POWERLOGIC® Power Server

PWRSRV710 and PWRSRV750 Models

Setup Guide

Retain for future use.

- Merlin Gerin
- Modicon
- Square D
- Telemecanique

Schneider Electric

NOTICE

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of either symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **will result** in death or serious injury.

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **can result** in death or serious injury.

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **can result** in minor or moderate injury.

CAUTION

CAUTION, used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, **can result** in property damage.

NOTE: Provides additional information to clarify or simplify a procedure.

PLEASE NOTE

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. This document is not intended as an instruction manual for untrained persons. No responsibility is assumed by Square D for any consequences arising out of the use of this manual.

CLASS A FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designated to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CONTENTS

CHAPTER 1—INTRODUCTION

OVERVIEW

The Power Server is a self-contained device that can be used to transfer power system information through a web browser and an Ethernet local area network (LAN) or a wide area network (WAN). It is designed specifically for industrial and commercial applications, making it possible to view system information from a standard web browser. Figure 1–2 on page 2 illustrates this application. An optional touch screen display (Square D part no. SD700) is also available for viewing the Power Server locally.

Using an embedded POWERLOGIC® System Setup application, the Power Server also provides setup capabilities for system components. The Power Server can be used to create communications connections and configure device settings for devices connected to a serial daisy chain, as well as other Modbus/Jbus devices located on the Ethernet network.

Two models are available. PWRSRV710 is the basic model. The other model, the PWRSRV750, has the standard features of the PWRSRV710 as well as enhanced capabilities. These enhanced capabilities include graphical diagram views, active alarm and alarm log views, and historical data and waveform report views.

When integrated into a system using System Manager™ Software (SMS), the Power Server can also serve as an Ethernet gateway for the local system. As illustrated in Figure 1–3 on page 2, the Power Server provides Ethernet routing from the SMS application to the devices on the serial daisy chain.
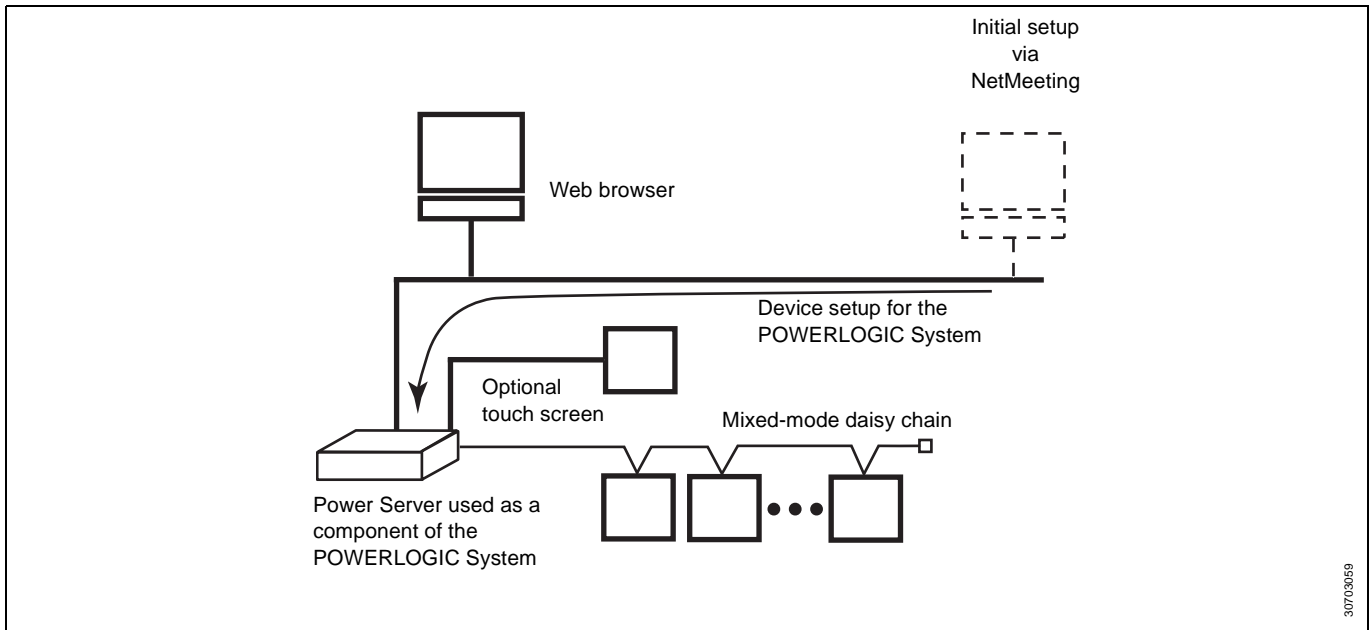

Figure 1–1: Power Server

Initial setup
via
NetMeeting

Web browser

Device setup for the
POWERLOGIC System

Optional
touch screen

Mixed-mode daisy chain

Power Server used as a
component of the
POWERLOGIC System

Figure 1–2: The Power Server used as a standalone system monitoring device

POWERLOGIC Enterprise System

Internet

View reports via
Internet browser

PC with
System Manager
Software (SMS)

POWERLOGIC
Enterprise System

Internet

Web browser

Firewall

via Ethernet

Firewall

PUSH application
sending data to
enterprise

Optional
touch screen

Mixed-mode daisy chain

via
Modem

Power Server used as
a gateway

NOTE: The shaded area depicts a POWERLOGIC Enterprise System. Contact POWERLOGIC Engineering Services for information on this type of application.
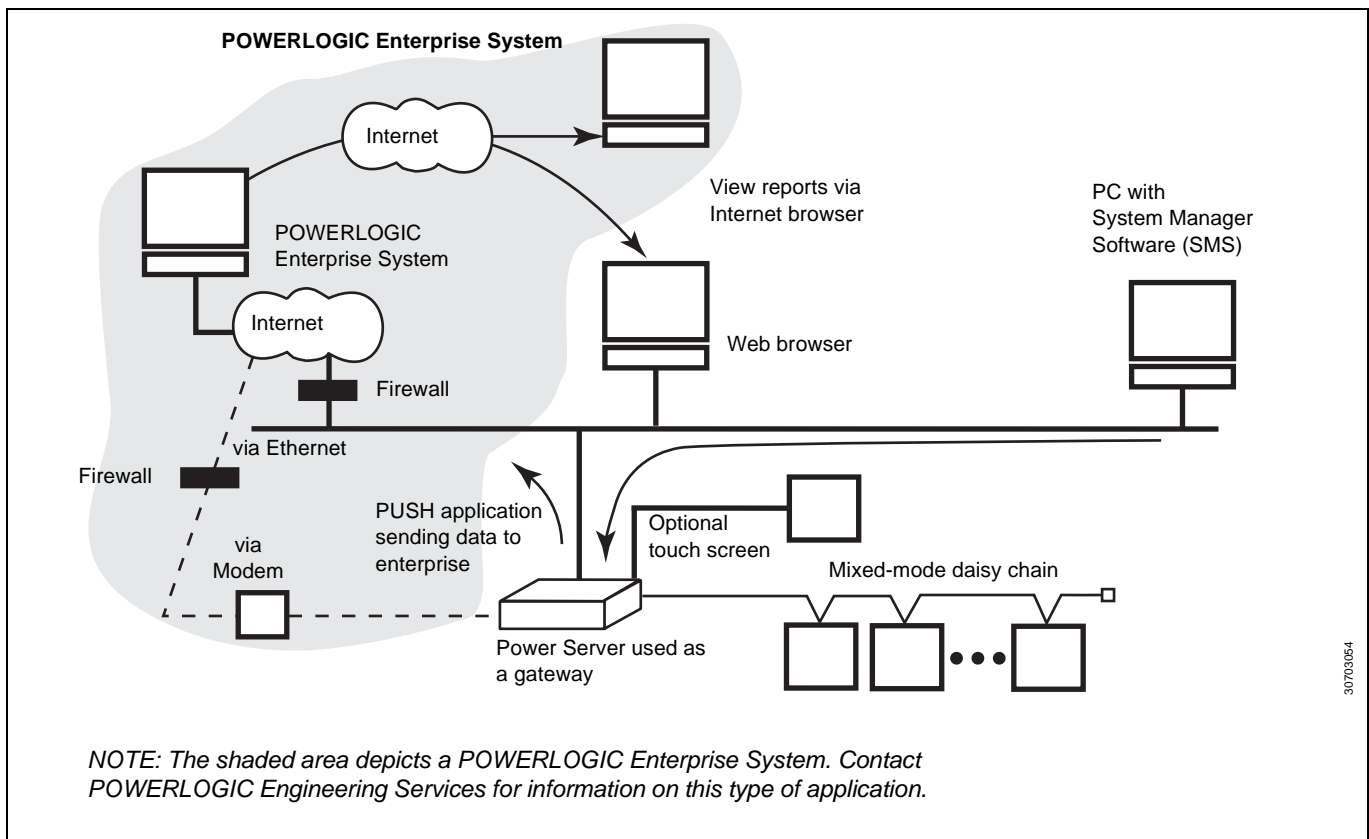
Figure 1–3: The Power Server used as a gateway device with SMS and a web server

CHAPTER 2—SAFETY PRECAUTIONS

> ### ⚠ DANGER
>
> **HAZARD OF ELECTRIC SHOCK, BURN, OR EXPLOSION**
>
> - Only qualified workers should install this equipment. Such work should be performed only after reading this entire set of instructions.
> - NEVER work alone.
> - Turn off all power supplying this equipment before working on or inside.
> - Always use a properly rated voltage sensing device to confirm that all power is off.
> - Before performing visual inspections, tests, or maintenance on this equipment, disconnect all sources of electric power. Assume that all circuits are live until they have been completely de-energized, tested, and tagged. Pay particular attention to the design of the power system. Consider all sources of power, including the possibility of backfeeding.
> - Beware of potential hazards, wear personal protective equipment, carefully inspect the work area for tools and objects that may have been left inside the equipment.
> - Use caution while removing or installing panels so that they do not extend into the energized bus; avoid handling the panels, which could cause personal injury.
> - The successful operation of this equipment depends upon proper handling, installation, and operation. Neglecting fundamental installation requirements may lead to personal injury as well as damage to electrical equipment or other property.
> - Before performing Dielectric (Hi-Pot) or Megger testing on any equipment in which the Power Server is installed, disconnect all input and output wires to it. High voltage testing may damage electronic components contained in the Power Server.
>
> **Failure to follow these instructions will result in death or serious injury.**

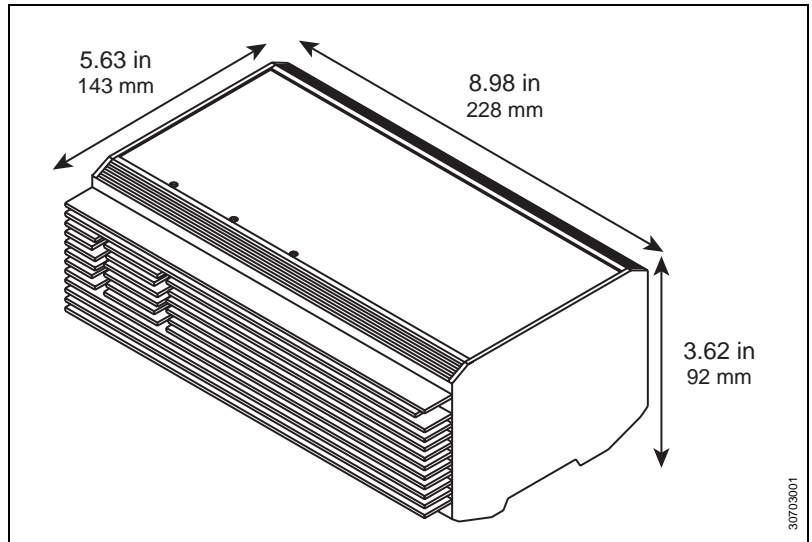# CHAPTER 3—INSTALLATION

DIMENSIONS

Figure 3–1: Power Server dimensional drawing

MOUNTING

The Power Server is designed to be mounted directly on a 1.38 in (35 mm) DIN rail. The unit has a snap-on DIN rail connector on the back (see Figure 3–2). No tools are required. Mount the Power Server in a clean, dry, well ventilated area. Allow 15.75 in (400 mm) on the DIN rail for mounting the Power Server and power supply. Also, allow 3 in (76 mm) clearance above the Power Server for heat ventilation.
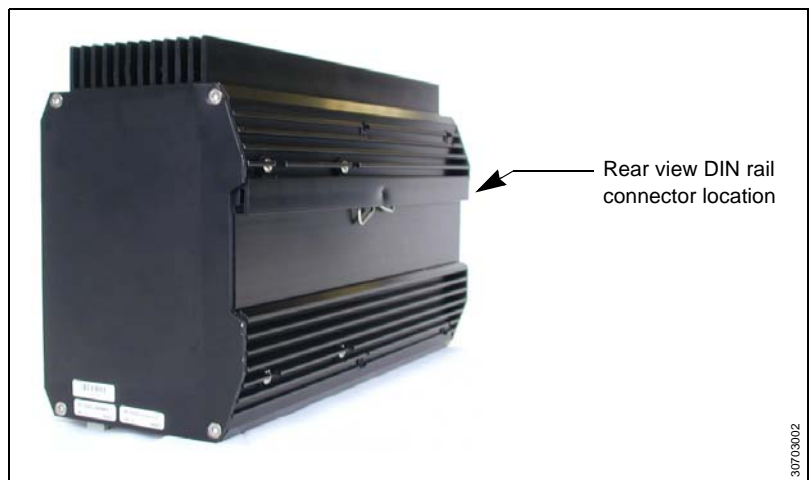

Rear view DIN rail connector location

Figure 3–2: Power Server rear view showing DIN rail connection

Mount the Power Server and Power Supply only in a horizontal position as shown in Figure 3–3.

Figure 3–3: Proper orientation of Power Server and power supply

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⚠ DANGER

HAZARD OF ELECTRIC SHOCK, BURN, OR EXPLOSION

- Turn off all power supplying this equipment and the equipment in which it is installed before working on this equipment.
- Always use a properly rated voltage sensing device to confirm that power is off.

Failure to follow these instructions will result in death or serious injury.

To mount the Power Server on a DIN rail, follow these steps:

1. Turn off power to the Power Server and any equipment into which it is to be installed and verify that power is off.

2. Ensure that the DIN rail is attached horizontally to a surface with a minimum thickness of 0.078 in (2 mm) for stability.

3. Place the Power Server on the DIN rail with the upper slot first. Then push against the lower edge to snap it on the rail.

To mount the Power Supply (Square D part no. PS080), refer to Figure 3–4 and follow these steps:

1. Align the mounting groove on the power supply with the DIN rail.

2. Press the blue button to pull back the tabs.

3. Snap the power supply onto the DIN rail and release the blue button to secure the unit onto the DIN rail.

   NOTE: Refer to **Appendix A—Specifications on page 29** *for PS080 specifications.*
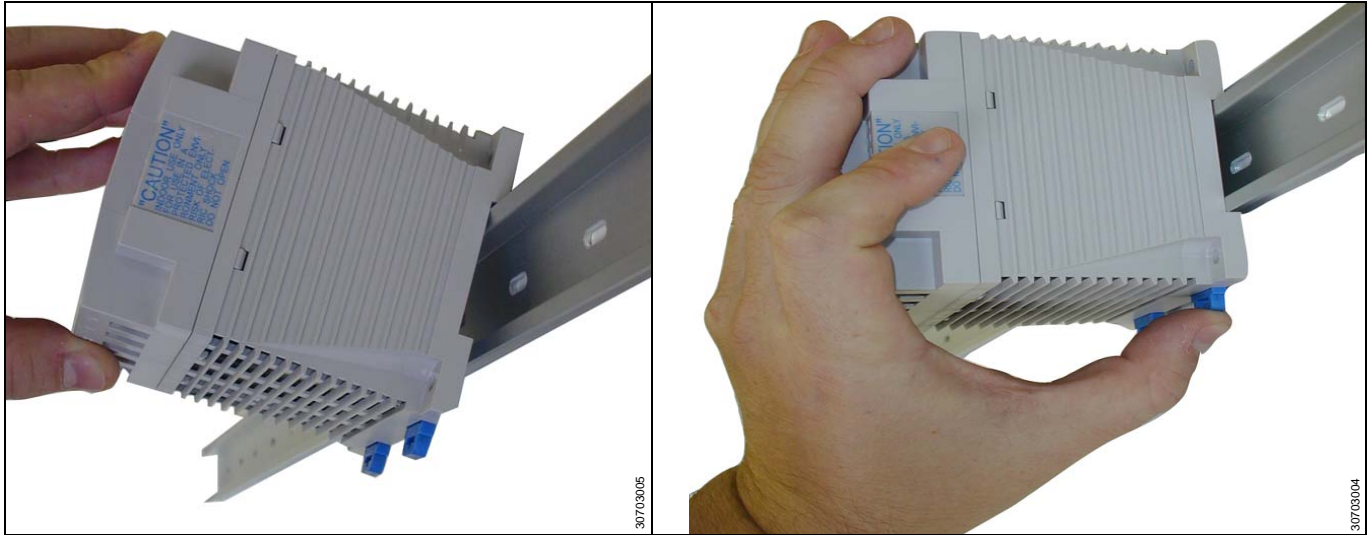

Figure 3–4: Power Supply (PS080) mounting

CHAPTER 4—CONNECTIONS

CONNECTIONS SUMMARY

The Power Server connections are described in this chapter. Table 4–1 briefly describes each connection.

Table 4–1: Connections description

Connection	Description
UTP Port	Ethernet connection. Standard RJ-45 port for connection of unshielded twisted-pair (10/100 BaseT) Ethernet cable. Category 5 recommended.
Control Power	Three-pin connector for 24 Vdc connection.
COM 1 RS-232	RS-232 serial port for configuring network settings using a PC.
COM 2 RS-232	Touchscreen serial cable port.
COM 3 RS-485	RS-485 comm ports for connecting POWERLOGIC or Modbus/
COM 4 RS-485	JBUS devices to the Power Server.
VGA output	Connect to touchscreen.
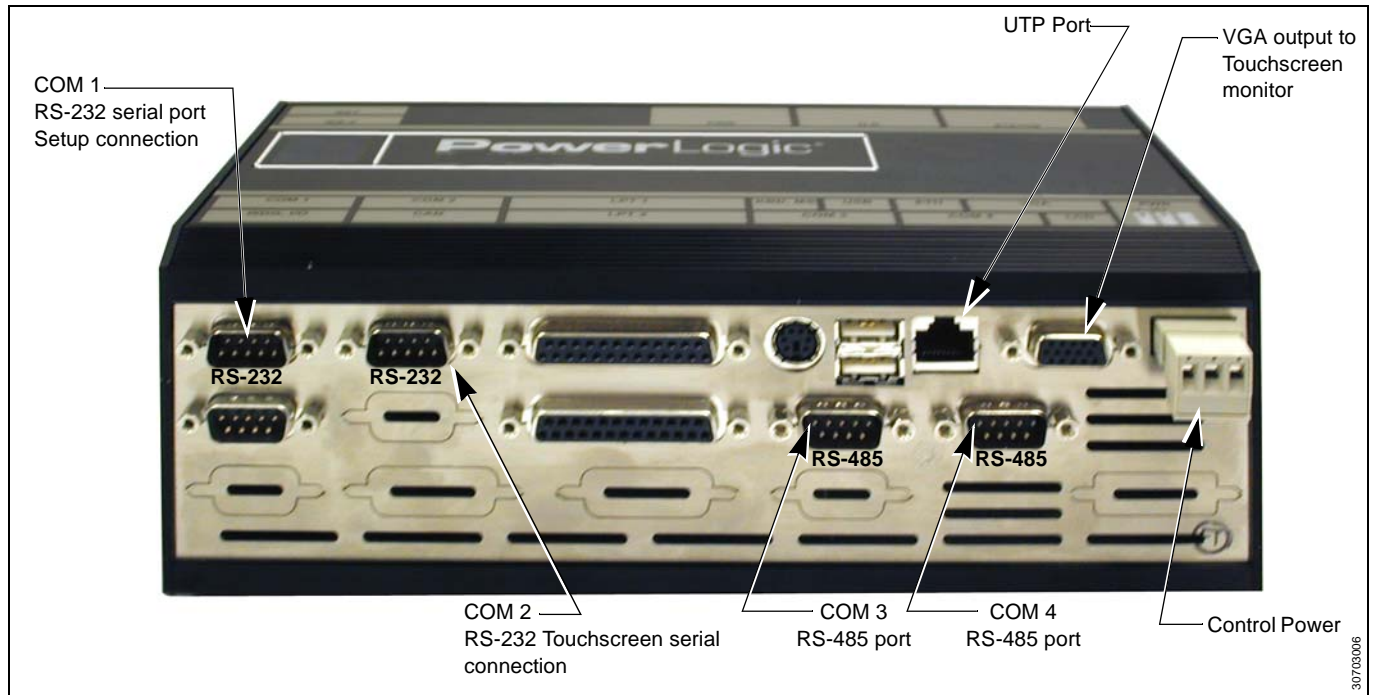
Figure 4–1: Power Server connections

CONTROL POWER

The Power Server accepts 24 Vdc control power with maximum power consumption of 28 watts. A 50-watt power supply is recommended for this application (order Square D part no. PS080).

NOTE: Check for proper polarity before applying power to the unit.

Fusing

We recommend using one 2 A fast-blow fuse as shown in Figure 4–2 and Figure 4–3 on page 11.

Grounding

The Power Server is connected to ground via the control power ground connection. Figure 4–2 depicts the recommended grounding method for the Power Server when used with power supply PS080. If grounding the Power Server to local equipment, refer to Figure 4–3 on page 11.

*NOTE: The control power source **must** be properly grounded.*
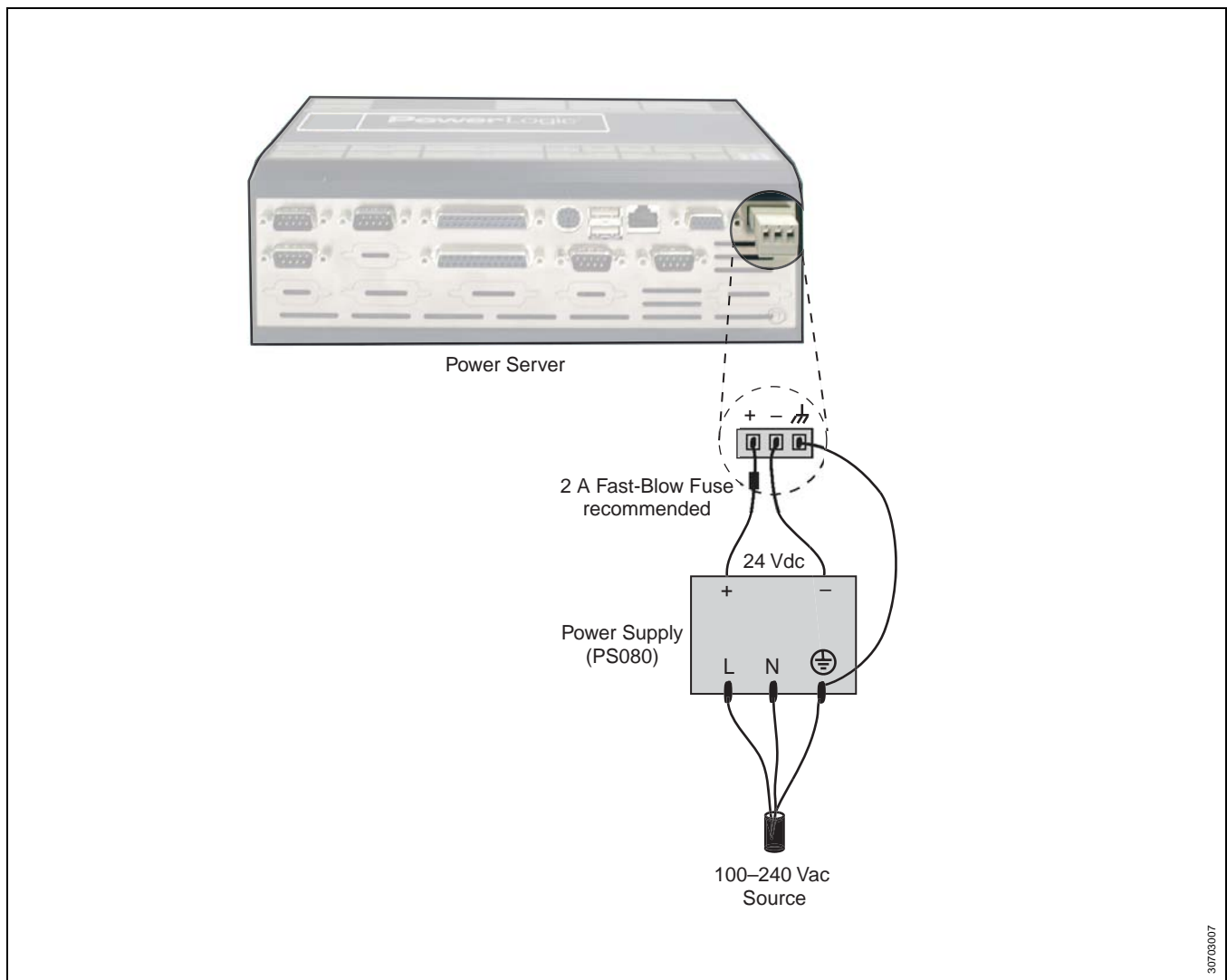
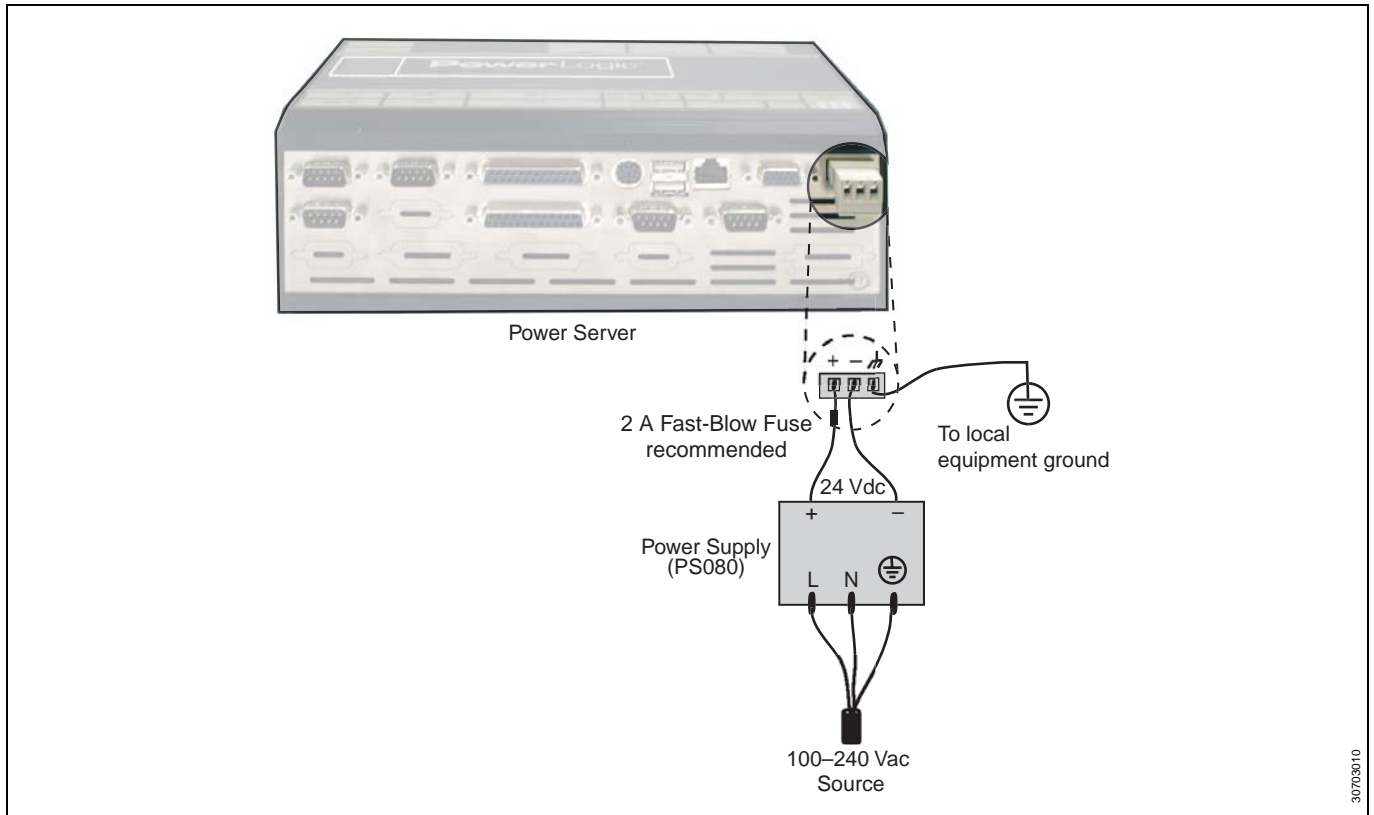**Figure 4–2: Power Server grounding to power supply PS080**

Power Server

2 A Fast-Blow Fuse
recommended

To local
equipment ground

24 Vdc

Power Supply
(PS080)

L N

100–240 Vac
Source

30703010

Figure 4–3: Power Server grounding to local equipment

RS-232 SERIAL PORTS

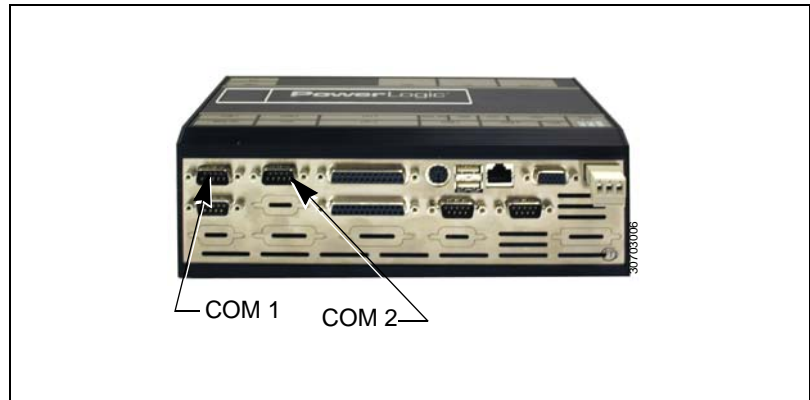The Power Server has two RS-232 serial communications ports.

Figure 4–4: COM 1 and COM 2 ports

COM 1

COM 1 is the port used for configuring the Power Server. When you attach a laptop or PC to this port, you can follow the instructions in this bulletin to configure the network settings of the Power Server. See *"Configuring the Power Server Communication Connection"* on page 17 for complete instructions.

COM 2

COM 2 is the serial port used if you are using the optional touch screen display (SD700).

RS-485 PORTS

Table 4–2 shows the default values for each of the RS-485 ports.

Table 4–2: Default Values for RS-485 Ports

Value	Default Setting COM 3 and COM 4
Type	4-wire
Baud Rate Speed	19200
Parity	Even

NOTE: On a 4-wire mixed mode (POWERLOGIC and Modbus) daisychain, device address 1 cannot be a POWERLOGIC or SY/MAX device and device address 16 cannot be a Modbus device.

Each RS-485 port is a male DB-9 connector with the pin-out arrangement shown in Figure 4–5.
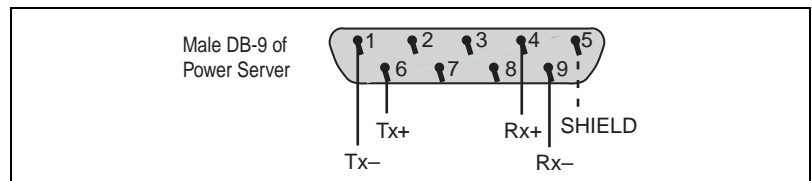
Figure 4–5: Male DB-9 connector (master port)

Two DB9-to-terminal block adapters (female) [Square D part no. DB9F2TB] are included with the Power Server. To connect the daisy chain of devices to the RS-485 port, attach an adapter to a Belden 8723 or equivalent cable and plug the adapter into the COM 3 or COM 4 port on the Power Server. Wire the cable and adapter as shown in Figure 4–6.

NOTE: Because of pin out configurations, it is necessary to make these connections as described. Square D cable CAB-107 is not compatible with this application.
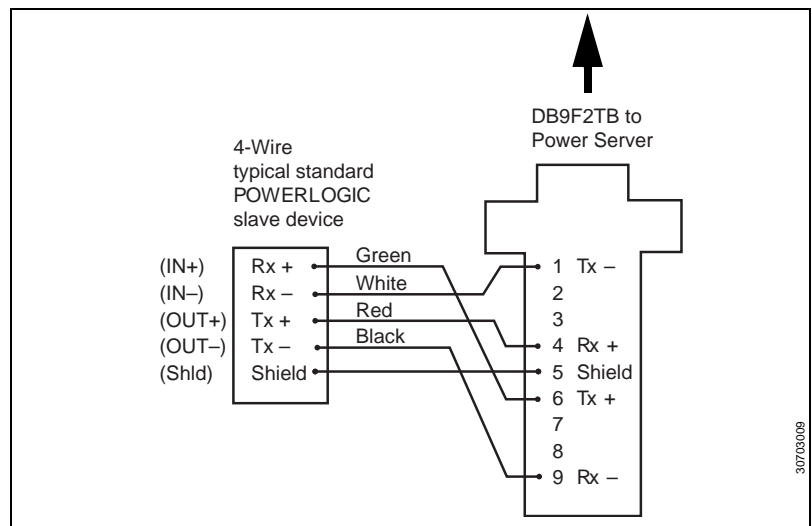

Figure 4–6: Typical POWERLOGIC standard device connection to Power Server

Biasing and Termination

Each RS-485 port has built-in communications signal biasing and termination circuitry. Thus, a multipoint communications adapter is not needed. However, an end-of-line terminator (Square D part no. MCT-485 or MCTAS-485) is required on the last device of each daisy chain. Refer to the instruction bulletin for the last device on the daisy chain.

CONNECTING 4-WIRE DEVICES AS 2-WIRE

Two DB9-to-terminal block adapters (female) [Square D part no. DB9F2TB] are included with the Power Server. Use an adapter to connect a 4-wire device as 2-wire to the Power Server. Refer to Figure 4–7 and follow these steps:

1. On the DB9F2TB adapter, jumper the Rx+ and Tx+ terminals together, and jumper the Rx– and Tx– terminals together.

2. Connect the Rx+/Tx+ terminals to the L+ line.

3. Connect the Rx–/Tx– terminals to the L– line.

4. Plug the DB9F2TB adapter into the RS-485 port on the Power Server.
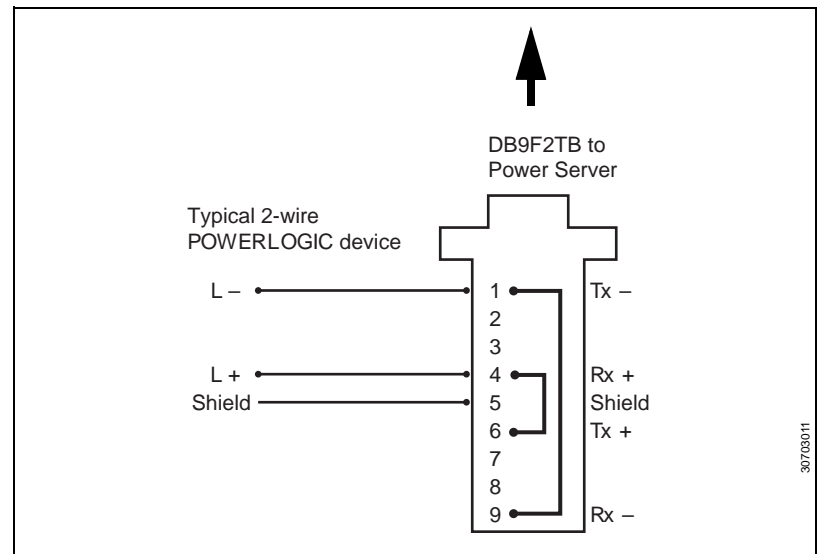
Figure 4–7: Typical 2-wire POWERLOGIC device connection to Power Server

COMMUNICATIONS WIRING

The maximum number of devices supported on a single daisy chain is determined based on baud rate, the length of the daisy chain, and the types of RS-485 devices (2-wire/4-wire) on the daisy chain. The RS-485 interface supports daisy chains as specified in Table 4–3 and Table 4–4.

Table 4–3:   Daisy Chain Maximum Distances 4-Wire

Baud Rate	Maximum Distances*	
	1–16 Devices	**17–32 Devices**
1200	10,000 ft (3,048 m)	10,000 ft (3,048 m)
2400	10,000 ft (3,048 m)	5,000 ft (1,524 m)
4800	10,000 ft (3,048 m)	5,000 ft (1,524 m)
9600	10,000 ft (3,048 m)	4,000 ft (1,219 m)
19200	5,000 ft (1,524 m)	2,500 ft (762 m)
38400	4,000 ft (1,219 m)	1,500 ft (457 m)

*   Due to the volume of RS-485 devices in the field, this table is only to be used as a guide and was tabulated based on POWERLOGIC 4-wire devices and POWERLOGIC 4-wire devices that support 2-wire connections.

Table 4–4:   Daisy Chain Maximum Distances 2-Wire

Baud Rate	Maximum Distances*	
	1–8 Devices	**9–16 Devices**
1200	10,000 ft (3,048 m)	10,000 ft (3,048 m)
2400	10,000 ft (3,048 m)	5,000 ft (1,524 m)
4800	9,000 ft (2,743 m)	5,000 ft (1,524 m)
9600	6,000 ft (1,829 m)	4,000 ft (1,219 m)
19200	3,000 ft (915 m)	2,500 ft (762 m)
38400	2,000 ft (610 m)	1,500 ft (457 m)

*   Due to the volume of RS-485 devices in the field, this table is only to be used as a guide and was tabulated based on POWERLOGIC 4-wire devices and POWERLOGIC 4-wire devices that support 2-wire connections.

CHAPTER 5—SETUP

SUMMARY OF SETUP STEPS

This chapter describes the steps for setting up the Power Server. To do this, you perform these main tasks:

1. Configure the Power Server communication connection using your laptop or PC.

2. Configure the PowerLogic System application using NetMeeting.

CONFIGURING THE POWER SERVER COMMUNICATION CONNECTION

To set up the Power Server communication connection, you will need to obtain a unique static IP address, subnet mask, and router IP address from your network administrator.

Two methods of configuration are possible:

• Use a null modem serial cable and HyperTerminal. See *Using a Null Modem Serial Cable to Configure the Power Server* in the section that follows. This method is recommended.

• Use an Ethernet cross-over cable and NetMeeting. This method is described in **Appendix C—Using a Crossover Cable to Configure the Power Server on page 33**.

Using a Null Modem Serial Cable to Configure the Power Server

1. Connect and apply power to the Power Server. Allow approximately five minutes for the Power Server to complete the boot process.

2. Connect the null modem cable from the serial port on your PC to COM 1 of the Power Server.
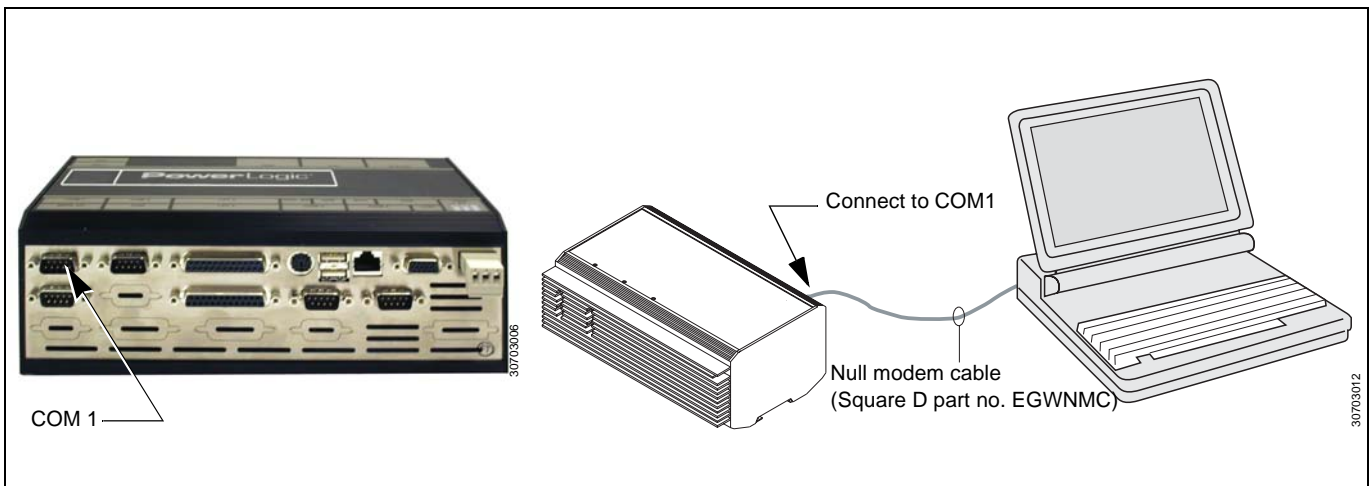
Figure 5–1: Null modem connection for Power Server configuration

3. From your PC, open the HyperTerminal accessory. From the Windows Explorer taskbar, click Start > Programs > Accessories > Communications > HyperTerminal.

NOTE: This path is typical for Windows 2000 and Windows XP. The path may differ for other platforms.

4. Enter a name for your setup connection and select OK.

5. Define your connection. From the dropdown menu, select the COM port on the PC that you are using to connect to the Power Server.

6. Click OK.

   The COM port Properties dialog displays.
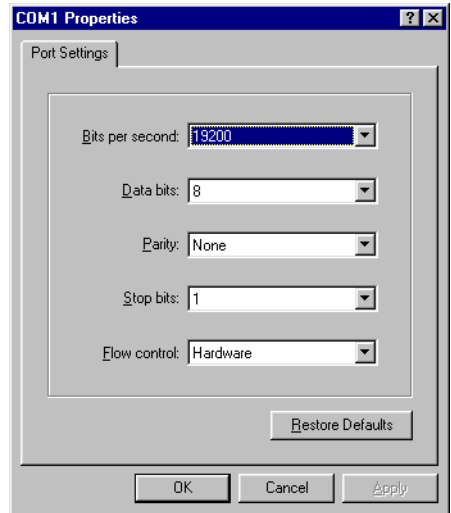
7. Set the serial port settings as shown above and click OK when finished.

    The HyperTerminal entry screen displays.
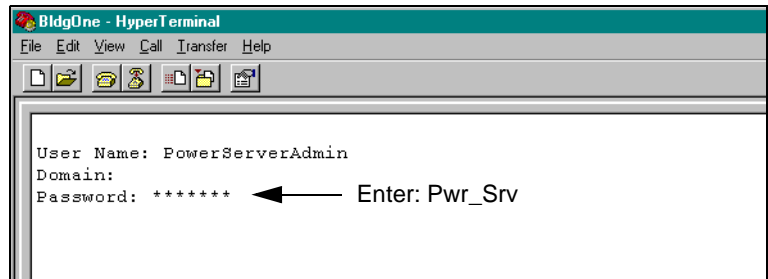
8. At the HyperTerminal login prompt, enter the
    User Name: **PowerServerAdmin**

    Leave the Domain name blank.

    For Password (case-sensitive), enter: **Pwr_Srv**

9. At the C:\ > prompt, enter: **nwsetup**

   The PowerLogic Network Setup Application displays in HyperTerminal.
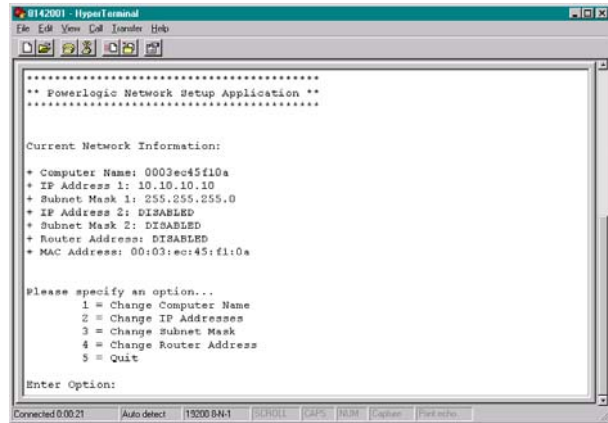
   NOTE: Even if the Power Server will not be used in a networked
   environment, you must run the Network Setup application at least once
   and then type **5** to quit.

10. Set all of the network setup options as described in Table 1.

    NOTE: To change any of the options, enter the option number at the
    Enter Option prompt and press Enter.

11. Follow the onscreen instructions to change the value.

Table 1:   Power Server Setup—HyperTerminal Options

Option	Description
Computer Name	The computer name defaults to the MAC Address. We recommend that you leave the default computer name. If you must change the name, it must be a unique alpha-numeric name, limited to 15 characters, no spaces or special characters.
IP Address 1 Subnet Mask 1	Use IP Address 1 as the primary address to access all the capabilities of the Power Server. Subnet Mask 1 is assigned to IP Address 1.
IP Address 2 Subnet Mask 2 *(optional)*	IP Address 2 and Subnet Mask 2 are optional. They should only be used if slave Modbus/Jbus and PowerLogic devices need to have the same address on both COM 3 and COM 4.
Router Address	Address of your company's Ethernet LAN router, if applicable.
MAC Address	Unique media access control number (cannot be changed).

12. After changing the options verify that all settings are correct.

13. At the Enter Option prompt, type **5** to quit.

    The Power Server reboots automatically.

    NOTE: It can take approximately five minutes to reboot. If errors occur,
    review all configuration settings before exiting HyperTerminal.

14. Exit HyperTerminal.

Now you are ready to configure the POWERLOGIC System applications as described in the next section, *Connecting to the Power Server with NetMeeting.*

CONNECTING TO THE POWER SERVER WITH NETMEETING

To perform this procedure, you can either connect remotely from a networked PC as illustrated in Figure 5–2, or you can connect directly from your PC to the Power Server using a crossover cable (not supplied). See **Appendix C— Using a Crossover Cable to Configure the Power Server on page 33** for details on crossover cable connections.

After connecting the cables, you will use NetMeeting to take control of the Power Server from your PC so that you can configure the POWERLOGIC System application. NetMeeting is provided with the FULL installation of Internet Explorer 5.5 and with the Windows 2000 operating system. If needed, NetMeeting can be downloaded from the Microsoft.com website.

NOTE: For Windows XP users, Windows XP does not provide any shortcut to NetMeeting. You can access it by searching for the file "conf.exe" or launch it by typing **conf.exe** *in the Run dialog.*
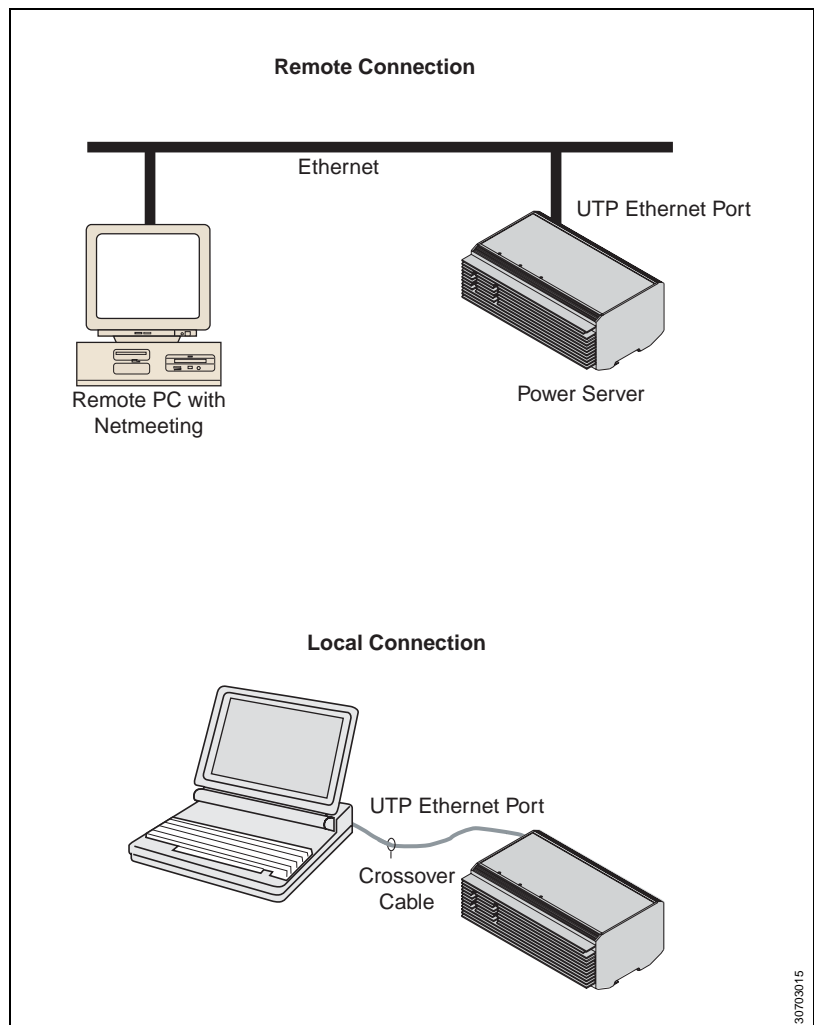
Figure 5–2: Power Sever remote or local connections for setup

Starting NetMeeting

1. From your PC, launch NetMeeting. Click Start > Programs > Accessories > Communications > Netmeeting (Windows 2000 path).

2. To connect to the Power Server using Netmeeting, click Tools > Options > Security and check "I prefer to make secure outgoing calls" and click OK.
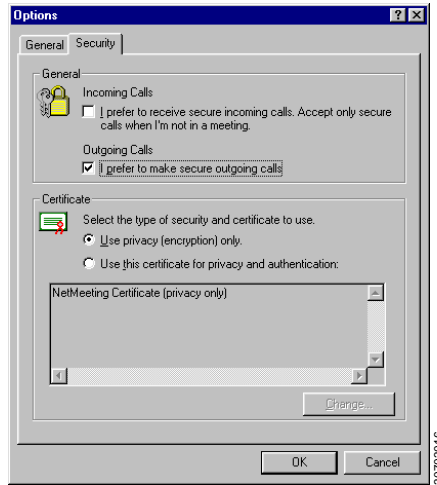
You should only have to do this once. NetMeeting stores this preference. Netmeeting displays the Not in a Call dialog.

Assigned IP Address from Table 1 on page 19.
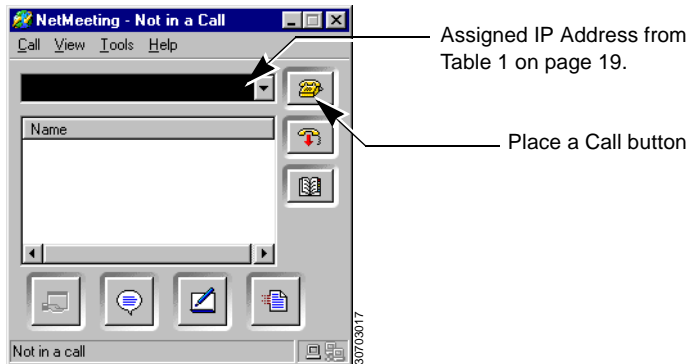
Place a Call button

3. Call the Power Server. Enter the IP address in NetMeeting and click the "Place a Call" button.

   Use IP address 1 that you entered in nwsetup on page 19.

   The Remote Desktop Sharing dialog displays.
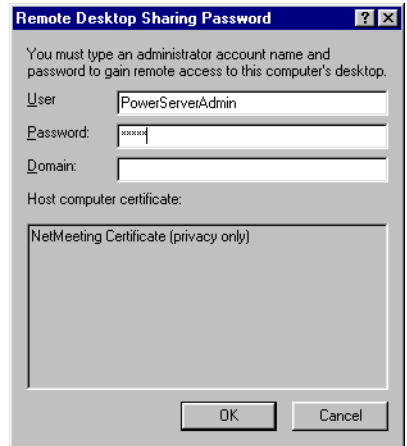
4. For User, enter: **PowerServerAdmin**

   For Password (case-sensitive), enter: **Pwr_Srv**

   Leave domain blank and click OK.

   You are now controlling the Power Server desktop and are ready to configure the POWERLOGIC system as described in the next section, *"Configuring the Power Server"* on page 23.

   NOTE: We recommend that you change your password after completing setup. See **Appendix B—Changing Your Password on page 31** *for instructions.*

CONFIGURING THE POWER SERVER

1. Use NetMeeting to access the Power Server.
   The Power Server splash screen displays.
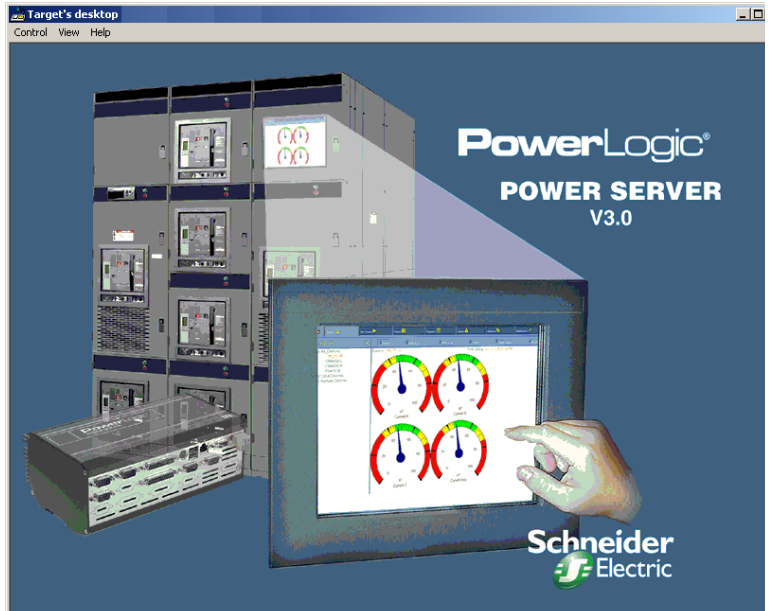
NOTE: During the startup process, the Power Server displays the splash screen with a DO NOT TOUCH Ø symbol. Wait until this symbol no longer displays before proceeding with the configuration.
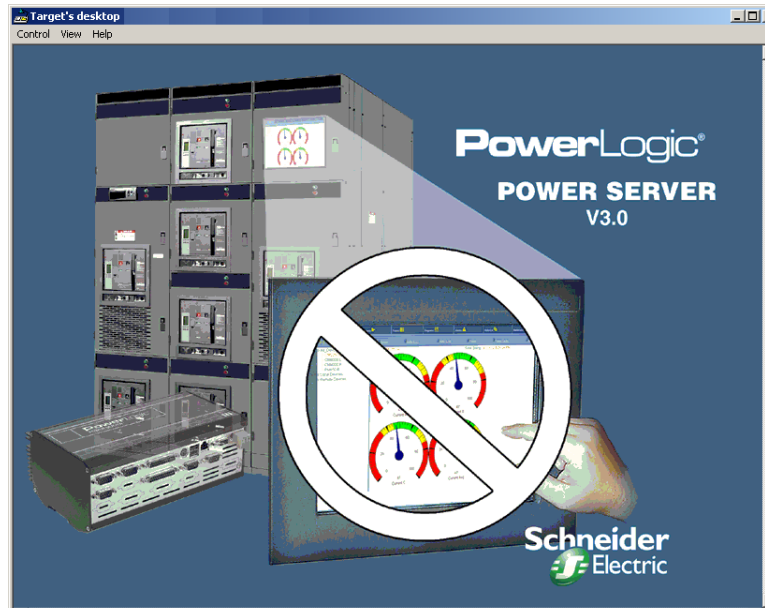
2. Press **Ctrl-W** to display the Power Server desktop.

The Power Server desktop displays. Verify that all the taskbar icons display as shown in Figure 5–3.

NOTE: Icons may be arranged differently than they are shown in this illustration.
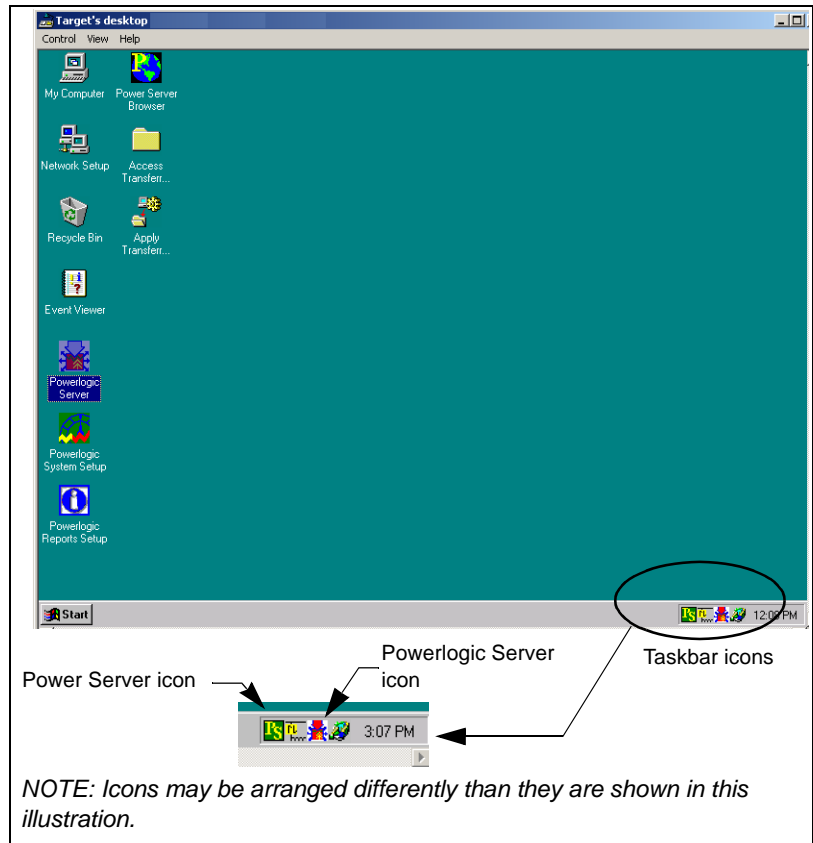
Figure 5–3: Power Server Desktop

To configure the Power Server you:

1. Set the time zone and daylight savings time preference.

2. Place the Power Server in setup mode.

3. Configure your POWERLOGIC system.

4. Return the Power Server to run mode.

Each of these procedures is described in this section. You can also create quick tables, diagrams, and reports for the Power Server Model PWRSRV750. Refer to the Power Server user's guide 63230-216-207 for details.

Setting the Date/Time and Time Zone

To update the date/time and time zone settings follow these steps:

1. In the taskbar, double click the time display.
    The Date/Time Properties dialog displays.

2. Click the Time Zone tab to display it.
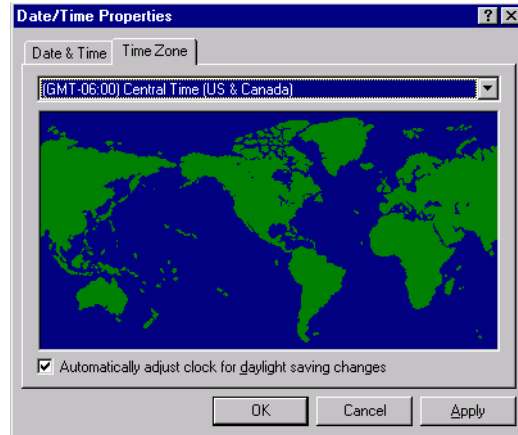
3. Select your time zone from the pull down list, select your preference for daylight savings, and click Apply.

4. Click the Date & Time tab to display it.
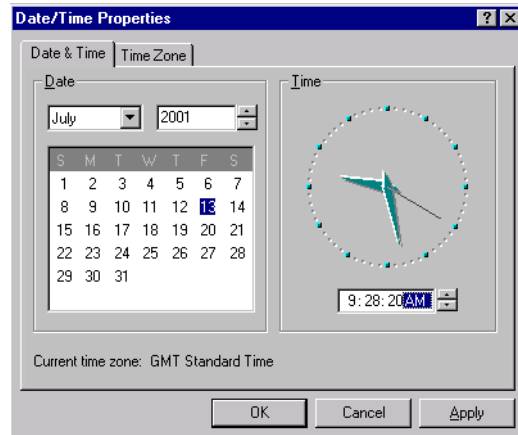
5.   Set the new date and time, then click Apply.

6.   Click OK to exit and save the changes.

7.   Set the Power Server to setup mode as described in the following section, *Changing the Mode from Run to Setup Mode*.

CAUTION

HAZARD OF SYSTEM MALFUNCTION

After configuring your Power Server, if you have to adjust the Power Server Time Zone and Date/Time, make sure you restart your Power Server and then manually run any scheduled task configured in Reports or in the Powerlogic System setup applications.

Failure to do so will result in alarms, reports, diagrams and database management malfunction.

Changing the Mode from Run to Setup Mode

The Power Server has two modes of operation, Run and Setup.

• Run mode is a view-only setting

• Setup mode lets you configure the POWERLOGIC system

During operation, the Power Server should be left in run mode. The green PS icon indicates that the unit is operating in run mode. It changes to the red PS icon when it is in setup mode. Before making any changes anytime to the Power Server, you **must** set the Power Server to setup mode. To do this, follow these steps:

1.   Click the green PS Power Server icon on the taskbar.

2.   Click the Setup Mode button to change to setup mode.
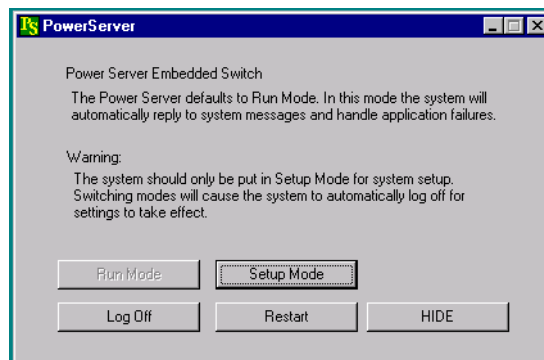
After changing to setup mode, your NetMeeting session will be disconnected while the Power Server restarts automatically. This process may take up to two minutes.

3.   Reconnect to the Power Server with NetMeeting. The Power Server icon displays red indicating it is in setup mode.

NOTE: If you leave the Power Server in Setup mode for more than 12 hours, it will automatically reboot in run mode.

Configuring Your POWERLOGIC System

While in setup mode, you can add devices to the POWERLOGIC System. Serial connections for COM 3 and COM 4 of the Power Server are already defined in the system. **Do not delete these settings or define a new communication connection for COM 3 or COM 4 ports**.

To add devices to the Power Server, follow these steps.

1. Double click the PowerLogic Server icon on the desktop to launch the application.

2. For user ID, enter: **master**

3. For password, enter: **master**, then click OK.

4. Double click the PowerLogic System Setup icon on the desktop to launch the application.

5. For user ID, enter: **master**

6. For password, enter: **master**, then click OK once the POWERLOGIC System Setup is started.

7. Select File > Offline to place the POWERLOGIC System offline.

8. Configure the system by defining the communication connections and adding devices. To do this, select Setup > Communications and then Setup > Devices/Routing.

   NOTE: If you need help configuring the PowerLogic system, refer to the online help file "Quick Starts" listed in the help contents. From the PowerLogic System Setup utility, click Help > SMS-3000 Help > Quick Starts > Quick Start: Serial Device Setup.

9. Depending on the type of Power Server you have and functions required, perform setup procedures as needed for:
   • Alarms
   • Reports
   • Waveforms
   • Diagrams
   Refer to the Power Server user's guide 63230-216-217 for details.

10. After configuring the system, place the POWERLOGIC system back online by selecting File > Online > System.

    The Power Server has only one system, which is always open for editing. It should always be left online except during configuration.

CAUTION

POSSIBLE LOSS OF COMMUNICATIONS

Ensure that your POWERLOGIC system is ***online*** before exiting POWERLOGIC System Setup.

Failure to do so will result in communication errors.

---

11. Close the POWERLOGIC System setup application.

12. Set the Power Server to run mode.
    Refer to *"Changing the Mode from Setup to Run Mode"* on page 28.

Changing the Mode from Setup to Run Mode

To change from setup mode to run mode, do the following:

1. Return the Power Server back to run mode: click the red Power Server icon **Ps** on the taskbar at the bottom right-hand portion of the screen. The Embedded Switch dialog displays.

2. Click the Run Mode button.

   The Power Server will reboot in run mode for normal operations. This operation may take up to five minutes depending on the number and types of devices in your POWERLOGIC system.

3. From your PC desktop, close NetMeeting.

APPENDIX A—SPECIFICATIONS

Table A–1:   Power Server Specifications

Type	Description
CONTROL POWER INPUT SPECIFICATIONS	
Operating Input Range	24 Vdc (± 10%) [sourced by Class 2 rated supply]
Burden, max.	28 W
ENVIRONMENTAL	
Ambient Operating Temperature	0 to 50°C (< 95% relative humidity, non-condensing)
Ambient Storage Temperature	–20°C to 70°C
Sealing	IP30: Sealed against particles > 2.5 mm
Altitude (maximum)	15,000 ft. (4.5 km)
PHYSICAL SPECIFICATIONS	
Housing Dimensions	8.98 in long x 3.62 in high x 5.63 in deep (228 mm long x 143 mm high x 92 mm deep)
Weight	Approximately 4.35 lbs (2kg) for complete system
Isolation	COM 3 / COM 4:Opto-galvanic, 500 Vac 100BaseTX: Galvanic, 500 Vac rms
REGULATORY/STANDARDS COMPLIANCE	
EMC	CE marked to the immunity to interference (EN 50082-2) and emissions directive (EN 50081-2) for industrial environments
SAFETY	
	Fast Transients—EN 50082-2 criteria B compliance
	UL Recognized, cUL Recognized
	CE

Table A–2:   PS080 Specifications

Type	Description
Output capacity	50 W
Input voltage (single phase, 2-wire)	100–240 Vac, 50/60 Hz 110–340 Vdc
Output voltage	24 Vdc
Output current (max)	2.1 A
Housing dimensions	3.54 in long x 3.74 in high x 2.95 in deep (90 mm long x 95 mm high x 75 mm deep)
Ambient operating temperature	-10°C to 60°C (20–90% relative humidity non-condensing)
Ambient storage temperature	-30°C to 85°C
Regulatory approvals	UL, cUL, CE, TUV

APPENDIX B—CHANGING YOUR PASSWORD

We recommend that you change your password after completing setup of the Power Server. To do this, follow these steps:

1. From the taskbar of your laptop or PC, launch NetMeeting and connect to the Power Server.

   See *"Starting NetMeeting"* on page 21 for instructions.

   If the Power Server is up and running, press **Ctrl-W** on your keyboard to switch to the Power Server desktop

2. Place the Power Server in setup mode.

   See *"Changing the Mode from Run to Setup Mode"* on page 26 for instructions.

3. From the taskbar, launch User Manager. Click Start > Programs > Administrative Tools > User Manager.

   The User Manager screen displays.

30703048
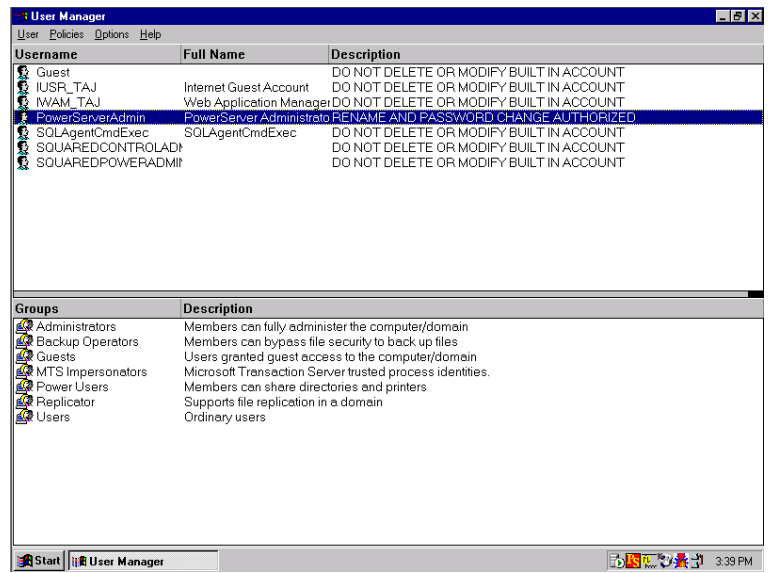
4. Click the PowerServerAdmin line.

5. From the User pull-down menu, click Rename.

   The Rename dialog displays.

30703049
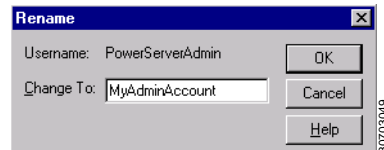
6. In the Change To box, type the new administrator user name and click OK.

7. Double click the Power Server administrator line for the name created in the previous step.

The User Properties dialog displays.
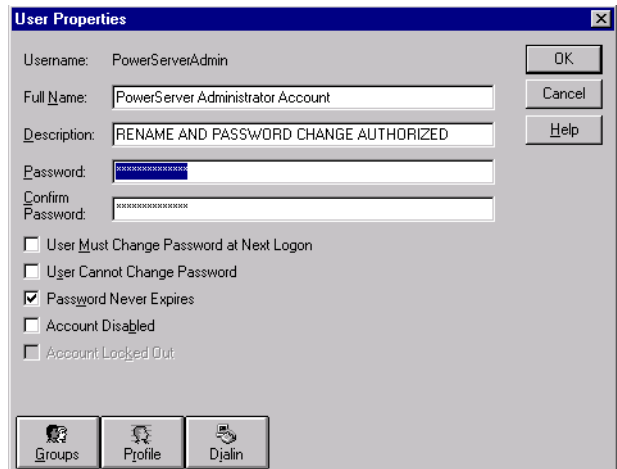
8. Type the new password in the Password and Confirm Password boxes and click OK.

9. Close the User Manager.

10. Return the Power Server to run mode.

See *"Changing the Mode from Setup to Run Mode"* on page 28 for instructions. The new password will take effect immediately.

NOTE: Use the new User name and password whenever you log in with NetMeeting or connect with a null modem cable to change the network settings.

APPENDIX C—USING A CROSSOVER CABLE TO CONFIGURE THE POWER SERVER

If you choose to use a cross-over cable to configure the Power Server, follow these steps:

1. Connect the cross-over cable from the Ethernet UTP port on the Power Server to your PC as illustrated in Figure C–1.

Ethernet
UTP port
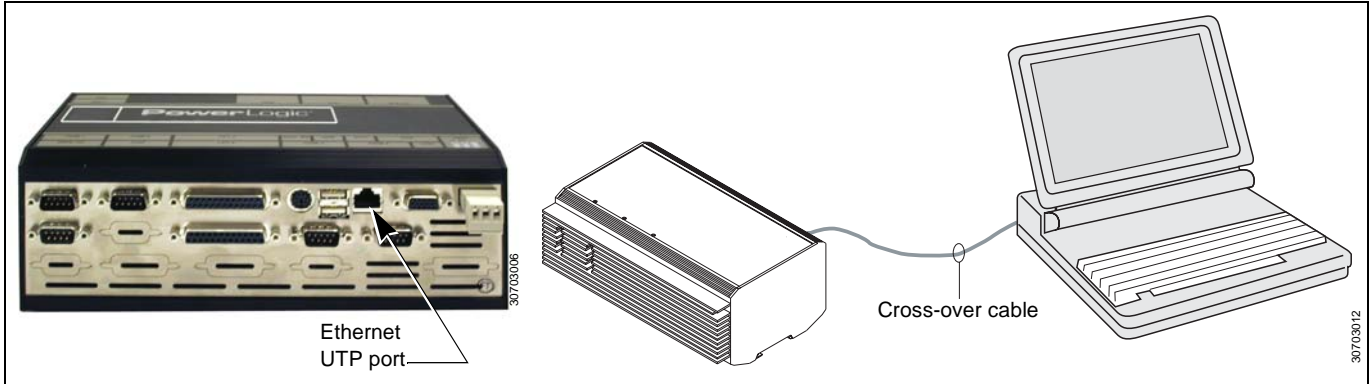
Cross-over cable

Figure C–1: Cross-over connection for Power Server configuration

2. Connect the power supply and ground if you have not already done so. For instructions, refer to the section *"Control Power"* on page 10.

3. From your PC's taskbar, click Start > Settings > Network and Dial-up Connections.
    The Network and Dial-up Connections screen displays.

    NOTE: An example using Microsoft Windows® 2000 is shown in the following steps. For help with other systems, contact your network administrator.

4. From the Network and Dial-up Connections screen, click the Local Area connection icon.

    Local Area
    Connection

    The Local Area Connection Status dialog box displays.
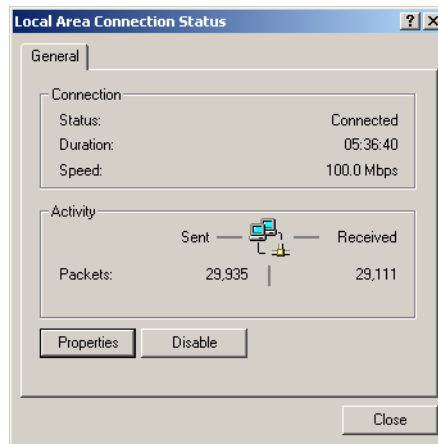
5. From the Local Area Connection Status dialog box, click Properties.

   The Local Area Connection Properties dialog box displays.
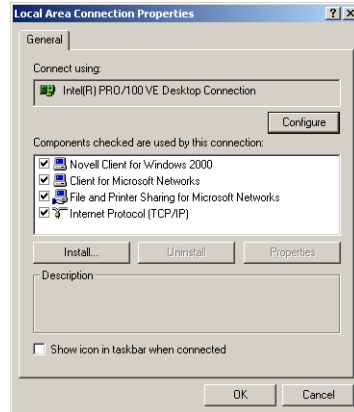
6. From the Local Area Connection Properties dialog box, select Internet Protocol (TCP/IP) and click Properties.

   The Internet Protocol (TCP/IP) Properties dialog box displays.
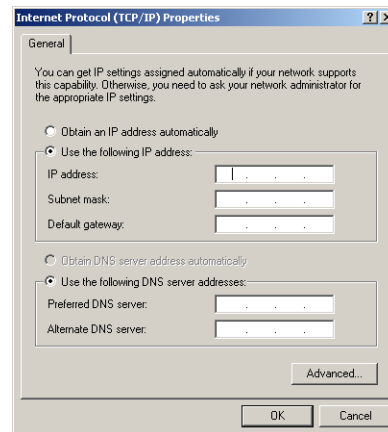
7. From the Internet Protocol (TCP/IP) Properties dialog box, select "Use the following IP address."

8. Enter the IP address (**10.10.10.11**) and subnet mask (**255.255.255.0**).

9. Click OK and reboot your PC.

10. From your PC, start NetMeeting. Click Start > Programs > Accessories > Communications > Netmeeting (Windows 2000 path).

    *NOTE: For Windows XP users, Windows XP does not provide any shortcut to NetMeeting. You can access it by searching for the file "conf.exe" or launch it by typing **conf.exe** in the Run dialog.*

11. To connect to the Power Server using Netmeeting, click Tools > Options > Security and check "I prefer to make secure outgoing calls."

You should only have to do this once. NetMeeting stores this preference. Netmeeting displays the Not in a Call dialog.

Assigned IP Address
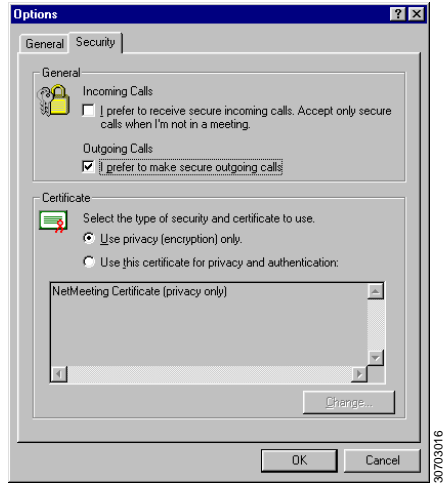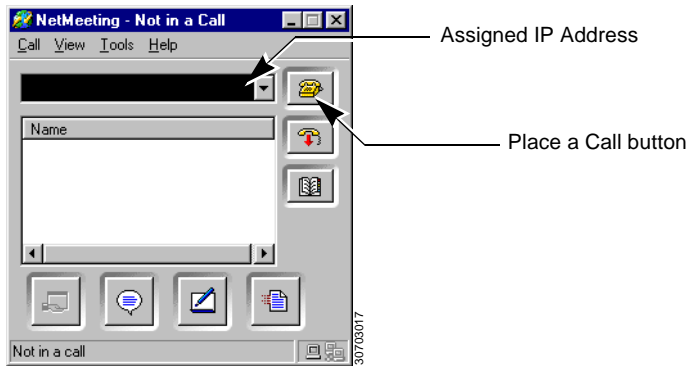
Place a Call button

12. Call the Power Server. Enter the IP address in NetMeeting and click the "Place a Call" button. For this initial configuration, use IP address: **10.10.10.10**

The Remote Desktop Sharing dialog displays.
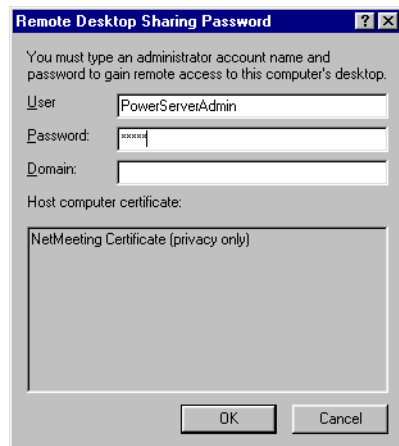
13. For User, enter: **PowerServerAdmin**

For Password (case-sensitive), enter: **Pwr_Srv**

Leave domain blank.

14. After you have connected to the Power Server via NetMeeting, press
    Ctrl-W on your keyboard to switch to the Power Server desktop.

15. Double click the Network Setup icon [icon] on the Power Server
    desktop.

    *NOTE: Even if the Power Server will not be used in a networked
    environment, you must run the Network Setup application at least once
    and then type **5** to quit.*

```
C:\Vega\nwsetup.exe                                           _ □ ×

*****************************************
** Powerlogic Network Setup Application **
*****************************************

Current Network Information:

+ Computer Name: 0003ec45f10a
+ IP Address 1: 10.10.10.10
+ Subnet Mask 1: 255.255.255.0
+ IP Address 2: DISABLED
+ Subnet Mask 2: DISABLED
+ Router Address: DISABLED
+ MAC Address: 00:03:ec:45:f1:0a


Please specify an option...
        1 = Change Computer Name
        2 = Change IP Addresses
        3 = Change Subnet Mask
        4 = Change Router Address
        5 = Quit

Enter Option: _
```
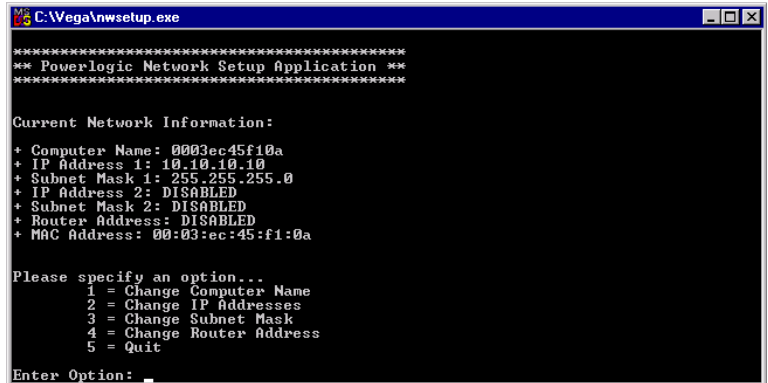
16. Set all of the network setup options as described in Table C–1 on page
    37.

    *NOTE: To change any of the options, type the option number at the Enter
    Option prompt and press Enter.*

17. Follow the onscreen instructions to change the value.

Table C–1:   Power Server Setup—HyperTerminal Options

Option	Description
Computer Name	The computer name defaults to the MAC Address. We recommend that you leave the default computer name. If you must change the name, it must be a unique alpha-numeric name, limited to 15 characters, no spaces or special characters.
IP Address 1 Subnet Mask 1	Use IP Address 1 as the primary address to access all the capabilities of the Power Server. Subnet Mask 1 is assigned to IP Address 1.
IP Address 2 Subnet Mask 2 *(optional)*	IP Address 2 and Subnet Mask 2 are optional. They should only be used if slave Modbus/Jbus and POWERLOGIC devices need to have the same address on both COM 3 and COM 4.
Router Address	Address of your company's Ethernet LAN router, if applicable.
MAC Address	Unique media access control number (cannot be changed).

18. After changing the options, verify that all settings are correct.

19. At the Enter Option prompt, type **5** to quit.

The Power Server reboots automatically. During the reboot, your NetMeeting session is closed automatically.

Now you are ready to configure the PowerLogic System applications as described in the section, *"Connecting to the Power Server with NetMeeting"* on page 20.

APPENDIX D—INTEGRATING THE POWER SERVER INTO SMS

This appendix provides instructions for using System Manager Software (SMS) to set up a PC interface to communicate through the Power Server as a gateway to the Power Server's attached serial slave devices.

To communicate with SMS through the Power Server, follow these steps:

1. Launch SMS.

2. Open an existing system or create a new system.

3. Add a communication connection.
   • For the communications connection name, type in a unique name for your Power Server connection.
   • For the communications driver, select "MODBUS/TCP driver."

4. Enter the Power Server IP address in the communication connection (MODBUS/TCP).

5. After defining the communications connection, add the serial daisy-chained devices using the previously defined Power Server communication connection.

For more details, refer to the SMS Help option in SMS by going to SMS > Quick Start > Quick start MODBUS/TCP device setup.

APPENDIX E—UPLOADING AND DELETING FILES ON THE POWER SERVER

ABOUT THE SOFTWARE WARRANTY

The Power Server products are intended for use with POWERLOGIC System software only. Installation of any non-POWERLOGIC compatible software will void the warranty for this product. Contact your local Schneider Electric Technical Support center or your local Schneider representative for details and information regarding POWERLOGIC compatible software.

UPLOADING FILES TO THE POWER SERVER

You can upload PDFs or custom web pages (html) of reference materials to the Power Server. They can then be viewed through the Power Server browser. To upload files to the Power Server, follow these steps:

1. Start NetMeeting and connect to the Power Server.
   See *"Starting NetMeeting"* on page 21.

2. Once connected, press **Ctrl-W** to display the Power Server desktop.

Click the Minimize button to minimize the NetMeeting Target's desktop.

3. Click the Minimize button in the top right corner to minimize the NetMeeting Target's desktop. Click OK if "Meeting Properties" or "The directory server could not be found" dialogs display. Then, click the Transfer Files icon on the NetMeeting connection dialog.

4. Wait for the Add Files icon to become enabled, then click it.
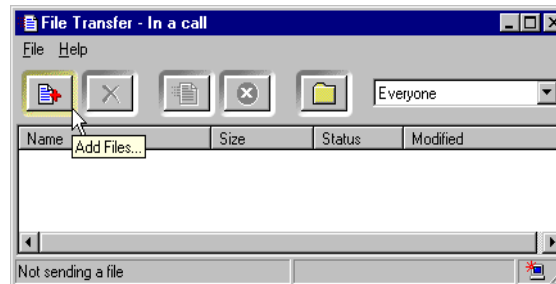
5. In the Select Files to Send dialog, select files to upload to the Power Server and click Add.
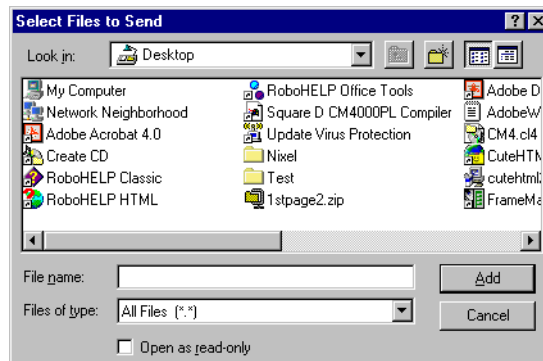
6. Click the Send All icon.
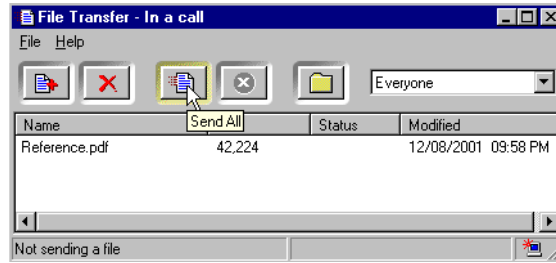
7. Restore the Target's desktop window and then close all the Transfer complete dialogs that displayed during the transfer.
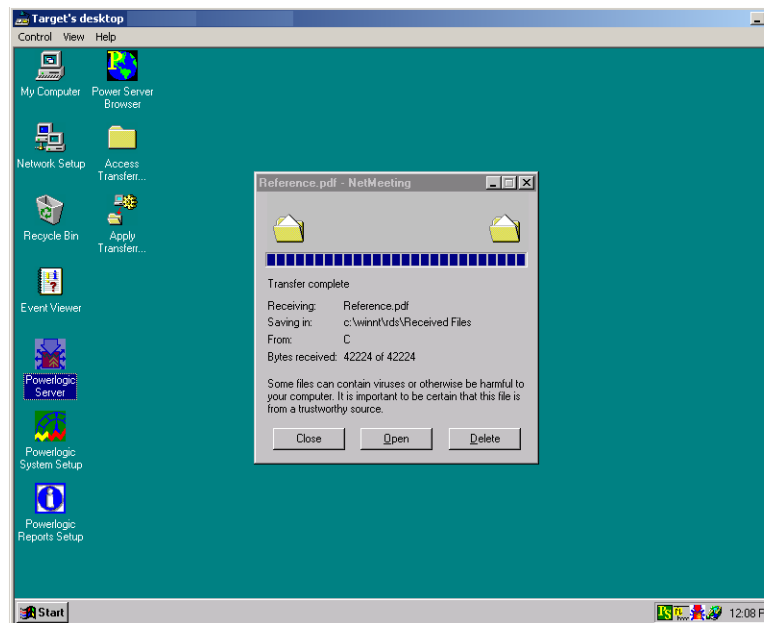
8. Double click the Apply Transferred Files icon on the Target's desktop.

The following screen displays.
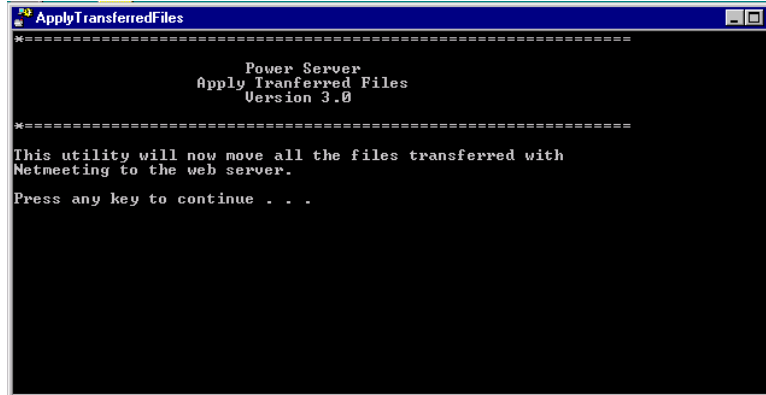
9. Press any key. The following screen displays.
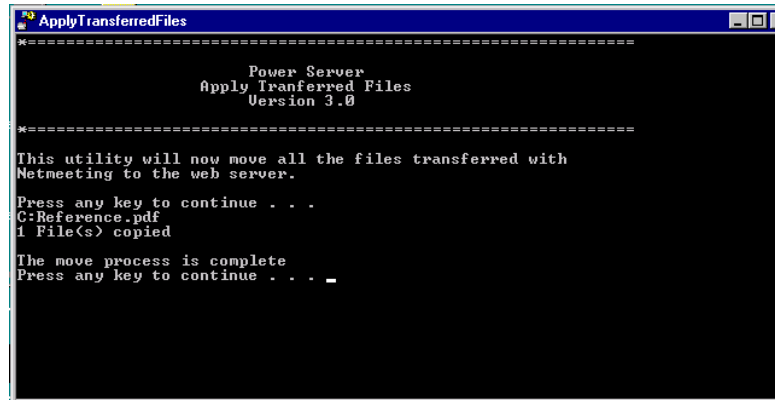
10. Press any key.

11. Double-click the Power Server browser icon to display the Power Server browser.

12. Minimize the Target's desktop screen.

13. End the call and exit NetMeeting.

DELETING FILES ON THE POWER SERVER

To delete uploaded files, do the following:

1. Start NetMeeting and connect to the Power Server.
   See *"Starting NetMeeting"* on page 21.

2. Once connected, press **Ctrl-W** to display the Power Server desktop.

3. Open the Access Transferred Files folder by double clicking the desktop icon.

4. Select files to be deleted.
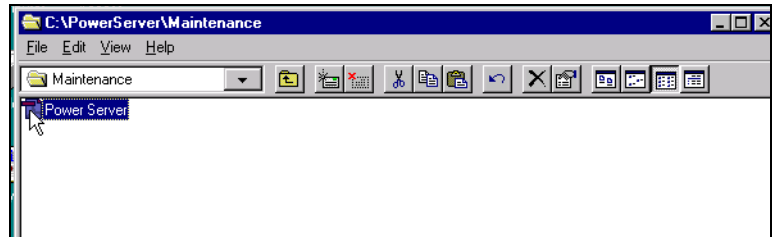
5. Click File > Delete.

6. Click Yes.

7. Close the Power Server\Maintenance window.

8. Double-click the Power Server browser icon to display the Power Server browser.

9. Minimize the Target's desktop screen.

10. End the call and exit NetMeeting.

APPENDIX F—CONNECTING THIRD PARTY DEVICES TO THE POWER SERVER

You can connect third party devices to the Power Server using a custom install application. Contact your field sales representative to determine the availability of the custom install application for a particular device.

If you have retained the custom files, follow these steps to install the files and connect to the device.

1. Start NetMeeting.

   Refer to *"Starting NetMeeting"* on page 21 and connect to the Power Server.

2. In the Target's desktop window, press **Ctrl-W** to display the Power Server desktop.

3. Display NetMeeting again by clicking the NetMeeting icon on your PC's taskbar.

4. Click OK to close the Meeting Properties window.
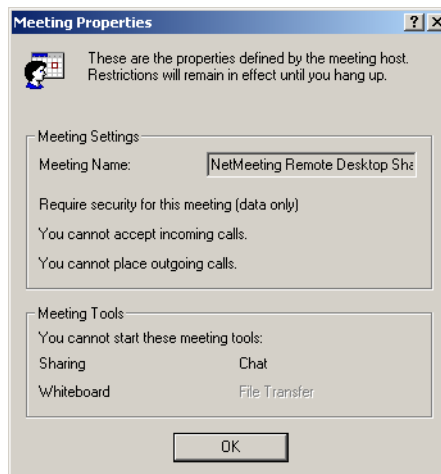
5. Click the Transfer Files icon.
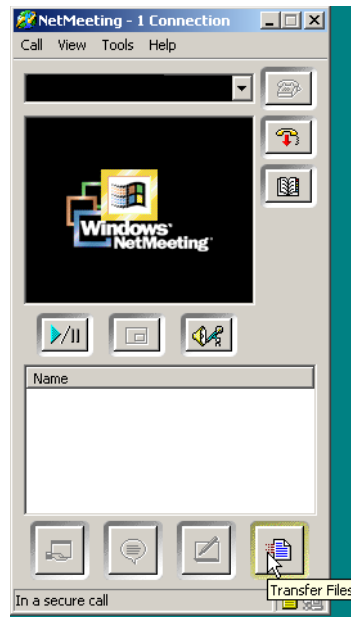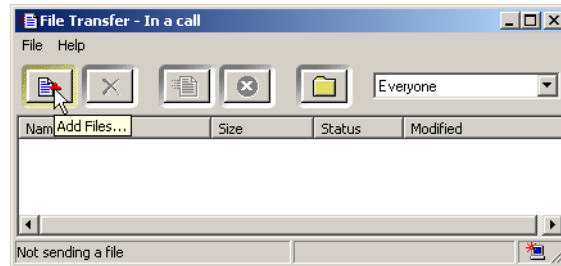
6. Click Add Files.

7. Select all the files for the custom install application and click Add.
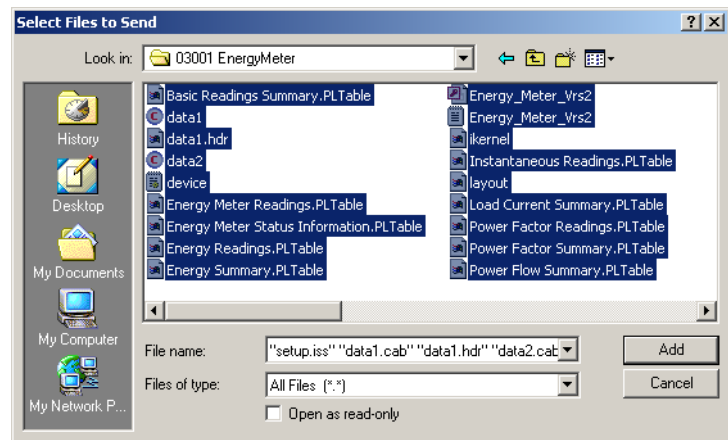
8. Click Send All.
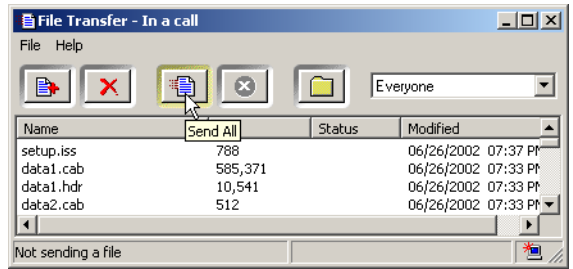
9. When all files have transferred, close the File Transfer dialog.

10. Click the "Target's Desktop" window.
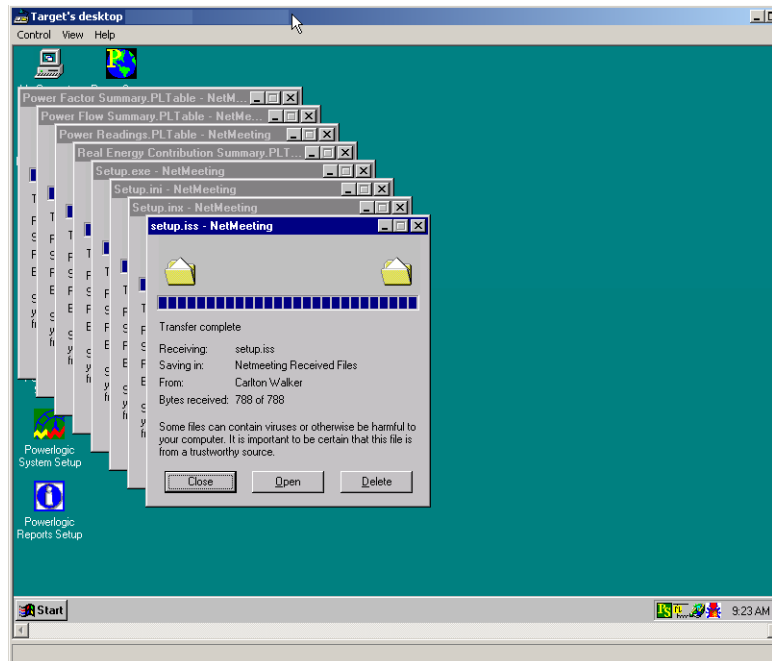
11. Click the Power Server icon on the bottom right of your taskbar.
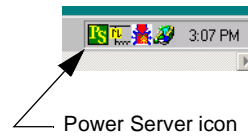
Power Server icon

The Power Server Embedded Switch dialog displays.
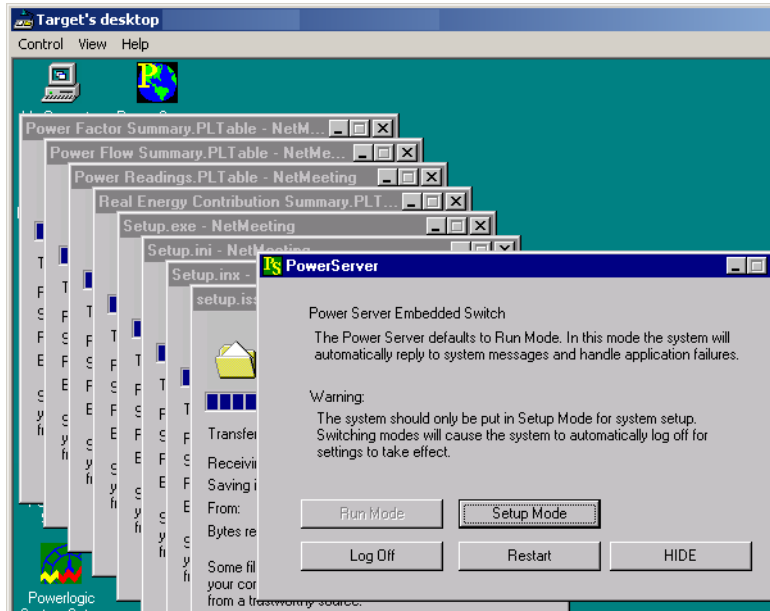
12. Click the Setup Mode button to change to setup mode.

After changing to setup mode, your NetMeeting session will be disconnected while the Power Server restarts automatically. This process may take up to two minutes.

13. Reconnect to the Power Server with NetMeeting.

14. Press **Ctrl-W** to display the Power Server desktop.

The Power Server icon displays red indicating it is in setup mode.

NOTE: Some third party device installations may be configured to execute automatically with no interaction on your part. Check with your field sales representative to see if this is the case. If so, skip to step 23.

15. Double-click the My Computer icon on the Power Server desktop and open the C:\Netmeeting Received Files folder.
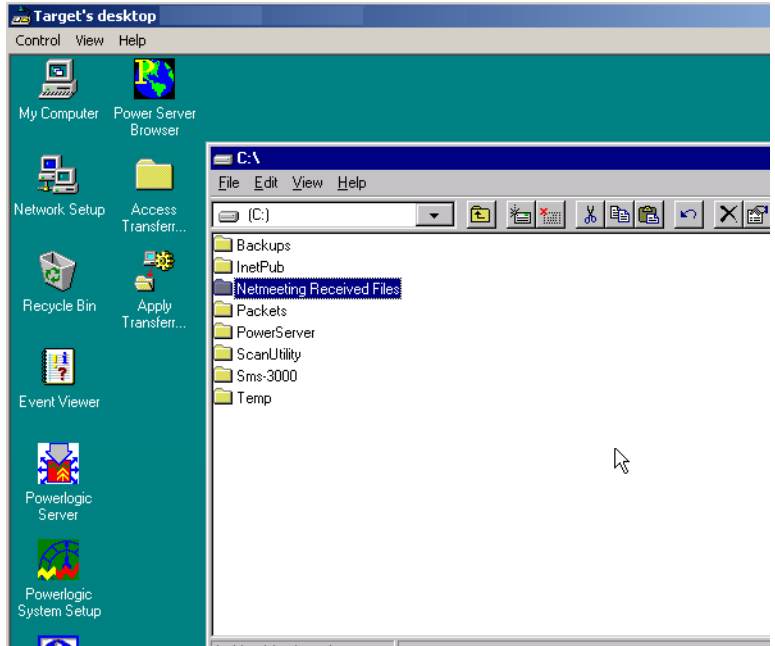
16. Double-click Setup.exe.
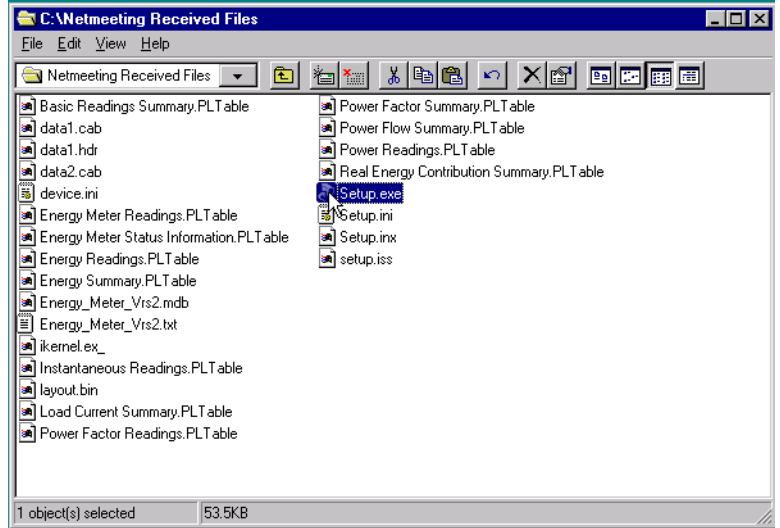
17. Follow the onscreen instructions in the wizard.

18. Upon completion of the install wizard, select "No. I will start my computer later."
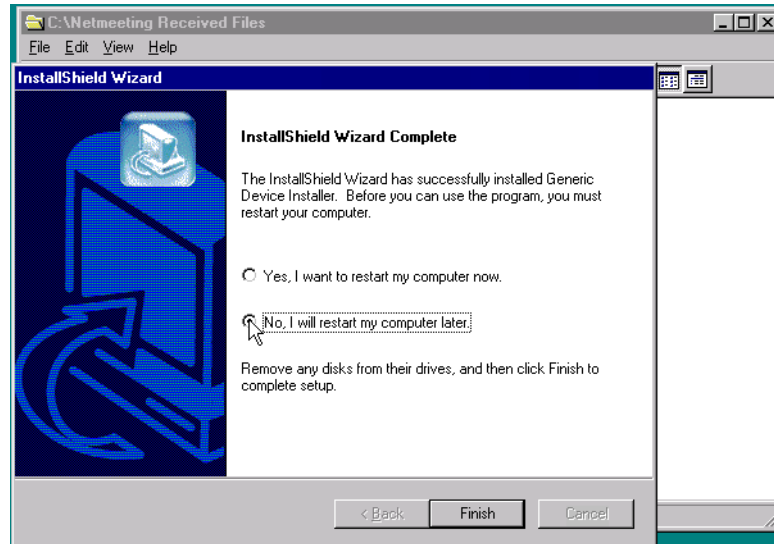
19. Click Finish.

20. Select all the files in the "C:\NetMeeting Received Files" folder and delete them.

21. Close the My Computer window.

22. Delete the files in your recycle bin by right-clicking the desktop icon and selecting "Empty Recycle Bin."

    NOTE: If you want to configure your POWERLOGIC system with the third party device you just added, do not switch back to run mode. Instead simply click the Restart button, configure your system, then proceed to step 23.

23. After configuring your POWERLOGIC system with the new device type, Click the Run Mode button on the Power Server Embedded Switch window to restart the Power Server back in run mode.
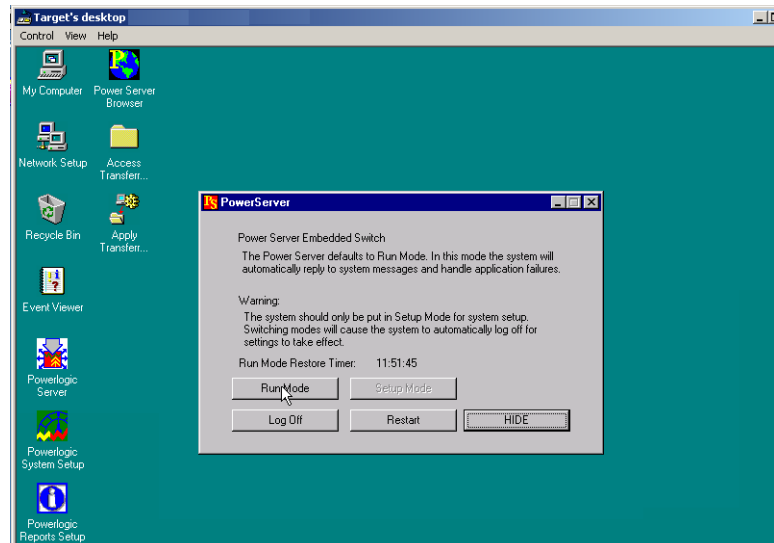
24. Close NetMeeting.

APPENDIX G—POWERLOGIC SYSTEM DISPLAY (SD700) INSTALLATION

PRODUCT DESCRIPTION

The System Display is a full-color, panel-mount touch screen display designed to be mounted on power equipment. The system display lets you view the Power Server screens locally at the equipment. Water and dust protection to NEMA 4 and 12 standards allow the system display to be used in a wide variety of industrial and commercial applications. A bright LCD display with 800 X 600 pixel resolution and a wide viewing angle ensure that data is visible in a broad range of lighting conditions. For complete specifications, see the user's guide shipped with the display.

INSTALLATION AND OPERATION

Refer to the user's guide shipped with the display for information on:

- Installing the display
- Connecting control power
- Auto-adjusting the touchscreen
- Understanding the front panel LED indicators

SAFETY PRECAUTIONS

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, BURN, OR EXPLOSION

- This equipment must be installed and serviced only by qualified personnel.
- Turn off all power supplying this equipment and the equipment it is mounted in before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm that power is off.
- Replace all device doors and covers before turning on power to this equipment.

Failure to observe these instructions will result in death or serious injury.

CONNECTING TO THE POWER SERVER

To connect the touch screen display to the Power Server, do the following:

1. Turn off all power supplying the electrical equipment in which the display and power server are installed, and confirm that power is off using a properly rated voltage sensing device.

2. Locate the serial cable supplied with the system display. The serial cable has a male nine-pin connector on one end and a female nine-pin connector on the other end.

3. Connect the female end of the serial cable to the COM 2 serial port on the Power Server (see Figure G–2). Tighten the captive screws on the cable connector.

4. Connect the male end of the serial cable to the Touch Screen Serial Output port on the system display. Tighten the captive screws on the cable connector.

5. Locate the video cable supplied with the system display.

6. Connect one end of the video cable to the female Video input port on the side of the system display. Tighten the captive screws on the cable connector.

7. Connect the other end of the video cable to the VGA output port on the Power Server (see Figure G–2). Tighten the captive screws on the cable connector.

COM 2 serial port — connect to the touch screen output port on the system display.

VGA output port — connect to the VIDEO input port on the system display.
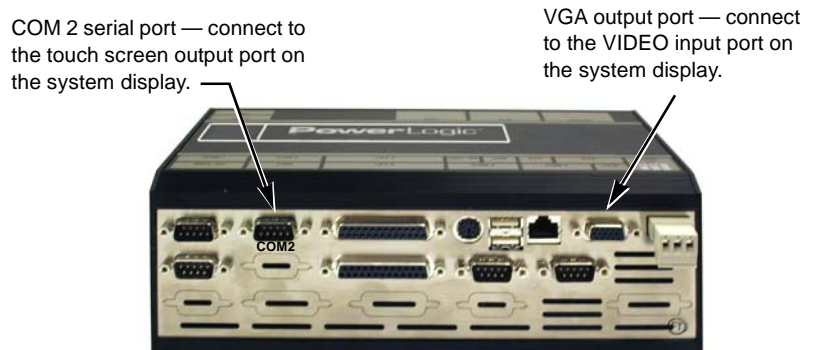
Figure G–2: Power Server connectors

CALIBRATING THE TOUCH SCREEN

The first time you power up the system display, you should calibrate the touch screen.

To calibrate the touch screen, do the following:

1. Ensure that the Power Server is running and that the Power Server interface is visible on the monitor.

2. Touch the Maintenance tab.

3. On the Maintenance tab, touch the Calibration button.

4. Follow the on-screen instructions.

5. When calibration is complete, touch the screen in several places and ensure that the pointer arrow accurately follows your touch. If it does not, repeat the calibration procedure.

CARE AND CLEANING

Occasionally clean the display panel with a soft cloth dampened with glass cleaner. Spray cleaner on the cloth. Do not spray cleaner directly on the touchscreen. Keep turning a fresh side of the cloth toward the screen surface to avoid scratching it with accumulated grit. Allow the screen to air dry.

NOTE: Never use ammonia-based cleaners to clean the touchscreen. Do not use paper products to clean the screen as they may scratch the surface.

SPECIFICATIONS

Table G–1:   Specifications

Display	
Type	Active matrix color thin film transistor (TFT) LCD
Nominal Display Area	
Diagonal	12.1 in (308 mm)
Resolution	800 x 600 pixels
Electrical	
Input voltage	100-240 Vac, 50–70 Hz, 0.5 A
	SD700 DC option: 24 Vdc (± 10%) [sourced by Class 2 rated supply], 1.5 A, 36 W
Environmental	
Panel mount rating	NEMA 4 and 12
Operating temperature	0° C to 50° C
Agency Approvals	
FCC Class A; UL and cUL Recognized; CE Marked	

APPENDIX H—DATABASE BACKUP

The Power Server contains four SQL databases: master, msdb, SMS-System and SMS-History. By default, the Power Server automatically backs up these databases every month. Although the master and msdb databases are SQL system databases and they do not get updated frequently, the System and History databases hold all the Power Server configuration and data. Therefore, you may need to back up those databases manually (for example, after the Power Server setup), retrieve them from the Power Server, and save them on a separate PC. The following sections cover procedures for these backups.

BACKING UP THE DATABASE ON THE POWER SERVER

The Power Server allows you to manually back up the system and history databases. To do so, follow these steps:
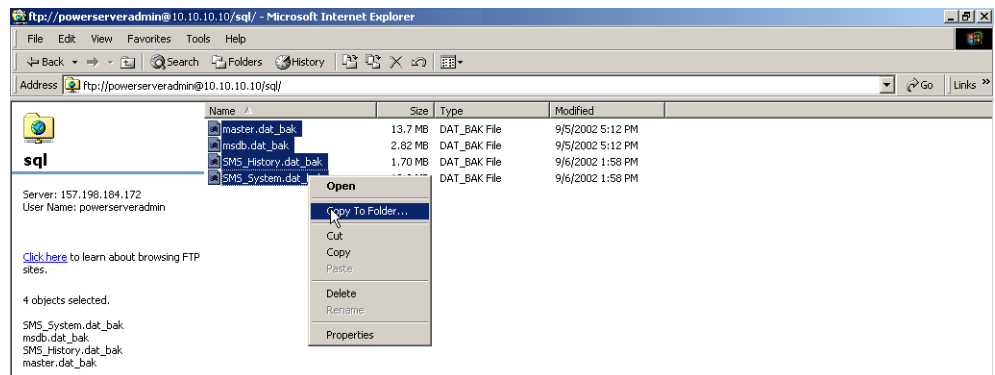
1. Type **http://**_Power Server IP_**/PowerServer/jobs/default.asp** in Internet Explorer using the IP address of the Power Server for "Power Server IP."

   The Enter Network Password dialog displays.
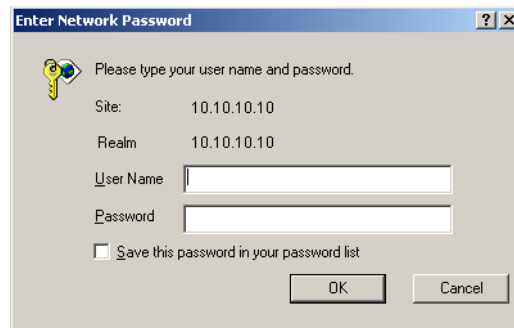
2. For User, enter: **PowerServerAdmin**

   For Password (case-sensitive), enter: **Pwr_Srv**

   The Power Server Database Maintenance page displays.
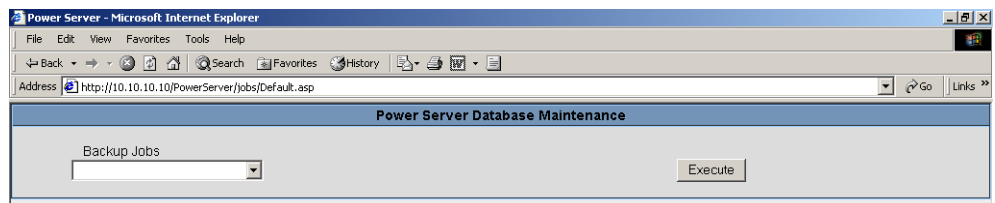
3. From the Backup Jobs dropdown list, select SMS System or SMS History and click Execute.
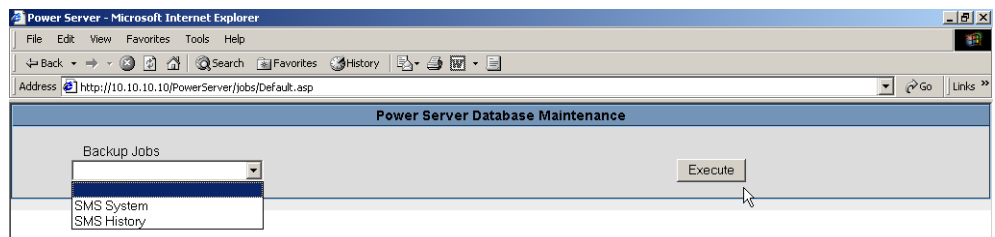
The web page displays "Job command sent" and the Power Server starts backing up the database on the Power Server.

Checking the Database Backup Status

To check the status of the database backup, follow these steps:

1. Type **http://**_Power Server IP_**/** to browse the main Power Server user interface (using the IP address of the Power Server for "Power Server IP").

2. Click the Maintenance tab.
   The Maintenance page displays.

3. Click the Diagnostics button.
   The Diagnostics page displays.

4. Select Database Statistics from the list on the left side of the page.
   The Power Server Database Statistics page displays.
   "Executing" displays in the Status column while the database backup is in progress.
   Once the database is backed up, the Status column will display "IDLE" with an updated date/time stamp.

   NOTE: The Database Statistics page does not refresh automatically. To refresh the page, click Database Statistics in the list again.
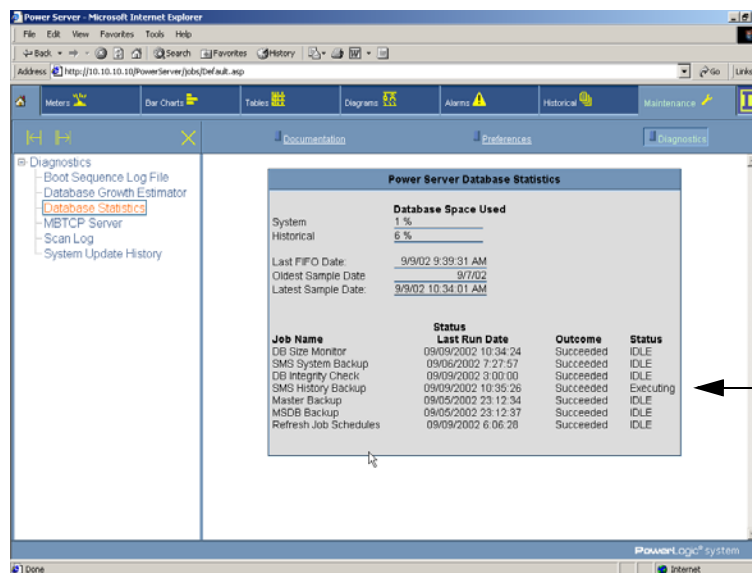
"Executing" displays in the Status column while the database backup is in progress.

BACKING UP THE POWER SERVER DATABASE ONTO A SEPARATE PC

In addition to backing up the database on the Power Server, we recommend saving your backups onto a separate PC on a regular basis. To do so, follow these steps:

1. Type **ftp://**_Power Server IP_**/SQL** in Internet Explorer using the IP address of the Power Server for "Power Server IP."

   The Enter Network Password dialog displays.
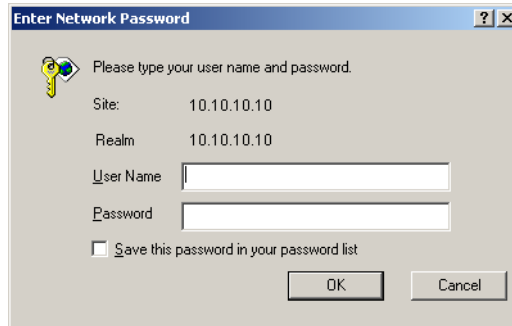
2. For User, enter: **PowerServerAdmin**

   For Password (case-sensitive), enter: **Pwr_Srv**

   The SQL folder displays.
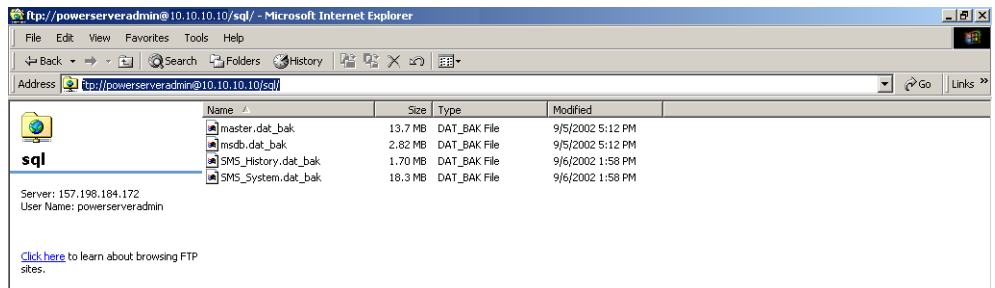
3. Select all files and right-click > Copy to Folder.

4. Select the destination folder to backup the database files.

Browse For Folder   ? | X

Copy the selected item(s) to the folder:

- Desktop
  - My Documents
  - My Computer
  - My Network Places

Folder: My Documents

OK   Cancel   New Folder

RESTORING THE DATABASE ON THE POWER SERVER

If you need to restore the database on your Power Server, contact your local Schneider Electric representative for instructions.

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Schneider Electric Technical Support Contacts / Schneider Electric contactos de soporte técnico / Schneider Electric contacts pour l'assistance technique

For technical support and additional information, contact your local sales office or an office listed below. /

Para obtener soporte técnico e información adicional, póngase en contacto con su oficina local de ventas o con una de las oficinas que aparecen a continuación./

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