SV-010L2

3-phase or single-phase 200 to 230 VAC (for 100 W)

SPECIFICATIONS

Model				SV-010L2
Power supply/current capacity and power loss	Maximum applicable motor capacity Single-phase 100 VAC			—
	Maximum applicable motor capacity Three-phase 200 VAC			100 W
	Maximum applicable motor capacity Single-phase 200 VAC			
	Power capacity (VA) per amplifier Single-phase 100 VAC			—
	Power capacity (VA) per amplifier Three-phase 200 VAC			300 VA
	Power capacity (VA) per amplifier Single-phase 200 VAC			
	Output current Continuous	Single-phase 100 VAC		—
		Three-phase 200 VAC		0.91 Arms
		Single-phase 200 VAC		
	Output current Maximum	Single-phase 100 VAC		—
		Three-phase 200 VAC		2.9 Arms
		Single-phase 200 VAC		
	Main circuit power loss Single-phase 100 VAC			—
	Main circuit power loss Three-phase 200 VAC			7.3 W
	Main circuit power loss Single-phase 200 VAC			7.4 W
	Built-in regenerative resistor power loss Single-phase 100 VAC			—
	Built-in regenerative resistor power loss Three-phase 200 VAC			
	Built-in regenerative resistor power loss Single-phase 200 VAC			
	Control circuit power loss Single-phase 100 VAC			
	Control circuit power loss Three-phase 200 VAC			17 W
	Control circuit power loss Single-phase 200 VAC			
	Total power loss Single-phase 100 VAC			—
	Total power loss Three-phase 200 VAC			24.3 W
	Total power loss Single-phase 200 VAC			24.4 W
	Input rated current	Main circuit Single-phase 100 VAC		—
		Main circuit Three-phase 200 VAC		1 Arms
		Main circuit Single-phase 200 VAC		2 Arms
		Control circuit Single-phase 100 VAC		—
		Control circuit Three-phase 200 VAC		0.2 Arms
		Control circuit Single-phase 200 VAC		
	Rush current	Main circuit Single-phase 100 VAC		—[*1]
		Main circuit Three-phase 200 VAC		33 A[*1]
		Main circuit Single-phase 200 VAC		
		Control circuit Single-phase 100 VAC		—[*1]
		Control circuit Three-phase 200 VAC		70 A[*1]
		Control circuit Single-phase 200 VAC		
General specifications	Type			For 200 V
	Capacity			100W
	Input power supply	Voltage/frequency	Main circuit	3-phase (or single-phase) 200 to 230 VAC, 50/60 Hz, 270 to 320 VDC
			Control circuit	Single-phase 200 to 230 VAC, 50/60 Hz
		Main circuit/control circuit	Allowable voltage fluctuation	170 to 253 VAC
			Allowable frequency fluctuation	±5% or less
		Allowable instantaneous outage time	Main circuit	Full-stop (100% down): 0.5 cycles, half-stop (50% down): 1 cycle
			Control circuit	Approx 100ms
		Overvoltage category		III
	Control method			3-phase full-wave rectification, IGBT, PWM control, sine wave current drive method
	Feedback			20-bit serial encoder (incremental, absolute) communication
	Operating environment	Operating ambient temperature		0 to +55°C (no freezing)
		Ambient storage temperature		-20 to +70°C (no freezing)
		Ambient operating/storage humidity		90%RH or less (no condensation)

		Vibration resistance		4.9 m/s^2 (conforms to JIS C 60068-2-6)
		Shock resistance		19.6 m/s^2 (conforms to JIS C 60068-2-27)
		Operating atmosphere (enclosure rating /pollution degree)		Pollution degree: 2 (within a control panel that has a rating of IP54 or higher), however, · No corrosive or flammable gas present · A location that is not subject to water, oil, or drugs · No dust present
		Altitude		1,000 m or less above sea level
	Approved standards	UL/CSA standards		UL508C, CSA C22.2 number 14
		CE marking	Low-voltage directive	EN50178
			EMI	EN55011 Class A, EN61800-3
			EMS	EN61800-3, EN61000-6-2
		North American EMI standards		FCC Part 15 B, ICES-003, Class A
	Structure	Type		Base mounting attachment
		Protection		Open, forced
	Lowest insulation resistance value			1 MΩ or more, tested with a 500 VDC megger
	Insulation withstand voltage			1,500 VAC or more (between the primary side and the earth terminal), 1,800 VAC or more (between the primary side and the secondary side)
	Weight			Approx 0.9kg
Performance specifications	Performance	Speed control range		1 to 5,000 (under the condition that the load torque is less than or equal to the rated torque)
		Speed fluctuation rate	During load fluctuation	±0.01% or less with a load fluctuation between 0 and 100% (at the rated rotation speed)
			When the voltage of the main circuit fluctuates	0% at the rated voltage ±10% (at the rated rotation speed)
			When the ambient temperature fluctuates	±0.1% or less when the ambient temperature is between 0 and +50°C (at the rated rotation speed)
		Torque control accuracy (reproducibility)		±1%
		Speed frequency response		1.6 kHz (when JL = JM) * JL: load moment of inertia (motor axis conversion), JM: motor moment of inertia
	Dynamic brake			Built-in
	Analogue monitor output for observation			Monitor output such as motor rotation speed and torque instruction for observations, number of built-in channels: 2
	Regenerative resistor	Built-in regenerative resistor		None
		External regenerative resistor		OP-84399 (220 W[*2])
	Display function	Access window		Status monitor, parameter settings, calibration, etc.
		CHARGE display LED		CHARGE LED (orange) for checking the main circuit power supply input
		Status		Servo on, instruction input in progress, warning, MECHATROLINK-II communication in progress
	Communication function	USB communication	Function	Status display, parameter settings, calibration, etc.
			Connection device	PC
	Protection function			Overcurrent, overvoltage, insufficient voltage, overload, regeneration error, etc.
	Other functions			Auto calibration, absolute position system, etc.
I/O specifications	MECHATROLINK-II type	Control I/O	Input signal: Number of channels	8CH
			Input signal: Function	Forced stop (FSTOP), forward rotation side limit switch (LSP), reverse rotation side limit switch (LSN), external latch signals 1 to 3 (EXT1, EXT2, EXT3), forward rotation side torque limit selection (PTL), reverse rotation side torque limit selection (NT
			Output signal: Number of channels	4CH
			Output signal: Function	Alarm (ALARM), operation preparation complete (RDY), in position (INPOS), speed matching (VCMP), electromagnetic brake timing (BRAKE), torque control in progress (TLM), speed control in progress (VLM), warning (WARN), zero-speed detection (ZSP), near posi
		Encoder division pulse output		A-phase (A+, A-), B-phase (B+, B-), Z-phase (Z+, Z-): line-driver output;[*3] Z-phase (ZOC): open-collector output; number of division pulses: 1.6 Mpps maximum (6.4 MHz when 2-phase 4× selected)[*4]
	Pulse/Analogue input type	Control I/O	Input signal: Number of channels	—
			Input signal: Function	
			Output signal: Number of channels	
			Output signal: Function	
		Encoder division pulse output		
		Position control	Pulse string input: Command pulse format	
			Pulse string input: Input format	
			Pulse string input: Input frequency	
		Speed control	Analogue input: Command voltage	
			Analogue input: Input impedance	
			Analogue input: Circuit time constant	
			Speed selection	
		Torque control	Analogue input: Command voltage	
			Analogue input: Input impedance	
			Analogue input: Circuit time constant	

Communication specifications (MECHATROLINK-II type only)	MECHATROLINK communication	Station address		41H to 5FH (Up to 30 slave stations can be connected. The 10s digit is selected from the access window, and the 1s digit is selected with the rotary switch.)
		Transmission speed	MECHATROLINK-II	10 Mbps (selected from the access window)
			MECHATROLINK-I	4 Mbps (selected from the access window)
		Transmission frequency	MECHATROLINK-II	250 µs, 0.5 ms to 4.0 ms (multiples of 0.5)
			MECHATROLINK-I	2ms
		Transmission byte number	MECHATROLINK-II	17 bytes/station, 32 bytes/station (selected from the access window)
			MECHATROLINK-I	17 bytes/station
	Command method	Operation specifications		Position control, speed control, and torque control performed by way of MECHATROLINK communication
		Command input		MECHATROLINK-II communication commands (such as sequence, motion, data setting and reference, monitor, and adjustment)
I/O terminal specifications and wiring	General-purpose input (DI-1)	Maximum input voltage		26.4 VDC
		Input rated voltage		24 VDC (5mA)
		Minimum ON voltage		19 VDC
		Maximum OFF current		0.1mA
		Common ground		Common (MECHATROLINK-II type servo amplifiers only have positive commons.)
	General-purpose output (DO-1)	Output		Open-collector output
		Rated load		30 VDC (30mA)
		Leakage current (at OFF)		0.1mA
		Residual voltage (at ON)		1.6 VDC or less
		Common ground		Common
	2-wire method compatible input (DI-2)	Maximum input voltage		26.4 VDC
		Input rated voltage		24 VDC (9mA)
		Minimum ON voltage		19 VDC
		Maximum OFF current		1.5mA
		Common ground		Common (MECHATROLINK-II type servo amplifiers only have positive commons.)
	2-wire method compatible high-speed input (DI-3)	Maximum input voltage		26.4 VDC
		Input rated voltage		24 VDC (11mA)
		Minimum ON voltage		19 VDC
		Maximum OFF current		1.5mA
		Common ground		Common
	Z phase open-collector output (DO-2)	Output		Non-isolated open-collector output
		Rated load		30 VDC (30mA)
		Leakage current (at OFF)		0.1mA
		Residual voltage (at ON)		1.2 VDC or less
		Common ground		Non-isolated
		Output frequency		50kHz
	Encoder output (DO-E)	Output		Differential line-driver output
		Output voltage		Corresponds to AM26C31
		Common ground		Independent (non-isolated)
		Output frequency		Phase difference: 1.6 Mpps (after 4×: 6.4 MHz)

*1 When used with the amount of current listed above, the duration of the rush current is 20 ms or lower.
*2 The rated capacity is the value with an ambient temperature of 70°C. However, when natural air cooling is being used, use this product with a capacity that is 20% or less of the value written above.
*3 Corresponds to AM26C31
*4 The parameters can be us

Dimensions

* Download CAD file or product manual for larger image/text and more detail.

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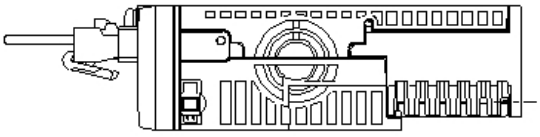

Mounting holes