

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 | • 90-264 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

| 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†^ |

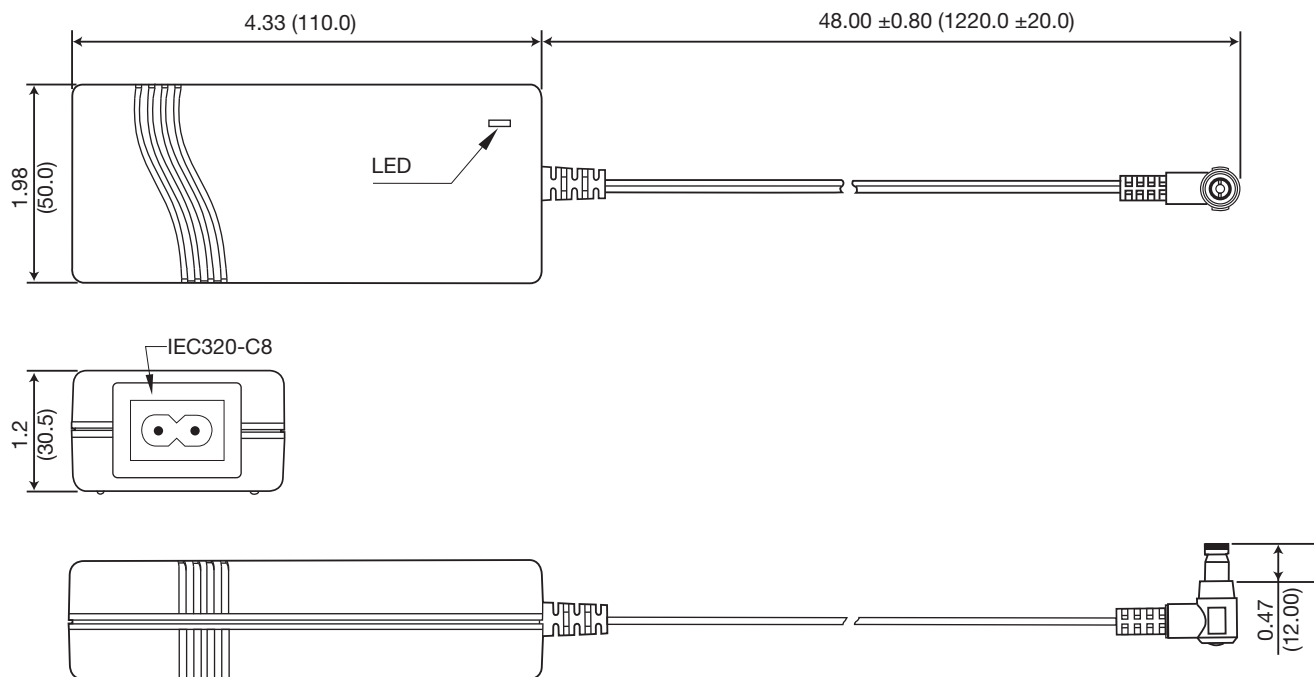
Notes

1. Ripple and Noise is measured using a 0.1 μF ceramic and 10 μF 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% ±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: ±0.02 (±0.5)
 All dimensions in inches (mm).

Derating Curves

