

# PS-48-10 Power Supply



The PS-48-10 Power Supply consists of a 48 VDC single output power supply with PFC function and one North American standard power cord.

- Input Voltage: 88~264 VAC; 47~63 Hz
- Output Voltage: 48 VDC
- Maximum Output Current: 10 A
- Dimensions: 184 x 120 x 93 mm
- Power cords for the UK, EU, and Italy can be purchased separately.
- When ordered in conjunction with TE Technology coolers and temperature controllers the interconnection cables are included free of charge.
- See additional pages for base power supply specifications.



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■ 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
- Built-in cooling Fan ON-OFF control
- Built-in remote ON-OFF control
- Built-in remote sense function
- Fixed switching frequency at 110KHz

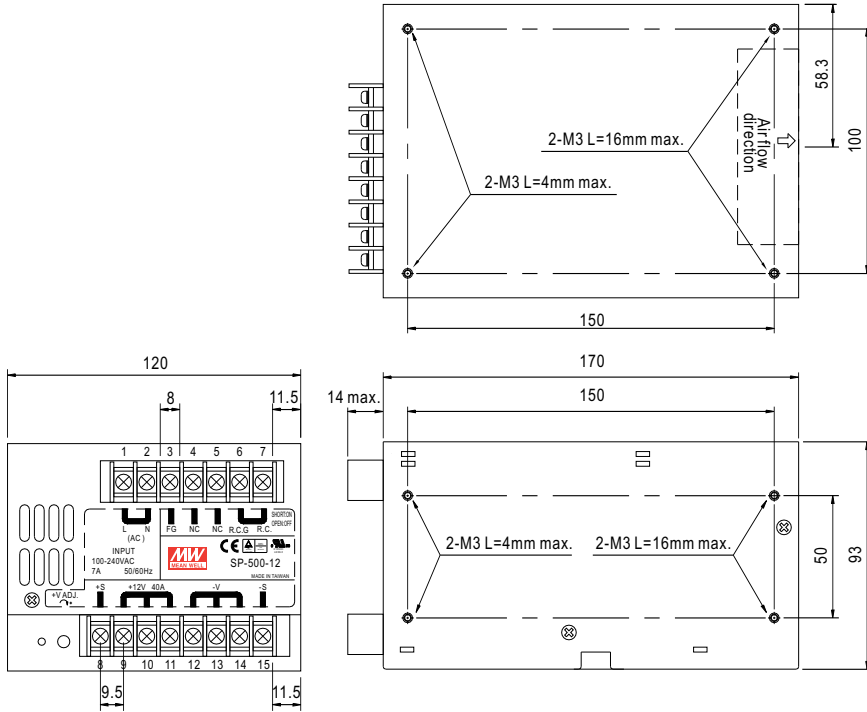


**SPECIFICATION**

<b>MODEL</b>		<b>SP-500-48</b>
<b>OUTPUT</b>	<b>DC VOLTAGE</b>	48V
	<b>RATED CURRENT</b>	10A
	<b>CURRENT RANGE</b>	0 ~ 10A
	<b>RATED POWER</b>	480W
	<b>RIPPLE &amp; NOISE (max.)</b> Note.2	300mVp-p
	<b>VOLTAGE ADJ. RANGE</b>	41 ~ 56V
	<b>VOLTAGE TOLERANCE</b> Note.3	±1.0%
	<b>LINE REGULATION</b>	±0.5%
	<b>LOAD REGULATION</b>	±0.5%
	<b>SETUP, RISE TIME</b>	1500ms, 50ms at full load
<b>HOLD UP TIME (Typ.)</b>	24ms at full load	
<b>INPUT</b>	<b>VOLTAGE RANGE</b> Note.5	88 ~ 264VAC    124 ~ 370VDC
	<b>FREQUENCY RANGE</b>	47 ~ 63Hz
	<b>POWER FACTOR (Typ.)</b>	PF>0.95/230VAC    PF>0.95/115VAC at full load
	<b>EFFICIENCY(Typ.)</b>	87%
	<b>AC CURRENT (Typ.)</b>	7A/115VAC    3.5A/230VAC
	<b>INRUSH CURRENT (Typ.)</b>	18A/115VAC    36A/230VAC
	<b>LEAKAGE CURRENT</b>	<3.5mA/240VAC
<b>PROTECTION</b>	<b>OVERLOAD</b>	105 ~ 135% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed
	<b>OVER VOLTAGE</b>	57.6 ~ 67.2V Protection type : Hiccup mode, recovers automatically after fault condition is removed
	<b>FAN CONTROL, O.T.P.</b>	RTH1 or RTH2 ≥ 50°C FAN ON, ≤ 45°C FAN OFF, ≥ 70°C output shutdown
<b>FUNCTION</b>	<b>REMOTE CONTROL</b>	RC+/RC-: Short = power on ; Open = power off
<b>ENVIRONMENT</b>	<b>WORKING TEMP.</b>	-10 ~ +50°C (Refer to output load derating curve)
	<b>WORKING HUMIDITY</b>	20 ~ 90% RH non-condensing
	<b>STORAGE TEMP., HUMIDITY</b>	-20 ~ +85°C, 10 ~ 95% RH
	<b>TEMP. COEFFICIENT</b>	±0.03%/°C (0 ~ 50°C)
	<b>VIBRATION</b>	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes
<b>SAFETY &amp; EMC</b> (Note 4)	<b>SAFETY STANDARDS</b>	UL60950-1, TUV EN60950-1, CCC GB4943( for 24V only) approved
	<b>WITHSTAND VOLTAGE</b>	I/P-O/P:3KVAC    I/P-FG:1.5KVAC    O/P-FG:0.5KVAC
	<b>ISOLATION RESISTANCE</b>	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH
	<b>EMI CONDUCTION &amp; RADIATION</b>	Compliance to EN55022 (CISPR22) Class B
	<b>HARMONIC CURRENT</b>	Compliance to EN61000-3-2,-3
	<b>EMS IMMUNITY</b>	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, light industry level, criteria A
<b>OTHERS</b>	<b>MTBF</b>	133.4K hrs min.    MIL-HDBK-217F (25°C)
	<b>DIMENSION</b>	170*120*93mm (L*W*H)
	<b>PACKING</b>	1.9Kg; 8pcs/15.5Kg/1.06CUFT
<b>NOTE</b>	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. 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 <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</p> <p>5. Derating may be needed under low input voltages. Please check the derating curve for more details.</p>	

**Mechanical Specification**

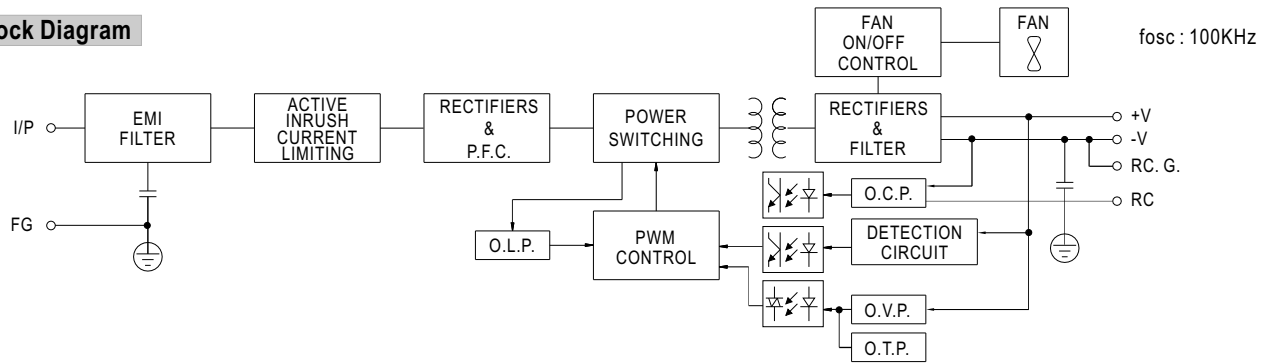
Case No. 910 Unit:mm



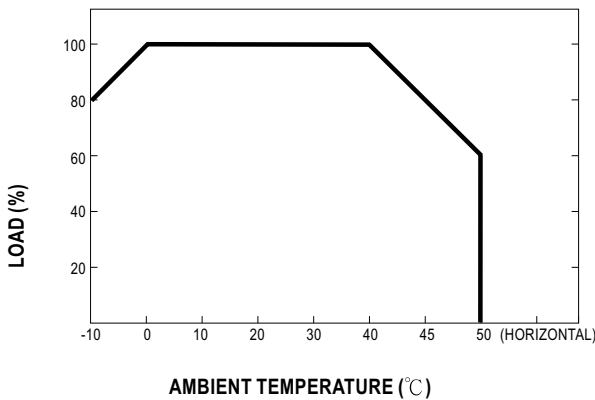
Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	7	R.C.
2	AC/N	8	+S
3	FG	9~11	DC OUTPUT +V
4,5	NC	12~14	DC OUTPUT -V
6	R.C.G	15	-S

**Block Diagram**



**Derating Curve**



**Output Derating VS Input Voltage**

