

**Less than .35" Profile**

**Industry Standard Footprints**

**Wide Input Range 2:1**

**Wave Solderable**

**Agency Approved**

**High Density**

**12, 24 & 48V Inputs**

**2 Year Warranty**

**Telecom Compliant**

Lambda's isolated PM Series single, dual and triple output DC-DC converters are designed specifically for telecom, datacom and computer applications, with 12V, 24V and 48V inputs. They are the only converters which meet all the safety agency requirements for these markets, including Bellcore and ETSI.

The PM Series uses 100% SMT technology, eliminating point to point wiring - the largest source of potential quality problems in DC-DC converters. Their highly automated continuous flow production line is located in North America, providing the industry's fastest delivery for production quantities - only 4 weeks from confirmed order to shipment.

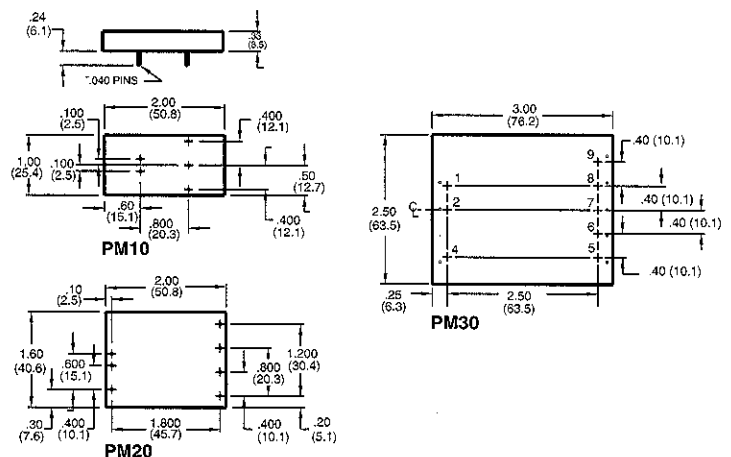
When you compare features, specifications and reliability, the PM Series is the clear choice for distributed power applications.

## Similar products

|                  |                         | Page |
|------------------|-------------------------|------|
| <b>SM Series</b> | Surface Mountable       | 78   |
| <b>RM Series</b> | Ultra High Efficiency   | 80   |
| <b>PP Series</b> | Less than 10W, 5V Input | 74   |

|                                       |                                                                                                                                                                |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DC Input</b> .....                 | 9-18V on 12V models;<br>18-36V on 24V models.<br>36-75V on 48V models.                                                                                         |
| <b>Transient Response</b> .....       | 2.0% deviation, recovery to 1.0% of final value in 1ms. Refers to 25% load step.                                                                               |
| <b>Input Line Disturbances</b> .....  | 12V input models 25V for 100ms. 24V input models 50V for 100ms.<br>48V input models 100V for 100ms and ETSI Standard ETS 300132 (100V, 10 joules pulse).       |
| <b>No Load Input Power</b> .....      | 0.4W.                                                                                                                                                          |
| <b>Inrush Current Limiting</b> .....  | All models meet the ETSI-300-132 requirements for inrush current less than 50A peak.                                                                           |
| <b>EMI</b> .....                      | 24/48V input models meet EN55022 (Level B), FCC Part 15 (Level B), ANSI 63.12-1987 (as called out in Bellcore TA-NWT-001089 Issue 2) with an external filter.  |
| <b>Output Voltage Accuracy</b> ...    | ±1% single output. ±1.5% dual output.                                                                                                                          |
| <b>Output Voltage Adj Range</b> ..    | PM15, 20 & 30 main outputs ±10% via TRM terminal.                                                                                                              |
| <b>Line Regulation</b> .....          | 0.2% for single and dual output, 3.0% (typical) on auxiliary outputs of triple output.                                                                         |
| <b>Load Regulation</b> .....          | 1.0% (typical) for single and main outputs, 8% (typical) aux. output of triple output models from 25% to 100% load, and with greater than 5W main output load. |
| <b>Ripple and Noise</b> .....         | 75mV pk-pk on 3V & 5V units.<br>100mV pk-pk on 12V, 15V single & dual output units.<br>120mV pk-pk on auxiliary outputs of triple output units.                |
| <b>Start Up</b> .....                 | Within 200ms after application of nominal input voltage.                                                                                                       |
| <b>Overshoot</b> .....                | No output overshoot at turn-on, turn-off or power failure.                                                                                                     |
| <b>Overvoltage Protection</b> .....   | Overvoltage protection clamps the output to a predetermined level.                                                                                             |
| <b>Short Circuit Protection</b> ..... | Continuous on main output only of all models. Aux. outputs: 30 ms. max.                                                                                        |
| <b>Cooling</b> .....                  | Convection allows full O/P rating.                                                                                                                             |
| <b>Operating Temperature Range</b>    | -40°C to +70°C.                                                                                                                                                |
| <b>Altitude</b> .....                 | 10,000 ft. - maximum operating.<br>45,000 ft. - storage.                                                                                                       |
| <b>Storage Temperature</b> .....      | -40°C to +105°C.                                                                                                                                               |
| <b>Fungus Proofing</b> .....          | Units are inherently fungus inert.                                                                                                                             |
| <b>Temperature Coefficient</b> ....   | ±0.015% per °C.<br>±0.03% per °C. on auxiliary output of triple output models                                                                                  |
| <b>Humidity</b> .....                 | 5% to 95% (non-condensing).                                                                                                                                    |
| <b>Isolation Resistance</b> .....     | 10MΩhm.                                                                                                                                                        |
| <b>Isolation Voltage</b> .....        | Input to Output: 900VAC, 1500VDC on 48V models. 500VAC, 700VDC on 12V and 24V models.                                                                          |
| <b>Thermal Cycling</b> .....          | 1hr. @ -25°C ramped to 1hr. @ +25°C, ramped to 1hr. @ +100° C.                                                                                                 |
| <b>Vibration and Shock</b> .....      | 2.5G RMS, 10Hz-50Hz, random vibration, 10 minutes per axis.                                                                                                    |
| <b>Remote On/Off</b> .....            | PM15, 20 & 30: High (open) enables unit, Low (short) shuts operation down.                                                                                     |
| <b>Safety Agency Approval</b> .....   | UL, CSA, EN60950 and CE Mark.                                                                                                                                  |
| <b>Warranty</b> .....                 | 2 years.                                                                                                                                                       |

| VOLTAGE (V)           | CURRENT (A) | POWER (W) | 12V INPUT     | MODEL 24V INPUT | 48V INPUT     |
|-----------------------|-------------|-----------|---------------|-----------------|---------------|
| <b>Single Outputs</b> |             |           |               |                 |               |
| 3.3                   | 1.27        | 4.2       | PM05-12S03    | PM05-24S03      | PM05-48S03    |
| 3.3                   | 2.55        | 8.4       | PM10-12S03    | PM10-24S03      | PM10-48S03    |
| 3.3                   | 3.75        | 12.4      | PM15-12S03    | PM15-24S03      | PM15-48S03    |
| 3.3                   | 5.00        | 16.5      | PM20-12S03    | PM20-24S03      | PM20-48S03    |
| 3.3                   | 7.50        | 24.75     | PM30-12S03    | PM30-24S03      | PM30-48S03    |
| 5.0                   | 1.00        | 5         | PM05-12S05    | PM05-24S05      | PM05-48S05    |
| 5.0                   | 2.00        | 10        | PM10-12S05    | PM10-24S05      | PM10-48S05    |
| 5.0                   | 3.00        | 15        | PM15-12S05    | PM15-24S05      | PM15-48S05    |
| 5.0                   | 4.00        | 20        | PM20-12S05    | PM20-24S05      | PM20-48S05    |
| 5.0                   | 6.00        | 30        | PM30-12S05    | PM30-24S05      | PM30-48S05    |
| 12.0                  | 0.42        | 5         | PM05-12S12    | PM05-24S12      | PM05-48S12    |
| 12.0                  | 0.83        | 10        | PM10-12S12    | PM10-24S12      | PM10-48S12    |
| 12.0                  | 1.25        | 15        | PM15-12S12    | PM15-24S12      | PM15-48S12    |
| 12.0                  | 1.67        | 20        | PM20-12S12    | PM20-24S12      | PM20-48S12    |
| 12.0                  | 2.50        | 30        | PM30-12S12    | PM30-24S12      | PM30-48S12    |
| 15.0                  | 0.33        | 5         | PM05-12S15    | PM05-24S15      | PM05-48S15    |
| 15.0                  | 0.67        | 10        | PM10-12S15    | PM10-24S15      | PM10-48S15    |
| 15.0                  | 1.00        | 15        | PM15-12S15    | PM15-24S15      | PM15-48S15    |
| 15.0                  | 1.33        | 20        | PM20-12S15    | PM20-24S15      | PM20-48S15    |
| 15.0                  | 2.00        | 30        | PM30-12S15    | PM30-24S15      | PM30-48S15    |
| <b>Dual Outputs</b>   |             |           |               |                 |               |
| ±12                   | 0.21        | 5         | PM05-12D12    | PM05-24D12      | PM05-48D12    |
| ±12                   | 0.42        | 10        | PM10-12D12    | PM10-24D12      | PM10-48D12    |
| ±12                   | 0.63        | 15        | PM15-12D12    | PM15-24D12      | PM15-48D12    |
| ±12                   | 0.83        | 20        | PM20-12D12    | PM20-24D12      | PM20-48D12    |
| ±12                   | 1.25        | 30        | PM30-12D12    | PM30-24D12      | PM30-48D12    |
| ±15                   | 0.167       | 5         | PM05-12D15    | PM05-24D15      | PM05-48D15    |
| ±15                   | 0.33        | 10        | PM10-12D15    | PM10-24D15      | PM10-48D15    |
| ±15                   | 0.50        | 15        | PM15-12D15    | PM15-24D15      | PM15-48D15    |
| ±15                   | 0.67        | 20        | PM20-12D15    | PM20-24D15      | PM20-48D15    |
| ±15                   | 1.00        | 30        | PM30-12D15    | PM30-24D15      | PM30-48D15    |
| <b>Triple Outputs</b> |             |           |               |                 |               |
| 3.3, ±12 7, ±1        | 30          |           | PM30-12T03-12 | PM30-24T03-12   | PM30-48T03-12 |
| 5, ±12 5, ±1          | 30          |           | PM30-12T05-12 | PM30-24T05-12   | PM30-48T05-12 |



NOTE: DIMENSIONS ARE IN INCHES EXCEPT DIMENSIONS ( ) ARE IN MM.