

POWERLOGIC® Ethernet Communications Card Reference



- Merlin Gerin
- Modicon
- Square D
- Telemecanique

NOTICE

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service, 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 Schneider Electric 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.

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CHAPTER 1—SETUP

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SETUP VIA A NETWORK OR THE INTERNET

Log Into the ECC

This section tells how to configure the ECC over a network or the Internet. After you set up Ethernet parameters using the Series 4000 Circuit Monitor display, the ECC is accessible via Ethernet and standard web browsers such as Internet Explorer (version 5.0 or higher recommended). All ECC setup information is stored in the circuit monitor into which the ECC is inserted. Thus, one ECC can be exchanged with another ECC without affecting these settings.

To log into the ECC via an Ethernet network, follow these steps:

Launch your Internet web browser (Internet Explorer v. 5.0 or higher is recommended).

Enter the ECC IP address (for example 221.234.252.39) into the URL address field (Figure 1–1) and press Enter.



Figure 1–1: IP address entered in URL address field

NOTE: If this is the first time you have accessed the ECC via a web browser, the password log-in page displays. The default password is "admin", all lower case. If you are the administrator, it is highly recommended, for security reasons, that you change this default password at this time. See "Password Administration" on page 7 for more information.

NOTE: English is the default language as shown in Figure 1–2.

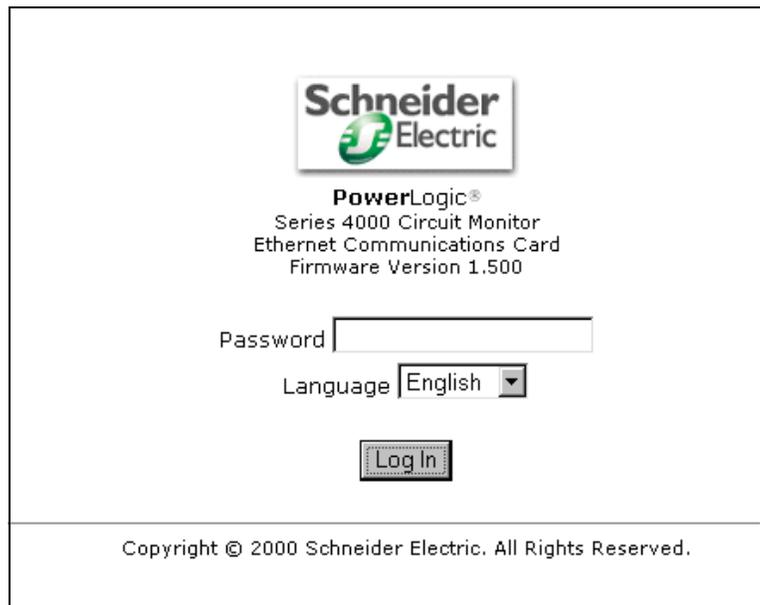


Figure 1–2: ECC Log In page

ECC Home Page

The ECC Home page displays (Figure 1–3). The list of available options on this page varies depending on the level of access assigned in the password administration option.



Figure 1–3: ECC Home page

Instantaneous Readings

No set up is required for the Instantaneous Readings page. For more information, see “Chapter 3—Real-Time Device Monitoring” on page 13.

Custom Pages

No set up is required for custom pages. For more information, see “Chapter 4—Transferring HTML Pages Via FTP” on page 21.

Accessible custom pages (those stored in the host circuit monitor memory) will be listed on the ECC Home page between Instantaneous Readings and Communications Settings.

Setup Options

The standard options shown on the ECC home page are summarized in Table 1–1. Following the table, each option is explained in more detail.

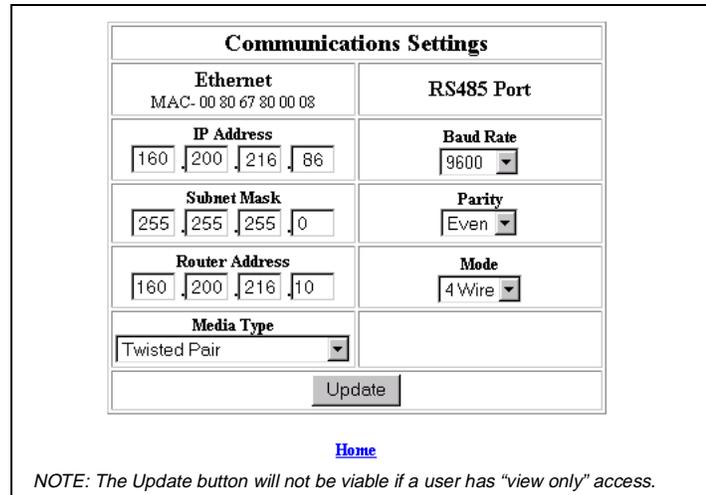
Table 1–1: ECC Setup Options

Option	Description	See Page
Communication Settings	Set up or modify Ethernet and serial communication parameters.	4
Device List	Identify serial devices on the daisy chain.	5
Diagnostics	Troubleshooting and miscellaneous ECC information.	6
Instantaneous Readings	Series 4000 Circuit Monitor real-time meter readings. <i>No set up is required.</i>	14
Password Administration	Set up and change user passwords and access levels.	7
Advanced Setup ¹	Change ECC timing values.	9
Log Out	Close ECC client session.	10
Custom Pages	Five default custom pages are embedded in the CM4000, with others available. These can be modified to fit your specific application.	22

1. Accessible by administrator only.

Communications Settings

Figure 1–4 shows the Communications Settings page. You will set up Ethernet and RS-485 ports here. After changing a value, you *must* click the update button for changes to take effect.



Communications Settings

Ethernet MAC- 00 80 67 80 00 08	RS485 Port
IP Address 160 . 200 . 216 . 86	Baud Rate 9600
Subnet Mask 255 . 255 . 255 . 0	Parity Even
Router Address 160 . 200 . 216 . 10	Mode 4 Wire
Media Type Twisted Pair	
<input type="button" value="Update"/>	
Home	

NOTE: The Update button will not be viable if a user has "view only" access.

Figure 1–4: Communications Settings page

NOTE: If you change any Ethernet parameter on the Communications Settings page and click update, the ECC resets and the new settings immediately go into effect. Because of the reset, you will need to log in to the ECC again. To log in, type the IP address into the URL address field and press Enter.

Ethernet Port Setup Via LAN

After you assign the initial TCP/IP address to the ECC through the circuit monitor display, you can go to the Communications Settings HTML page via a standard web browser and change the ECC TCP/IP setup (Figure 1–4). The following parameters are necessary for TCP/IP setup and must match your network LAN:

- IP address
- subnet mask
- router address
- media type (twisted pair or fiber optic half- or full-duplex)

RS-485 Serial Port Setup

The RS-485 setup information consists of baud rate parity, and port mode (Table 1–2). The baud rate and parity you assign must match the settings for attached RS-485 devices (all devices must have the same baud rate and parity settings). Set the port mode according to whether your daisy chain is 2-wire or 4-wire.

Table 1–2: RS-485 Setup Parameters

Parameter	Options
Baud Rate	1200, 2400, 4800, 9600, 19200, 38400
Parity	None, Even
Mode	4-Wire; 2-Wire

Device List

Figure 1–5 shows the HTML Device List page.

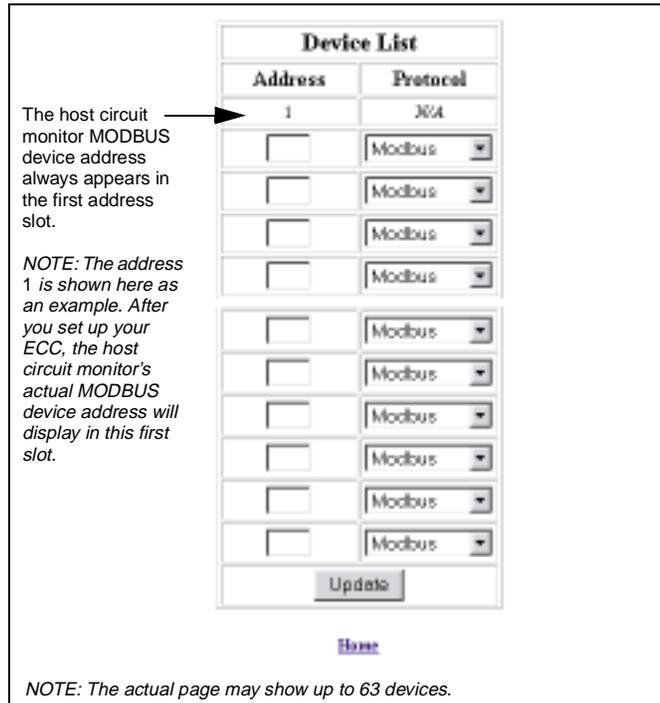


Figure 1–5: Device List page

Keep in mind the following points when setting up the Device List:

- MODBUS/JBUS devices do not have to be defined in the Device List.
- POWERLOGIC protocol (SY/MAX) devices must be defined in the Device List.
- Up to 31 devices can be defined on the Device List page without a repeater.
- To communicate with the host circuit monitor via MODBUS/TCP, use the circuit monitor MODBUS device address. This address will always be the first address listed on the Device List (in Figure 1–5, this address is 1).

Table 1–3 shows the address range available for various protocols.

Table 1–3: RS-485 Device Definitions Address Range

Protocol	Available Device Address Range
MODBUS, JBUS	1 through 247
POWERLOGIC	1 through 199

NOTES:

- **Do not assign address 1 to any POWERLOGIC protocol device on a mixed-mode daisy chain.**

- **Do not assign address 16 to any MODBUS or JBUS device if you have a mixed-mode daisy chain (for example a single daisy chain with some RS-485 devices using POWERLOGIC protocol and other devices using MODBUS/JBUS protocol).**

For information on adding additional address/protocol positions to the Device List, see “Advanced Setup” on page 9.

Diagnostics

The ECC displays diagnostics data on this page. In addition to its information value, this page may be helpful in troubleshooting network problems. This page also contains information about your specific ECC, including the serial number, manufacturing date, and Media Access Control (MAC) address. Pressing Reset clears the accumulative readings counters.

NOTES:

- *This page shows accumulated readings since the ECC was last activated. If power to the ECC is lost, all values reset to zero. The reset button will not display if a user has “view only” access.*
- *The HTML User Logins since the ECC was last activated are shown at the bottom of the page.*

Figure 1–6 shows the Diagnostics page.

Diagnostics			
RS485 Port		Dual Port RAM	
Timeouts	0	Timeouts	0
Checksum / CRC Errors	0	Checksum / CRC Errors	0
Protocol Errors	0	Protocol Errors	0
Outbound Read Messages	0	Outbound Read Messages	0
Outbound Write Messages	0	Outbound Write Messages	0
Inbound Read Messages	0	Inbound Read Messages	0
Inbound Write Messages	0	Inbound Write Messages	0
MBTCP		Ethernet	
Timeouts	0	CRC Errors	0
Checksum / CRC Errors	0	Alignment Errors	0
Protocol Errors	0	Code Errors	0
Outbound Read Messages	0	Long Frame Errors	0
Outbound Write Messages	0	Short/Long Frame Errors	0
Inbound Read Messages	0	Multiple Collisions	0
Inbound Write Messages	0	Card Information	
Active Inbound Connections	0	Processor Utilization	2%
Active Outbound Connections	0	MAC Address	88:06:7B:00:3B
Inbound Connections	0	Serial Number	3
Outbound Connections	0	Model Number	1
Maximum Inbound Connections	0	Hardware Version	000D
Maximum Outbound Connections	0	Manufacture Date	Jan 21, 2008
HTML User Logins			
Admin User = 1	User 1 = 0	User 2 = 0	User 3 = 0
Reset			

Figure 1–6: Diagnostics page

Password Administration

Figure 1–7 shows the Password Administration HTML page. There are four password accounts on the page, one administrator account and three user password accounts. The default passwords assigned to user accounts are “master,” “engineer,” and “operator” (Figure 1–7). The default passwords are editable by the administrator.

Administrator Account

The administrator account is always granted full access to every HTML page available through the ECC. The administrator account password is configurable. Only the administrator can access and change passwords. The administrator password can be from one to eight alphanumeric characters and is case-sensitive. The default administrator password is “admin”.

NOTE: If you are the administrator, it is highly recommended, for security reasons, that you change this default password the first time you log in.

User Account

The default access levels for all user accounts are shown in Figure 1–7. The administrator can grant one of three access levels for each HTML page to each user: None (no access), Read Only, and Full (access).

Password Administration				
	User 1	User 2	User 3	Disable Password
	master	engineer	operator	
Instantaneous Readings	Full	Full	Read Only	<input type="checkbox"/>
Communications Settings	Full	Read Only	Read Only	<input type="checkbox"/>
Device List	Full	Read Only	Read Only	<input type="checkbox"/>
Diagnostics	Full	Read Only	Read Only	<input type="checkbox"/>
Administrator Password:	admin			
Update				
Home				

Figure 1–7: Password Administration page (default values shown)

Up to 10 concurrent users can be logged into the ECC at any given time, using any combination of passwords. The amount of time the ECC waits during an inactivity period before “expiring” access is configurable (see “Advanced Setup” on page 9). During normal operations, it is recommended that each user return to the ECC home page and select “log out” when finished interfacing with the ECC; doing so immediately releases that access privilege for another user.

Disabling Passwords

The administrator can disable the password for many HTML pages. This disables security for that page, allowing users to bookmark the page for quick access without receiving the password prompt. For information on bookmarking HTML pages, see “Bookmarking an HTML Page” on page 10.

Table 1–4 summarizes password accounts, default passwords, and access levels.

Table 1–4: Password Administration Summary

Password Account	Default Password	Convention ¹	Access
Administrator	admin	1-8 characters	Full access to all passwords and HTML pages
User 1	master	1-8 characters	Choosing from the following options, the administrator assigns access levels for these HTML pages: Instantaneous Readings, Communication Settings, Device List, Diagnostics, and Custom Pages. Access levels are: <ul style="list-style-type: none">• None (no access)• Read Only• Full (full access; same as Administrator Access)
User 2	engineer	1-8 characters	
User 3	operator	1-8 characters	

1. Case-sensitive, alphanumeric characters only.

Advanced Setup

The Advanced Setup HTML page is accessible by the administrator password only. This setup page allows advanced users to tweak ECC timing values that normally should never be changed. ECC parameters and corresponding values are show in Table 1–5.

Table 1–5: Advanced Communication Setup Parameters

Parameter	Range of Values	Description
HTML User Timeout	1–255 minutes	Maximum time allowed for a user to stay idle before the ECC expires that user’s access.
Timeout for RS-485 Port	3–10 seconds	Maximum time the ECC will wait for requested information from the RS-485 daisy-chained devices.
Instantaneous Readings Refresh Rate	5–300 seconds	Interval at which Instantaneous Readings page updates readings.
Timeout for Host Circuit Monitor	3–10 seconds	Maximum time the ECC will wait for requested information from the Series 4000 Circuit Monitor.
Number of Viewable Devices	2–64 devices	Number of viewable devices in the HTML Device List page.

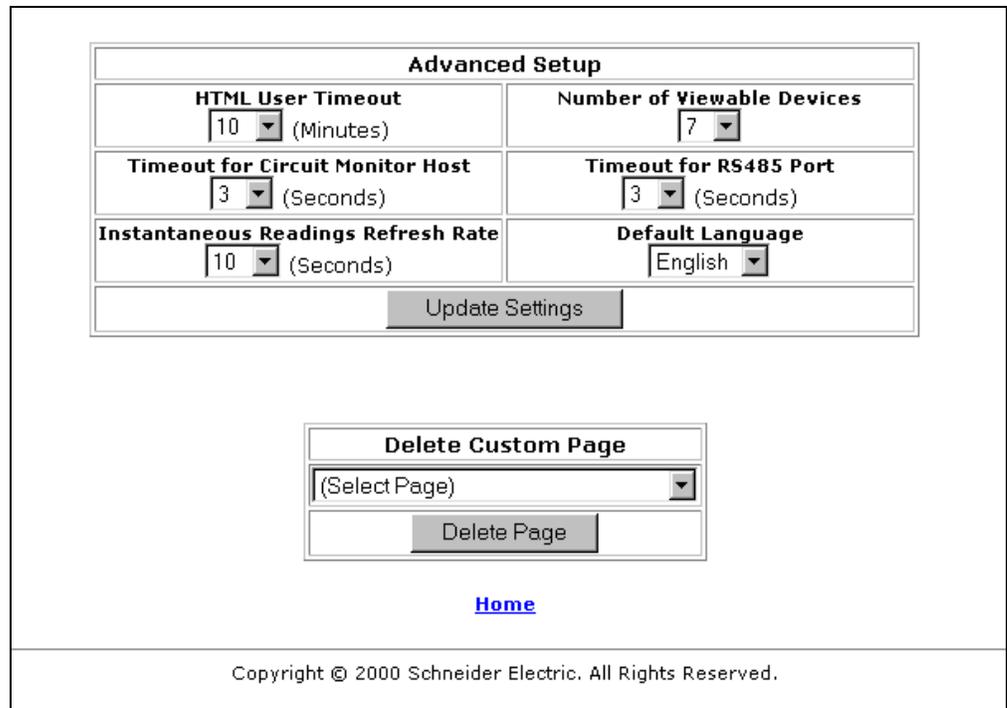


Figure 1–8: Advanced Setup page

As shown in Figure 1–8, you can also delete custom pages from the Advanced Setup page. To do so, select the page you want to delete and click Delete Page.

NOTE: English is the default language as shown in Figure 1–8.

Log Out

To log out of the ECC HTML pages, go to the ECC Home page and click Log Out. This ends your client session. The Log In page displays so you will be able to quickly log back in when you are ready.

Bookmarking an HTML Page

To bookmark an HTML page, follow these steps:

1. Disable security for the page you want to bookmark by:
 - a. logging in using the administrator password
 - b. opening the Password Administration page and clicking the box in the Disable Password column for the HTML page you are going to bookmark
 - c. clicking Update
2. Type the HTML page address in the address field of your web browser.

Follow this convention: `http://(IP address)/(name of page).htm`

For example, if you want to bookmark the Instantaneous Readings page, and the IP address of the ECC is 157.198.216.86 type:

`http://157.198.216.86/InstantaneousReadings.htm`

Page names are case-sensitive. Capitalize only the first letter of each word; all other letters are lowercase. The correct HTML page naming convention for each HTML page is shown in Table 1–6.

NOTES:

- You can not bookmark the Password Administrator or Advanced Setup pages.
- If you try to bookmark an HTML page using your web browser software, five access token numbers will be added to the URL after ".htm". These five numbers must be removed to access the page.

Table 1–6: Naming Conventions When Bookmarking HTML Pages

To Bookmark This Page:	Use this Naming Convention: (substitute your correct ECC IP Address for the one shown)
Instantaneous Readings	<code>http://157.198.216.86/InstantaneousReadings.htm</code>
Communications Settings	<code>http://157.198.216.86/CommunicationsSetup.htm</code>
Device List	<code>http://157.198.216.86/DeviceList.htm</code>
Diagnostics	<code>http://157.198.216.86/Diagnostics.htm</code>
Log Out	<code>http://157.198.216.86/LogOut.htm</code>
Custom Pages	<code>http://157.198.216.86/CustomPageX¹.htm</code>

1. Substitute the custom page number for "X".

CHAPTER 2—SAFETY PRECAUTIONS

This chapter contains important safety precautions that must be followed before attempting to install, service, or maintain electrical equipment. Carefully read and follow the safety precautions outlined below.

⚠ 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.
- 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.
- Turn off all power supplying the Series 4000 Circuit Monitor and the equipment in which it is installed before installing and wiring the ECC. Be aware that the circuit monitor may be connected to a separate power source derived from the equipment in which it is installed.
- Also turn off all power supplying any option card already installed in the Series 4000 Circuit Monitor before installing and wiring the ECC.
- Beware of potential hazards, wear personal protective equipment, and carefully inspect the work area for tools and objects that may have been left inside the equipment.
- 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.

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

CHAPTER 3—REAL-TIME DEVICE MONITORING

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INTRODUCTION

The ECC has the capability to show real-time device data from a single device or multiple devices, including the host Series 4000 Circuit Monitor or any other attached devices.

INSTANTANEOUS READINGS (CM4000 HOST CIRCUIT MONITOR)

Included in the ECC pages is one non-customizable HTML page for viewing instantaneous readings from the host Series 4000 Circuit Monitor (Figure 3–1). This page is embedded into the ECC and is very similar to the System Manager Software (SMS) instantaneous page for the CM4000.

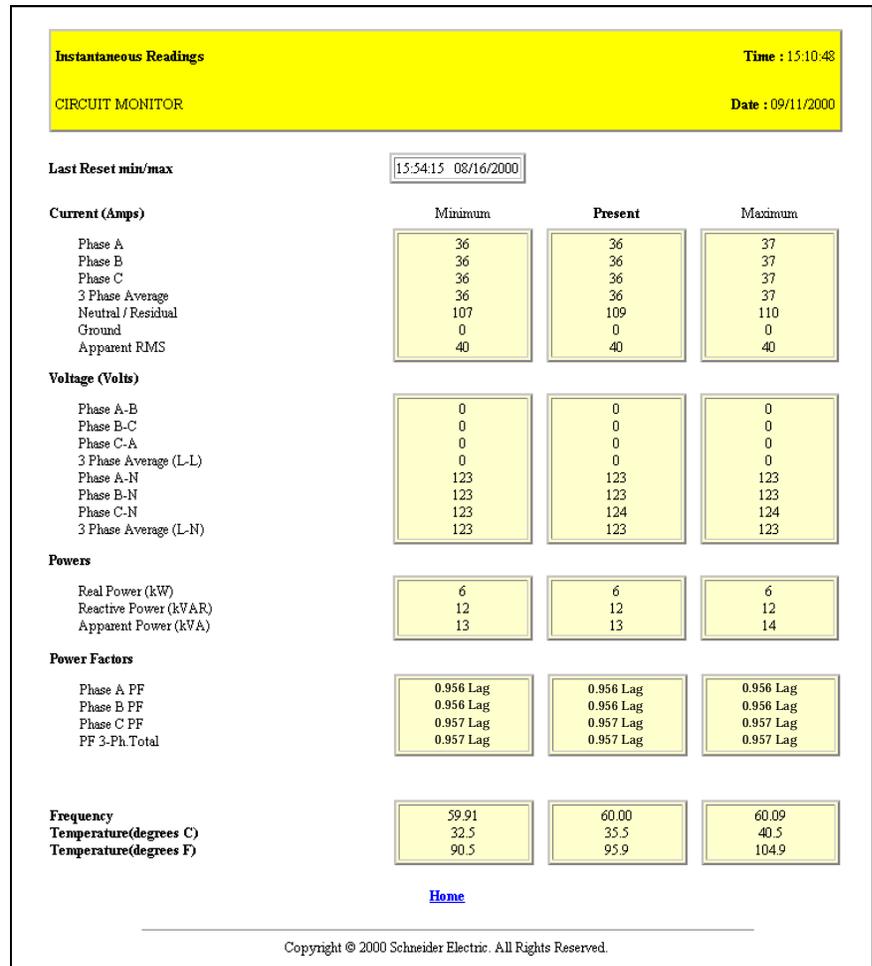


Figure 3–1: Instantaneous Readings page

The metered values automatically update at the intervals you specify on the Advanced Setup page (see “Advanced Setup” on page 9.) For immediate updating of metered values, click Refresh on your browser.

HTML CUSTOM PAGES

Five custom HTML templates are stored in the CM4000 circuit monitor. As a backup, these pages are also stored on a diskette shipped with the ECC. The pages are configured to read data from the host CM4000. You can also configure them to provide a summary of a few or all of the devices on the daisy chain.

NOTE: A maximum of five custom HTML pages can be stored in the circuit monitor. If you need to delete a custom page from the circuit monitor to make room for another one, you can restore the deleted page in the future. To do so, load custom pages from the diskette you received with the ECC onto your computer hard drive and then upload them to the circuit monitor (where they are stored).

Custom pages can be uploaded from your computer hard drive to the host CM4000 (where they are stored) via File Transfer Protocol (FTP). For more information on custom HTML pages, see "Transferring HTML Pages Via FTP" on page 22.

NOTE: After custom pages are uploaded to your ECC, their names will appear on the ECC Home page between Instantaneous Readings and Communications Settings.

CREATING HTML CUSTOM DEVICE READINGS TABLES

You can create a new custom HTML page by modifying the code of an existing custom page.

NOTE: This section is intended for users already familiar with HTML and JavaScript. If you are not familiar with these topics, you can contract POWERLOGIC Power Management Engineering Services to modify HTML custom pages to fit your specific application. For more information, contact your local sales representative.

This section shows a sample custom device table and the code used to create it. The custom device tables are created by users very familiar with HTML and JavaScript. Each page is written in HTML with special delimiters that instruct the ECC to dynamically get register information from a device.

When creating custom HTML pages, remember that the maximum file size for each page is 20 KB or less. A maximum of five custom pages totalling 100 KB can be stored in the host circuit monitor at a time.

The delimiters at the beginning (PL__) and end (__PL) of a string instruct the ECC to parse this string and dynamically fill it with register data. Table 3–1 shows supported POWERLOGIC tags and also, an HTML example of how they can be used.

Table 3–1: POWERLOGIC HTML Tags

Function Code	Function Name	POWERLOGIC Tag	Example of Data Returned
0	SY/MAX Block Read—Registers	<DeviceID>^<RegisterAddress>[<NumberOfRegisters>] example tag = PL__1^1003[5]__PL	85,86,84,25,56
4	SY/MAX Scattered Read—Registers	<DeviceID>^<RegisterAddress1>,<RegisterAddress2>,etc example tag = PL__1^1003,1004,1005,1006,1007	85,86,84,25,56
3	Modbus Block Read—Holding Registers	<DeviceID>^H<RegisterAddress>[<NumberOfRegisters>] example tag = PL__1^H1003[5]__PL	85,86,84,25,56
4	Modbus Block Read—Input Registers	<DeviceID>^I<RegisterAddress>[<NumberOfRegisters>] example tag = PL__1^I1003[5]__PL	85,86,84,25,56
100	Modbus Scattered Read—Holding Registers	<DeviceID>^S<RegisterAddress1>,<RegisterAddress2>,etc example tag = PL__1^S1003,1004,1005,1006,1007__PL	85,86,84,25,56

Example: An HTML Custom Page and Source Code

Figure 3–2 shows an example of a custom HTML page.

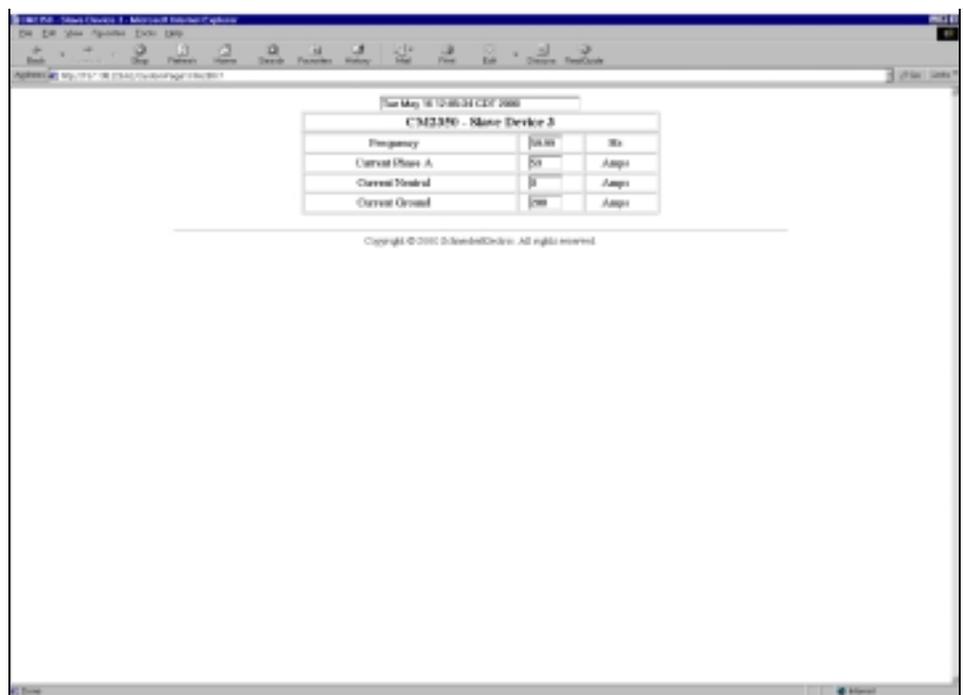


Figure 3–2: Example of a device HTML custom page

The source code used to develop the device HTML custom page in Figure 3–2 is shown below.

```

<html>

<head>
<META HTTP-EQUIV="refresh" CONTENT="5">
<title>CM2350 - Slave Device 3</title>
</head>

<body>
<form name="view_form">
  <p align="center">
    <input type = "text" name = "time_spot" size = "40">
    <table border="1" width="600">
      <tr>
        <td width="600"><p align="center"><font size="4"><b>CM2350 - Slave
          Device 3</b></font></p>
        </td>
      </tr>
      </table>
      <table border="1" width="600">
        <tr>
          <td width="300">
            <p align="center">Frequency</p>
          </td>
          <td align="center" width="90"><p align="center"><input
            type="text" size="5" name="frequency"></p>
          <td width="100">
            <p align="center">Hz</p>
          </td>
        </tr>
        <tr>
          <td width="300">
            <p align="center">Current Phase A</p>
          </td>
          <td align="center" width="90"><p align="center"><input
            type="text" size="5" name="currentphasea"></p>
          <td width="100">
            <p align="center">Amps</p>
          </td>
        </tr>
        <tr>
          <td width="300">
            <p align="center">Current Neutral</p>
          </td>
          <td align="center" width="90"><p align="center"><input
            type="text" size="5" name="currentneutral"></p>
          <td width="100">
            <p align="center">Amps</p>
          </td>
        </tr>
        <tr>
          <td width="300">
            <p align="center">Current Ground</p>
          </td>
          <td align="center" width="90"><p align="center"><input

```

```

        type="text" size="5" name="currentground"></p>
        <td width="100">
            <p align="center">Amps</p>
        </td>
    </tr>
</table>
<br><HR SIZE="1" width="66%"><CENTER><font face="Times Roman"
size="2">Copyright © 2000 SchneiderElectric. All rights reserved.</font></CENTER>
</form>

```

*NOTE: This is the
 POWERLOGIC tag.*

```

<script language="JavaScript">
function ShowFreq()
{
Registers = [PL__3^2020,2021,2022,2025,1001,1003,1006,1007__PL];
ScaleFactorA = Registers[0];
ScaleFactorB = Registers[1];
ScaleFactorC = Registers[2];
ScaleFactorF = Registers[3];
Frequency = Registers[4];
CurrentPhaseA = Registers[5];
CurrentNeutral = Registers[6];
CurrentGround = Registers[7];
ScaleFactorAMultiplier = 0;
ScaleFactorBMultiplier = 0;
ScaleFactorCMultiplier = 0;
ScaleFactorFMultiplier = 0;
TheTime = new Date();

switch (ScaleFactorA)
{
    case -2:
        ScaleFactorAMultiplier = 0.01;
        break;
    case -1:
        ScaleFactorAMultiplier = 0.1;
        break;
    case 1:
        ScaleFactorAMultiplier = 10;
        break;
    default:
        ScaleFactorAMultiplier = 1;
        break;
}
switch (ScaleFactorB)
{
    case -2:
        ScaleFactorBMultiplier = 0.01;
        break;
    case -1:
        ScaleFactorBMultiplier = 0.1;
        break;
    case 1:
        ScaleFactorBMultiplier = 10;
        break;
    default:
        ScaleFactorBMultiplier = 1;
        break;
}
}

```

```
}
switch (ScaleFactorC)
{
  case -2:
    ScaleFactorCMultiplier = 0.01;
    break;
  case -1:
    ScaleFactorCMultiplier = 0.1;
    break;
  case 1:
    ScaleFactorCMultiplier = 10;
    break;
  default:
    ScaleFactorCMultiplier = 1;
    break;
}
switch (ScaleFactorF)
{
  case -1:
    ScaleFactorFMultiplier = 0.1;
    break;
  default:
    ScaleFactorFMultiplier = 0.01;
    break;
}
Frequency *= ScaleFactorFMultiplier;
CurrentPhaseA *= ScaleFactorAMultiplier;
if (CurrentNeutral == -32768)
  CurrentNeutral = "N/A";
else
  CurrentNeutral *= ScaleFactorBMultiplier;
if (CurrentGround == -32768)
  CurrentGround = "N/A";
else
  CurrentGround *= ScaleFactorCMultiplier;
document.view_form.frequency.value = Frequency;
document.view_form.currentphasea.value = CurrentPhaseA;
document.view_form.currentneutral.value = CurrentNeutral;
document.view_form.currentground.value = CurrentGround;
document.view_form.time_spot.value = TheTime;
}
ShowFreq();
</script>

</body>

</html>
```


CHAPTER 4—TRANSFERRING HTML PAGES VIA FTP

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OVERVIEW

The ECC can act as a File Transfer Protocol (FTP) server, providing a quick and easy way to download ECC firmware updates and upload HTML custom pages.

TRANSFERRING HTML PAGES VIA FTP

Five default ECC custom pages are already embedded in the Series 4000 Circuit Monitor. As a backup, those custom pages are also provided on a diskette shipped with your ECC. If you delete one or more custom pages embedded in the circuit monitor, and later want to replace the page(s), you can load the diskette files onto your computer hard drive and then upload them to the circuit monitor via FTP.

To modify the five ECC custom page templates to meet your specific applications, see “Creating HTML Custom Device Readings Tables” on page 15.

Newly created custom HTML pages will have to be uploaded to the circuit monitor via FTP.

To upload custom HTML pages into the circuit monitor via FTP, follow these steps:

NOTE: Before proceeding, we will assume you have created a folder on your computer hard drive in which to store custom HTML pages you wish to upload into the circuit monitor via FTP. In this example, we will use the folder “ecc” located on the C: drive.

1. Access DOS on your computer by selecting Start>Program>Command Prompt.
2. Type the drive you want to access (in this case **C:**) and press Enter (return).
3. Type **cd** (change directory) and the name of the folder containing the HTML pages you are going to FTP (in this example, **ecc**) and press Enter. (See Figure 4–1.)

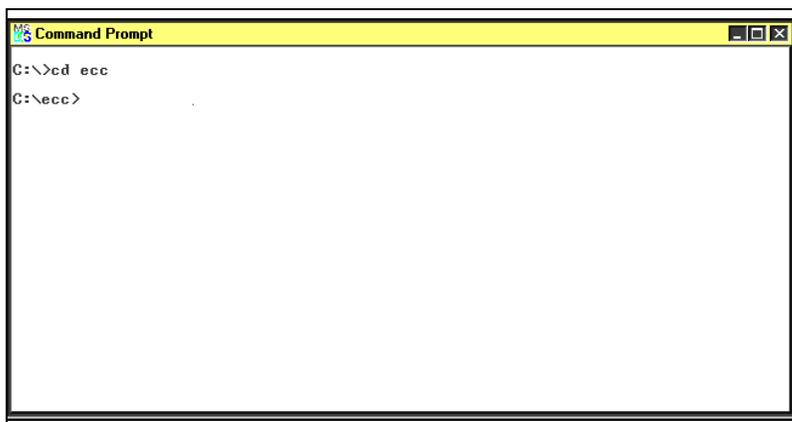
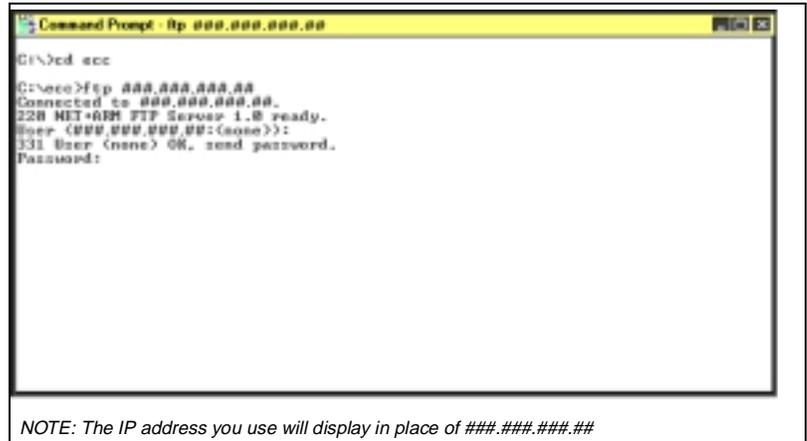


Figure 4–1: Identifying folder where HTML pages are stored

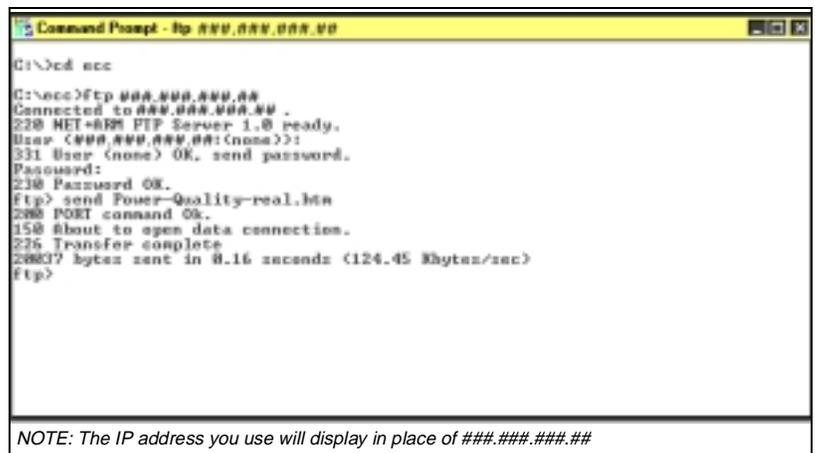
4. Type **ftp** and the **IP address** assigned to the ECC; click enter. You should receive the message “connected to [IP address]”, indicating you are now in an FTP session.
5. At the “User (IP address:(none):)” prompt, press Enter.
6. At the password prompt (Figure 4–2), enter the administrator password (**admin** is the default password until the administrator changes it).



NOTE: The IP address you use will display in place of ###.###.###.##

Figure 4–2: Password prompt

7. At the ftp prompt, type **send [filename]** and press Enter to initiate the ftp transfer. (In this example, we entered “send Power-Quality-real”).
NOTE: The filename you enter is case-sensitive.
8. When the upload is complete (Figure 4–3), you will see the “ftp” prompt again. If you have another HTML page to upload, type **send [filename]** and press Enter. If you are finished uploading files, type **quit** and press Enter to exit the FTP session.



NOTE: The IP address you use will display in place of ###.###.###.##

Figure 4–3: File transfer completed

Firmware Updates

Due to technological improvements, the base firmware your ECC was shipped with may be updated periodically. We recommend periodically checking with your local sales representative to see if an upgrade is available.

If an update becomes available, compare the version number with the version number shown on the ECC home page. If the update is a newer version (has a higher version number), transfer it to your computer hard drive, taking note of which folder you store it in.

Then use FTP to transfer the firmware upgrade into the ECC. To do so, follow the steps listed in “Transferring HTML Pages Via FTP” on page 22. The process is identical except that you will be sending the firmware.bin file instead of an HTML file (Figure 4–4).

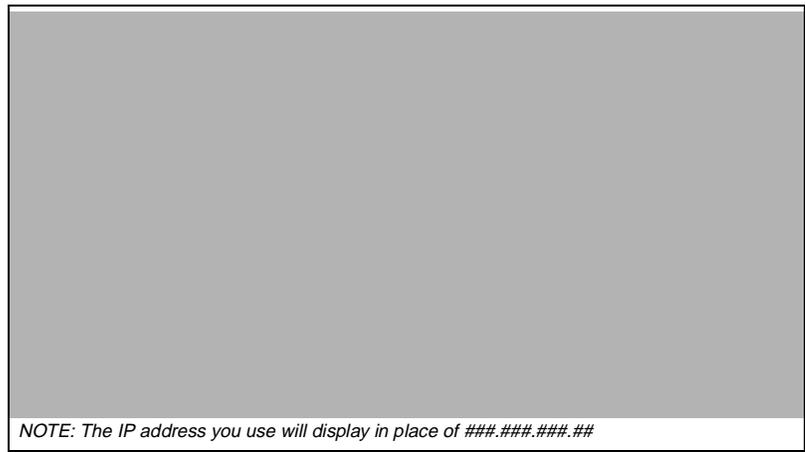


Figure 4–4: Sending a firmware upgrade to the ECC via FTP

CHAPTER 5—SYSTEM MANAGER SOFTWARE INTERFACE WITH THE ECC

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OVERVIEW/REQUIREMENTS

This appendix provides instructions on setting up a PC interface with the ECC. You must be running System Manager Software (SMS) version 3.2 or higher.

COMMUNICATING WITH SYSTEM MANAGER SOFTWARE (SMS) VIA THE ECC

The first requirement in establishing communications with SMS is adding a Communications Connection by defining the name and interface type of the port.

Follow these steps to add the Communications Connection (PC interface):

1. Open the appropriate system (click Open > system > “system name”), or create a new system. (See the SMS instruction bulletin or help system for information on creating a new system.)
2. On the SMS main menu, select Setup > Communications Connection.
3. In the Setup Communications Connection dialog box click Add. SMS displays the Add Communications Connection dialog box (Figure 5–1).



Figure 5–1: Select MODBUS/TCP Driver in the Add Communications Connection dialog box

4. Type a unique name for the communication connection, up to 31 characters.
5. Select MODBUS/TCP Driver from the Communications Driver pull-down box.
6. Click Continue to proceed with setup.

7. The Communications Connection—Modbus/TCP dialog box displays (Figure 5–2).

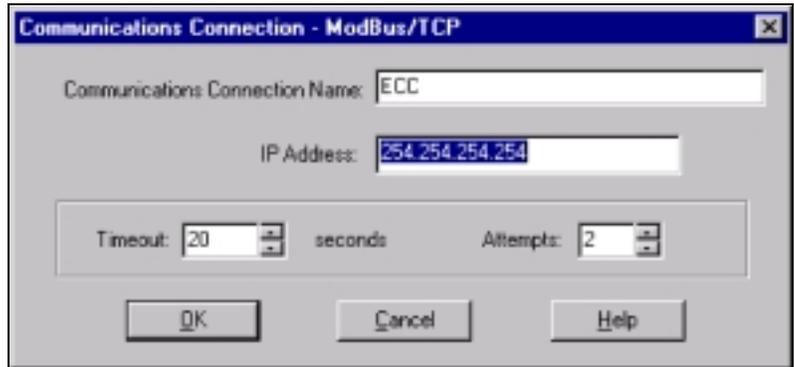


Figure 5–2: Communications Connection MODBUS/TCP dialog box

8. The Communications Connection Name assigned in the previous dialog box displays (ECC in this example). Type the IP address assigned to the ECC. Click OK.

The communication connection is now defined (Figure 5–3)

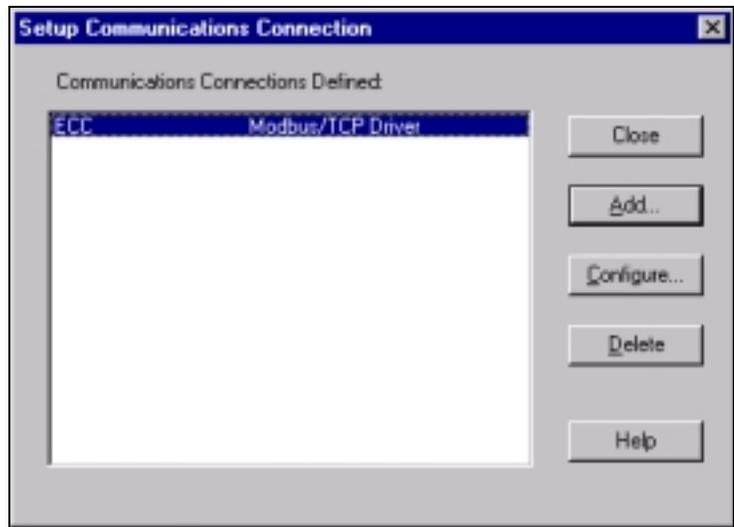


Figure 5–3: Setup Communications Connection dialog box

Adding Devices

To add devices to the SMS network server database, follow these steps:

1. On the Setup menu, click Devices/Routing... to display the Setup Devices/Routing dialog box (Figure 5-4). This dialog box also lists all previously defined devices along with their device types and routes.

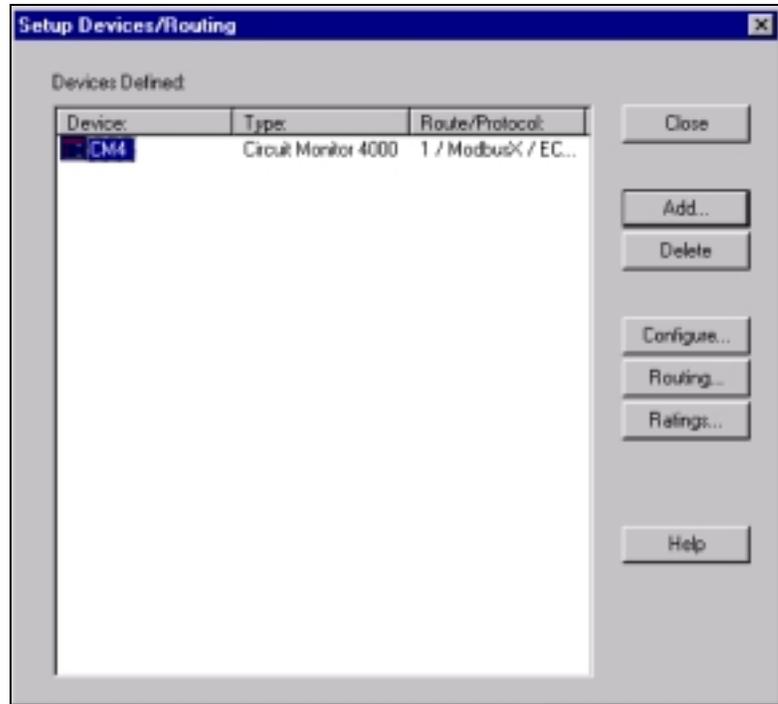


Figure 5-4: Setup Devices/Routing dialog box

2. Click Add to display the Add Device dialog box. Enter information as follows:
 - Device Name: Type a descriptive name for this device (32 characters maximum, no apostrophes), for example, *Main1 (Cube 1-A) CM4000*.
 - Device Type: Select the type of device you are adding.
 - Connection Name: Select the PC interface to which this device is connected.

NOTE: The Device Name and Connection Name you enter in this dialog box should match the names you have already assigned to the ECC and host circuit monitor.

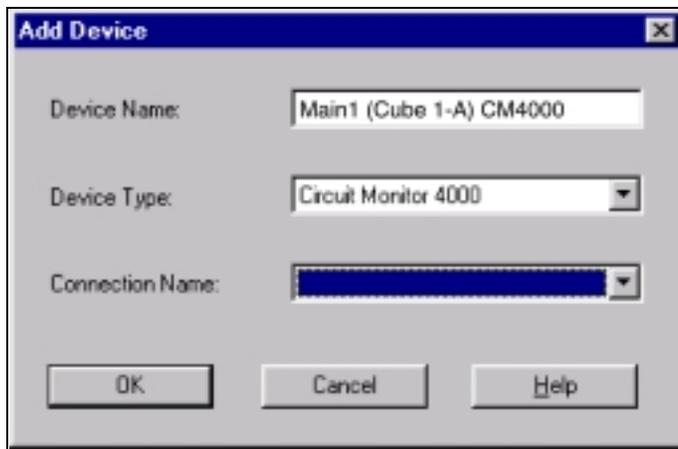


Figure 5-5: Add Device dialog box

3. Click OK and the MODBUS/TCP Device Route dialog box displays (Figure 5–6). Enter information as follows:
 - In the Comm Connection Name box, select the PC port to which this device connects. SMS defaults to the connection name chosen in the Add Device dialog box (figure 6-3).
 - In the Device Address box, select the device address entered for this particular device.
 - Select the protocol by which the device is to communicate:
 - POWERLOGIC—Choose this for any POWERLOGIC device not configured for MODBUS or JBUS.
 - MODBUS with POWERLOGIC Extensions or JBUS with POWERLOGIC Extensions—Choose this for a POWERLOGIC device configured to use MODBUS or JBUS.
 - MODBUS or JBUS—Choose this for any other MODBUS or JBUS device, or for a generic MODBUS/JBUS device type.



Figure 5–6: MODBUS/TCP Device Route dialog box

4. Click OK.
5. Repeat steps 1–4 for each additional device you add to the system or the RS-485 daisy chain.
6. Close the MODBUS/TCP Device Route dialog box.

SMS is now configured to go online with the system just created.

For more information about SMS, refer to the SMS instruction bulletins.

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