WinSystems®

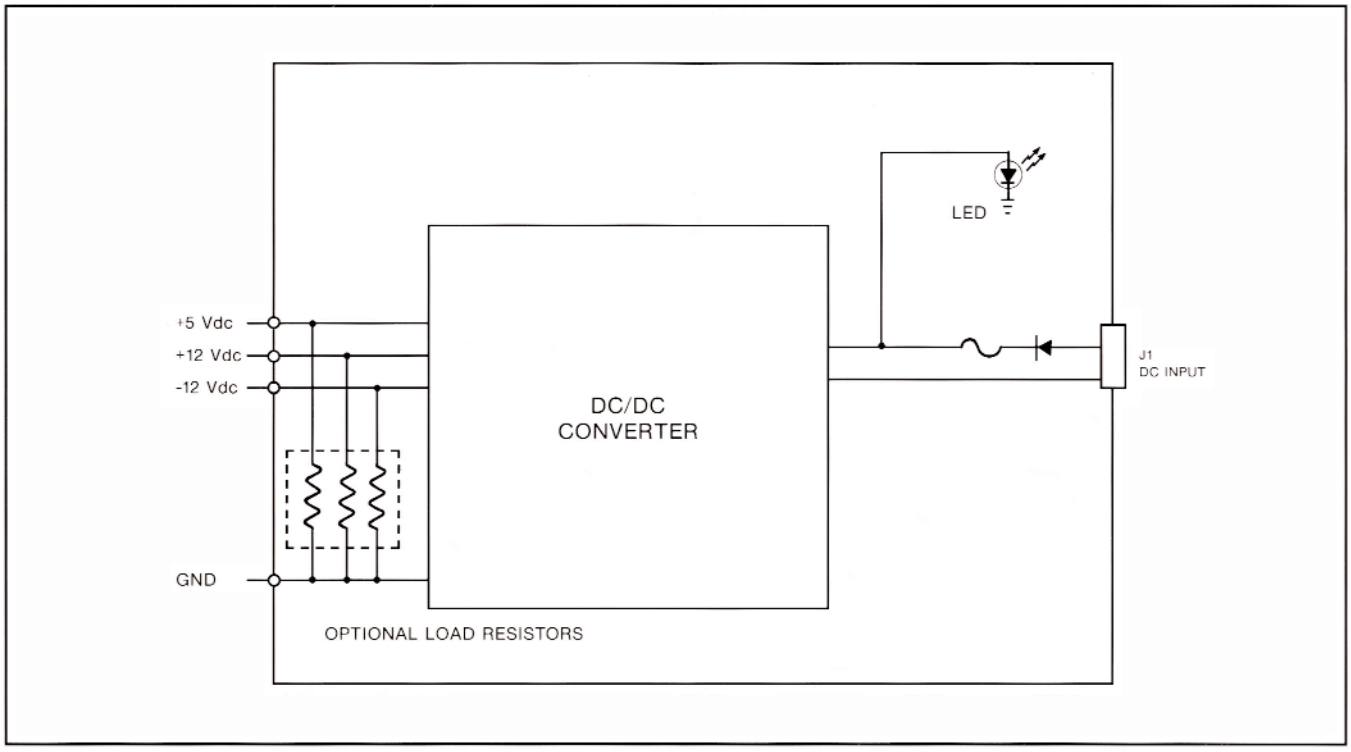
STD BUS

PS12/24/48T12 DC/DC In-Rack Power Supply

FEATURES

- 15W STD Bus in-rack DC/DC power supply
- Three input voltage ranges:
  - 9 - 18 VDC
  - 18 - 36 VDC
  - 36 - 72 VDC
- Wide input voltage range with 2:1 ratio
- Input polarity reversal protection circuit
- Fused input line
- Triple output voltage:
  - +5 VDC at 1500 mA
  - +12 VDC at 310 mA
  - -12 VDC at 310 mA
- Short circuit protection on outputs
- Overvoltage protection on all outputs
- Wide operational temperature range:
  - -25°C to +71°C with no derating

The PS12T12, PS24T12, and PS48T12 are three, 15 Watt STD Bus DC/DC converters that feature a wide input voltage range. The unit plugs directly into an STD Bus card cage to provide a triple output voltage. Nominal DC input voltages of +12, +24, or +48 volts are accepted with a wide input tolerance ratio of 2:1. These units are ideal for applications where only DC input voltage is present and a wide operational temperature range is needed for STD Bus embedded control applications.



FUNCTIONAL CAPABILITY

Input Voltage Range - The PS12T12 supply accepts 9 - 18 VDC, the PS24T12 accepts 18-36 VDC, and the PS48T12 accepts 36 - 72 VDC input. Each of the power supplies has an input protection circuit that prevents a short circuit if the unit is wired into the main DC supply backwards. An in-line fuse is wired on the input side of the power supply. Also an LED is onboard that will illuminate when DC input power is present.

Output Voltage Range - Three output voltages are present from the power supply: +5 VDC, +12 VDC, and -12 VDC. 1500 mA is available on the +5 volt output. 310 mA is available at both +12 and -12 volts outputs. The onboard high efficiency DC/DC switching power module requires a minimum current loading on each output.

Output Loading and Protection - Thermal shutdown is provided for long-term short circuit and overload clamp protection. Overvoltage protection is provided on each output. The output loading and protection for each output is shown in the table below.

Amperes

VDC	Min	Nom.	Max.	OVP
+5	.250	1.5	2.0	+6.8V
+12	.100	0.31	0.50	+15V
-12	.100	0.31	0.50	-15V

Output Loading and Protection Table

The maximum total power from all outputs is limited to 15 Watts, but no output should be allowed to exceed its maximum current. Minimum current on each output is required to maintain regulation. Solder pads are provided on each output line of the DC/DC converter to accommodate optional user installed resistors to meet the minimum load requirement shown in the table above.

The power supply has a six-sided continuous shield for EMI/RFI protection. Also the unit has input/output isolation of 500 VDC. The efficiency is 78% or higher. Operating temperature is from -25°C to +71°C with no derating.

Mounting - The DC/DC converter is a complete unit that mounts on a STD Bus board. The height of the converter module is 0.83" (21.1mm) which means that the PS12T12, PS24T12, or PS48T12 will require 2 card slots in a card cage if it is not installed in slot 1.

Connectors - A Molex 15-24-4041 polarized right angle header is used as the input connector. This is a very common, 4-pin, right angle connector that is used to supply power for the disk drives in PCs.

J1 Input Voltage Pin-Out

Pin	Description
1	+ DC Input voltage
2	+ DC Input voltage
3	Ground
4	Ground

The output voltages are wired to the respective voltage pins on the STD Bus connector. All other pins to the STD Bus are not connected.

STD Bus Voltage Pin-Out

Pin	Description
1	+5 volts DC
2	+5 volts DC
3	Ground
4	Ground
55	+12 volts DC
56	-12 volts DC

SPECIFICATIONS

Electrical

Input Voltage
12VDC (9 - 18 VDC): PS12T12
24VDC (18 - 36 VDC): PS24T12
48VDC (36 - 72 VDC): PS48T12

Output Voltage/Current
+5VDC at 1500 mA
+12VDC at 310 mA
-12VDC at 310 mA

Mechanical

Dimensions: 4.5" x 6.5" x 1.0"

Connectors

Input Power: 4-pin Molex. Mates with AMP 1-480424-0 housing and 60617-1 pins
Output Power: 56-pin STD Bus card edge

Environmental

Operational Temperature: -25° to +71°C

ORDERING INFORMATION

PS12T12 12 VDC input DC/DC supply
PS24T12 24 VDC input DC/DC supply
PS48T12 48 VDC input DC/DC supply