## MPM-815H:



## 

## 150 Watt Medical ATX Power Supply

## Features:

- 150 Watts Convection Cooled Operation
- Universal AC Input with Active PFC
- 5VSB / Power Good / Inhibit Functions
- ATX 12V V2.0 Compliant
- 2 Year Warranty


## INPUT:

Input Voltage Universal Input (90~264 VAC)
Input Frequency 47-63Hz
Inrush Current 60A @ 240 VAC Cold Start
Input Current 3 Amps Max Continuous
Input Protection Dual Fuse
Hold-Up Time 16 mS minimum
Leakage $300 \mu \mathrm{~A}$ max

## OUTPUT:

Adjustment Range See Output Table
Minimum Load None
Regulation See Output Table
Ripple \& Noise See Output Table
Overload Protection Auto-Recovery
Over Voltage 3.3 / 5 / 12Vout only (latching)
Short Circuit Protection Trip without damage \& auto-recovery

## STATUS \& CONTROL:

Power Good High = DC in Regulation
Power Fail Goes low $>1 \mathrm{~ms}$ before loss of regulation
5VSB Always Present and on when AC is present
Remote $0 \mathrm{n} / \mathrm{Off} \mathrm{P} / \mathrm{S}$ is on when pin is connected to ground
Fan Speed Thermal switch on secondary heatsink

## GENERAL:

Efficiency 75\% Typical
Operating Temperature $0-50^{\circ} \mathrm{C}$ Full Load (derate $2.5 \% /{ }^{\circ} \mathrm{C}$ up to $70^{\circ} \mathrm{C}$ max)
Storage Temperature $-20^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$
Over-Temp Protection Included
Cooling Convection Cooled
Operating Humidity $10-90 \%$ RH, Non-Condensing
Vibration $5 \sim 50 \mathrm{~Hz}$, acceleration $7.35 \mathrm{~m} / \mathrm{s}^{*} \mathrm{~s}$ on $X, Y$ and $Z$ Axis

## EMC:

Electrostatic Discharge EN61000-4-2, $\pm 4 \mathrm{KV}$ Contact / $\pm 8$ KV Air Discharge
Radiated Susceptibility EN61000-4-3, 26-1000MHz, 10V/M, 80\% AM
EFT / Bursts EN61000-4-4, $\pm 2 \mathrm{KV}$
Surges EN61000-4-5, $\pm 2$ KV Line-Earth, $\pm 1$ KV Line-Line
Conducted Immunity EN61000-4-6, $0.15-800 \mathrm{MHz}, 10 \mathrm{~V}, 80 \%$ AM
Voltage Dips EN61000-4-100, 95\% Dip \& 10ms, 30\% Dip \& 500ms
Voltage Interruptions EN61000-4-11, 95\% reduction, 5s
Fluctuations \& Flicker EN61000-3-3

## APPROVALS:

Emissions EN55011 / EN55022 "B"
FCC Part 15 Subject J Class B
Safety Approvals UL/cUL 60601-1
EN 60601-1
CE Mark (LVD)

## MPM-815H:

Ouput Specifications:

| Output <br> Voltage | Min. Output <br> Current | Rated Output <br> Current | Max. Output <br> Current | Line <br> Regulation | Load <br> Regulation | Ripple \& Noise <br> p-p | Initial Setting <br> Accuracy |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{+ 5 V}$ | 1 A | 11 A | 14 A | $\pm 1 \%$ | $\pm 2 \%$ | 50 mV | 5.05 V to 5.15 V |
| $\mathbf{+ 1 2 V}$ | 0 A | 5 A | 10 A | $\pm 1 \%$ | $\pm 4 \%$ | 100 mV | 11.6 V to 12.6 V |
| $\mathbf{- 1 2 V}$ | 0 A | 0.5 A | 1 A | $\pm 1 \%$ | $\pm 5 \%$ | 150 mV | -11.4 V to -12.6V |
| $\mathbf{+ 3 . 3 V}$ | 0 A | 7.5 A | 12 A | $\pm 1 \%$ | $\pm 4 \%$ | 50 mV | 3.20 V to 3.40V |
| $\mathbf{+ 5 V s b}$ | 0 A | 0.75 A | 1.5 A | $\pm 1 \%$ | $\pm 4 \%$ | 100 mV | 4.80 V to 5.20 V |

Note: 1) The maximum total combined output power on the +3.3 V and +5 V rails is 90 W .
2) Measured by a 20 MHz bandwidth limited oscilloscope and the each output is connected with a $10 \mu \mathrm{~F}$ Electrolytic Capacitor and a $0.1 \mu \mathrm{~F}$ Ceramic Capacitor.
3) Initial Setting Accuracy is at Input 110VAC and all output at $60 \%$ rated load.
4) The total DC continuous power shall be kept with 150 W at input voltage at $110-264 \mathrm{VAC}$. With input voltage $90-109 \mathrm{VAC}$ the total DC continuous power shall be kept with 120W max. The maximum total combined output power on the +3.3 V and +5 V rails is 90 W . On condition of with the option cover, the maximum 150 W is at $30^{\circ} \mathrm{C}$ environment temperature (Please see part 6 of operating temperature).

| Connector | CN1 --- AC input: CN3 --- DC output: CN4 --- Fan output: CN5 --- PG/PF: CN6 --- PS ON/OFF: CN7 --- +5Vsb output: |  | 3 Positions Terminal blocks. 8 Positions Terminal blocks. Molex 5045-02A or equivalent Molex 5045-02A or equivalent Molex 5045-02A or equivalent Molex 5045-02A or equivalent |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pin Assignment | CN1 | Pin | 1. L | 2. N | 3. GND |  |
|  | CN3 | Pin | 1. -12 V | 2. GND | 3. +3.3 V | 4. GND |
|  |  |  | 5. +5 V | 6. +5 V | 7. +12 V | 8. GND |
|  | CN4 | Pin | 1. +12 V | 2. GND |  |  |
|  | CN5 | Pin | 1. +5 V | 2. GND |  |  |
|  | CN6 | Pin | 1. +5 V | 2. GND |  |  |
|  | CN7 | Pin | 1. +5 Vsb | 2. GND |  |  |



