

UM3800 SERIES

75 Watt DC-DC Dual Output Converters

- ◆ 2:1 Input Range
- ◆ 400 KHz Switching Frequency
- ◆ Short Circuit Protection
- ◆ Under Voltage Lockout
- ◆ 15A Maximum Per Channel
- ◆ Industry Standard Footprint
- ◆ 75 Watt Total Output Power
- ◆ Standard "Half Brick" Package



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	36-75V
Input Filter	Pi Network

OUTPUT SPECIFICATIONS

Voltage Accuracy	±2% max.
External Trim Adj. Range	±10%
Transient Response ² , ±1% Error Band	<500u sec.
Ripple, 20MHz BW ³ (Each Output)	100mV p-p max. 40mV rms max.
Over-Voltage Protection	Clamp Type
Short Circuit Protection	Continuous
Line Regulation ⁴ , Vo1	±0.2% max.
Vo2	±1.0% max.
Load Regulation ⁵ , Vo1	±0.5% max.
Vo2	±1.0% max.
Minimum Load	10% Io Rated
Power	75W max.

GENERAL SPECIFICATIONS

Efficiency ⁶	82% typ.
Isolation Voltage (I/O)	1500VDC min.
Isolation Resistance	10 ⁸ Ohms min.
Switching Frequency	400KHz typ.
Baseplate Operating Temperature Range	
None Derating	-25°C to +85°C
Derating	Linearly to Half Power at 100°C
Cooling	Free Air Convection
Storage Temperature Range	-40°C to +105°C
Temperature Coefficient	0.03%/°C
Thermal Protection	115°C typ.
Case Material	Aluminum Baseplate with Plastic Case
Dimensions	2.4*2.28*0.5 inches (61.0*57.9*12.7 mm)



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NOTE

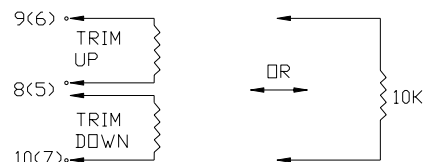
1. Determine the correct fuse size by calculating the maximum DC current drain at low line input, maximum load and then adding 20% to 25% to get the desired fuse size.
2. di/dt= 0.1A/1uS, Vin= Nominal Line, Tc= 25°C; load change = 0.5 Io max. to 0.75 Io max. and 0.75 Io max. to 0.5 Io max.
3. Measured with 10uF Low ESR tantalum capacitor and 0.1uF & 1uF ceramic capacitor across output.
4. Measured from high line to low line.
5. Measured from full load to 1/10 load.
6. 5V at full load condition.
7. Current from either output at maximum value, or from both output to a combined total of 15 Amps.
8. Maximum capacitive load across the output ports should not over following indicated values.
9. This converter required a 10% Io Rated load on the each output to maintain specified regulation. Operation under no-load condition will not damage these devices, however they may not meet all listed specification.
10. Standard product is active high, active low remote on/off option is available, to order suffix a "N" to the model number e.g. UM3811N.

STANDARD REMOTE ON/OFF CONTROL

Logic Compatibility	CMOS or Open Collector TTL
Ec-ON	> +2.5 VDC or Open Circuit
Ec-OFF	< 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.

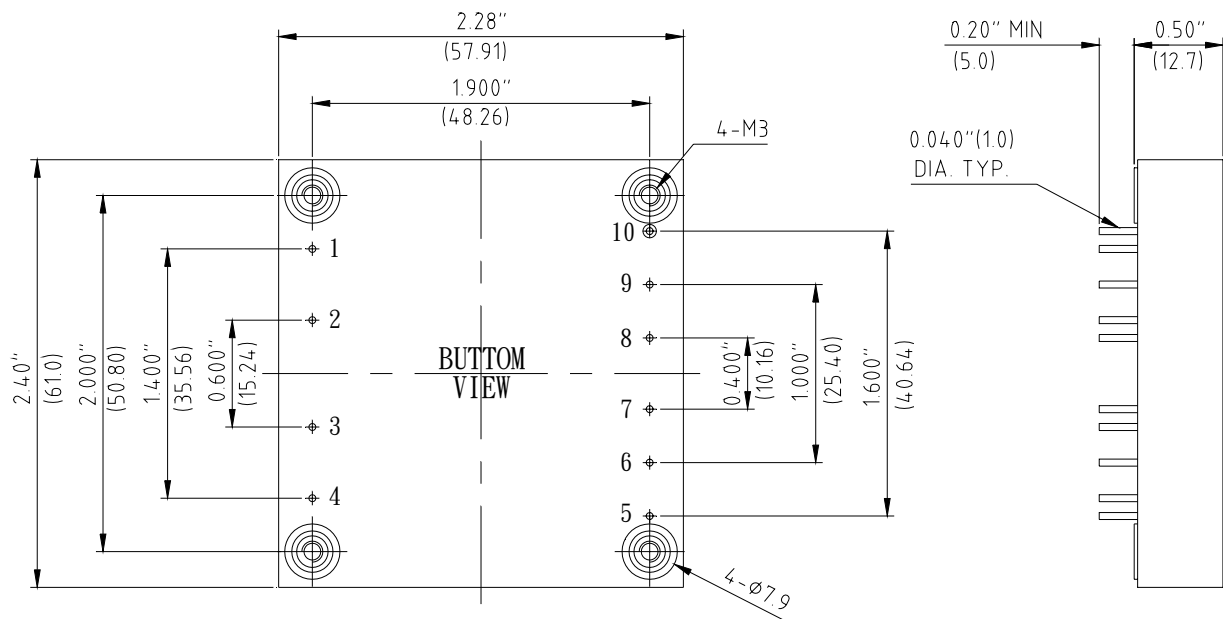


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MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE & RATED CURRENT ⁷	
		Vo1	Vo2
UM3801	24 VDC	5V/15A	3.3V/15A
UM3811	48 VDC	5V/15A	3.3V/15A

NOTE: Other output voltage can be supported upon request.

MODEL NUMBER	UM3801		UM3811	
	Vo1	Vo2	Vo1	Vo2
MAXIMUM ⁸ CAPACITIVE LOAD (uF)	1000	1000	1000	1000



Pin Connections	
Pin	Function
1	-Vin
2	CASE
3	On/Off
4	+Vin
5	Vo1 Trim
6	Vo1 Return
7	Vo1
8	Vo2 Trim
9	Vo2 Return
10	Vo2

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



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