

Changes for the Better

General-Purpose AC Servo MELSERVO-J4

Conversion Unit for SSCNET of MR-J2S-B Compatible Servo Amplifier: MR-J4-B-RJ020

Conversion Unit for SSCNET of MR-J2S-B: MR-J4-T20

March 2014

New Product Release

SV1306-1E-B



100 V AC type is added to product lines for MR-J4-B-RJ020 servo amplifier for connecting to SSCNET of MR-J2S-B.

By using the conversion unit for SSCNET of MR-J2S-B, MR-J4 series servo amplifier can be connected to the SSCNET of MR-J2S-B compatible servo system controller *.

MR-J4-B-RJ020 is now available in the following capacities:

- 200 V 0.1 kW to 22 kW,
- NEW** 100 V 0.1 kW to 0.4 kW, and
- 400 V 0.6 kW to 22 kW

* For compatible controllers, refer to p. 1 in this brochure.

Conversion Unit for SSCNET of MR-J2S-B Compatible Servo Amplifier: MR-J4- _B_ -RJ020
Conversion Unit for SSCNET of MR-J2S-B: MR-J4-T20

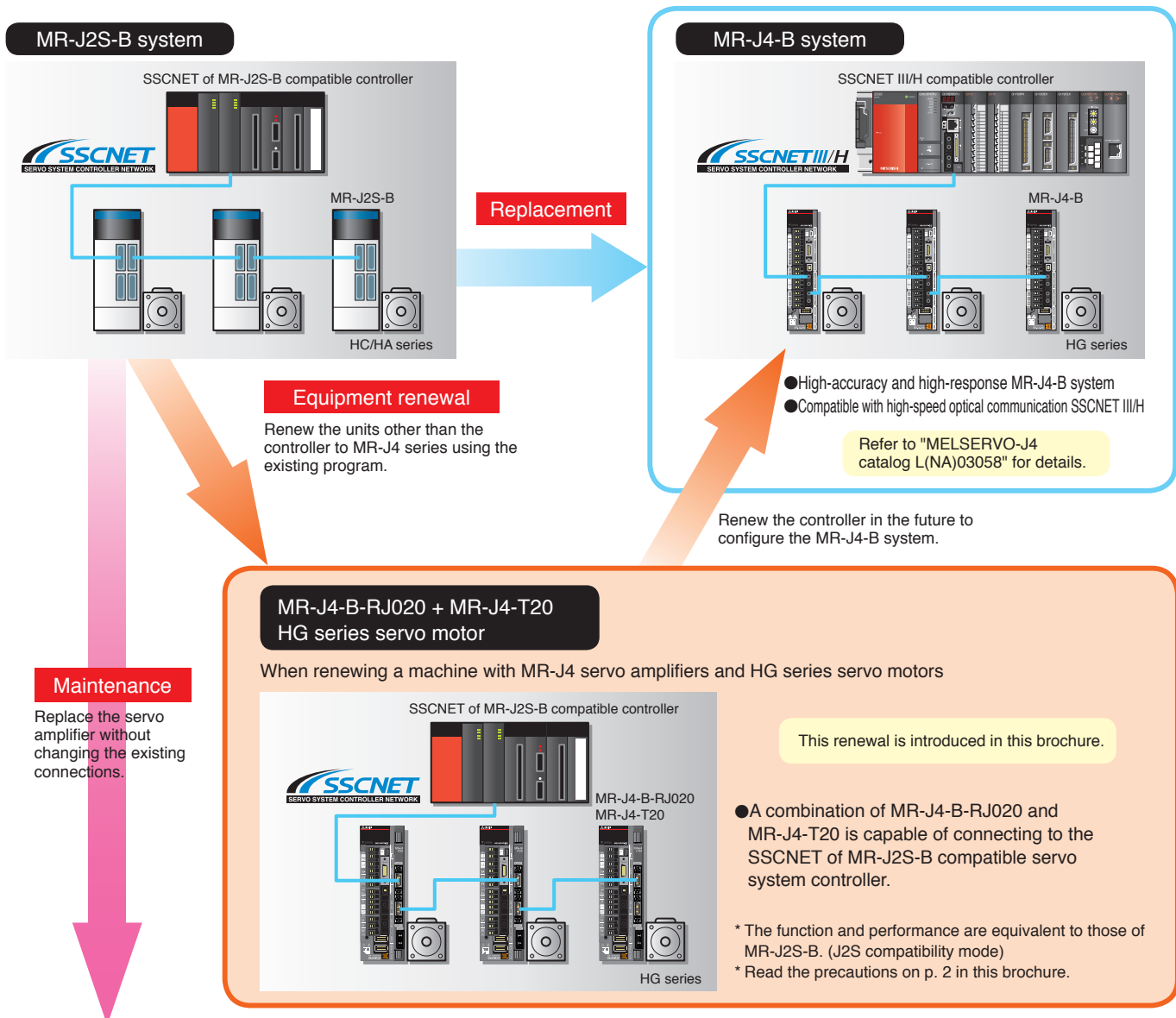
●A combination of MR-J4-B-RJ020 and MR-J4-T20 is capable of connecting to the SSCNET of MR-J2S-B compatible servo system controller and drives MR-J4 compatible HG series servo motors.

●Use the existing program.

* For the outline of precautions, refer to p. 2 in this brochure. Refer to "MR-J4- _B_ -RJ020 MR-J4-T20 Servo Amplifier Instruction Manual" for details.

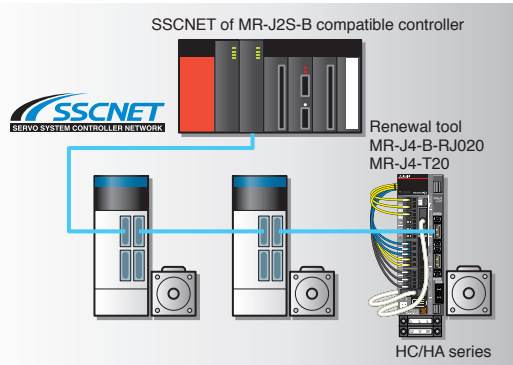
Features

A combination of MR-J4-B-RJ020 and MR-J4-T20 is capable of connecting to the SSCNET of MR-J2S-B compatible servo system controller. Thus, renewing a machine with MR-J4 series servo amplifiers and servo motors is possible without changing the existing controller.



MR-J2S-B renewal tool manufactured by Mitsubishi Electric System & Service Co., Ltd.

When using the existing HC/HA series servo motors or when replacing MR-J2S-B using the existing connections

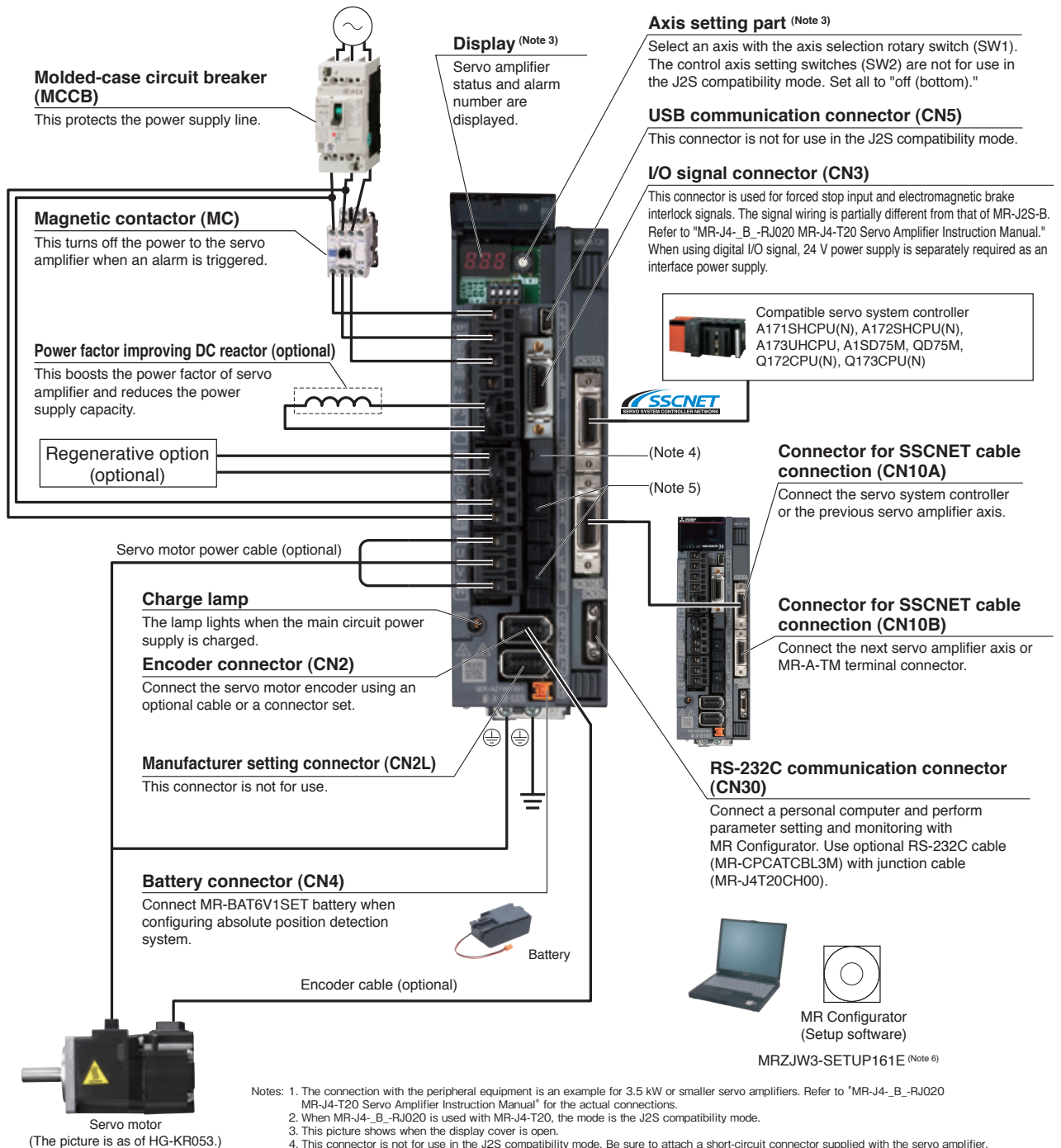


For MR-J2S-B renewal tool, contact your local sales office.

- Use the existing mounting holes and wiring, and complete the replacement and the wiring in a short period of time.

Compatible Controllers

The set of MR-J4-B-RJ020 and MR-J4-T20 is compatible with the following servo system controllers: A171SHCPU(N), A172SHCPU(N), A173UHCPU, A1SD75M, QD75M, Q172CPU(N), and Q173CPU(N)



Precautions

Installation

- Mounting holes are not compatible with those of MR-J2S- B_.
- Dimensions of MR-J4- B_ combined with MR-J4-T20 are different from those of MR-J2S- B_.

Wiring

- The wire size is different from that of MR-J2S- B_ depending on the capacity.
- Options/peripheral equipment for MR-J2S series cannot be used except the SSCNET cable and the terminal connector. Select options/ peripheral equipment for MR-J4 series.
- For RS-232C communication, use RS-232C cable (MR-CPCATCBL3M) with junction cable (MR-J4T20CH00).
- MR-J4- B_-RJ020 servo is not equipped with 24 V power supply for interface. When using digital I/O signal, 24 V (current capacity 0.1 A) power supply is separately required as an interface power supply.
- The signal wiring of connector for I/O signal (CN3) of MR-J4- B_-RJ020 is partially different from that of MR-J2S- B_.
- Use MR-BAT6V1SET when configuring absolute position detection system.

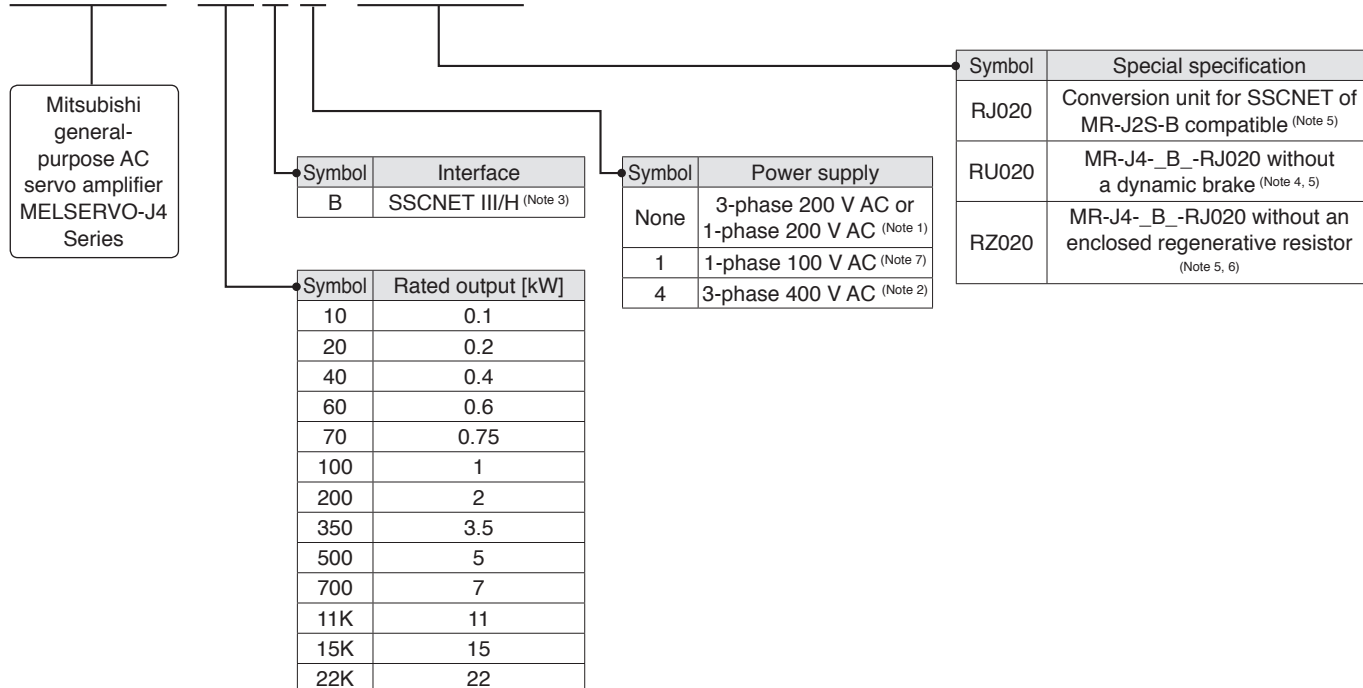
Function/performance

- Adaptive vibration suppression control (parameter No. 25) is not available.
- Alarms are displayed in two digits, which is the same as MR-J2S- B_. Some alarms are displayed in three digits.
- Use MR Configurator (MRZJW3-SETUP161E). Note that the following functions are not available.
 - Gain search
 - Machine simulation
 - Motor-less operation (Motor-less operation by the parameter setting is available.)
- Servo motors that are compatible with MR-J4 (HG series) may have different coasting distance for dynamic brake from that of conventional HC/HA series servo motors.
- The encoder resolution of HG series servo motors will be 131072 pulses/rev (17 bit).

Refer to "MR-J4- B_-RJ020 MR-J4-T20 Servo Amplifier Instruction Manual" for details.

Servo Amplifier Model Designation

MR-J4-10B-RJ020



- Notes: 1. 0.75 kW or smaller servo amplifiers are available for 1-phase 200 V AC.
 2. 0.6 kW, and 1 kW or larger servo amplifiers are available.
 3. SSCNET III/H interface is not available in the J2S compatibility mode.
 4. Available in 7 kW or less servo amplifier without a built-in dynamic brake. When using the servo amplifier without a dynamic brake, the servo motor does not stop immediately at an alarm occurrence or power failure. Take measures to ensure safety on the entire system.
 When the following servo motors are used, the electronic dynamic brake may operate at an alarm occurrence.
 HG-KR053, HG-KR13, HG-KR23, HG-KR43, HG-MR053, HG-MR13, HG-MR23, HG-MR43, HG-SR51, and HG-SR52
 Disable the electronic dynamic brake by setting [Pr. 56] to "2_ _ _".
 5. MR-J4-T20 conversion unit for SSCNET of MR-J2S-B is required to make the servo amplifier be compatible with SSCNET interface.
 When MR-J4-B-RJ020 and MR-J4-T20 are combined, MR-J4-B-RJ020 is compatible with the following servo system controllers:
 A171SHCPU(N), A172SHCPU(N), A173UHCPU, A1SD75M, QD75M, Q172CPU(N), and Q173CPU(N)
 6. Available in 11 kW to 22 kW servo amplifier. A regenerative resistor (standard accessory) is not enclosed.
 7. 0.4 kW or smaller servo amplifiers are available.

Combinations of Servo Amplifier and Servo Motor

For 200 V AC/100 V AC

Servo amplifier	Servo motor
MR-J4-10B-RJ020	HG-KR053, 13
MR-J4-10B1-RJ020	HG-MR053, 13
MR-J4-20B-RJ020	HG-KR23
MR-J4-20B1-RJ020	HG-MR23
MR-J4-40B-RJ020	HG-KR43
MR-J4-40B1-RJ020	HG-MR43
MR-J4-60B-RJ020	HG-SR51, 52 HG-JR53
MR-J4-70B-RJ020	HG-KR73 HG-MR73 HG-JR73 HG-UR72
MR-J4-100B-RJ020	HG-SR81, 102 HG-JR53 ^(Note 1) , 103
MR-J4-200B-RJ020	HG-SR121, 201, 152, 202 HG-JR73 ^(Note 1) , 103 ^(Note 1) , 153, 203 HG-RR103, 153 HG-UR152
MR-J4-350B-RJ020	HG-SR301, 352 HG-JR153 ^(Note 1) , 203 ^(Note 1) , 353 HG-RR203 HG-UR202
MR-J4-500B-RJ020	HG-SR421, 502 HG-JR353 ^(Note 1) , 503 HG-RR353, 503 HG-UR352, 502
MR-J4-700B-RJ020	HG-SR702 HG-JR503 ^(Note 1) , 703
MR-J4-11KB-RJ020	HG-JR903, 11K1M
MR-J4-15KB-RJ020	HG-JR15K1M
MR-J4-22KB-RJ020	HG-JR22K1M

For 400 V AC

Servo amplifier	Servo motor
MR-J4-60B4-RJ020	HG-SR524 HG-JR534
MR-J4-100B4-RJ020	HG-SR1024 HG-JR534 ^(Note 1) , 734, 1034
MR-J4-200B4-RJ020	HG-SR1524, 2024 HG-JR734 ^(Note 1) , 1034 ^(Note 1) , 1534, 2034
MR-J4-350B4-RJ020	HG-SR3524 HG-JR1534 ^(Note 1) , 2034 ^(Note 1) , 3534
MR-J4-500B4-RJ020	HG-SR5024 HG-JR3534 ^(Note 1) , 5034
MR-J4-700B4-RJ020	HG-SR7024 HG-JR5034 ^(Note 1) , 7034
MR-J4-11KB4-RJ020	HG-JR9034, 11K1M4
MR-J4-15KB4-RJ020	HG-JR15K1M4
MR-J4-22KB4-RJ020	HG-JR22K1M4

Notes: 1. The maximum torque can be increased from 300% to 400% of the rated torque with this combination.

MR-J4-B-RJ020 (Interface for SSCNET of MR-J2S-B) Specifications (200 V/100 V)

Servo amplifier model MR-J4-_-RJ020		10B	20B	40B	60B	70B	100B	200B	350B	500B	700B	11KB	15KB	22KB	10B1	20B1	40B1
Output	Rated voltage	3-phase 170 V AC															
	Rated current [A]	1.1	1.5	2.8	3.2	5.8	6.0	11.0	17.0	28.0	37.0	68.0	87.0	126.0	1.1	1.5	2.8
Main circuit power supply input	Voltage/frequency (Note 1)	3-phase or 1-phase 200 V AC to 240 V AC, 50 Hz/60 Hz					3-phase 200 V AC to 240 V AC, 50 Hz/60 Hz								1-phase 100 V AC to 120 V AC, 50 Hz/60 Hz		
	Rated current [A]	0.9	1.5	2.6	3.2 (Note 7)	3.8	5.0	10.5	16.0	21.7	28.9	46.0	64.0	95.0	3.0	5.0	9.0
	Permissible voltage fluctuation	3-phase or 1-phase 170 V AC to 264 V AC					3-phase 170 V AC to 264 V AC								1-phase 85 V AC to 132 V AC		
	Permissible frequency fluctuation	±5% maximum															
Control circuit power supply input	Voltage/frequency	1-phase 200 V AC to 240 V AC, 50 Hz/60 Hz													1-phase 100 V AC to 120 V AC, 50 Hz/60 Hz		
	Rated current [A]	0.2					0.3					0.4					
	Permissible voltage fluctuation	1-phase 170 V AC to 264 V AC													1-phase 85 V AC to 132 V AC		
	Permissible frequency fluctuation	±5% maximum															
	Power consumption [W]	30					45					30					
Interface power supply		24 V DC ± 10% (required current capacity: 0.1 A)															
Control method		Sine-wave PWM control/current control method															
Tolerable regenerative power	Built-in regenerative resistor (Note 2, 3) [W]	-	10	10	10	20	20	100	100	130	170	-	-	-	-	10	10
	External regenerative resistor (standard accessory) (Note 2, 3, 9, 10) [W]	-	-	-	-	-	-	-	-	-	-	500 (800)	850 (1300)	850 (1300)	-	-	-
Dynamic brake		Built-in (Note 4)										External option (Note 11)			Built-in (Note 4)		
Communication function		USB: not for use in the J2S compatibility mode															
Encoder output pulse		Compatible (A/B/Z-phase pulse)															
Analog monitor		2 channels															
Fully closed loop control		Not compatible															
Load-side encoder interface		Not compatible															
Protective functions		Overcurrent shut-off, regenerative overvoltage shut-off, overload shut-off (electronic thermal), servo motor overheat protection, encoder error protection, regenerative error protection, undervoltage protection, instantaneous power failure protection, overspeed protection, error excessive protection															
Functional safety		Not compatible															
Compliance to standards	CE marking	LVD: EN 61800-5-1 EMC: EN 61800-3 MD: EN ISO 13849-1, EN 61800-5-2, EN 62061															
	UL standard	UL 508C															
	CSA standard	CSA C22.2 No.14															
	Korea Radio Wave Law (KC)	Compliant															
Structure (IP rating)		Natural cooling, open (IP20)				Force cooling, open (IP20)				Force cooling, open (IP20) (Note 5)				Natural cooling, open (IP20)			
Close mounting		Possible (Note 6)								Not possible				Possible (Note 6)			
Environment	Ambient temperature	0 °C to 55 °C (non-freezing), storage: -20 °C to 65 °C (non-freezing)															
	Ambient humidity	90 %RH maximum (non-condensing), storage: 90 %RH maximum (non-condensing)															
	Ambience	Indoors (no direct sunlight); no corrosive gas, inflammable gas, oil mist or dust															
	Altitude	1000 m or less above sea level															
	Vibration resistance	5.9 m/s ² at 10 Hz to 55 Hz (directions of X, Y and Z axes)															
Mass (Note 8) [kg]		0.8	0.8	1.0	1.0	1.4	1.4	2.1	2.3	4.0	6.2	13.4	13.4	18.2	0.8	0.8	1.0

Notes: 1. Rated output and speed of a rotary servo motor are applicable when the servo amplifier, combined with the rotary servo motor, is operated within the specified power supply voltage and frequency.

2. Select the most suitable regenerative option for your system with our capacity selection software.

3. Refer to "MR-J4-_B_-RJ020 MR-J4-T20 Servo Amplifier Instruction Manual" for the tolerable regenerative power [W] when regenerative option is used.

4. When using the built-in dynamic brake, refer to "MR-J4-_B_-RJ020 MR-J4-T20 Servo Amplifier Instruction Manual" for the permissible load to motor inertia ratio.

5. Terminal blocks are excluded.

6. When the servo amplifiers are closely mounted, keep the ambient temperature within 0 °C to 45 °C, or use them with 75% or less of the effective load ratio.

7. The rated current is 2.9 A when the servo amplifier is used with UL or CSA compliant servo motor.

8. The value is applicable for MR-J4-_B_-RJ020 servo amplifier only.

9. The value in brackets is applicable when cooling fans (2 units of 92 mm × 92 mm, minimum air flow: 1.0 m³/min) are installed, and then [Pr. 2] is changed.

10. Servo amplifiers without an enclosed regenerative resistor are also available. Refer to "Servo Amplifier Model Designation" in this brochure for details.

11. Use an optional external dynamic brake with the servo amplifier. Without the external dynamic brake, a servo motor does not stop immediately at emergency stop and falls in free-run status, causing an accident such as machine collision, etc. Take measures to ensure safety on the entire system when not using the dynamic brake.

MR-J4-B4-RJ020 (Interface for SSCNET of MR-J2S-B) Specifications (400 V)

Servo amplifier model MR-J4-_-RJ020		60B4	100B4	200B4	350B4	500B4	700B4	11KB4	15KB4	22KB4
Output	Rated voltage	3-phase 323 V AC								
	Rated current [A]	1.5	2.8	5.4	8.6	14.0	17.0	32.0	41.0	63.0
Main circuit power supply input	Voltage/frequency ^(Note 1)	3-phase 380 V AC to 480 V AC, 50 Hz/60 Hz								
	Rated current [A]	1.4	2.5	5.1	7.9	10.8	14.4	23.1	31.8	47.6
	Permissible voltage fluctuation	3-phase 323 V AC to 528 V AC								
	Permissible frequency fluctuation	±5% maximum								
Control circuit power supply input	Voltage/frequency	1-phase 380 V AC to 480 V AC, 50 Hz/60 Hz								
	Rated current [A]	0.1			0.2					
	Permissible voltage fluctuation	1-phase 323 V AC to 528 V AC								
	Permissible frequency fluctuation	±5% maximum								
	Power consumption [W]	30			45					
Interface power supply		24 V DC ± 10% (required current capacity: 0.1 A)								
Control method		Sine-wave PWM control/current control method								
Tolerable regenerative power	Built-in regenerative resistor ^(Note 2, 3) [W]	15	15	100	100	130 ^(Note 6)	170 ^(Note 6)	-	-	-
	External regenerative resistor (standard accessory) ^(Note 2, 3, 8, 9) [W]	-	-	-	-	-	-	500 (800)	850 (1300)	850 (1300)
Dynamic brake		Built-in ^(Note 4)						External option ^(Note 10)		
Communication function		USB: not for use in the J2S compatibility mode								
Encoder output pulse		Compatible (A/B/Z-phase pulse)								
Analog monitor		2 channels								
Fully closed loop control		Not compatible								
Load-side encoder interface		Not compatible								
Protective functions		Overcurrent shut-off, regenerative overvoltage shut-off, overload shut-off (electronic thermal), servo motor overheat protection, encoder error protection, regenerative error protection, undervoltage protection, instantaneous power failure protection, overspeed protection, error excessive protection								
Functional safety		Not compatible								
Compliance to standards	CE marking	LVD: EN 61800-5-1 EMC: EN 61800-3 MD: EN ISO 13849-1, EN 61800-5-2, EN 62061								
	UL standard	UL 508C								
	CSA standard	CSA C22.2 No.14								
	Korea Radio Wave Law (KC)	Compliant								
Structure (IP rating)		Natural cooling, open (IP20)		Force cooling, open (IP20)		Force cooling, open (IP20) ^(Note 5)				
Close mounting		Not possible								
Environment	Ambient temperature	0 °C to 55 °C (non-freezing), storage: -20 °C to 65 °C (non-freezing)								
	Ambient humidity	90 %RH maximum (non-condensing), storage: 90 %RH maximum (non-condensing)								
	Ambience	Indoors (no direct sunlight); no corrosive gas, inflammable gas, oil mist or dust								
	Altitude	1000 m or less above sea level								
	Vibration resistance	5.9 m/s ² at 10 Hz to 55 Hz (directions of X, Y and Z axes)								
Mass ^(Note 7) [kg]		1.7	1.7	2.1	3.6	4.3	6.5	13.4	13.4	18.2

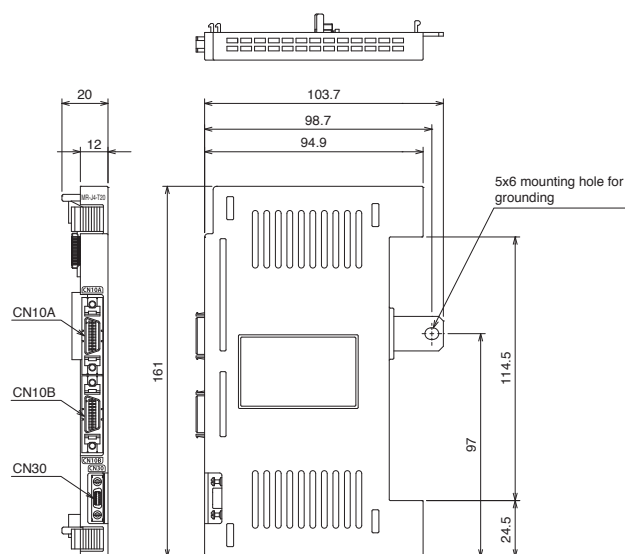
- Notes: 1. Rated output and speed of a rotary servo motor are applicable when the servo amplifier, combined with the rotary servo motor, is operated within the specified power supply voltage and frequency.
 2. Select the most suitable regenerative option for your system with our capacity selection software.
 3. Refer to "MR-J4-_-RJ020 MR-J4-T20 Servo Amplifier Instruction Manual" for the tolerable regenerative power [W] when regenerative option is used.
 4. When using the built-in dynamic brake, refer to "MR-J4-_-RJ020 MR-J4-T20 Servo Amplifier Instruction Manual" for the permissible load to motor inertia ratio.
 5. Terminal blocks are excluded.
 6. The servo amplifier built-in regenerative resistor is compatible with the maximum torque deceleration when the servo motor is used within the rated speed and the recommended load to motor inertia ratio. Contact your local sales office if the operating motor speed or the load to motor inertia ratio exceeds the rated speed or the recommended ratio.
 7. The value is applicable for the MR-J4-_-B4-RJ020 servo amplifier only.
 8. The value in brackets is applicable when cooling fans (2 units of 92 mm × 92 mm, minimum air flow: 1.0 m³/min) are installed, and then [Pr. 2] is changed.
 9. Servo amplifiers without an enclosed regenerative resistor are also available. Refer to "Servo Amplifier Model Designation" in this brochure for details.
 10. Use an optional external dynamic brake with the servo amplifier. Without the external dynamic brake, a servo motor does not stop immediately at emergency stop and falls in free-run status, causing an accident such as machine collision, etc. Take measures to ensure safety on the entire system when not using the dynamic brake.

Conversion Unit for SSCNET of MR-J2S-B (MR-J4-T20)

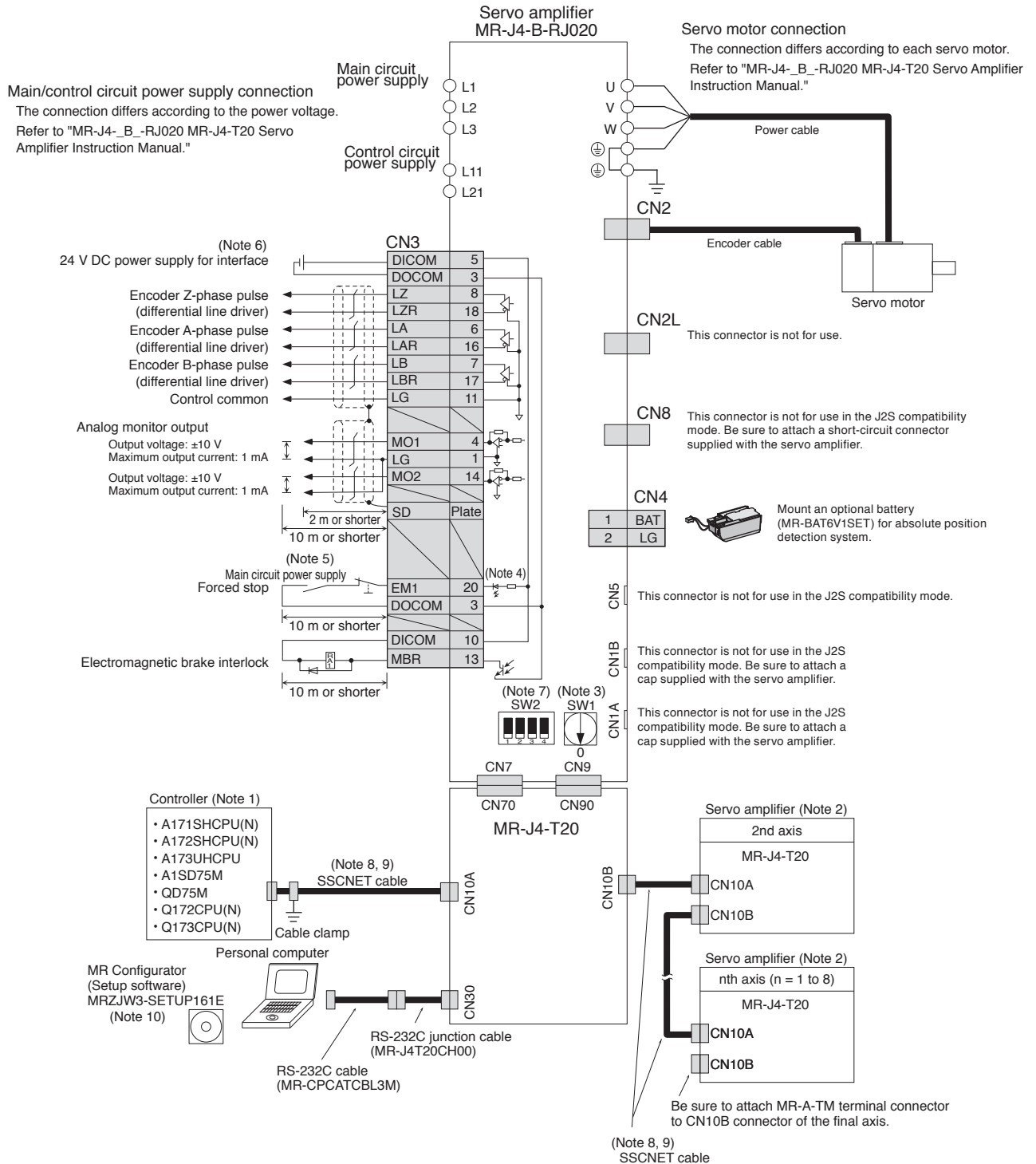
Specifications

Item		Description
Model		MR-J4-T20
Control circuit power supply input	Voltage	5 V DC (Control circuit power for the conversion unit for SSCNET of MR-J2S-B is supplied from the servo amplifier.)
	Rated current [A]	0.1
Network interface		SSCNET interface (CN10A and CN10B connectors)
Communication function		RS-232C: Connect a personal computer (MR Configurator (MRZJW3-SETUP161E) compatible) (CN30 connector)
Structure (IP rating)		Natural cooling, open (IP00)
Environment	Ambient temperature	0 °C to 55 °C (non-freezing), storage: -20 °C to 65 °C (non-freezing)
	Ambient humidity	90 %RH maximum (non-condensing), storage: 90 %RH maximum (non-condensing)
	Ambience	Indoors (no direct sunlight); no corrosive gas, inflammable gas, oil mist or dust
	Altitude	1000 m or less above sea level
Vibration resistance		5.9 m/s ² at 10 Hz to 55 Hz (directions of X, Y and Z axes)
Mass [g]		140

Dimensions



MR-J4-B-RJ020 Standard Wiring Diagram Example (Note 11)



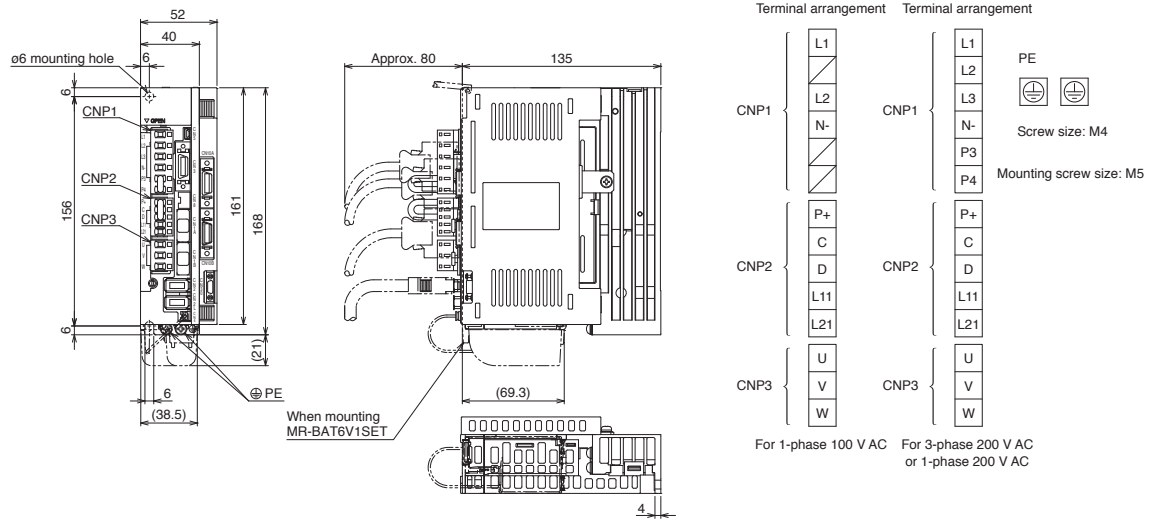
Be sure to read through Instruction Manual for the actual wiring and use. Use the equipment after you have a full knowledge of the equipment, safety information and instructions.

MR-J4-B-RJ020 Standard Wiring Diagram Example

- Notes:
1. For details such as setting the controllers, refer to programming manual or user's manual for the controllers.
 2. Connections for the second and following axes are omitted.
 3. Up to 8 axes are connectable by setting the axis selection rotary switch (SW1).
 4. This is for sink wiring. Source wiring is also possible.
 5. Create a circuit to turn off EM1 (Forced stop) when the main circuit power is turned off to prevent an unexpected restart of the servo amplifier.
 6. Provide an external power supply of 24 V DC \pm 10% (required current capacity: 0.1 A) to the interface.
 7. SW2 is not for use in the J2S compatibility mode.
 8. The total length of the SSCNET cables must be 30 m or shorter. It is recommended that three or four data line filters in serial connection or a cable clamp be used near the connector on the controller to improve noise immunity.
 9. The SSCNET cables vary depending on the controller. Select the appropriate SSCNET cable as follows:
 - A171SHCPU(N)/A172SHCPU(N)/A173UHCPU/A1SD75M: MR-J2HBUS_M-A
 - QD75M: MR-J2HBUS_M
 - Q172CPU(N): Q172J2BCBL_M(-B)
 - Q173CPU(N): Q173J2B_CBL_M
 - MR-J4-_B_-RJ020+MR-J4-T20: MR-J2HBUS_M
 10. Use setup software (MRZJW3-SETUP161E) when using MR-J4-_B_-RJ020 servo amplifier in the J2S compatibility mode.
Setup software (MRZJW3-SETUP161E) is available for free download. Contact your local sales office for more details.
 11. This standard wiring diagram is common for 200 V AC, 100 V AC and 400 V AC type servo amplifiers.

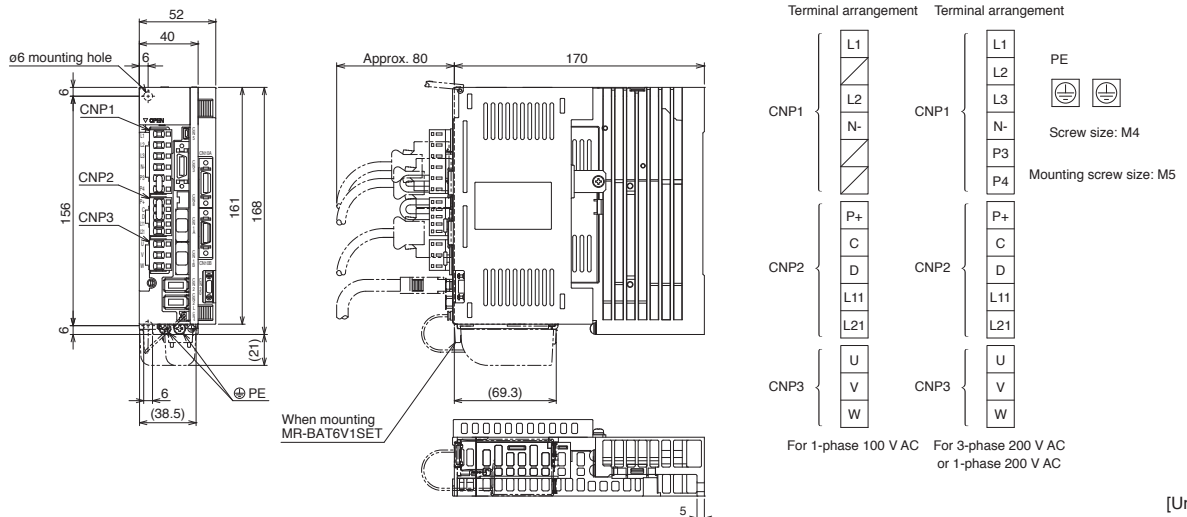
MR-J4-B-RJ020 Dimensions (Note 2)

- MR-J4-10B-RJ020 (Note 1), MR-J4-10B1-RJ020 (Note 1)
- MR-J4-20B-RJ020 (Note 1), MR-J4-20B1-RJ020 (Note 1)



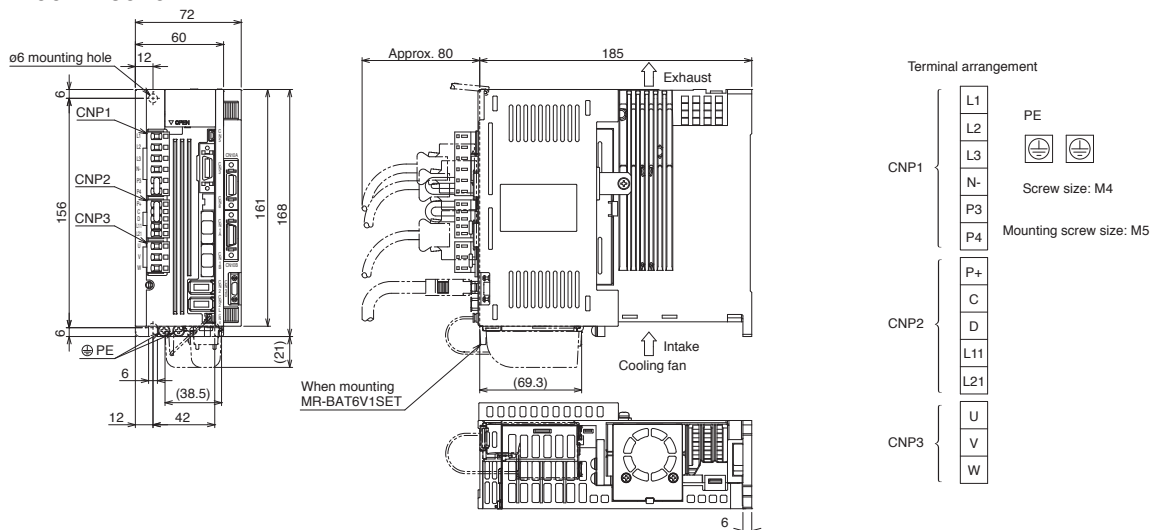
[Unit: mm]

- MR-J4-40B-RJ020 (Note 1), MR-J4-40B1-RJ020 (Note 1)
- MR-J4-60B-RJ020 (Note 1)



[Unit: mm]

- MR-J4-70B-RJ020 (Note 1)
- MR-J4-100B-RJ020 (Note 1)

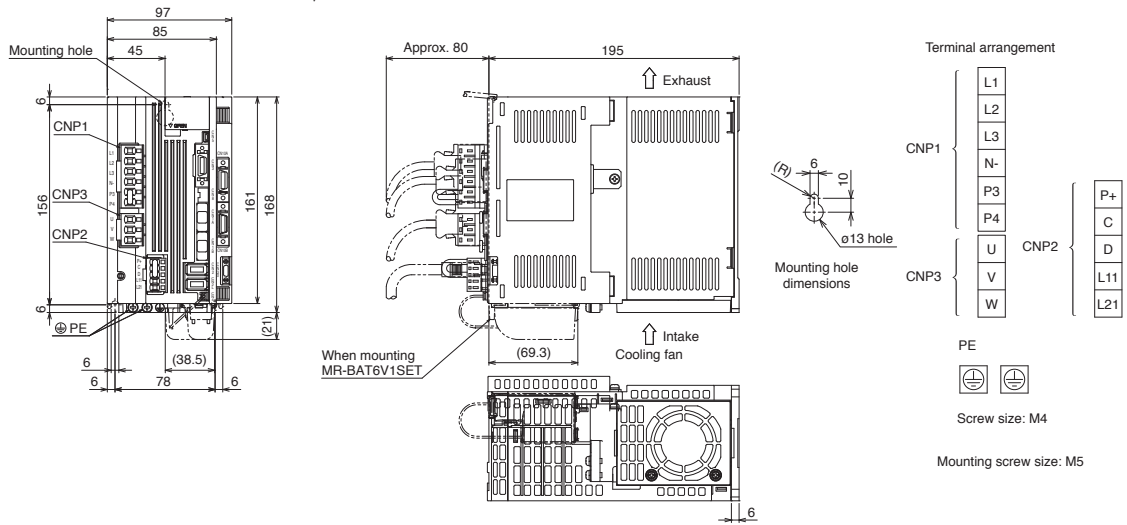


[Unit: mm]

Notes: 1. CNP1, CNP2 and CNP3 connectors (insertion type) are supplied with the servo amplifier.
 2. The dimensions are applicable when MR-J4-B-RJ020 and MR-J4-T20 are combined. Refer to "MR-J4-B(-RJ) Dimensions" in "MELSERVO-J4 catalog (L(NA)03058)" for the dimensions of MR-J4-B-RJ020 servo amplifiers alone.

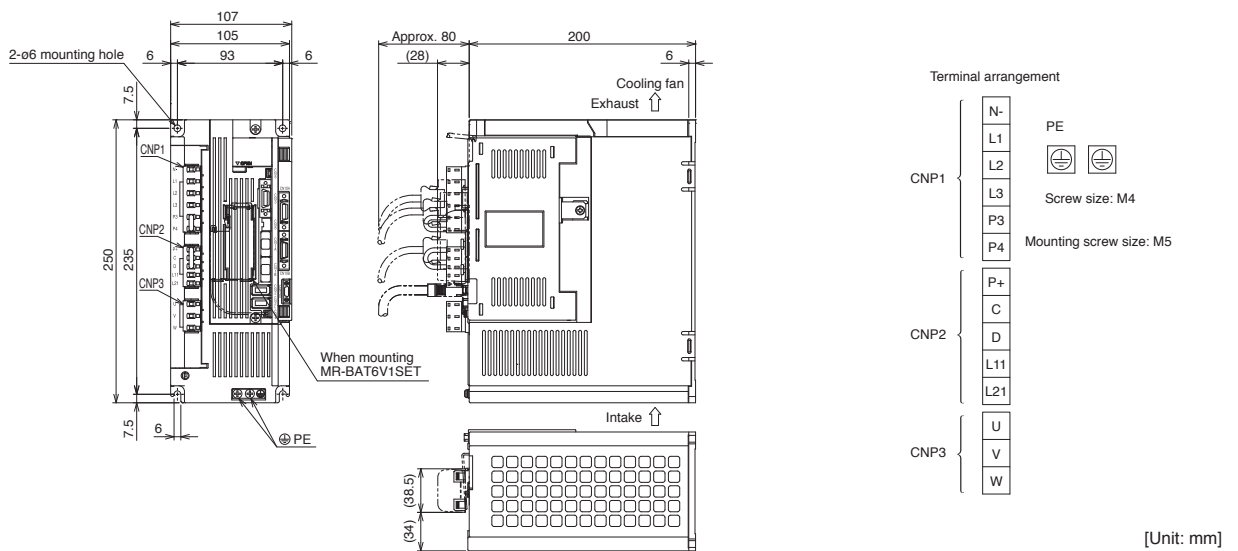
MR-J4-B-RJ020 Dimensions (Note 2)

●MR-J4-350B-RJ020 (Note 1)



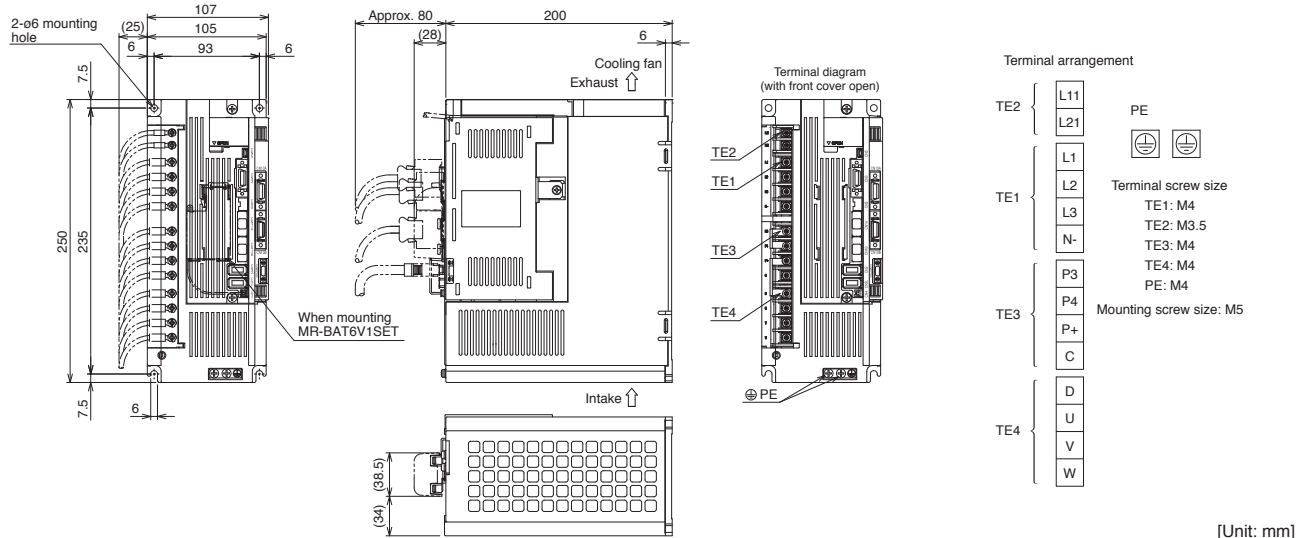
[Unit: mm]

●MR-J4-350B4-RJ020 (Note 1)



[Unit: mm]

●MR-J4-500B-RJ020



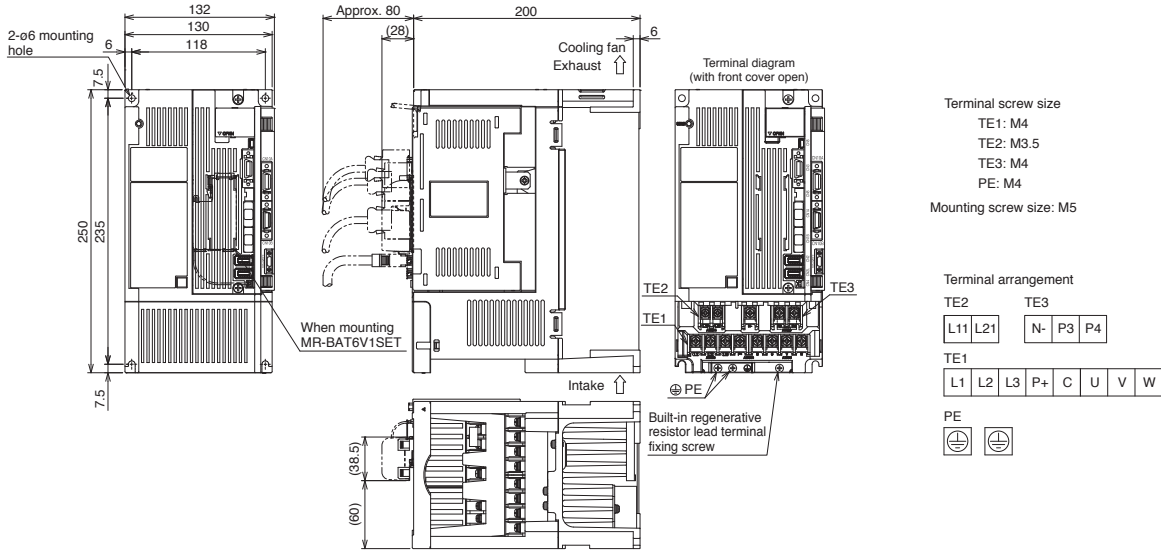
[Unit: mm]

Notes: 1. CNP1, CNP2 and CNP3 connectors (insertion type) are supplied with the servo amplifier.

2. The dimensions are applicable when MR-J4-B-RJ020 and MR-J4-T20 are combined. Refer to "MR-J4-B-(RJ) Dimensions" in "MELSERVO-J4 catalog (L(NA)03058)" for the dimensions of MR-J4-B-RJ020 servo amplifiers alone.

MR-J4-B-RJ020 Dimensions (Note 1)

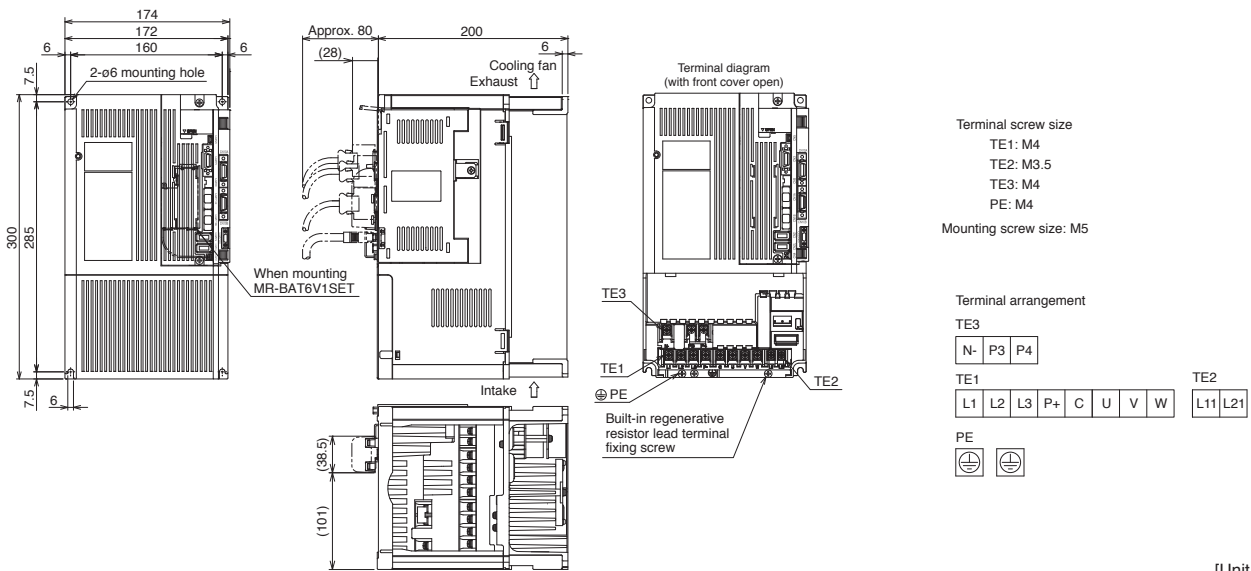
●MR-J4-500B4-RJ020



[Unit: mm]

●MR-J4-700B-RJ020

●MR-J4-700B4-RJ020

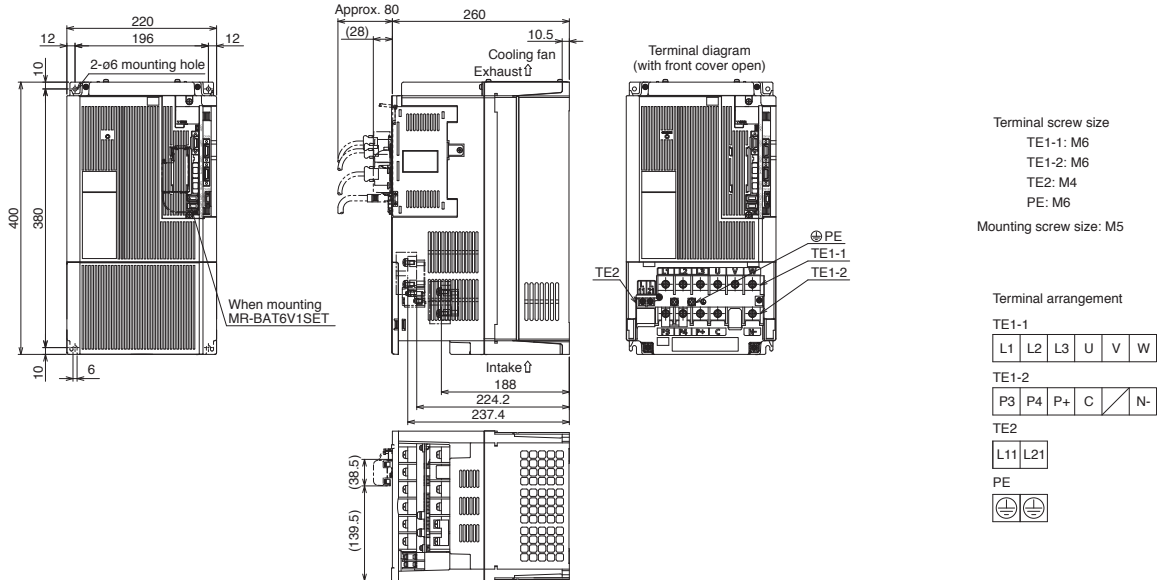


[Unit: mm]

Notes: 1. The dimensions are applicable when MR-J4-B-RJ020 and MR-J4-T20 are combined. Refer to "MR-J4-B(-RJ) Dimensions" in "MELSERVO-J4 catalog (L(NA)03058)" for the dimensions of MR-J4-B-RJ020 servo amplifiers alone.

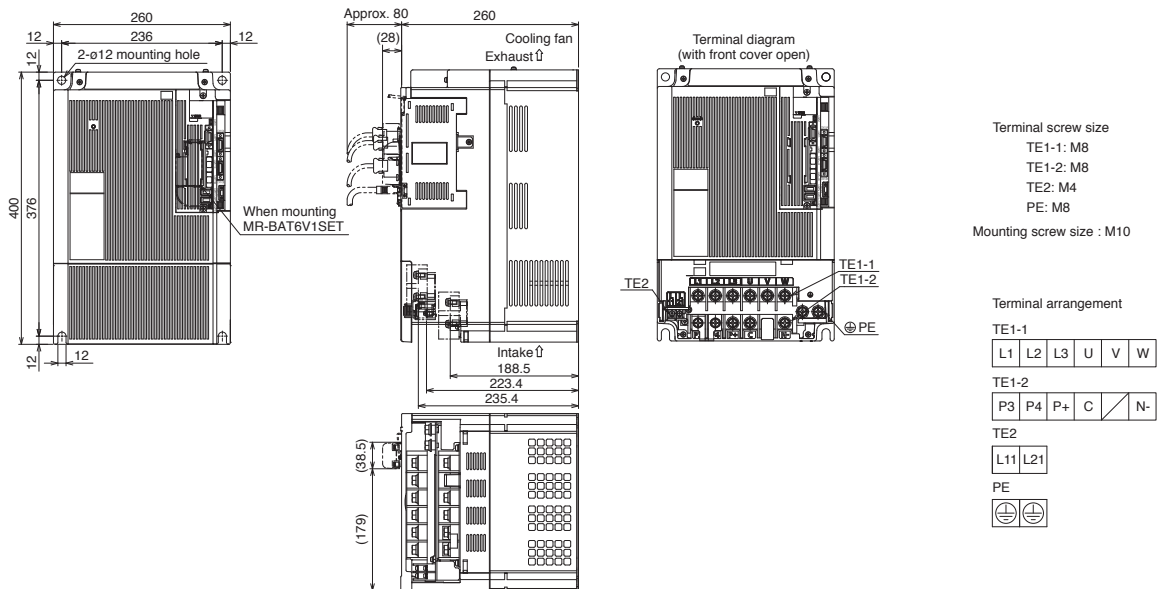
MR-J4-B-RJ020 Dimensions (Note 1)

- MR-J4-11KB-RJ020
- MR-J4-15KB-RJ020
- MR-J4-11KB4-RJ020
- MR-J4-15KB4-RJ020



[Unit: mm]

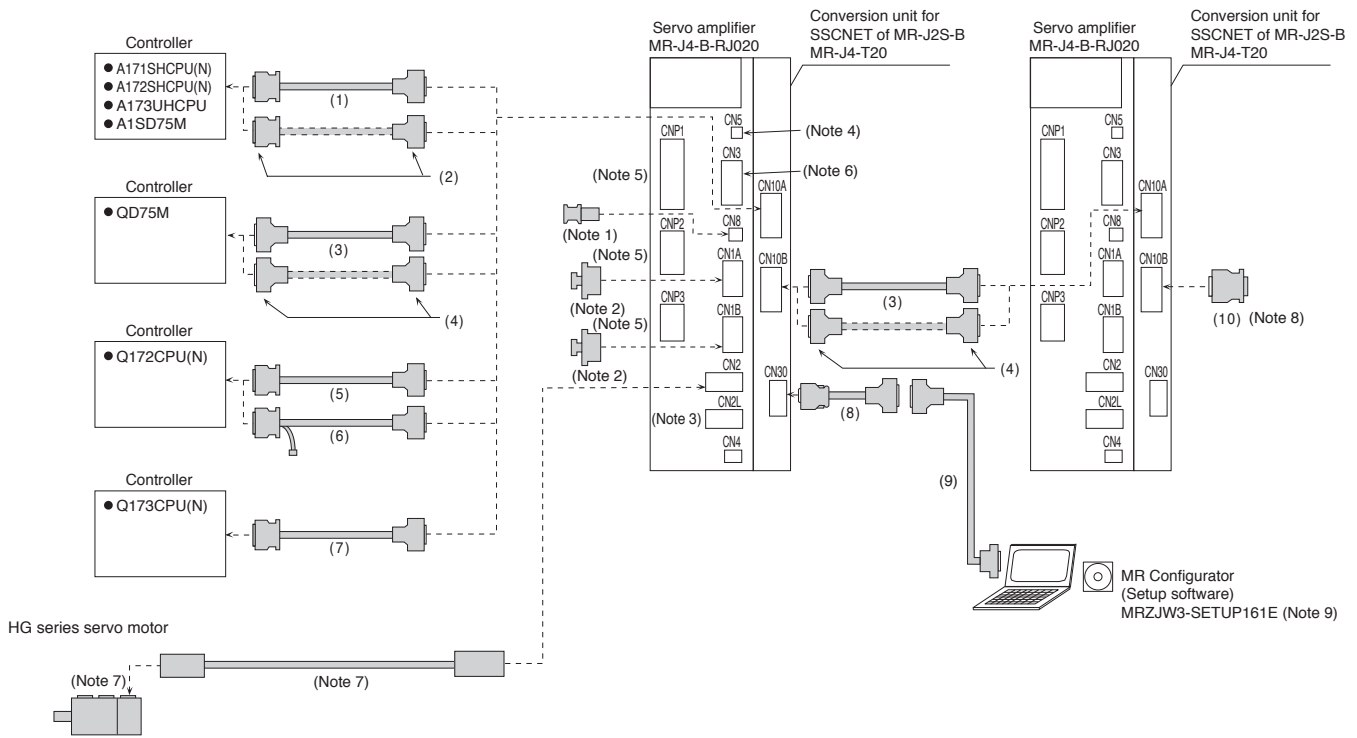
- MR-J4-22KB-RJ020
- MR-J4-22KB4-RJ020



[Unit: mm]



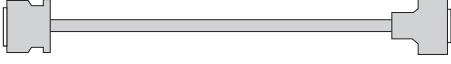

Notes: 1. The dimensions are applicable when MR-J4-B-RJ020 and MR-J4-T20 are combined. Refer to "MR-J4-B(-RJ) Dimensions" in "MELSERVO-J4 catalog (L(NA)03058)" for the dimensions of MR-J4-B-RJ020 servo amplifiers alone.

Configuration Example



- Notes:
1. This connector is not for use in the J2S compatibility mode. Be sure to attach a short-circuit connector supplied with the servo amplifier.
 2. This connector is not for use in the J2S compatibility mode. Be sure to attach a cap supplied with the servo amplifier.
 3. This connector is not for use.
 4. This connector is not for use in the J2S compatibility mode.
 5. CNP1, CNP2 and CNP3 connectors (insertion type) are supplied with 3.5 kW or smaller servo amplifiers. As 5 kW or larger servo amplifiers have terminal blocks mounted, these connectors are not supplied with the servo amplifier. Refer to "MR-J4-B-RJ020 Dimensions" in this brochure for details.
 6. Refer to "MR-J4-_B_-RJ020 MR-J4-T20 Servo Amplifier Instruction Manual" for CN3 connector.
 7. Refer to "MELSERVO-J4 catalog (L(NA)03058)" for the encoder cable, the power cable, and the electromagnetic cable for HG series servo motors.
 8. Be sure to attach MR-A-TM terminal connector to CN10B connector of the final axis.
 9. Setup software (MRZJW3-SETUP161E) is available for free download. Contact your local sales office for more details.

Cables and Connectors

Item	Model	Cable length	IP rating	Application	Description	
(1) SSCNET cable	MR-J2HBUS05M-A	0.5 m	-	For A171SHCPU(N)/ A172SHCPU(N)/ A173UHCPU/ A1SD75M/ MR-J4-T20	Controller-side connector Connector: PCR-S20FS+ Case: PCR-LS20LA1 (Honda Tsushin Kogyo Co., Ltd.)	MR-J4-T20-side connector ^(Note 1) Connector: 10120-6000EL Shell kit: 10320-3210-000 (3M) or an equivalent product
	MR-J2HBUS1M-A	1 m				
	MR-J2HBUS5M-A	5 m				
(2) SSCNET connector set	MR-J2CN1-A	-	-	For A171SHCPU(N)/ A172SHCPU(N)/ A173UHCPU/ A1SD75M/ MR-J4-T20	Controller-side connector Connector: PCR-S20FS+ Case: PCR-LS20LA1 (Honda Tsushin Kogyo Co., Ltd.)	MR-J4-T20-side connector ^(Note 2) Connector: 10120-3000PE Shell kit: 10320-52F0-008 (3M) or an equivalent product
(3) SSCNET cable	MR-J2HBUS05M	0.5 m	-	For QD75M/ MR-J4-T20	Controller/MR-J4-T20-side connector ^(Note 1) Connector: 10120-6000EL Shell kit: 10320-3210-000 (3M) or an equivalent product	MR-J4-T20-side connector ^(Note 1) Connector: 10120-6000EL Shell kit: 10320-3210-000 (3M) or an equivalent product
	MR-J2HBUS1M	1 m				
	MR-J2HBUS5M	5 m				
(4) SSCNET connector set	MR-J2CN1	-	-	For QD75M/ MR-J4-T20	Controller/MR-J4-T20-side connector ^(Note 2) Connector: 10120-3000PE Shell kit: 10320-52F0-008 (3M) or an equivalent product	MR-J4-T20-side connector ^(Note 2) Connector: 10120-3000PE Shell kit: 10320-52F0-008 (3M) or an equivalent product
(5) SSCNET cable	Q172J2BCBL05M	0.5 m	-	For Q172CPU(N)/ MR-J4-T20	Controller-side connector Connector: HDR-E14MG1+ Case: HDR-E14LPA5 (Honda Tsushin Kogyo Co., Ltd.)	MR-J4-T20-side connector ^(Note 1) Connector: 10120-6000EL Shell kit: 10320-3210-000 (3M) or an equivalent product
	Q172J2BCBL1M	1 m				
	Q172J2BCBL5M	5 m				
(6) SSCNET cable	Q172J2BCBL05M-B	0.5 m	-	For Q172CPU(N)/ MR-J4-T20	Controller-side connector Connector: HDR-E14MG1+ Case: HDR-E14LPA5 (Honda Tsushin Kogyo Co., Ltd.)	MR-J4-T20-side connector ^(Note 1) Connector: 10120-6000EL Shell kit: 10320-3210-000 (3M) or an equivalent product
	Q172J2BCBL1M-B	1 m				
	Q172J2BCBL5M-B	5 m			Battery unit-side connector Socket: HNC2-2.5S-2 Terminal: HNC2-2.5S-D-B (Hirose Electric Co., Ltd.)	
* Use this cable when using Q170BAT battery unit.						

Notes: 1. Solder type (connector: 10120-3000PE and shell kit: 10320-52F0-008) (3M) is also usable. Contact the manufacturer directly.
 2. Press bonding type (connector: 10120-6000EL and shell kit: 10320-3210-000) (3M) is also usable. Contact the manufacturer directly.

Cables and Connectors

Item	Model	Cable length	IP rating	Application	Description	
(7) SSCNET cable	Q173J2B_CBL05M ^(Note 2)	0.5 m	-	For Q173CPU(N)/MR-J4-T20	Controller-side connector Connector: HDR-E26MG1+ Case: HDR-E26LPA5 (Honda Tsushin Kogyo Co., Ltd.)	MR-J4-T20-side connector ^(Note 1) Connector: 10120-6000EL Shell kit: 10320-3210-000 (3M) or an equivalent product
	Q173J2B_CBL1M ^(Note 2)	1 m				
	Q173J2B_CBL5M ^(Note 2)	5 m				
(8) Junction cable for RS-232C	MR-J4T20CH00	0.2 m	-	For MR-J4-T20	MR-J4-T20-side connector Connector: HDR-E14MG1+ Case: HDR-E14LPA5 (Honda Tsushin Kogyo Co., Ltd.)	Junction connector Receptacle: 10220-0200EL Shell kit: 10320-E2W0-008 (3M) or an equivalent product
(9) Personal computer communication cable (RS-232C cable)	MR-CPCATCBL3M	3 m	-	For MR-J4-T20	Junction connector ^(Note 1) Connector: 10120-6000EL Shell kit: 10320-3210-000 (3M) or an equivalent product	Personal computer connector Connector: DE-9SF-N Connector case: DE-C1-J6-S6 (Japan Aviation Electronics Industry, Limited)
(10) Terminal connector	MR-A-TM	-	-	For MR-J4-T20		

Notes: 1. Solder type (connector: 10120-3000PE and shell kit: 10320-52F0-008) (3M) is also usable. Contact the manufacturer directly.

2. The underbar of Q173J2B_CBL05M/Q173J2B_CBL1M/Q173J2B_CBL5M indicates the number of SSCNET branched systems. None: one system, 2: two systems, 4: four systems

Refer to "MR-J4-_B_-RJ020 MR-J4-T20 Servo Amplifier Instruction Manual" for the wire size and other options.



Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001 (standards for quality assurance management systems)





Safety Warning

To ensure proper use of the products listed in this catalog,
please be sure to read the instruction manual prior to use.

MITSUBISHI ELECTRIC CORPORATION

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