UM1700 SERIES

60 Watt DC-DC Converters

- **Low Profile 0.91 Inch High**
- **Efficiency to 84%**
- **2:1 Input Range**
- **PC Mounting**
- **Pi Input Filter**
- **OVP on All Outputs**

SPECIFICATIONS

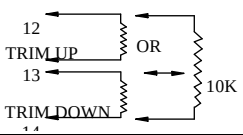
All specifications are typical at nominal line, full load and 25°C unless otherwise noted.

INPUT SPECIFICATIONS

Input Voltage Range, 12V 9-18V
24V 18-36V
48V 36-72V
Input Filter ..... Pi Network
Surge Protection ..... Transient Clamp
Reverse Voltage Protection ..... Internal Shunt Diode
Use External Fuse

OUTPUT SPECIFICATIONS

Voltage Accuracy, Primary Output ..... ±1.0% max.
-5V,Output ..... ±3.0% max.
Auxiliary Output Balance[1] ..... ±2.0% max.
Voltage Adjustment[2] ..... ±10%
Line Regulation, HL-LL ..... ±0.5% max.
-5V,Output ..... ±1.0% max.
Load Regulation[3] FL-1/4FL
Single Output ..... .±1.0% max.
Dual Output ..... ±2.0% max.
-5V, Output ..... ±1.0% max.
Ripple and Noise, 20MHz BW ..... 10mV RMS max.
75mV P-P max.
Temperature Coefficient ..... ±0.02%/°C max.
Voltage Stability, 24 Hours ..... ±0.05% max.
Transient Response[4],±1% Error Band
25% Step Load Change ..... 500µsec. max.
Remote Sense[5] ..... Output 1
Short Circuit Protection, All Outputs ..... Continuous
Overvoltage Protection[6] ..... OVP Clamp All Outputs

EXTERNAL OUTPUT TRIMMING	
SINGLE & DUAL OUTPUT	QUAD OUTPUT
Output may optionally be externally trimmed (±10%) with a fixed resistor or an external trimpot as shown. 	Output may optionally be externally trimmed(±10%)with A fixed resistor 

GENERAL SPECIFICATIONS

Isolation Voltage, Input to Output ..... 500 VDC min.
Input to Case ..... 250 VDC min.
Isolation Resistance
Input to Output ..... 10^8 Ohms min.
Input to Case ..... 10^6 Ohms min.
Switching Frequency 100KHz
Operating Temperature Range
Ambient, None Derating ..... -25°C to +55°C
With Optional Heatsink ..... -25°C to +71°C
Case ..... -25°C to +85°C
Derating, above 85°C Case ..... Linearly to Zero
Power at+100°C
Storage Temperature Range ..... -55°C to+105°C
Cooling ..... Free-Air Convection or Conduction
Weight, without Heatsink ..... 16 oz.(454 grams)
EMI/RFI ..... Six-Sided Continuous Shield
Case Material ..... Black Coated Aluminum with
Non-Conductive Base

NOTES:

1. Maximum difference between the voltage magnitudes of outputs 2 & 3 for triples: 3 & 4 for quads.
2. All models except triples have provision for output voltage adjustment. See connection table and external output trimming information.
3. No minimum load required for operation
4. Any output.
5. REMOTE SENSE is provided on all singles, and on output #1 of dual and triples. It will compensate for up to 1V drop between converter and load. If remote sense is not being used, the +Sense should be connected to its corresponding +Output, and likewise the -Sence should be connected to its corresponding -Output.
6. 5V output clamped at 6.8V,12V or 15V outputs clamped at 18V.
7. OUTPUT ISOLATION ON DUALS: The two outputs are isolated, and can be referenced as either positive or negative, No load sharing is possible.

REMOTE ON/OFF CONTROL
Terminal 6 Control
Logic Compatibility ..... COMS or Open Collector TTL
Control Voltage, ON ..... +5.5V or Open Circuit
OFF ..... +1.2V
Converter Shutdown Idle Current 5mA
Control Common ..... Input Terminal 2

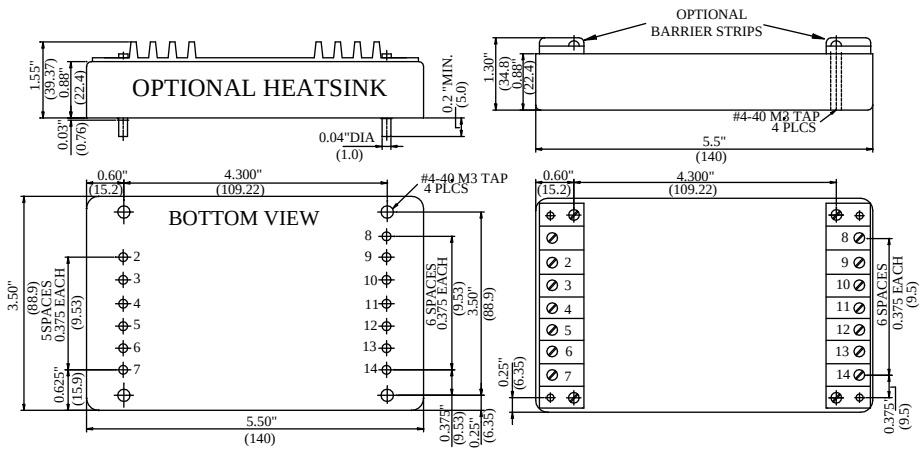
MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF	CASE
				NO LOAD	FULL LOAD		
UM1701	12VDC	5 VDC	10.0 A	25 mA	5.20 A	80	K
UM1702		12 VDC	5.0 A	25 mA	6.10 A	82	
UM1703		15 VDC	4.0 A	25 mA	6.10 A	82	
UM1704		5/5 VDC	5/5 A	25 mA	5.20 A	80	
UM1705		12/12 VDC	2.5/2.5 A	30 mA	6.10 A	82	
UM1706		15/15 VDC	2.0/2.0 A	30 mA	6.10 A	82	
UM1707		+5/±12 VDC	5.0/±1.25 A	70 mA	5.72 A	80	
UM1708		+5/±15 VDC	5.0/±1.0 A	85 mA	5.72 A	80	
UM1709		±5/±12 VDC	+5/-0.5/±1.25 A	145 mA	5.99 A	80	
UM1710		±5/±15 VDC	+5/-0.5/±1.0 A	165 mA	5.99 A	80	
UM1711	24VDC	5 VDC	10.0 A	20 mA	2.60 A	81	K
UM1712		12 VDC	5.0 A	20 mA	3.00 A	83	
UM1713		15 VDC	4.0 A	20 mA	2.97 A	84	
UM1714		5/5 VDC	5/5 A	20 mA	2.60 A	81	
UM1715		12/12 VDC	2.5/2.5 A	25 mA	3.05 A	82	
UM1716		15/15 VDC	2.0/2.0 A	25 mA	2.97 A	84	
UM1717		+5/±12 VDC	5.0/±1.25 A	45 mA	2.92 A	82	
UM1718		+5/±15 VDC	5.0/±1.0 A	55 mA	2.92 A	82	
UM1719		±5/±12 VDC	+5/-0.5/±1.25 A	85 mA	2.96 A	81	
UM1720		±5/±15 VDC	+5/-0.5/±1.0 A	95 mA	2.96 A	81	
UM1721	48VDC	5 VDC	10.0 A	20 mA	1.27 A	82	K
UM1722		12 VDC	5.0 A	20 mA	1.48 A	84	
UM1723		15 VDC	4.0 A	20 mA	1.48 A	84	
UM1724		5/5 VDC	5/5 A	20 mA	1.27 A	82	
UM1725		12/12 VDC	2.5/2.5 A	20 mA	1.49 A	84	
UM1726		15/15 VDC	2.0/2.0 A	20 mA	1.49 A	84	
UM1727		+5/±12 VDC	5.0/±1.25 A	35 mA	1.40 A	82	
UM1728		+5/±15 VDC	5.0/±1.0 A	35 mA	1.40 A	82	
UM1729		±5/±12 VDC	+5/-0.5/±1.25 A	50 mA	1.44 A	83	
UM1730		±5/±15 VDC	+5/-0.5/±1.0 A	60 mA	1.44 A	83	

NOTE: 1. To order the #4-40 TAP., add the suffix “z” to the model number.

To order the M3 TAP., add the suffix “Y” to the model number.

To order the optional heatsink on the PC mount model, add the suffix ”H” to the model number.

To order the optional barrier terminal strips, add the suffix ”B” to the model number.



PIN CONNECTIONS									
Term	Single	Dual	Triple	Quad	Term	Single	Dual	Triple	Quad
Inputs					Outputs				
1	No Pin	*	*	*	8	-Output	-Sense 1	-Sense 1	-Output 1
2	-Input	*	*	*	9	-Output	-Output 1	-Output 1	Com 1&2
3	-Input	*	*	*	10	+Output	+Output 1	+Output 1	+Output 2
4	+Input	*	*	*	11	+Output	+Sense 1	+Sense 1	Trim 2
5	+Input	*	*	*	12	-Sense	-Output 2	-Output 2	-Output 3
6	Control	*	*	*	13	Trim	Trim 2	Com 2&3	Com 3&4
7	Case	*	*	*	14	+Sense	+Output 2	+Output 3	+Output 4

*Connection is same as single column

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