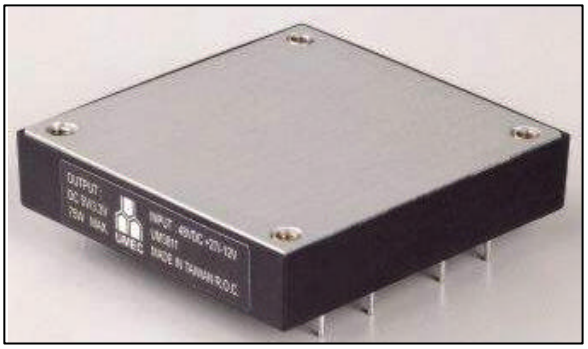
UM3800 SERIES

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)

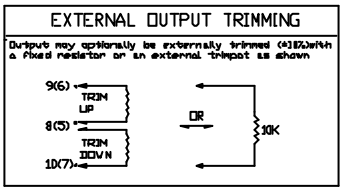
NOTE

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.



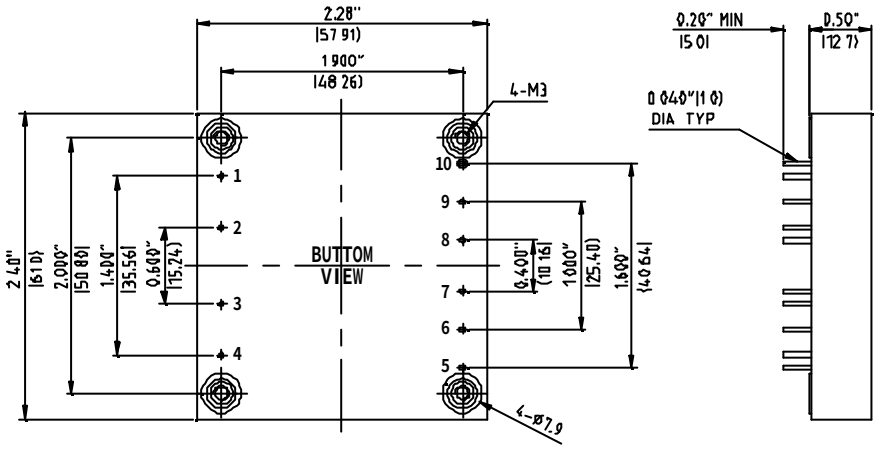
UNIVERSAL MICROELECTRONICS

3,27TH RD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN, R.O.C.
TEL: 886-4-23590096 FAX: 886-4-23590129

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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