

# UM2900 SERIES



## 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
Input Filter	Pi Network

### OUTPUT SPECIFICATIONS

Voltage Accuracy <sup>1</sup> , Single Output	±2%max.
Triple Output +5V	±2%max.
Auxiliaries	±5% max.

#### Transient Response<sup>2</sup>

Single, 25% step Load Change	<500u sec.
External Trim Adj. Range	+10%
Short Circuit Protection	Continuous
Line Regulation <sup>3</sup> Single Output	±0.5% max.
Triple Output +5V	±0.5% max.
Auxiliaries	±2% max.
Load Regulation <sup>4</sup> Single Output	±1% max.
Triple Output +5V	±2% max.
Ripple and Noise, 20MHz BW <sup>5</sup>	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	10 <sup>8</sup> 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

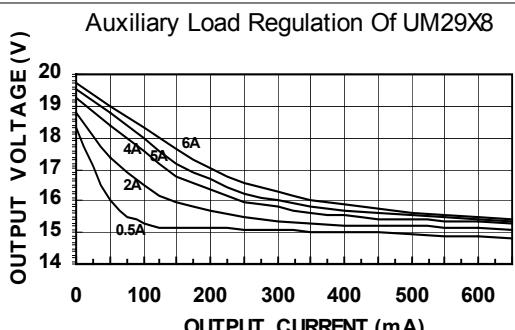
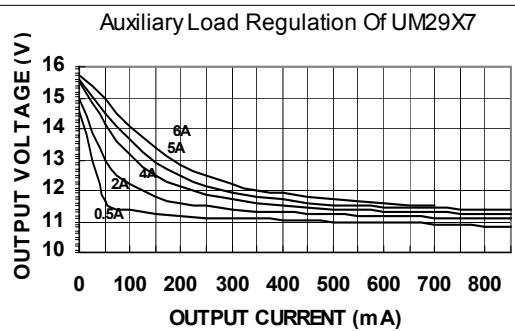
### NOTE

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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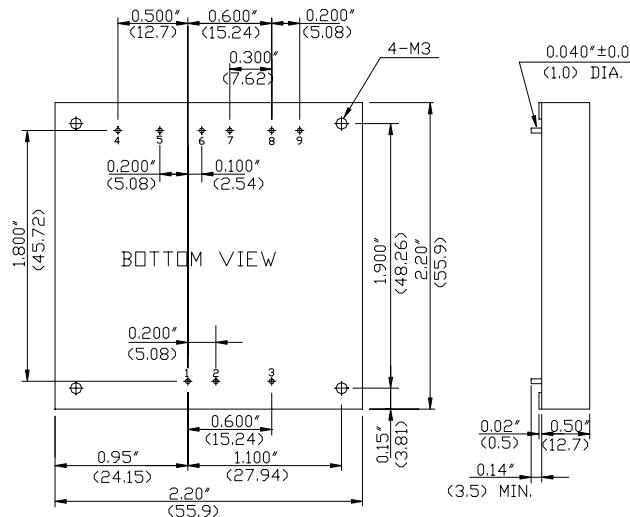


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MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT FULL LOAD	MAXIMUM OUTPUT WATT	TYPICAL EFFICIENCY	CASE
UM2901 UM2902 UM2903 UM2907 UM2908 UM2909	24 VDC	5 VDC	8000 mA	2083 mA	40 W	80%	N
		12 VDC	4160 mA	2480 mA	50 W	84%	
		15 VDC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

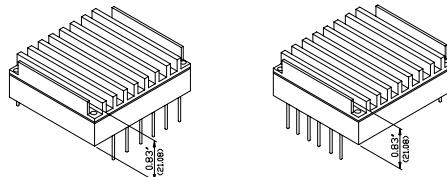
### CASE N



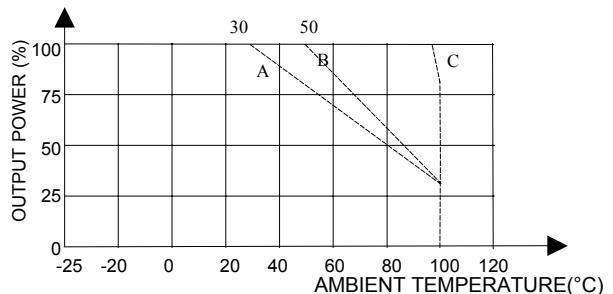
All dimensions in inches (mm)

Tolerance .xx =±0.04"

.xxx =±0.010"



TOP MOUNTED-X  
TOP MOUNTED-Y  
Power Derating Curve with Top-Mounted Heatsink

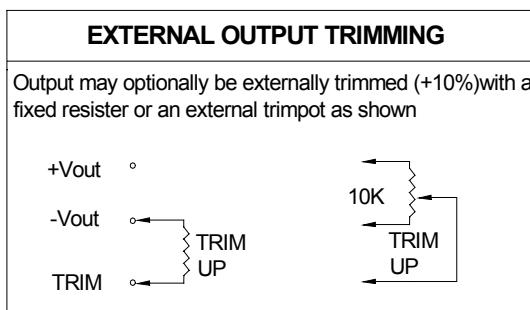


A: Natural convection cooling without additional heat sink.

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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