1.3 Servo amplifier standard specifications

Model: MR-JE-		10A	20A	40A	70A	100A	200A	300A
Output	Rated voltage	3-phase 170 V AC						
	Rated current [A]	1.1	1.5	2.8	5.8	6.0	11.0	11.0
Power supply input	Voltage/Frequency	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 6)		3-phase 200 V AC to 240 V AC, 50 Hz/60 Hz
	Rated current (Note 5) [A]	0.9	1.5	2.6	3.8	5.0	10.5	14.0
	Permissible voltage fluctuation	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 6)		3-phase 170 V AC to 264 V AC
	Permissible frequency fluctuation	Within ±5%						
	Power supply capacity [kVA]	Refer to section 10.2.						
	Inrush current [A]	Refer to section 10.5.						
Interface power supply	Voltage	24 V DC ± 10%						
	Current capacity [A]	0.3 (Note 1)						
Control method		Sine-wave PWM control, current control method						
Dynamic brake		Built-in						
Communication function		USB: connection to a personal computer or others (MR Configurator2-compatible)						
		RS-422/RS-485: Connection to controller (1: n communication up to 32 axes) (Note 4, 7)						
Encoder output pulses		Compatible (A/B/Z-phase pulse)						
Analog monitor		Two channels						
Position control mode	Max. input pulse frequency	4 Mpulses/s (for differential receiver) (Note 3), 200 kpulses/s (for open collector)						
	Positioning feedback pulse	Encoder resolution (resolution per servo motor revolution): 131072 pulses/rev						
	Command pulse multiplying factor	Electronic gear A:1 to 16777215, B:1 to 16777215, 1/10 < A/B < 4000						
	In-position range setting	0 pulse to ±65535 pulses (command pulse unit)						
	Error excessive	±3 revolutions						
	Torque limit	Set by parameter setting or external analog input (0 V DC to +10 V DC/maximum torque)						
Speed control mode	Speed control range	Analog speed command 1: 2000, internal speed command 1: 5000						
	Analog speed command input	0 to ±10 V DC/rated speed (The speed at 10 V is changeable with [Pr. PC12].)						
	Speed fluctuation ratio	±0.01% or less (load fluctuation 0% to 100%), 0% (power fluctuation ±10%), ±0.2% or less (ambient temperature 25 °C ± 10 °C) when using analog speed command						
	Torque limit	Set by parameter setting or external analog input (0 V DC to +10 V DC/maximum torque)						
Torque control mode	Analog torque command input	0 V DC to ±8 V DC/maximum torque (input impedance 10 kΩ to 12 kΩ)						
	Speed limit	Set by parameter setting or external analog input (0 V DC to 10 V DC/rated speed)						
Positioning mode		Refer to section 1.1 of "MR-JE-_A Servo Amplifier Instruction Manual (Positioning Mode)" The positioning mode is available with servo amplifiers with software version B7 or later.						
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, and error excessive protection						
Compliance with global standards	CE marking	LVD: EN 61800-5-1 EMC: EN 61800-3						
	UL standard	UL 508C						
Structure (IP rating)		Natural cooling, open (IP20)					Force cooling, open (IP20)	
Close mounting (Note 2)	3-phase power supply input	Possible						
	1-phase power supply input	Possible				Impossible		

Model: MR-JE-			10A	20A	40A	70A	100A	200A	300A
Environment	Ambient temperature	Operation	0 °C to 55 °C (non-freezing)						
		Storage	-20 °C to 65 °C (non-freezing)						
	Ambient humidity	Operation	5 %RH to 90 %RH (non-condensing)						
		Storage							
	Ambience		Indoors (no direct sunlight), free from corrosive gas, flammable gas, oil mist, dust, and dirt						
	Altitude		2000 m or less above sea level (Note 8)						
	Vibration resistance		5.9 m/s^2, at 10 Hz to 55 Hz (directions of X, Y and Z axes)						
Mass [kg]			0.8			1.5		2.1	

Note 1. 0.3 A is the value applicable when all I/O signals are used. The current capacity can be decreased by reducing the number of I/O points.

2. When closely mounting the servo amplifier of 3.5 kW or less, operate them at the ambient temperatures of 0 °C to 45 °C or at 75% or smaller effective load ratio.
3. 1 Mpulse/s or lower commands are supported in the initial setting. When inputting commands over 1 Mpulse/s and 4 Mpulses/s or lower, change the setting in [Pr. PA13].
4. The RS-422 communication function is supported by servo amplifier manufactured in December 2013 or later. Refer to section 1.6 (1) for the year and month of manufacture.
5. These are current values for 3-phase power supply.
6. When using 1-phase 200 V AC to 240 V AC power supply, operate the servo amplifier at 75% or smaller effective load ratio.
7. The RS-485 communication function is available with servo amplifiers manufactured in May 2015 or later. Refer to section 1.6 (1) for the year and month of manufacture.
8. Follow the restrictions in section 2.6 when using this product at altitude exceeding 1000 m and up to 2000 m above sea level.