

## 500 Watt, USP Series, U-Channel PFC Series, (Single Output)

**ALL PSU LTD**  
Electronic Power Solutions

- Universal Input with PFC
- High Efficiency / Reliability
- Low Profile (Fits 1U Systems)
- Optional N+1 Current Share (24 & 48V models)
- Short Circuit, Over Load, Over Voltage Over Temp Protection
- Full Approvals : UL/CUL/TUV/CB/CE
- 3 Year Warranty
- 400 Watt Convection Cooled Rating



### Specification

Input Voltage.....	90~264 VAC, 47~63 Hz, (or 120~370 VDC).
Power Factor.....	0.95@ 230 VAC, 0.98@ 115 VAC
Output Voltage.....	See table below (plus adjustment range)
Over Load Protection.....	105~130% constant current, shut off after 3 sec
Over Voltage Protection.....	115~135% of output voltage (dependant on model)
Line Regulation.....	+/-0.5% typical
Load Regulation.....	+/-1.0% typical (+/-2.0% for 5 V models)
Inrush Current.....	30 A @ 115 VAC, 50 A @ 230 VAC
Set Up, Rise, Hold Up Time.....	2000 ms, 100 ms, 16 ms @ 230 VAC
Isolation Voltage.....	I/P-O/P: 3 kVAC, I/P-FG: 1.5 kVAC, O/P-FG: 0.5 kVAC
Operating Temperature.....	-20 °C to +60 °C (see derating curves)
Safety Standards.....	UL60950-1, TUV EN60950-1
EMC Standard.....	EN55022 Class B, EN61000-4-2, 3, 4, 5, 6, 8, 11 EN61000-3-2, 3, ENV50204, EN55024, EN6100-6-2
MTBF.....	129.8 khrs (MIL-HDBK-217F) @ 25 °C
Dimensions.....	254 x 127 x 41 mm
Weight.....	1.6 kg each

### Models and Ratings

Model	Output Convection Cooled	Output Fan Cooled (23.5CFM)	Ripple/Noise	Efficiency
<a href="#">USP-500-5</a>	5.0 V / 60 A	5.0 V / 80 A	80 mV	85%
<a href="#">USP-500-12</a>	12.0 V / 33 A	12.0 V / 42 A	100 mV	90%
<a href="#">USP-500-15</a>	15.0 V / 27 A	15.0 V / 33.5 A	100 mV	90%
<a href="#">USP-500-24</a>	24.0 V / 17 A	24.0 V / 21 A	150 mV	89%
<a href="#">USP-500-48</a>	48.0 V / 8.5 A	48.0 V / 10.5 A	150 mV	90%

**Note:** The unit requires 23.5CFM of forced air cooling for 500W rated output power. With free air convection cooling, the unit is rated at 400W

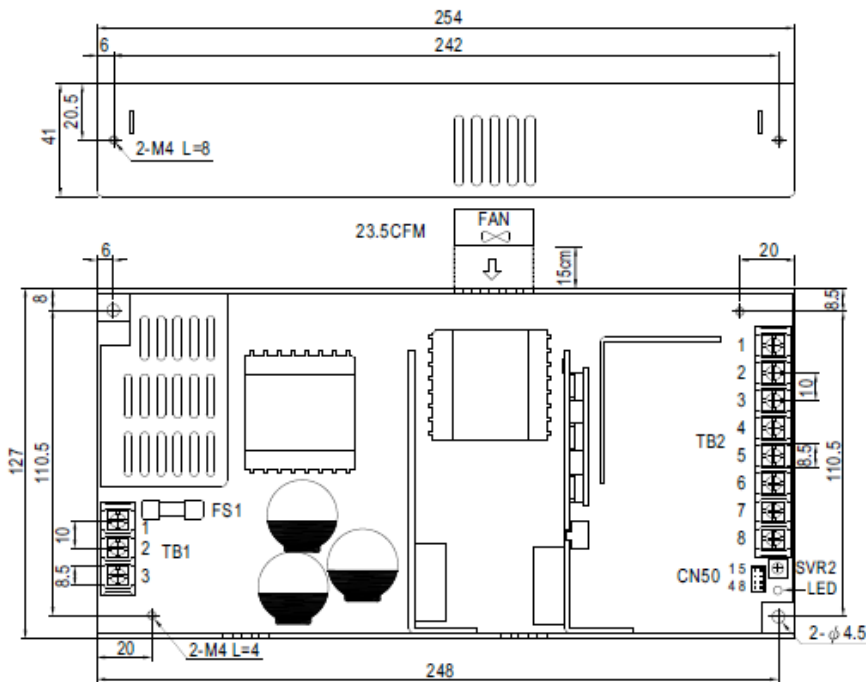
For mechanical & connection details and derating curve see next page

**ALL PSU Ltd, Unit D6 Laser Quay, Culpeper Close, Medway City Estate,  
Rochester, Kent, ME2 4HU, Tel : 01634 725527, Fax : 01634 739111,  
Email: [sales@allpsu.co.uk](mailto:sales@allpsu.co.uk) Web: [www.allpsu.co.uk](http://www.allpsu.co.uk)**

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## Mechanical Details

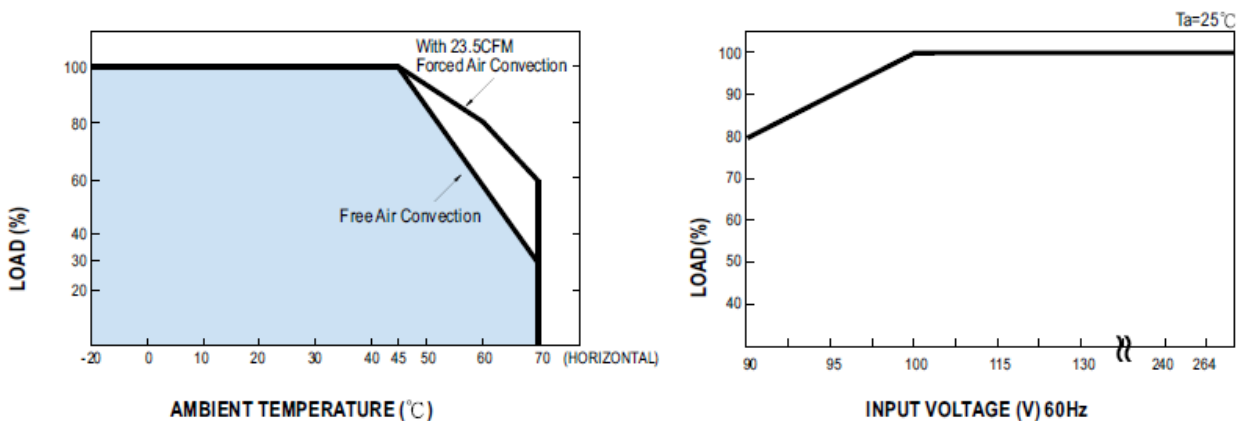


Terminal	Function
1	AC Live
2	AC Neutral
3	F/G

Terminal	Function
1~4	-V Out
5-8	+V Out

Terminal	Function	Remote Sense (CN50) JST B8B-PHDSS or Equivalent	
		Mating Housing	Mating Terminal
		JST PHD-08VS or Equivalent	JST SPHD-002T-P.05 or equivalent
<b>Function Description</b>			
1	+ Sense	+ Sense should be connected to the +ve terminal of the load. Maximum compensation 0.5V	
2	Gnd	Connects to the -ve terminal. Return for DC_OK signal	
3	- Remote	Return for +Remote signal input	
4	CS (Optional)	Current share. When units are used in parallel to allow equal load sharing	
5, 8	- Sense	- Sense should be connected to the -ve terminal of the load	
6	DC OK	TTL level signal, referenced to pin 3 (DC OK Gnd). High when PSU turns on	
7	+ Remote	Turns the PSU on or off by electrical or dry contact between pin 7 (+R) and pin 3 (-R). 0~0.8v = power on. 4~10V = power off	

## Derating Curves



Specifications can change without notice, E&OE. ALL PSU Terms & Conditions apply.

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