



320W Single Output with PFC Function

RSP-320 series

Dimension

L	*	W	*	H
215	*	115	*	30 mm
8.46	*	4.53	*	1.18 inch



User's Manual



R3100
RoHS



IS13252
(except 2.5V,48V)



AS/NZS60950-1



UL62368-1



BS EN/EN62368-1



(only for 5V)



GB4943.1 TPTC004



IEC61558-1/2-16

(for 12V or higher models)

IEC62368-1



DEKRA

EN61558-1/2-16
(for 12V or higher models)

IEC62368-1



Features

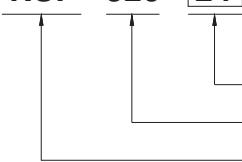
- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 90%
- Forced air cooling by built-in DC Fan with fan speed control function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Operating altitude up to 5000 meters
- Optional conformal coating
- LED indicator for power on
- 3 years warranty

Description

RSP-320 is a 320W single output enclosed type AC/DC power supply. This series operates for 88~264VAC input voltage and offers the models with the DC output mostly demanded from the industry. Each model is cooled by the built-in fan with fan speed control, working for the temperature up to 70°C.

Model Encoding / Order Information

RSP - 320 - 24



Output voltage (2.5V/3.3V/4V/5V/7.5V/12V/13.5V/15V/24V/27V/36V/48V)

Output wattage

Series name



320W Single Output with PFC Function

RSP-320 series

SPECIFICATION

MODEL	RSP-320-2.5	RSP-320-3.3	RSP-320-4	RSP-320-5	RSP-320-7.5	RSP-320-12
OUTPUT	DC VOLTAGE	2.5V	3.3V	4V	5V	7.5V
	RATED CURRENT	60A	60A	60A	40A	26.7A
	CURRENT RANGE	0 ~ 60A	0 ~ 60A	0 ~ 60A	0 ~ 40A	0 ~ 26.7A
	RATED POWER	150W	198W	240W	300W	320.4W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	100mVp-p	150mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	2.35 ~ 2.85V	2.97 ~ 3.8V	3.7 ~ 4.3V	4.5 ~ 5.5V	6 ~ 9V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.3%
	LOAD REGULATION	±1.5%	±1.5%	±1.0%	±1.0%	±0.5%
	SETUP, RISE TIME	1500ms, 50ms/230VAC	3000ms, 50ms/115VAC at full load			
INPUT	HOLD UP TIME (Typ.)	8ms at full load	230VAC / 115VAC			
	VOLTAGE RANGE Note.4	88 ~ 264VAC	124 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF>0.95/230VAC	PF>0.98/115VAC at full load			
	EFFICIENCY (Typ.)	75.5%	79.5%	81%	83%	88%
	AC CURRENT (Typ.)	2.7A/115VAC	1.5A/230VAC	4A/115VAC	2A/230VAC	
PROTECTION	INRUSH CURRENT (Typ.)	20A/115VAC	40A/230VAC			
	LEAKAGE CURRENT	<1mA / 240VAC				
	OVERLOAD	105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed				
ENVIRONMENT	OVER VOLTAGE	2.88 ~ 3.38V	3.8 ~ 4.5V	4.5 ~ 5.3V	5.75 ~ 6.75V	9.4 ~ 10.9V
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, re-power on to recover				
		Shut down o/p voltage, recovers automatically after temperature goes down				
SAFETY & EMC (Note 6)	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes				
	OPERATING ALTITUDE	5000 meters				
OTHERS	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004, CCC GB4943.1, BSMI CNS15598-1, AS/NZS 60950.1, IS13252(Part1)/ IEC60950-1(except for 2.5V,48V), Dekra EN 61558-1/2-16, IEC 61558-1/2-16(for 12V or higher models) 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°C / 70% RH				
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020, CNS15936, GB9254 Class B, GB17625.1, KN 32 (only for 5V)				
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, light industry level, EAC TP TC 020				
NOTE	MTBF	1826.4K hrs min.	Telcordia SR-332 (Bellcore)	; 192.9K hrs min.	MIL-HDBK-217F (25°C)	
	DIMENSION	215*115*30mm (L*W*H)				
	PACKING	0.9Kg; 15pcs/14.5Kg/0.67CUFT				
	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF & 47 μF 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 ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). 6. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf) 7. For charging related applications, please consult Mean Well for details. 8. Strongly recommended that external output capacitance should not exceed 5000uF. (Only for: RSP-320-2.5/-3.3/-4/-5/-7.5/-12/-13.5/-15) ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx					



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RSP-320 series

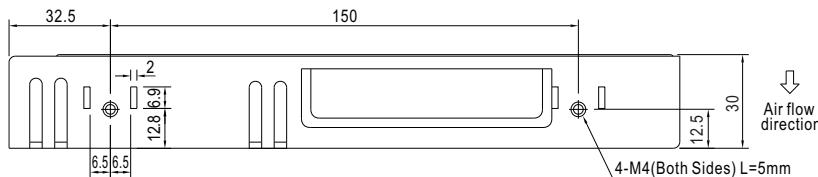
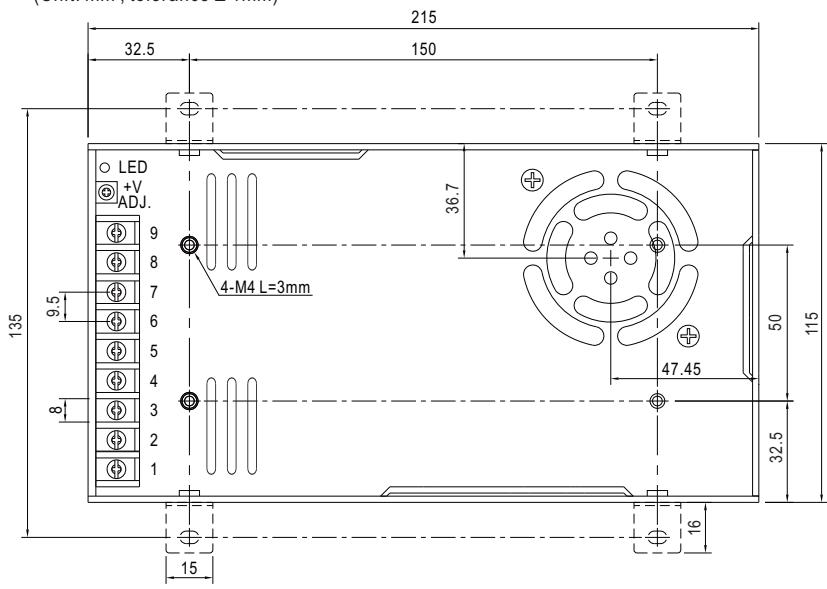
SPECIFICATION

MODEL	RSP-320-13.5	RSP-320-15	RSP-320-24	RSP-320-27	RSP-320-36	RSP-320-48
OUTPUT	DC VOLTAGE	13.5V	15V	24V	27V	36V
	RATED CURRENT	23.8A	21.4A	13.4A	11.9A	8.9A
	CURRENT RANGE	0 ~ 23.8A	0 ~ 21.4A	0 ~ 13.4A	0 ~ 11.9A	0 ~ 8.9A
	RATED POWER	321.3W	321W	321.6W	321.3W	320.4W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	200mVp-p	220mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 31.5V	32.4 ~ 39.6V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1500ms, 50ms/230VAC	3000ms, 50ms/115VAC at full load			
INPUT	HOLD UP TIME (Typ.)	8ms at full load	230VAC / 115VAC			
	VOLTAGE RANGE Note.4	88 ~ 264VAC	124 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF>0.95/230VAC	PF>0.98/115VAC at full load			
	EFFICIENCY (Typ.)	88%	88.5%	89%	89%	89.5%
	AC CURRENT (Typ.)	4A/115VAC	2A/230VAC			
PROTECTION	INRUSH CURRENT (Typ.)	20A/115VAC	40A/230VAC			
	LEAKAGE CURRENT	<1mA / 240VAC				
	OVERLOAD	105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed				
ENVIRONMENT	OVER VOLTAGE	15.7 ~ 18.4V	18.8 ~ 21.8V	27.6 ~ 32.4V	32.9 ~ 38.3V	41.4 ~ 48.6V
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, re-power on to recover				
		Shut down o/p voltage, recovers automatically after temperature goes down				
SAFETY & EMC (Note 6)	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes				
	OPERATING ALTITUDE	5000 meters				
OTHERS	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004, CCC GB4943.1, BSMI CNS15598-1, AS/NZS 60950.1, IS13252(Part1)/ IEC60950-1(except for 2.5V,48V), Dekra EN 61558-1/2-16, IEC 61558-1/2-16(for 12V or higher models) 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°C / 70% RH				
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020, CNS15936, GB9254 Class B, GB17625.1				
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, light industry level, EAC TP TC 020				
NOTE	MTBF	1826.4K hrs min. Telcordia SR-332 (Bellcore) : 192.9K hrs min. MIL-HDBK-217F (25°C)				
	DIMENSION	215*115*30mm (L*W*H)				
	PACKING	0.9Kg; 15pcs/14.5Kg/0.67CUFT				
<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF & 47 μF parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>5. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>6. 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 meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)</p> <p>7. For charging related applications, please consult Mean Well for details.</p> <p>8. Strongly recommended that external output capacitance should not exceed 5000uF. (Only for: RSP-320-2.5/-3.3/-4/-5/-7.5/-12/-13.5/-15)</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p>						

■ Mechanical Specification

 (Unit: mm, tolerance $\pm 1\text{mm}$)

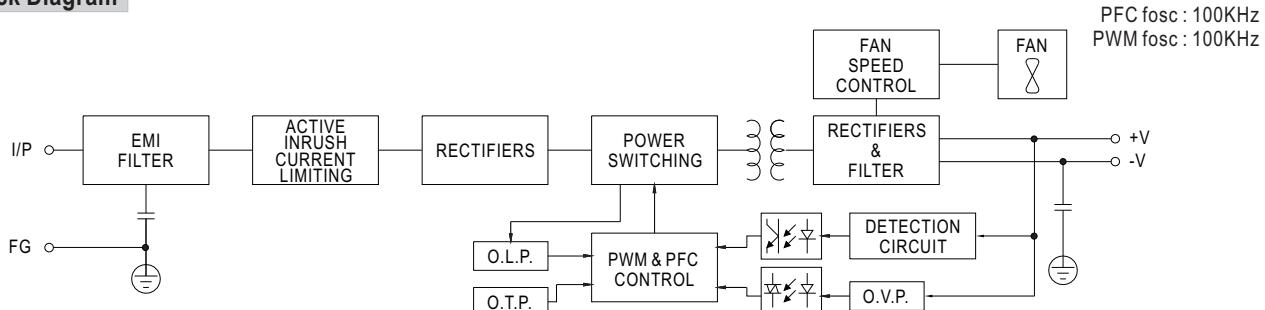
Case No.207A



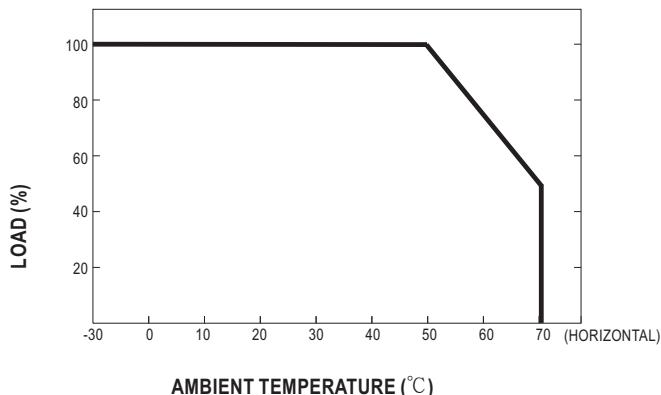
Terminal Pin No. Assignment :

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

■ Block Diagram



■ Derating Curve



■ Static Characteristics

