Reliability® Incorporated *Product Data Sheet*

7 - 18 Watt Z-PAC® DC/DC Converters

Key Features

- **Efficiency 90% Minimum**
- **Input/Output Isolated**
- **Single and Combinable Dual Output**
- **Designed To Meet FCC Section 15, Sub Part J, A & B**
- **Balanced Load**
- **Full Range Operating to 85°C**
- **Designed for Low Noise, High Efficiency Applications**
- **Outputs may be paralleled**

The Z-PAC Series of DC/DC converters provides the performance advantages of conventional linear converters with a minimum efficiency of 90%. The units are designed to encompass A/D and D/A converters, operational amplifiers, RS232, 444 and 488 as well as negative voltage biasing. The units are also suitable in battery or solar powered equipment and in a wide variety of other uses in commercial and industrial equipment. The 18 Watt model is specifically intended for Ethernet/Cheapernet Hub applications. The series operates from inputs of 5 and 12 VDC with single and dual outputs. All Z-PAC devices operate over their full temperature range with no derating.

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.)

PARAMETER	LIMITS	CONDITIONS
Input Voltage Range	± 20%	All Units
Input Filter	Yes	All Units
Input Ripple Current	5% (P-P)	Of Average Input Current
Maximum Input Voltage (1)	8V, 15V (Max)	5V & 12V Inputs, respectively
Output Voltage	See Selection Guide	
Output Current	See Selection Guide	
Output Voltage Accuracy	± 3%	80% of Full Load, Nominal Input
Output Ripple and Noise	100mV (P-P)	20 Hz - 20 MHz, BW Ext. Cap Across Outputs
Load Regulation	See Graphs	Balanced Loads
Line Regulation	1.25% per 1% (Max)	Delta Vo/ Delta V IN 80% Full Load
Minimum Load	25ma	All Units
Isolation	500 VDC	All Units
Efficiency (2)	90% (Min)	80% of Full Load, Nominal Input
Short Circuit Protection	Momentary	Recommended for Full Protection, Use External Fuse
Operating Temperature	-40°C to +85°C	No Derating
Storage Temperature	-55°C to 125°C	
Case	2" x 2" x 0.375"	Ryton UL 94V-0
FCC Sect. 15 Sub Part J	Yes	Class B Radiated, Class A Conducted

(1) Note that the output voltage will increase accordingly. Units may be operated at maximum input voltage continuously.
(2) Minimum of 85% for single 5V output and 9V output unit.
Do not operate the converters under no load conditions. To prevent high output voltages always have at least 25ma of load current on each output.
The positive or negative output may be used as an output common to obtain 24 or 30 VDC. In this application do not use pin 4, the standard output common. The maximum output current will be as specified for a single output, i.e., 300ma for 24V and 250ma for 30 VDC.

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SELECTION GUIDE

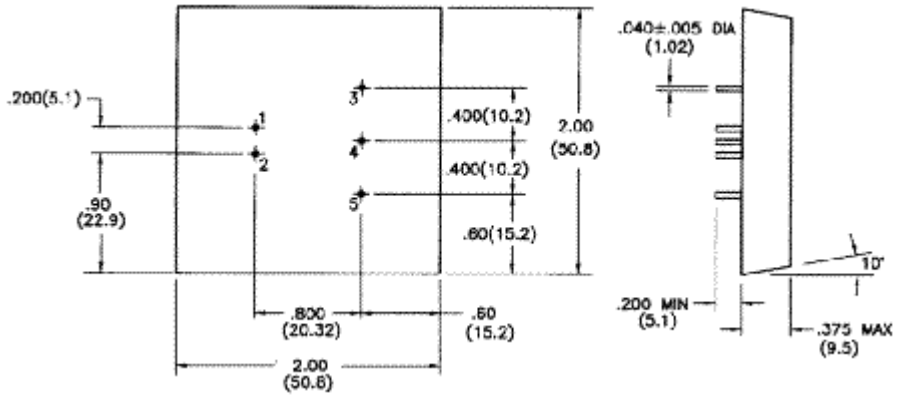
Device Type	Input Volts VDC	Input Current A (Max)	Output Voltage	Output Current mA (Max)	Package/ Pinout
7A5U5	4.5 - 5.5	1.5	+ or - 5	1500	A
7A5U12-12	4.5 - 5.5	1.3	+ and - 12	±300	A
7D5U12-12	4.5 - 5.5	1.3	+ and - 12	±300	D
7D12U12-12	10.8 - 13.2	0.53	+ and - 12	±300	D
7D12U15-15	10.8 - 13.2	0.6	+ and - 15	±250	D
18ZA12U9	11.4 – 12.6	1.6	+ or – 9	2000	A

Pin Connections:

Pin	*Single Input*	*Pin*	*Dual Output*
1	*+ input*	*1*	*+ input*
2	*– Input*	*2*	*– Input*
3	*+ Output*	*3*	*+ Output*
4	*– Output*	*4*	*Common*
5	*– Output*	*5*	*– Output*

Mechanical Specification (dimensions in inches)

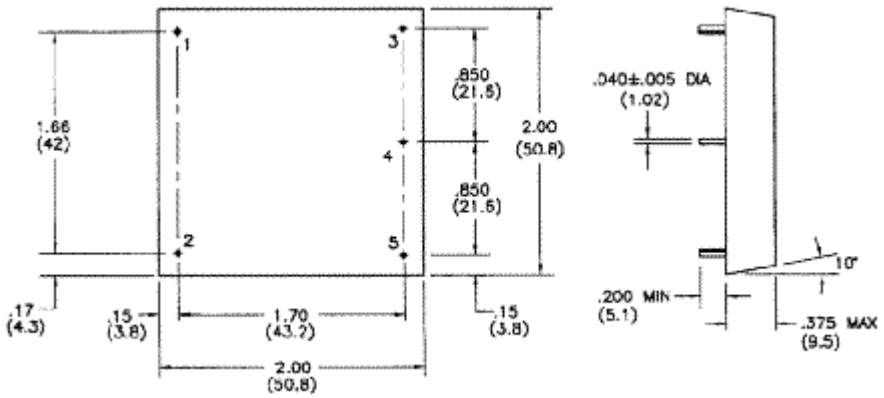
ZA



NOTES (ALL DEVICES & PACKAGES):

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

ZD



Performance Data

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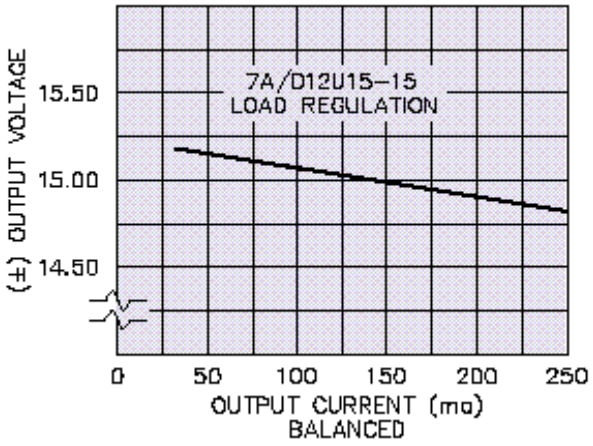

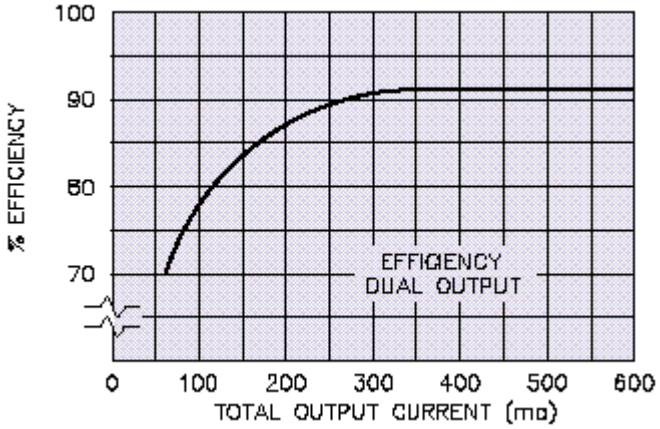

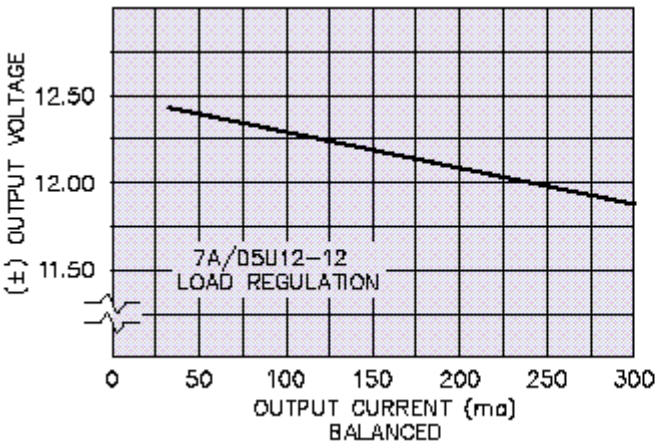

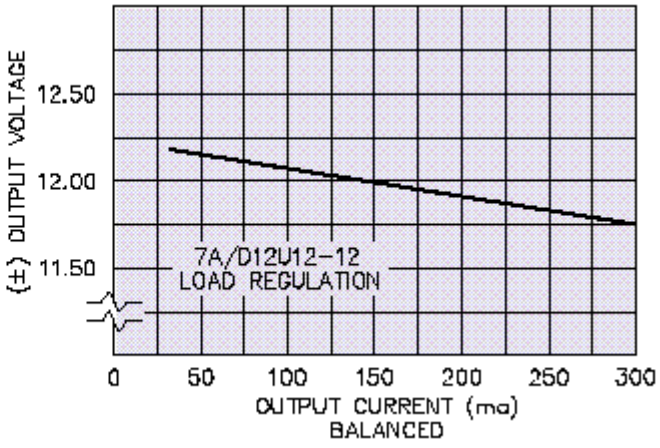

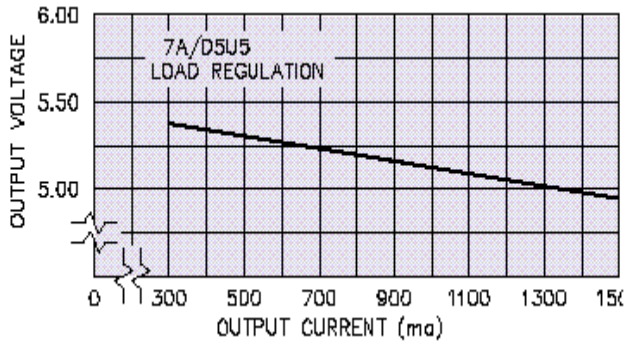

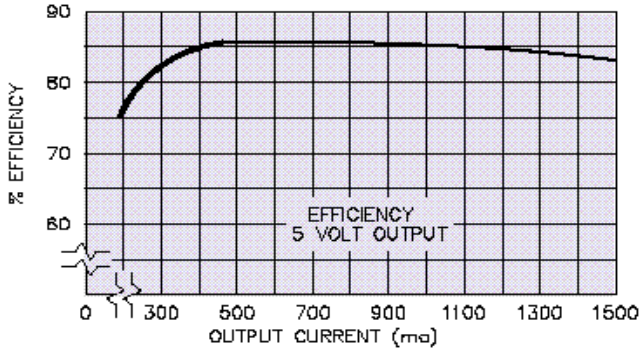

Reliability Incorporated Locations		
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