



### 10 Watt DC/DC Converters

#### Key Features

- Wide Input Ranges
- Typical Efficiency of 80%  
(76% For 3.3V)
- Remote On/Off
- Overvoltage Protection
- Meets FCC Section 15 Sub Part J  
Class B Radiated, Class A Conducted
- U.L., CSA Approved
- CE (LVD)



#### Applications

- Telecommunications Equipment
- Digital Circuits
- Private Branch Exchange
- Distributed Power Systems
- Analog Systems

The 10 Watt DC/DC converters operate from wide input ranges. A low profile makes them ideal for board-mounted applications where space is at a premium. Available in single and dual outputs.

Reliability Incorporated also provides custom designed DC/DC Converters to meet customer specifications. Reliability Incorporated is based in Houston, Texas, USA and is a leading provider of semiconductor processing equipment and DC/DC converters. Corporate headquarters, located in Houston, TX, USA is ISO 9001 certified. DC/DC converters are manufactured in Costa Rica.

#### General Electrical Specifications

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

INPUT SPECIFICATIONS	
Input Voltage Range	See Selection Guide
Input Filter	Pi Type, LC on "AW"
Input Current	See Selection Guide
Input Transient Voltage	100 VDC for 100 ms.
Reverse Voltage Protection	None
Startup & Shutdown Voltage (C), (CNE), (SN)	≤(30), (36) VDC
Start Up Time (power applied) (C), (CNE), (SN)	(<5 ms), (.25 to 15 ms)
Turn-on Overshoot (10A48R5SN only)	.25VDC (Max)
Remote On/Off	
Enable	Open Circuit
Inhibit, Logic Low	I sink < 0.1ma, < 0.5 VDC
Start Up Time	< 1ms



Output Specifications	
Voltage Variance/Regulation (across: temp, input, & load range) Single 3.3v, 5v, 6.5 Single 15v Dual ±5v, ±12v, ±15v	± 4% ± 10% ± 4%
Ripple & Noise 20 Mhz Bandwidth (SN) (C), (CNE), or No Letter Duals ±12, ±5	100 mv P-P (Max) 100 mv P-P (Max) external .1mf cap 100 mv P-P (max) external 100mf caps.
Transient Response (SN) ± 25% from 10% to 100% of rated load, ± 5% voltage deviation (C) & (CNE) ± 25% from 50% to 90% of rated load, ± 5% voltage deviation	< 0.3 ms., recovery time to 1% < 1.5 ms., recovery time to 1%
Load Current Maximum Minimum	See Selection Guide 10% of Full Load
Short Circuit Protection (SN), (C), (CNE), or No Letter	Continuous Initiated between 105% and 200% of rated current.
Power Output No Derating to 71°C No Derating to 85°C Overvoltage Protection FCC Sect. 15 Sub Part J	10 Watts Continuous (SN) (C), (CNE), or No Letter 6.2V on 5V Unit; 4.3V on 3.3V Unit Yes
GENERAL SPECIFICATIONS	
Isolation	1500 VDC
Operating Temperature (SN) (C), (CNE), or No Letter	-25 to + 71°C -40 to + 85°C
Storage Temperature (SN) (C), (CNE), or No Letter	-25 to +100°C -40 to +100°C
FCC Compliance	Class B Radiated Class A Conducted
Efficiency	76% - 80% Typical

## SELECTION GUIDE

Device Type	Input Volts VDC	Input Current A (Max)	Output Voltage	Output Current A (Max)
10A24R5C	18-36	0.585	5.0	2.0
10A24R12C	18-36	0.585	12.0	0.83
10A24R15-15	12-48	1.070	±15.0	±0.334
10A48R3.3C	36-75	0.278	3.17-3.43	3.0
10A48R5C	36-75	0.278	4.80-5.20	2.0
10A48R5CNE	36-75	0.278	4.80-5.20	2.0
10A48R3.3SN	36-75	0.281	3.17-3.43	3.0
10A48R5SN	36-75	0.278	4.80-5.20	2.0
10AW48R5	18-72	0.278	5.0	2.0
10AW48R5-5	18-72	0.278	±5.0	±1.0
10AW48R6.5T	18-72	0.265	6.5	1.54
10AW48R12-12	18-72	0.265	±12.0	±0.417

## Pin Connections:

## Mechanical Specification for "10A" (dimensions in inches)

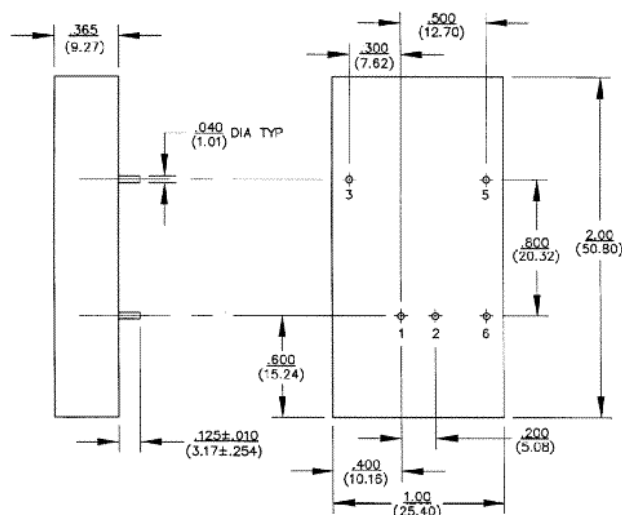
Pin	Connection
1	+ V Input
2	- V Input
3	+ V Output
4	No pin*
5	V Return
6	Enable**

\*Dual output common

\*10A48R5CNE pin 6 omitted

### Notes (all devices and packages):

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

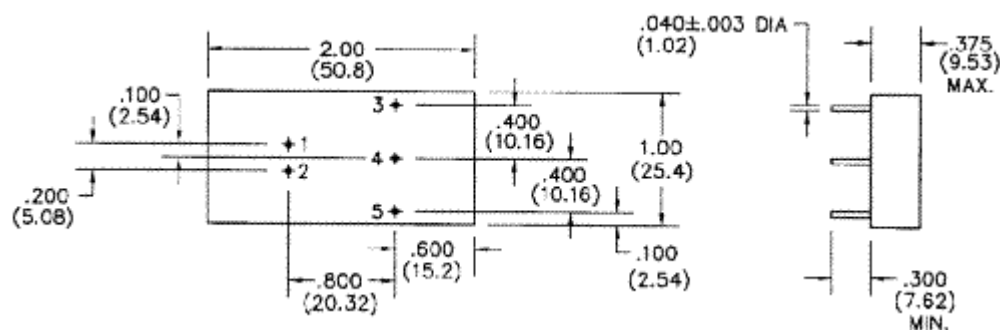


## Pin Connections:

## Mechanical Specification for "10AW" (dimensions in inches)

Pin	Single Output	Dual Output
1	+ Input	+ Input
2	- Input	- Input
3	+ Output	+ Output
4	No pin/Adjust (5V only)*	Output Common
5	Output Common	- Output

\*5V output model may be ordered with adjust pin 4 (trim) by adding the suffix "T"



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