

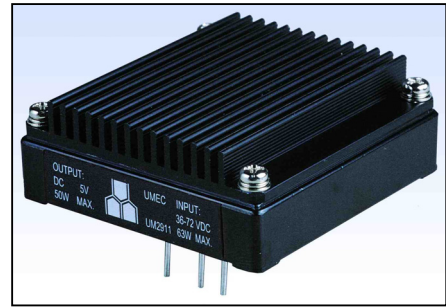
UMEC International Corporation

UM2900 SERIES

Green Product
RoHS

40 – 50 Watt DC/DC Converters

- ◆ 2:1 Input Range
- ◆ 40-50 W Isolated Output
- ◆ High-Density
- ◆ Remote on/off Control
- ◆ Design meet EN60950
- ◆ RoHS Compliant



SPECIFICATIONS

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

INPUT SPECIFICATIONS

Input Voltage Range, 24V 18-36V
 48V 36-72V
 Input Filter Pi Network

OUTPUT SPECIFICATIONS

Voltage Accuracy¹, Single Output ±2% max.
 Triple Output +5V ±2% max.
 Auxiliaries ±5% max.
 Transient Response²
 Single, 25% step Load Change <500u sec.
 External Trim Adj. Range +10%
 Short Circuit Protection Continuous
 Line Regulation³ Single Output ±0.5% max.
 Triple Output +5V ±0.5% max.
 Auxiliaries ±2% max.
 Load Regulation⁴ Single Output ±1% max.
 Triple Output +5V ±2% max.
 Ripple and Noise, 20MHz BW⁵ 100mV p-p max.
 Auxiliaries 200mV p-p max.

GENERAL SPECIFICATIONS

Efficiency See Table
 Isolation Voltage, Input/Output 1500VDC
 Input/Case 1500VDC
 Switch Frequency 250KHz
 Isolation Resistance 10⁸ Ohms min.
 Case Grounding Capacity Coupled to Input
 Operating Temperature Range -25°C to +100°C
 Storage Temperature Range -40°C to +105°C
 EMI/RFI Five-Sided Continuous Shield
 Dimensions 2.2*2.2*0.5 inches
 (55.88*55.88*12.7 mm)
 Case Material Black Coated metal
 Weight 80g

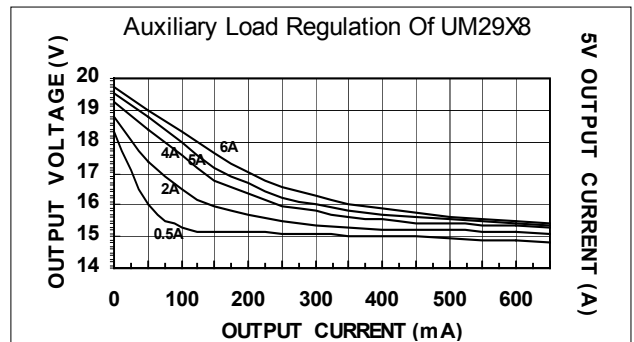
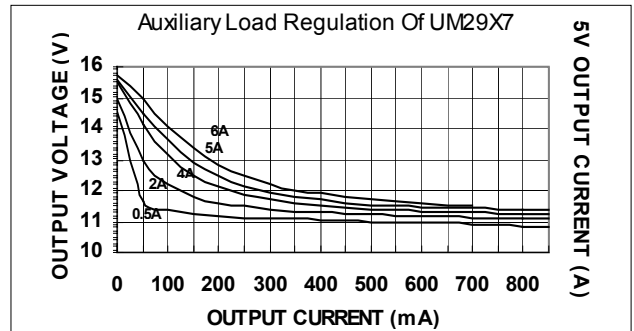
NOTE

1. Defined at the static output regulation at 25°C, including initial setting accuracy, Line voltage within stated limits and load current within stated limits.
2. di/dt=0.1A/1uS ,Tc=25°C; load change=0.5 lo max. to 0.75 lo max. and 0.75 lo max. to 0.5 lo max.
3. Measured from high line to low line.

4. Single: from full load to 1/4 load, Triple: from full load to 1/2 load with all other outputs at rated load.
5. Measured with 0.1uF ceramic Cap. cross to each output. 10uF/25V Tantalum Cap to Auxiliaries output.
6. This converter require a minimum 10% loading on their primary output and 10% loading on each auxiliary output to maintain specified regulation. Operation under no-load conditions will not damage these devices; however they may not meet all listed specifications.
7. For triple outputs, common pins (5 and 8) should be connected externally.
8. Output V1 must return to common 1 and output V2 and V3 to common 2 and 3 respectively in order to meet noise and regulation specifications.

REMOTE ON/OFF CONTROL

Logic Compatibility CMOS or Open Collector TTL
 Ec-ON > +2.5 VDC or Open Circuit
 Ec-OFF < 0.8 VDC
 Shutdown Idle Current 10mA
 Control Common Referenced to Input Minus



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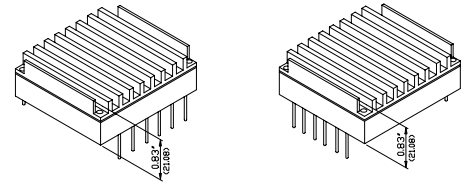
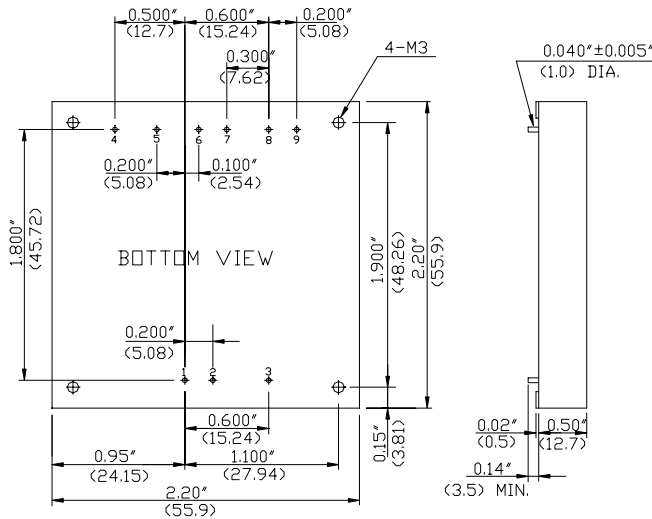
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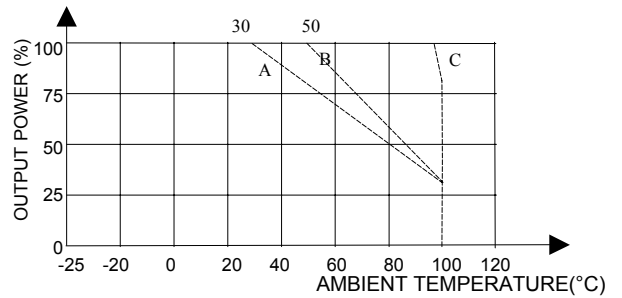
| MODEL NUMBER | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | INPUT CURRENT FULL LOAD | MAXIMUM OUTPUT WATT | TYPICAL EFFICIENCY | CASE |
|--------------|---------------|----------------|----------------|-------------------------|---------------------|--------------------|------|
| UM2901 | 24 VDC | 5 VDC | 8000 mA | 2083 mA | 40 W | 80% | N |
| UM2902 | | 12 VDC | 4160 mA | 2480 mA | 50 W | 84% | |
| UM2903 | | 15 VDC | 3330 mA | 2480 mA | 50 W | 84% | |
| UM2907 | | +5/±12 VDC | 6000/±830 mA | 2080 mA | 40 W | 80% | |
| UM2908 | | +5/±15 VDC | 6000/±660 mA | 2080 mA | 40 W | 80% | |
| UM2909 | | 3.3 VDC | 10000 mA | 1785 mA | 33 W | 77% | |
| UM2911 | 48 VDC | 5 VDC | 8000 mA | 1024 mA | 40 W | 81% | N |
| UM2912 | | 12 VDC | 4160 mA | 1240 mA | 50 W | 84% | |
| UM2913 | | 15 VDC | 3330 mA | 1240 mA | 50 W | 84% | |
| UM2917 | | +5/±12 VDC | 6000/±830 mA | 1029 mA | 40 W | 81% | |
| UM2918 | | +5/±15 VDC | 6000/±660 mA | 1029 mA | 40 W | 81% | |
| UM2919 | | 3.3 VDC | 10000 mA | 890 mA | 33 W | 77% | |

To order the optional heatsink, add the suffix "X" or "Y" to the model number

CASE N



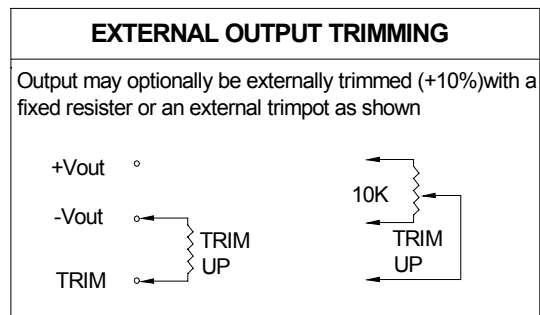
Power Derating Curve with Top-Mounted Heatsink



All dimensions in inches (mm)
Tolerance .xx = ±0.04"
.xxx = ±0.010"

- A: Natural convection cooling without additional heat sink.
- B: Natural convection cooling with additional heat sink.
- C: Maximum case temperature under any condition.

| Pin Connections | | |
|-----------------|-----------------------|-----------|
| Pin | Single | Triple |
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | Remote ON/OFF Control | |
| 4 | No Pin | +Aux. Out |
| 5 | No Pin | Common2,3 |
| 6 | No Pin | -Aux. Out |
| 7 | +Vout | +5 Vout |
| 8 | -Vout | Common1 |
| 9 | Trim | Trim |



The auxiliary output voltages vary proportionally with +5V output adjustment



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