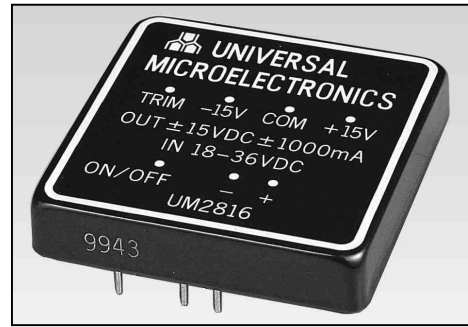


# UM2800 SERIES

## 16 to 30 Watt DC-DC Converters

- ◆ 2:1 Input Range
- ◆ High-Density
- ◆ Remote On/Off Control
- ◆ 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 <sup>1</sup> .....	9-18V
24V .....	18-36V
48V .....	36-72V
Input Filter .....	Pi Network

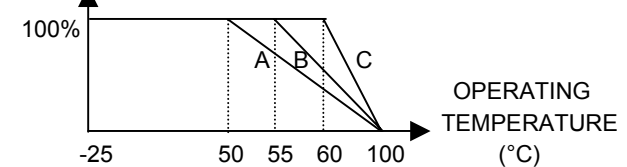
### OUTPUT SPECIFICATIONS

Voltage Accuracy, Single Output .....	±2% max.
Dual, +Output .....	±2% max.
-Output .....	±3% max.
Triple, +3.3V/+5V .....	±2% max.
Auxiliaries .....	±5% max.
Voltage Balance, Dual Output at Full Load .....	±2% max.
Transient Response,	
Single, 25% Step Load Change .....	< 500 u sec.
Dual, FL-1/2FL ±1% Error Band .....	< 500 u sec.
External Trip Adj. Range .....	+10%
Ripple and Noise, 20MHz BW <sup>2</sup> .....	15mV RMS max.
75mV P-P max.	
Triple Output (UM283X, UM284X)	
Auxiliaries .....	120mV P-P max.
Short Circuit Protection .....	Continuous
Overvoltage Protection Trip Point (Zener Clamping Type)	
3.3V .....	4.3V
5V .....	6.8V
12V .....	15.0V
15V .....	18.0V
Line Regulation <sup>3</sup> , Single/Dual Output .....	±0.5% max.
Triple Output +3.3V/+5V .....	±1% max.
Auxiliaries .....	±2% max.
Load Regulation <sup>4</sup> , Single/Dual Output .....	±1% max.
Triple Output +3.3V/+5V .....	±2% max.
Auxiliaries .....	±5% max.

### GENERAL SPECIFICATIONS

Efficiency .....	See Table
Isolation Voltage .....	500 VDC min.
Isolation Resistance .....	10 <sup>8</sup> Ohms min.
Case Grounding .....	Capacity Coupled to Input
Switching Frequency .....	400KHz
Storage Temperature Range .....	-55°C to +105°C
EMI/RFI .....	Six-Sided Continuous Shield
Dimensions .....	2.0x2.0x0.4 inches
	(50.8x50.8x10.4mm)
Case Material .....	Black Coated Copper With
	Non-conductive Base
Operating Temperature Range,	
UM280X .....	-25°C to 50°C
UM2811, UM2814, UM2821, UM2824 .....	-25°C to 55°C
UM281X, UM282X, UM283X, UM284X .....	-25°C to 60°C

### OUTPUT POWER



- A: UM280X
- B: UM2811, UM2814, UM2821, UM2824
- C: UM281X, UM282X, UM283X, UM284X

### NOTES

1. Start up voltage (UM280X) ..... 10-18V
2. Measured with 3.3uF 25V tantalum capacitor across each output for triple output models, 0.1uF ceramic capacitor across each output for single and dual output models.
3. Measured from high line to low line.
4. Single: from full load to 1/4 load, Dual: loaded balanced from full load to 1/4 load, Triple: from full load to 1/10 load (UM283X, UM284X from full load to 1/4 load) with all other outputs at rated load.

REMOTE ON/OFF CONTROL	
Control Input .....	Pin 1
Control Common .....	Pin 3
Logic Compatibility .....	CMOS or Open Collector TTL
Control Voltage .....	
On .....	>+2.5 VDC or Open Circuit
Off .....	< +0.8 VDC or Jumper to Pin 3
Converter Shutdown Idle Current .....	10 mA



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UM2800

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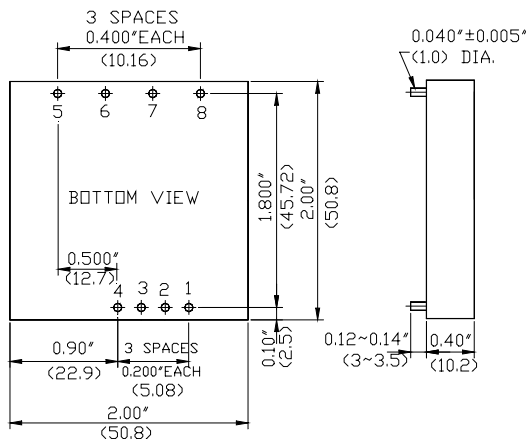
MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF	CASE
				NO LOAD	FULL LOAD		
UM2801	12 VDC	5 VDC	5000 mA	75 mA	2671 mA	77	C
UM2802		12 VDC	2084 mA	100 mA	3050 mA	81	
UM2803		15 VDC	1650 mA	100 mA	3050 mA	82	
UM2804		±5 VDC	±2500 mA	75 mA	2671 mA	78	
UM2805		±12 VDC	±1042 mA	100 mA	3050 mA	82	
UM2806		±15 VDC	±825 mA	100 mA	3050 mA	82	
UM2807		+5/±12 VDC	3500±310 mA	110 mA	2637 mA	78	
UM2808		+5/±15 VDC	3500±250 mA	110 mA	2637 mA	78	
UM2809		3.3 VDC	5000 mA	75 mA	1860 mA	74	
UM2811	24 VDC	5 VDC	5000 mA	50 mA	1336 mA	79	C
UM2812		12 VDC	2500 mA	60 mA	1525 mA	82	
UM2813		15 VDC	2000 mA	60 mA	1525 mA	82	
UM2814		±5 VDC	±2500 mA	50 mA	1336 mA	79	
UM2815		±12 VDC	±1250 mA	60 mA	1470 mA	83	
UM2816		±15 VDC	±1000 mA	60 mA	1470 mA	83	
UM2817		+5/±12 VDC	3500±310 mA	70 mA	1319 mA	78	
UM2818		+5/±15 VDC	3500±250 mA	70 mA	1319 mA	78	
UM2819		3.3 VDC	5000 mA	50 mA	916 mA	75	
UM2837		+3.3/±12 VDC	4000±300 mA	60 mA	1133 mA	75	
UM2838	+3.3/±15 VDC	4000±230 mA	60 mA	1116 mA	75		
UM2821	48 VDC	5 VDC	5000 mA	20 mA	660 mA	79	C
UM2822		12 VDC	2500 mA	20 mA	763 mA	82	
UM2823		15 VDC	2000 mA	20 mA	763 mA	82	
UM2824		±5 VDC	±2500 mA	20 mA	660 mA	79	
UM2825		±12 VDC	±1250 mA	20 mA	735 mA	83	
UM2826		±15 VDC	±1000 mA	20 mA	735 mA	83	
UM2827		+5/±12 VDC	3500±310 mA	40 mA	651 mA	78	
UM2828		+5/±15 VDC	3500±250 mA	40 mA	651 mA	78	
UM2829		3.3 VDC	5000 mA	20 mA	460 mA	75	
UM2847		+3.3/±12 VDC	4000±300 mA	30 mA	566 mA	75	
UM2848		+3.3/±15 VDC	4000±230 mA	30 mA	558 mA	75	

NOTES: 1. Minimum current of 10% full load required on main output and each auxiliaries for triple output models to maintain specified regulation. Operation under no-load conditions will not damage these devices; however they may not meet all listed specifications.

2. Maximum capacitive load across the output ports should not be over following Indicated values.

MODEL NUMBER	UM28X1	UM28X2	UM28X3	UM28X4	UM28X5	UM28X6	UM28X7	UM28X8	UM28X9
MAXIMUM <sup>2</sup> CAPACITIVE LOAD (uF)	1500	680	470	+680 -680	+330 -330	+220 -220	+680 +100 -100	+680 +68 -68	1500

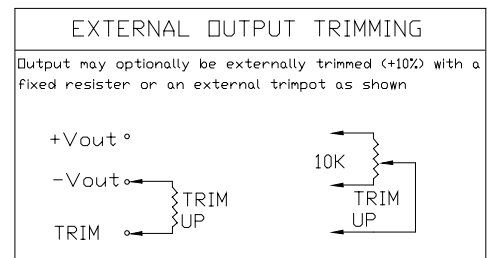
CASE C



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

PIN CONNECTIONS			
Pin	Single	Dual	Triple
1	Remote On/Off Control		
2	No Pin	No Pin	No Pin
3	-Vin	-Vin	-Vin
4	+Vin	+Vin	+Vin
5	No Pin	+Vout	+Aux. out
6	+Vout	Common	+3.3V/+5V Out
7	-Vout	-Vout	Common
8	Trim	Trim	-Aux. out

\*NP (No Pin) ON SINGLE OUTPUT MODELS



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