

# UM3700 SERIES

## 37.5 to 75 Watt DC-DC Converters

- ◆ 2:1 Input Range
- ◆ Efficiency up to 90%
- ◆ 200 KHz Switching Frequency
- ◆ Short Circuit Protection
- ◆ Remote on/off Control
- ◆ Internal Soft Start
- ◆ 37.5 to 75W Isolation Output
- ◆ High-Density
- ◆ Under Voltage Lockout
- ◆ Standard "Quarter-Brick" Package



### SPECIFICATIONS

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

#### INPUT SPECIFICATIONS

Input Voltage Range, 48V ..... 36-75V  
 Input Filter ..... Pi Network

#### OUTPUT SPECIFICATIONS

Voltage Accuracy ..... ±1.5% max.  
 External Trim Adj. Range ..... ±10%  
 Transient Response<sup>2</sup>Single,  
 25% Step Load Change, ±1% Error Band ..... <500u sec.  
 Ripple & Noise, 20MHz BW<sup>3</sup>, ..... 100mV p-p max.  
 40mV rms max.  
 Over-Voltage Protection ..... Clamp Type  
 Short Circuit Protection ..... Continuous  
 Line Regulation<sup>4</sup> ..... ±0.5% max.  
 Load Regulation<sup>5</sup> ..... ±0.5% max.

#### GENERAL SPECIFICATIONS

Efficiency ..... See Table  
 Isolation Voltage (I/O) ..... 1500Vdc min.  
 Isolation Resistance ..... 10<sup>8</sup> Ohms min.  
 Switching Frequency ..... 200KHz typ.  
 Baseplate Operating Temperature Range  
 None Derating ..... -25°C to +85°C  
 Derating ..... Linearly to Half Power at 100°C  
 Storage Temperature Range ..... -40°C to +125°C  
 Thermal Protection ..... 110°C typ.  
 Dimensions ..... 1.45\*2.28\*0.5 inches  
 (36.8\*57.9\*12.7 mm)

### NOTE

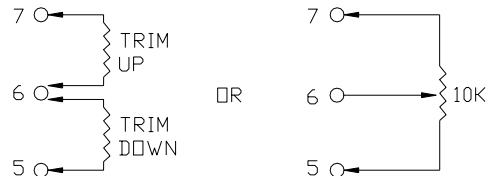
1. Determine the correct fuse size by calculating the maximum DC current drain at low line input, maximum load and then adding 20% to 25% to get the desired fuse size.
2. di/dt= 0.1A/1uS, Vin= Nominal Line, Tc= 25°C; load change= 0.5 Io max. to 0.75 Io max. and 0.75 Io max. to 0.5 Io max.
3. Measured with 10uF Low ESR tantalum capacitor and 0.1uF ceramic capacitor across output.
4. Measured from high line to low line.
5. Measured from full load to 1/4 load.
6. Maximum capacitive load across the output ports should not over following indicated values.
7. This converter required a minimum 10% loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices, However they may not meet all listed specification.
8. Standard product is active low, active high remote on/off option is available, to order suffix a "H" to the model number e.g. UM3711H.

#### STANDARD REMOTE ON/OFF CONTROL

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

#### EXTERNAL OUTPUT TRIMMING

Output may optionally be externally trimmed with a fixed resistor or an external trimpot as shown.



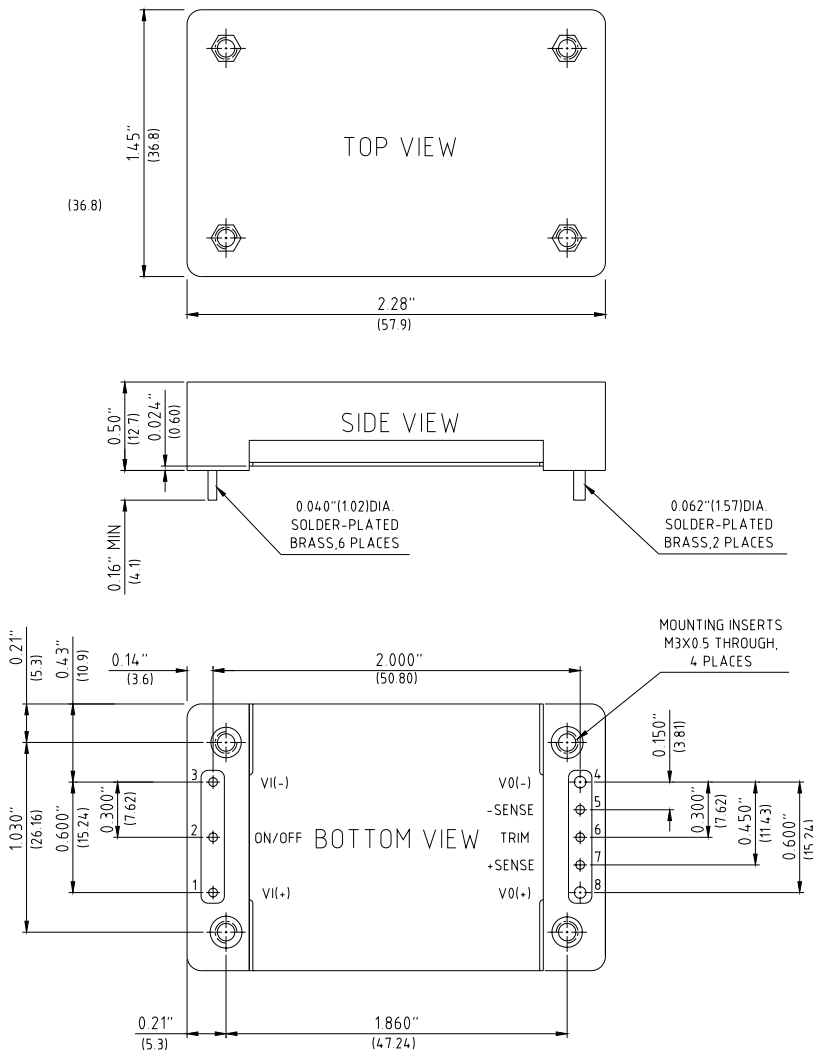
**UMEC  
INTERNATIONAL**

2539 W. 237TH STREET, SUITE A,  
 TORRANCE, CA 90505  
 TEL: (310) 326-7072 FAX: (310) 326-7058

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	% EFF
UM3711	48 VDC	5 VDC	15 A	90
UM3718	48 VDC	2.5 VDC	15 A	87
UM3719	48 VDC	3.3 VDC	15 A	89

NOTE: Other output voltage can be supported upon request.

MODEL NUMBER	UM3711	UM3718	UM3719
MAXIMUM <sup>6</sup> CAPACITIVE LOAD (uF)	2200	2200	2200



Pin Connections*	
Pin	Function
1	+Vin
2	On/Off
3	-Vin
4	-Vout
5	-Sense
6	Trim
7	+Sense
8	+Vout

NOTE:  
 \* : If remote sensing not utilized, output sense pin must be jumpered to respective output power pins, for normal operation connect Pin NO.4 to Pin NO.5 and Pin NO.7 to Pin NO.8.

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



2539 W. 237TH STREET, SUITE A,  
 TORRANCE, CA 90505  
 TEL: (310) 326-7072 FAX: (310) 326-7058