

Sales and Service

Addition of Regenerative Options for MR-J5 Series AC Servo Amplifiers (7 kW)

Thank you for your continued patronage of the Mitsubishi Electric AC servo system. Regenerative options supported by MR-J5 servo amplifiers of 7 kW (200 V) will be added.

1. Target Model

Regenerative options: MR-RB3Z, MR-RB5Z
(For MR-J5-700G(-RJ) and MR-J5-700A(-RJ) servo amplifiers.)

2. Supported Regenerative Options List

The regenerative options supported by servo amplifiers of 7 kW are shown in Table 1.

Table 1. Supported regenerative options list for the MR-J5-700_

Servo amplifier model	Permissible regenerative power [W] ^{*3}		
	Built-in regenerative resistor	Regenerative option	
		MR-RB3Z ^{*2}	MR-RB5Z ^{*1}
MR-J5-700G(-RJ) MR-J5-700A(-RJ)	170	5.5 Ω	5.5 Ω
		300	500

*1. Forcibly cool it with a cooling fan (1.0 m³/min or more, 92 mm × 92 mm). The cooling fan must be prepared by the customer.

*2. It needs to be forcibly cooled with a cooling fan (1.0 m³/min or more, 92 mm × 92 mm) depending on the operating environment.

*3. The power values in the table are resistor-generated powers and not rated powers.

3. Supported Servo Amplifier Version

Servo amplifiers with firmware version B6 or later support the regenerative options. This change will be made sequentially from the November 2020 production.

For information on the firmware update tool and firmware update file, contact your local sales office.

4. Release Schedule

November 23, 2020

The revised MELSERVO-J5 catalog (L(NA)03179ENG-F) will be issued in June 2021.

Date of issue	November 2020	Title	Addition of Regenerative Options for MR-J5 Series AC Servo Amplifiers (7 kW)	Mitsubishi Electric Corp., Nagoya Works 1-14, Yada-minami 5-chome, Higashi-ku, Nagoya 461-8670 Tel.: +81 (52) 721-2111 Main line
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5. Dimensions and Connections

Dimensions	[Unit: mm]	Connections				
<p>MR-RB3Z</p> <p>Terminal assignment</p> <table border="1"> <tr><td>P</td></tr> <tr><td>C</td></tr> <tr><td>G3</td></tr> <tr><td>G4</td></tr> </table> <p>Terminal screw size: M4 Mounting screw size: M6</p>	P	C	G3	G4		<p>Servo amplifier</p> <p>Remove the wiring between P+ and D.</p> <p>Regenerative option</p> <p>5 m or less</p> <p>Cooling fan</p>
P						
C						
G3						
G4						
<p>MR-RB5Z</p> <p>Cooling fan mounting screw (2-M3 screw)^{*2} provided on the opposite side</p> <p>Terminal assignment</p> <table border="1"> <tr><td>P</td></tr> <tr><td>C</td></tr> <tr><td>G3</td></tr> <tr><td>G4</td></tr> </table> <p>Terminal screw size: M4 Mounting screw size: M6</p>	P	C	G3	G4		
P						
C						
G3						
G4						

Regenerative option	Variable dimensions		Mass [kg]
	A	B	
MR-RB3Z	17	335	2.9
MR-RB5Z	17	217	5.6

- *1. Configure a sequence circuit which will switch off the magnetic contactor when abnormal heating occurs.
- *2. If using the MR-RB5Z, forcibly cool it with a cooling fan (1.0 m³/min or more, 92 mm × 92 mm).
The cooling fan must be prepared by the customer.
- *3. If using the MR-RB3Z, it needs to be forcibly cooled with a cooling fan (1.0 m³/min or more, 92 mm × 92 mm) depending on the operating environment.
- *4. G3 and G4 are terminals for the thermal sensor. Between G3 and G4 opens if the regenerative option overheats abnormally.

6. Precautions for Wiring Regenerative Options

- (1) The regenerative option generates heat that is 100 °C higher than the ambient temperature. Fully consider heat dissipation, the installation position, wires used, and other relevant areas before installing the option. For wiring, use flame-retardant wires or make the wires flame retardant, and do not let them touch the regenerative option.
- (2) When connecting with the servo amplifier, use twisted wires with a maximum length of 5 m.
- (3) When connecting with the thermal sensor, use twisted wires to avoid operation failure caused by induction noise.