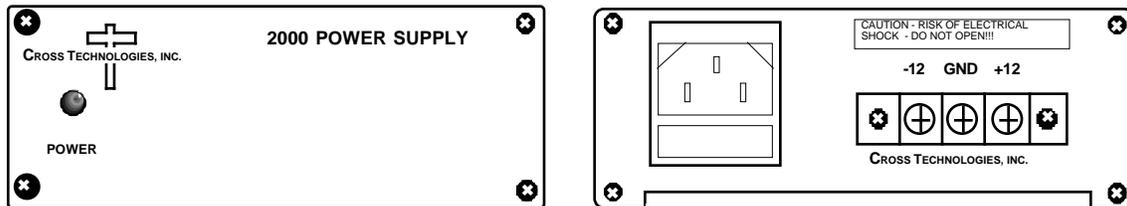


Instruction Manual

Model 2000-12 Power Supply

April 2012, Rev. A



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INSTRUCTION MANUAL

MODEL 2000-12 Power Supply

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WARRANTY - The following warranty applies to all Cross Technologies, Inc. products.

All Cross Technologies, Inc. products are warranted against defective materials and workmanship for a period of one year after shipment to customer. Cross Technologies, Inc.'s obligation under this warranty is limited to repairing or, at Cross Technologies, Inc.'s option, replacing parts, subassemblies, or entire assemblies. Cross Technologies, Inc. shall not be liable for any special, indirect, or consequential damages. This warranty does not cover parts or equipment which have been subject to misuse, negligence, or accident by the customer during use. All shipping costs for warranty repairs will be prepaid by the customer. There are not other warranties, express or implied, except as stated herein.



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MODEL 2000-12 POWER SUPPLY

SECTION 1 GENERAL

1.1 Equipment Description - The 2000-12 Power Supply is a switching power supply which provides regulated +12 VDC at 1.2 amps and -12 VDC at 0.5 amps with a 100-240 \pm 10% VAC, 47 to 63 Hz input and can be used with Cross Series 2000 products. The input AC connector is IEC 320 C13 and the DC outputs are on a barrier strip. The 2000-12 can be mounted on an 1.75" x 19.0" rack mount panel (option -R).

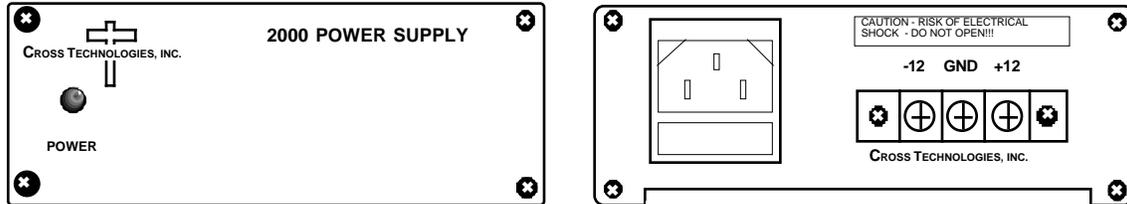


TABLE 1.0 2000-12 POWER SUPPLY SPECIFICATIONS

AC Input Characteristics

Voltage	100-240 \pm 10% VAC
Frequency	47 - 63 Hz
Power, maximum	50 watts

DC Output Characteristics

Voltage / Current	+12 VDC/ 1.2 amps, -12 VDC / 0.5 amps
Load Regulation, max.	\pm 5%
Power Supply type	Switcher
Switching Frequency	50 kHz, typical

Indicators

DC Power	Green LED
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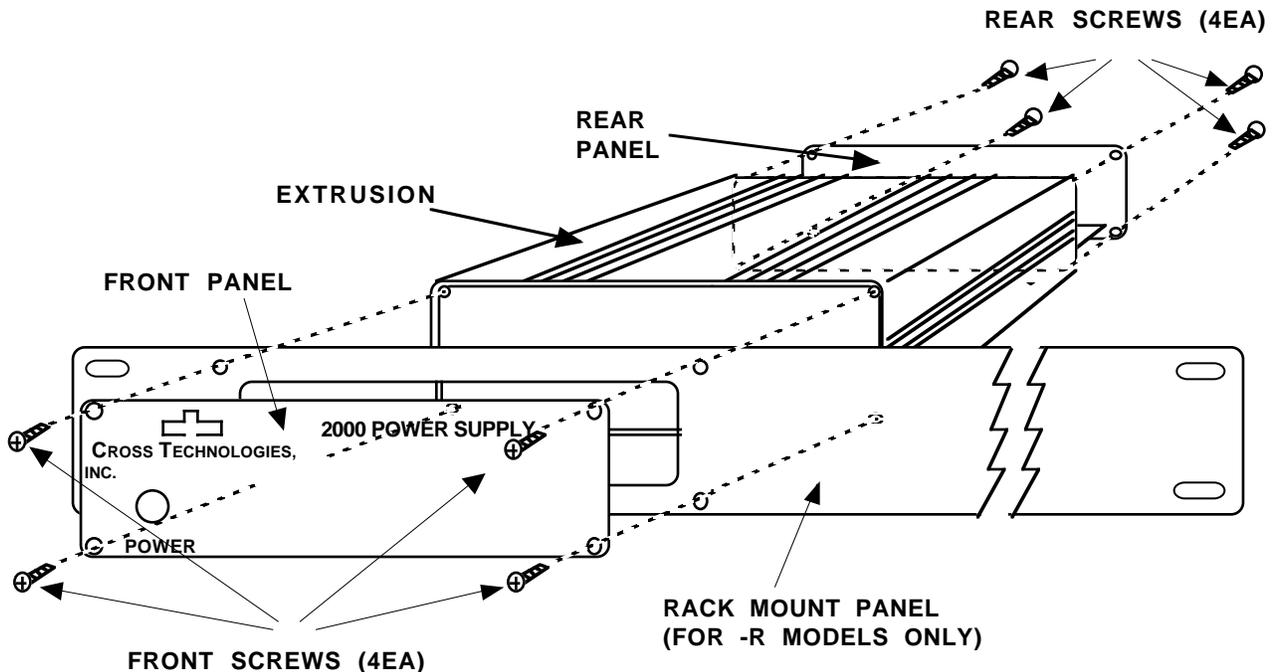
Other

Connector, AC Input	IEC 320 C13
Connector, DC Output	Barrier Strip
Size, Bench Top	4.7" wide X 1.75"high X 8.5" deep
Size, Rack Mount (-R)	19 inch standard chassis 1.75"high X 9.0"deep (Optional)

*+10 to +40 degrees C; Specifications subject to change without notice

2.0 Installation

2.1 **Mechanical** - The 2000-12 is packaged in an aluminum extrusion. The **-R option** is mounted on a 1.75" X 19" panel that can be mounted to a rack using the 4 holes at the ends. See Figure 2.1.



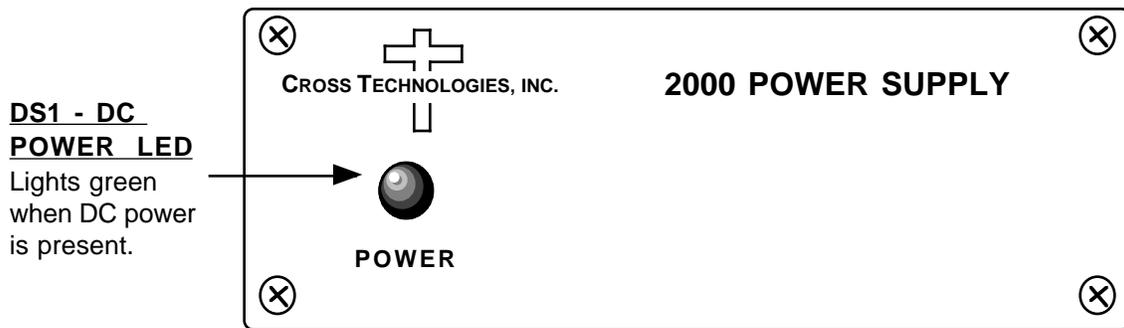
2.2 **Controls and Indicators** - Figure 2.2 shows the front panel indicator.

2.3 **Input / Output Signals** - Figure 2.3 shows the input and output signals to the 2000-12.

2.4 **Accessing and Changing On-Card Fuse** - The **primary fuse** is in the AC connector fuse box (Figure 2.3, Section 2.5.2). Figure 2.4 shows the **secondary fuse** on the power supply.

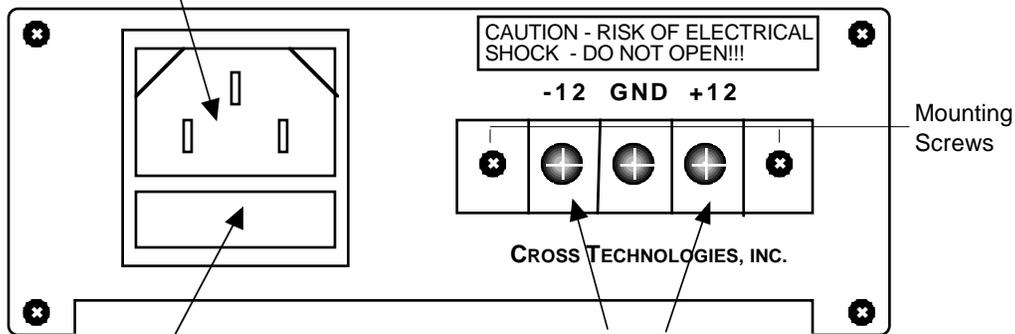
To remove the power supply from the extrusion for access to the secondary fuse:

- 1.) Remove four (4) **rear panel screws** (see Figure 2.1).
- 2.) **Gently** pull the power supply assembly completely out of the extrusion.
- 3.) With **AC Power disconnected**, replace fuse with a **2.0 amp fuse** (Figure 2.4).
- 4.) **Gently** push the power supply assembly completely in to the extrusion.
- 5.) Install four (4) **rear panel screws**.



J1 - AC INPUT

The 100-240 $\pm 10\%$ VAC, 47 - 63 HZ input. The fuse is in the tray below this and is a 2.0 amp fuse. There is also a 2.0 amp fuse on the internal power supply.



FU5E BOX

A 2.0 amp fuse. There is also a spare 2.0 amp fuse in the box.

J2 - DC POWER OUT-

The +12 VDC (1.2 A) and -12 VDC (0.5 A) regulated DC output voltage.

FIGURE 2.3 2000-12 Rear Panel Inputs and Outputs

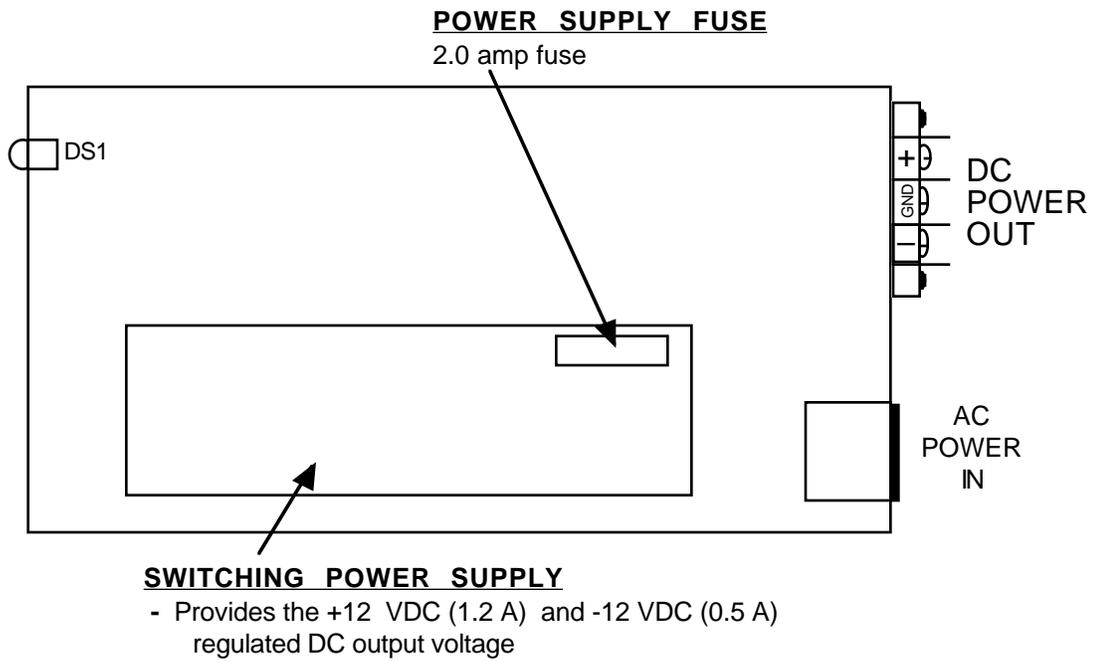


FIGURE 2.4 2000-12 On-Card AC Power Supply Fuse
(See Section 2.4 for instructions on removing the unit from the extrusion)

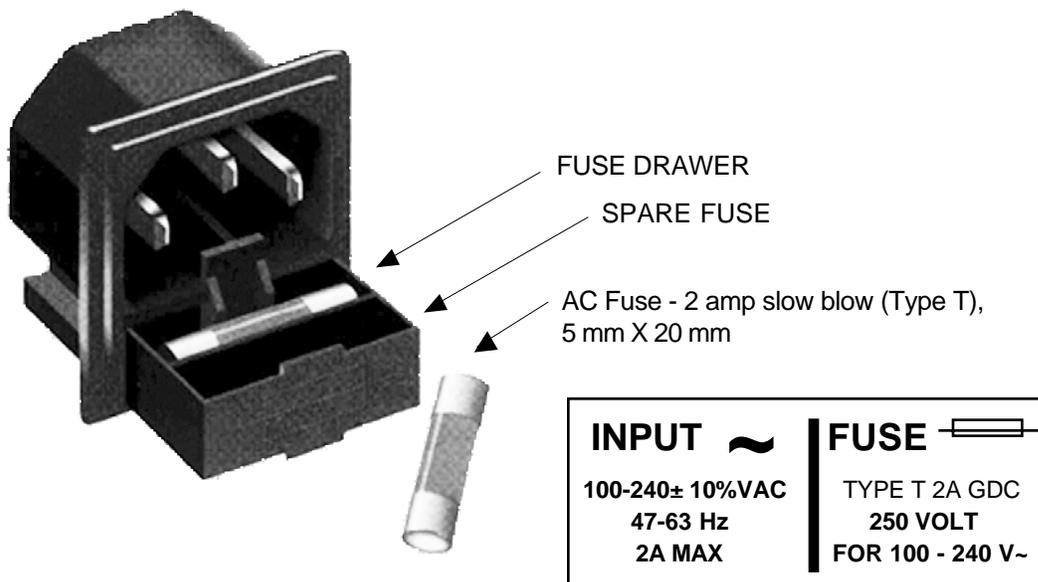
2.5 Installation / Operation -

2.5.1 Installing and Operating the 2000-12 -

- 1.) Connect the DC power to the Series 2000 unit.
- 2.) Connect the 2000-12 to 100-240 \pm 10% VAC, 43 - 60 Hz.
- 3.) Be sure DS1 (green, DC Power) is on (Figure 2.2).

2.5.2 Replacing the fuse in the rear panel fuse box (Figure 2.3) -

- 1.) Remove the 100-240 \pm 10% VAC, 43 - 60 Hz to the 2000-12
- 2.) Pull out the fuse box below the AC input connector (Figure 2.3).
- 3.) Pry out the fuse in the back slot and measure it to see if it is open.
- 4.) If the fuse is open determine the cause of the blown fuse and repair this.
- 5.) After the cause of the blown fuse is corrected, replace the open fuse with the **2.0 amp** fuse in the front section.
- 6.) Apply 100-240 \pm 10% VAC, 43 - 60 Hz to the 2000-12 and be sure DS1 (green, DC Power) is on Figure 2.2.



3.0 Environmental Use Information

- A. **Rack-Mounting** - To mount this equipment in a rack, please refer to the installation instructions located in the user manual furnished by the manufacturer of your equipment rack.
- B. **Mechanical Loading** - Mounting of equipment in a rack should be such that a hazardous condition does not exist due to uneven weight distribution.
- C. **Elevated Operating Ambient Temperature** - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack may be greater than room ambient temperature. Therefore, consideration should be given to Tmra.
- D. **Reduced Air Flow** - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised. Additional space between units may be required.
- E. **Circuit Overloading** - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits could have on over current protection and supply wiring. Appropriate consideration of equipment name plate rating should be used when addressing this concern.
- F. **Reliable Earthing** - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connection to the Branch (use of power strips).
- G. **Top Cover** - There are no serviceable parts inside the product so, the Top Cover should not be removed. If the Top Cover is removed the ground strap and associated screw **MUST BE REINSTALLED** prior to Top Cover screw replacement. **FAILURE TO DO** this may cause **INGRESS** and/or **EGRESS** emission problems.



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