

# UM500 SERIES

## 10 to 12 Watt DC-DC Converters

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

### SPECIFICATIONS

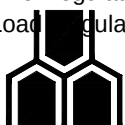
All specifications are typical at nominal line, full load and 25°C unless otherwise noted.

#### INPUT SPECIFICATIONS

Input Voltage Range ..... See Table 1  
Input Filter ..... Pi Network

#### OUTPUT SPECIFICATIONS

Voltage Accuracy .....  $\pm 1.0\%$  max.  
Voltage Balance, Dual Output .....  $\pm 0.5\%$  max.  
Temperature Coefficient  
Single Output .....  $\pm 0.02\%/^{\circ}\text{C}$   
Dual Output .....  $\pm 0.01\%/^{\circ}\text{C}$   
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 ..... 0.02%  
Load Regulation ..... 0.05%



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#### GENERAL SPECIFICATIONS

Efficiency ..... 60%  
Isolation Voltage ..... 500 VDC min.  
Isolation Capacitance ..... 100pF  
Isolation Resistance .....  $10^8$  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<sup>1</sup>  
Dimensions ..... 3.5\*2.5\*0.88 inches  
(88.9\*63.5\*22.4mm)  
Case Material ..... Black-Coated Copper with  
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 |

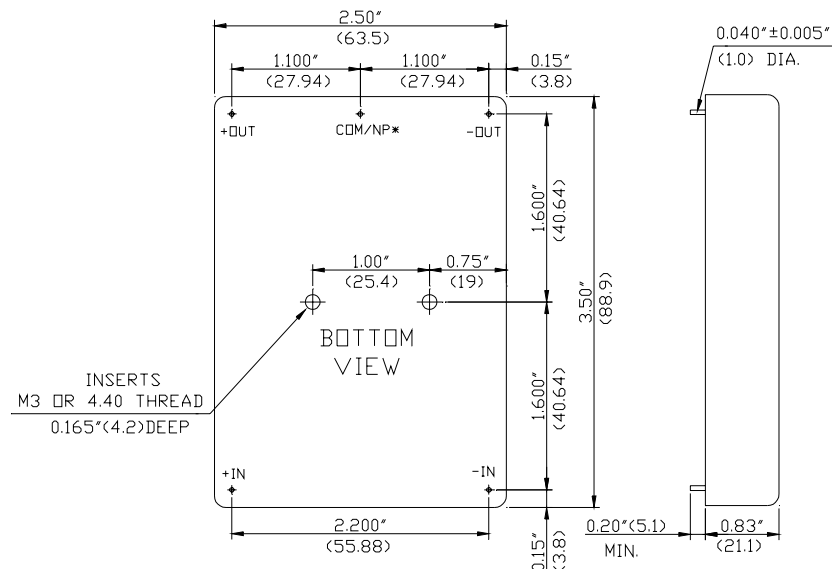
#### NOTES:

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

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| 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).

Dimension .xx=±0.04

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