

### Features:

- Universal AC input / Full range with active PFC
- 5" x 3" footprint
- Medical safety approval: ANSI / AAMI ES 60601-1 / TUV EN 60601-1; IEC 60601-1 / MOPP
- 150W convection cooling and 250W with 23.5 CFM forced air
- Protection: Short circuit, Over load, Over voltage
- High operation temperature up to 70°C
- Built-in fan auxiliary Power
- Power OK signal
- Withstand 2G vibration test
- 3 years warranty



MODEL		MP-250-12	MP-250-15	MP-250-24	MP-250-48
Output	DC Voltage Range	12V	15V	24V	48V
	Rated Current	20.85A	16.67A	10.45A	5.25A
	Current Range (Convection)	0 ~ 12.5A	0 ~ 10A	0 ~ 6.25A	0 ~ 3.125A
	Current Range (23.5 CFM Fan)	0 ~ 20.85A	0 ~ 16.67A	0 ~ 10.45A	0 ~ 5.25A
	Rated Power (Convection)	150W	150W	150W	150W
	Rated Power (23.5 CFM Fan)	250.2W	250W	250.8W	252W
	Ripple & Noise (Max.)	120mVp-p	150mVp-p	240mVp-p	480mVp-p
	Voltage Adj. Range	±10%			
	Voltage Tolerance	±2.0%	±2.0%	±2.0%	±2.0%
	Line Regulation	±1.0%	±1.0%	±1.0%	±1.0%
	Load Regulation	±1.0%	±1.0%	±1.0%	±1.0%
	Setup, Rise Time	2000ms, 100ms / 230VAC, 3500ms, 100ms / 115VAC at full load			
Hold Up Time	>10ms / 230VAC, >10ms / 115VAC at full load				
Input	Voltage Range	90 ~ 264VAC, 127 ~ 373VDC			
	Frequency Range	47 ~ 63Hz			
	Efficiency (Typ.) at 230VAC	90%	90%	91%	91%
	AC Current (Typ.)	3.0A / 115VAC, 1.5A / 230VAC			
	Inrush Current (Typ.)	Cold Start 30A / 115VAC, 60A / 230VAC			
Leakage Current	For earth < 300uA / 264VAC, For patient < 100uA / 264VAC				
Protection	Over Load	Above 110% rated output power Protection type: latch-style (Recovery after reset AC power ON)			
	Over Voltage	115 ~ 140% rated output voltage Protection type: latch-style (Recovery after reset AC power ON)			
Environment	Working Temp.	-20 ~ 70°C (Refer to output load de-rating 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, period for 60min. each along X, Y, Z axes				
Safety & EMC	Safety Standards	Meets UL / cUL (ANSI / AAMI ES 60601-1; CAN / CSA-C22.2 No.60601-1); NFPA 99 Meets TUV (EN 60601-1; IEC 60601-1); MOPP approval			
	Withstand Voltage	I/P-O/P: 4KVAC, I/P-FG: 1.8KVAC, O/P-FG: 1.5KVAC			
	Isolation Resistance	I/P-O/P: 100M Ohms / 500VDC			
	EMI Conduction & Radiation	Certified EN 55011			
	Harmonic Current	Certified EN 61000-3-2; EN 61000-3-3			
EMS Immunity	Certified EN 60601-1-2; IEC 61000-4-2, 3, 4, 5, 6, 8, 11				
Others	MTBF	XXX K HRS Certified MIL-HDBK-217F			
	Cooling	Free Air convection for 150W, with 23.5 CFM Fan for 250W			
	Dimension (WxHxD)	76.2x39.6x127 mm / 3.00x1.43x5.00 inch			
	Packing	0.32 kg			
Note	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>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.</li> <li>3. Tolerance: includes set up tolerance, line regulation and load regulation.</li> <li>4. Line regulation is measured from low line to high line at rated load.</li> <li>5. Load regulation is measured from 0% to 100% rated load.</li> <li>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.</li> </ol>				

### Mechanical Specification:

Unit : mm / inch

AC Input Connector (CN1): JST B3P-VH or equivalent

Pin No.	Assignment	Mating Housing / Contact	
1	AC / N	JST VHR-3N or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC / L		

External Fan Power Connector (CN2): JST B2B-XH-A or equivalent

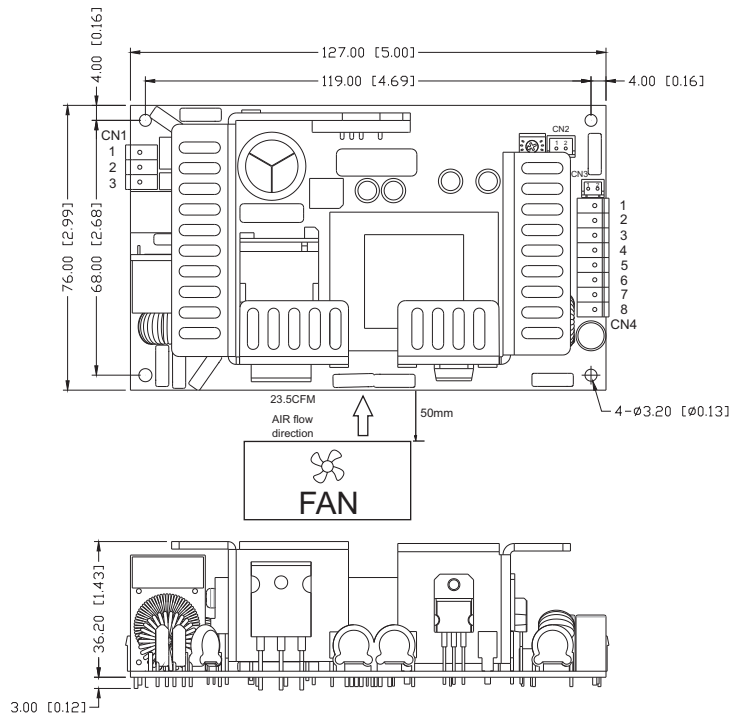
Pin No.	Assignment	Mating Housing / Contact	
1	+12V	JST SXH-001T-P0.6 or equivalent	JST XHP-2 or equivalent
2	GND		

Power OK Connector (CN3): JST B2B-PH-K-S or equivalent

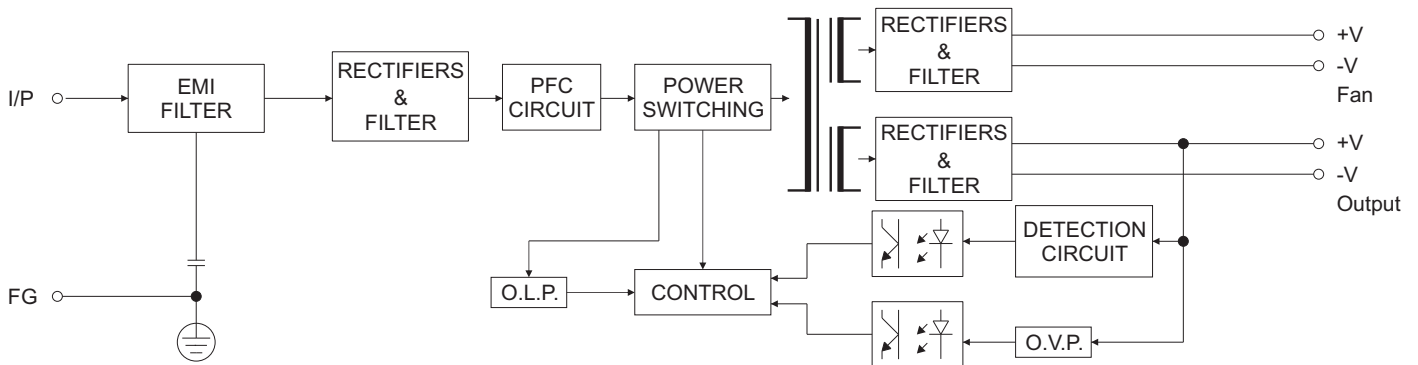
Pin No.	Assignment	Mating Housing / Contact	
1	P.OK	JST SPH-002T-P0.5S or equivalent	JST XHP-2 or equivalent
2	GND		

DC Output Connector (CN4): JST B6P-VH or equivalent

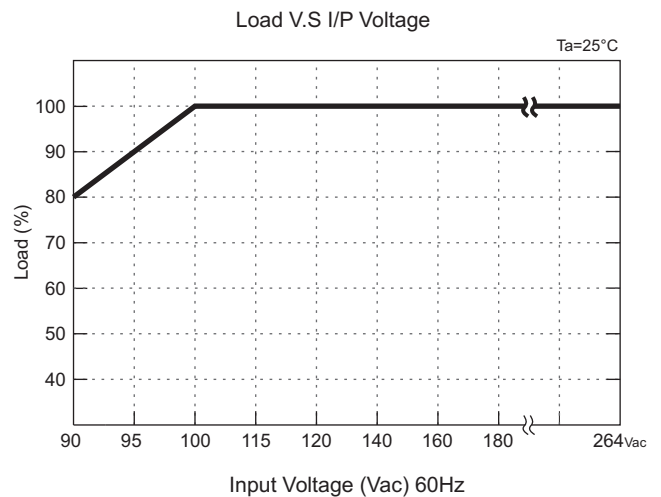
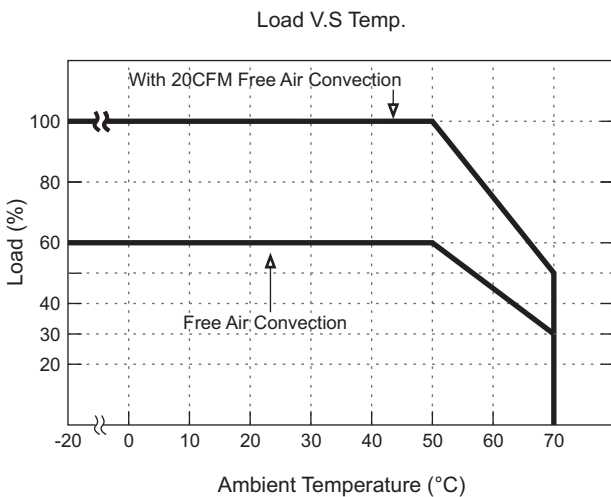
Pin No.	Assignment	Mating Housing / Contact	
5,6,7,8	+VO	JST VHR-6N or equivalent	JST SVH-41T-P1.1 or equivalent
1,2,3,4	-VO		



### Block Diagram:



### De-rating Curve:



## Function Description of CN3:

### 2.P-OK CONTROL

POK Signal use open drain mosfet control  
 MAX:30Vds,0.1A

