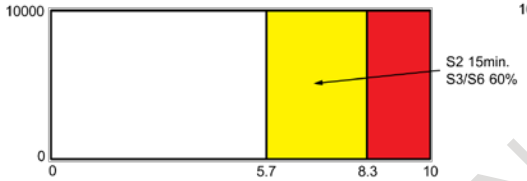
Normalized by cont. output



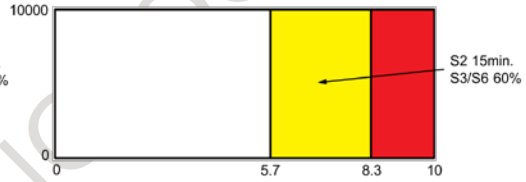
αiI 1/10000HV-B (A06B-2502-Bxxx)

A06B-1230-K502#S00

Normalized by max. output



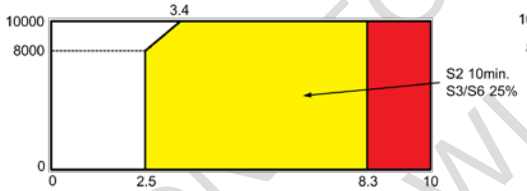
Normalized by cont. output



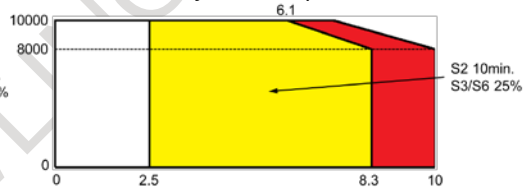
αiI 1.5/10000HV-B (A06B-2503-Bxxx)

A06B-1230-K503#S00

Normalized by max. output



Normalized by cont. output



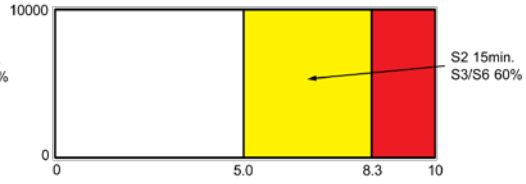
αiI 2/10000HV-B (A06B-2504-Bxxx)

A06B-1230-K504#S00

Normalized by max. output



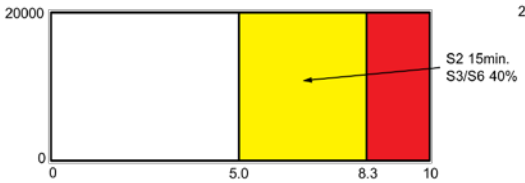
Normalized by cont. output



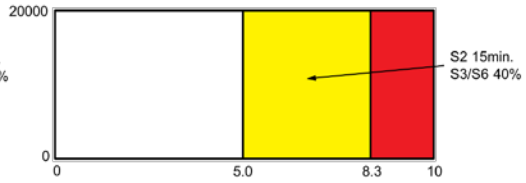
αiI 2/20000HV-B (A06B-2524-B123#0101)

A06B-1230-K524#S00

Normalized by max. output



Normalized by cont. output

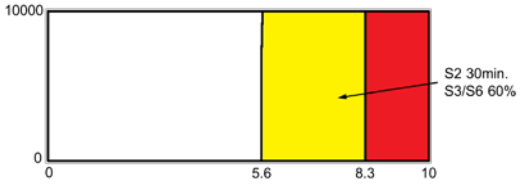


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DOWLING

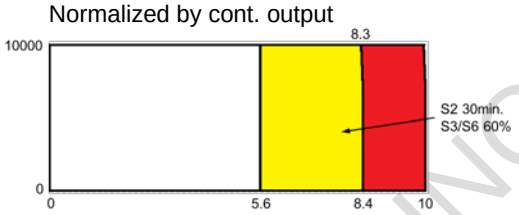
αiI 3/10000HV-B (A06B-2505-Bxxx)

A06B-1230-K505#S00

Normalized by max. output



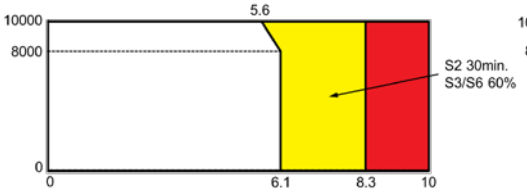
Normalized by cont. output



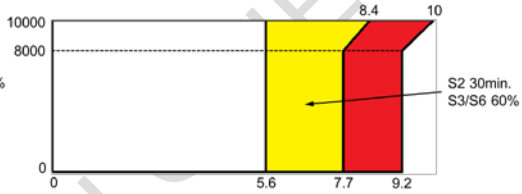
αiI 6/10000HV-B (A06B-2506-Bxxx)

A06B-1230-K506#S00

Normalized by max. output

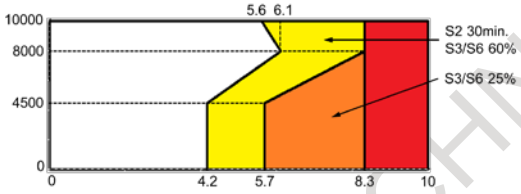


Normalized by cont. output

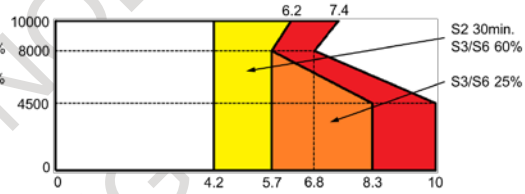


A06B-1230-K506#S0P

Normalized by max. output



Normalized by cont. output



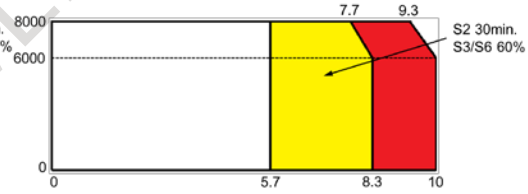
αiI 8/8000HV-B (A06B-2507-Bxxx)

A06B-1230-K507#S00

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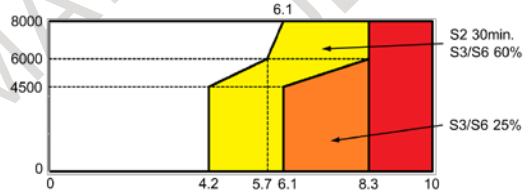


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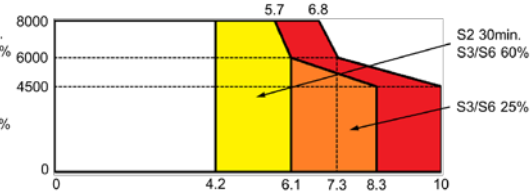


A06B-1230-K507#S0P

Normalized by max. output



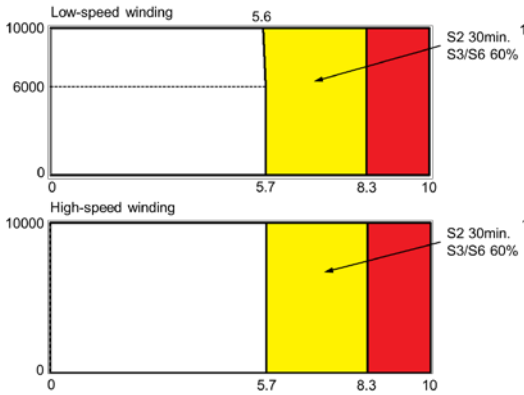
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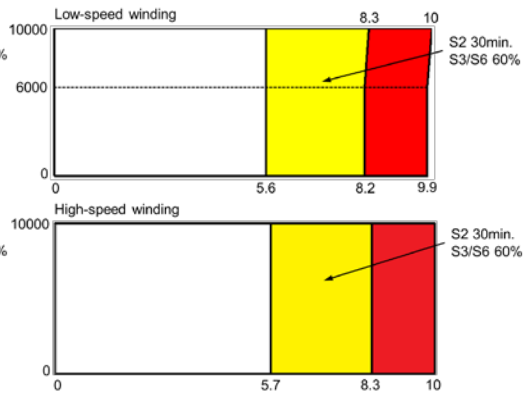
αiI 8/10000HV-B (A06B-2527-B1xx)

A06B-1230-K527#S00

Normalized by max. output



Normalized by cont. output

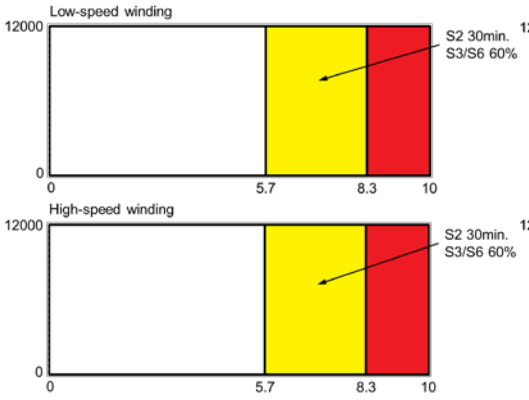


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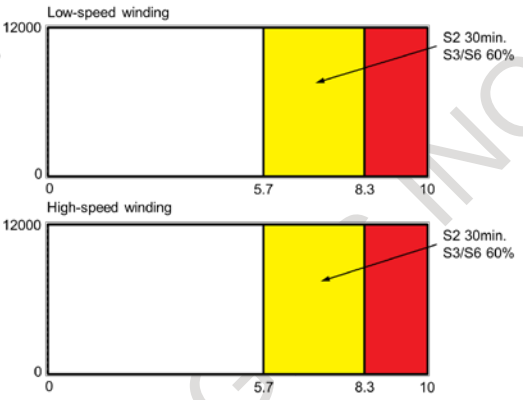
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A06B-1230-K527#S01

Normalized by max. output



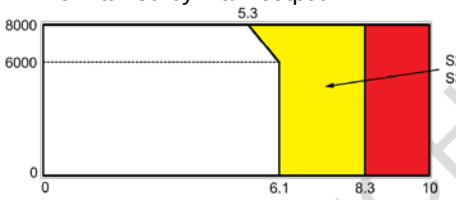
Normalized by cont. output



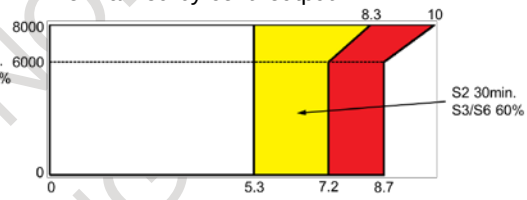
αiI 12/8000HV-B (A06B-2508-Bxxx)

A06B-1230-K508#S00

Normalized by max. output

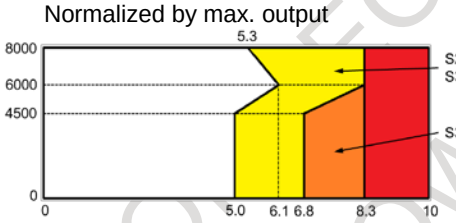


Normalized by cont. output

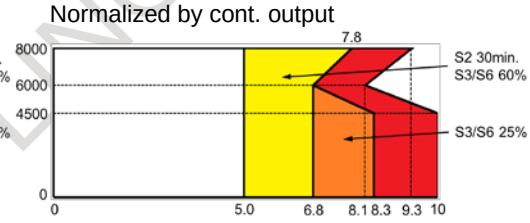


A06B-1230-K508#S0P

Normalized by max. output



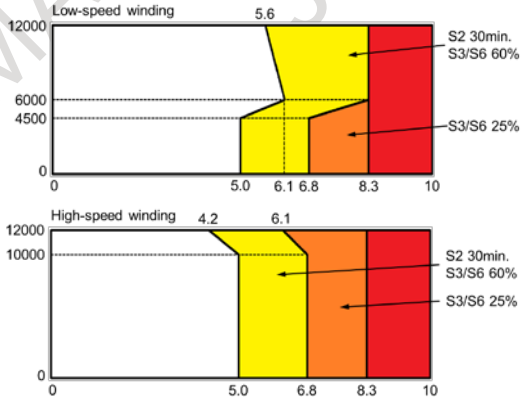
Normalized by cont. output



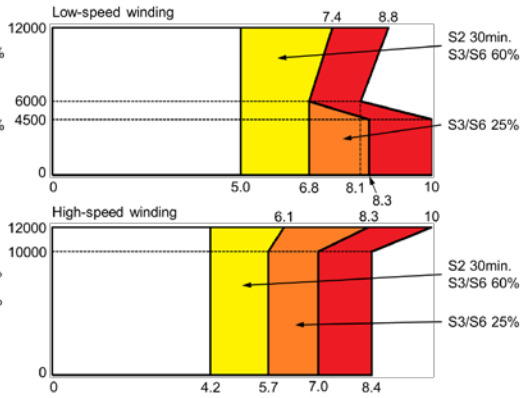
αiI 12/12000HV-B (A06B-2528-B12x)

A06B-1230-K528#S0P

Normalized by max. output



Normalized by cont. output

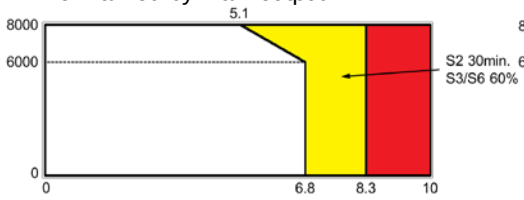


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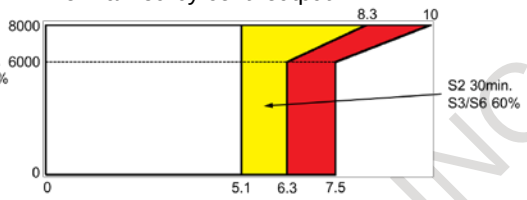
αiI 15/8000HV-B (A06B-2509-Bxxx)

A06B-1230-K509#S00

Normalized by max. output

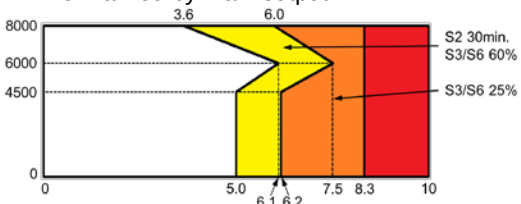


Normalized by cont. output

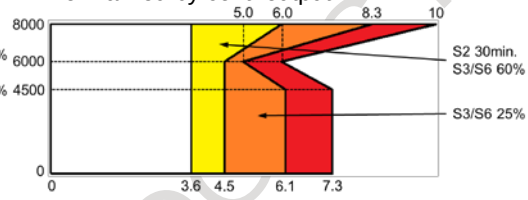


A06B-1230-K509#S0P

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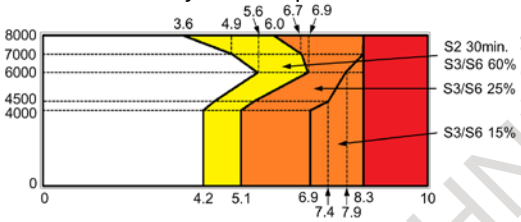


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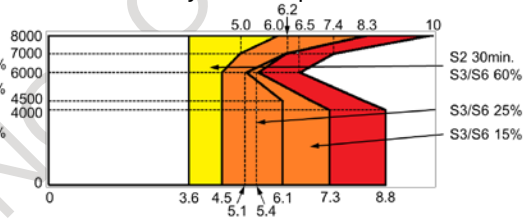


A06B-1230-K509#S0S

Normalized by max. output



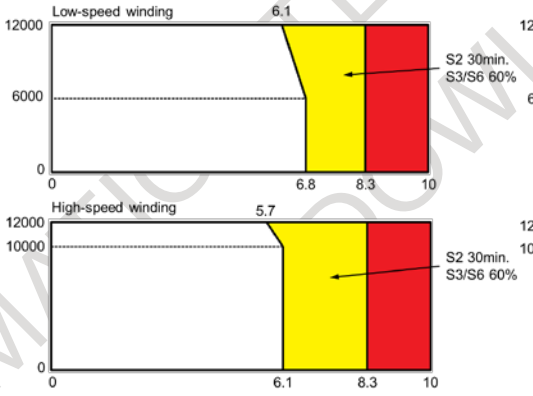
Normalized by cont. output



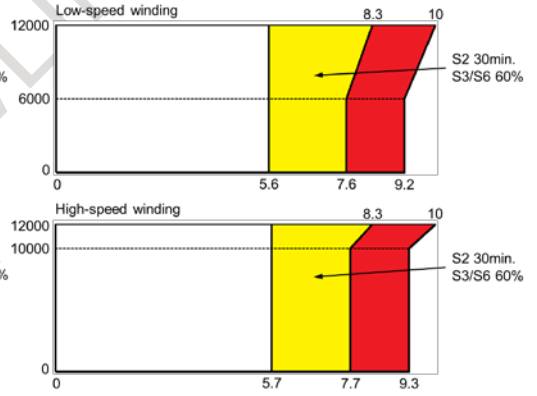
αiI 15/12000HV-B (A06B-2529-B12x)

A06B-1230-K529#S00

Normalized by max. output



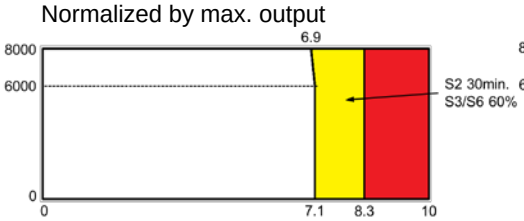
Normalized by cont. output



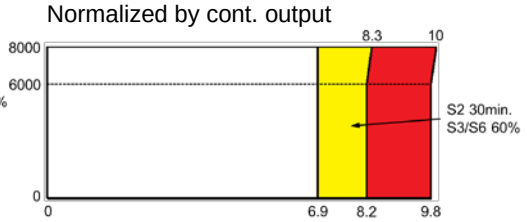
αiI 22/8000HV-B (A06B-2511-Bxxx)

A06B-1230-K511#S00

Normalized by max. output

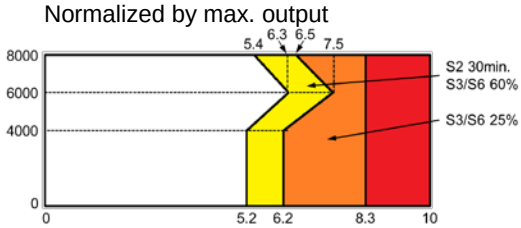


Normalized by cont. output

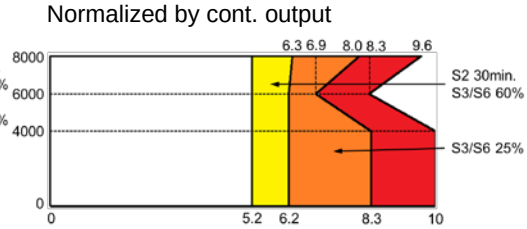


A06B-1230-K511#S0P

Normalized by max. output



Normalized by cont. output

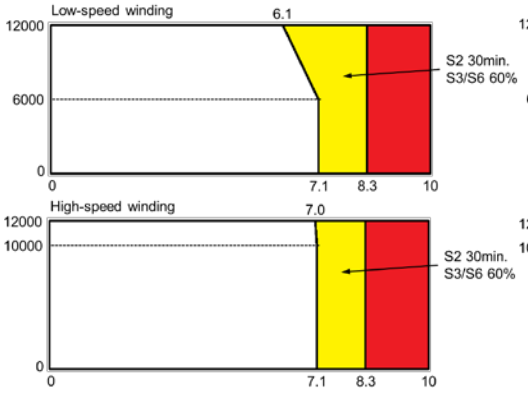


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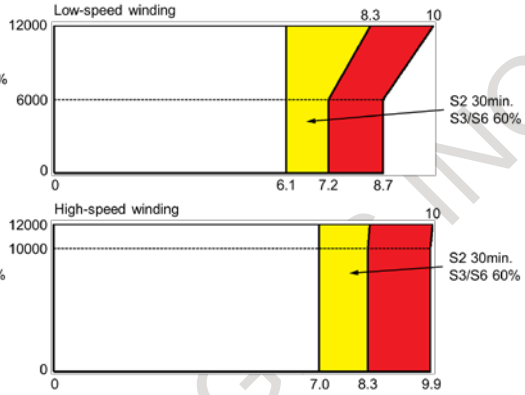
αiI 22/12000HV-B (A06B-2531-B12x)

A06B-1230-K531#S00

Normalized by max. output

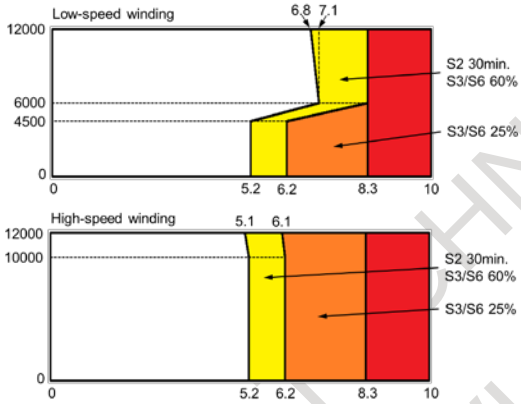


Normalized by cont. output

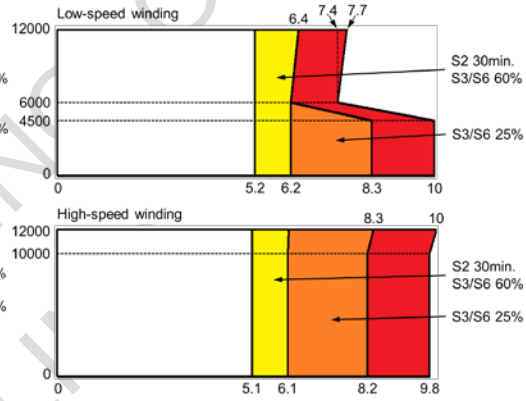


A06B-1230-K531#S0P

Normalized by max. output



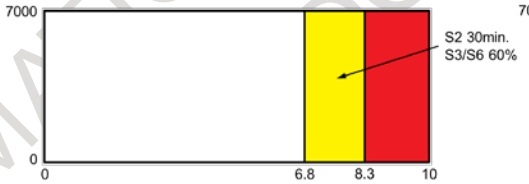
Normalized by cont. output



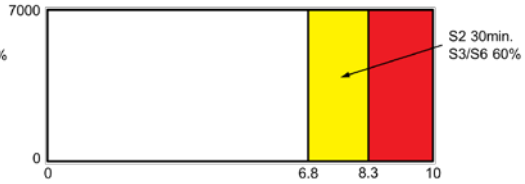
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A06B-1230-K512#S00

Normalized by max. output

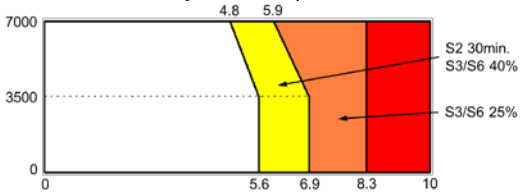


Normalized by cont. output

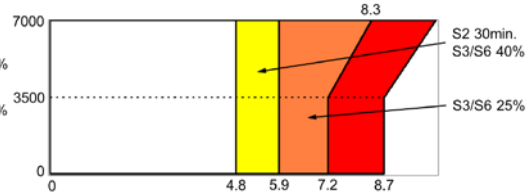


A06B-1230-K512#S0P

Normalized by max. output



Normalized by cont. output

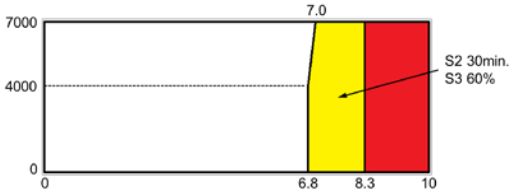


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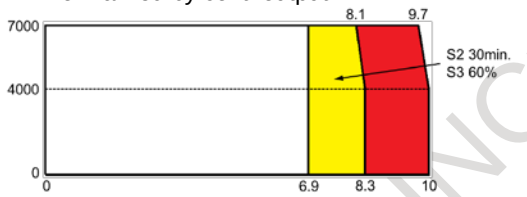
αiI 40/7000HV-B (A06B-2513-Bxxx)

A06B-1230-K513#S00

Normalized by max. output

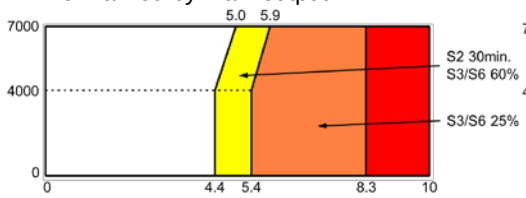


Normalized by cont. output

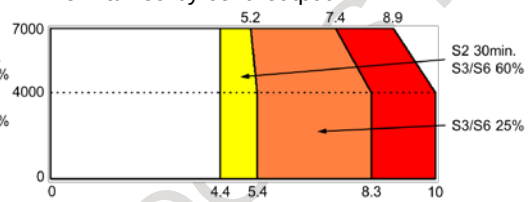


A06B-1230-K513#S0P

Normalized by max. output



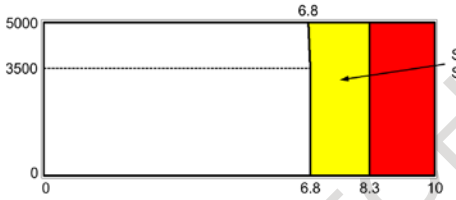
Normalized by cont. output



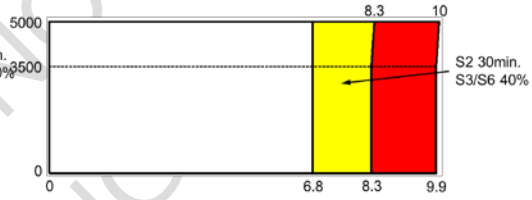
αiI 50/5000HV-B (A06B-2514-Bxxx)

A06B-1230-K514#S00

Normalized by max. output



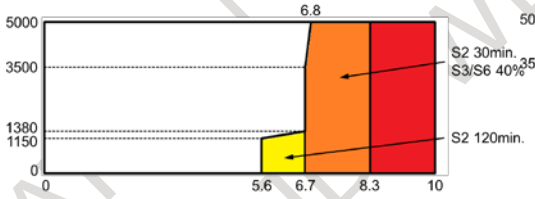
Normalized by cont. output



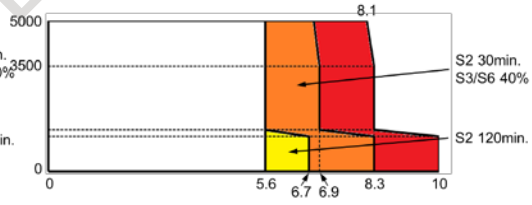
αiI 60/5000HV-B (A06B-2515-Bxxx)

A06B-1230-K515#S00

Normalized by max. output



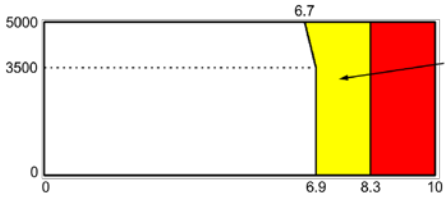
Normalized by cont. output



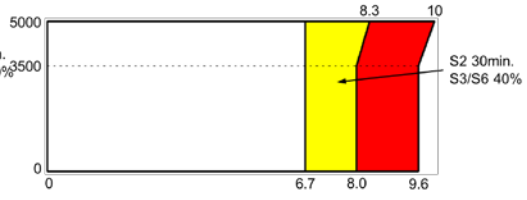
αiI 75/5000HV-B (A06B-2516-Bxxx)

A06B-1230-K516#S00

Normalized by max. output



Normalized by cont. output



αiI 100/5000HV-B (A06B-2518-Bxxx)

A06B-1230-K518#S00

Normalized by max. output



Normalized by cont. output

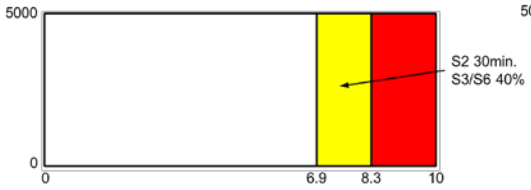


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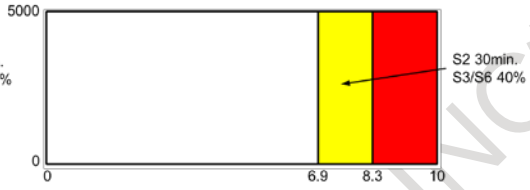
αiI 150/5000HV-B (A06B-2532-Bxxx)

A06B-1230-K532#S00

Normalized by max. output



Normalized by cont. output

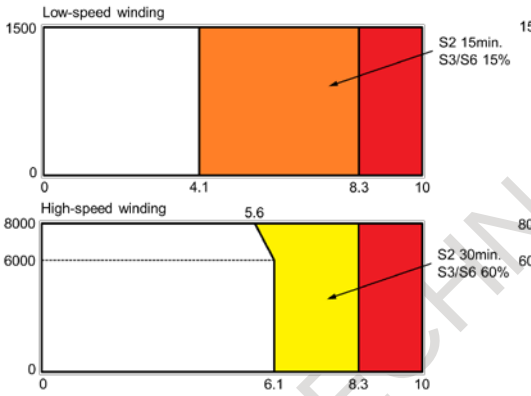


B.3 αiIP-B series 200V type

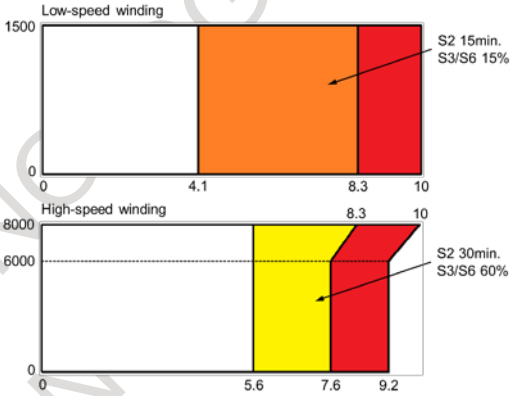
αiIP 12/8000-B (A06B-2448-Bxxx)

A06B-1230-K448#S00

Normalized by max. output

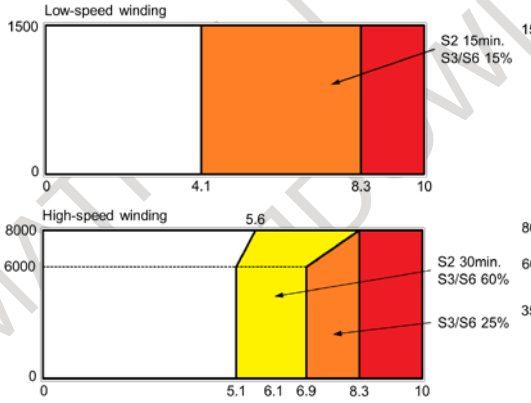


Normalized by cont. output

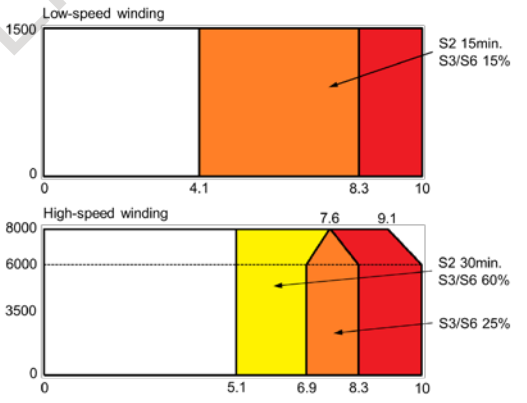


A06B-1230-K448#S0P

Normalized by max. output



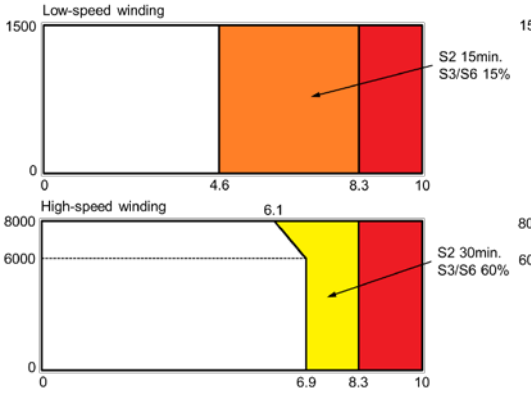
Normalized by cont. output



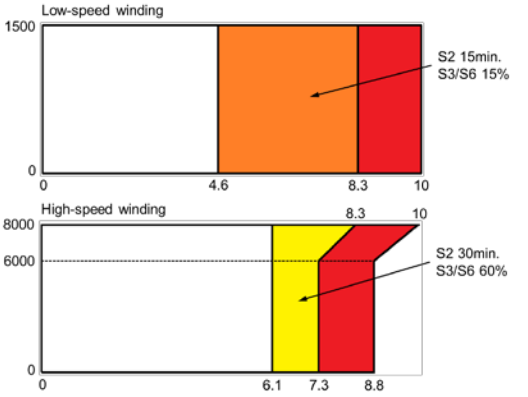
αiIP 15/8000-B (A06B-2449-Bxxx)

A06B-1230-K449#S00

Normalized by max. output



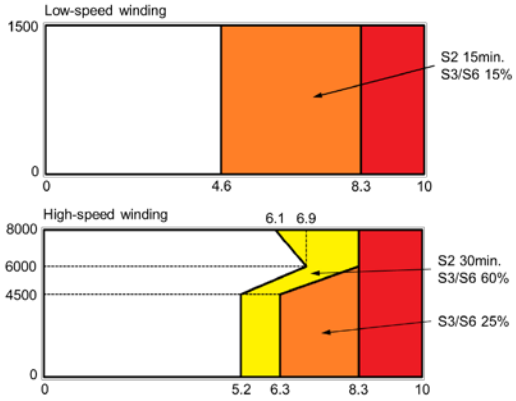
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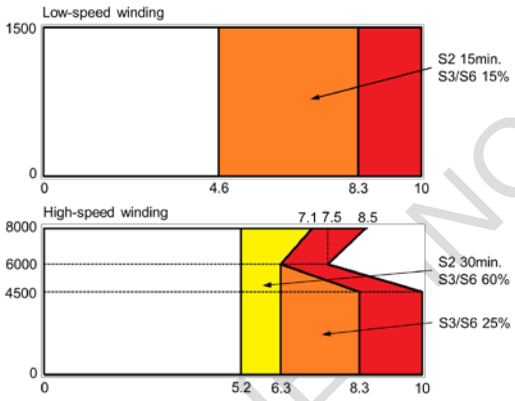
JR AUTOMATION TECHNOLOGIES INC*

A06B-1230-K449#S0P

Normalized by max. output



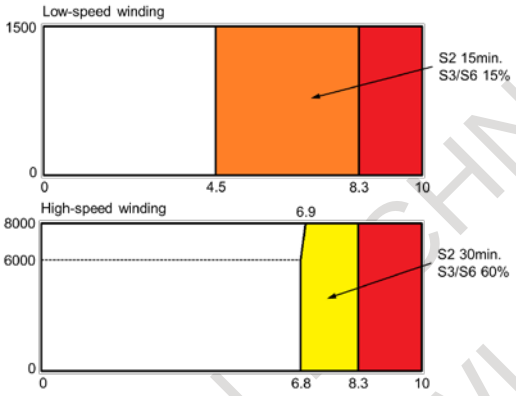
Normalized by cont. output



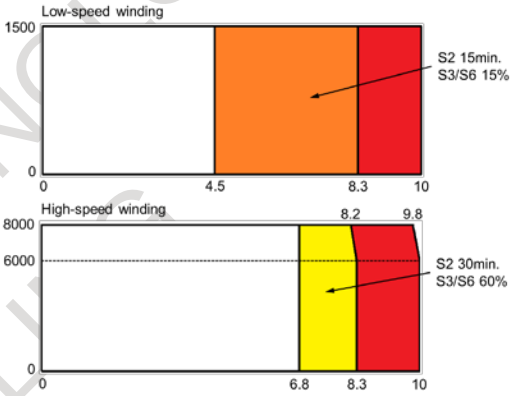
αiIP 18/8000-B (A06B-2456-Bxxx)

A06B-1230-K456#S00

Normalized by max. output

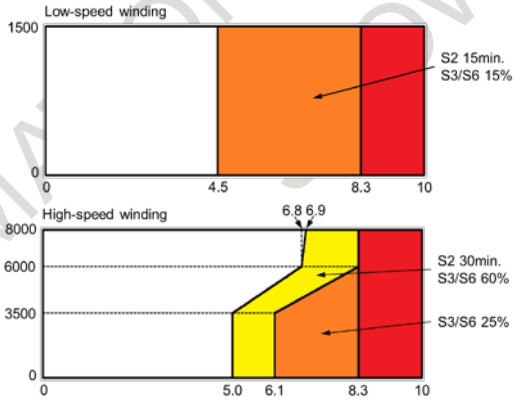


Normalized by cont. output

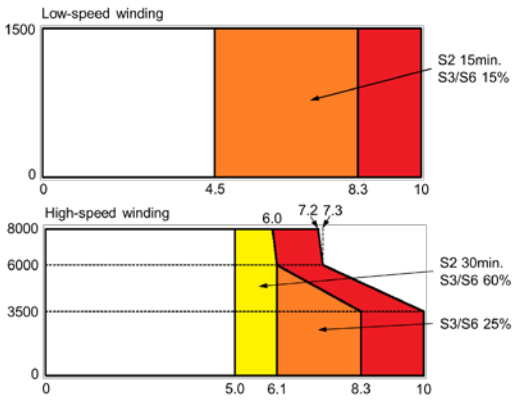


A06B-1230-K456#S0P

Normalized by max. output



Normalized by cont. output

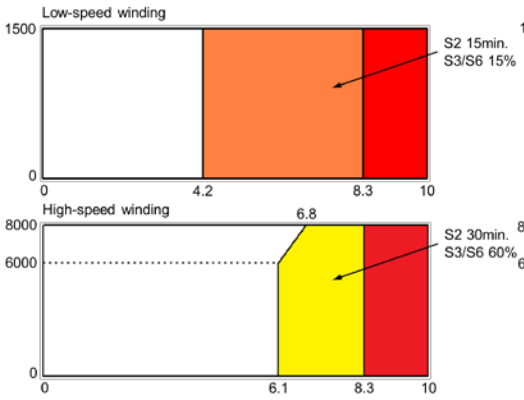


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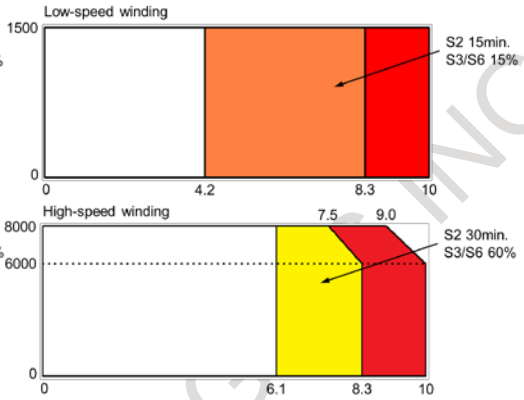
αiIP 22/8000-B (A06B-2451-Bxxx)

A06B-1230-K451#S00

Normalized by max. output

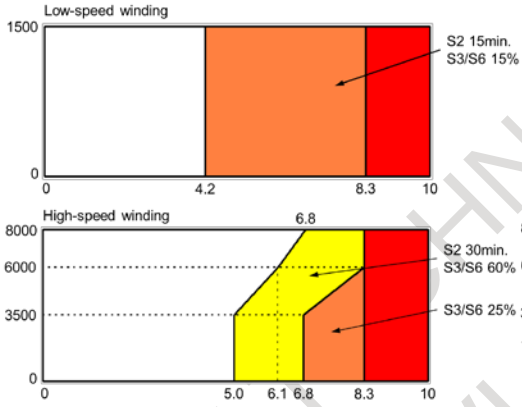


Normalized by cont. output

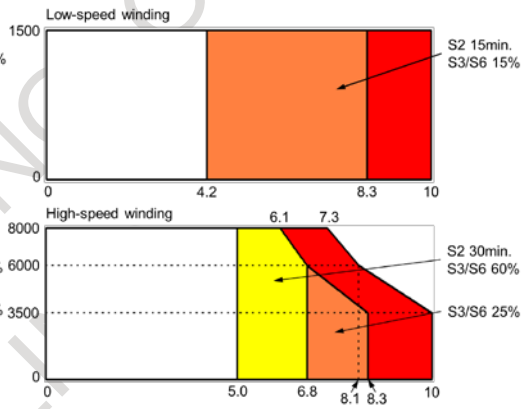


A06B-1230-K451#S0P

Normalized by max. output



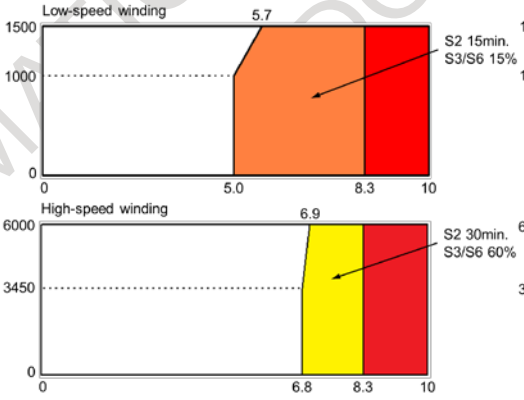
Normalized by cont. output



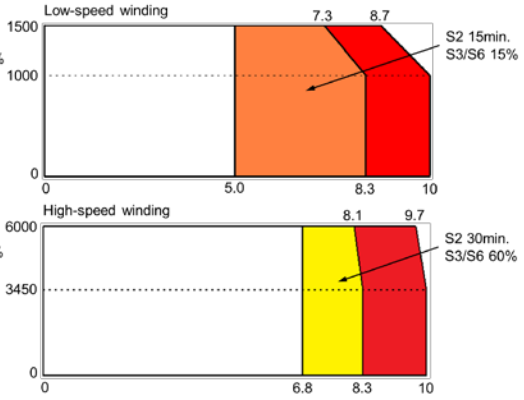
αiIP 30/6000-B (A06B-2452-Bxxx)

A06B-1230-K452#S00

Normalized by max. output



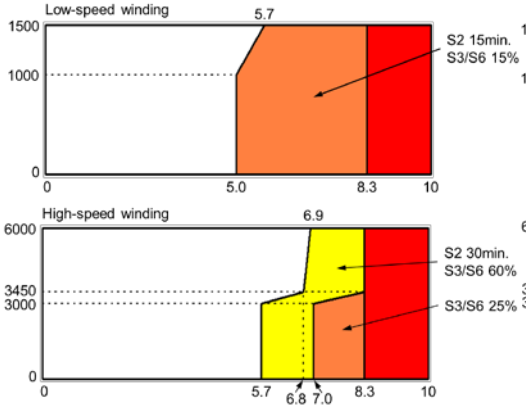
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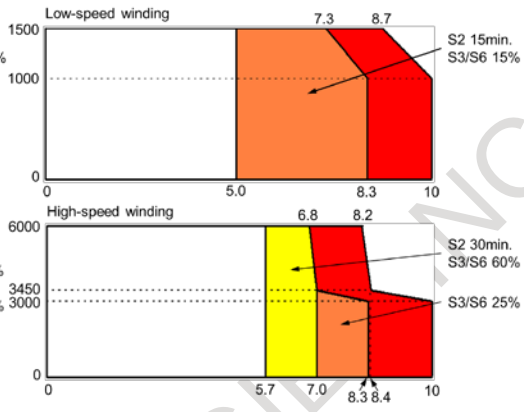
JR AUTOMATION TECHNOLOGIES, INC*

A06B-1230-K452#S0P

Normalized by max. output



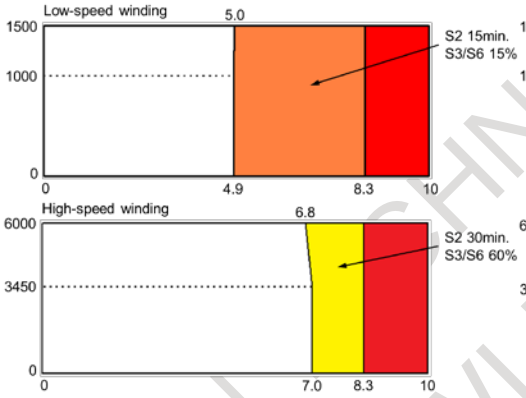
Normalized by cont. output



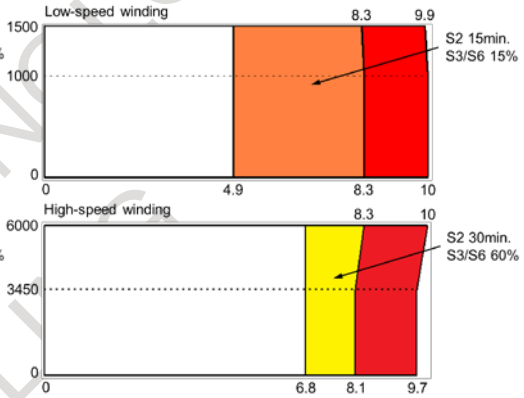
αiIP 40/6000-B (A06B-2453-Bxxx)

A06B-1230-K453#S00

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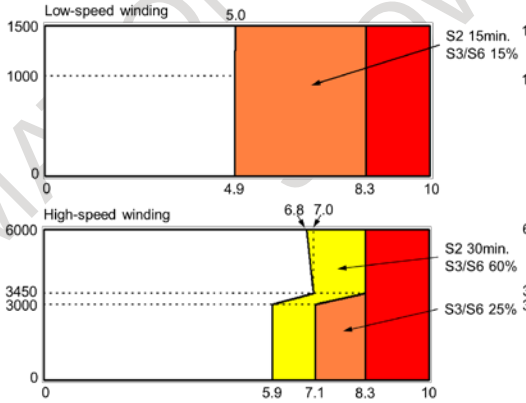


Normalized by cont. output

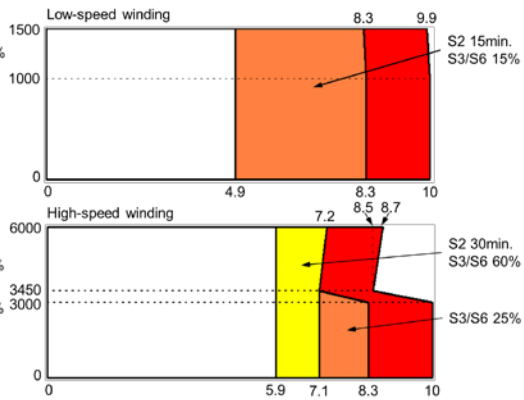


A06B-1230-K453#S0P

Normalized by max. output



Normalized by cont. output

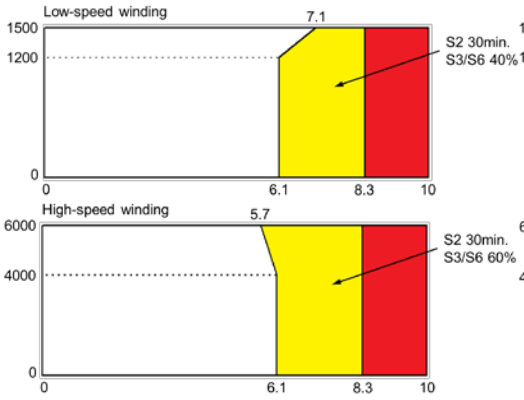


JR AUTOMATION TECHNOLOGIES, INC*

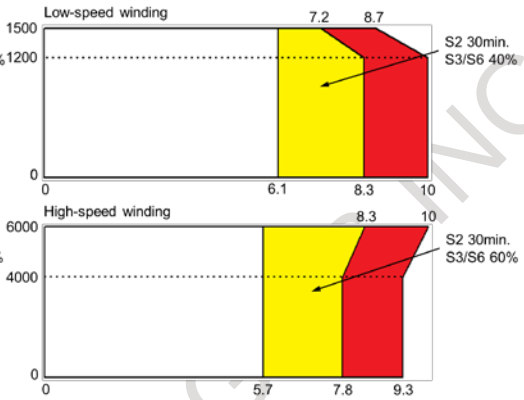
αiIP 50/6000-B (A06B-2454-Bxxx)

A06B-1230-K454#S00

Normalized by max. output

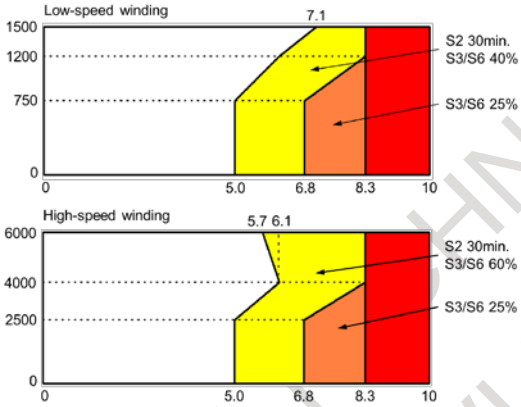


Normalized by cont. output

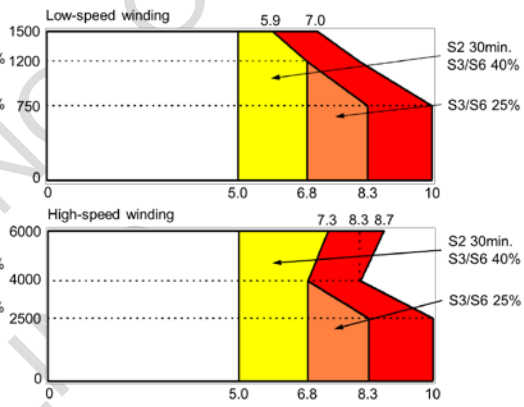


A06B-1230-K454#S0P

Normalized by max. output



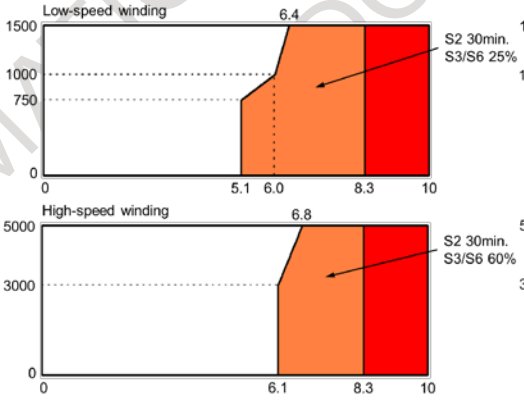
Normalized by cont. output



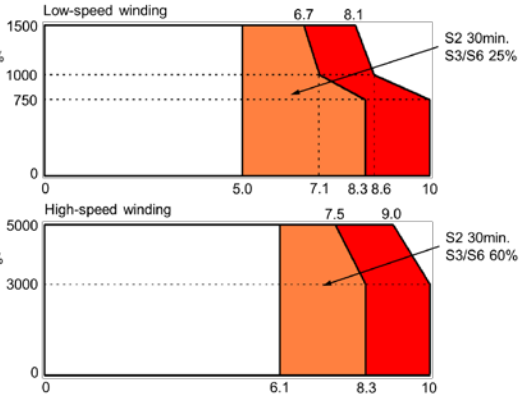
αiIP 60/5000-B (A06B-2455-Bxxx)

A06B-1230-K455#S00

Normalized by max. output



Normalized by cont. output



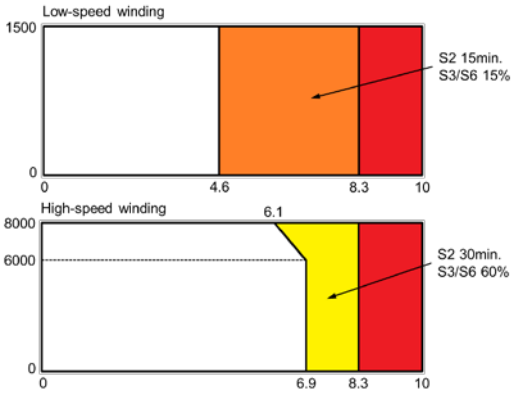
JR AUTOMATION TECHNOLOGIES, INC*

B.4 αiIP-B series 400V type

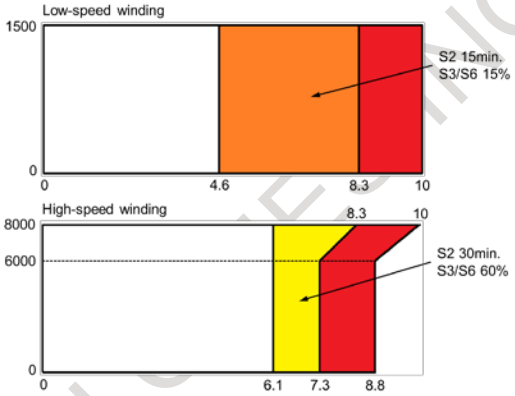
αiIP 15/8000HV-B (A06B-2549-Bxxx)

A06B-1230-K549#S00

Normalized by max. output



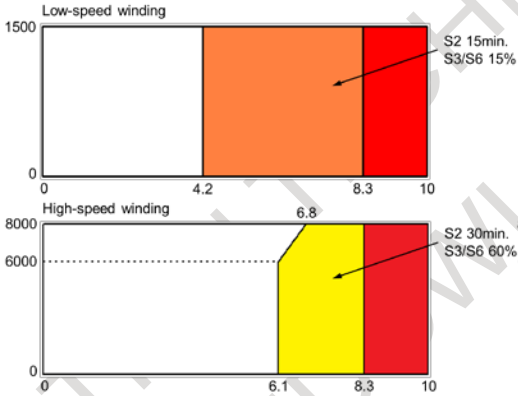
Normalized by cont. output



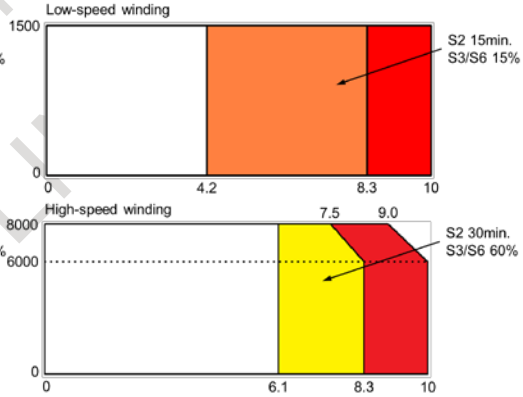
αiIP 22/8000HV-B (A06B-2551-Bxxx)

A06B-1230-K551#S00

Normalized by max. output



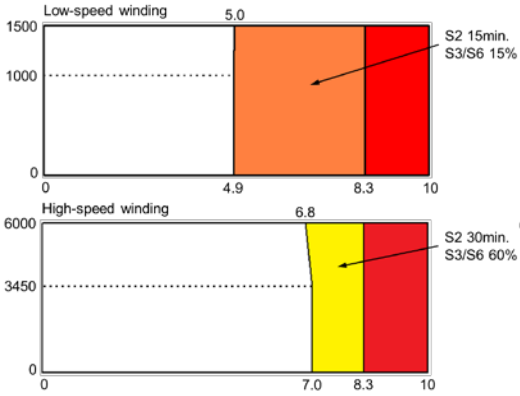
Normalized by cont. output



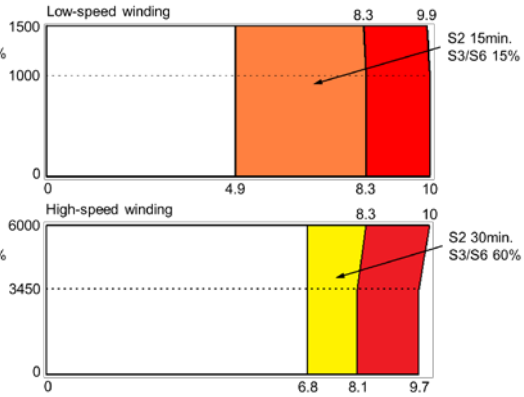
αiIP 40/6000HV-B (A06B-2553-Bxxx)

A06B-1230-K553#S00

Normalized by max. output



Normalized by cont. output

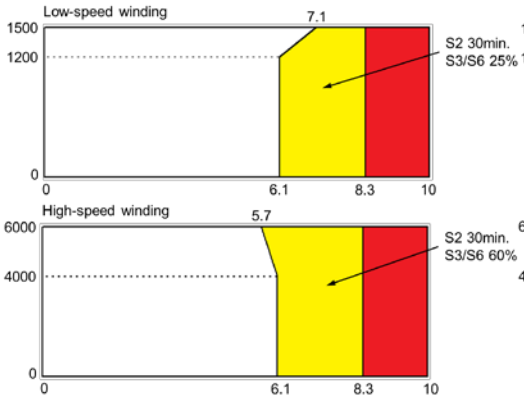


JR AUTOMATION TECHNOLOGIES, JD WILL INC*

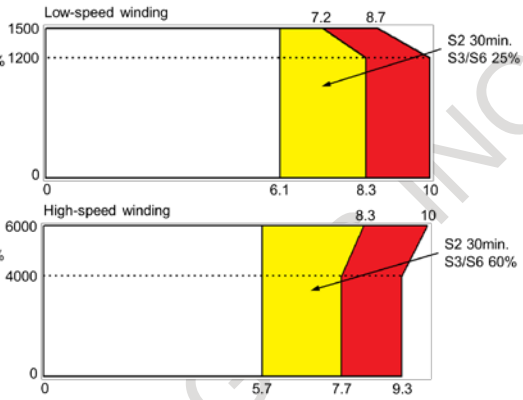
αiIP 50/6000HV-B (A06B-2554-Bxxx)

A06B-1230-K554#S00

Normalized by max. output



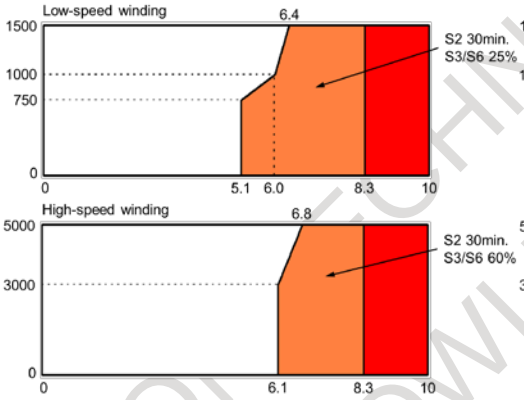
Normalized by cont. output



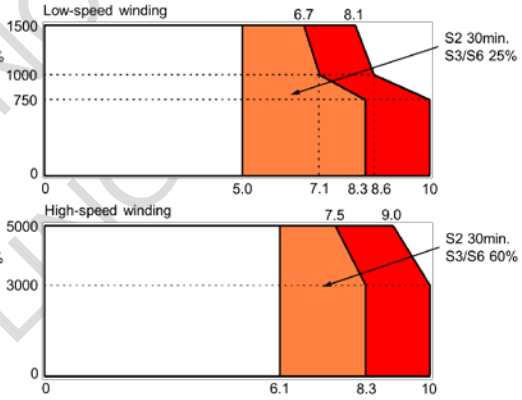
αiIP 60/5000HV-B (A06B-2555-Bxxx)

A06B-1230-K555#S00

Normalized by max. output



Normalized by cont. output

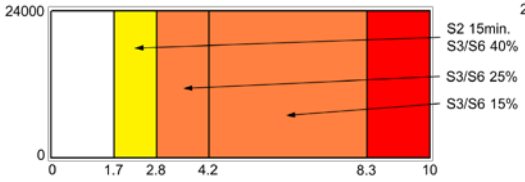


B.5 αiIT-B series 200V type

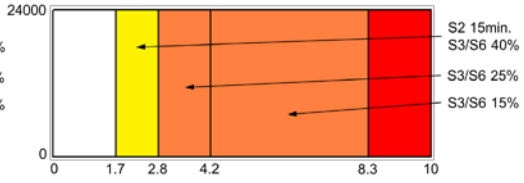
αiIT 1/24000-B (A06B-2460-B123)

A06B-1230-K460#S0S

Normalized by max. output



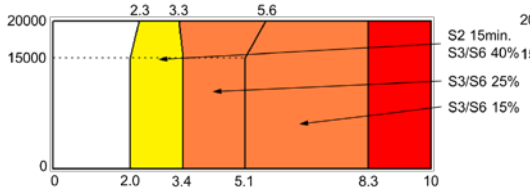
Normalized by cont. output



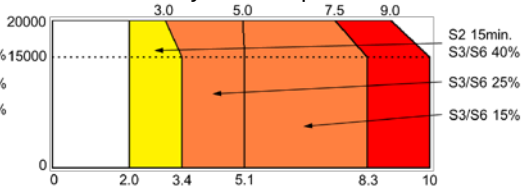
αiIT 1.5/20000-B (A06B-2463-B123)

A06B-1230-K463#S0S

Normalized by max. output



Normalized by cont. output

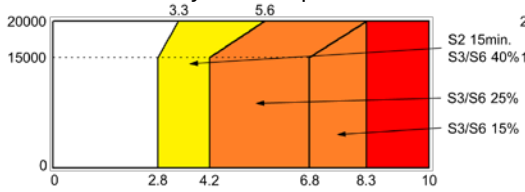


JR AUTOMATION TECHNOLOGY, INC*
JDOWLING

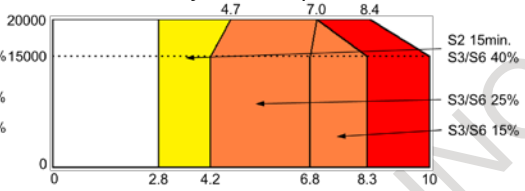
αiIT 2/20000-B (A06B-2464-B123)

A06B-1230-K464#S0S

Normalized by max. output



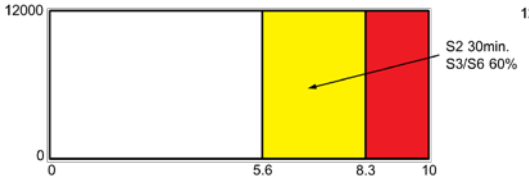
Normalized by cont. output



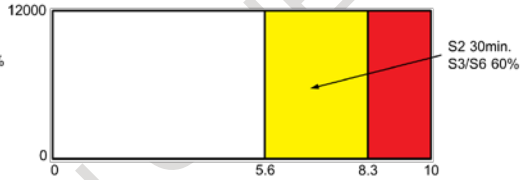
αiIT 3/12000-B (A06B-2465-B123)

A06B-1230-K465#S00

Normalized by max. output

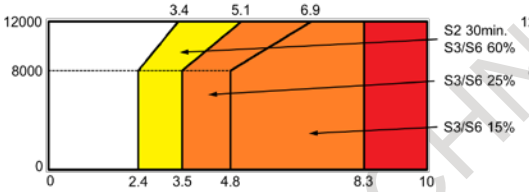


Normalized by cont. output



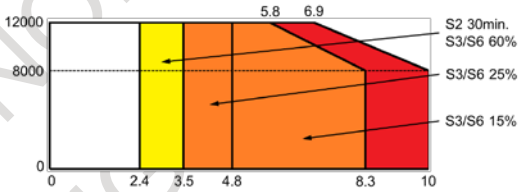
A06B-1230-K465#S0S

Normalized by max. output



4.8

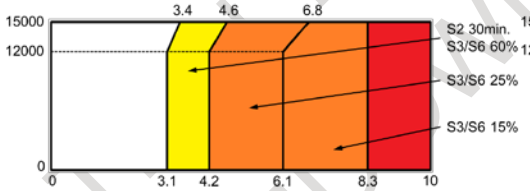
Normalized by cont. output



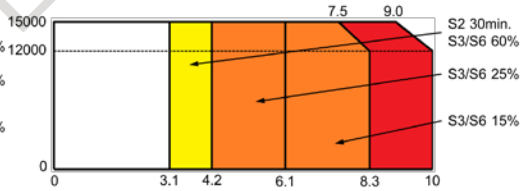
αiIT 3/15000-B (A06B-2475-B133)

A06B-1230-K475#S0U

Normalized by max. output



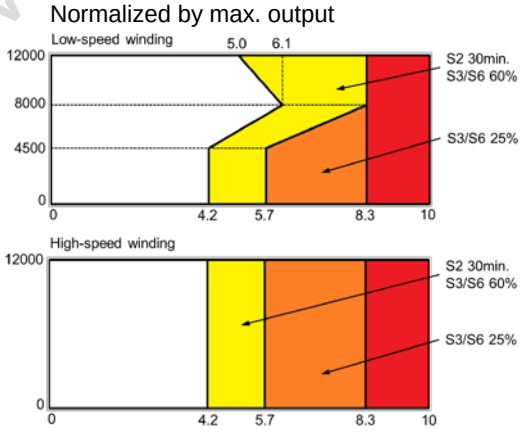
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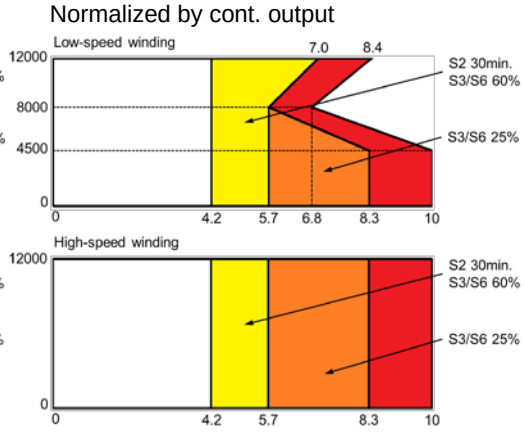
αiIT 6/12000-B (A06B-2466-B123)

A06B-1230-K466#S0P

Normalized by max. output



Normalized by cont. output

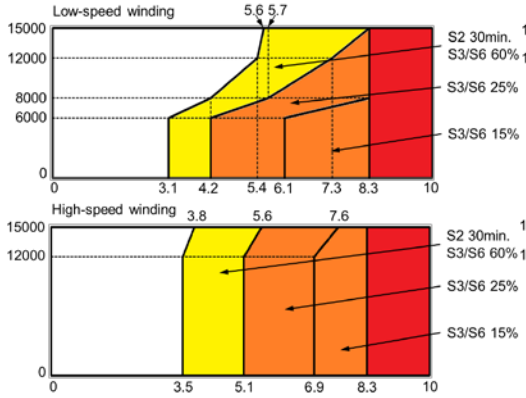


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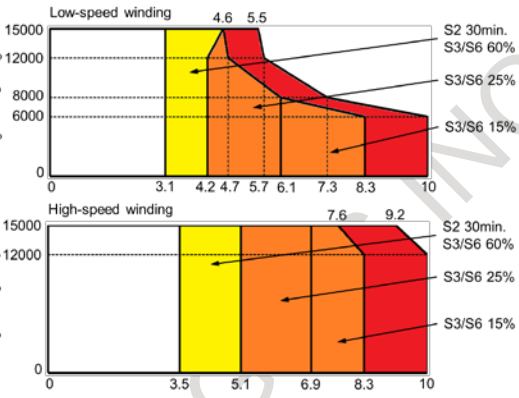
αiIT 6/15000-B (A06B-2476-B133)

A06B-1230-K476#S0S

Normalized by max. output



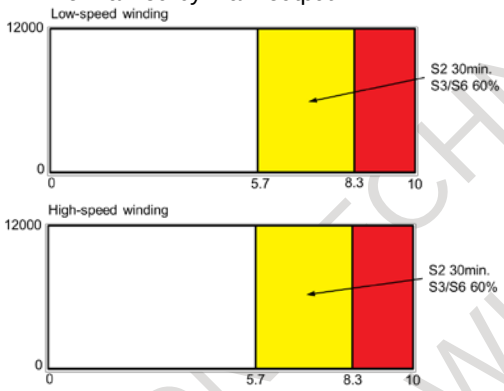
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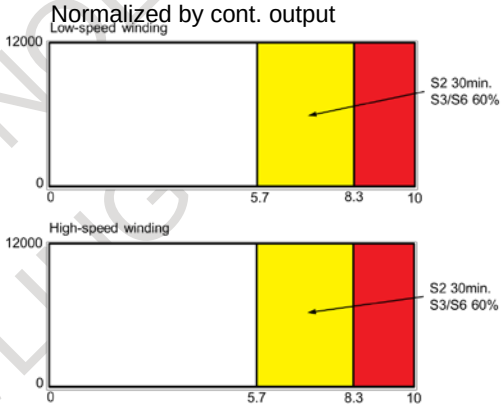
αiIT 8/12000-B (A06B-2467-B123)

A06B-1230-K467#S00

Normalized by max. output

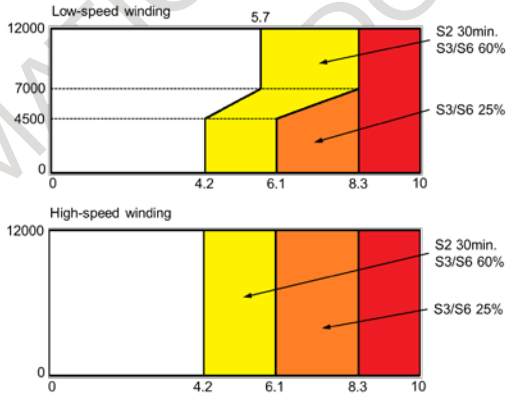


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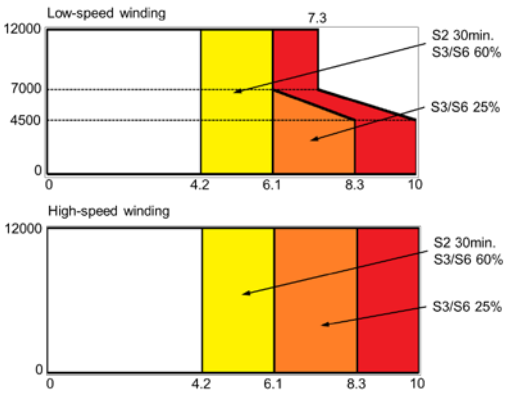


A06B-1230-K467#S0P

Normalized by max. output



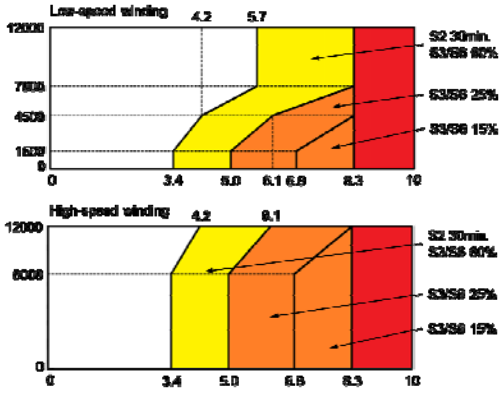
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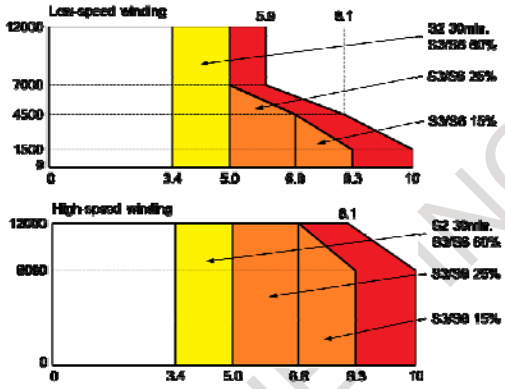
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A06B-1230-K467#S0S

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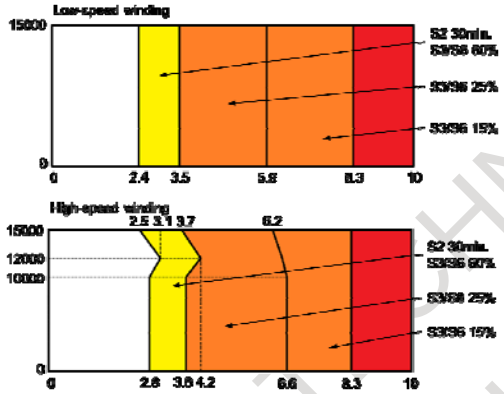
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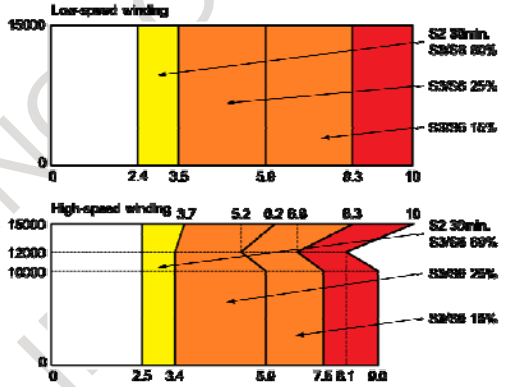
αiIT 8/15000-B (A06B-2477-B133#0501)

A06B-1230-K477#S0S

Normalized by max. output



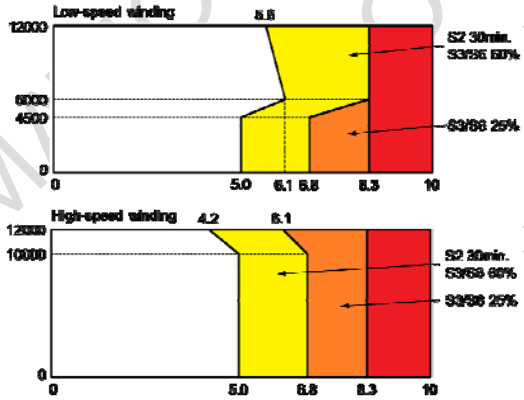
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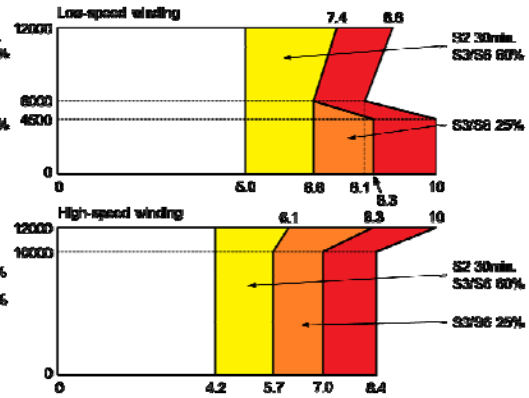
αiIT 12/12000-B (A06B-2468-B123)

A06B-1230-K468#S0P

Normalized by max. output



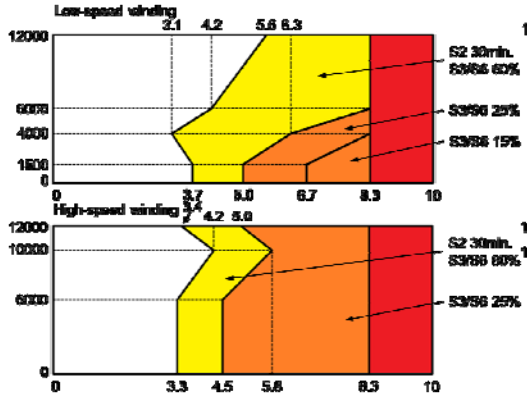
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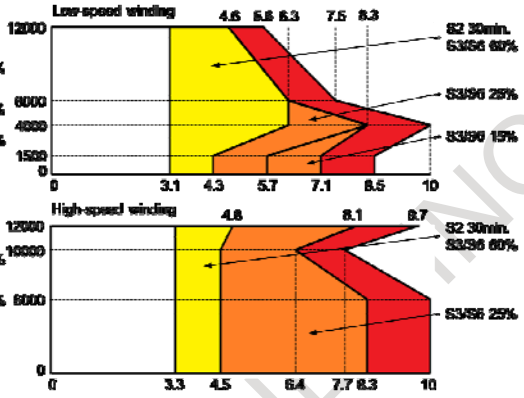
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A06B-1230-K468#S0S

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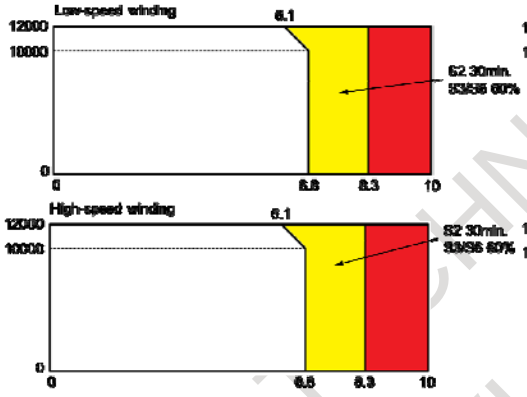
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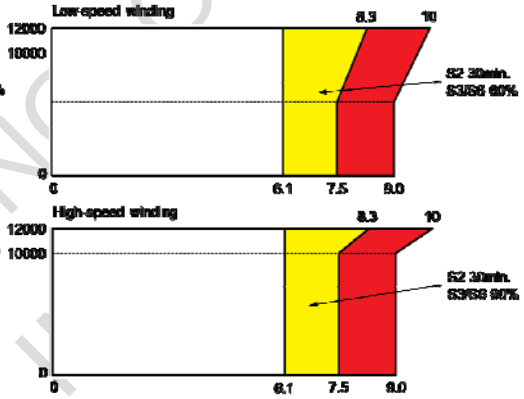
αiIT 15/12000-B (A06B-2469-B123)

A06B-1230-K469#S00

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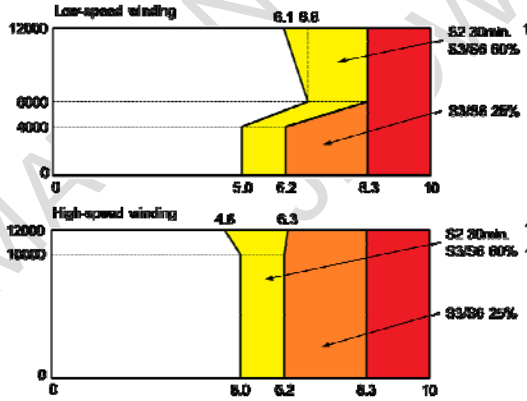


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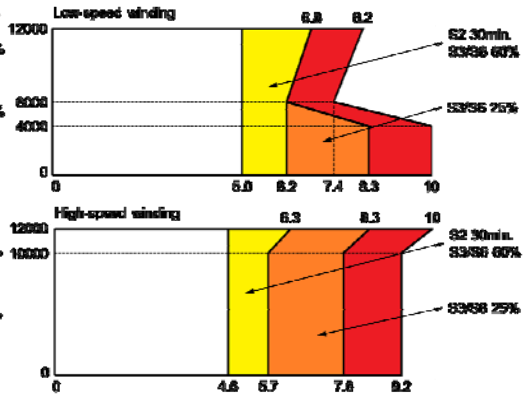


A06B-1230-K469#S0P

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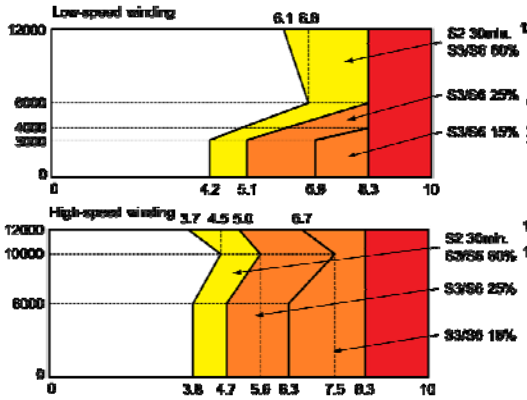


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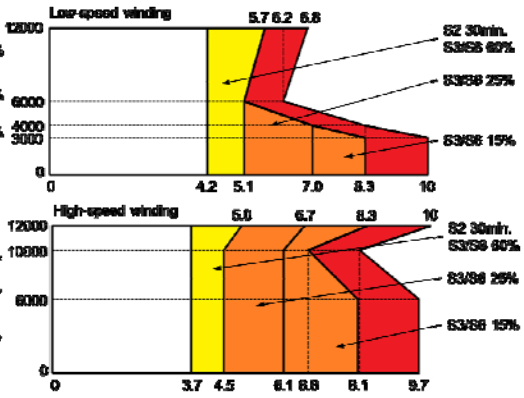


A06B-1230-K469#S0S

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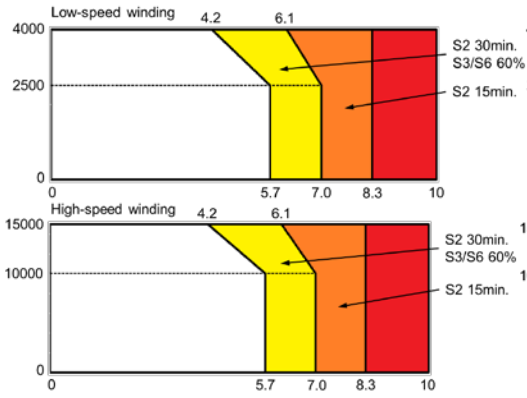


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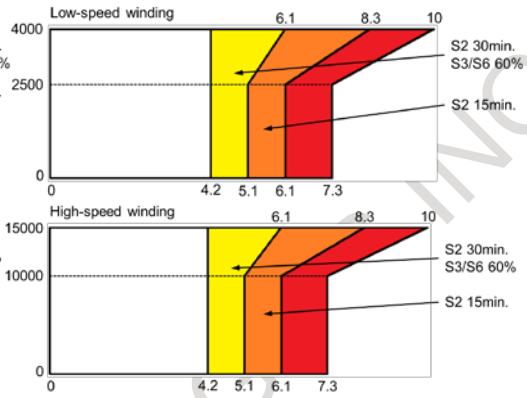
αiIT 15/15000-B (A06B-2479-B133)

A06B-1230-K479#S00

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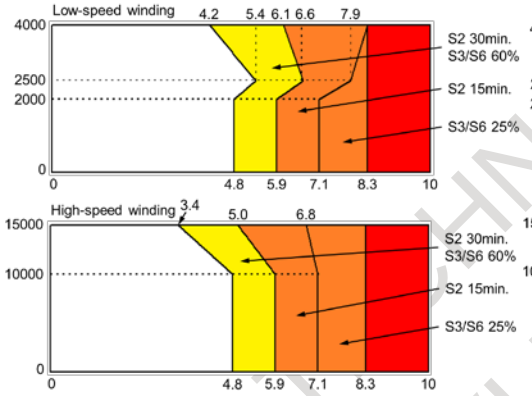


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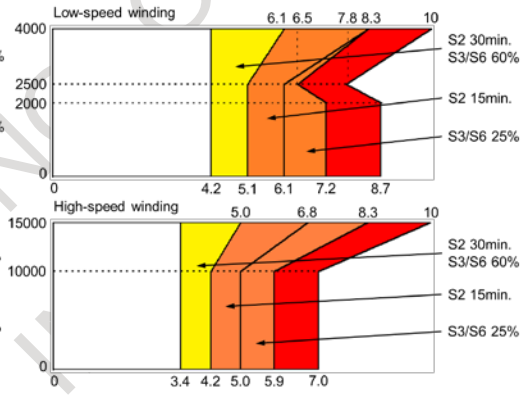


A06B-1230-K479#S0P

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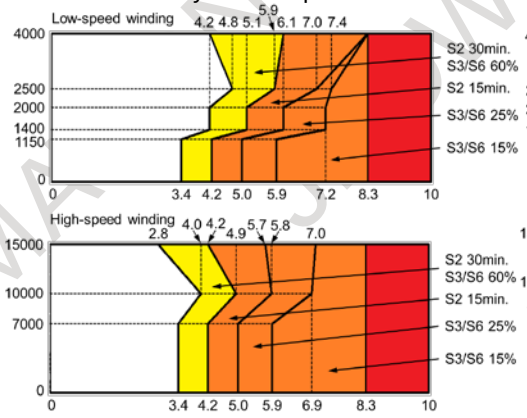


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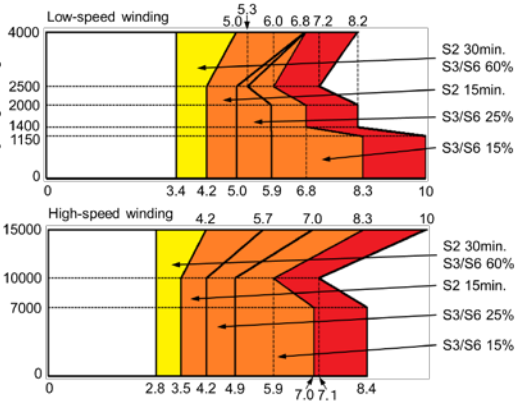


A06B-1230-K479#S0S

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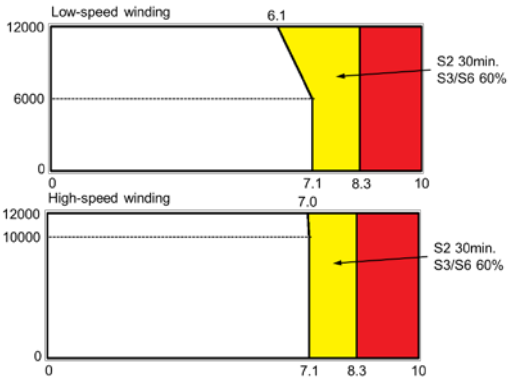


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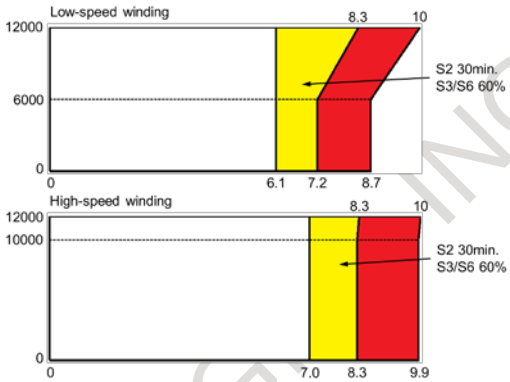
αiIT 22/12000-B (A06B-2471-B123)

A06B-1230-K471#S00

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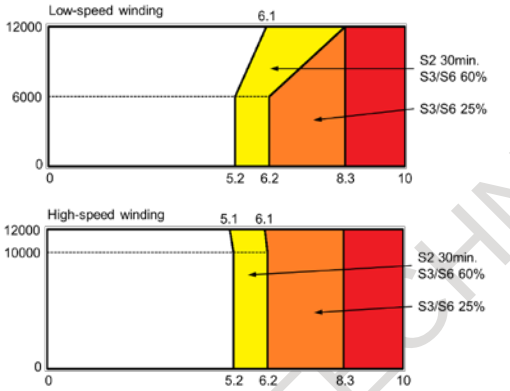


Normalized by cont. output

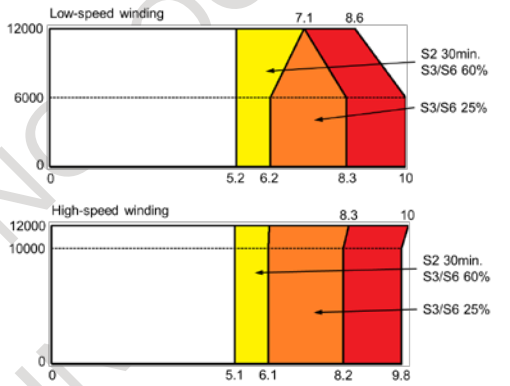


A06B-1230-K471#S0P

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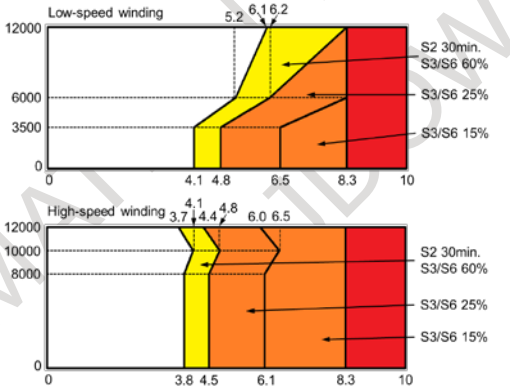


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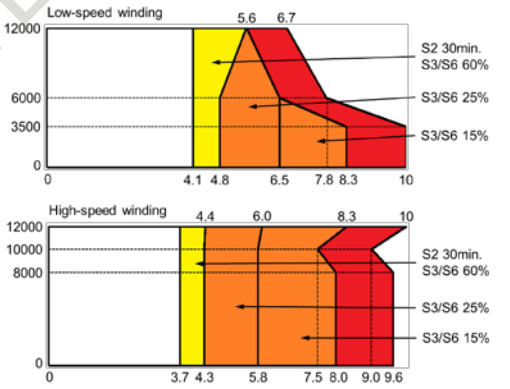


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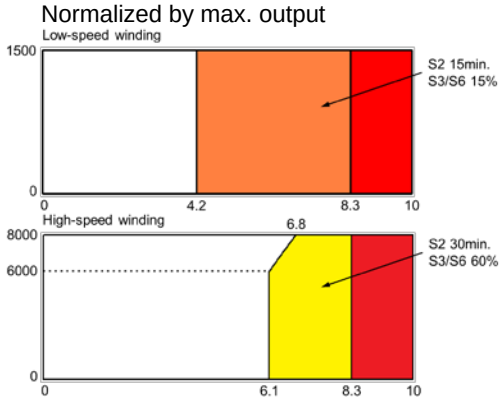
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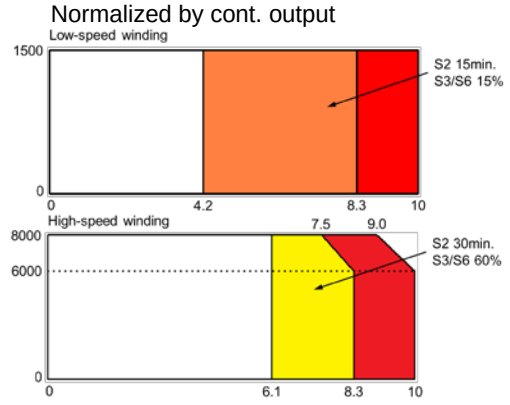
αiIPT 22/8000-B (A06B-2572-B123)

A06B-1230-K472#S00

Normalized by max. output



Normalized by cont. output



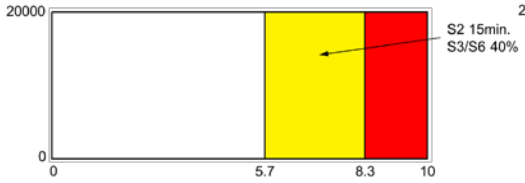
JR AUTOMATION TECHNOLOGY, INC*

B.6 αiIT-B series 400V type

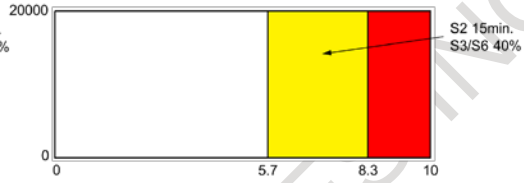
αiIT 1.5/20000HV-B (A06B-2563-B123#0101)

A06B-1230-K563#S00

Normalized by max. output



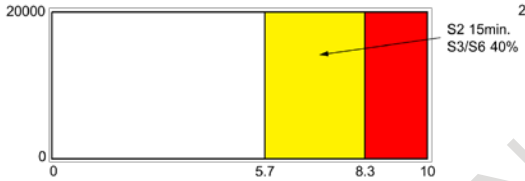
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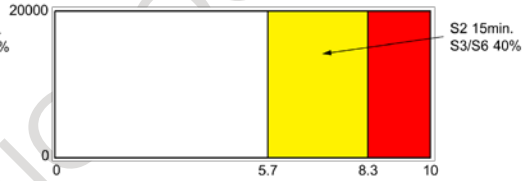
αiIT 2/20000HV-B (A06B-2564-B123#0101)

A06B-1230-K564#S00

Normalized by max. output



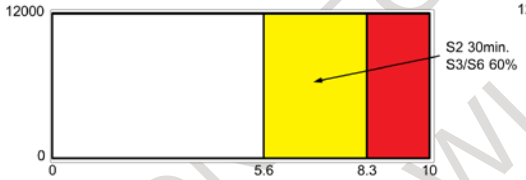
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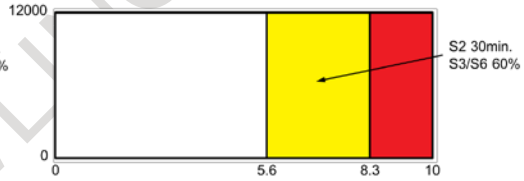
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A06B-1230-K565#S00

Normalized by max. output



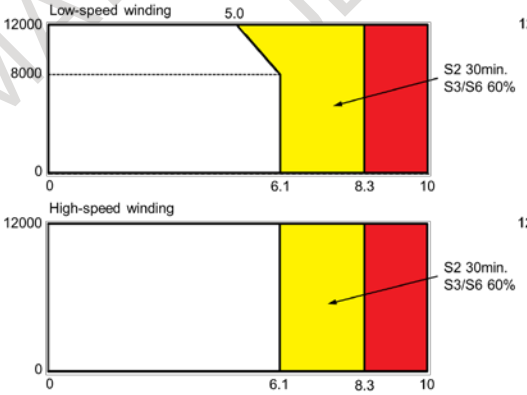
Normalized by cont. output



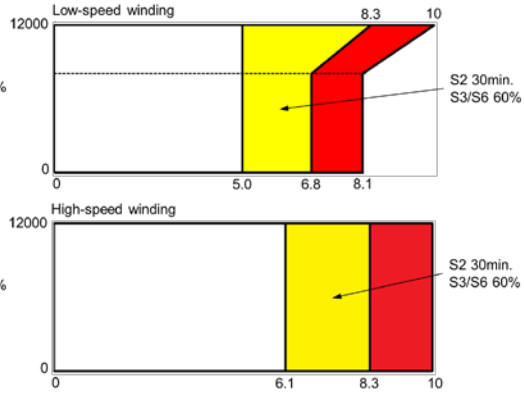
αiIT 6/12000HV-B (A06B-2566-B123)

A06B-1230-K566#S00

Normalized by max. output



Normalized by cont. output

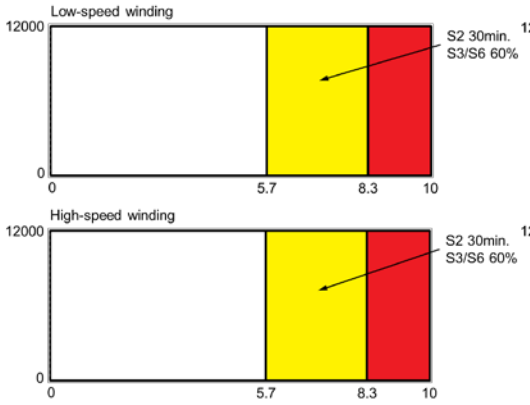


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IDOWLING

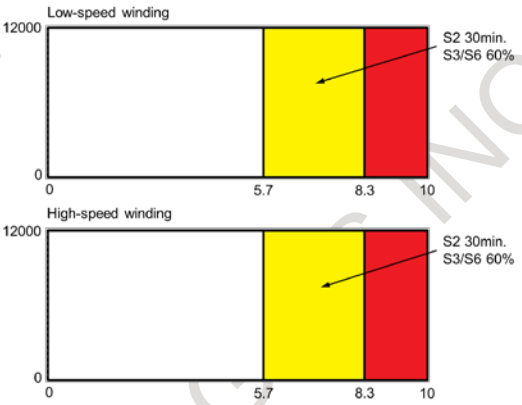
αiIT 8/12000HV-B (A06B-2567-B123)

A06B-1230-K567#S00

Normalized by max. output



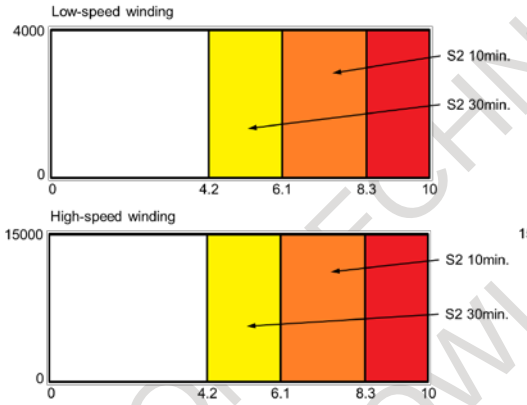
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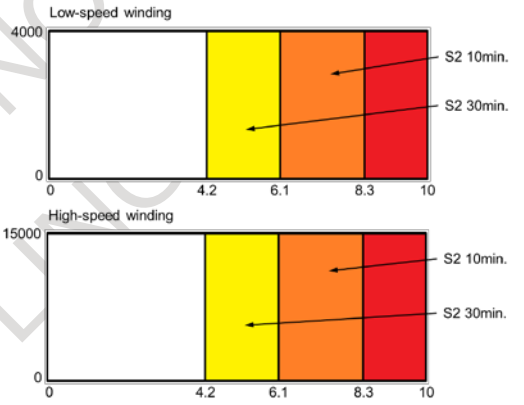
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A06B-1230-K577#S00

Normalized by max. output



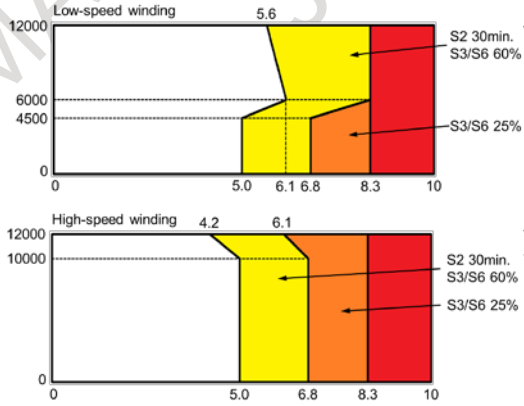
Normalized by cont. output



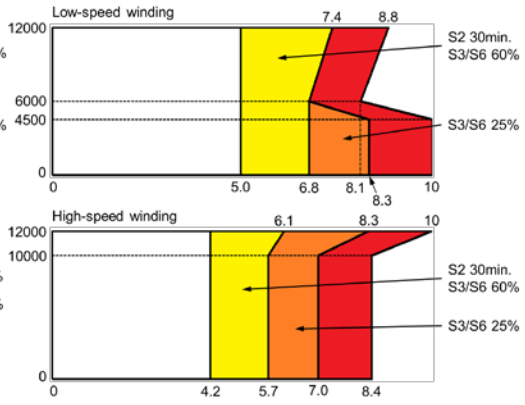
αiIT 12/12000HV-B (A06B-2568-B123)

A06B-1230-K568#S0P

Normalized by max. output



Normalized by cont. output

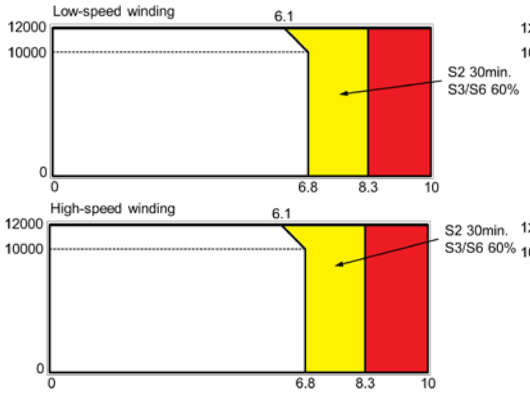


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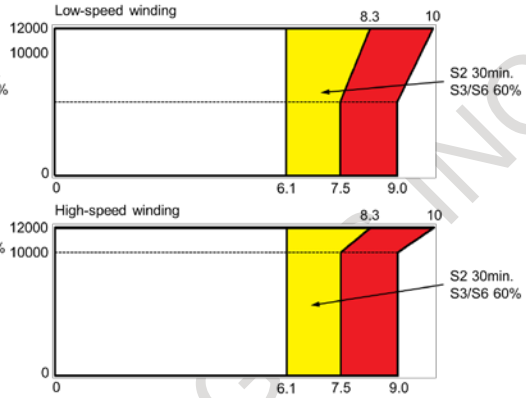
αiIT 15/12000HV-B (A06B-2569-B123)

A06B-1230-K569#S00

Normalized by max. output



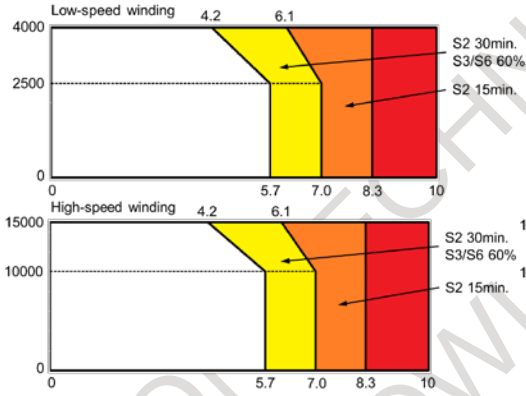
Normalized by cont. output



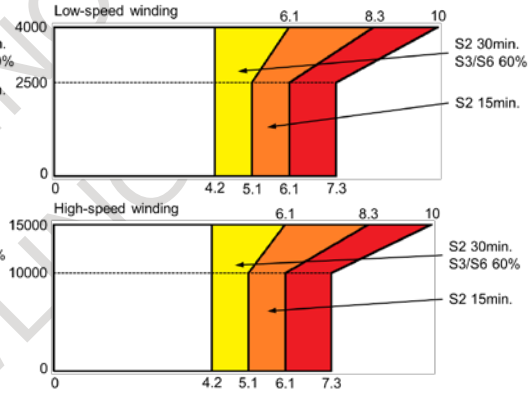
αiIT 15/15000HV-B (A06B-2579-B133)

A06B-1230-K579#S00

Normalized by max. output

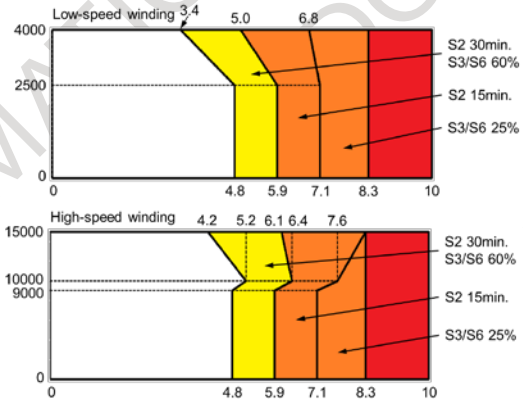


Normalized by cont. output

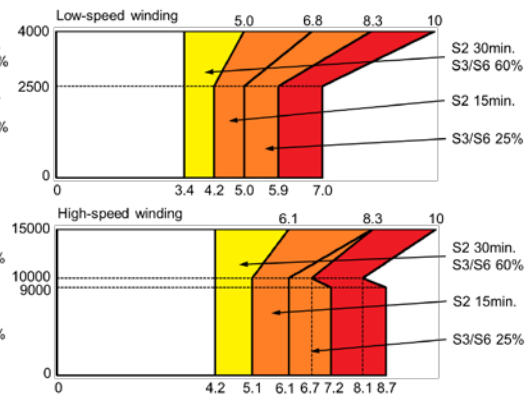


A06B-1230-K579#S0P

Normalized by max. output



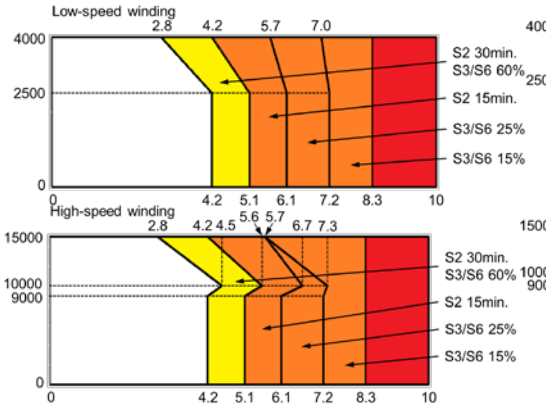
Normalized by cont. output



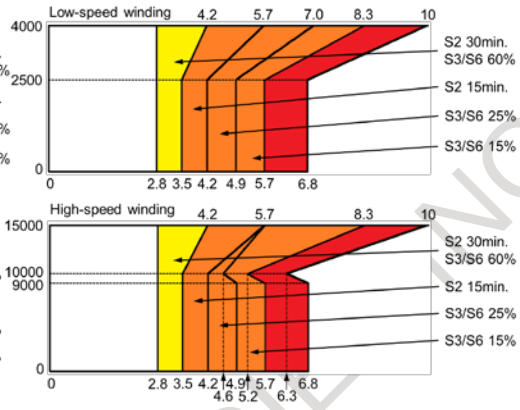
JR AUTOMATION TECHNOLOGY, INC*

A06B-1230-K579#S0S

Normalized by max. output



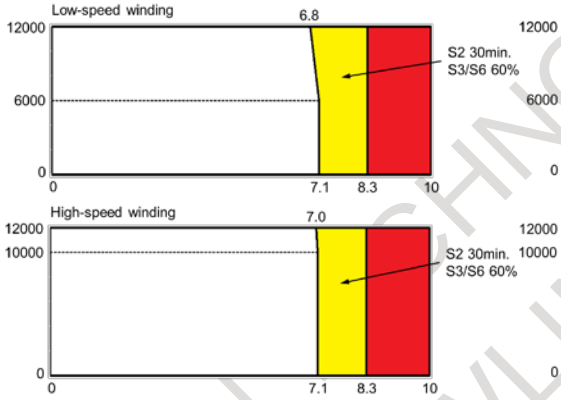
Normalized by cont. output



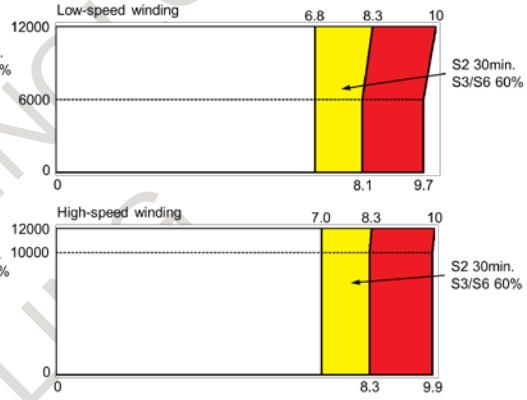
αiIT 22/12000HV-B (A06B-2571-B123)

A06B-1230-K571#S00

Normalized by max. output

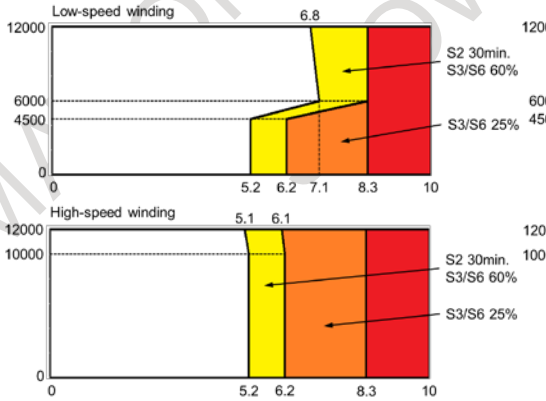


Normalized by cont. output

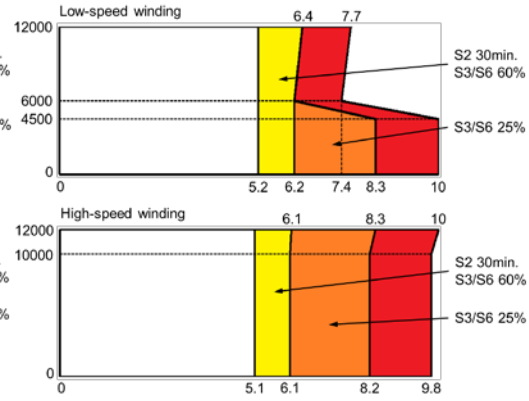


A06B-1230-K571#S0P

Normalized by max. output



Normalized by cont. output



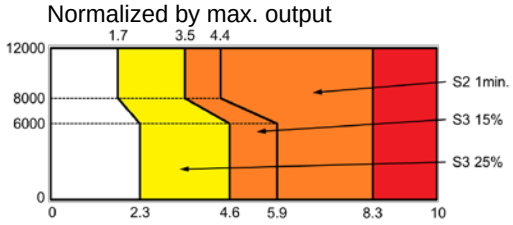
JR AUTOMATION TECHNOLOGIES, INC*

B.7 αiS 1/12000-B, αiST 1/12000-B

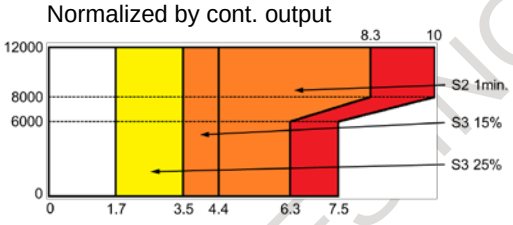
αiS 1/12000-B (A06B-2462-B123)

A06B-1230-K462#S00

Normalized by max. output



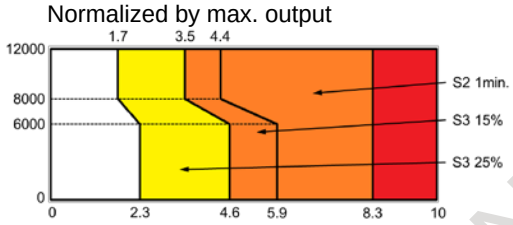
Normalized by cont. output



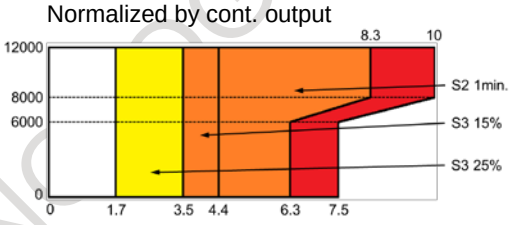
αiST 1/12000-B (A06B-2478-B123)

A06B-1230-K478#S00

Normalized by max. output



Normalized by cont. output



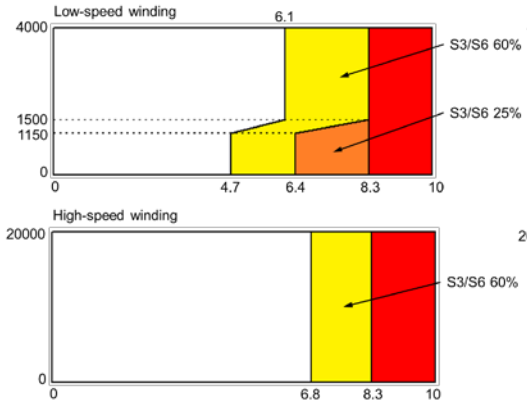
JR AUTOMATION TECHNOLOGIES, INC*
JDOWLING

B.8 αiIL-B series 200V type

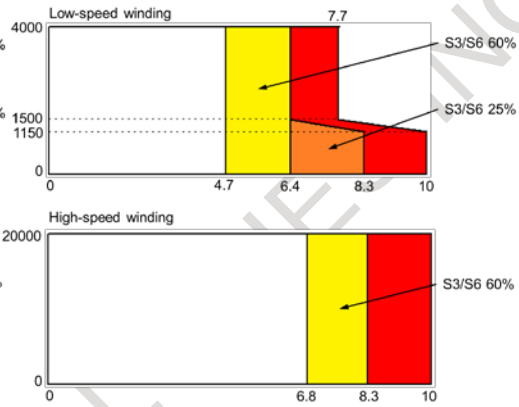
αiIL 8/20000-B (A06B-2497-B145)

A06B-1230-K497#S0N

Normalized by max. output



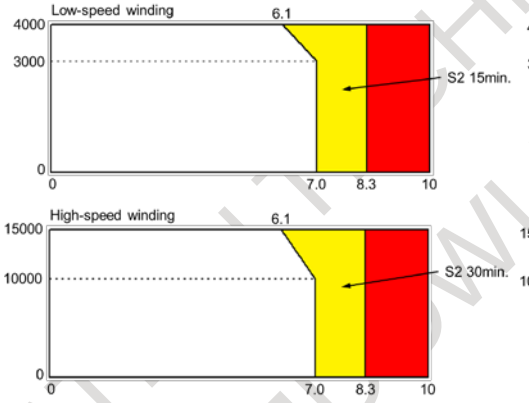
Normalized by cont. output



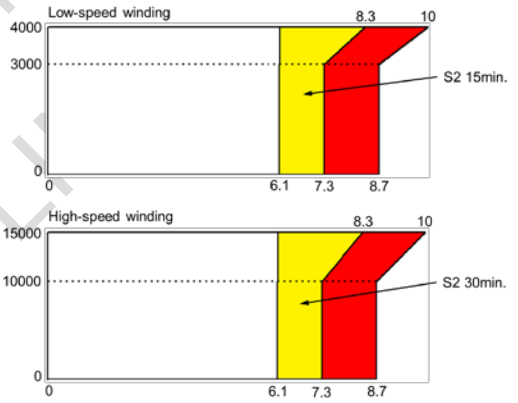
αiIL 15/15000-B (A06B-2495-B135)

A06B-1230-K495#S01

Normalized by max. output



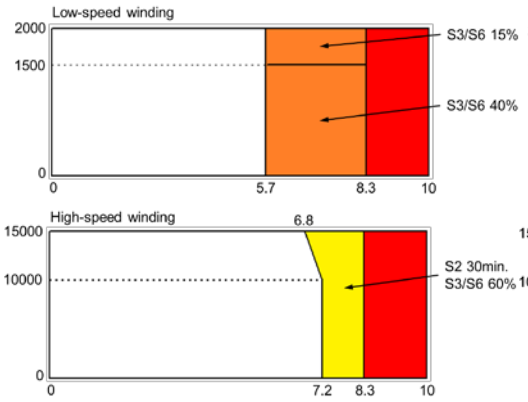
Normalized by cont. output



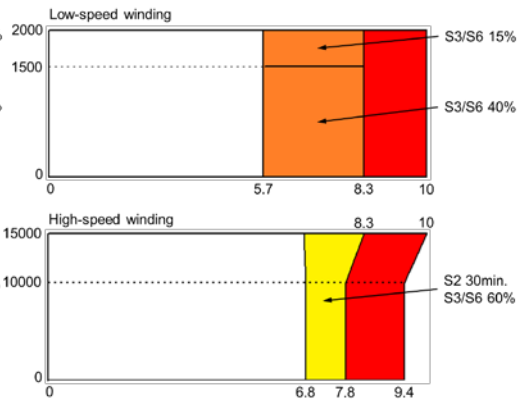
αiIL 26/15000-B (A06B-2494-B135)

A06B-1230-K494#S01

Normalized by max. output



Normalized by cont. output



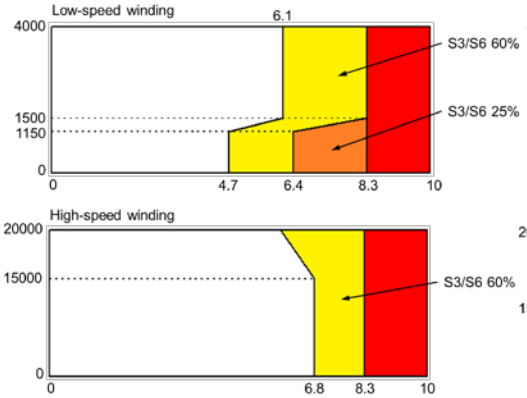
JR AUTOMATION TECHNOLOGIES, INC*

B.9 αiIL-B series 400V type

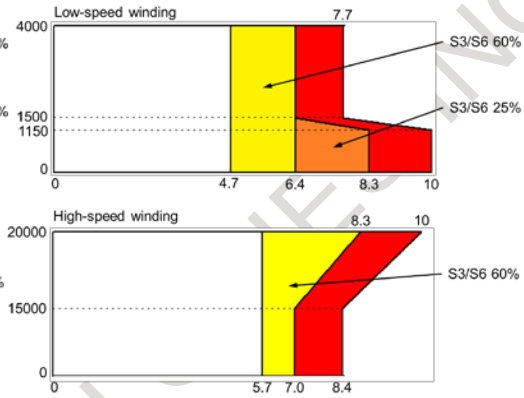
αiIL 8/20000HV-B (A06B-2597-B145)

A06B-1230-K597#S0N

Normalized by max. output



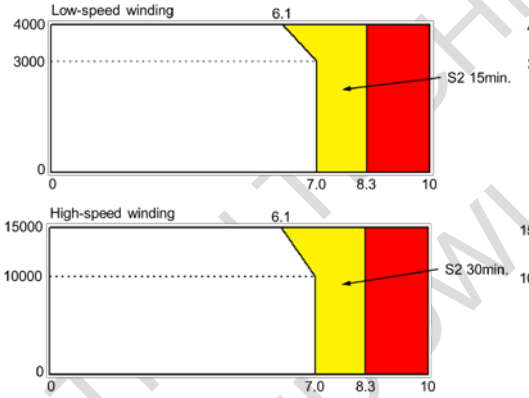
Normalized by cont. output



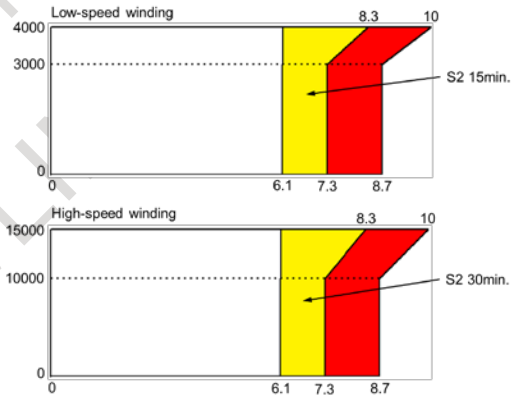
αiIL 15/15000HV-B (A06B-2595-B135)

A06B-1230-K595#S01

Normalized by max. output



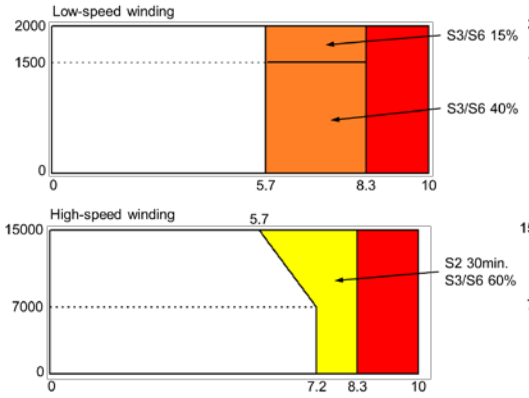
Normalized by cont. output



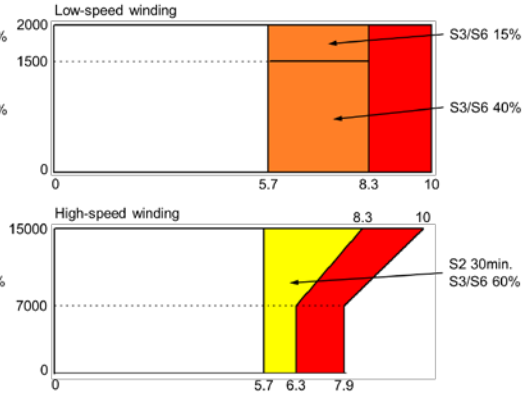
αiIL 26/15000HV-B (A06B-2594-B135)

A06B-1230-K594#S01

Normalized by max. output



Normalized by cont. output



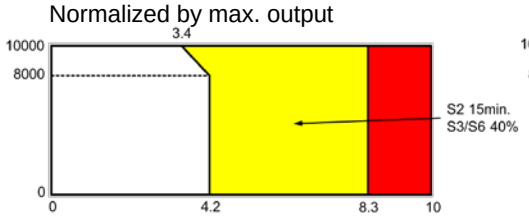
JR AUTOMATION TECHNOLOGIES, INC*

B.10 αiI-B (IP65) series

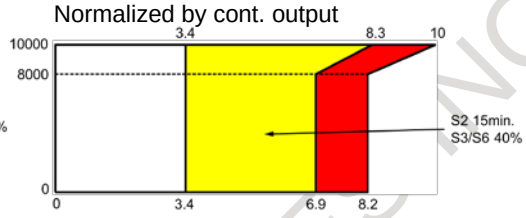
αiI 0.5/10000-B (IP65) (A06B-2481-B105)

A06B-1230-K481#S00

Normalized by max. output



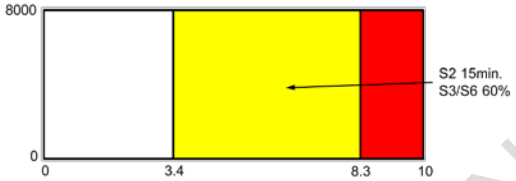
Normalized by cont. output



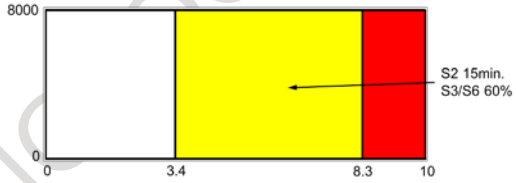
αiI 1/8000-B (IP65) (A06B-2482-B105)

A06B-1230-K482#S00

Normalized by max. output



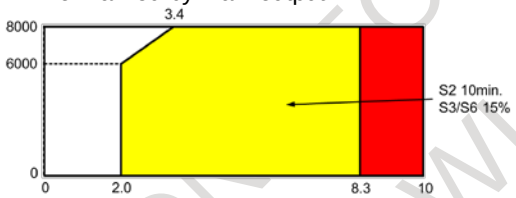
Normalized by cont. output



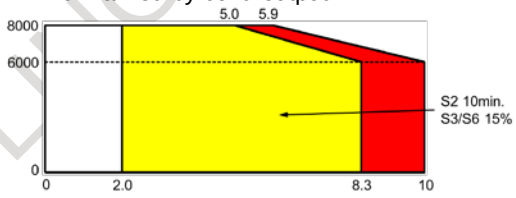
αiI 1.5/10000-B (IP65) (A06B-2481-B105)

A06B-1230-K483#S00

Normalized by max. output



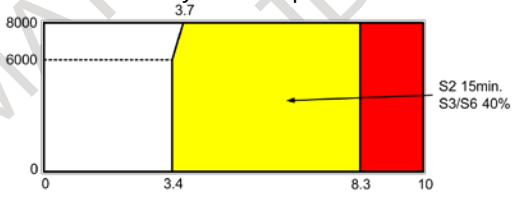
Normalized by cont. output



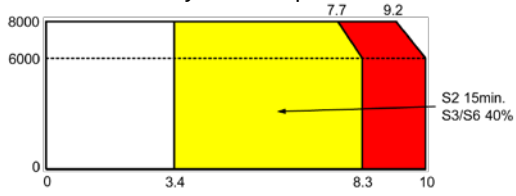
αiI 2/8000-B (IP65) (A06B-2484-B1x5)

A06B-1230-K484#S00

Normalized by max. output



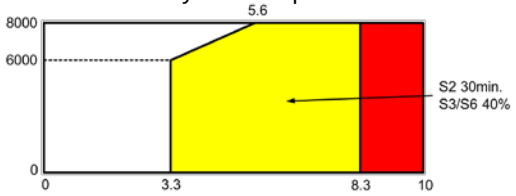
Normalized by cont. output



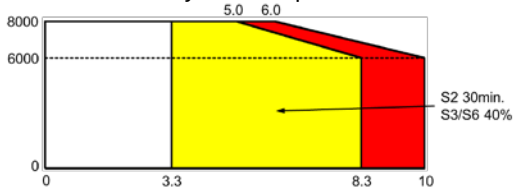
αiI 3/8000-B (IP65) (A06B-2485-B1x5)

A06B-1230-K485#S00

Normalized by max. output



Normalized by cont. output

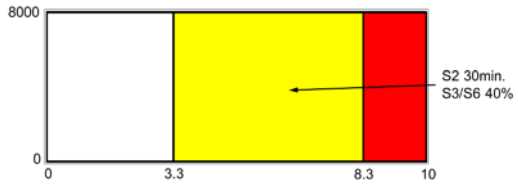


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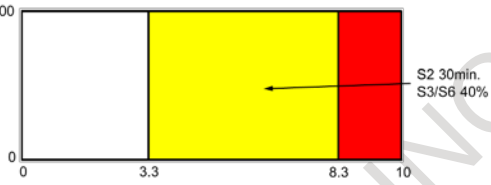
αiI 6/8000-B (IP65) (A06B-2486-B105)

A06B-1230-K486#S00

Normalized by max. output



Normalized by cont. output

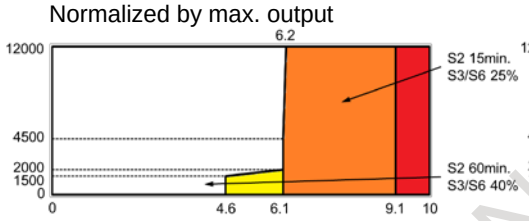


B.11 βiI-B series 200V type

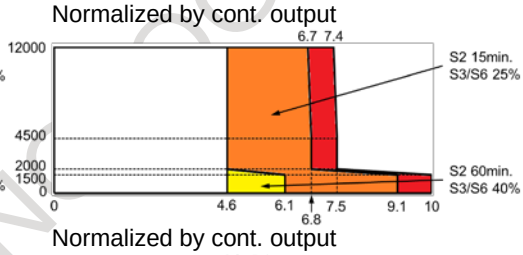
βiI 3/12000-B (A06B-2444-Bxxx)

A06B-1230-K444#S00

Normalized by max. output

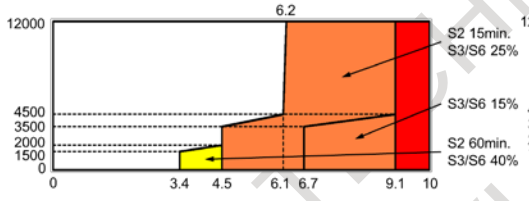


Normalized by cont. output

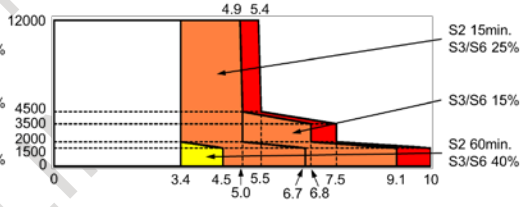


A06B-1230-K444#S0P

Normalized by max. output



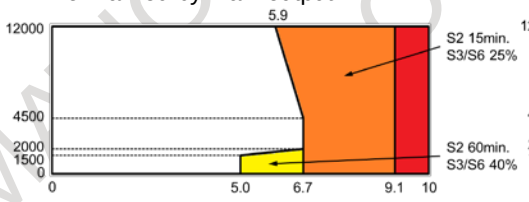
Normalized by cont. output



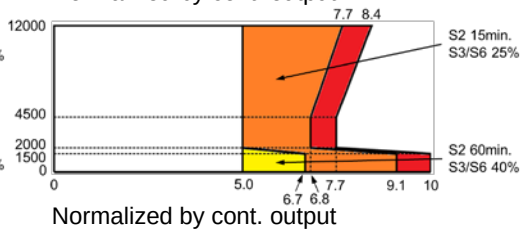
βiI 6/12000-B (A06B-2445-Bxxx)

A06B-1230-K445#S00

Normalized by max. output

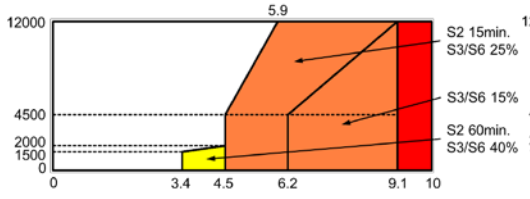


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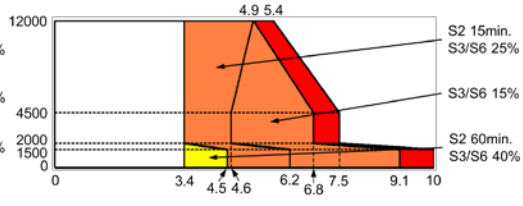


A06B-1230-K445#S0P

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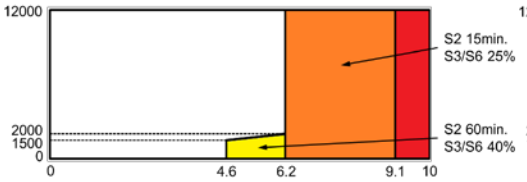
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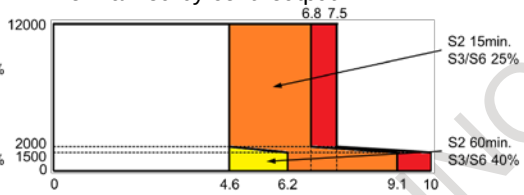
JR AUTOMATION TECHNOLOGIES INC*

βiI 8/12000-B (A06B-2446-Bxxx)

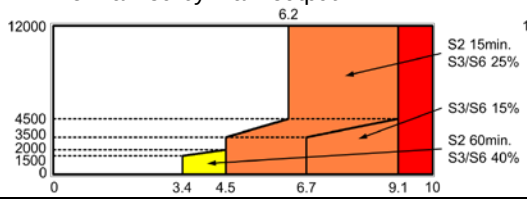
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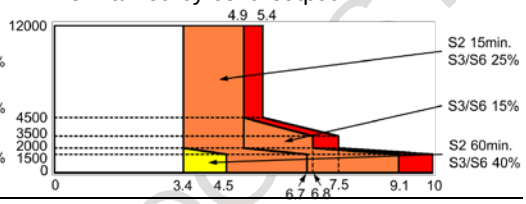
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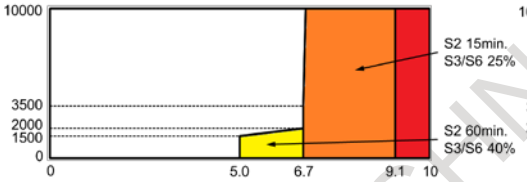


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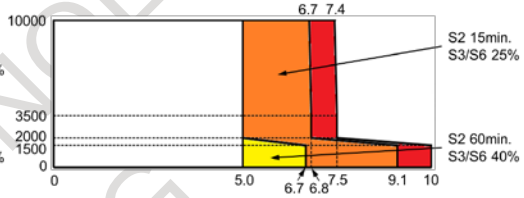


βiI 12/10000-B (A06B-2447-Bxxx)

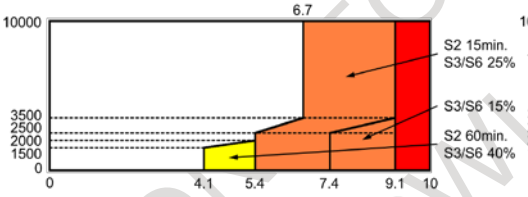
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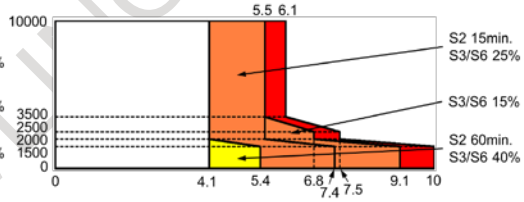
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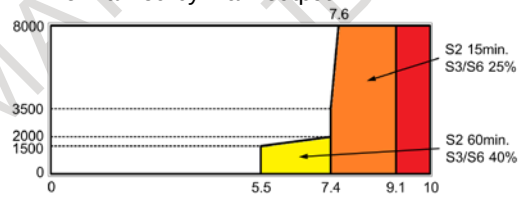


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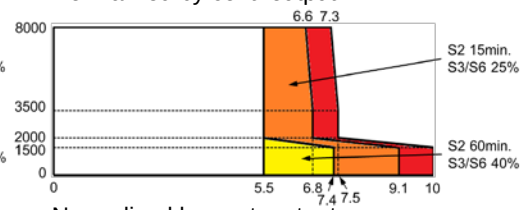


βiI 15/8000-B (A06B-2498-Bxxx)

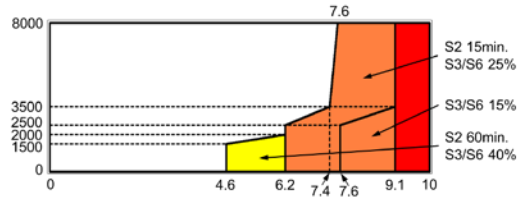
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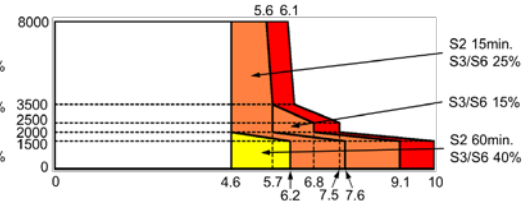
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A06B-1230-K498#S0P Normalized by max. output



Normalized by cont. output



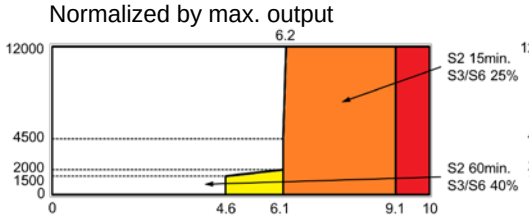
JR AUTOMATION TECHNOLOGIES, INC*
DOWNLOADED

B.12 βiI-B series 400V type

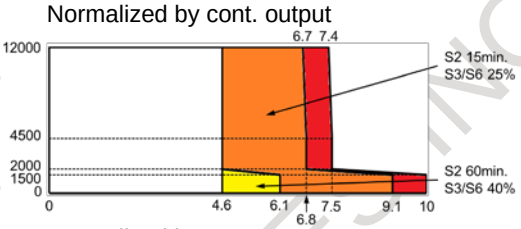
βiI 3/12000HV-B (A06B-2544-Bxxx)

A06B-1230-K544#S00

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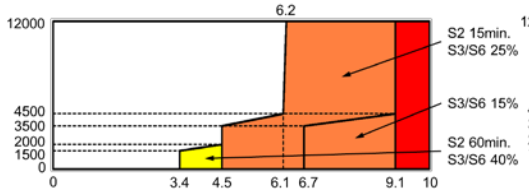


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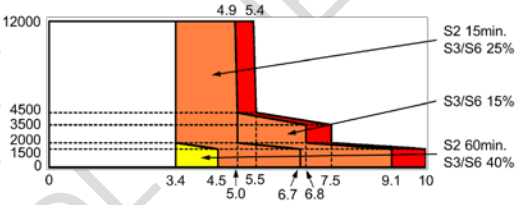


A06B-1230-K544#S0P

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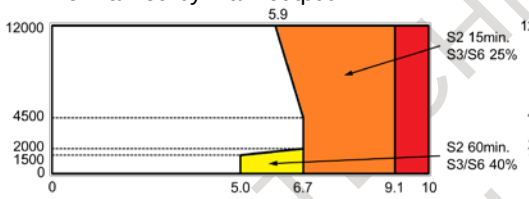
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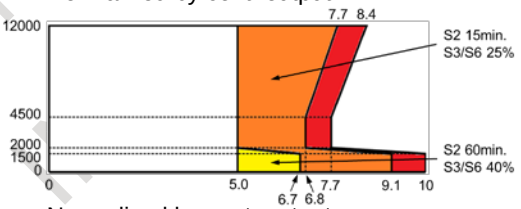
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A06B-1230-K545#S00

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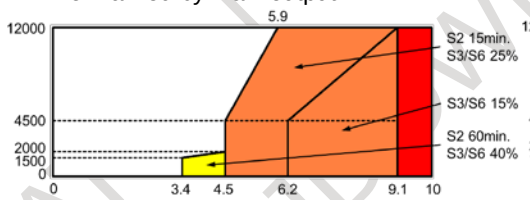


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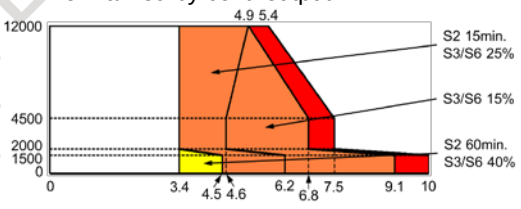


A06B-1230-K545#S0P

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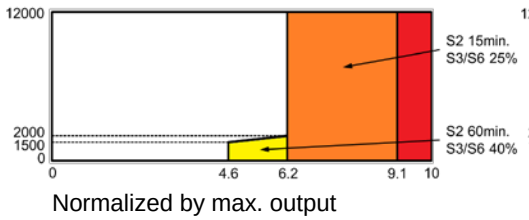
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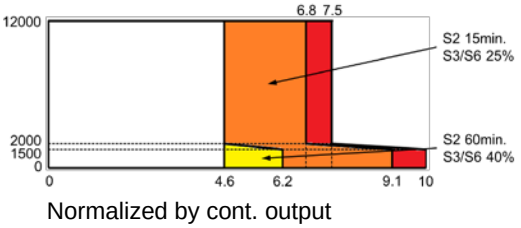
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A06B-1230-K546#S00

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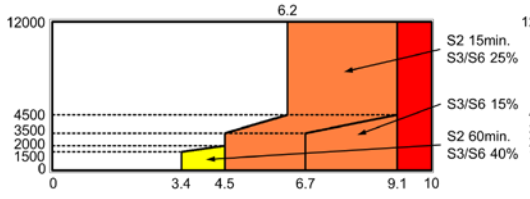


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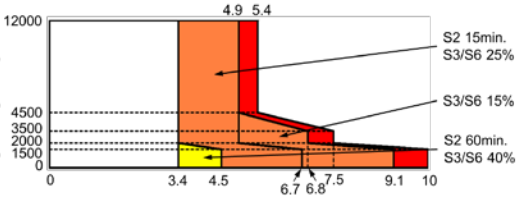


A06B-1230-K546#S0P

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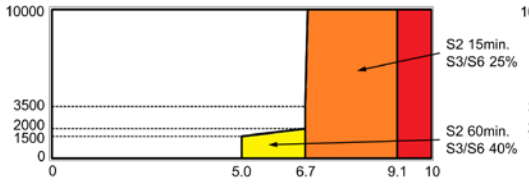


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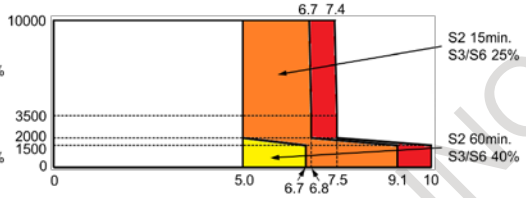
βiI 12/10000HV-B (A06B-2547-Bxxx)

A06B-1230-K547#S00

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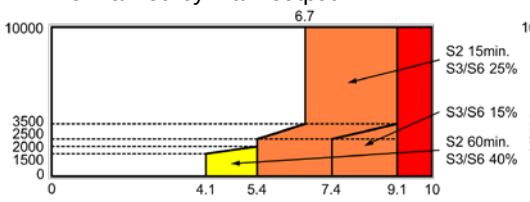


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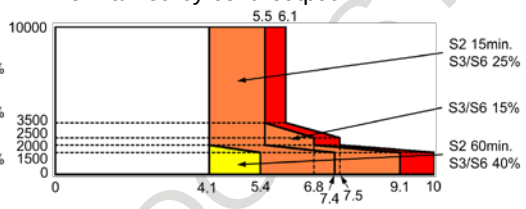


A06B-1230-K547#S0P

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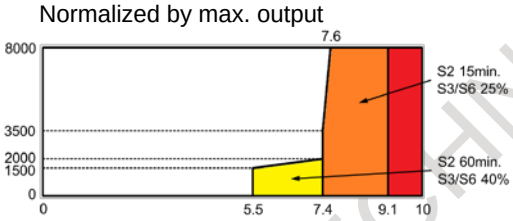
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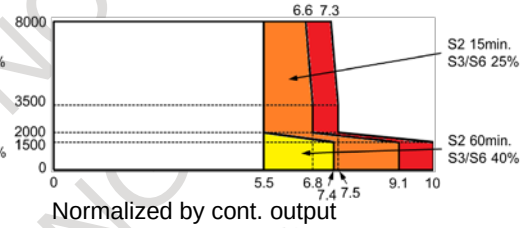
βiI 15/8000HV-B (A06B-2598-Bxxx)

A06B-1230-K598#S00

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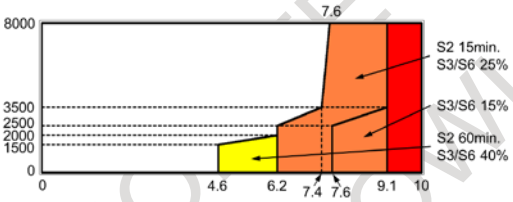


Normalized by cont. output

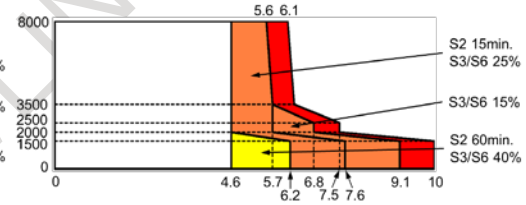


A06B-1230-K598#S0P

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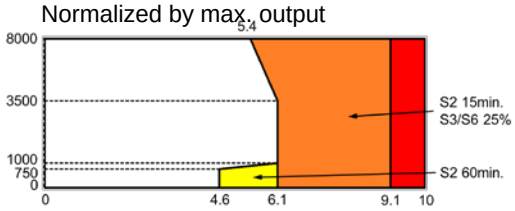
JR AUTOMATION TECHNOLOGIES, INC*
JDOWLING

B.13 βiIP-B series 200V type

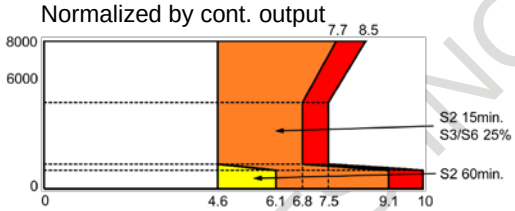
βiIP 8/6000-B (A06B-2457-Bxxx)

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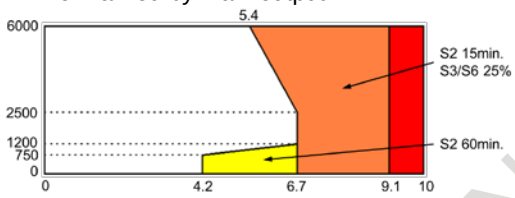
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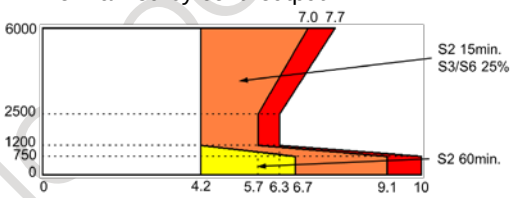
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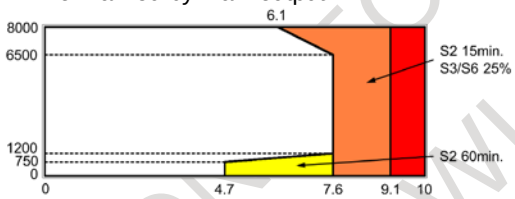
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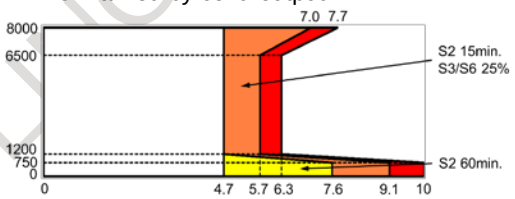
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A06B-1230-K442#S00

Normalized by max. output



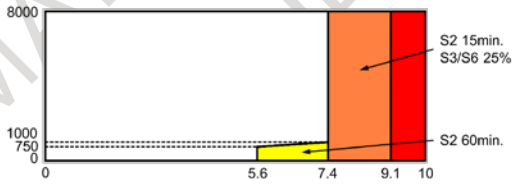
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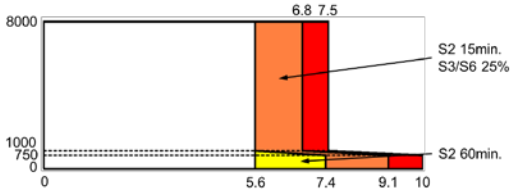
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A06B-1230-K443#S00

Normalized by max. output



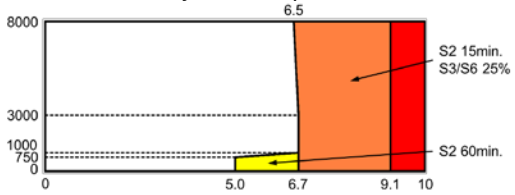
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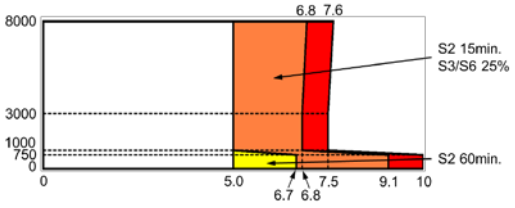
βiIP 22/8000-B (A06B-2459-Bxxx)

A06B-1230-K459#S00

Normalized by max. output



Normalized by cont. output

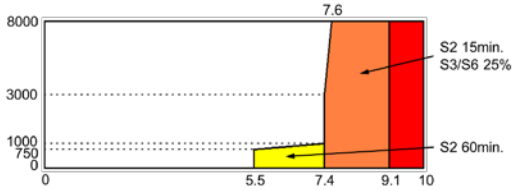


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DOWNLOAD

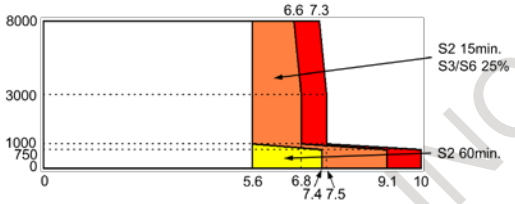
βiIP 30/8000-B (A06B-2458-Bxxx)

A06B-1230-K499#S00

Normalized by max. output



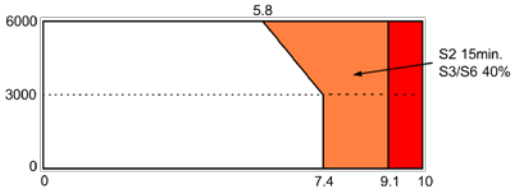
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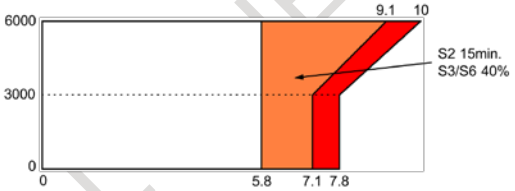
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A06B-1230-K480#S00

Normalized by max. output



Normalized by cont. output

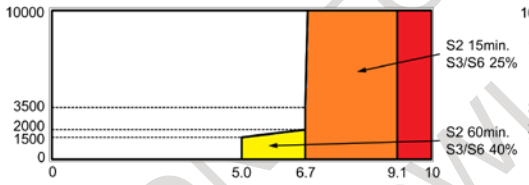


B.14 βiIT-B series 200V type

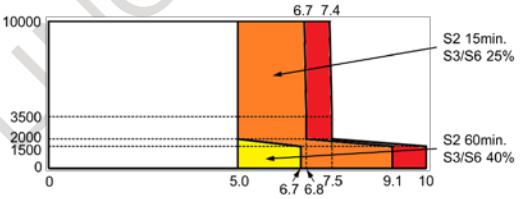
βiIT 12/10000-B (A06B-2490-B123)

A06B-1230-K490#S00

Normalized by max. output

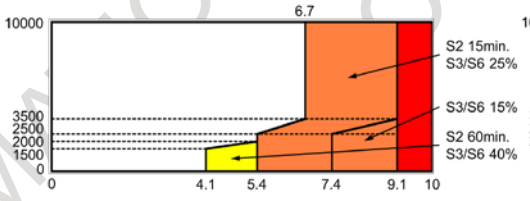


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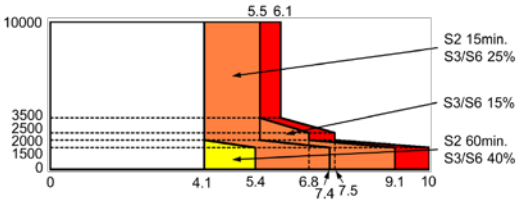


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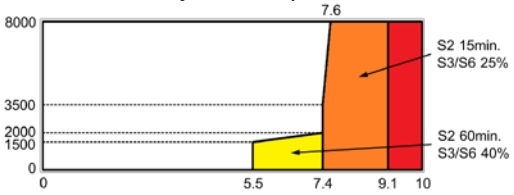
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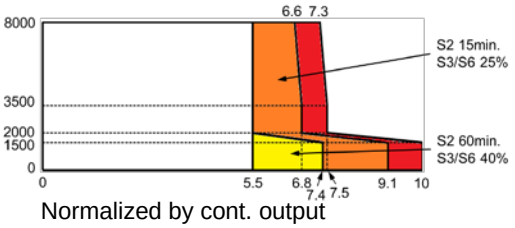
βiIT 15/8000-B (A06B-2491-B123)

A06B-1230-K491#S00

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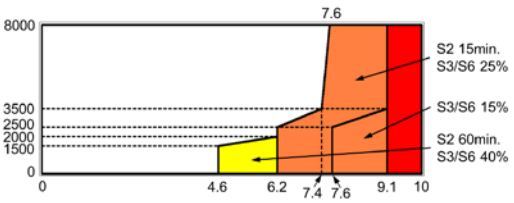


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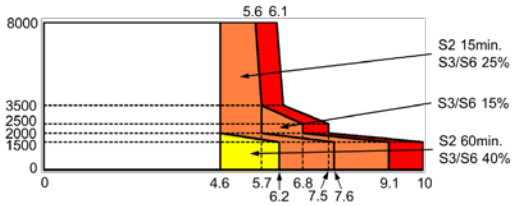


A06B-1230-K491#S0P

Normalized by max. output



Normalized by cont. output



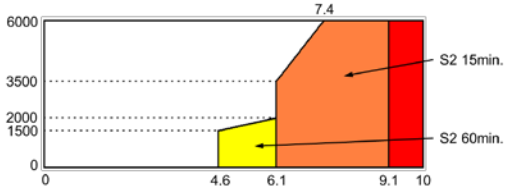
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B.15 βiIc-B series 200V type

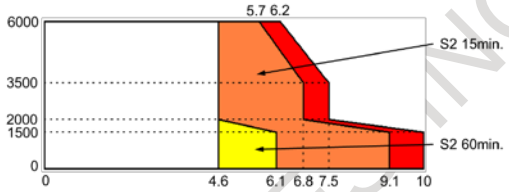
βiIc 3/6000-B (A06B-2415-Bxxx)

A06B-1230-K415#S00

Normalized by max. output



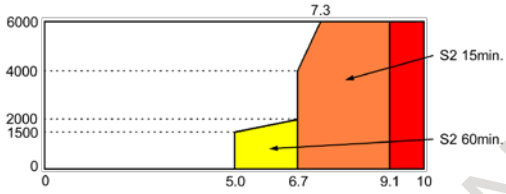
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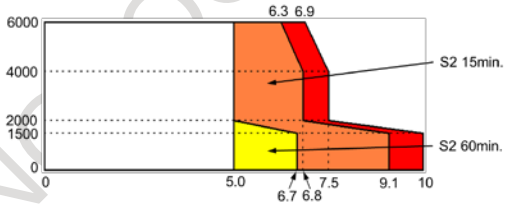
βiIc 6/6000-B (A06B-2416-Bxxx)

A06B-1230-K416#S00

Normalized by max. output



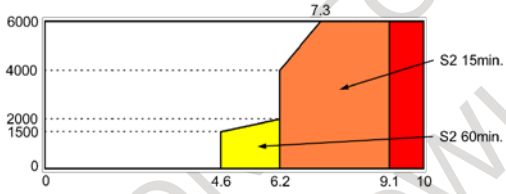
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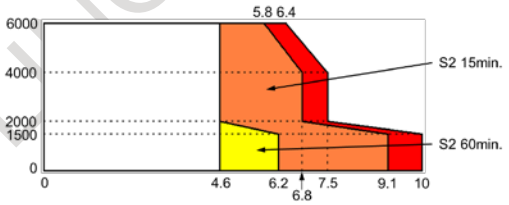
βiIc 8/6000-B (A06B-2417-Bxxx)

A06B-1230-K417#S00

Normalized by max. output



Normalized by cont. output



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ADDITIONAL INFORMATION

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Addition of SPINDLE MOTOR for lathe MODEL βiI 6/10000-B

1. Type of applied documents

Name	FANUC AC SPINDLE MOTOR αi-B/βi-B DESCRIPTIONS
Spec. No./Ver.	B-65452EN/03

2. Summary of Change

Group	Name / Outline	New, Add Correct, Del	Applicable Date
Basic Function	Addition of SPINDLE MOTOR βiI 6/10000-B which is enhanced allowable radial load	Add	2019.8
Optional Function			
Unit			
Maintenance Parts			
Notice			
Correction			
Another			

JR AUTOMATION TECHNOLOGIES INC*
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				TITLE Addition of SPINDLE MOTOR for lathe MODEL βiI 6/10000-B	
01	19.09.03	Katsuki	Newly desingned	DRAW. No. B-65452EN/03-01	CUST.
Ed.	Date	Design.	Description	FANUC CORPORATION	SHEET 1/8

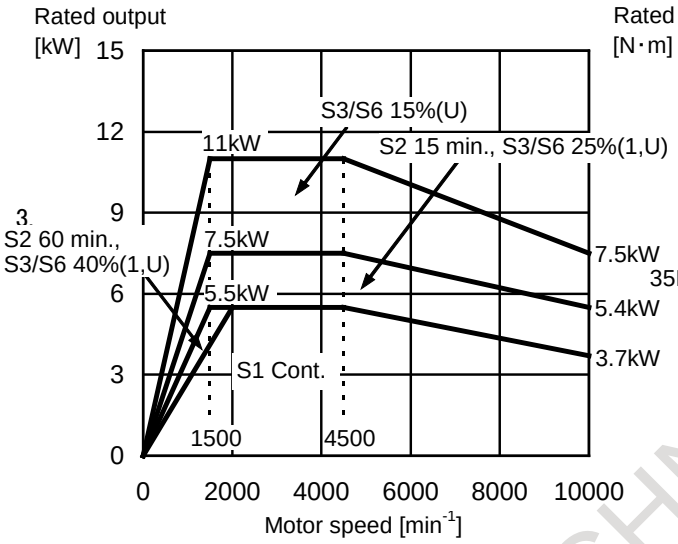
1. Ordering specification number and Components

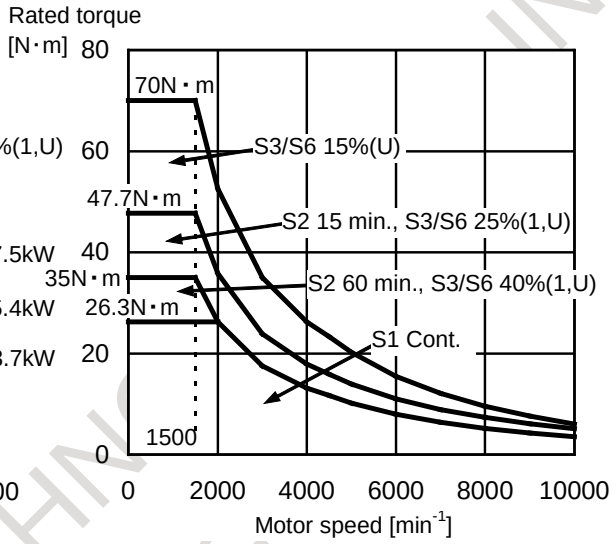
Name	Specification number	Ordering number of specification nameplate	Notes
Model βiI 6/10000-B	A06B-2445-B300	A06B-1230-K445#S01	αiM sensor inside Flange type Key less shaft Oil seal Exhaust rear
		A06B-1230-K445#S0U	
	A06B-2445-B301	A06B-1230-K445#S01	αiM sensor inside Flange type Key less shaft Oil seal Exhaust front
		A06B-1230-K445#S0U	
	A06B-2445-B303	A06B-1230-K445#S01	αiMZ sensor inside Flange type Key less shaft Oil seal Exhaust rear
		A06B-1230-K445#S0U	
	A06B-2445-B304	A06B-1230-K445#S01	αiMZ sensor inside Flange type Key less shaft Oil seal Exhaust front
		A06B-1230-K445#S0U	

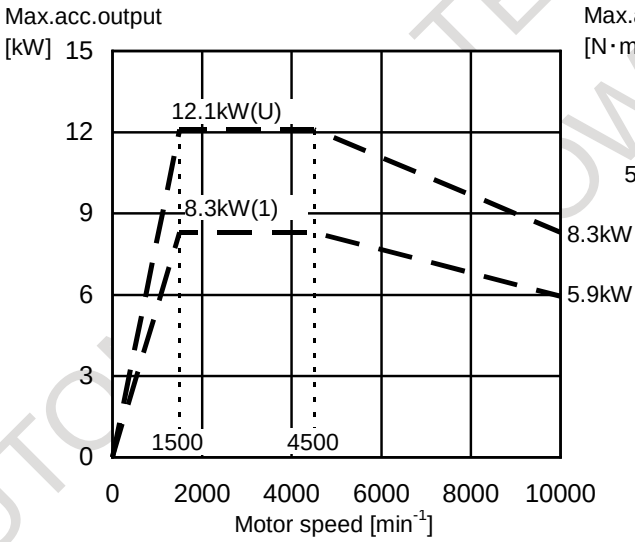
JR AUTOMATION TECHNOLOGIES INC*
JDOWLING

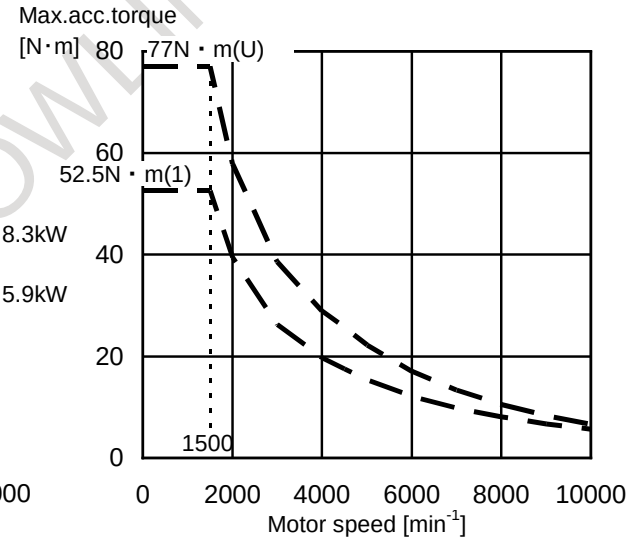
2. Output / Torque characteristics

- Model βiI 6/10000-B
  Spec. number for motor : A06B-2445-B30*
  Spec. number for output specification nameplate: A06B-1230-K445#S01, A06B-1230-K445#S0U
- Applicable amplifier: : (1) αiSP 11-B or βiSVSP*-11-B, (U) αiSP 15-B or βiSVSP*-15-B









JR AUTOMATION TECHNOLOGY INC*

				TITLE: Addition of SPINDLE MOTOR for lathe MODEL βiI 6/10000-B	
01	19.09.03	Katsuki	Newly desingned	DRAW. No. B-65452EN/03-01	CUST.
Ed.	Date	Design.	Description	FANUC CORPORATION	SHEET 3/8

3. Datasheet

Item			Symbol	Value		Unit
Model				#S01	#S0U	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	5.5	5.5	kW
	S2 15 min., S3/S6 25% rated			7.5	7.5	kW
	S3/S6 15% rated			-	11	kW
Rated current	S1 continuous rated		I_C	40	40	A
	S2 60 min., S3/S6 40% rated			47	47	A
	S2 15 min., S3/S6 25% rated			56	56	A
	S3/S6 15% rated			-	80	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	10000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				8.3	12.1	kW
Continuous rated torque in the constant torque range			T_b	26.3		N・m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.0148		$kg・m^2$
Weight			W	48		kg
Winding resistance (U-V, V-W, and W-U)			R	102		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				128		λ/rev.
Vibration				V5		
Output shaft seal				Oil seal		
Degree of protection				IP54		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				38		W

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4. Connections

4.1 Connections of power lead and fan motor.

Cables for power lead and fan motor are connected to the terminal block.
Thermistor signal uses a connector manufactured by Tyco Electronics AMP.
The connector housing and the connector are attached to the motor.

Model \ Size of screws used in the terminal block	Power lead	Fan motor
	U,Z,V,X,W,Y,G	FMU,FMV,FMW
βiI 6/10000-B	M5	Screw-less terminal block

Cable for the power lead

For the power lead cable specification, refer to "FANUC SERVO AMPLIFIER αi-B series DISCRIPTIONS" (B-65282EN)

Fan motor current value

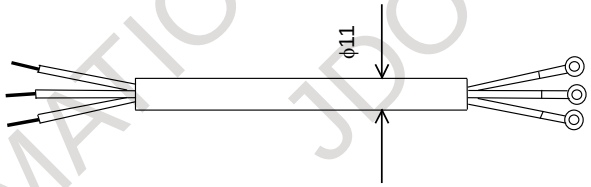
Model	50Hz				60Hz			
	Usable voltage [V]	Rated voltage [V]	Rated current [A]	Surge current [Ap-p]	Usable voltage [V]	Rated voltage [V]	Rated current [A]	Surge current [Ap-p]
βiI 6/10000-B	170-240	200	0.09	0.40	170-240	200	0.10	0.40

Note） The values listed above are rough standard. They are not guaranteed.

Cable for the fan motor

The machine tool builder is to prepare the following cable for the fan motor:
Vinyl heavy-duty power cord JIS C 3312 3-conductor
Conductor: 37/0.26 (2 mm2)
Sheath: PVCφ 11
Crimp terminal: T2-4S

For a non-screw terminal block (Peel off each wire sheath on the motor side by 8 to 9 mm.)



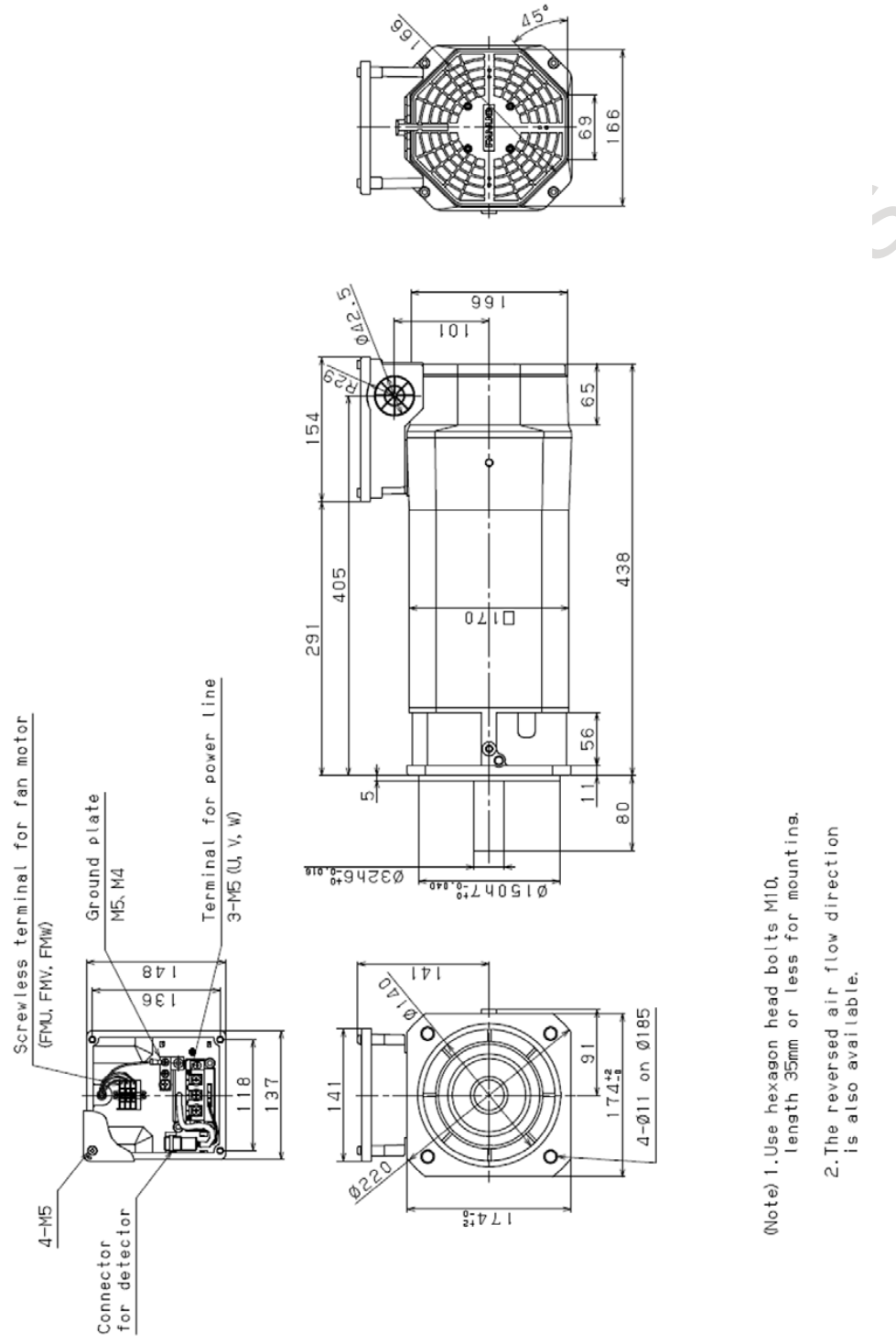
4.2 Connections signal lead.

For the connections of signal lead , refer to "FANUC AC SPINDLE MOTOR αi/βi series DISCRIPTIONS" (B-65452EN)

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5. External dimensions

Model $\beta i I$ 6/10000-B (A06B-2445-B30*)



(Note) 1. Use hexagon head bolts M10,
length 35mm or less for mounting.

2. The reversed air flow direction
is also available.

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				TITLE Addition of SPINDLE MOTOR for lathe MODEL $\beta i I$ 6/10000-B	
01	19.09.03	Katsuki	Newly desingned	DRAW. No. B-65452EN/03-01	CUST.
Ed.	Date	Design.	Description	**FANUC CORPORATION**	SHEET 6/8

6. Allowable radial load

Use the motor output shaft below the allowable radial loads shown in the table below.

	At output shaft end	At output shaft center
Allowable radial load	1830N (186kgf)	2000N (204kgf)

NOTE

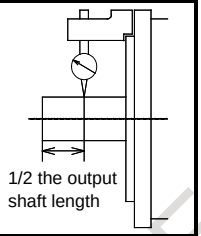
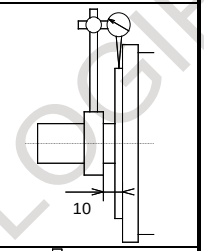
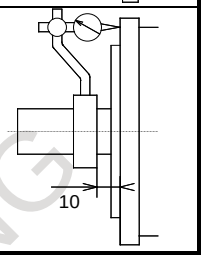
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, it is possible that an abnormal sound may occur.)

2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.

3 If a thrust load is applied when a helical gear is used, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

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7. Assembling accuracy

Item \ Model	βiI 6/10000-B	Measuring method
Run-out at the end of the output shaft	20μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	40μm or less	
Run-out of the flange mounting surface against the core of the shaft	80μm or less	

JR AUTOMATION TECHNOLOGIES INC*
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				TITLE Addition of SPINDLE MOTOR for lathe MODEL βiI 6/10000-B	
01	19.09.03	Katsuki	Newly desingned	DRAW. No. B-65452EN/03-01	CUST.
Ed.	Date	Design.	Description	FANUC CORPORATION	SHEET 8/8

Addition of SPINDLE MOTOR for lathe MODEL αiI 6/10000-B

1. Type of applied documents

Name	FANUC AC SPINDLE MOTOR αi-B/βi-B DESCRIPTIONS
Spec. No./Ver.	B-65452EN/03

2. Summary of Change

Group	Name / Outline	New, Add Correct, Del	Applicable Date
Basic Function	Addition of SPINDLE MOTOR αiI 6/10000-B which is enhanced allowable radial load	Add	2019.8
Optional Function			
Unit			
Maintenance Parts			
Notice			
Correction			
Another			

JR AUTOMATION TECHNOLOGIES INC*
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				TITLE Addition of SPINDLE MOTOR for lathe MODEL αiI 6/10000-B	
01	19.09.03	Katsuki	Newly designed	DRAW. No. B-65452EN/03-02	CUST.
Ed.	Date	Design.	Description	FANUC CORPORATION	SHEET 1/8

1. Ordering specification number and Components

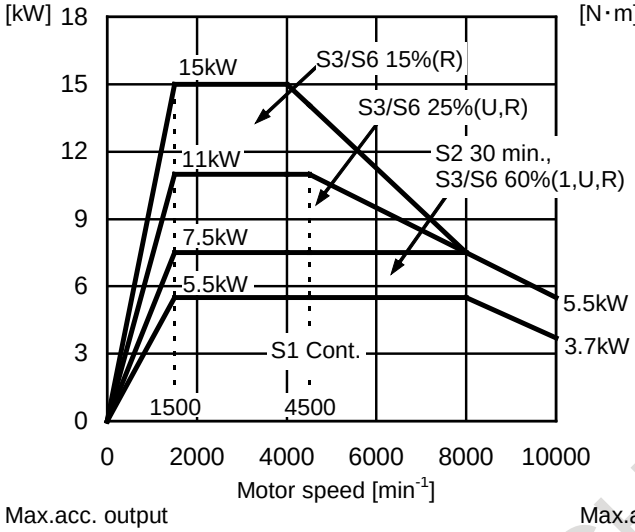
Name	Specification number	Ordering number of specification nameplate	Notes
Model αiI 6/10000-B	A06B-2406-B300	A06B-1230-K406#S01	αiM sensor inside Flange type Key less shaft Oil seal Exhaust rear
		A06B-1230-K406#S0U	
		A06B-1230-K406#S0R	
	A06B-2406-B301	A06B-1230-K406#S01	αiM sensor inside Flange type Key less shaft Oil seal Exhaust front
		A06B-1230-K406#S0U	
		A06B-1230-K406#S0R	
	A06B-2406-B303	A06B-1230-K406#S01	αiMZ sensor inside Flange type Key less shaft Oil seal Exhaust rear
		A06B-1230-K406#S0U	
		A06B-1230-K406#S0R	
	A06B-2406-B304	A06B-1230-K406#S01	αiMZ sensor inside Flange type Key less shaft Oil seal Exhaust front
		A06B-1230-K406#S0U	
		A06B-1230-K406#S0R	

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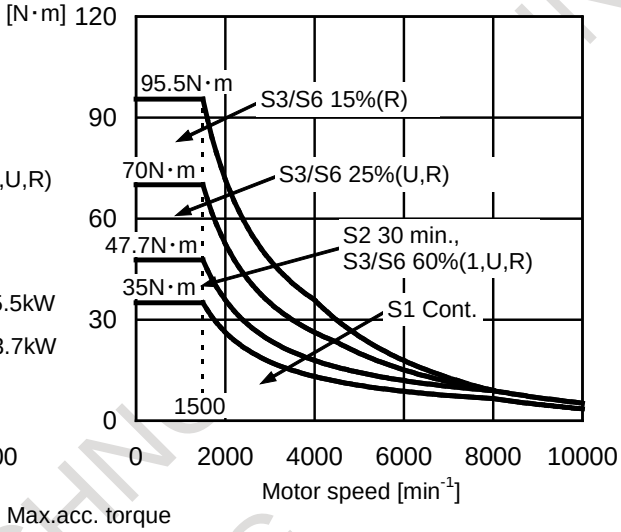
2. Output / Torque characteristics

- Model αiI 6/10000-B
  Spec. number for motor : A06B-2406-B30*
  Spec. number for output specification nameplate: A06B-1230-K406#S01→(1), #S0U→(U), #S0R→(R)
- Applicable amplifier: : (1), (U) αiSP 11-B or βiSVSP*-11-B, (R) αiSP 15-B or βiSVSP*-15-B

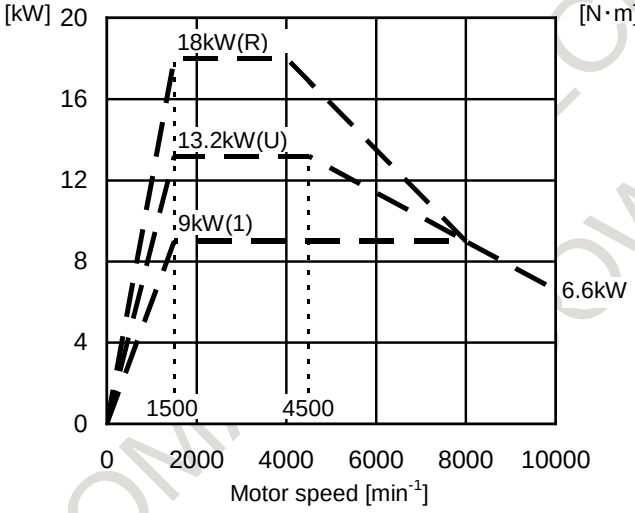
Rated output



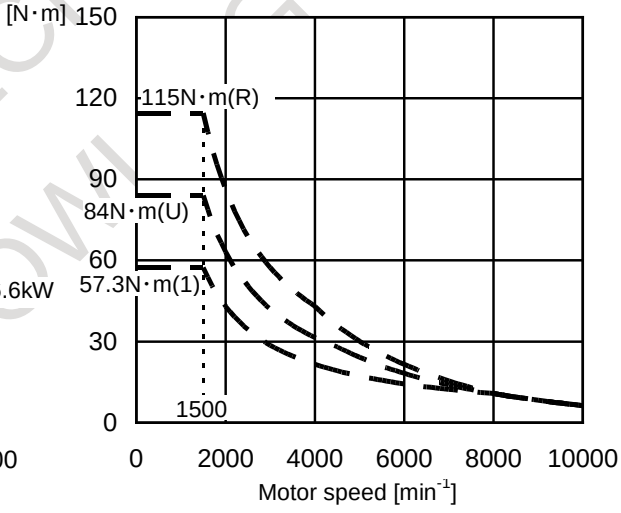
Rated torque



Max.acc. output



Max.acc. torque



JR AUTOMATION TECHNOLOGY, INC*

				TITLE: Addition of SPINDLE MOTOR for lathe MODEL αiI 6/10000-B	
01	19.09.03	Katsuki	Newly designed	DRAW. No. B-65452EN/03-02	CUST.
Ed.	Date	Design.	Description	FANUC CORPORATION	SHEET 3/8

3. Datasheet

Item		Symbol	Value			Unit
Model			#S01	#S0U	#S0R	
Rated output	S1 continuous rated	P_C	5.5	5.5	5.5	kW
	S2 30 min., S3/S6 60% rated		7.5	7.5	7.5	kW
	S3/S6 25% rated		-	11	11	kW
	S3/S6 15% rated		-	-	15	kW
Rated current	S1 continuous rated	I_C	43	43	43	A
	S2 30 min., S3/S6 60% rated		49	49	49	A
	S3/S6 25% rated		-	63	63	A
	S3/S6 15% rated		-	-	76	A
Speed	Base speed	N_b	1500			min^{-1}
	Max. speed	N_{max}	10000			min^{-1}
Steady-state maximum output		P_{max}	120% of maximum rated output			kW
Maximum output at acceleration for PS selection			9.0	13.2	18.0	kW
Continuous rated torque in the constant torque range		T_b	35.0			N・m
Number of poles			4			
Moment of inertia of the rotor		J_m	0.0179			$kg・m^2$
Weight		W	54			kg
Winding resistance (U-V, V-W, and W-U)		R	118			mΩ
Built-in detector			αiM sensor or αiMZ sensor contained			
Number of teeth for speed detection			256			λ/rev.
Output shaft seal			Oil seal			
Degree of protection			IP54			
Vibration			V5 (option V3)			
Noise			75 or less			dB(A)
Cooling system			Totally enclosed and fan cooled (IC0A6)			
Rated power of the cooling fan			50			W

JR AUTOMATION TECHNOLOGIES INC*
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4. Connections

4.1 Connections of power lead and fan motor.

Cables for power lead and fan motor are connected to the terminal block.
Thermistor signal uses a connector manufactured by Tyco Electronics AMP.
The connector housing and the connector are attached to the motor.

Size of screws used in the terminal block / Model	Power lead	Fan motor
	U,Z,V,X,W,Y,G	FMU,FMV,FMW
αiI 6/10000-B	M5	Screw-less terminal block

Cable for the power lead

For the power lead cable specification, refer to "FANUC SERVO AMPLIFIER αi-B series DISCRIPTIONS" (B-65282EN)

Fan motor current value

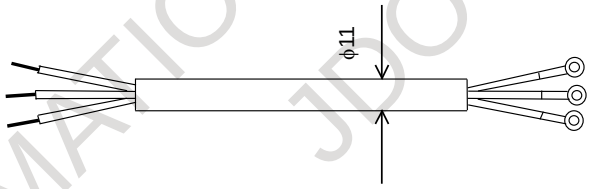
Model	50Hz				60Hz			
	Usable voltage [V]	Rated voltage [V]	Rated current [A]	Surge current [Ap-p]	Usable voltage [V]	Rated voltage [V]	Rated current [A]	Surge current [Ap-p]
αiI 6/10000-B	170-240	200	0.13	0.58	170-240	200	0.14	0.55

Note） The values listed above are rough standard. They are not guaranteed.

Cable for the fan motor

The machine tool builder is to prepare the following cable for the fan motor:
Vinyl heavy-duty power cord JIS C 3312 3-conductor
Conductor: 37/0.26 (2 mm2)
Sheath: PVCφ 11
Crimp terminal: T2-4S

For a non-screw terminal block (Peel off each wire sheath on the motor side by 8 to 9 mm.)



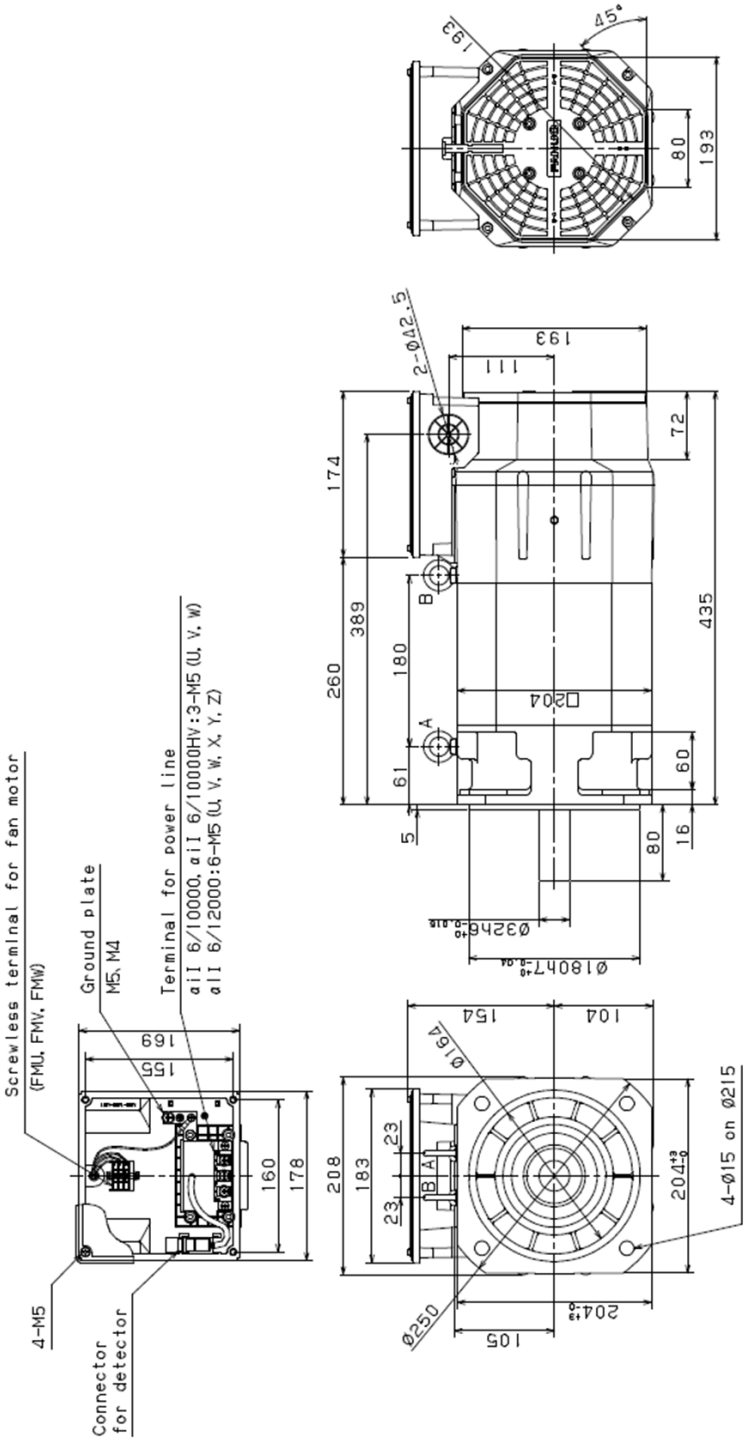
4.2 Connections signal lead.

For the connections of signal lead , refer to "FANUC AC SPINDLE MOTOR αi/βi series DISCRIPTIONS" (B-65452EN)

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5. External dimensions

Model αiI 6/10000-B (A06B-2406-B30*)



(Note) 1. Use hexagon head bolts M12, length 35mm or less for mounting.

2. The reversed air flow direction is also available.

				TITLE: Addition of SPINDLE MOTOR for lathe MODEL αiI 6/10000-B	
01	19.09.03	Katsuki	Newly designed	DRAW. No. B-65452EN/03-02	CUST.
Ed.	Date	Design.	Description	FANUC CORPORATION	SHEET 6/8

6. Allowable radial load

Use the motor output shaft below the allowable radial loads shown in the table below.

	At output shaft end	At output shaft center
Allowable radial load	2570N (262kgf)	2900N (296kgf)

NOTE

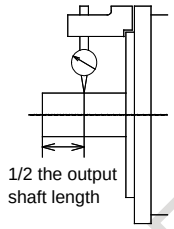
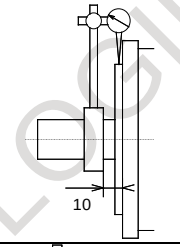
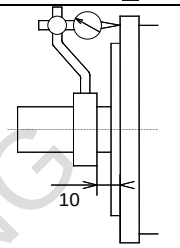
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor.
(If an excessive load is applied, it is possible that an abnormal sound may occur.)

2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.

3 If a thrust load is applied when a helical gear is used, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

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7. Assembling accuracy

Item \ Model	αiI 6/10000-B	Measuring method
Run-out at the end of the output shaft	20μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	40μm or less	
Run-out of the flange mounting surface against the core of the shaft	80μm or less	

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				TITLE Addition of SPINDLE MOTOR for lathe MODEL αiI 6/10000-B	
01	19.09.03	Katsuki	Newly designed	DRAW. No. B-65452EN/03-02	CUST.
Ed.	Date	Design.	Description	FANUC CORPORATION	SHEET 8/8

Addition of SPINDLE MOTOR for lathe MODEL βiI 8/10000-B

1. Type of applied documents

Name	FANUC AC SPINDLE MOTOR αi-B/βi-B DESCRIPTIONS
Spec. No./Ver.	B-65452EN/03

2. Summary of Change

Group	Name / Outline	New, Add Correct, Del	Applicable Date
Basic Function	Addition of SPINDLE MOTOR βiI 8/10000-B which is enhanced allowable radial load	Add	2019.8
Optional Function			
Unit			
Maintenance Parts			
Notice			
Correction			
Another			

JR AUTOMATION TECHNOLOGIES INC*
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				TITLE Addition of SPINDLE MOTOR for lathe MODEL βiI 8/10000-B	
01	19.09.03	Katsuki	Newly designed	DRAW. No. B-65452EN/03-03	CUST.
Ed.	Date	Design.	Description	FANUC CORPORATION	SHEET 1/8

1. Ordering specification number and Components

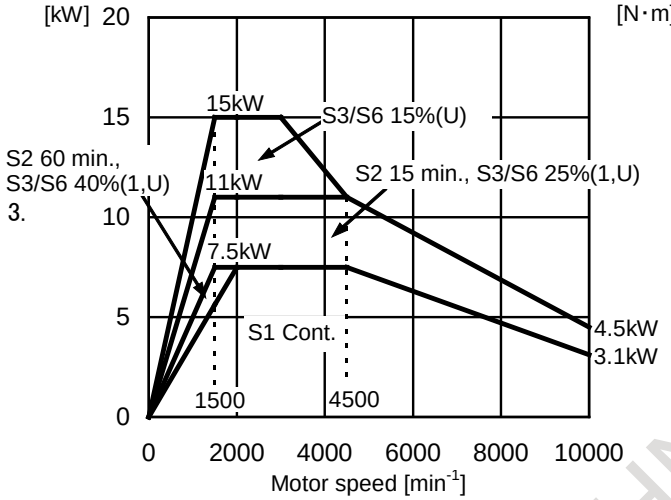
Name	Specification number	Ordering number of specification nameplate	Notes
Model βiI 8/10000-B	A06B-2446-B300	A06B-1230-K446#S01	αiM sensor inside Flange type Key less shaft Oil seal Exhaust rear
		A06B-1230-K446#S0U	
	A06B-2446-B301	A06B-1230-K446#S01	αiM sensor inside Flange type Key less shaft Oil seal Exhaust front
		A06B-1230-K446#S0U	
	A06B-2446-B303	A06B-1230-K446#S01	αiMZ sensor inside Flange type Key less shaft Oil seal Exhaust rear
		A06B-1230-K446#S0U	
	A06B-2446-B304	A06B-1230-K446#S01	αiMZ sensor inside Flange type Key less shaft Oil seal Exhaust front
		A06B-1230-K446#S0U	

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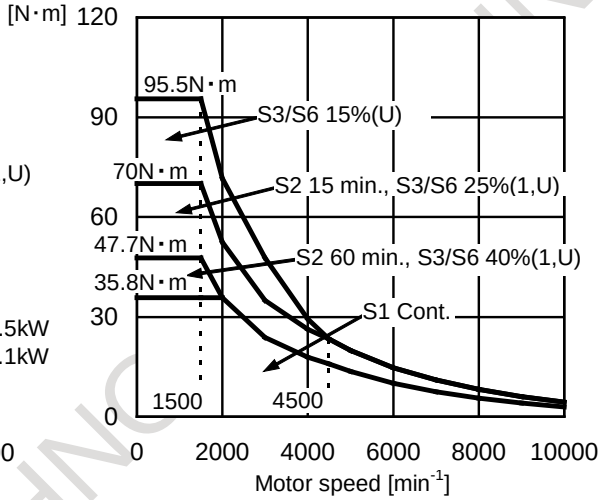
2. Output / Torque characteristics

- Model βiI 8/10000-B
  Spec. number for motor : A06B-2446-B30*
  Spec. number for output specification nameplate: A06B-1230-K446#S01, A06B-1230-K446#S0U
- Applicable amplifier: : (1) αiSP 11-B or βiSVSP*-11-B, (U) αiSP 15-B or βiSVSP*-15-B

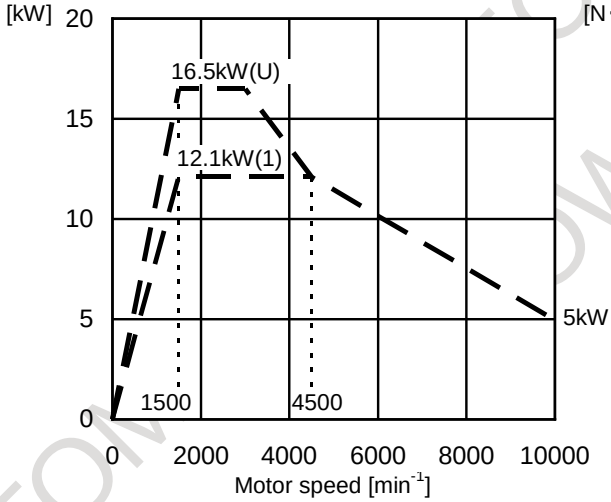
Rated output



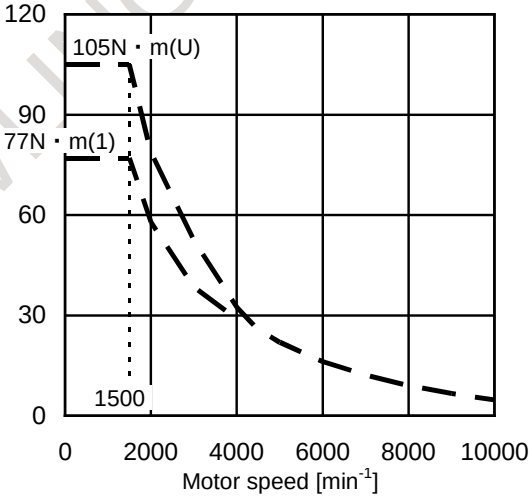
Rated torque



Max.acc.output



Max.acc.torque



JR AUTOMATION TECHNOLOGY, INC*

				TITLE: Addition of SPINDLE MOTOR for lathe MODEL βiI 8/10000-B	
01	19.09.03	Katsuki	Newly designed	DRAW. No. B-65452EN/03-03	CUST.
Ed.	Date	Design.	Description	FANUC CORPORATION	SHEET 3/8

3. Datasheet

Item			Symbol	Value		Unit
Model				#S01	#S0U	
Rated output	S1 continuous rated, S2 60 min., S3/S6 40% rated		P_C	7.5	7.5	kW
	S2 15 min., S3/S6 25% rated			11	11	kW
	S3/S6 15% rated			-	15	kW
Rated current	S1 continuous rated		I_C	36	36	A
	S2 60 min., S3/S6 40% rated			42	42	A
	S2 15 min., S3/S6 25% rated			56	56	A
	S3/S6 15% rated			-	78	A
Speed	Base speed	S1 continuous rated		2000		min^{-1}
		S2 60 min., S3/S6 40% rated S2 15 min., S3/S6 25% rated S3/S6 15% rated	N_b	1500		min^{-1}
	Max. speed		N_{max}	10000		min^{-1}
Steady-state maximum output			P_{max}	110% of maximum rated output		kW
Maximum output at acceleration for PS selection				12.1	16.5	kW
Continuous rated torque in the constant torque range			T_b	35.8		N·m
Number of poles				4		
Moment of inertia of the rotor			J_m	0.0179		$kg·m^2$
Weight			W	54		kg
Winding resistance (U-V, V-W, and W-U)			R	146		mΩ
Built-in detector				αiM sensor or αiMZ sensor contained		
Number of teeth for speed detection				256		λ/rev.
Output shaft seal				Oil seal		
Degree of protection				IP54		
Vibration				V5		
Noise				75 or less		dB(A)
Cooling system				Totally enclosed and fan cooled (IC0A6)		
Rated power of the cooling fan				50		W

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4. Connections

4.1 Connections of power lead and fan motor.

Cables for power lead and fan motor are connected to the terminal block.
Thermistor signal uses a connector manufactured by Tyco Electronics AMP.
The connector housing and the connector are attached to the motor.

Size of screws used in the terminal block / Model	Power lead	Fan motor
	U,Z,V,X,W,Y,G	FMU,FMV,FMW
βiI 8/10000-B	M5	Screw-less terminal block

Cable for the power lead

For the power lead cable specification, refer to "FANUC SERVO AMPLIFIER αi-B series DISCRIPTIONS" (B-65282EN)

Fan motor current value

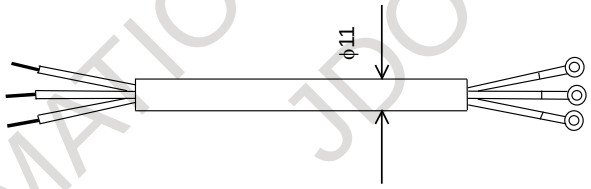
Model	50Hz				60Hz			
	Usable voltage [V]	Rated voltage [V]	Rated current [A]	Surge current [Ap-p]	Usable voltage [V]	Rated voltage [V]	Rated current [A]	Surge current [Ap-p]
βiI 8/10000-B	170-240	200	0.13	0.58	170-240	200	0.14	0.55

Note） The values listed above are rough standard. They are not guaranteed.

Cable for the fan motor

The machine tool builder is to prepare the following cable for the fan motor:
Vinyl heavy-duty power cord JIS C 3312 3-conductor
Conductor: 37/0.26 (2 mm2)
Sheath: PVCφ 11
Crimp terminal: T2-4S

For a non-screw terminal block (Peel off each wire sheath on the motor side by 8 to 9 mm.)



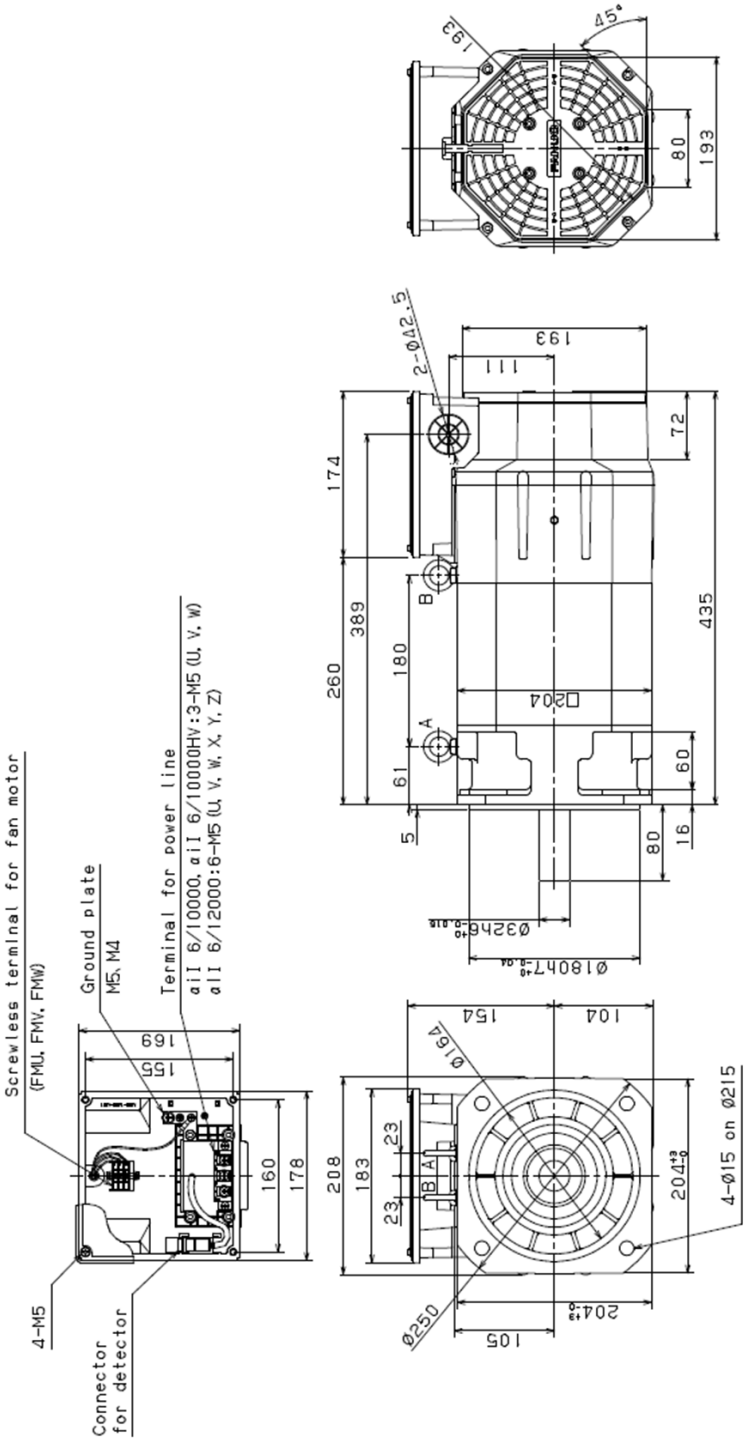
4.2 Connections signal lead.

For the connections of signal lead , refer to "FANUC AC SPINDLE MOTOR αi/βi series DISCRIPTIONS" (B-65452EN)

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5. External dimensions

Model βiI 8/10000-B (A06B-2446-B30*)



(Note) 1. Use hexagon head bolts M12, length 35mm or less for mounting.

2. The reversed air flow direction is also available.

JR AUT
S INC*

				TITLE	
				Addition of SPINDLE MOTOR for lathe MODEL βiI 8/10000-B	
01	19.09.03	Katsuki	Newly designed	DRAW. No. B-65452EN/03-03	CUST.
Ed.	Date	Design.	Description	FANUC CORPORATION	SHEET 6/8

6. Allowable radial load

Use the motor output shaft below the allowable radial loads shown in the table below.

	At output shaft end	At output shaft center
Allowable radial load	2570N (262kgf)	2900N (296kgf)

NOTE

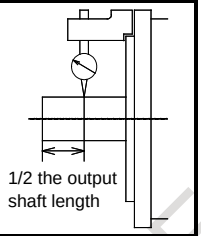
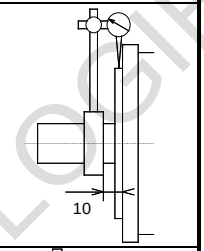
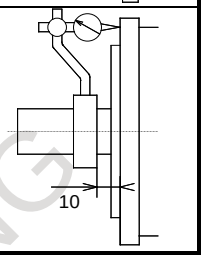
1 When using a belt, adjust the tension so the allowable loads indicated above are not exceeded. If an excessive load is applied, consider the use of a support bearing on the machine side to maintain the long-term reliability of the motor. (If an excessive load is applied, it is possible that an abnormal sound may occur.)

2 When the belt tension is maximized at a point outside the output shaft end, the allowable loads are less than those at the output shaft end.

3 If a thrust load is applied when a helical gear is used, the shaft moves in the direction of the thrust. So, as a general rule, never apply a thrust load.

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7. Assembling accuracy

Item \ Model	βiI 8/10000-B	Measuring method
Run-out at the end of the output shaft	20μm or less	
Run-out of the faucet joint for mounting the flange against the core of the shaft	40μm or less	
Run-out of the flange mounting surface against the core of the shaft	80μm or less	

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				TITLE Addition of SPINDLE MOTOR for lathe MODEL βiI 8/10000-B	
01	19.09.03	Katsuki	Newly designed	DRAW. No. B-65452EN/03-03	CUST.
Ed.	Date	Design.	Description	FANUC CORPORATION	SHEET 8/8

Cleaning/ Inspection Procedures for Fan Motor of Spindle Motor

1. Type of applied technical documents

Name	FANUC AC SPINDLE MOTOR αi series, DESCRIPTIONS FANUC AC SERVO MOTOR αi series, FANUC AC SPINDLE MOTOR αi series, FANUC SERVO AMPLIFIER αi series MAINTENANCE MANUAL FANUC AC SPINDLE MOTOR βi series, DESCRIPTIONS FANUC AC SERVO MOTOR βi series, FANUC AC SPINDLE MOTOR βi series, FANUC SERVO AMPLIFIER βi series MAINTENANCE MANUAL FANUC AC SPINDLE MOTOR αi-B series, FANUC AC SPINDLE MOTOR βi-B series, DESCRIPTIONS FANUC AC SERVO MOTOR αi-B/αi series, FANUC AC SPINDLE MOTOR αi-B series, FANUC SERVO AMPLIFIER αi-B series, FANUC AC SERVO MOTOR βi-B/βi series, FANUC AC SPINDLE MOTOR βi-B series, FANUC SERVO AMPLIFIER βi-B series MAINTENANCE MANUAL
Spec.No.	B-65272EN/08, B-65285EN/04, B-65312EN/05, B-65325EN/02, B-65452EN/03, B-65515EN/01,

2. Summary of Change

Group	Name	New, Add, Correct, Delete,	Applicable Date
Basic Function			
Optional Function			
Unit			
Maintenance Parts			
Notice			
Correction			
Another	Cleaning/ Inspection Procedures for Fan Motor of Spindle Motor	Add	Oct.2019

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Ed.	Date	Design	Description
01	12.Nov.19	Mukai	Newly designed Hayahi

TITLE: Cleaning/ Inspection Procedures for Fan Motor of Spindle Motor

DRAW. No. B-65272EN/08-09
B-65285EN/04-05
B-65312EN/05-03
B-65325EN/02-02
B-65452EN/03-04
B-65515EN/01-03

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Cleaning/ Inspection Procedures for Fan Motor of Spindle Motor

1. Outline

In order to guarantee enough cooling of spindle motors, regular cleaning and inspection is necessary as described in DESCRIPTIONS and MAINTENANCE MANUAL.

However, there are cases in which cleaning and inspection is not conducted regularly and therefore leading to failure and trouble. If the fan motor stop, an overheat alarm may occur and the machine may stop. In the worst case, driving under conditions in which cutting fluid or its mist is splashed on the motor may lead to combustibility of sludge accumulated on the fan motors(*). Regular cleaning and inspection is highly recommended.

Please contact FANUC if there is any question regarding the contents of this report. FANUC service department will conduct inspection at your request so please contact FANUC if necessary.

(*) Our fan cover is made with self-extinguishing material which the flammability is V-0, so if there is no foreign matter, it is not combustibility.

2. Frequency of Cleaning and Inspection

Recommended: once every three months

The standard frequency of cleaning and inspection is once every three months. The frequency may differ according to the condition the motor is used in.

3. Safety Precautions

When cleaning and inspecting the fan motors, please keep in mind the precautions described as follows.

⚠WARNING

- Before touching a motor, shut off the power to it.

  Even if a motor is not rotating, there may be a voltage across the terminals of the motor.
  Especially before touching a power supply connection, take sufficient precautions.
  Otherwise you may get electric shocks.

- A voltage is applied for a while after the power is shut off. Before touching a motor, be sure to check 0 V.

  There is a high voltage across power terminals for a while after the power is shut off. Do not touch a motor or connect the motor to another device before checking the voltage. Otherwise you may get electric shocks or the motor may get damaged. Be sure to check that the voltage is lowered to 0 V, then touch the motor.

- Do not insert your finger or a stick into the fan motor.

  A cover is mounted on the fan motor, but a stick may get inside it. When the fan is rotating, inserting your finger or a stick may injure you.

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Ed.	Date	Design	Description
01	12.Nov.19	Mukai	Newly designed Hayahi

TITLE: Cleaning/ Inspection Procedures for Fan Motor of Spindle Motor

DRAW. No.: B-65272EN/08-09, B-65285EN/04-05, B-65312EN/05-03, B-65325EN/02-02, B-65452EN/03-04, B-65515EN/01-03

CUST

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⚠CAUTION

- Do not touch a motor when it is running or immediately after it stops.

  A motor may get hot when it is running. Do not touch the motor before it gets cool enough. Otherwise, you may get burned.

- Be careful not get your hair or cloths caught in a fan.

  Be careful especially for a fan used to generate an inward air flow.

  Be careful also for a fan even when the motor is stopped, because it continues to rotate while the amplifier is turned on.

- Be sure to connect motor cables correctly.

  An incorrect connection of a cable cause abnormal heat generation, equipment malfunction, or failure.

  Always use a cable with an appropriate current carrying capacity (or thickness). For how to connect cables to motors, refer to their respective specification manuals.

※ Precautions are classified into Warning and Caution according to their bearing on safety. Read all Warnings and Cautions thoroughly before attempting to use the machine.

⚠ WARNING

Applied when there is a danger of the user being injured or when there is a danger of both the user being injured and the equipment being damaged if the approved procedure is not observed.

⚠ CAUTION

Applied when there is a danger of the equipment being damaged, if the approved procedure is not observed.

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4. Cleaning/ Inspection Procedures and Work Descriptions

4.1 Cleaning/ Inspection Procedures

Regular inspection is composed of checking mechanical (i.e. rotation) and electrical state of the fan motor.

Follow the procedures below and clean or replace the fan motor in accordance.
As for the details of the content and criteria, refer to Subsection 4.2.

4.1.1 Mechanical Inspection Procedures

If the state of the fan motor is not visible, follow the procedures in Subsection 4.1.2 "Electrical Inspection Procedures, Cleaning and Replacement of the Fan Motor".

If the state is visible, check the state of rotation.
Check if the fan motor is rotating or not when the power is on and follow the procedures below.

1) If the Fan Motor is Rotating

Go on to Subsection 4.1.2 "Electrical Inspection Procedures, Cleaning and Replacement of the Fan Motor" and follow the procedures.

If the fan motor is clogged with foreign materials such as dust and metal chips, spindle motor's cooling will be insufficient and may cause failure and trouble. If there is a visible foreign materials, please clean the fan motor following the procedures in Subsection 4.2 "Cleaning of the Fan Motor".

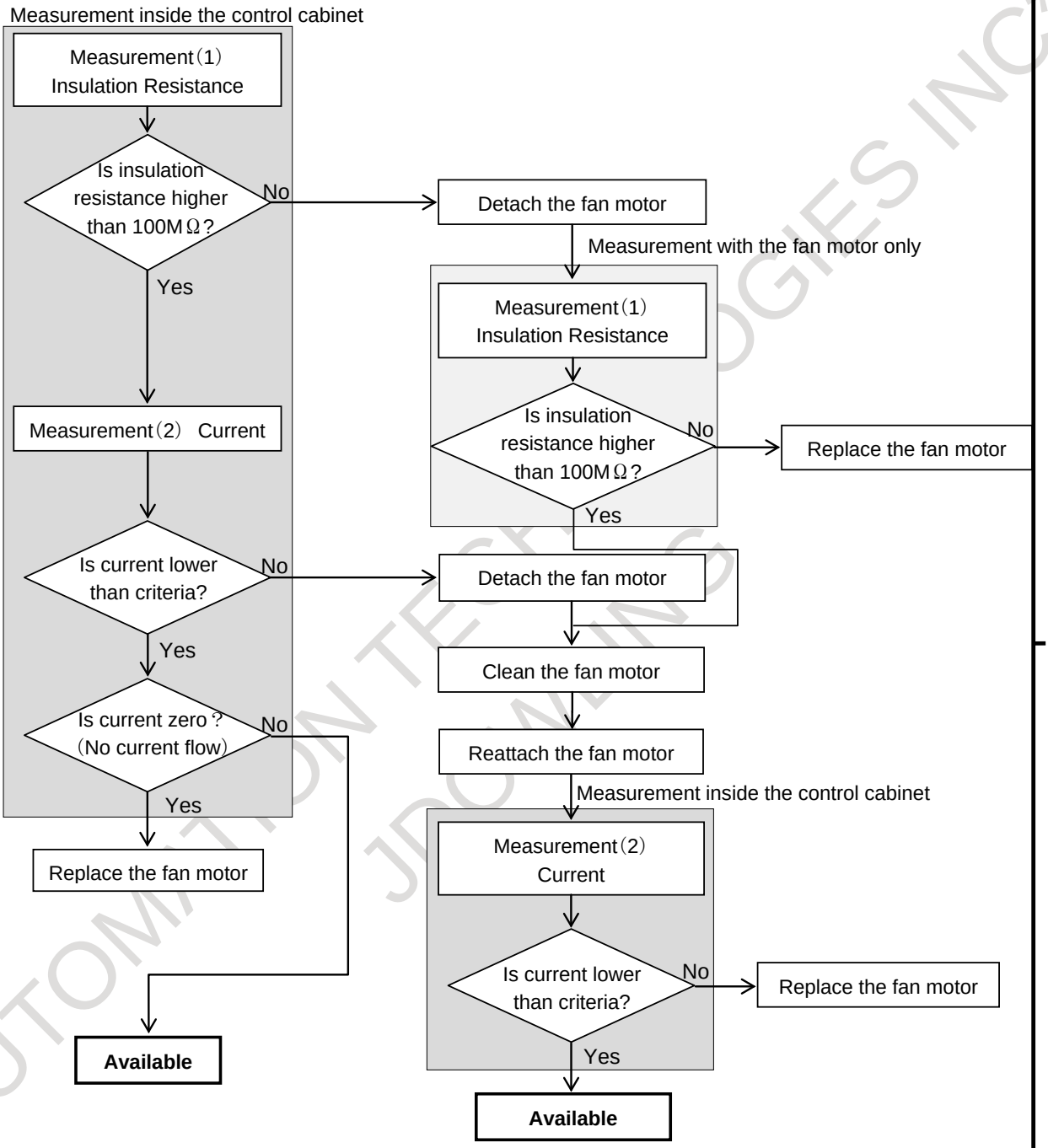
2) If the Fan Motor is not Rotating

Replace the fan motor following the procedure in Subsection 4.2 "Replacement of the Fan Motor"

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4.1.2 Electrical Inspection Procedures, Cleaning and Replacement of the Fan Motor

Follow the procedures below and clean or replace the fan motor in accordance.
As for the details of the content and criteria, refer to Subsection 4.2.



※ Please contact FANUC if there is any question regarding the contents of this report. FANUC service department will conduct inspection at your request so please contact FANUC if necessary.

				TITLE	Cleaning/ Inspection Procedures for Fan Motor of Spindle Motor
				DRAW. No.	B-65272EN/08-09 B-65285EN/04-05 B-65312EN/05-03 B-65325EN/02-02 B-65452EN/03-04 B-65515EN/01-03
					CUST
01	12.Nov.19	Mukai	Newly designed Hayahi		
Ed.	Date	Design	Description	FANUC CORPORATION	SHEET 5/10

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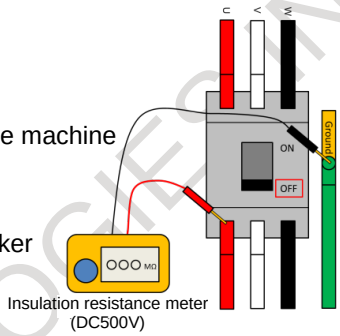
4.2 Work Descriptions and Criteria for Cleaning and Inspection

※ If you do not own an insulation resistance meter and a clamp meter necessary for the following measurements, confirm that the fan motor is rotating correctly by vision. If the fan motor is found to be not clean, follow the procedures “Cleaning of the Fan Motor”.

Measurement（1）Insulation Resistance

Instrument : insulation resistance meter (DC500V)
Point : breaker or terminal block inside the control cabinet of the machine
Method :

① Turn off the power of the machine.
② Measure the insulation resistance using the terminal on the breaker or terminal block connected to power leads of the fan motor. Measure between one of the three power leads and ground.



Insulation resistance meter (DC500V)

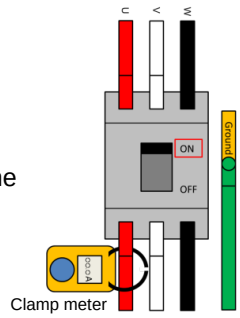
Criteria : No failure if the insulation resistance is above 100MΩ.

※ If the fan motor is sharing the same breaker with other equipment, measure the insulation resistance between the power leads of fan motor and the ground wire by isolating the power leads of fan motor or isolating the fan motor.

Measurement（2）Current

Instrument : clamp meter
Point : power leads of fan motor inside the control cabinet of the machine
Method :

① Attach a clamp meter to one of the power leads of the fan motor.
② Turn on the power of the fan motor.
③ Measure the current flowing to the fan motor.



Clamp meter

Criteria : No failure if the current is below the criterial value shown in the chart below (i.e. 20% higher than the rated current), and above zero.

⚠WARNING

- The measurement is done while the power is on. Take enough safety measures to prevent electric shock.

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				TITLE	Cleaning/ Inspection Procedures for Fan Motor of Spindle Motor
				DRAW. No.	B-65272EN/08-09 B-65285EN/04-05 B-65312EN/05-03 B-65325EN/02-02 B-65452EN/03-04 B-65515EN/01-03
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Current Criteria（**αiI-B,βiI-B** Series）

For model series aside from **αiI-B** and **βiI-B**, contact FANUC sales department or service department.

αiI-B, αiIP-B, αiIT-B, αiIPT**-B,** **βiI-B, βiIP-B, βiIT-B Series 200V Type**	**50Hz**		**60Hz**	
	Rated Current [A]	**Criterial Value [A]**	**Rated Current [A]**	**Criterial Value [A]**
αiI 1-B, αiI 1.5-B, αiIT 1-B, αiIT 1.5-B	0.09	0.11	0.10	0.12
αiI 2-B, αiI 3-B, αiIT 2-B, αiIT 3-B, βiI 3-B, βiI 6-B, βiIC 3-B, βiIC 6-B	0.09	0.11	0.10	0.12
αiI 6-B, αiI 8-B, αiIT 6-B, αiIT 8-B, βiI 8-B, βiI 12-B, βiIP 12-B, βiIT 12-B, βiIC 8-B	0.13	0.16	0.14	0.17
αiI 12-B～αiI 22-B, αiIP 12-B～αiIP 22-B, αiIT 12-B～αiIT 22-B, αiIPT 22-B, βiI 15-B, βiIP 15-B～βiIP 30-B, βiIT 15-B	0.20	0.24	0.30	0.36
αiI 30-B,αiI 40-B, αiIP 30-B, αiIP 40-B, αiIP 50-B, βiIP 40-B	0.45	0.54	0.48	0.58
αiI 50-B, αiI 60-B, αiIP 60-B	0.42	0.50	0.55	0.66

αiI-B, αiIP-B, αiIT-B, βiI-B, βiIT-B Series 400VType	**50Hz**		**60Hz**	
	Rated Current [A]	**Criterial Value [A]**	**Rated Current [A]**	**Criterial Value [A]**
αiI 1HV-B, αiI 1.5HV-B, αiIT 1.5HV-B	0.09	0.11	0.11	0.13
αiI 2HV-B, αiI 3HV-B, αiIT 2HV-B, αiIT 3HV-B, βiI 3HV-B, βiI 6HV-B,	0.11	0.13	0.13	0.16
αiI 6HV-B, αiI 8HV-B,αiIT 6HV-B, αiIT 8HV-B, βiI 8HV-B, βiI 12HV-B	0.07	0.08	0.08	0.10
αiI 12HV-B～αiI 22HV-B, αiIP 15HV-B, αiIP 22HV-B, αiIT 15HV-B, αiIT 22HV-B, βiI 15HV-B	0.15	0.18	0.16	0.19
αiI 30HV-B, αiI 40HV-B, αiIP 40HV-B, αiIP 50HV-B	0.22	0.26	0.26	0.31
αiI 50HV-B, αiI 60HV-B, αiIP 60HV-B	0.22	0.26	0.28	0.34
αiI 75HV-B, αiI 100HV-B	0.30	0.36	0.36	0.43
αiI 150HV-B	0.70	0.84	1.2	1.44

; αiI, βiI series are similar to the above.

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				TITLE	Cleaning/ Inspection Procedures for Fan Motor of Spindle Motor
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Ed.	Date	Design	Description	**FANUC CORPORATION**	SHEET 7/10

Detaching the Fan Motor

① Unscrew the 4 bolts on the terminal box and remove the lid of terminal box.



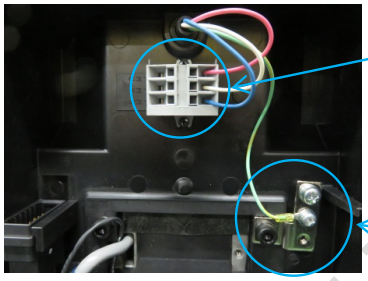


Terminal box of the motor



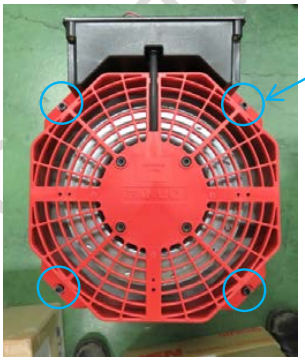
Inside the terminal box

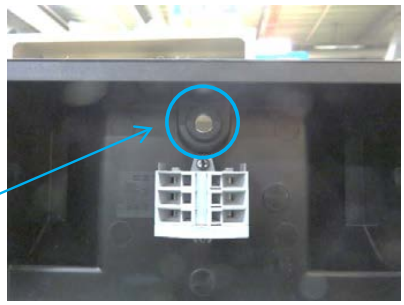
② Detach the power leads of fan motor from terminal block and ground wire from ground, both located inside the terminal box.





③ Unscrew the 4 bolts on the fan motor and detach the fan motor from the spindle motor. During this operation, be careful not to detach the rubber bushing from the terminal box hole.





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Cleaning of the Fan Motor

① Blow off the sludge accumulated around the fan motor by blowing compressed air.
If the sludge cannot be blown off, please replace the fan motor.





② Blow compressed air from the space between bell mouth and impeller and blow off the sludge accumulated inside of the fan motor.





Blown off sludge

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				DRAW. No.: B-65272EN/08-09 B-65285EN/04-05 B-65312EN/05-03 B-65325EN/02-02 B-65452EN/03-04 B-65515EN/01-03	CUST
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Reattaching the Fan Motor

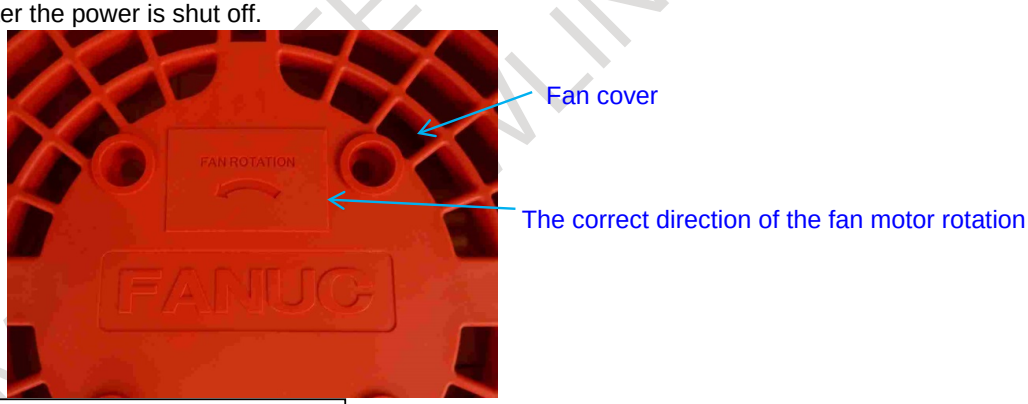
① Pull the power leads of the fan motor through the rubber bushing and draw them into the terminal box.
Spraying lubricant on the rubber tube of the power leads will make the operation easier.
② Fix the fan motor on the spindle motor with 4 bolts.
On tightening the bolts, control the torque to the correct value. (Tightening torque: 2.8～4.0Nm)
③ Connect the power leads to the terminal block and ground wire to the ground in the terminal box.

Power leads wiring of the fan motor

The fan motor has 3 power leads and 1ground wire.
Wire the power leads to the terminals FMU, FMV and FMW printed on the terminal block in the terminal box or imprinted on the terminal box.
Wire the ground wire to the screw with the ground mark.

Type and color	Connection point
Power lead（Red）	terminal FMU
Power lead（White）	terminal FMV
Power lead（Blue or black）	terminal FMW
Ground wire（Green and yellow）	Screw of the ground terminal

④ Fix the lid on the terminal box with 4 bolts.
On tightening the bolts, control the torque to the correct value. (Tightening torque: 2.8～4.0Nm)
⑤ Verify that the fan motor is rotating in the correct direction by vision right after the power is put on or right after the power is shut off.



Replacement of the Fan Motor

① Detach the fan motor following the procedures in “Detaching the Fan Motor”.
② Have a replacement fan motor at hand and attach the new fan motor following the procedures in “Reattaching the Fan Motor”.

※ If a replacement fan is not available soon enough, make sure to shut off the power by dropping the breaker or disconnecting the power leads on the fan motor as a temporary treatment until the fan motor is replaced.

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Ed.	Date	Design	Description
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TITLE: Cleaning/ Inspection Procedures for Fan Motor of Spindle Motor
DRAW. No.: B-65272EN/08-09, B-65285EN/04-05, B-65312EN/05-03, B-65325EN/02-02, B-65452EN/03-04, B-65515EN/01-03
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REVISION RECORD

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03	Jan. 2019	• Added αiS 1/12000-B, αiST 1/12000-B, and the αiI-B (IP65) series. • Added the following models: αiI 2/12000-B, βiIP 8/6000-B • Corrected typos.
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