

# UM600 SERIES

## 15 Watt DC-DC Converters

- 2:1 Input Range.
- 15W Isolated Output.
- Efficiency to 84%.
- Remote On/Off Control
- 100 KHz Switching Frequency.
- Six-Sided Shield.

### SPECIFICATIONS

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

#### INPUT SPECIFICATIONS

Input Voltage Range, 12V ..... 9-18V  
24V ..... 18-36V  
48V ..... 36-72V  
Input Filter ..... Pi Network  
Reverse Voltage Protection<sup>1</sup> ..... Internal Shunt Diode  
Use External Fuse

#### OUTPUT SPECIFICATIONS

Voltage Accuracy, Single Output ..... ±1% max.  
Dual +Output ..... ±1% max.  
-Output ..... ±3% max.  
Triple, 5V ..... ±2% max.  
12V/15V ..... ±3% max.  
Voltage Balance, Dual Output at Full Load ..... ±1.0% max.  
Transient Response  
Single, 25% Step Load Change ..... <500 μ sec.  
Dual, FL-1/2FL, ±1% Error Band ..... <500 μ sec.  
External Trim Adj. Range ..... ±10%  
Ripple and Noise, 20MHz BW ..... 10mV RMS max.  
75mV P-P max.  
Temperature Coefficient ..... ±0.02%°C max.  
Short Circuit Protection ..... Continuous  
Overvoltage Protection, 5V ..... 6.8V  
12V ..... 15V  
15V ..... 18V  
Line Regulation<sup>2</sup>, Single/Dual Output ..... ±0.2% max.  
Triple Output ..... ±1% max.  
Load Regulation<sup>3</sup>, Single/Dual Output ..... ±1% max.  
Triple Output ..... ±5% max.

### GENERAL SPECIFICATIONS

Efficiency ..... See Table  
Isolation Voltage ..... 500 VDC min.  
Isolation Resistance ..... 10<sup>8</sup> ohms min.  
Switching Frequency ..... 100KHz  
Case Grounding ..... Capacity Coupled to Input  
Operating Temperature Range  
Ambient, None Derating ..... -25°C to +71°C  
Cooling ..... Free Air Convection  
Storage Temperature Range ..... -55°C to +105°C  
EMI/RFI ..... Six-Sided Continuous Shield  
Dimensions ..... 2.56 \* 3.0 \* 0.83 inches  
(65 \* 76.2 \* 21.1mm)  
Case Material ..... Black-Coated Copper with  
Non-Conductive Base  
Weight ..... 180g

#### NOTES:

1. Determine the correct fuse size by calculating the maximum DC current drain at low line input, maximum load and then adding 20% to 25% to get the desired fuse size.
2. Measured from high line to low line.
3. Measured from full load to 1/4 full load.

#### REMOTE ON/OFF CONTROL

Logic Compatibility.....	CMOS or Open Collector TTL
Ec-ON,.....	>+5.5 VDC or Open Circuit
Ec-OFF,.....	<1.8VDC
Shutdown Idle Current.....	10mA
Control Common.....	Referenced to Input Minus

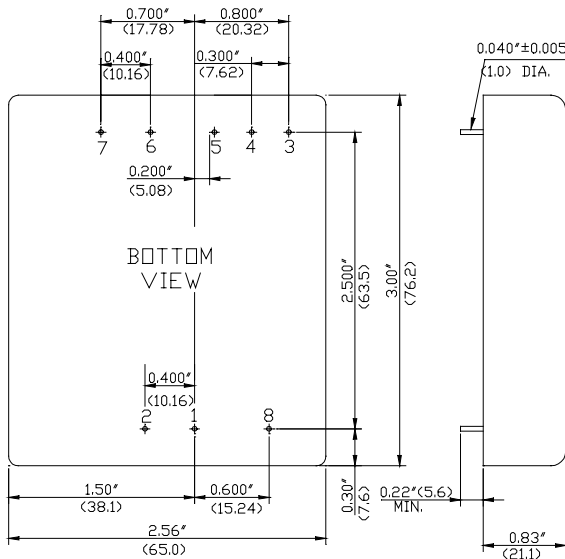


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MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF	CASE
				NO LOAD	FULL LOAD		
UM601	12 VDC	5 VDC	3000 mA	30 mA	1700 mA	75	E
UM602		12 VDC	1250 mA	30 mA	1600 mA	78	
UM603		15 VDC	1000 mA	30 mA	1600 mA	78	
UM604		±12 VDC	±625 mA	35 mA	1520 mA	82	
UM605		±15 VDC	±500 mA	35 mA	1520 mA	82	
UM606		5/±12 VDC	1500/±310 mA	40 mA	1600 mA	78	
UM607		5/±15 VDC	1500/±250 mA	40 mA	1600 mA	78	
UM608		+5/+12/-5 VDC	1500/+310/500 mA	40 mA	1470 mA	78	
UM611	24 VDC	5 VDC	3000 mA	20 mA	810 mA	77	E
UM612		12 VDC	1250 mA	20 mA	780 mA	80	
UM613		15 VDC	1000 mA	20 mA	780 mA	80	
UM614		±12 VDC	±625 mA	30 mA	750 mA	84	
UM615		±15 VDC	±500 mA	30 mA	750 mA	84	
UM616		5/±12 VDC	1500/±310 mA	30 mA	780 mA	80	
UM617		5/±15 VDC	1500/±250 mA	30 mA	780 mA	80	
UM618		+5/+12/-5 VDC	1500/+310/500 mA	30 mA	815 mA	80	
UM621	48 VDC	5 VDC	3000 mA	20 mA	410 mA	77	E
UM622		12 VDC	1250 mA	20 mA	390 mA	80	
UM623		15 VDC	1000 mA	20 mA	390 mA	80	
UM624		±12 VDC	±625 mA	25 mA	375 mA	84	
UM625		±15 VDC	±500 mA	25 mA	375 mA	84	
UM626		5/±12 VDC	1500/±310 mA	20 mA	380 mA	82	
UM627		5/±15 VDC	1500/±250 mA	20 mA	380 mA	82	
UM628		+5/+12/-5 VDC	1500/+310/500 mA	20 mA	350 mA	82	

CASE E



All dimensions in inches(mm).

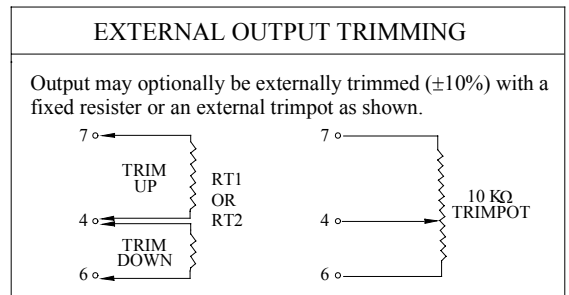
Tolerance .xx = ±0.04

.xxx = ±0.010

NOTES:

- Maximum total power from all outputs is limited to 15 watts but no output should be allowed to exceed its maximum current.
- Minimum current on each output is required to maintain specified regulation.

PIN CONNECTIONS			
Pin	Single	Dual	Triple
1	+Input	+Input	+Input
2	-Input	-Input	-Input
3	No Pin	+Output	+Output
4	Output Trim	Common	Common
5	No Pin	-Output	-Output
6	+Output	No Pin	+5V Output
7	-Output	No Pin	No Pin
8	Remote On/Off Control		



TRIPLE OUTPUT LOADING TABLE <sup>1</sup>				
		Amperes		
		Min <sup>2</sup>	Nom.	Max.
1	+5	.250	1.5	2.0
2 & 3	+12 or -12	.100	.310	.500
2 & 3	+15 or -15	.100	.250	.500
2 & 3	+12 or -5	.100/.100	.310/.500	.500/.500



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