

AC-DC Medical

25 Watts PBM25 Series



THE **XP**ERTS IN POWER

Small Size 2.50" x 4.25" x 0.96"

Low Leakage Current

Medical Safety Agency Approvals

Both Line and Neutral Fused

Meets Class B, EN55011 Conducted

Fixed Switching Frequency

Specification

Input

Input Voltage	• 85-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• 0.7 A (rms) at 115 VAC, 0.4 A (rms) at 230 VAC
Inrush Current	• 10 A max at 115 VAC, 25 A max at 230 VAC
Earth Leakage Current	• 90 μ A max at 115 VAC 60 Hz 150 μ A max at 230 VAC 50 Hz

Output

Output Voltage	• 5.1 to 28 VDC, See Table
Output Power	• 25/28 Watts, See Table
Minimum Load	• No minimum for single outputs models See Table for multi outputs models
Start Up Delay	• 3 s max
Start Up Rise Time	• 12 ms
Hold up Time	• 10 ms minimum at 110 VAC
Initial Set Accuracy	• $\pm 1\%$
Line Regulation	• $\pm 0.5\%$ max at full load
Total Regulation	• See Table
Transient Response	• 4% max deviation, 500 μ s recovery time for a 25% load change
Ripple & Noise	• $\pm 1\%$ max pk-pk (See Note 1)
Overvoltage Protection	• Provided on output 1 only; set at 112-132% of its nominal output voltage
Overcurrent Protection	• 125-200% with auto recovery
Short Circuit Protection	• Trip & restart with auto recovery
Temperature Coefficient	• $\pm 0.04\%/^{\circ}\text{C}$

General

Efficiency	• 68% minimum for 5 V & multi output models, 70% minimum all others
Isolation	• 4000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency	• 42 KHz ± 5 KHz
MTBF	• 500,000 hrs per min MIL-HDBK-217F
Size	• 4.25 x 2.50 x 0.96" 107.95 x 63.50 x 24.38 mm
Weight	• Single output models 163 g, Multi output models 175 g

Environmental

Operating Temperature	• 0 $^{\circ}\text{C}$ to +70 $^{\circ}\text{C}$, derate linearly from 100% load at +50 $^{\circ}\text{C}$ to 50% load at +70 $^{\circ}\text{C}$
Storage Temperature	• -40 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$
Cooling	• Convection cooled
Relative Humidity	• 5-95%, non-condensing
Operating Altitude	• 3000m
Shock	• 20 G in 3 directions, 3 times each
Vibration	• 0.15mm over 10-55Hz and 1 octave/min. 3 axes for 30 min

EMC & Safety

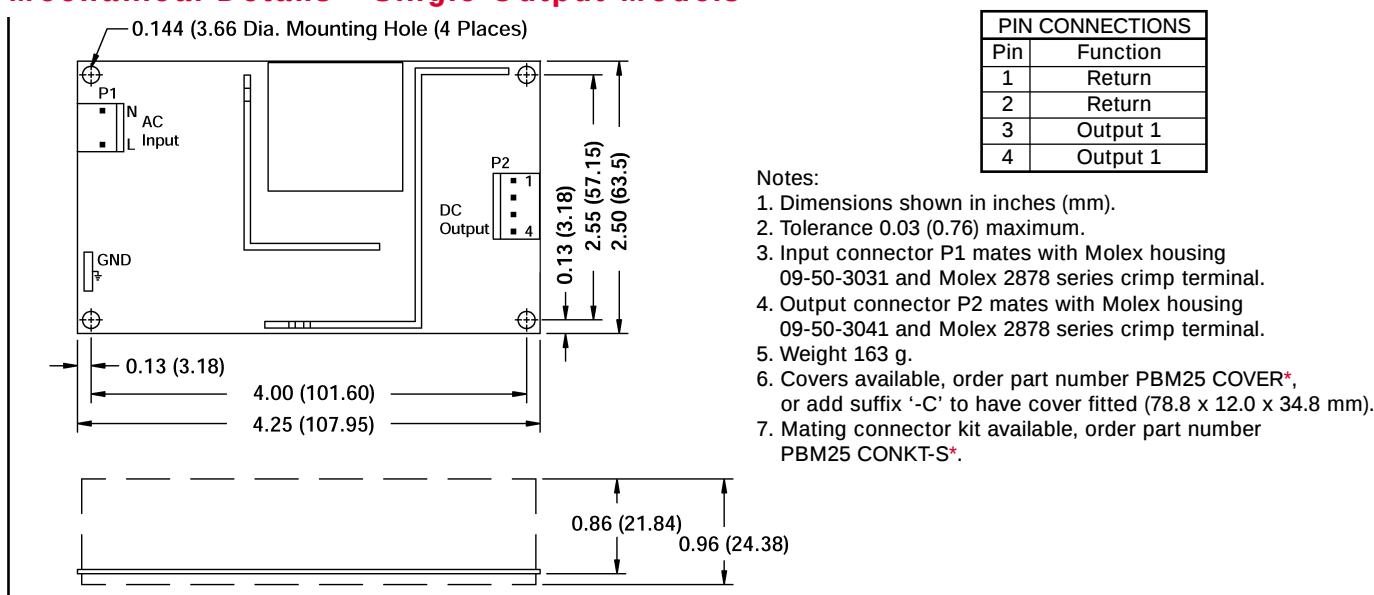
EMC	• EN55011 (CISPR11) Class B & FCC Class B conducted
ESD	• EN61000-4-2 Level 2 Perf Criteria A
Radiated Immunity	• EN61000-4-3 3 V/m Perf Criteria A
EFT/Burst	• EN61000-4-4 Level 3 Perf Criteria A
Surge	• EN61000-4-5 Level 3 Perf Criteria A
Safety Approvals	• UL2601-1, CSA C22.2 No 601.1, EN60601-1, IEC 601-1

OUTPUT VOLTAGE & CURRENT RATINGS													PBM25
Output Power Maximum	Output 1				Output 2				Output 3				Model Number
	Vnom	Imin	Imax	Reg. ⁽²⁾	Vnom	Imin	Imax	Reg. ⁽²⁾	Vnom	Imin	Imax	Reg. ⁽²⁾	
28 W	5.1 V	0.0 A	5.5 A	2%									PBM25US05
28 W	12.0 V	0.0 A	2.3 A	1%									PBM25US12*
28 W	15.0 V	0.0 A	1.9 A	1%									PBM25US15*
28 W	24.0 V	0.0 A	1.2 A	1%									PBM25US24*
28 W	28.0 V	0.0 A	1.0 A	1%									PBM25US28*
25 W	5.1 V	0.4 A	2.5 A	3%	+12 V	0.2 A	1.5 A	5%					PBM25UD01*
25 W	5.1 V	0.4 A	2.5 A	3%	+24 V	0.1 A	0.8 A	5%					PBM25UD02*
25 W	5.1 V	0.4 A	2.5 A	3%	+12 V	0.2 A	1.5 A	5%	-12 V	0.05 A	0.2 A	4%	PBM25UT01*
25 W	5.1 V	0.4 A	2.5 A	3%	+15 V	0.1 A	1.0 A	5%	-15 V	0.05 A	0.2 A	4%	PBM25UT02*
25 W	5.1 V	0.4 A	2.5 A	3%	+24 V	0.1 A	0.8 A	5%	-12 V	0.05 A	0.2 A	4%	PBM25UT03*

Notes

1. Ripple and noise measured with 20 MHz bandwidth with 10 μ F electrolytic in parallel with 0.1 μ F ceramic.
 2. Regulation includes line and load regulation and set point accuracy. All multiple output models may be operated at no-load, but output regulation will increase to 10% on outputs V2 & V3.
- * Also available from Farnell InOne, see pages 350 & 351.

Mechanical Details - Single Output Models



Mechanical Details - Multi Output Models

