



500 Watt 12 Volt, Enclosed, Single Output Power Supply with Active PFC

UNIT CODE	DESCRIPTION
PS-RSP 500-12	500 Watt, 12 Volt, Single Output, 1U Low Profile, Power Supply with an Active PFC Function

SPECIFICATIONS		
Input	Output	Agency Approvals
Full Range 85 ~ 264VAC	+12VDC @ 0 ~ 41.7A	

Features at a Glance:

- Priced Economically
- Universal AC input for use worldwide
- Efficient (up to 90%)
- Active PFC function (PF>0.95)
- 40.5mm low profile 1U design
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in Remote ON/OFF Control
- Built-in Remote Sense Function
- LED indicator for Power ON
- Forced air cooling (by fan with speed control)
- Safety Standards: UL60950-1, TUV EN60950-1
- Certificates: UL, CUL, TUV, CB, and CE
- MBTF: 187.7K hours min. *MIL-HDBK-217F (25°C)*
- Case: 226A
- Weight: 2.86 lbs. (1.3 Kgs.)
- Dimensions: 9.0" L x 5.0" W x 1.6" H
230L X 127W X 40.5H mm
- 3 year warranty



The PS-RSP 500 Series are economical, single output, general-purpose, 500 Watt, 1U low profile, enclosed type, switching power supplies with full range AC input and an active Power Factor Correction (PFC) function.

Other built-in functions include built-in Remote ON/OFF Control, Remote Sense, fan speed control, protection against short circuit, overload, over voltage and over temperature. All versions comply with UL, CUL, TUV, CB, and CE regulations that ensure user and environmental safety.

Wide -30~+70°C (-22~158° F) operating temperature range.

The PS-RSP-500 Series is widely used and applications include general industrial control systems, mechanical and electrical equipment, instrumentation, LED displays, or any system that requires a low profile, economical power supply.

[Click for more information](#)

Pricing:	1+	\$ 149.95
	10+	137.50
	25+	119.00

Pollock Industries, Inc. PO Box 1003, White River, VT 05001
 toll-free 1-866-665-5434 (603) 888-2467 sales@electracool.com



- Features :
- * Universal AC input / Full range
- * Built-in active PFC function, PF>0.95
- * Protections: Short circuit / Overload / Over voltage / Over temperature
- * Forced air cooling by built-in DC Fan (Note5)
- * 1U low profile 40.5mm
- * High efficiency up to 90.5%
- * Built-in remote ON-OFF control
- * Built-in remote sense function
- * LED indicator for power on
- * 3 years warranty

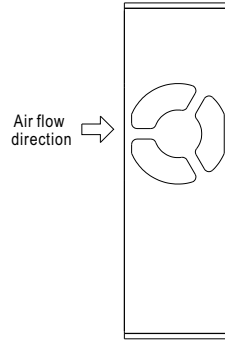
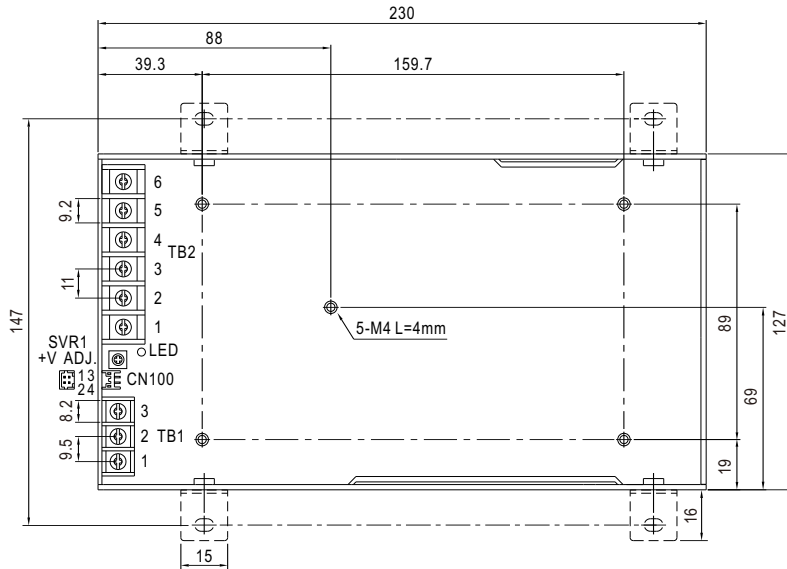


SPECIFICATION

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%	
	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		2.1 A/230VAC		5.3A/115VAC		2.65 A/230VAC		
	INRUSH CURRENT (Typ.)	20A/115VAC		40A/230VAC						
LEAKAGE CURRENT	<2mA / 240VAC									
PROTECTION	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	
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down								
FUNCTION	REMOTE CONTROL	POWER ON: open or 0~0.8VDC between RC+(Pin 4)&RC-(Pin3) on CN100 POWER OFF: 4~10VDC between RC+(Pin 4)&RC-(Pin3) on CN100								
	REMOTE SENSE	Compensate voltage drop on the load wiring up to 0.3V								
	FAN CONTROL (Typ.)	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)								
ENVIRONMENT	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)								
SAFETY & EMC (Note 4)	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes								
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 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 EN55032 (CISPR32) Class B, EN61000-3-2,-3								
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2, EN61204-3 heavy industry level, criteria A								
	MTBF	187.7K hrs min.		MIL-HDBK-217F (25°C)						
	DIMENSION	230*127*40.5mm (L*W*H)								
	PACKING	1.3Kg; 9pcs/12.7Kg/0.7CUFT								
NOTE	<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 0.1uf & 47uf 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. Fan always on for 3.3~5V, Fan ON/OFF control for 12~48V.</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 http://www.meanwell.com)</p>									

Mechanical Specification

Case No.226A Unit:mm

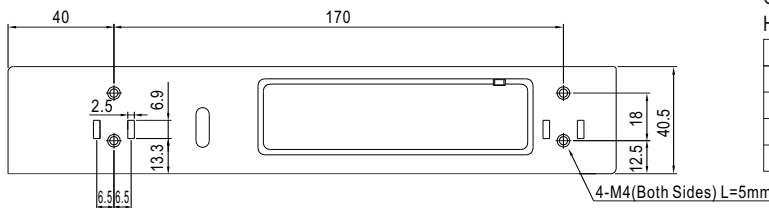


AC Input Terminal
Pin No. Assignment (TB1)

Pin No.	Assignment
1	AC/L
2	AC/N
3	FG \pm

DC Output Terminal
Pin No. Assignment (TB2)

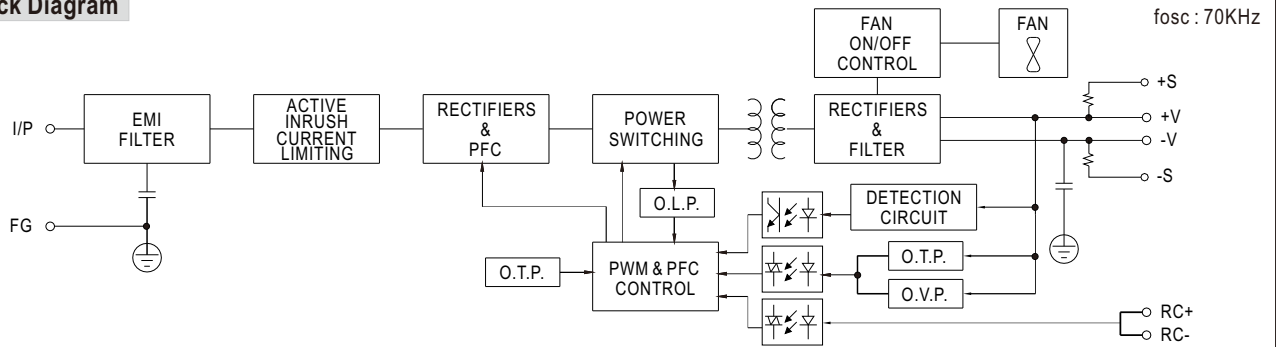
Pin No.	Assignment
1-3	DC OUTPUT -V
4-6	DC OUTPUT +V



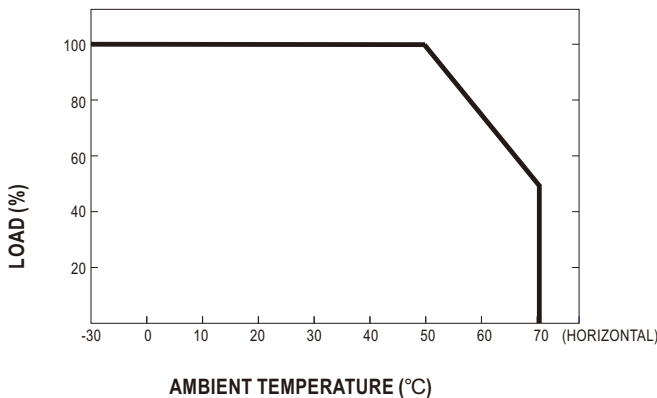
Connector Pin No. Assignment (CN100) :
HRS DF11-04DP-2DS or equivalent

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

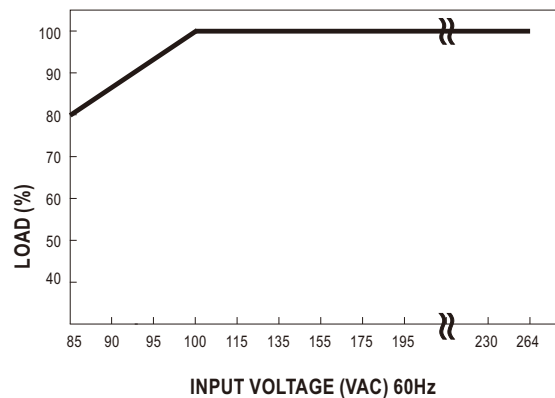
Block Diagram



Derating Curve



Static Characteristics



■ **Function Description of CN100**

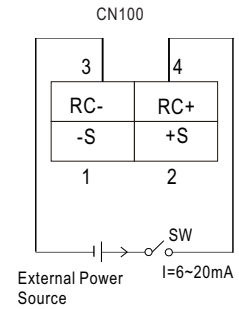
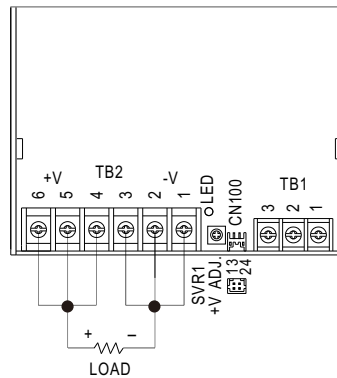
Pin No.	Function	Description
1	-S	Negative sensing. The -S signal should be connected to the negative terminal of the load. The -S and +S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.3V.
2	+S	Positive sensing. The +S signal should be connected 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

