

## 72 ~ 110 Watts Single/Dual/Triple/Quad Output Open Frame Type for Medical



### FEATURES

♦ Small size, light weigh ♦ EN55011 & FCC Class B ♦ OVP & OCP protection ♦ Input surge current protection ♦ Low safety ground leakage current

### SPECIFICATIONS

Input Voltage Range ..... 85~264VAC  
Input Current (rms) ..... 3.2A Max.  
Efficiency ..... 70% min. on single output model with  $V_o \geq 12V$ , 65% min. on the others  
Earth leakage/Touch current ..... 220uA/100uA max. @ 264VAC/63Hz  
Operating Temperature ..... -10°C ~ +70°C  
(derated linearly from 100% load @ 50°C to 50% load @ 70°C)  
Storage Temperature ..... -40°C ~ 85°C

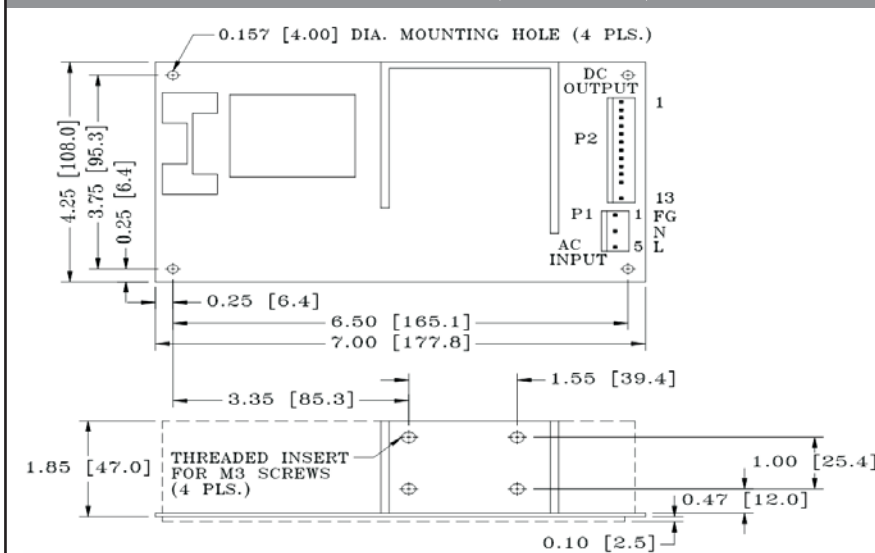
Relative Humidity ..... 5% to 95% non-condensing  
Protections ..... OVP, OCP Protection  
Withstand Voltage ..... I/P-O/P: 5600VDC  
Cooling ..... 72-110 watts continuous output power at 25 CFM forced air cooling  
60-80 watts at convection cooling  
Safety Standard.....UL ES60601-1, CSA C22.2 No. 60601-1, CE  
EMC Standard ..... EN55011 Class B  
EN61000-3-2,-3, EN61000-4-2, 3, 4, 5, 6, 8, 11

All Specifications are Typical at Nominal Line, full Load and 25°C. Unless Otherwise Noted.

Model Number	Output #1				Output #2					Output #3				Output #4				Max. Output Power
	V1	Imin	Imax	Tol.	V2	Imin	Imax	Ipeak	Tol.	V3	Imin	Imax	Tol.	V3	Imin	Imax	Tol.	
FPM110-S033	3.3V	0A	22.0A	±3%														60W/72W
FPM110-S050	5.0V	0A	22.0A	±3%														80W/110W
FPM110-S120	12V	0A	9.0A	±2%														80W/110W
FPM110-S150	15V	0A	7.5A	±2%														80W/110W
FPM110-S240	24V	0A	4.5A	±2%														80W/110W
FPM110-S300	30V	0A	3.6A	±3%														80W/110W
FPM110-D023	+5.1V	0A	10.0A	±3%	+12V	0A	5.0A	9.0A	±3%									80W/110W
FPM110-T031	+5.1V	0A	10.0A	±3%	+12V	0A	5.0A	9.0A	±3%	-12V	0A	1A	±4%					80W/110W
FPM110-T032	+5.1V	0A	10.0A	±3%	+15V	0A	4.0A	7.5A	±3%	-15V	0A	1A	±4%					80W/110W
FPM110-Q040	+5.1V	0A	10.0A	±3%	+12V	0A	5.0A	9.0A	±3%	-12V	0A	1A	±4%	-5V	0.0A	1.0A	±4%	80W/110W
FPM110-Q041	+5.1V	0A	10.0A	±3%	+15V	0A	4.0A	7.5A	±3%	-15V	0A	1A	±4%	+24V	0.0A	1.0A	±4%	80W/110W
FPM110-Q042	+5.1V	0A	10.0A	±3%	+12V	0A	5.0A	9.0A	±3%	-12V	0A	1A	±4%	+12V	0.0A	1.0A	±4%	80W/110W
FPM110-Q045	+5.1V	0A	10.0A	±3%	+12V	0A	5.0A	9.0A	±3%	-12V	0A	1A	±4%	+24V	0.0A	1.0A	±4%	80W/110W
FPM110-Q045-1	+5.1V	2A	10.0A	±3%	+12V	0A	5.0A	9.0A	±3%	-12V	0A	1A	±4%	+24V	1.5A	3.0A	±4%	80W/110W
FPM110-Q045-2	+5.1V	0A	10.0A	±3%	+24V	0A	3.0A	5.0A	±3%	-12V	0A	1A	±4%	-12V	0.0A	1.0A	±4%	80W/110W
FPM110-Q046	+5.1V	0A	10.0A	±3%	+15V	0A	4.0A	7.5A	±3%	-15V	0A	1A	±4%	-5V	0.0A	1.0A	±4%	80W/110W

\* The output #1 of model FPM110-Q045-1A needs a minimum current of 2A to support the other outputs at their maximum rated load.  
\* 110 watts maximum at 25 CFM forced air cooling or 80 watts maximum at convection cooling, except model FPM110-S033 which is rated at 60 watts maximum at convection cooling or 72 watts maximum at 25 CFM forced air cooling.  
\* Peak output current with 10% maximum duty cycle for less than 60 seconds. Total peak power must not exceed 130 watts.  
\* All models may be operated at no-load. At no-load, output voltage tolerance increases to 10%.  
\* Ripple and noise is maximum peak to peak voltage value measured at output within 20 MHz bandwidth, at rated line voltage and output load ranges, and with a 10  $\mu$ F tantalum capacitor in parallel with a 0.1  $\mu$ F ceramic capacitor across the output.

### MECHANICAL DRAWING (Unit: mm)



#### OUTPUT CONNECTOR PIN CHART

PIN NO	SINGLE	DUAL	TRIPLE	QUAD
1,2,3	+V1	V1	V1	V1
4,5	V1 return	Common Return	Common Return	Common Return
6,7	V1 return	Common Return	Common Return	Common Return
8,9	+V1	V2	V2	V2
10	PFD	PFD	PFD	PFD
11	N.C.	N.C.	V3	V3
12	KEY	KEY	KEY	KEY
13	N.C.	N.C.	N.C.	V4

Connector:

P1: Molex header 09-65-2058 or equivalent, mating with Molex housing 09-50-1051 or equivalent.  
P2 mates with Molex 09-50-3131 or equivalent.

Note

- The copper pad of the mounting hole near P1 is for system grounding through a metallic stand-off to system chassis.
- Dimensions in inches(mm)
- Tolerance: 0.02 [0.5] max.
- 1.Weight : 640 grams (1.408 lbs.)