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When ordering parts from Cross Technologies, Inc., be sure to include the equipment model number, equipment serial number, and a description of the part.
INSTRUCTION MANUAL

MODEL 2000-02 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.
MODEL 2000-02 Power Supply

1.0 General

1.1 Equipment Description

The 2000-02 Power Supply is a switching power supply which provides regulated +18 VDC a 1.0 amps with a 100-240 ± 10% VAC, 47 to 63 Hz input and can be used with Cross products requiring +18 VDC. The input AC connector is IEC 320 C13 and the DC outputs are on a barrier strip. The 2000-02 can be mounted on an 1 3/4” X 19” rack mount panel (option -R).

![2000 POWER SUPPLY](image1)

![2000 POWER SUPPLY](image2)

FIGURE 1.1 Model 2000-02 Front and Rear Views

1.2 Technical Characteristics

TABLE 1.1 2000-02 Power Supply Specifications*

<table>
<thead>
<tr>
<th>AC Input Characteristics</th>
<th>DC Output Characteristics</th>
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<tbody>
<tr>
<td>Voltage</td>
<td>Voltage</td>
</tr>
<tr>
<td>100-240 ± 10% VAC</td>
<td>+18 VDC</td>
</tr>
<tr>
<td>Frequency</td>
<td>Current</td>
</tr>
<tr>
<td>47-63 Hz</td>
<td>1.0 amps</td>
</tr>
<tr>
<td>Power, maximum</td>
<td>Load Regulation, max.</td>
</tr>
<tr>
<td>20 Watts</td>
<td>± 5%</td>
</tr>
</tbody>
</table>

Indicators

- DC Power: Green LED

Other

- AC Input Connector: IEC 320 C13
- DC Output Connector: Barrier Strip
- Size (Bench Top): 4.7” wide X 1.75” high X 8.5” deep
- Size (Rack Mount, -R): 19 inch, 1RU standard chassis 1.75”high X 9.0” deep

---

*+10°C to +40°C; Specifications subject to change without notice
2.0 Installation

2.1 Mechanical - The 2000-02 is packaged in an aluminum extrusion. The -R option is mounted on a 1 3/4” X 19” panel that can be mounted to a rack using the 4 holes at the ends. See Figure 2.1.

FIGURE 2.1  2000-02 Mechanical Assembly
2.2 Controls and Indicators - Figure 2.2 shows the indicator on the front panel.

![Figure 2.2 2000-02 Front Panel Indicator](image)

**DS1 - DC POWER LED**
Lights green when DC power is present.

**FIGURE 2.2 2000-02 Front Panel Indicator**

2.3 Input and Output Signals - The following are the rear panel inputs and outputs.

**J1 - AC INPUT**
The 100-240 ±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.

**J2 - DC POWER OUT**
The V1 and V2 (+18 VDC) regulated DC output voltages.

![Figure 2.3 2000-02 Rear Panel Inputs and Outputs](image)

**FU5E BOX**
A 2.0 amp fuse. There is also a spare 2.0 amp fuse in the box.

**FIGURE 2.3 2000-02 Rear Panel Inputs and Outputs**
2.4 Changing the On-Card Fuse

The **primary fuse** is in the AC connector fuse box (Figures 2.3 and 2.5). 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.

---

**FIGURE 2.4  2000-02 On-Card AC Power Supply Fuse**

**POWER SUPPLY FUSE**

2.0 amp fuse

**SWITCHING POWER SUPPLY**

Provides the +18 VDC (1.0 A) regulated DC output voltage
2.5 Operation

2.5.1 Operating the 2000-02 Power Supply
1. Connect the DC power output to the Series 2000 unit (or other unit) (Figure 2.3).
2. Connect the 2000-02 to 100-240 ± 10% VAC, 47-63 Hz AC power.
3. Be sure DS1 (green, DC POWER) is on (Figure 2.2).
4. AC Fuse - The fuse is a 5 mm X 20 mm, 2 amp slow blow (Type T) and is inserted in the far slot in the
   drawer below the AC input as shown in Figure 2.4. There is a spare fuse in the near slot. If a fuse
   continues to open, the power supply is most likely defective.

2.5.2 Replacing the Fuse in the Rear Panel Fuse Box
1. Remove the 100-240 ± 10% VAC, 47-63 Hz AC power from the 2000-02.
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 ± 10% VAC, 47-63 Hz AC power to the 2000-02 and be sure DS1 (green, DC POWER)
   is on (Figure 2.2).

![Fuse Location and Spare Fuse](image URL)
2.6 Use Information

A. **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.

B. **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.

C. **Mechanical loading** - Mounting of equipment in a rack should be such that a hazardous condition does not exist due to uneven weight distribution.

D. **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.

E. **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).

F. **Top Cover** - There are no servicable 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 RE-INSTALLED prior to Top Cover screw replacement. FAILURE TO DO this may cause INGRESS and/or EGRESS emission problems.