

FACTORY AUTOMATION

AC Servo System MELSERVO-J5

Innovate Together

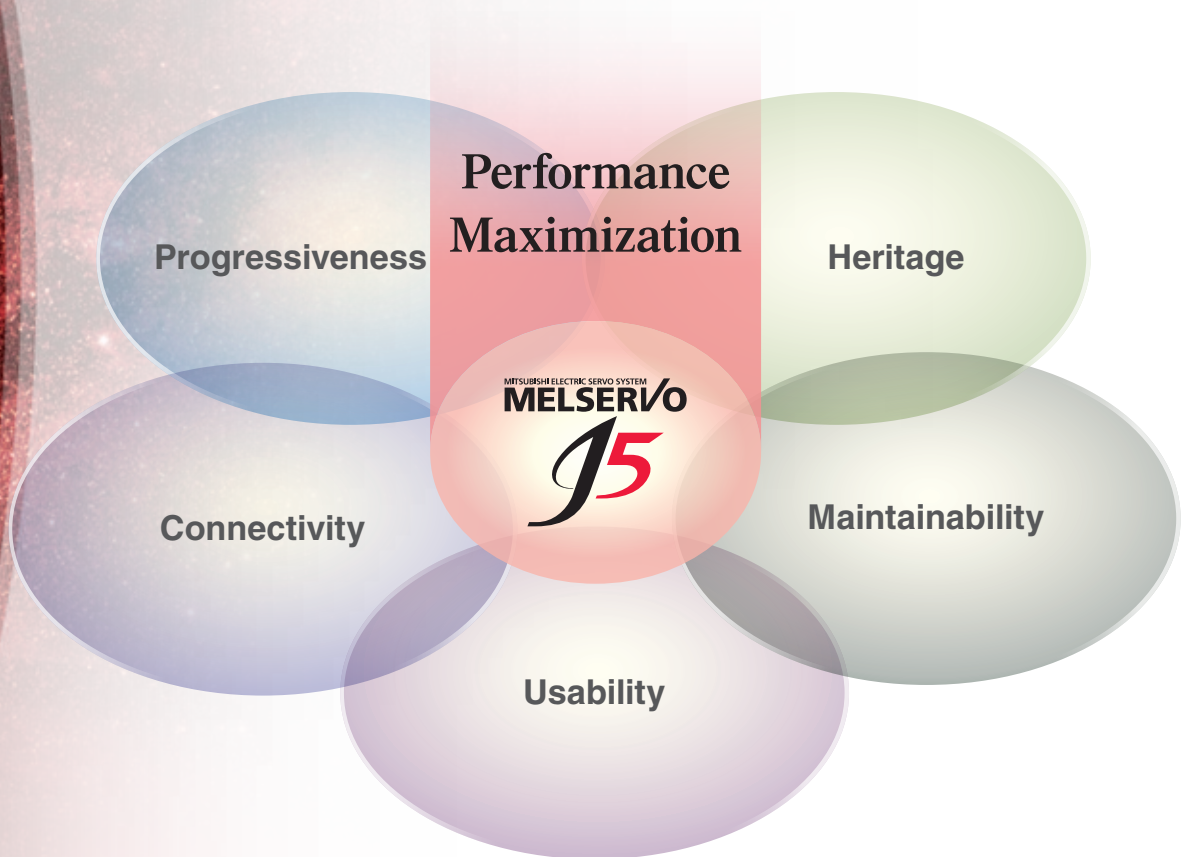


MITSUBISHI ELECTRIC SERVO SYSTEM

MELSERVO-J5

Create new value with MELSERVO-J5. Unlock performance with a total drive solution.

Maximize system performance



Progressiveness



For evolution of machines

- Performance improvement
- Program standardization

Connectivity



For flexible system configurations

- Integration with connectable devices

Usability



For quick operation start

- Tool enhancement
- Improved drive system usability

Maintainability



For prompt detection and diagnosis of failures

- Predictive/preventative maintenance
- Corrective maintenance
- Maintenance cost reduction

Heritage



For utilization of existing devices

- Interchangeability with previous generation models

Servo Amplifiers

●: Supported ○: Future support planned –: Not supported

Servo amplifier	Number of control axes	Power supply specifications (Note 2)	Rated output [kW] (Note 1)	Command interface (Note 3)						Control mode			Fully closed loop control	Compatible servo motor		
				CC-Link IE TSN	EtherCAT®	EtherNet/IP™ (Note 5)	SSCNET II/H	Pulse train	Analog voltage	Position	Velocity/Speed	Torque		Rotary	Linear	Direct drive
 MR-J5-G	1 axis	200 V AC	0.1, 0.2, 0.4, 0.6, 0.75, 1, 2, 3.5, 5, 7, 12, 17, 25	●	–	–	–	–	–	●	●	●	●	●	●	●
		400 V AC	0.6, 1, 2, 3.5, 5, 7, 12, 17, 25	●	–	–	–	–	–	●	●	●	●	●	○	–
 MR-J5W_-G	2 axes	200 V AC	0.2, 0.4, 0.75, 1	●	–	–	–	–	–	●	●	●	●	●	●	●
	3 axes		0.2, 0.4	●	–	–	–	–	–	●	●	●	–	●	●	●
 MR-J5D_-G4 (Note 4)	1 axis	400 V AC	1, 2, 3.5, 5, 7	●	–	–	–	–	–	●	●	●	●	–	–	–
	2 axes		1, 2, 3.5, 5, 7	●	–	–	–	–	–	●	●	●	●	●	–	–
	3 axes		1, 2	●	–	–	–	–	–	●	●	●	–	●	–	–
 MR-J5-B	1 axis	200 V AC	0.1, 0.2, 0.4, 0.6, 0.75, 1, 2, 3.5, 5, 7, 12, 17, 25	–	–	–	●	–	–	●	●	●	●	●	●	●
		400 V AC	0.6, 1, 2, 3.5, 5, 7, 12, 17, 25	–	–	–	●	–	–	●	●	●	●	●	○	–
 MR-J5W_-B	2 axes	200 V AC	0.2, 0.4, 0.75, 1	–	–	–	●	–	–	●	●	●	●	●	●	●
	3 axes		0.2, 0.4	–	–	–	●	–	–	●	●	●	–	●	●	●
 MR-J5-G-N1	1 axis	200 V AC	0.1, 0.2, 0.4, 0.6, 0.75, 1, 2, 3.5, 5, 7, 12, 17, 25	–	●	●	–	–	–	●	●	●	●	●	●	●
		400 V AC	0.6, 1, 2, 3.5, 5, 7, 12, 17, 25	–	●	●	–	–	–	●	●	●	●	●	○	–
 MR-J5W_-G-N1	2 axes	200 V AC	0.2, 0.4, 0.75, 1	–	●	●	–	–	–	●	●	●	●	●	●	●
	3 axes		0.2, 0.4	–	●	●	–	–	–	●	●	●	–	●	●	●
 MR-J5D_-G4-N1 (Note 4)	1 axis	400 V AC	1, 2, 3.5, 5, 7	–	●	●	–	–	–	●	●	●	●	–	–	–
	2 axes		1, 2, 3.5, 5, 7	–	●	●	–	–	–	●	●	●	●	●	–	–
	3 axes		1, 2	–	●	●	–	–	–	●	●	●	–	●	–	–
 MR-J5-A	1 axis	200 V AC	0.1, 0.2, 0.4, 0.6, 0.75, 1, 2, 3.5, 5, 7, 12, 17, 25	–	–	–	–	●	●	●	●	●	●	●	●	●
		400 V AC	0.6, 1, 2, 3.5, 5, 7, 12, 17, 25	–	–	–	–	●	●	●	●	●	●	●	○	–

Notes: 1. The value listed is the servo amplifier rated output. Refer to "Combinations of Servo Motors and Servo Amplifiers" for compatible servo motors.

2. 200 V AC servo amplifiers are also compatible with DC power supply input as standard.

3. MR-J5-G/MR-J5D1-G4 are also compatible with CC-Link IE Field Network Basic.

4. An MR-CV_4 power regeneration converter unit is required for MR-J5D_-G4(-N1) drive units.

5. EtherNet/IP™ is supported by MR-J5-G-HSN1/MR-J5-G-RJN1/MR-J5W_-G-N1/MR-J5D_-G4-N1.

Progressiveness



Multi-Network-Compatible Servo Amplifiers

MR-J5-G-N1

MR-J5-G-N1/MR-J5W_-G-N1/MR-J5D_-G4-N1 servo amplifiers can connect to EtherCAT® and EtherNet/IP™ to perform high-speed, high-precision control.

The performance and the functions have been greatly improved, contributing to innovative evolution of the machines.

EtherCAT®
EtherNet/IP™
ODVA

MR-J5-G(4)-N1

MR-J5W_-G-N1

MR-J5D_-G4-N1

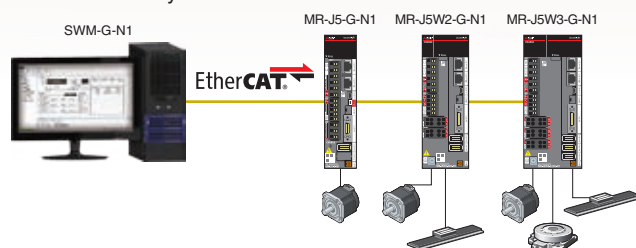


Minimum communication cycle
125 μs

Functional safety
via network

Features of Multi-Network-Compatible Servo Amplifiers

- Features the minimum communication cycle of 125 μs and speed frequency response of 3.5 kHz to perform high-speed, high-precision control
- Features safety communications via EtherCAT® and EtherNet/IP™



Speed frequency
response
**3.5
kHz**

Minimum
communication cycle
**125
μs**

Encoder
**Batteryless
absolute
position
encoder**

Servo System

Servo System
Controllers

Embedded Type
Servo System Controller

Servo Amplifiers

Servo Motors

Utilization of SSCNET III/H
Device Assets

77

Heritage



SSCNET III/H-Compatible Servo Amplifiers

MR-J5-B

MR-J5-B/MR-J5W_-B servo amplifiers can connect to SSCNET III/H and utilizes the existing program assets to improve the performance of the machines.

Transition from MELSERVO-J4 series to MELSERVO-J5 is supported.

SSCNET III/H
SERVO SYSTEM CONTROLLER NETWORK

MR-J5-B(4)

MR-J5W_-B



Utilizing existing
program assets

Optical
communication

Servo system
recorder

Features of SSCNET III/H-Compatible Servo Amplifiers

- Allows the user to build a MELSERVO-J5 series servo system that utilizes the existing assets of Motion controllers and Simple Motion modules
- Enables function improvement of the machines by combining MR-J5-B servo amplifiers and HK series rotary servo motors

Driving a wider range of motors with more flexible options

Servo amplifiers

MITSUBISHI ELECTRIC SERVO SYSTEM

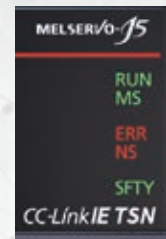
MELSERVO-J5

Designed for an ambient temperature of up to 60 °C.



Replaceable cooling fan

Enhanced visibility



Input and output are distinguished by color.



CC-Link IE TSN



MR-J5-G(4)

Supports Ethernet-based CC-Link IE TSN, featuring high-speed, large-capacity communication (1 Gbps). Communication cycle of $\geq 31.25 \mu\text{s}$ and speed frequency response of 3.5 kHz enable advanced motion control.



MR-J5W_-G

Drives a maximum of two/three servo motors. This simplifies wiring, saves energy, and enables a compact machine.



MR-J5D_-G4

The drive unit is a converter separate type servo amplifier (1/2/3-axis type available). Combined with an MR-CV_4 power regeneration converter unit, the drive unit can create an energy-saving servo system.

Product Lines

Servo amplifier

●: Supported ○: Future support planned -: Not supported

Model	Power supply specifications (Note 1)	Command interface (Note 4)	Fully closed loop control (Note 2)	Compatible servo motors			
				Rotary	Linear (Note 3)	Direct drive	
MR-J5-G	200 V AC	CC-Link IE TSN EtherCAT® (Note 5) EtherNet/IP™ (Note 6)	●	●	●	●	
	400 V AC		●	●	○	—	
MR-J5W2-G	200 V AC		●	●	●	●	
MR-J5W3-G			—	●	●	●	
MR-J5D1-G4			●	●	—	—	
MR-J5D2-G4	400 V AC		●	●	—	—	
MR-J5D3-G4			—	●	—	—	
MR-J5-B	200 V AC	SSCNET III/H	●	●	●	●	
	400 V AC		●	●	○	—	
MR-J5W2-B	200 V AC		●	●	●	●	
MR-J5W3-B			—	●	●	●	
MR-J5-A	200 V AC	Pulse train/Analog voltage	●	●	●	●	
	400 V AC		●	●	○	—	

Notes: 1. 200 V AC servo amplifiers are also compatible with DC power supply input as standard.

2. The indicated servo amplifiers are compatible with a two-wire type serial encoder. For four-wire type serial encoders and pulse train interface (A/B/Z-phase differential output type) encoders, use MR-J5-G-HS/MR-J5-G-RJ/MR-J5D1-G4/MR-J5-B-RJ/MR-J5-A-RJ servo amplifiers.

3. The indicated servo amplifiers are compatible only with two-wire type and four-wire type serial linear encoders. For a pulse train interface (A/B/Z-phase differential output type) linear encoder, use MR-J5-G-HS/MR-J5-G-RJ/MR-J5-B-RJ/MR-J5-A-RJ servo amplifiers.

4. MR-J5-G/MR-J5D1-G4 are also compatible with CC-Link IE Field Network Basic.

5. EtherCAT® is supported by MR-J5-G-N1/MR-J5-G-HSN1/MR-J5-G-RJN1/MR-J5W_-G-N1/MR-J5D_-G4-N1.

6. EtherNet/IP™ is supported by MR-J5-G-HSN1/MR-J5-G-RJN1/MR-J5W_-G-N1/MR-J5D_-G4-N1.

Model Designation for 1-Axis Servo Amplifier (Note 1)

MR - J5 - 10G -

AC servo
amplifier
MELSERVO-J5
series

Symbol	Power supply
None	3-phase 200 V AC, 1-phase 200 V AC (Note 6), or DC input
4	3-phase 400 V AC

Symbol	Interface
G	Network compatible

Symbol	Rated output [kW]
10	0.1
20	0.2
40	0.4
60	0.6
70	0.75
100	1
200	2
350	3.5
500	5
700	7
12K	12
17K	17
25K	25

Symbol	Compatible network
None	CC-Link IE TSN-compatible
N1	EtherCAT®/EtherNet/IP™-compatible (Note 7)

Symbol	Special specifications (Note 2, 4)
None	Standard
HS (Note 9)	Fully closed loop control four-wire type, Load-side encoder A/B/Z-phase input compatible, Safety sub-function, 3 points of functional safety I/O signals
RJ	Fully closed loop control four-wire type, Load-side encoder A/B/Z-phase input compatible, Safety sub-function
ED	MR-J5- _G_ without a dynamic brake (Note 3)
HU (Note 10)	MR-J5- _G_ -HS without a dynamic brake (Note 3)
RU	MR-J5- _G_ -RJ without a dynamic brake (Note 3)
PX	MR-J5- _G_ without an enclosed regenerative resistor (Note 5)
HZ	MR-J5- _G_ -HS without an enclosed regenerative resistor (Note 5)
LL	MR-J5- _G_ compatible with pressure control
RN	MR-J5- _G_ -LL without an enclosed regenerative resistor (Note 5)
EB	MR-J5- _G_ with special coating specification (Note 8)
HB (Note 9)	MR-J5- _G_ -HS with special coating specification (Note 8)
RB	MR-J5- _G_ -RJ with special coating specification (Note 8)

- Notes:
- This section describes what each symbol in a model name indicates. Some combinations of symbols are not available.
 - For the servo amplifier firmware version supporting each function, refer to "MR-J5 User's Manual".
 - A dynamic brake which is built in the 7 kW or smaller servo amplifiers is removed. When the servo amplifiers without the dynamic brake are used, the servo motors coast to a stop and do not stop immediately at alarm occurrence or power failure. Take measures to ensure safety on the entire system. When specified servo motors are used, the electronic dynamic brake may activate at an alarm occurrence. The dynamic brake can be disabled with a servo parameter setting. Refer to "MR-J5 User's Manual" for details.
 - For the restrictions on the communication cycle of each function, refer to "Restrictions" in this catalog.
 - Available in 12 kW to 25 kW servo amplifiers. A regenerative resistor (standard accessory) is not enclosed. Refer to "MR-J5 User's Manual" for details.
 - A power supply of 1-phase 200 V AC is supported by 0.1 kW to 2 kW servo amplifiers.
 - EtherNet/IP™ is compatible with MR-J5-G-HSN1 and MR-J5-G-RJN1.
 - The special coating is applied to the circuit board of the servo amplifier. Refer to "MR-J5 User's Manual" for details.
 - MR-J5-200G-HS(N1) to MR-J5-700G-HS(N1) and MR-J5-200G-HB(N1) to MR-J5-700G-HB(N1) will be available in the near future.
 - MR-J5-10G-HU(N1) to MR-J5-700G-HU(N1) will be available in the near future.

Servo Amplifiers

MR-J5-G_ (Network Compatible) Specifications (200 V)

G **G-HS** **G-RJ**

Servo amplifier model		MR-J5-_-(-HS)(N1))	10G	20G	40G	60G	70G	100G	200G (Note 22)	350G (Note 22)	500G (Note 22)	700G (Note 22)	12KG	17KG	25KG	
		MR-J5-_-(-RJ)(N1))							200G	350G	500G	700G	-	-	-	
Output	Voltage		3-phase 0 V AC to 240 V AC													
	Rated current [A]		1.3	1.8	2.8	3.2	5.8	6.0	11.0	17.0	28.0	37.0	68.0	87.0	126.0	
Main circuit power supply input	Voltage/ frequency (Note 1)	AC input	3-phase or 1-phase 200 V AC to 240 V AC, 50 Hz/60 Hz						3-phase or 1-phase 200 V AC to 240 V AC, 50 Hz/60 Hz (Note 7)		3-phase 200 V AC to 240 V AC, 50 Hz/60 Hz					
		DC input (Note 8)	283 V DC to 340 V DC													
	Rated current [A] (Note 6)	AC input	0.9 (1.5)	1.5 (2.5)	2.6 (4.5)	3.2 (5.0)	3.8 (6.5)	5.0 (10.5)	10.5 (15.8)	16.0	21.7	28.9	52.0	72.2	109.7	
		DC input	1.1	1.8	3.2	3.5	4.6	6.0	12.4	19.4	26.5	38.9	63.6	77.7	132.9	
	Permissible voltage fluctuation	AC input	3-phase or 1-phase 170 V AC to 264 V AC						3-phase or 1-phase 170 V AC to 264 V AC (Note 7)		3-phase 170 V AC to 264 V AC					
		DC input (Note 8)	241 V DC to 374 V DC													
	Permissible frequency fluctuation		±5 % maximum													
	Control circuit power supply input	Voltage/ frequency	AC input	1-phase 200 V AC to 240 V AC, 50 Hz/60 Hz												
DC input (Note 8)			283 V DC to 340 V DC													
Rated current [A]		0.2									0.3					
Permissible voltage fluctuation		AC input	1-phase 170 V AC to 264 V AC													
		DC input (Note 8)	241 V DC to 374 V DC													
Permissible frequency fluctuation		±5 % maximum														
Power consumption [W]		30												45		
Interface power supply			24 V DC ± 10 % (required current capacity: 0.3 A (including CN8 connector signals))													
Control method			Sine-wave PWM control/current control method													
Permissible regenerative power	Built-in regenerative resistor (Note 2, 3) [W]	-	10	30			100			130	170	-				
	External regenerative resistor (standard accessory) (Note 2, 3, 19, 20) [W]	-											500 (800)	850 (1300)		
Dynamic brake (Note 4)			Built-in											External option (Note 16, 18)		
CC-Link IE TSN Class B (Note 13)	Communication cycle (Note 10, 12)	MR-J5-G(-HS)/MR-J5-G(-RJ)	31.25 μs, 62.5 μs, 125 μs, 250 μs, 500 μs, 1 ms, 1.5 ms, 2 ms, 2.5 ms, 3 ms, 3.5 ms, 4 ms, 4.5 ms, 5 ms, 5.5 ms, 6 ms, 6.5 ms, 7 ms, 7.5 ms, 8 ms													
		MR-J5-G-LL	125 μs, 250 μs, 500 μs, 1 ms, 1.5 ms, 2 ms, 2.5 ms, 3 ms, 3.5 ms, 4 ms, 4.5 ms, 5 ms, 5.5 ms, 6 ms, 6.5 ms, 7 ms, 7.5 ms, 8 ms													
	Protocol version		1.0/2.0 (Note 5)													
CC-Link IE TSN Class A (Note 5, 13, 14) (MR-J5-G(-HS)/MR-J5-G(-RJ))		Communication cycle (Note 10)	500 μs to 500 ms													
		Protocol version	2.0													
EtherCAT® (MR-J5-G(-HS)N1/MR-J5-G(-RJ)N1)		Communication cycle (Note 10, 12)	125 μs, 250 μs, 500 μs, 1 ms, 2 ms, 4 ms, 8 ms													
EtherNet/IP™ (Note 14) (MR-J5-G-HSN1/MR-J5-G-RJN1)		Cycle time	Select from 1 ms to 100 ms													
CC-Link IE Field Network Basic (Note 5, 14)		MR-J5-G(-HS)/MR-J5-G(-RJ)	Supported													
		MR-J5-G-LL	Not supported													
Communication function		USB	Connect a personal computer (MR Configurator2 compatible)													
A/B/Z-phase pulse output		MR-J5-G(-HS)(N1))/MR-J5-G(-RJ)(N1))	Compatible													
		MR-J5-G-LL	Not compatible													
Analog monitor			2 channels													
Positioning mode (Note 5, 12)			Point table method													

MR-J5-G_ (Network Compatible) Specifications (200 V)

MR-J5-G_ (Network Compatible) Specifications (200 V)											G	G-HS	G-RJ	Common Specifications		
Servo amplifier model		MR-J5-_-(-HS)(N1))	10G	20G	40G	60G	70G	100G	200G (Note 22)	350G (Note 22)	500G (Note 22)	700G (Note 22)	12KG		17KG	25KG
		MR-J5-_-(-RJ)(N1))							200G	350G	500G	700G	-	-	-	
Analog input		MR-J5-G(-HS)(N1))/ MR-J5-G(-RJ)(N1))	Not supported													Servo System Controllers
		MR-J5-G-LL	3 points (Note 23)													
Digital I/O		MR-J5-G(-HS)(N1))/ MR-J5-G(-RJ)(N1))	DI 6 points, DO 3 points													Servo Amplifiers
		MR-J5-G-LL	DI 5 points, DO 3 points													
Fully closed loop control (Note 5, 12)		MR-J5-G(-HS)(N1))/ MR-J5-G(-RJ)(N1))	Supported													Rotary Servo Motors
		MR-J5-G-LL	Not supported													
Scale measurement function (Note 5, 12)		MR-J5-G(-HS)(N1))/ MR-J5-G(-RJ)(N1))	Supported													Linear Servo Motors
		MR-J5-G-LL	Not supported													
Load-side encoder interface		MR-J5-G(-N1)	Mitsubishi Electric high-speed serial communication													Direct Drive Motors
		MR-J5-G-HS(N1)/ MR-J5-G-RJ(N1)	Mitsubishi Electric high-speed serial communication, A/B/Z-phase differential input signal													
		MR-J5-G-LL	Not supported													
Pressure control	MR-J5-G(-HS)/ MR-J5-G(-RJ)		Not supported													Options/Peripheral Equipment
	MR-J5-G-LL	Pressure feedback voltage	0 V to 10 V													
		Pressure feedback cycle	One-point mode: 62.5 μs, Three-point mode: 125 μs (Note 23)													
		Cyclic synchronous pressure mode	Basic mode, pressure model adaptive mode													
Servo functions			Advanced vibration suppression control II, adaptive filter II, robust filter, quick tuning, auto tuning, one-touch tuning, tough drive function, drive recorder function, machine diagnosis function (including failure prediction), power monitoring function, lost motion compensation function, super trace control (Note 5) , continuous operation to torque control mode (Note 5, 12, 15) , driver communication function (Note 5, 12, 15)													LV/S/Wire
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, magnetic pole detection protection, linear servo control fault protection													
Safety sub-function, Safety performance			Refer to "Safety Sub-Functions" in section 1 of this catalog.													
Structure (IP rating)			Natural cooling, open (IP20) (Note 24)				Force cooling, open (IP20) (Note 24)				Force cooling, open (IP20) (Note 9, 24)		Force cooling, open (IP20) (Note 17, 21)			
Close mounting	3-phase power supply input		Possible (Note 11)										Not possible			
	1-phase power supply input		Possible (Note 11)					Not possible			-					
Mass [kg]			0.8		1.0	1.4	2.2		3.7		6.2	12.7		18.1		

- Notes:
1. Rated output and speed of a rotary servo motor and a direct drive motor; and continuous thrust and maximum speed of a linear servo motor are applicable when the servo amplifier is operated within the specified power supply voltage and frequency.
 2. Select the most suitable regenerative option for your system with our Drive System Sizing Software Motorizer.
 3. Refer to "Regenerative Option" in this catalog for the permissible regenerative power [W] when a regenerative option is used.
 4. When using the dynamic brake, refer to "MR-J5 User's Manual" for the permissible load to motor inertia ratio and the permissible load to mass ratio.
 5. For the servo amplifier firmware version supporting each function, refer to "MR-J5 User's Manual".
 6. The values in brackets are the rated current for the 1-phase power supply input.
 7. When the servo amplifier is used with a 1-phase power supply and combined with a servo motor of over 750 W, use the servo amplifiers at 75 % or less of the effective load ratio.
 8. For a connection example of power supply circuit with DC input, refer to "MR-J5 User's Manual".
 9. The connector part is excluded.
 10. The communication cycle depends on the controller specifications and the number of device stations connected.
 11. When the servo amplifiers are closely mounted, keep the ambient temperature within 0 °C to 45 °C, or use the servo amplifiers at 75 % or less of the effective load ratio.
 12. For the restrictions on the communication cycle, refer to "Restrictions" in this catalog.
 13. A communication speed of 1 Gbps/100 Mbps can be selected. When 100 Mbps is selected, the minimum communication cycle is 500 μs.
 14. For the restrictions on the network, refer to "MR-J5 User's Manual".
 15. The function is not available with MR-J5-G-N1, MR-J5-G-HSN1, and MR-J5-G-RJN1.
 16. Use an external dynamic brake with the 12 kW or larger servo amplifiers. Failure to do so will cause an accident because the servo motor does not stop immediately but coasts at emergency stop. Ensure the safety in the entire equipment.
 17. This product is certified as IP00.
 18. The external dynamic brake cannot be used to comply with the SEMI-F47 standard. Do not assign DB (Dynamic brake interlock) to the output device. If DB (Dynamic brake interlock) is assigned, the servo amplifier switches to servo-off status when an instantaneous power failure occurs.
 19. The values in brackets are applicable when cooling fans (two units of 92 mm x 92 mm, minimum air flow: 1.0 m³/min) are installed, and then [Pr. PA02] is changed.
 20. Servo amplifiers without an enclosed regenerative resistor are also available. Refer to "Model Designation for 1-Axis Servo Amplifier" in this catalog for details.
 21. Terminal blocks are excluded.
 22. The servo amplifier will be available in the near future.
 23. The three-point mode is available on servo amplifiers manufactured in May 2025 or later with firmware version F0 or later.
 24. MR-J5-10G-HS(N1) to MR-J5-700G-HS(N1) are certified as IP00.

Servo Amplifiers

MR-J5-G_ (Network Compatible) Specifications (400 V)

G
G-HS
G-RJ

Servo amplifier model		MR-J5-_-(-HS)(N1))	60G4	100G4	200G4	350G4	500G4	700G4	12KG4	17KG4	25KG4
		MR-J5-_-(-RJ)(N1))					-	-	-	-	-
Output	Voltage		3-phase 0 V AC to 480 V AC								
	Rated current [A]		1.6	2.8	5.5	8.6	14	17	32.0	41.0	63.0
Main circuit power supply input	Voltage/ frequency (Note 1)	AC input	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	26.0	36.1	54.8
	Permissible voltage fluctuation	AC input	3-phase 323 V AC to 528 V AC								
	Permissible frequency fluctuation		±5 % maximum								
Control circuit power supply input	Voltage/ frequency	AC input	1-phase 380 V AC to 480 V AC, 50 Hz/60 Hz								
	Rated current [A]		0.1				0.2				
	Permissible voltage fluctuation	AC input	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: 0.3 A (including CN8 connector signals))								
Control method			Sine-wave PWM control/current control method								
Permissible regenerative power	Built-in regenerative resistor (Note 2, 3) [W]	15	100	120	130	170	-				
	External regenerative resistor (standard accessory) (Note 2, 3, 14, 15) [W]	-							500 (800)	850 (1300)	
Dynamic brake (Note 4)			Built-in						External option (Note 11, 13)		
CC-Link IE TSN Class B (Note 7)	Communication cycle (Note 5, 6)	MR-J5-G4(-HS)/ MR-J5-G4(-RJ)	31.25 μs, 62.5 μs, 125 μs, 250 μs, 500 μs, 1 ms, 1.5 ms, 2 ms, 2.5 ms, 3 ms, 3.5 ms, 4 ms, 4.5 ms, 5 ms, 5.5 ms, 6 ms, 6.5 ms, 7 ms, 7.5 ms, 8 ms								
		MR-J5-G4-LL	125 μs, 250 μs, 500 μs, 1 ms, 1.5 ms, 2 ms, 2.5 ms, 3 ms, 3.5 ms, 4 ms, 4.5 ms, 5 ms, 5.5 ms, 6 ms, 6.5 ms, 7 ms, 7.5 ms, 8 ms								
	Protocol version		1.0/2.0 (Note 9)								
CC-Link IE TSN Class A (Note 7, 8, 9) (MR-J5-G4(-HS)/ MR-J5-G4(-RJ))		Communication cycle (Note 5)	500 μs to 500 ms								
		Protocol version	2.0								
EtherCAT® (MR-J5-G4(-HS)N1/ MR-J5-G4(-RJ)N1)		Communication cycle (Note 5, 6)	125 μs, 250 μs, 500 μs, 1 ms, 2 ms, 4 ms, 8 ms								
EtherNet/IP™ (Note 8) (MR-J5-G4-HSN1/ MR-J5-G4-RJN1)		Cycle time	Select from 1 ms to 100 ms								
CC-Link IE Field Network Basic (Note 8, 9)		MR-J5-G4(-HS)/ MR-J5-G4(-RJ)	Supported								
		MR-J5-G4-LL	Not supported								
Communication function		USB	Connect a personal computer (MR Configurator2 compatible)								
A/B/Z-phase pulse output	MR-J5-G4(-HS)(N1))/ MR-J5-G4(-RJ)(N1))		Compatible								
	MR-J5-G4-LL		Not compatible								
Analog monitor			2 channels								
Positioning mode (Note 6, 9)			Point table method								

MR-J5-G_ (Network Compatible) Specifications (400 V)

MR-J5-G_ (Network Compatible) Specifications (400 V)										G	G-HS	G-RJ
Servo amplifier model		MR-J5-_-(-HS)(N1))	60G4	100G4	200G4	350G4	500G4	700G4	12KG4	17KG4	25KG4	
		MR-J5-_-(-RJ)(N1))					-	-	-	-	-	
Analog input		MR-J5-G4(-(-HS)(N1))/ MR-J5-G4(-(-RJ)(N1))	Not supported									
		MR-J5-G4-LL	3 points ^(Note 18)									
Digital I/O		MR-J5-G4(-(-HS)(N1))/ MR-J5-G4(-(-RJ)(N1))	DI 6 points, DO 3 points									
		MR-J5-G4-LL	DI 5 points, DO 3 points									
Fully closed loop control ^(Note 6)		MR-J5-G4(-(-HS)(N1))/ MR-J5-G4(-(-RJ)(N1))	Supported									
		MR-J5-G4-LL	Not supported									
Scale measurement function ^(Note 6)		MR-J5-G4(-(-HS)(N1))/ MR-J5-G4(-(-RJ)(N1))	Supported									
		MR-J5-G4-LL	Not supported									
Load-side encoder interface		MR-J5-G4(-N1)	Mitsubishi Electric high-speed serial communication									
		MR-J5-G4-HS(N1)/ MR-J5-G4-RJ(N1)	Mitsubishi Electric high-speed serial communication, A/B/Z-phase differential input signal									
		MR-J5-G4-LL	Not supported									
Pressure control	MR-J5-G4(-(-HS)(N1))/ MR-J5-G4(-(-RJ)(N1))		Not supported									
	MR-J5-G4-LL	Pressure feedback voltage	0 V to 10 V									
		Pressure feedback cycle	One-point mode: 62.5 μs, Three-point mode: 125 μs ^(Note 18)									
		Cyclic synchronous pressure mode	Basic mode, pressure model adaptive mode									
Servo functions			Advanced vibration suppression control II, adaptive filter II, robust filter, quick tuning, auto tuning one-touch tuning, tough drive function, drive recorder function, machine diagnosis function (including failure prediction), power monitoring function, lost motion compensation function, super trace control, continuous operation to torque control mode ^(Note 6, 10) , driver communication function ^(Note 6, 9, 10)									
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, magnetic pole detection protection, linear servo control fault protection									
Safety sub-function, Safety performance			Refer to "Safety Sub-Functions" in section 1 of this catalog.									
Structure (IP rating)			Natural cooling, open (IP20) ^(Note 17)		Force cooling, open (IP20) ^(Note 17)		Force cooling, open (IP20)		Force cooling, open (IP20) ^(Note 12, 16)			
Close mounting			Not possible									
Mass		[kg]	1.6	2.2	2.3	5.2	5.4	12.7	18.1			

- Notes:
1. Rated output and speed of a rotary servo motor are applicable when the servo amplifier is operated within the specified power supply voltage and frequency.
 2. Select the most suitable regenerative option for your system with our Drive System Sizing Software Motorizer.
 3. Refer to "Regenerative Option" in this catalog for the permissible regenerative power [W] when a regenerative option is used.
 4. When using the dynamic brake, refer to "MR-J5 User's Manual" for the permissible load to motor inertia ratio.
 5. The communication cycle depends on the controller specifications and the number of device stations connected.
 6. For the restrictions on the communication cycle, refer to "Restrictions" in this catalog.
 7. A communication speed of 1 Gbps/100 Mbps can be selected. When 100 Mbps is selected, the minimum communication cycle is 500 μs.
 8. For the restrictions on the network, refer to "MR-J5 User's Manual".
 9. For the servo amplifier firmware version supporting each function, refer to "MR-J5 User's Manual".
 10. The function is not available with MR-J5-G4-N1, MR-J5-G4-HSN1, and MR-J5-G4-RJN1.
 11. Use an external dynamic brake with the 12 kW or larger servo amplifiers. Failure to do so will cause an accident because the servo motor does not stop immediately but coasts at emergency stop. Ensure the safety in the entire equipment.
 12. This product is certified as IP00.
 13. The external dynamic brake cannot be used to comply with the SEMI-F47 standard. Do not assign DB (Dynamic brake interlock) to the output device. If DB (Dynamic brake interlock) is assigned, the servo amplifier switches to servo-off status when an instantaneous power failure occurs.
 14. The values in brackets are applicable when cooling fans (two units of 92 mm × 92 mm, minimum air flow: 1.0 m³/min) are installed, and then [Pr. PA02] is changed.
 15. Servo amplifiers without an enclosed regenerative resistor are also available. Refer to "Model Designation for 1-Axis Servo Amplifier" in this catalog for details.
 16. Terminal blocks are excluded.
 17. MR-J5-60G4-HS(N1) to MR-J5-350G4-HS(N1) are certified as IP00.
 18. The three-point mode is available on servo amplifiers manufactured in May 2025 or later with firmware version F0 or later.