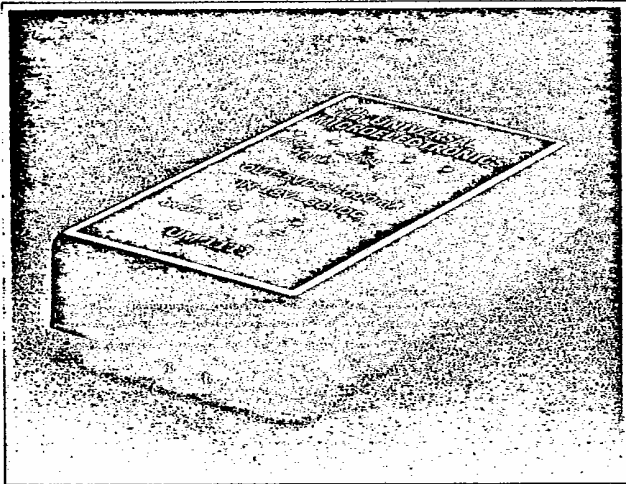


# 25 to 30 Watt DC-DC Converters

## UM 1100 SERIES



- 2:1 Input Range
- 30W Isolated Output
- Efficiency to 84%
- Remote On/Off Control
- 100 kHz Switching Frequency
- Six-Sided Shield

### SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted.

#### INPUT SPECIFICATIONS

Input Voltage Range, 12V ..... 9-18V  
 24V ..... 18-36V  
 48V ..... 36-72V

Input Filter ..... PI Type

Reverse Voltage Protection<sup>3</sup> ..... 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.  
 -5V ..... ± 2% max.

Voltage Balance, Dual output at Full load  
 ..... ± 1.0% max.

Transient Response,  
 Single, 25% step load change ..... < 500μ sec.  
 Dual, FL-1/2L ± 1% Error Band ..... < 500μ 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 ..... Indefinite

Overvoltage Protection, 5V ..... 6.8V  
 12V ..... 15V  
 15V ..... 18V

Line Regulation<sup>1</sup>, Single/Dual output ..... ± 0.2% max.  
 Tripple output ..... ± 1% max.

Load Regulation<sup>2</sup>, Single/Dual output ..... ± 1% max.  
 Tripple output ..... ± 5% max.

### GENERAL SPECIFICATIONS

Efficiency ..... See Table

Isolation Voltage ..... 500 VDC min.

Isolation Resistance ..... 10<sup>9</sup> ohms min.

Switching Frequency ..... 100kHz

Case Grounding ..... Capacity Coupled to Input

Operating Temperature Range ..... - 25°C to + 71°C

Storage Temperature Range ..... - 55°C to + 105°C

EMI/RFI ..... Six-Sided Continuous Shield

Dimensions ..... 2.56 × 4.56 × 0.83 inches  
 (65 × 115.8 × 21.1mm)

Case Material ..... Black Coated Copper with  
 Non-Conductive Base

#### NOTE:

1. Measured from High Line to Low Line.
2. Measured from Full Load to 1/4 Full Load.
3. 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.

#### REMOTED ON/OFF CONTROL

Logic Compatibility ..... CMOS or Open Collector TTL

E<sub>c</sub>-ON, ..... > + 5.5 VDC or Open Circuit

E<sub>c</sub>-OFF, ..... < 1.8 VDC

Shutdown Idle Current ..... 10 mA

Input Resistance ..... (E<sub>in</sub> 0 VDC to 9 VDC) 100 KΩ

Control Common ..... Referenced to Input Minus



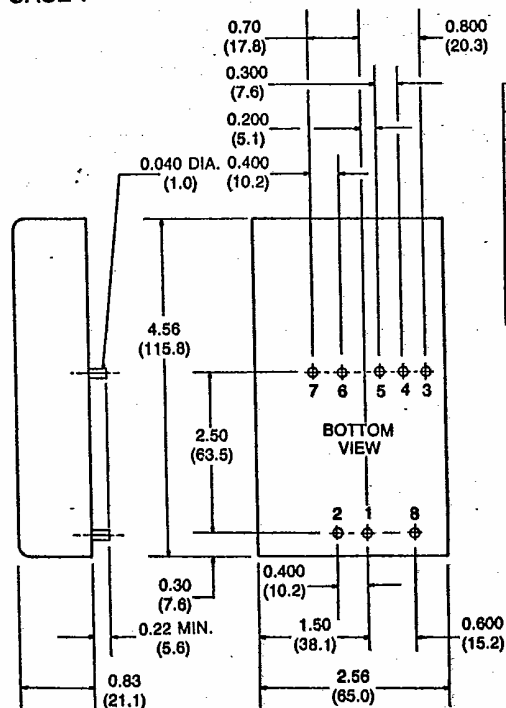
**UNIVERSAL  
 MICROELECTRONICS**

# UNIVERSAL MICROELECTRONICS

MODEL NUMBER	INPUT VOLTAGE RANGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT <sup>1</sup>		% EFF	CASE
				NO LOAD	FULL LOAD		
UM1101	9-18 VDC	5 VDC	5000 mA	30 mA	2800 mA	75	F
UM1102	9-18 VDC	12 VDC	2500 mA	30 mA	3200 mA	78	F
UM1103	9-18 VDC	15 VDC	2000 mA	30 mA	3200 mA	78	F
UM1104	9-18 VDC	± 12 VDC	± 1250 mA	25 mA	3050 mA	82	F
UM1105	9-18 VDC	± 15 VDC	± 1000 mA	25 mA	3050 mA	82	F
UM1106	9-18 VDC	+5/± 12 VDC	3000/± 450 mA	50 mA	2900 mA	74	F
UM1107	9-18 VDC	+5/± 15 VDC	3000/± 350 mA	50 mA	2750 mA	77	F
UM1108	9-18 VDC	+5/+ 12/- 5 VDC	3000/450/1000 mA	50 mA	2850 mA	74	F
UM1111	18-36 VDC	5 VDC	5000 mA	20 mA	1350 mA	77	F
UM1112	18-36 VDC	12 VDC	2500 mA	20 mA	1550 mA	80	F
UM1113	18-36 VDC	15 VDC	2000 mA	20 mA	1550 mA	80	F
UM1114	18-36 VDC	± 12 VDC	± 1250 mA	25 mA	1500 mA	84	F
UM1115	18-36 VDC	± 15 VDC	± 1000 mA	25 mA	1500 mA	84	F
UM1116	18-36 VDC	+5/± 12 VDC	3000/± 450 mA	40 mA	1350 mA	80	F
UM1117	18-36 VDC	+5/± 15 VDC	3000/± 350 mA	40 mA	1300 mA	82	F
UM1118	18-36 VDC	+5/+ 12/- 5 VDC	3000/450/1000 mA	40 mA	1300 mA	81	F
UM1121	36-72 VDC	5 VDC	5000 mA	20 mA	670 mA	78	F
UM1122	36-72 VDC	12 VDC	2500 mA	20 mA	770 mA	81	F
UM1123	36-72 VDC	15 VDC	2000 mA	20 mA	770 mA	81	F
UM1124	36-72 VDC	± 12 VDC	± 1250 mA	15 mA	750 mA	83	F
UM1125	36-72 VDC	± 15 VDC	± 1000 mA	15 mA	750 mA	83	F
UM1126	36-72 VDC	+5/± 12 VDC	3000/± 450 mA	30 mA	650 mA	82	F
UM1127	36-72 VDC	+5/± 15 VDC	3000/± 350 mA	30 mA	650 mA	82	F
UM1128	36-72 VDC	+5/+ 12/- 5 VDC	3000/450/1000 mA	30 mA	650 mA	81	F

NOTE: 1. Nominal Input Voltage 12, 24 or 48 VDC.

## CASE F



ALL DIMENSIONS IN INCHES (MM)

Pin Connections			
Pin	Single	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, 5V
6	+ Output	No Pin	+ 5V
7	- Output	No Pin	+ 5V com
8	Remote On/Off Control		

