

30 Watts

PDM30 Series



- CEC2008 & EISA2007 Compliant ≥ 9 V
- Worldwide Medical Approvals
- Class II Construction
- Single Outputs from 5 V to 24 V
- High Efficiency
- Operation to $+60$ °C
- 3 Year Warranty

Specification

Input

Input Voltage	• 80-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• 0.6 A rms max
Inrush Current	• 50 A max at 264 VAC, cold start 25 °C
Power Factor	• Meets EN61000-3-2, Class A
Input Protection	• Fitted with a T2 A/250 VAC fuse in live line

Output

Output Voltage	• See table
Initial Set Accuracy	• $\pm 2\%$ set at 60% load
Minimum Load	• No minimum load required
Start Up Delay	• 3 s max
Start Up Rise Time	• 2 ms
Hold Up Time	• 16 ms typical at 115 VAC
Line Regulation	• $\pm 1\%$
Load Regulation	• See tables
Transient Response	• 5% max deviation recovering to within 1% within 500 μ s for 50% load change
Ripple & Noise	• 1% max, 20 MHz bandwidth see note 1
Overvoltage Protection	• See table
Overload Protection	• 120-150%
Short Circuit Protection	• Trip & restart (hiccup mode), auto-recovery
Temperature Coefficient	• $\pm 0.05\%/^{\circ}\text{C}$

General

Efficiency	• 82% minimum
Isolation	• 4000 VAC Input to Output
Switching Frequency	• 70 kHz typical
Power Density	• 3 W/Inch ³
MTBF	• 300 kHrs to MIL-HDBK-217 at 25 °C, GB

Environmental

Operating Temperature	• 0 °C to $+60$ °C (see derating curves)
Cooling	• Convection-cooled
Operating Humidity	• 5-95% non-condensing
Storage Temperature	• -20 °C to $+85$ °C
Operating Altitude	• 3000 m
Vibration	• 5-500 Hz at 3 g for 10 mins on each axis
Shock	• 30 g with 18 ms half sine wave, 3 times on each axis

EMC & Safety

Emissions	• EN55011 Level B conducted & radiated
Harmonic Currents	• EN61000-3-2, Class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2 Level 3, Perf Criteria A
Radiated Immunity	• EN61000-4-3 Level 2, Perf Criteria A
EFT/Burst	• EN61000-4-4, Level 3, Perf Criteria A
Surge	• EN61000-4-5 Level 3, Perf Criteria A
Conducted Immunity	• EN61000-4-6 Level 3, Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 70% U_T for 500 ms, 40% U_T for 100 ms, $<5\%$ U_T for 5000 ms Perf criteria A, B, B
Safety Approvals	• UL60601-1, EN60601-1, IEC60601-1, CE Mark

Models and Ratings

PDM30 XP

Output Voltage	Output Current	OVP Range	Efficiency	Regulation		Model Number
				Line ⁽²⁾	Load ⁽³⁾	
5 V	4.00 A	6.45-7.14 V	74%	±1%	±6%	PDM30US05†^
9 V	3.00 A	10.5-11.6 V	81%	±1%	±4%	PDM30US09†^
12 V	2.50 A	14.3-15.8 V	82%	±1%	±3%	PDM30US12†^
15 V	2.00 A	17.1-18.9 V	83%	±1%	±3%	PDM30US15†^
18 V	1.65 A	20.9-23.1 V	83%	±1%	±2%	PDM30US18†^
24 V	1.25 A	25.7-28.4 V	83%	±1%	±2%	PDM30US24†^

Notes

1. Ripple and Noise is measured using a 0.1 μ F ceramic and 10 μ F electrolytic capacitor, 20 MHz bandwidth.

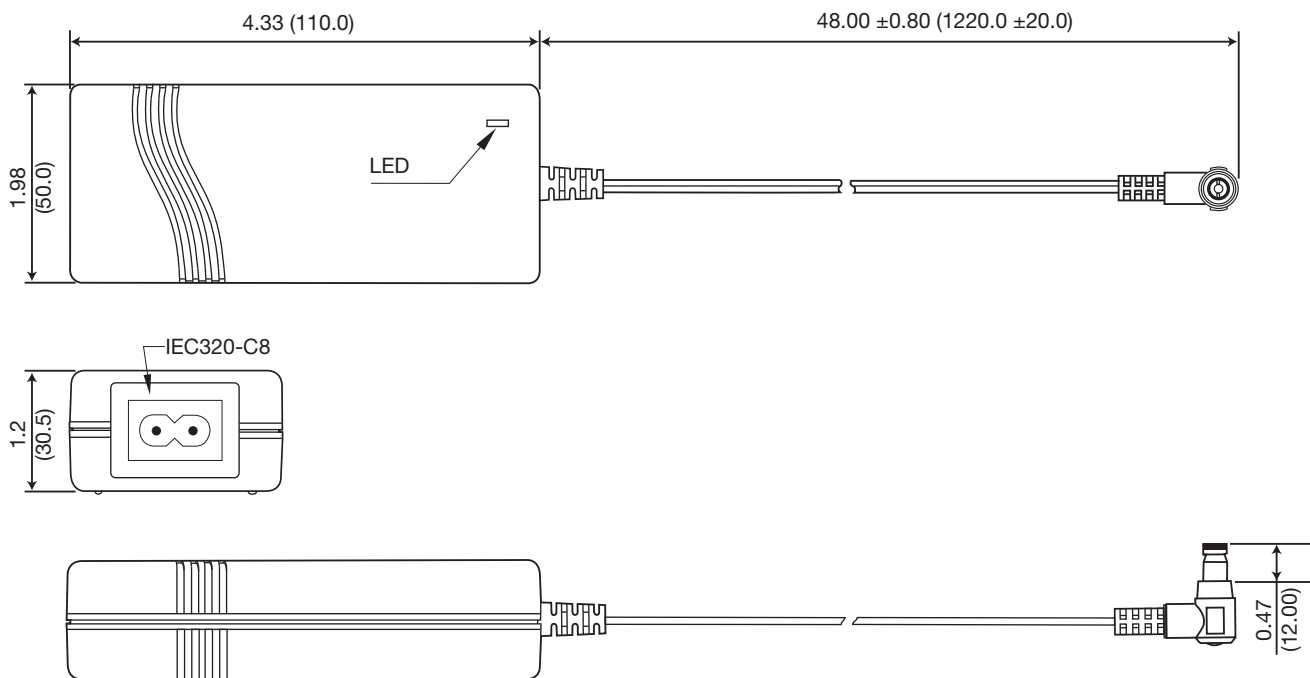
2. Line regulation is measured from 100 VAC to 240 VAC with full load.

3. Load regulation is measured from 20% to 100% full load (60% $\pm$ 40% full load).

† Available from Farnell. See pages 266-269.

^ Available from Newark. See pages 270-272.

Mechanical Details



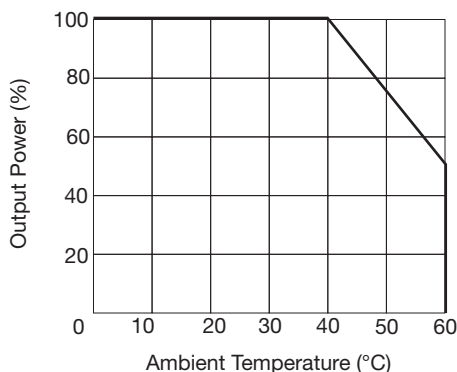
Output connector is right angle jack 0.22 x 0.10 x 0.47 (5.5 x 2.5 x 12.0), center positive.

Weight: 0.49 lbs (220 g). Case tolerance: $\pm$ 0.02 ($\pm$ 0.5)

All dimensions in inches (mm).

Derating Curves

5 V, 9 V & 12 V Models



15 V, 18 V & 24 V Models

