

## 1 and 1.5 WATT DC/DC CONVERTERS

### Key Features

- Compact DIP Package
- Input/Output Isolated
- No derating to +85° C
- Self-recovering short circuit protection
- LC Input Filter

### Applications

- Telecommunications
- Industrial Controls
- Where space is at a premium

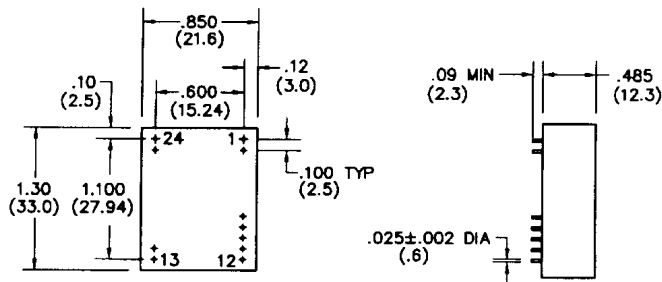


These 1 and 1.5 Watt DC/DC converters operate from a nominal 48v source and make available isolated single 5v and dual 5v outputs at the board level. The converters operate without derating over their full temperature range. Solid tantalum capacitors are used for enhanced reliability. Applications include telecommunications and industrial controls where space is at a premium.

### General Electrical Specifications

(Specifications at Nominal Input and 25 C, nominal input voltage and rated output current unless otherwise noted.)

Parameter	Limits	Conditions
Input Voltage	-42 to -56 VDC	(Low to High Line)
Input Filter	LC	
Max. Input Surge Current	2A Max.	43 ohm series input resistor
Output Voltage	5.0VDC $\pm$ 4% $\pm$ 5.0VDC $\pm$ 4%	Rated line, no load To full load
Efficiency	75% Min - Single 55% Min - Dual	Nominal line, full
Output Ripple and Noise	100mV P-P	20MHz bandwidth
Line Regulation	50mV	47 $\mu$ F across output
Load Regulation	50mV	Full load Nominal line, no load to full load, both outputs
Output Current	30-300mA - Single 30-100mA - Dual 10-100mA - Dual	Positive output Negative output
Output Protection	Short Positive output - continuous Negative output - 5 seconds	Automatic restart after short removed
Output Voltage Temperature Coefficient	0.4% per °C	Nominal line, full load
Isolation	750 VDC Min	No derating
Operating Temperature	-40° to +85°C	
Storage Temperature	-55° to +125°C	

**1M**

**NOTES (ALL DEVICES & PACKAGES):**

1. All dimensions in parentheses are metric.
2. Tolerances unless otherwise specified:  
 $.xx \pm .03$  (.76)  $.xxx = \pm .015$  (.38)

## Selection Guide

Device Type	Input Voltage Range VDC	Typical Input Current (A) @ Max Load	Output Voltage VDC	Max Output Current (mA)
1M48R5	42-56	.045	+ or - 5	30-300
1M48R5-5	42-56	.045	±5	30-100, 10-100
1M110R5	-70 to -120	.100	+5	30-300

## Mechanical Specification (dimensions in inches)

### Pin Connections

Single Output Models		Dual Output Models
1	- Input	- Input
2	+ Input	+Input
8,9	+ Pos. Output	+ Pos. Output
10	Output Common	Output Common
11,12	No connection	- Neg. Output
13,14,23,24	No connection	No connection

Reliability Power Locations	
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