

# UM500 SERIES

## 10 to 12 Watt DC-DC Converters

- ◆ **High Performance**
- ◆ **60% Efficiency**
- ◆ **Regulated Outputs**
- ◆ **Pi Input Filter**
- ◆ **Six-Sided Shield**

### SPECIFICATIONS

All specifications are typical at nominal line, full load and 25°C unless otherwise noted.

### OUTPUT SPECIFICATIONS

|   |               |
|---|---------------|
| Voltage Accuracy .....                  | ± 1.0% max.   |
| Voltage Balance, Dual Output .....      | ± 0.5% max.   |
| Temperature Coefficient                 |               |
| Single Output .....                     | ± 0.02%/°C    |
| Dual Output .....                       | ± 0.01%/°C    |
| Ripple and Noise, 20MHz BW <sup>1</sup> |               |
| Single Output .....                     | 50mV P-P max. |
| Dual Output .....                       | 35mV P-P max. |
| Short Circuit Protection .....          | Current Limit |
| Line Regulation .....                   | 0.2%          |
| Load Regulation .....                   | 0.5%          |

### GENERAL SPECIFICATIONS

|                                 |   |
|---------------------------------|---|
| Efficiency .....                | 60%   |
| Isolation Voltage .....         | 500 VDC min.                                    |
| Isolation Capacitance .....     | 100pF   |
| Isolation Resistance .....      | 10 <sup>8</sup> Ohms min.                       |
| Switching Frequency .....       | 20KHz min.                                      |
| Operating Temperature Range     |   |
| Ambient, None Derating .....    | -25°C to +71°C                                  |
| Cooling .....                   | Free Air Convection                             |
| Storage Temperature Range ..... | -40°C to +100°C                                 |
| EMI/RFI .....                   | Six-Sided Continuous Shield                     |
| Dimensions .....                | 3.5*2.5*0.88 inches<br>(88.9*63.5*22.4mm)       |
| Case Material .....             | Black-Coated Copper with<br>Non-Conductive Base |
| Weight .....                    | 200g  |

| Input Voltage | 60% FL      | 80% FL     | 100% FL     |
|---------------|-------------|------------|-------------|
| 5V            | 4.4- 6.5V   | 4.5- 6.0V  | 4.65- 5.5V  |
| 12V           | 10.56-15.6V | 10.8-14.4V | 11.16-13.2V |
| 24V           | 21.12-31.2V | 21.6-28.8V | 22.32-26.4V |
| 28V           | 24.64-36.4V | 25.2-33.6V | 26.04-30.8V |
| 48V           | 42.24-62.4V | 43.2-57.6V | 44.64-52.8V |

### INPUT SPECIFICATIONS

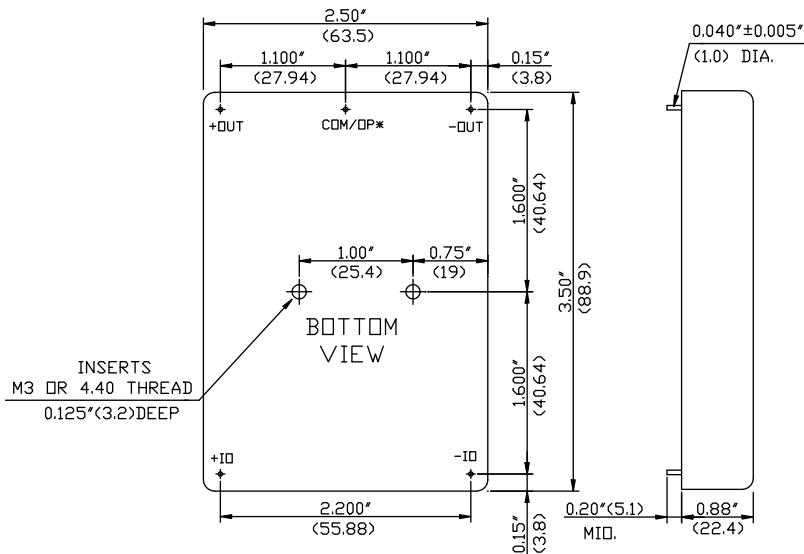
|                           |            |
|---------------------------|------------|
| Input Voltage Range ..... | See Table  |
| Input Filter .....        | Pi Network |

### NOTES:

1. Measured with 0.1uF ceramic cap.  
Connected to the output pins.

| MODEL NUMBER | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | INPUT CURRENT |           | CASE |
|--------------|---------------|----------------|----------------|---------------|-----------|------|
|              |               |                |                | NO LOAD       | FULL LOAD |      |
| UM501        | 5 VDC         | 5 VDC          | 2000 mA        | 70 mA         | 3300 mA   | D    |
| UM502        |               | 12 VDC         | 940 mA         | 90 mA         | 3500 mA   |      |
| UM503        |               | 15 VDC         | 800 mA         | 100 mA        | 3670 mA   |      |
| UM504        |               | ± 12 VDC       | ± 525 mA       | 130 mA        | 3840 mA   |      |
| UM505        |               | ± 15 VDC       | ± 412 mA       | 180 mA        | 3780 mA   |      |
| UM506        | 12 VDC        | 5 VDC          | 2000 mA        | 30 mA         | 1350 mA   | D    |
| UM507        |               | 12 VDC         | 940 mA         | 40 mA         | 1450 mA   |      |
| UM508        |               | 15 VDC         | 800 mA         | 50 mA         | 1540 mA   |      |
| UM509        |               | ± 12 VDC       | ± 525 mA       | 80 mA         | 1600 mA   |      |
| UM510        |               | ± 15 VDC       | ± 412 mA       | 90 mA         | 1570 mA   |      |
| UM511        | 24 VDC        | 5 VDC          | 2000 mA        | 20 mA         | 690 mA    | D    |
| UM512        |               | 12 VDC         | 940 mA         | 25 mA         | 700 mA    |      |
| UM513        |               | 15 VDC         | 800 mA         | 25 mA         | 730 mA    |      |
| UM514        |               | ± 12 VDC       | ± 525 mA       | 50 mA         | 780 mA    |      |
| UM515        |               | ± 15 VDC       | ± 412 mA       | 50 mA         | 760 mA    |      |
| UM516        | 28 VDC        | 5 VDC          | 2000 mA        | 20 mA         | 590 mA    | D    |
| UM517        |               | 12 VDC         | 940 mA         | 25 mA         | 590 mA    |      |
| UM518        |               | 15 VDC         | 800 mA         | 30 mA         | 620 mA    |      |
| UM519        |               | ± 12 VDC       | ± 525 mA       | 50 mA         | 650 mA    |      |
| UM520        |               | ± 15 VDC       | ± 412 mA       | 50 mA         | 650 mA    |      |
| UM521        | 48 VDC        | 5 VDC          | 2000 mA        | 20 mA         | 350 mA    | D    |
| UM522        |               | 12 VDC         | 940 mA         | 25 mA         | 350 mA    |      |
| UM523        |               | 15 VDC         | 800 mA         | 25 mA         | 360 mA    |      |
| UM524        |               | ± 12 VDC       | ± 525 mA       | 30 mA         | 390 mA    |      |
| UM525        |               | ± 15 VDC       | ± 412 mA       | 40 mA         | 380 mA    |      |

#### CASE D



\*NP(NO PIN)ON SINGLE OUTPUT MODELS

All dimensions in inches(mm).

Tolerance .xx=± 0.04

.xxx=± 0.010



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