

UM2400 SERIES

25 to 30 Watt DC-DC Converters

- ◆ 4:1 Input Range
- ◆ 30W Isolated Output
- ◆ Efficiency to 83%
- ◆ Remote On/Off Control
- ◆ 100 KHz Switching Frequency
- ◆ Six-Sided Shield
- ◆ Conductive EMI Meets CISPR22 Class A



SPECIFICATIONS

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

INPUT SPECIFICATIONS

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

OUTPUT SPECIFICATIONS

Voltage Accuracy, Single Output	±1% max.
Dual, +Output	±1% max.
-Output	±3% max.
Triple, 5V	±1% max.
12V/15V	±5% 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 ² , Single/Dual Output	±0.5% max.
Triple Output	±1% max.
Load Regulation ³ , Single/Dual Output	±1% max.
Triple Output	±5% max.

GENERAL SPECIFICATIONS

Efficiency	See Table
Isolation Voltage	1500 VDC min.
Isolation Resistance	10 ⁹ ohms min.
Switching Frequency	100KHz
Case Grounding	Capacity Coupled to Input
Operating Temperature Range	
Ambient, None Derating	-25°C to +60°C
Derating	0.67W/°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,	<1.8 VDC
Shutdown Idle Current	10mA
Control Common	Referenced to Input Minus



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UM2400

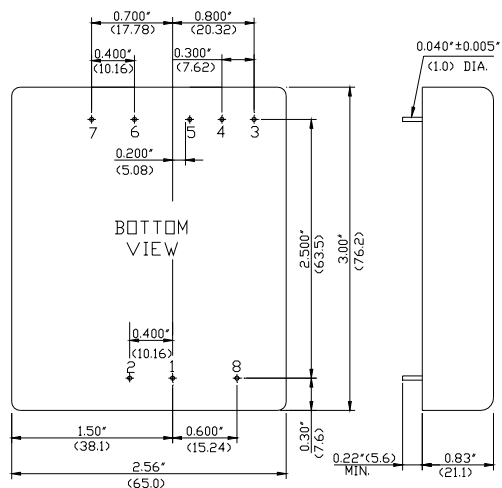
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REV.1

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	INPUT CURRENT		% EFF	CASE
				NO LOAD	FULL LOAD		
UM2401	24VDC	5 VDC	5000 mA	25 mA	1360 mA	76	E
UM2402		12 VDC	2500 mA	30 mA	1600 mA	78	
UM2403		15 VDC	2000 mA	30 mA	1580 mA	79	
UM2404		± 12 VDC	± 1250 mA	30 mA	1560 mA	80	
UM2405		± 15 VDC	± 1000 mA	30 mA	1560 mA	80	
UM2406		+5/±12 VDC	3000/±450 mA	50 mA	1400 mA	77	
UM2407		+5/±15 VDC	3000/±350 mA	50 mA	1380 mA	77	
UM2411	48VDC	5 VDC	5000 mA	20 mA	680 mA	77	E
UM2412		12 VDC	2500 mA	20 mA	780 mA	80	
UM2413		15 VDC	2000 mA	20 mA	780 mA	80	
UM2414		± 12 VDC	± 1250 mA	20 mA	760 mA	82	
UM2415		± 15 VDC	± 1000 mA	20 mA	760 mA	82	
UM2416		+5/±12 VDC	3000/±450 mA	40 mA	700 mA	77	
UM2417		+5/±15 VDC	3000/±350 mA	40 mA	680 mA	78	

CASE E



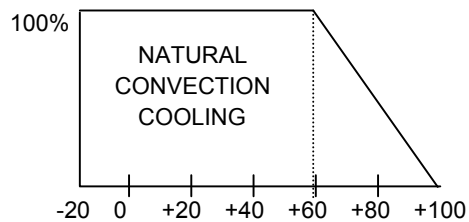
All dimensions in inches (mm).
Tolerance .xx = ±0.04"
.xxx = ±0.010"

OUTPUT	VOLATGE	Amperes		
		Min. ²	Nom.	Max.
1	+5	0.500	3.0	3.5
2&3	+12 or -12	0.100	0.450	0.700
2&3	+12 or -15	0.100	0.350	0.700

NOTES:

- Maximum total power from all outputs is limited to 30 watts but no output should be allowed to exceed its maximum current.
- Minimum current on each output required to maintain specified regulation.
- If remotes sensing is utilized, output sense pins must be jumpered to respective output power pins, for normal operation connect pin No.3 to pin No.6 and pin No.5 to pin No.7.

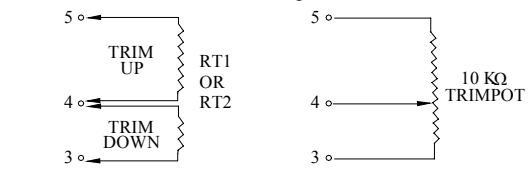
Operating Limit and Output Power Range



Maximum case temperature under any operating condition must not be exceeded 105°C

EXTERNAL OUTPUT TRIMMING

Output may optionally be externally trimmed (±10%) with a fixed resistor or an external trimpot as shown.



Pin Connections

Pin	Single ³	Dual	Triple
1	+Input	+Input	+Input
2	-Input	-Input	-Input
3	+Sense	+Output	+12V,15V
4	Output Trim	Common	Common
5	-Sense	-Output	-12V,15V
6	+Output	No Pin	+5V
7	-Output	No Pin	+5V Com
8	Remote On/Off Control		



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