RSP320 Switch-mode Power Supply

Our RSP320 series industrial switch mode power supplies provide a compact enclosed power supply to suit our range of stepper and servo drive power needs. They are CE certified and come with a host our DC output options and a range of output currents available.

FEATURES

- Universal AC input
- High quality and reliability
- Built-in active PFC function, PF>0.95
- High efficiency up to 90%
- Protections: short circuit / overload / over voltage/ over temperature
- Forced air cooling by built-in DC Fan with fan speed control function
- 1U low profile 30mm
- Optional conformal coating models (RSP320- ☐CC)
- Meets EN61000 / EN60950 industrial levels, CE certification
- 3-year warranty

TECHNICAL SPECIFICATIONS

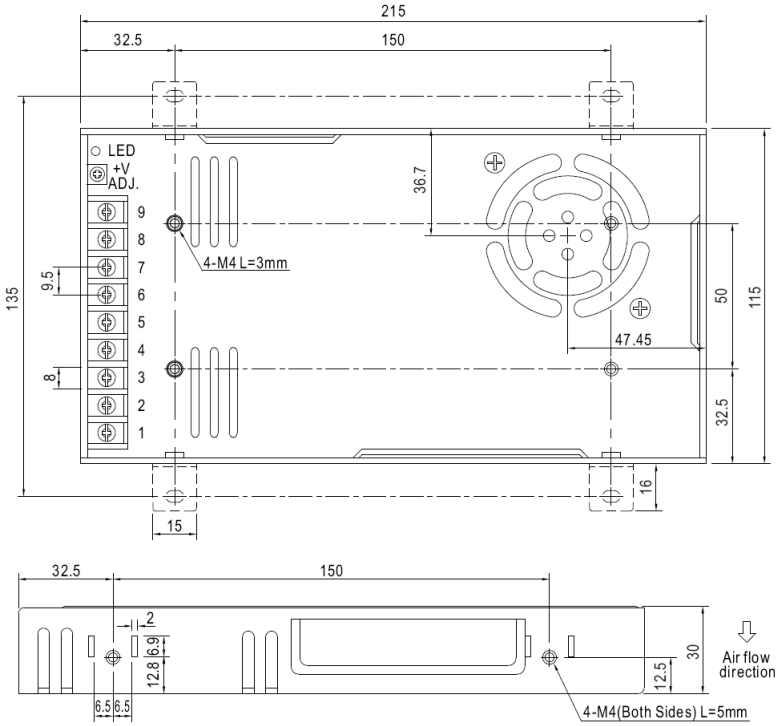
Model		SPS320-24	SPS320-36	RSP320-48
Input	Voltage Range	88-264VAC (124 – 370VDC)		
	Frequency Range	47-63Hz		
	Power Factor	PF>0.95/ 230VAC PF>0.98 / 115VAC at full load		
	AC Current	4A / 115VAC 2A/ 230VAC		
	Efficiency	89%	89.5%	90%
	Inrush Current	20A / 115VAC 40A/ 230VAC		
	Leakage Current	< 1mA / 240VAC		
Output	Voltage (VDC)	24V	36V	48V
	Rated Current	13.4A	8.9A	6.7A
	Current Range	0 – 13.4A	0 – 8.9A	0 – 6.7A
	Rated Power	321.6W	320.4W	321.6W
	Line Regulation	±0.2%	±0.2%	±0.2%
	Load Regulation	±0.5%	±0.5%	±0.5%
	Ripple & Noise (max.)[2]	150mVp-p	220mVp-p	240mVp-p
	Voltage Adj. Range	20 -26.4V	32.4 – 39.6V	41 – 56V
	Voltage Tolerance[3]	±1.0%	±1.0%	±1.0%
	Temperature Drift	±0.02% / °C(0-50°C)	±0.02% / °C (0°C-50°C)	±0.02% / °C (0°C-50°C)
	Setup, Rise Time	1500ms, 50ms/ 230VAC 3000ms, 50ms/ 115VAC at full load		
	Holding Time	8ms at full load 230VAC/ 115VAC		

	Model	RSP320-24	RSP320-36	RSP320-48
Protection	Over Load Protection	105 – 135% rated output power Protection type: Hiccup mode, recovers automatically after fault condition is removed		
	Over Voltage Protection	27.6 – 32.4V	41.4 – 48.6V	58.4 – 68V
		Protection type: Shut down o/p voltage, re-power on to recover		
	Over-Temp. Protection	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down		
Environment	Operating Temp and Humidity	-30℃ - +70℃ (Refer to "Derating Curve" 20%-90%RH non-condensing		
	Storage Temp and Humidity	-40℃ - +85℃ 10% - 95%RH		
	Temp. Coefficient	±0.03% /℃ (0 - 50℃)		
	Vibration	10-500Hz, 2G, 10mins / 1 cycle, 60mins each along X, Y and Z axis		
Safety EMC[5]	Safety Standards	UL60950-1, TUV EN60950-1 , CCC GB4943 approved		
	Withstand Voltage	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC		
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH		
	EMC Emission	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3,GB9254 class B,GB17625.1		
	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A		
Others	MTBF	206.5K hrs min. MIL-HDBK-217F (25℃)		
	Dimensions	215*113*30mm		
	Weight	0.9kg	0.9kg	0.9kg

NOTES:

1. all parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature;
2. Ripple & noise are measured at 20MHZ of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μf parallel capacitor;
3. Tolerance includes set up tolerance, line regulation and load regulation;
4. Derating may be needed under low input voltages. Please check the derating curve for more details
5. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meet EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies" or contact our technical sales for details;
6. For charging related applications, please consult Motion Control Products Ltd. for details

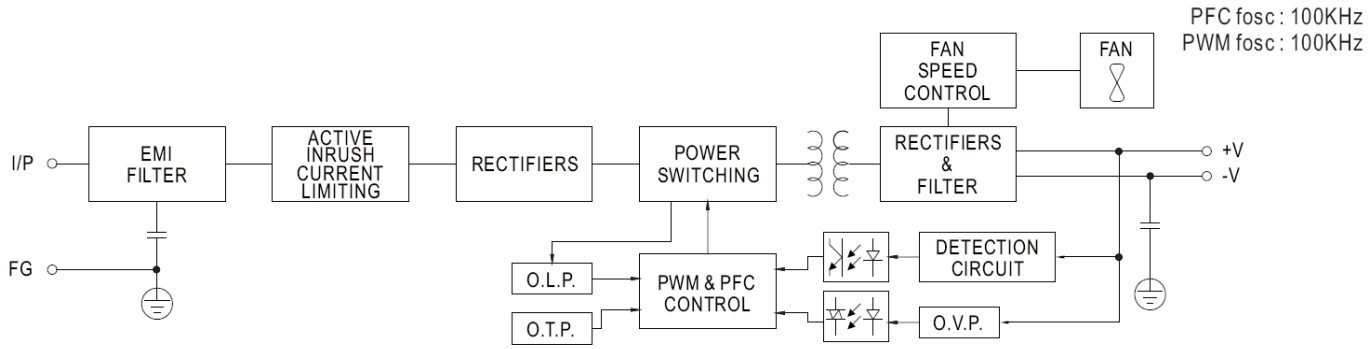
MECHANICAL DIMENSIONS



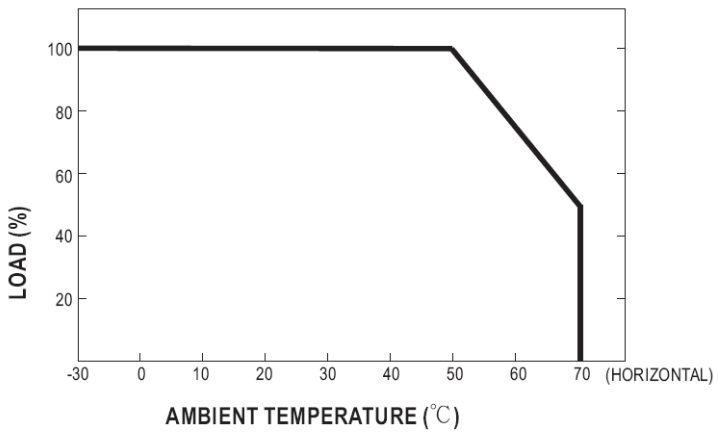
Terminal Pin No. Assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4~6	DC OUTPUT -V
2	AC/N	7~9	DC OUTPUT +V
3	FG ⏚		

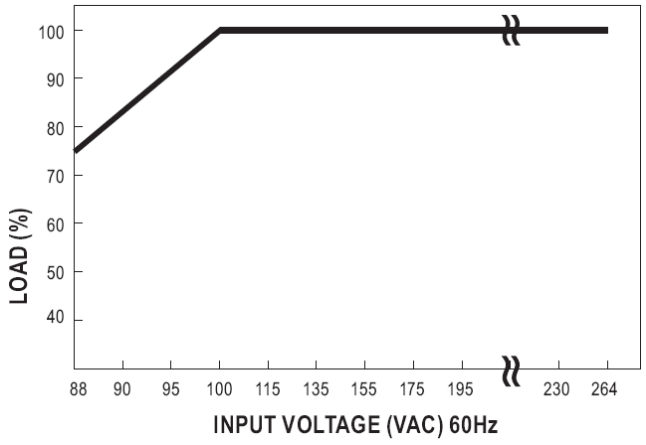
BLOCK DIAGRAM



DERATING CURVE



STATIC CHARACTERISTICS



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