



500W Single Output with PFC Function

RSP-500 series

Dimension

L	*	W	*	H
230	*	127	*	40.5(1U) mm
9.06	*	5	*	1.59(1U) inch



User's Manual



R33100
RoHS
CNS14336-1



AS/NZS62368-1
UL62368-1



BS EN/EN62368-1
GB4943.1
TPTC004
IEC62368-1



■ Features

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 90.5%
- Forced air cooling by built-in DC fan (Note.5)
- Built-in remote ON-OFF control / remote sense / DC OK signal
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 3 years warranty

■ Applications

- Factory control or automation apparatus
- Test and measurement instrument
- Laser related machine
- Burn-in facility
- RF application

■ GTIN CODE

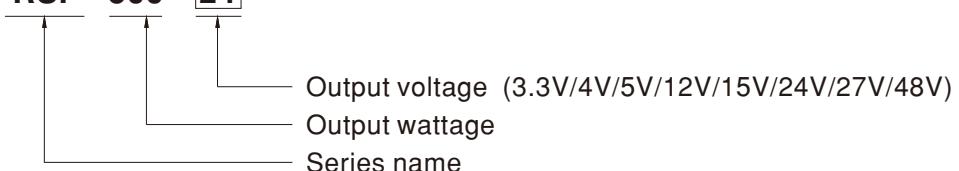
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

■ Description

RSP-500 is a 500W single output enclosed type AC/DC power supply. This series operates for 85~264VAC 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. Moreover, RSP-500 provides vast design flexibility by equipping various built-in functions such as remote ON-OFF control, remote sense, DC OK signal, etc.

■ Model Encoding / Order Information

RSP - 500 - 24



Output voltage (3.3V/4V/5V/12V/15V/24V/27V/48V)

Output wattage

Series name



500W Single Output with PFC Function

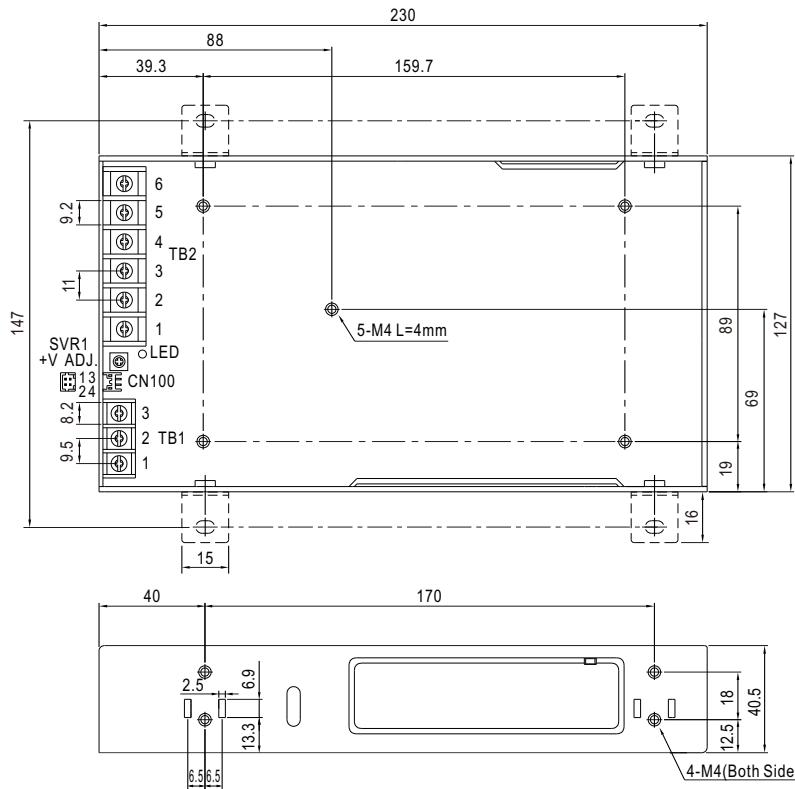
RSP-500 series

SPECIFICATION

MODEL	RSP-500-3.3	RSP-500-4	RSP-500-5	RSP-500-12	RSP-500-15	RSP-500-24	RSP-500-27	RSP-500-48	
OUTPUT	DC VOLTAGE	3.3V	4V	5V	12V	15V	24V	27V	48V
	RATED CURRENT	90A	90A	90A	41.7A	33.4A	21A	18.6A	10.5A
	CURRENT RANGE	0 ~ 90A	0 ~ 90A	0 ~ 90A	0 ~ 41.7A	0 ~ 33.4A	0 ~ 21A	0 ~ 18.6A	0 ~ 10.5A
	RATED POWER	297W	360W	450W	500.4W	501W	504W	502.2W	504W
	RIPPLE & NOISE (max.) Note.2	120mVp-p	120mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	2.8 ~ 3.6V	3.6 ~ 4.3V	4.5 ~ 5.5V	10 ~ 13.2V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 30V	41 ~ 56V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
INPUT	SETUP, RISE TIME	1500ms, 80ms/230VAC	3000ms, 80ms/115VAC at full load						
	HOLD UP TIME (Typ.)	18ms/230VAC	14ms/115VAC at full load						
INPUT	VOLTAGE RANGE Note.4	85 ~ 264VAC	120 ~ 370VDC						
	FREQUENCY RANGE	47 ~ 63Hz							
	POWER FACTOR (Typ.)	PF>0.95/230VAC	PF>0.98/115VAC at full load						
	EFFICIENCY (Typ.)	81%	83%	84%	88%	88%	89%	89.5%	90.5%
	AC CURRENT (Typ.)	4.2A/115VAC	2.1A/230VAC	5.3A/115VAC	2.65 A/230VAC				
	INRUSH CURRENT (Typ.)	20A/115VAC	40A/230VAC						
PROTECTION	LEAKAGE CURRENT	<2mA / 240VAC							
	OVERLOAD	105 ~ 130% rated output power							
		Protection type : Constant current limiting, recovers automatically after fault condition is removed							
	OVER VOLTAGE	3.8 ~ 4.5V	4.5 ~ 5.3V	5.75 ~ 6.75V	13.8 ~ 16.2V	18.8 ~ 21.8V	27.6 ~ 32.4V	32.9 ~ 38.3V	58.4 ~ 68V
FUNCTION	OVER TEMPERATURE	Protection type : Shut down o/p voltage, re-power on to recover							
	REMOTE CONTROL	POWER ON:open or 0~0.8VDC between RC+(Pin 4)&RC-(Pin3) on CN100							
	REMOTE SENSE	POWER OFF: 4~10VDC between RC+(Pin 4)&RC-(Pin3) on CN100							
ENVIRONMENT	FAN CONTROL (Typ.)	Compensate voltage drop on the load wiring up to 0.3V							
	WORKING TEMP.	RTH2≥50°C±10°C Fan on ; RTH2≤40°C±10°C Fan off (Fan always on for 3.3~5V,Fan ON/OFF control for 12~48V)							
	WORKING HUMIDITY	-30 ~ +70°C (Refer to "Derating Curve")							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	20 ~ 90% RH non-condensing							
	TEMP. COEFFICIENT	-40 ~ +85°C, 10 ~ 95% RH							
	VIBRATION	±0.03%/°C (0 ~ 50°C)							
SAFETY & EMC (Note.4)	WORKING TEMP.	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes							
	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, AS/NZS 62368.1, EAC TP TC 004 , CCC GB4943.1 , BSMI CNS14336-1approved							
	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,GB/T 9254, CNS13438 Class B							
OTHERS	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2, EAC TP TC 020							
	MTBF	1372.4K hrs min. Telcordia SR-332 (Bellcore) ; 187.9K hrs min. MIL-HDBK-217F (25°C)							
	DIMENSION	230*127*40.5mm (L*W*H)							
NOTE	PACKING	1.3Kg; 9pcs/12.7Kg/0.7CUFT							
		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 0.1uf & 47uf 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. Fan always on for 3.3~5V,Fan ON/OFF control for 12~48V.							
		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 http://www.meanwell.com)							
		7. 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).							
		※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx							

■ Mechanical Specification

Case No.226A Unit:mm



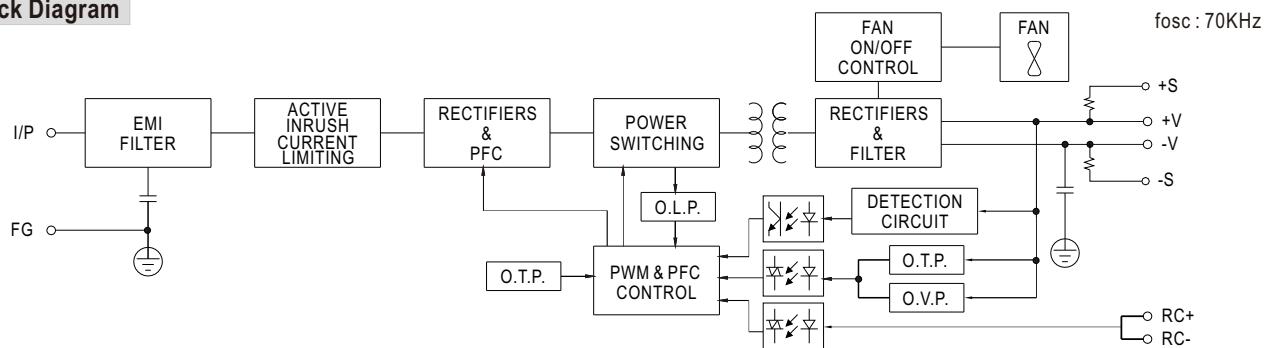
Air flow direction 

AC Input Terminal Pin No. Assignment (TB1)	
Pin No.	Assignment
1	AC/L
2	AC/N
3	FG \pm

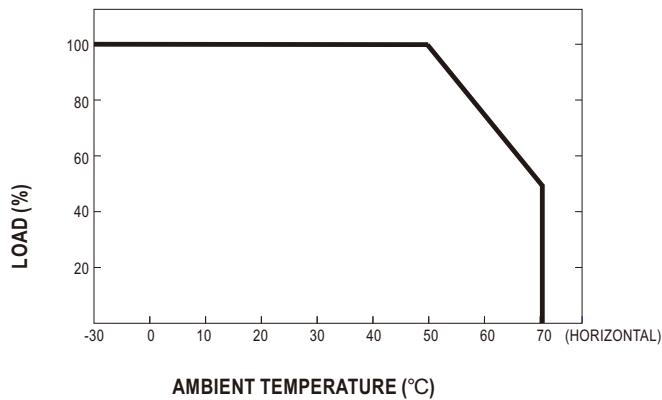
DC Output Terminal Pin No. Assignment (TB2)	
Pin No.	Assignment
1~3	DC OUTPUT-V
4~6	DC OUTPUT +V

HRS DF11-4DS or equivalent			
Pin No.	Assignment	Mating Housing	Terminal
1	-S	HRS DF11-4DS or equivalent	HRS DF11-**SC or equivalent
2	+S		
3	RC-		
4	RC+		

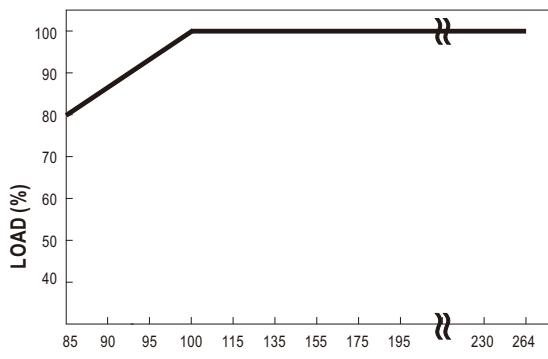
Block Diagram



■ Derating Curve



■ Static Characteristics



■ Function Description of CN100

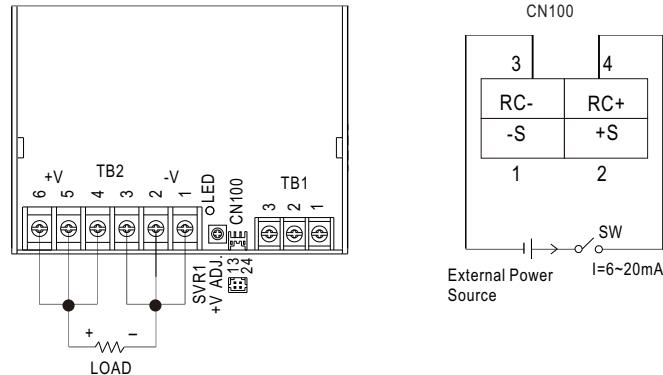
Pin No.	Function	Description
1	-S	Negative sensing. The -S signal should be connected to the negative terminal of the load. The -S and +S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.3V.
2	+S	Positive sensing. The +S signal should be connected to the positive terminal of the load. The +S and -S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.3V.
3	RC-	Return for RC+ signal input.
4	RC+	Turns the output on and off by electrical or dry contact between pin 4 (RC+) and pin 3 (RC-). 0~0.8VDC or open: Power ON, 4~10VDC: Power OFF.

■ Function Manual

1. Remote Control

The PSU can be turned ON/OFF by using the "Remote Control" function.

Between RC-(pin3) and RC+(pin4) on CN100	PSU Status
SW OFF (0 ~ 0.8VDC) or open	ON
SW ON (4 ~ 10V)	OFF



2. Remote Sense

The remote sensing compensates voltage drop on the load wiring up to 0.3V

