PC-200/PC-300 Energy Monitoring Power Conditioner & Controller

Supplemental Guide

Crestron Electronics, Inc.

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PC-200/PC-300: Energy Monitoring Power Conditioner & Controller

Introduction

The Crestron® PC-200 and PC-300 are eight-outlet power conditioners, controllers, and surge protectors that monitor energy usage and allow for networked outlet control in a single-space rack mount package.

The eight outlets on the rear of the PC-200 may be controlled and monitored via a web browser interface. The eight outlets on the rear of the PC-300 may be individually controlled and monitored via the built-in LCD display or a web browser interface.

NOTE: The PC-200 and PC-300 are functionally similar. For simplicity within this guide, the term "power conditioner" is used except where noted.

For more information on the PC-200 and PC-300, refer to the PC-200/PC-300 DO Guide (Doc. 7837) at www.crestron.com/manuals.

Configuration via Web Interface

The power conditioner may be monitored and configured using the included web configuration interface. The configuration interface is accessible from a web browser if the IP address of the power conditioner is known.

Web browser access enables full control over the features of the power conditioner, including settings for the username and password, the IP address, system settings, outlets, event logs, and TLS settings. This access does not allow for firmware updates.

NOTES:

- Use Crestron Toolbox™ software to access firmware updates and to modify the Ethernet settings and the IP table. Crestron Toolbox may also be used to connect the power conditioner to a control system, allowing the power conditioner to be controlled with a Crestron Studio® software program or a SIMPL Windows c program. For more information, refer to the Crestron Toolbox help file.
- Most pages in the PC-200 and PC-300 web configuration utilities are identical. Any differences are noted in the text.

Access the Configuration Interface

To access the web configuration interface:

1. Open a web browser.
2. Enter the power conditioner IP address into the browser URL field using an HTTPS URL scheme ("https://*xxx.xxx.xxx.xxx*").

   NOTES:

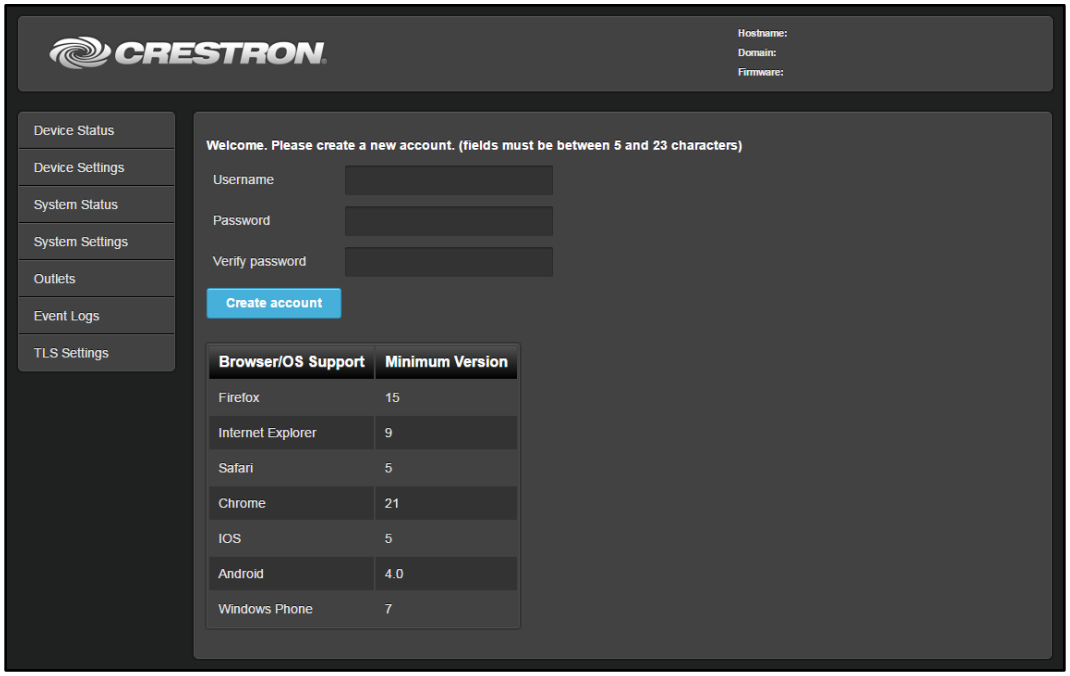
   - If the default web management port number of 443 has been changed, append the port number to the IP address by entering a colon followed by the new port number. If, for example, the IP address is 192.1.1.1 and the web management port number has been changed from 443 to 150, navigate to "https://192.1.1.1:150".
   - For 48 hours after a firmware upgrade, the browser cache must be cleared after each login to the web-based configuration utility. If the cache is not cleared, the browser may not display the login page. Refer to the release notes for more details.

   The configuration utility web server uses a self-signed certificate, which causes a browser warning to appear when the page loads.
3. Authorize the web server certificate using the certificate authorization process for the web browser.

Create a New Account

When the configuration interface is accessed for the first time, a page is displayed for creating a new account.

Create New Account Page



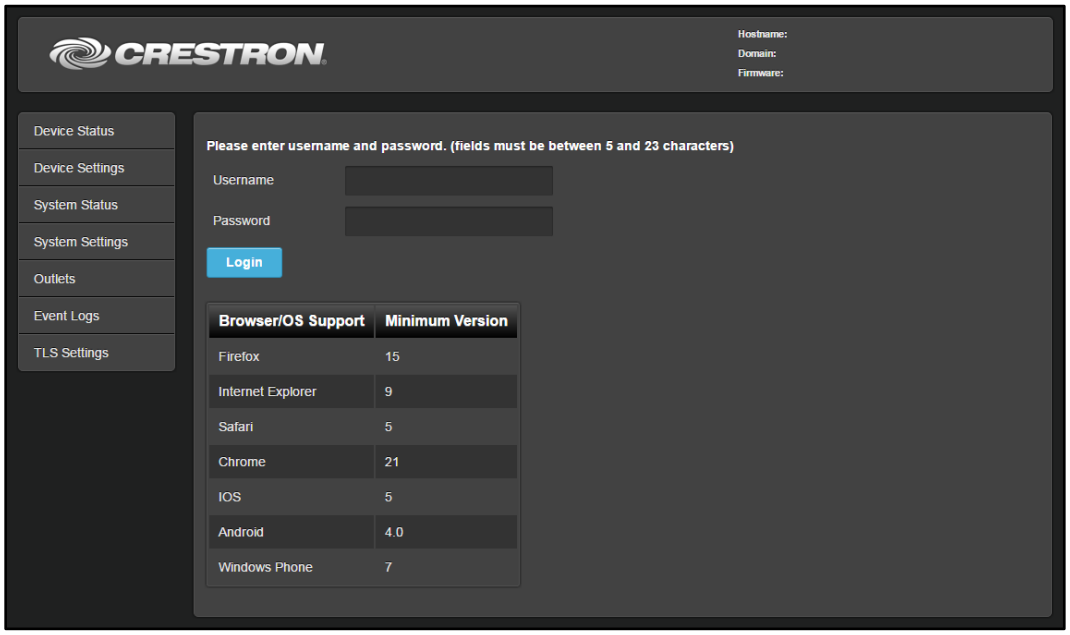
To create a new account:

1. Enter a username in the **Username** text field.
2. Enter a password in the **Password** text field. The password must be between 5 and 23 characters.
3. Reenter the password in the **Verify password** text field.
4. Click **Create account**.

NOTE: The username and password are case sensitive.

After the account is created, the Login page is displayed each time the configuration utility is accessed. Enter the account username and password to log in to the utility.

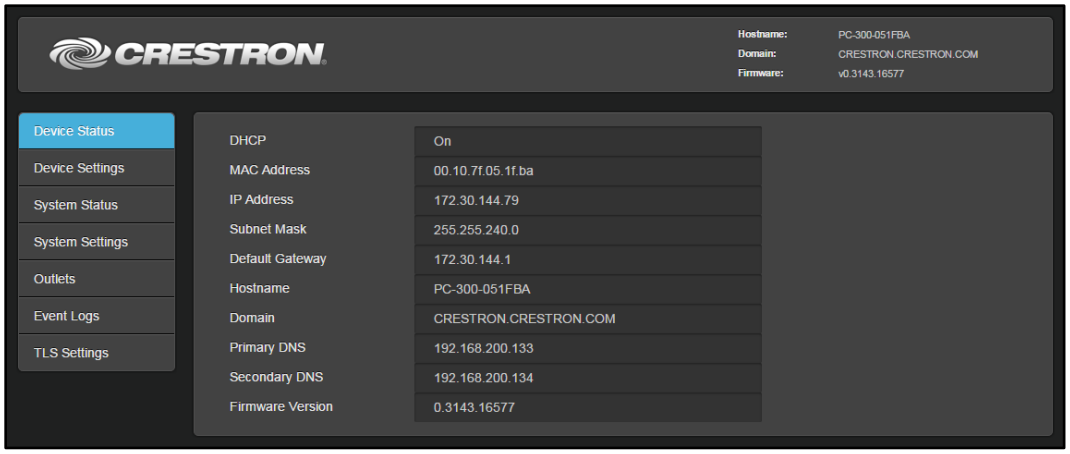
Login Page



NOTE: The Create New Account page and the Login page list the minimum versions of browsers and operating systems that are supported by the configuration interface. Ensure that the chosen web browser is supported prior to logging in.

Upon successful login, the Device Status page is displayed by default.

Device Status Page



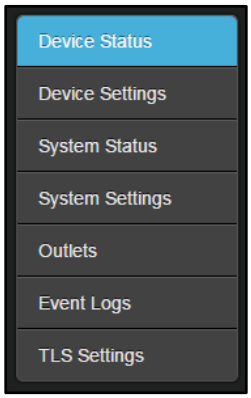
NOTE: Do not lose the username or password for the configuration interface account. If the username or password is lost, the power conditioner must be restored to factory settings to restore access.

Navigate the Configuration Interface

Use the navigation menu on the left side of the page to select the various configuration pages. The menu is always visible on the left side of the page, with the selected screen highlighted in blue.

The Device Status page is the default page that is displayed upon logging in.

Navigation Menu

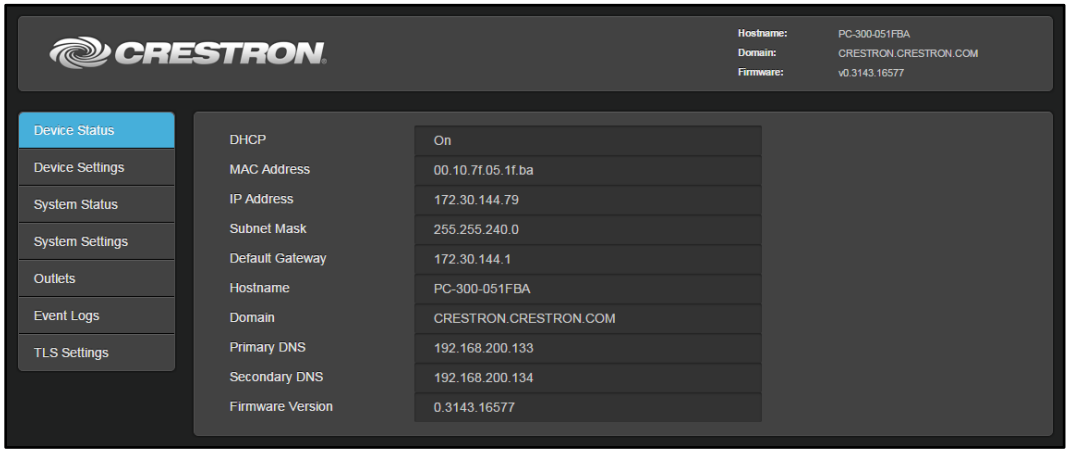


The device configuration pages are described in the section that follow.

Device Status

Click **Device Status** in the navigation menu to display the Device Status page.

Device Status Page



Use the Device Status page to view status information about the power conditioner. These settings are configured using the Device Settings page. For more information, refer to page 7.

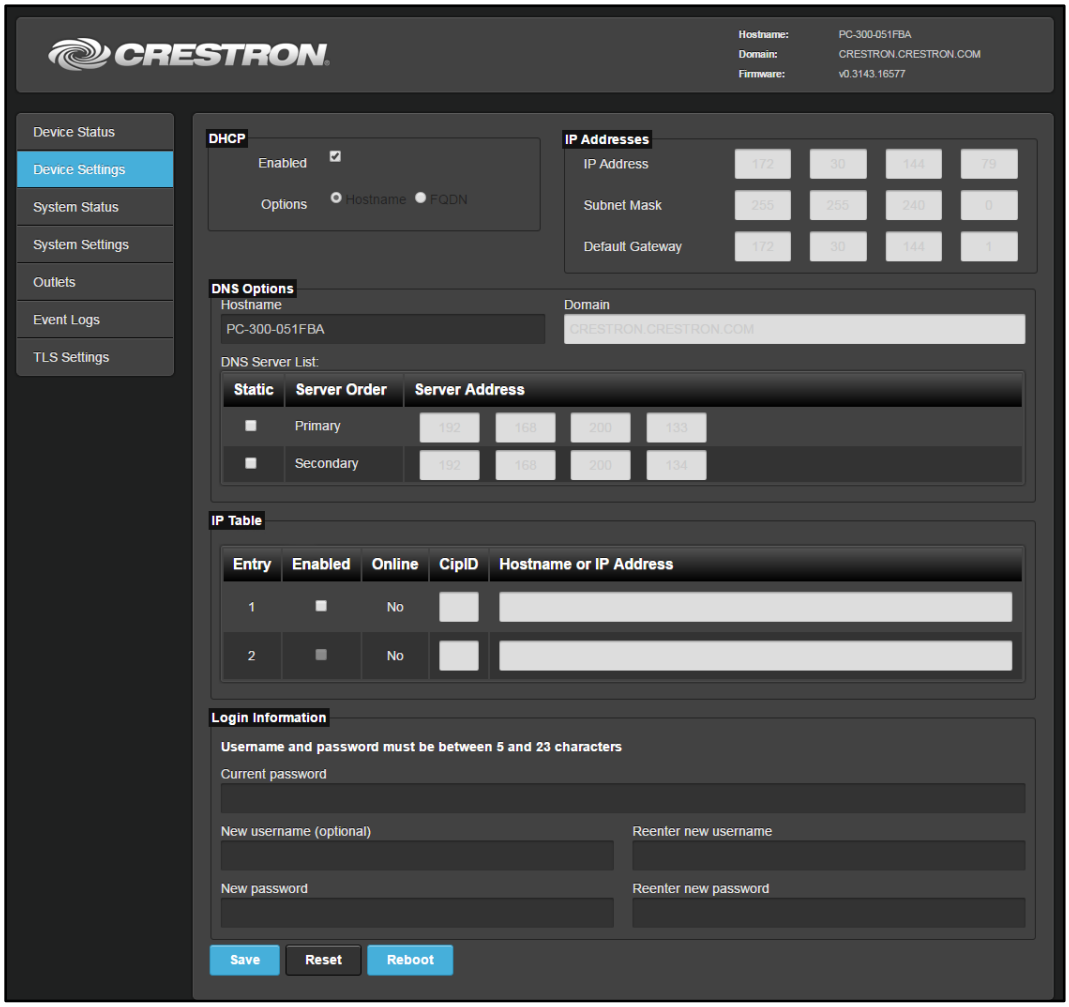
The following status information is provided:

- **DHCP:** Reports whether DHCP (dynamic host configuration protocol) is turned on or off
- **MAC Address:** The power conditioner MAC (media access control) address
- **IP Address:** The power conditioner IP address
- **Subnet Mask:** The power conditioner subnet mask address
- **Default Gateway:** The gateway router address
- **Hostname:** The power conditioner hostname
- **Domain:** The power conditioner domain name
- **Primary DNS:** The primary DNS (domain name server) address used to resolve the power conditioner domain to an IP address
- **Secondary DNS:** The secondary DNS address used to resolve the power conditioner domain to an IP address if the primary DNS fails
- **Firmware Version:** The firmware version running on the power conditioner

Device Settings

Click **Device Settings** in the navigation menu to display the Device Settings page.

Device Settings Page



Use the Device Settings page to make changes to the DHCP, IP address, DNS, IP table, and login information settings. The power conditioner may also be rebooted from this page.

The following controls are provided at the bottom of the Device Settings page:

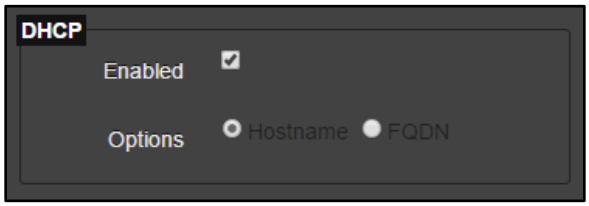
- Click **Save** to save any changes to the device settings.
- Click **Reset** to revert to the previously saved settings.
- Click **Reboot** to reboot the power conditioner.

NOTE: Some device settings, including IP addresses, DNS options, IP table, and login information, require the power conditioner to be rebooted before they take effect.

DHCP

Use the settings provided in the **DHCP** section to enable or disable using DHCP for the power conditioner.

Device Settings - DHCP



- **Enabled:** Click the check box to enable or disable DHCP. A filled check box indicates that DHCP is enabled.

  NOTE: If DHCP is enabled, IP does not function until a reply has been received from the server. The power conditioner periodically broadcasts requests for an IP address.

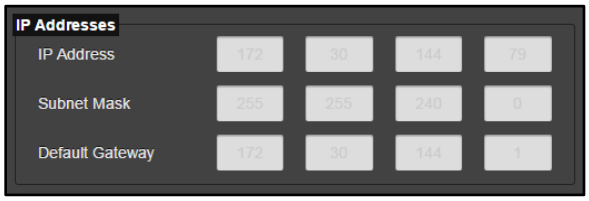
- **Options:** If DHCP is enabled, select the appropriate radio button to determine whether DHCP resolves to a **Hostname** or a **FQDN** (fully qualified domain name).

IP Addresses

Use the settings provided in the **IP Addresses** section to set the power conditioner IP address, subnet mask address, and default gateway address.

NOTE: If DHCP is enabled, the **IP Addresses** settings may not be changed manually.

Device Settings - IP Addresses



- **IP Address:** Enter an IP address for the power conditioner. Valid IP addresses consist of four octets, 0 to 255. The default address is "0.0.0.0".
- **Subnet Mask:** Enter a subnet mask address for the power conditioner. The default address is "255.255.255.0".
- **Default Gateway:** Enter a default gateway address for the gateway router. The default address is "0.0.0.0".

DNS Options

Use the settings provided in the **DNS Options** section to edit the power conditioner domain name and DNS addresses.

NOTE: The power conditioner hostname and domain name may be configured only by using the Text Console tool in Crestron Toolbox.

Device Settings - DNS Options

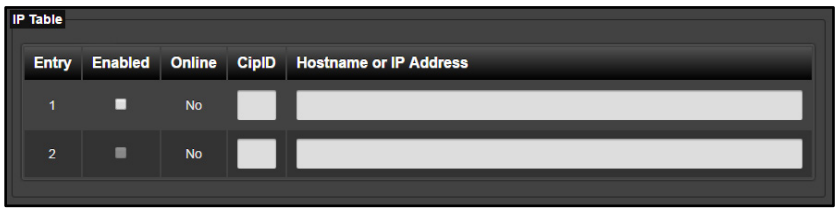
- **Hostname:** The power conditioner hostname
- **Domain:** The power conditioner domain name
- **DNS Server List:** Configure the power conditioner DNS addresses:
  - **Static:** Click the check box to enable or disable using static DNS addresses. A filled check box indicates that static DNS addresses are enabled.

    NOTE: If **Static** is enabled, DNS addresses must be entered manually. If **Static** is disabled, the power conditioner uses DNS addresses that are received via DHCP.
  - **Server Order:** Indicates whether the DNS address is primary or secondary
  - **Server Address:** Enter the DNS server address. The default address is "0.0.0.0".

IP Table

Use the settings provided in the **IP Table** section to edit the power conditioner IP table for connecting to a control system.

Device Settings - IP Table



- **Entry:** Indicates the IP table entry
- **Enabled:** Click the check box to enable or disable the IP table entry. A filled check box indicates that the IP table entry is enabled.

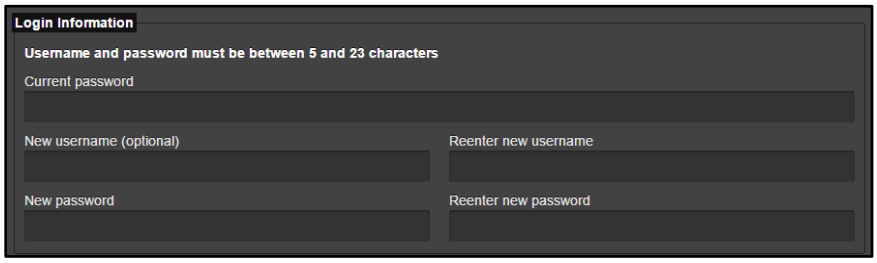
  NOTE: If the IP table entry is enabled, the power conditioner will attempt to make a connection over IP to the control system specified by the **CipID** and **Hostname or IP Address** fields.

- **Online:** Reports whether the control system connected via IP is online
- **CipID:** Enter a CIP (Crestron Internet Protocol ID for the control system in hexadecimal format. Valid values range from 0x03 to 0xFE.
- **Hostname or IP Address:** Enter a valid control system hostname or IP address.

Login Information

Use the settings provided in the **Login Information** section to change the username and password for the configuration utility account.

Device Settings - Login Information



- **Current password:** Enter the current password for the account to make any username or password changes.
- **New username (optional):** Enter a new account username (if desired).
- **Reenter new username:** Reenter the username entered in the **New username (optional)** text field.
- **New password:** Enter a new account password. The password must be between 5 and 23 characters long.
- **Reenter new password:** Reenter the password entered in the **New password** text field.

NOTE: The username and password are case sensitive.

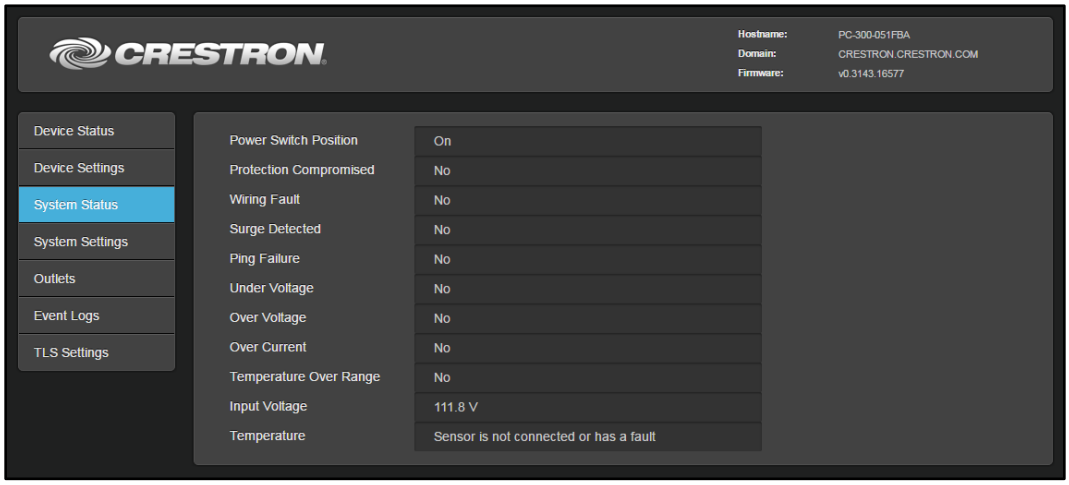
Click **Save** to save the new login credentials. The connection to the power conditioner is reset, and the power conditioner must be rebooted. Click **Reboot** to reboot the power conditioner, and then log in to the configuration utility using the new login credentials.

NOTE: Attempting to change any other device settings before rebooting the power conditioner with new login credentials results in an error message.

System Status

Click **System Status** in the navigation menu to display the System Status page.

System Status Page



Use the System Status page to view operational information about the power conditioner. These settings are configured using the System Settings page. For more information, refer to page 13.

For detailed operational notes regarding device limits, refer to "Appendix C: Device Limits Operational Notes" on page 47.

NOTE: The System Status page refreshes automatically every 10 seconds.

The following operational information is provided:

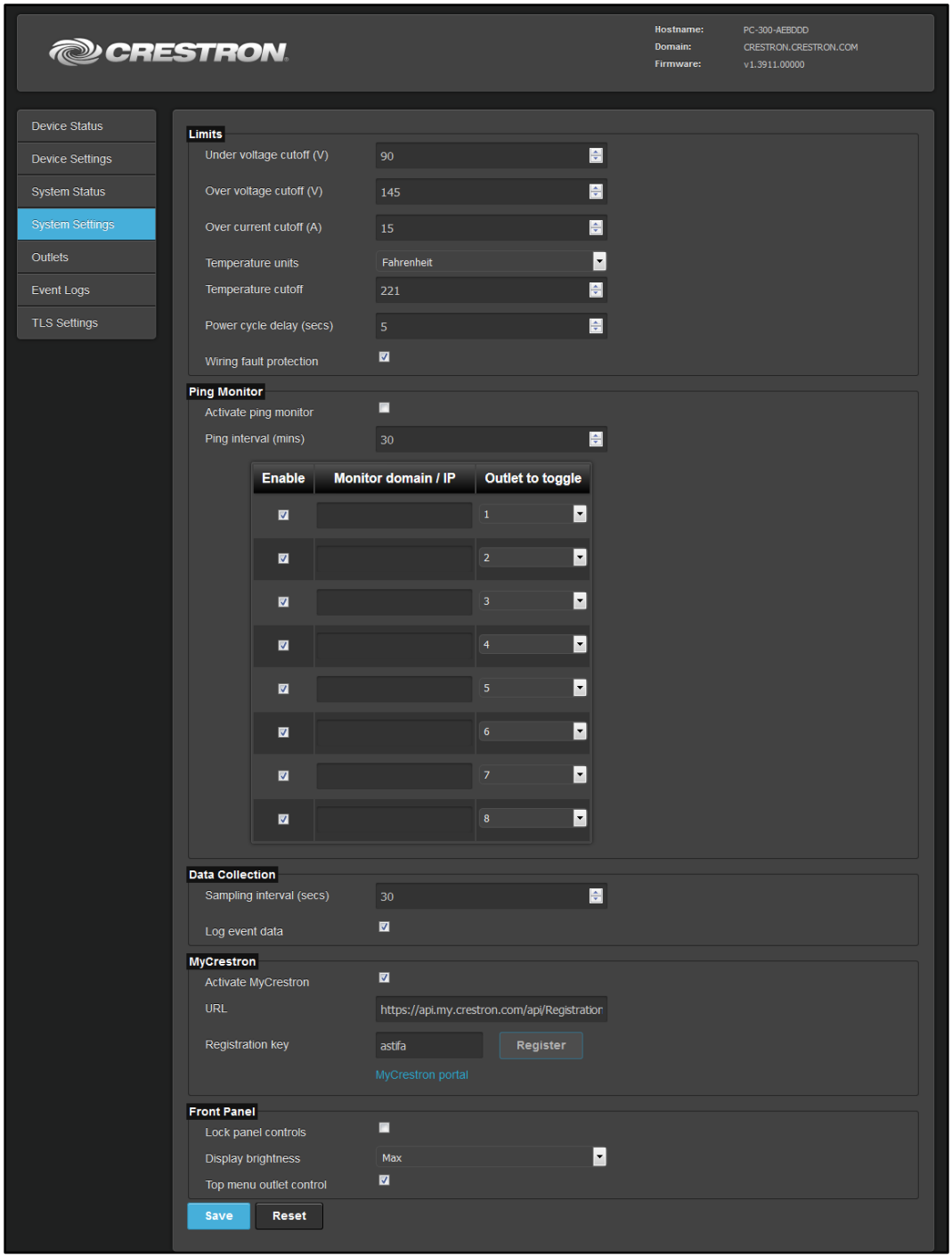
- **Power Switch Position:** Reports whether the power switch on the front panel of the device is set to on or off
- **Protection Compromised:** Reports whether the surge protection provided by the power conditioner has been compromised
- **Wiring Fault:** Reports whether there is a fault in the power conditioner wiring
- **Surge Detected:** Reports whether a power surge has been detected
- **Ping Failure:** Reports whether a ping monitor failure has occurred while attempting to ping a connected device
- **Under Voltage:** Reports whether the voltage level on the ac input has gone under the set limit
- **Over Voltage:** Reports whether the voltage level on the ac input has gone over the set limit
- **Over Current:** Reports whether the current level on the ac outputs has gone over the set limit

- **Temperature Over Range:** Reports whether the power conditioner temperature has gone over the set limit
- **Input Voltage:** Displays the current input voltage level
- **Temperature:** Displays the device temperature in Fahrenheit or Celsius.

System Settings

Click **System Settings** in the navigation menu to display the System Settings page. The System Settings page for a PC-300 is shown below.

System Settings Page (PC-300)



Use the System Settings page to make changes to the device limits, ping monitor settings, data collection settings, and front panel settings (PC-300 only). The System Settings page is also used to register the power conditioner with the MyCrestron Dynamic DNS service.

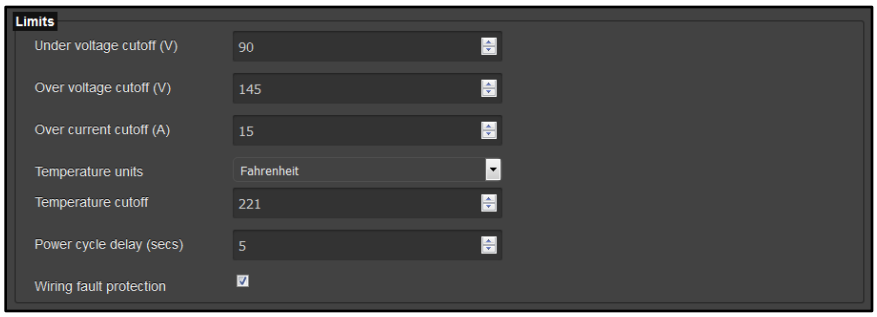
The following controls are provided at the bottom of the System Settings page:

- Click **Save** to save any changes to the device settings.
- Click **Reset** to revert to the previously saved settings.

Limits

Use the settings provided in the **Limits** section to set various system limits.

System Settings - Limits



- **Under voltage cutoff (V):** Enter the under voltage cutoff limit in volts. The power conditioner shuts off power to the ac outputs when the input voltage is detected to have gone under this value.
- **Over voltage cutoff (V):** Enter the over voltage cutoff limit in volts. The power conditioner shuts off power to the ac outputs when the input voltage is detected to have gone over this value.
- **Over current cutoff (A):** Enter the over current cutoff limit in amperes. The power conditioner shuts off if the combined amperes of the ac outputs are detected to have gone over this value.
- **Temperature units:** Use the drop-down menu to select whether the power conditioner temperature is reported in Fahrenheit or Celsius.
- **Temperature cutoff:** Enter the temperature cutoff limit in the selected temperature unit. The power conditioner shuts off if the temperature is detected to have gone over this value.
- **Power cycle delay (secs):** Enter the duration in seconds that power to an outlet cycles off before powering back on.
- **Wiring fault protection:** Click the check box to enable or disable wiring fault protection. A filled check box indicates that wiring fault protection is enabled.

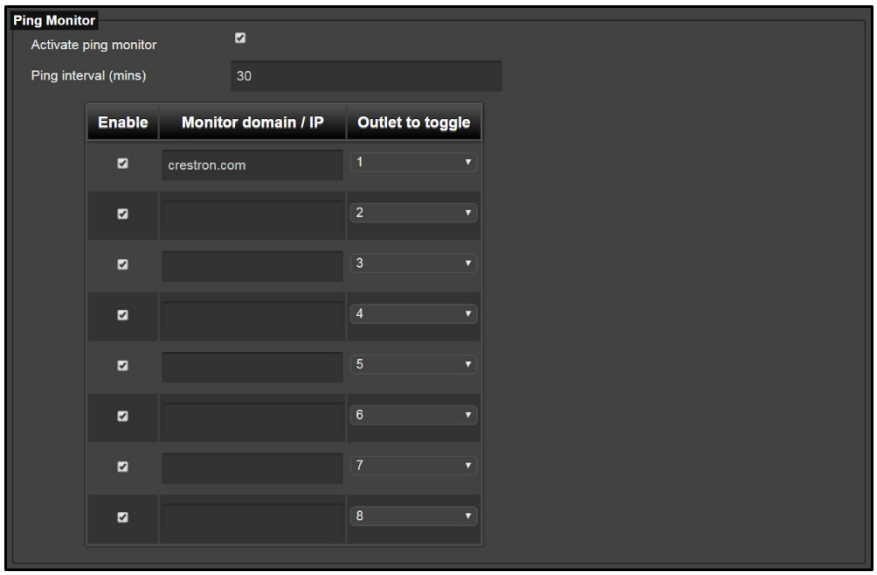
  NOTE: A warning message is displayed after wiring fault detection is disabled to alert the user of the risks. Accept the warning message to continue.

Ping Monitor

Use the settings provided in the **Ping Monitor** section to configure ping monitoring for the power conditioner. The **Ping Monitor** section for a PC-300 is shown below.

NOTE: For the PC-300, each of the eight rear outlets may be assigned to ping a different device hostname or IP address. For the PC-200, rear outlets 1–6 may be assigned to ping a different device hostname or IP address.

System Settings - Ping Monitor (PC-300)



When ping monitoring is activated, the power conditioner pings the device connected to the chosen outlet and waits for a response. Up to four ping attempts are made during each polling interval. If the device does not respond after four attempts, the power is cycled for the associated outlet, which forces a reboot of the device hardware that has locked up or become otherwise unresponsive.

NOTE: The ping monitor becomes temporarily inactive when the associated outlet is switched off manually.

- **Activate ping monitor:** Click the check box to enable or disable activating the ping monitor. A filled check box indicates that ping monitoring is activated.
- **Ping interval (mins):** Enter the polling interval between pings in minutes.
- **Enable:** Click the check box to enable or disable ping monitoring for the outlet selected in the **Outlet to toggle** column. A filled check box indicates that ping monitoring is enabled for the selected outlet.
- **Monitor domain / IP:** Enter the domain name or IP address of the device connected to the selected outlet.
- **Outlet to toggle:** Use the drop-down menu to select the rear outlet that will be used for ping monitoring.

Data Collection

Use the settings provided in the **Data Collection** section to configure data collecting settings for the power conditioner.

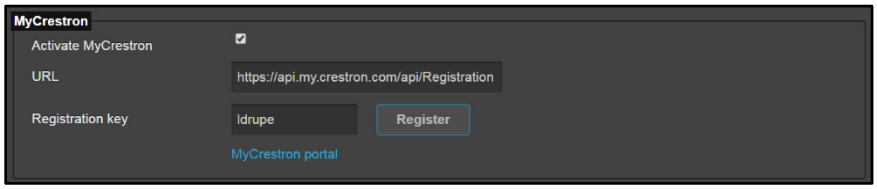
System Settings - Data Collection

- **Sampling interval (secs):** Enter a sampling interval between event log recordings in seconds
- **Log event data:** Click the check box to enable or disable logging event data for the power conditioner. A filled check box indicates that event logging is enabled. For more information, refer to "Event Logs" on page 21.

MyCrestron

Use the settings provided in the **MyCrestron** section to connect the power conditioner to the MyCrestron Dynamic DNS service.

System Settings - MyCrestron



- **Activate MyCrestron:** Click the check box to activate a connection between the power conditioner and the MyCrestron service. A filled check box indicates that the connection is activated.
- **URL:** The registration URL for registering the power conditioner with the MyCrestron service
- **Registration key:** A registration key for registering the power conditioner with the MyCrestron service
- **Register:** Click **Register** to generate a new registration key.
- **MyCrestron portal:** Opens the MyCrestron portal to complete the device registration process. For instructions on connecting to MyCrestron, refer to "Appendix B: Register the Device with MyCrestron" on page 44.

Front Panel (PC-300 Only)

Use the settings provided in the **Front Panel** section to configure the front panel settings for the PC-300.

System Settings - Front Panel

- **Lock panel controls:** Click the check box to lock or unlock the front panel controls, including the LCD display. A filled check box indicates that front panel controls are locked.
- **Display brightness:** Use the drop-down menu to select the brightness level of the LCD display (**Max**, **Dim**, or **Off**).
- **Top menu outlet control:** Click the check box to enable or disable adding the **Outlets** selection to the LCD display main menu. For more information, refer to page 35.

Outlets

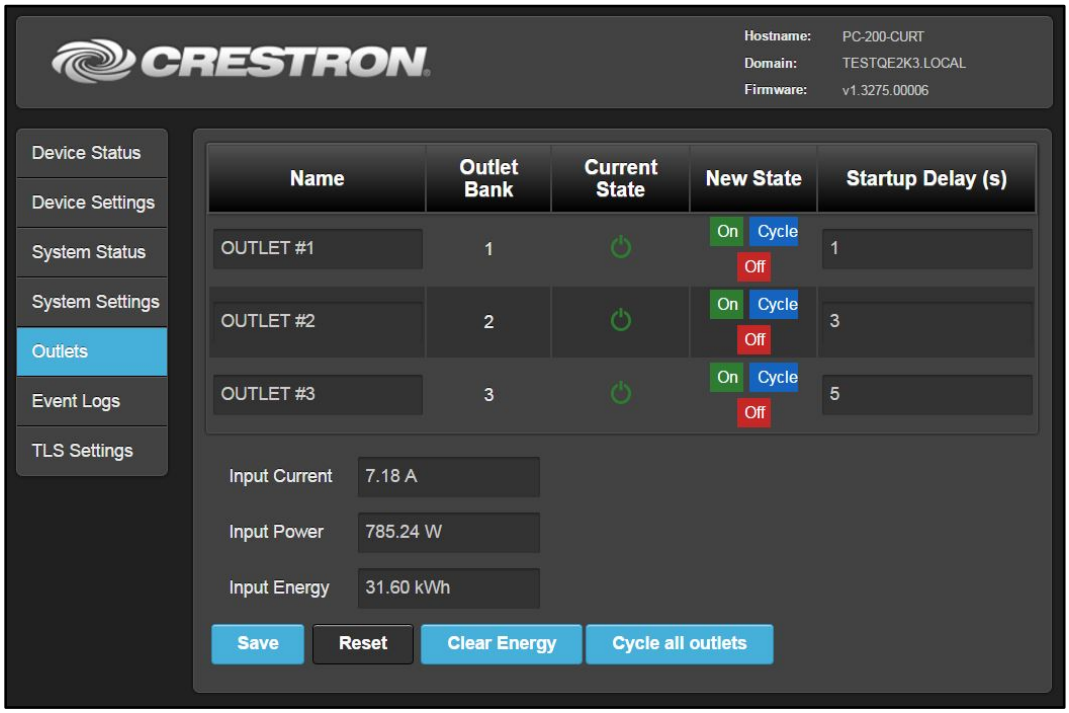
Click **Outlets** in the navigation menu to display the Outlets page. The Outlets page provides controls for naming, monitoring, and activating/deactivating power conditioner outlets.

The Outlets page differs between the PC-200 and PC-300. These differences are described in the following sections.

Outlets (PC-200)

The PC-200 **Outlets** page allows for grouped rear outlet control and monitoring per outlet bank. For an illustration showing the PC-200 outlet banks, refer to the PC-200/PC-300 DO Guide (Doc. 7837).

Outlets Page (PC-200)



The following controls are provided at the bottom of the Outlets page:

- Click **Save** to save any changes to the outlet settings.
- Click **Reset** to revert to the previously saved outlet settings.
- Click **Clear Energy** to clear the energy readings for all outlet banks.
- Click **Cycle all outlets** to cycle the power for all outlet banks:
  - The PC-200 powers off outlet banks for the duration set for the **Power cycle delay** setting in the System Settings page. Refer to page 14 or more information.
  - The PC-200 powers on outlet banks after the duration set for the associated **Startup Delay (s)** setting for each outlet bank.

The following information and controls are provided for each outlet bank:

NOTE: The front outlet is always powered on and may not be controlled from this page.

- **Name:** Enter a user-defined name for the outlet bank. There is a 15-character limit.
- **Outlet Bank:** The outlet bank number that corresponds with the outlet bank on the PC-200.
- **Current State:** Reports the power status of the selected outlet bank (A green power icon ⏻ displays if the outlet is powered on, while a red x icon ✕ displays if the outlet is powered off.)

- **New State:** Provides controls for altering the power state of the outlet bank:
  - Click **On** to power on the outlet bank.
  - Click **Cycle** to cycle power to the outlet bank. The PC-200 powers off the outlet bank for the duration set for the **Power cycle delay** setting in the System Settings page. Refer to page 14 for more information.
  - Click **Off** to power off the outlet bank.
- **Startup Delay (s):** Enter the duration in seconds to delay powering on the outlet bank after the PC-200 is powered on.

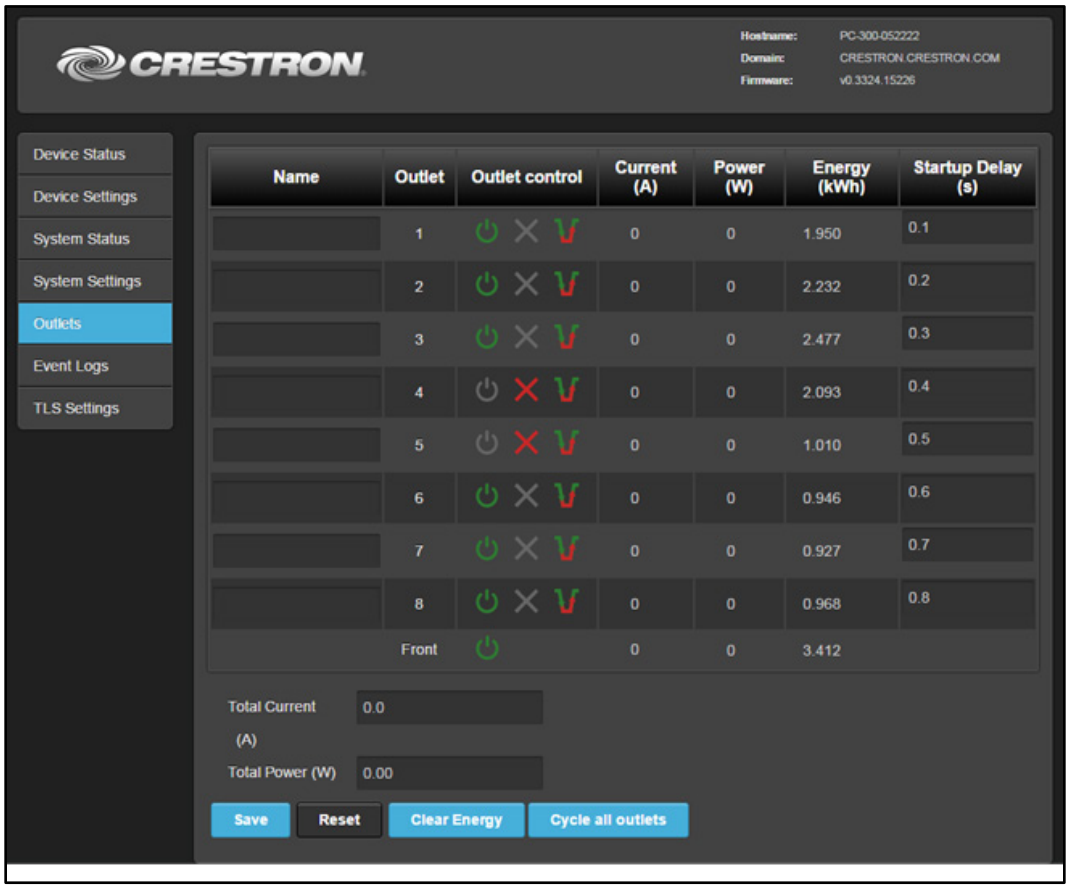
The following information is provided for all outlet banks:

- **Input Current:** Reports the combined current level in amperes of all outlet banks
- **Input Power:** Reports the combined power level in watts for all outlet banks
- **Input Energy:** Reports the combined energy level in kilowatt hours for all outlet banks

Outlets (PC-300)

The PC-300 **Outlets** page allows for individual rear outlet control and monitoring.

Outlets Page (PC-300)



The following controls are provided at the bottom of the Outlets page:

- Click **Save** to save any changes to the outlet settings.
- Click **Reset** to revert to the previously saved outlet settings.
- Click **Clear Energy** to clear the energy readings for all outlets.
- Click **Cycle all outlets** to cycle the power for all outlets
  - The PC-300 powers off outlets for the duration set for the **Power cycle delay** setting in the System Settings page. Refer to page 14 for more information.
  - The PC-200 powers on outlets after the duration set for the associated **Startup Delay (s)** setting for each outlet.

The following information and controls are provided for each outlet:

NOTE: The front outlet is always powered on and may not be controlled from this page.

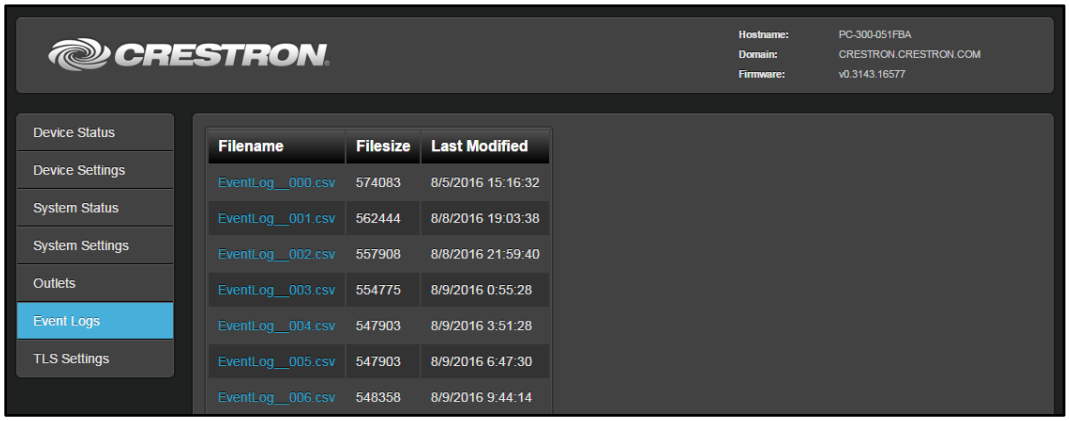
- **Name:** Enter a user-defined name for the outlet. There is a 15-character limit.
- **Outlet Bank:** The outlet number that corresponds with the outlet on the PC-300.
- **Current State:** Reports the power status of the selected outlet bank (A green power icon displays if the outlet is powered on, while a red x icon displays if the outlet is powered off.)

  The **Current State** icons are also used to alter the power state of the outlet:
  - Click the green power icon to power on the outlet.
  - Click the red x icon to power off the outlet.
  - Click the green and red cycle icon to cycle power to the outlet. The PC-300 powers off the outlet for the duration set for the **Power cycle delay** setting in the System Settings page. Refer to page 14 for more information.
- **Current (A):** Reports the current level in amperes of the outlet
- **Power (W):** Reports the power level in watts of the outlet
- **Energy (Wh):** Reports the energy level in kilowatt hours of the outlet
- **Startup Delay (s):** Enter the duration in seconds to delay powering on the outlet after the PC-300 is powered on.

Event Logs

Click **Event Logs** in the navigation menu to display the Event Logs page.

Event Logs Page



The Event Logs page is used to view and download the power conditioner event logs if event logging is activated. For more information on activating event logs, refer to page 16.

Event logs are recorded by the power conditioner at a set interval and are saved as .csv files. These files may be downloaded and viewed in a spreadsheet program.

The following information is provided for each event log entry:

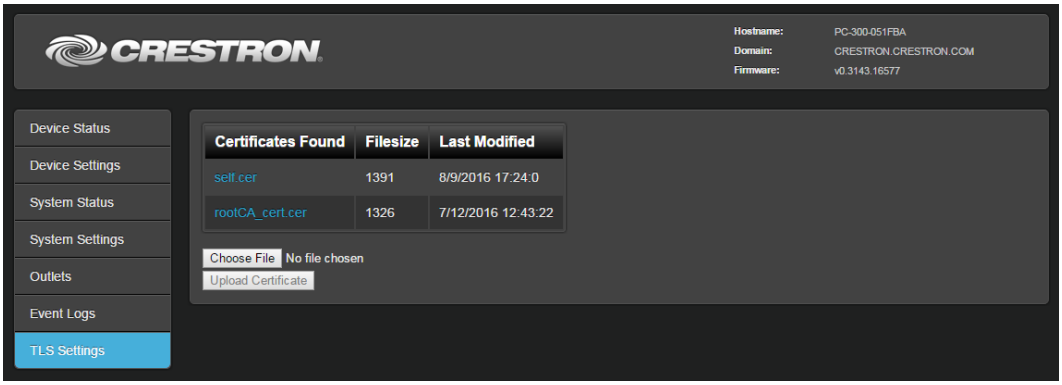
- **Filename:** The event log filename (Click the filename to download the .csv file to the host computer.)
- **Filesize:** The size of the event log file in bytes
- **Last Modified:** The date and time that the event log entry was last modified

NOTE: Event logs may be further customized by using the SIMPL Debugger tool in Crestron Toolbox. For more information, refer to the Crestron Toolbox help file.

TLS Settings

Click **TLS Settings** in the navigation menu to display the TLS Settings page.

TLS Settings Page



The TLS Settings page is used to view and load security certificates for the power conditioner.

To upload a new security certificate:

1. Click **Choose File**.
2. Select a security certificate file from the host computer.

   NOTE: The security certificate file must be in a valid TLS (Transport Layer Security) certificate file format (such as .cer).

3. Click **Upload Certificate**. The security certificate appears on the page after it is uploaded.

The following information is provided for each uploaded security certificate:

- **Certificates Found:** The security certificate filename (Click the filename to download the certificate file to the host computer.)
- **Filesize:** The size of the security certificate file in bytes
- **Last Modified:** The date and time that the security certificate was last modified

Configuration via LCD Display (PC-300)

The PC-300 settings may be configured using the LCD display and navigation pad on the front panel of the device.

To access the LCD display setup screens:

NOTE: Press up or down on the navigation pad to highlight a menu selection, then press the center button on the navigation pad to make the selection. Press **HOME** at any time to return to **PC-300** screen. Press **BACK** at any time to return to the previous screen.

1. Power on the PC-300. The **PC-300** screen is displayed.

   PC-300 Screen

2. Select **Setup**. The **PassCode** screen is displayed.

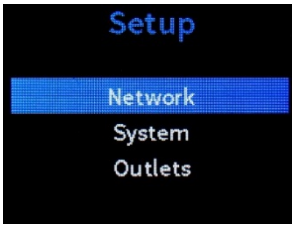
   PassCode Screen

3. Press the center button on the navigation pad to enter the default passcode ("0000") if one has not yet been created, or use the navigation pad to enter an existing passcode.

   NOTE: For increased security, creating a new passcode is strongly recommended. Navigate to **Setup** > **System** > **Passcode** to create a new passcode. For more information, refer to page 36.

The main **Setup** screen is displayed following a successful passcode entry.

Setup Screen



Use the **Setup** screen to configure various settings for the PC-300. The **Setup** screen is divided into the following three selections:

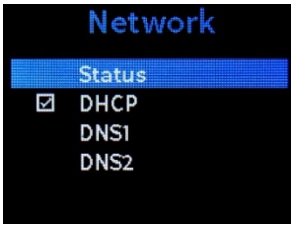
- **Network:** Provides network configuration settings
- **System:** Provides various system settings
- **Outlets:** Provides controls for adjusting the rear outlet settings

Each selection is described in the sections that follow.

Network

Select **Network** from the **Setup** screen to display the **Network** screen.

Network Screen



The **Network** screen provides selections to configure general network settings and DNS server settings. This screen also provides a selection for viewing the network status.

Press **BACK** to return to the **Setup** screen.

Network Status

Select **Status** from the **Network** screen to display the **Network Status** screen.

Network Status Screen

The **Network Status** screen provides basic and advanced connection information about the PC-300 on the network.

Press **BACK** to return to the **Network** screen.

Basic

Select **Basic** from the **Network Status** screen to display the **Basic** screen.

Basic Screen

The following basic network information is provided:

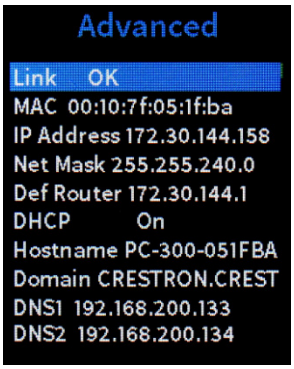
- **Link:** Reports whether the PC-300 is connected to a network
- **IP Address:** The PC-300 IP address

Press **BACK** to return to the Network Status screen.

Advanced

Select **Advanced** from the **Network Status** screen to display the **Advanced** screen.

Advanced Screen



The following advanced network information is provided:

- **Link:** Reports whether the PC-300 is connected to a network
- **MAC:** The PC-300 MAC address
- **IP Address:** The PC-300 IP address
- **Net Mask:** The PC-300 subnet mask address
- **Def Router:** The gateway router address
- **DHCP:** Reports whether DHCP is on or off
- **Hostname:** The PC-300 hostname
- **Domain:** The PC-300 domain name
- **DNS1: T**he primary DNS (domain name server) address used to resolve the PC-300 domain to an IP address
- **DNS2:** The secondary DNS address used to resolve the PC-300 domain to an IP address if the primary DNS fails

Press **BACK** to return to the **Network Status** screen.

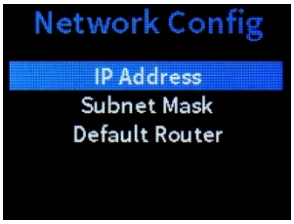
DHCP/Network Config

Select **DHCP** from the **Network** screen to toggle turning DHCP on or off. A check box is shown next to the **DHCP** selection if DHCP is turned on.

NOTE: If DHCP is enabled, IP does not function until a reply has been received from the server. The power conditioner broadcasts requests for an IP address periodically.

If **DHCP** is selected after being turned off, the **Network Config** screen is displayed.

Network Config Screen



The **Network Config** screen provides selections for configuring the PC-300 IP address, subnet mask address, and default router address when DHCP is disabled.

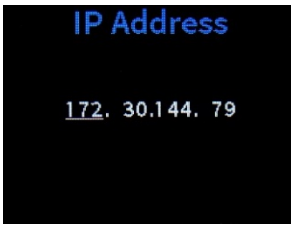
NOTE: The PC-300 hostname and domain name may be configured only by using the Text Console tool in Crestron Toolbox.

Press **BACK** to return to the **Network** screen.

IP Address

Select **IP Address** from the **Network Config** screen to display the **IP Address** screen.

IP Address Screen



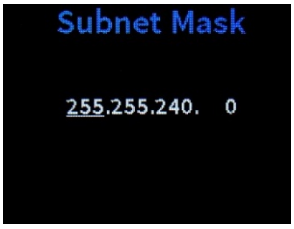
Use the **IP Address** screen to enter an IP address for the PC-300.

- Press up or down on the navigation pad to set the IP address octets.
- Press left or right on the navigation pad to move the cursor between octets.
- Press the center button on the navigation pad to save the new IP address and to return to the **Network Config** screen.
- Press **BACK** to cancel and to return to the **Network Config** screen.

Subnet Mask

Select **Subnet Mask** from the **Network Config** screen to display the **Subnet Mask** screen.

Subnet Mask Screen



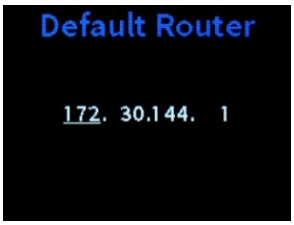
Use the **Subnet Mask** screen to enter a subnet mask address for the PC-300.

- Press up or down on the navigation pad to set the subnet mask address octets.
- Press left or right on the navigation pad to move the cursor between octets.
- Press the center button on the navigation pad to save the new subnet mask address and to return to the **Network Config** screen.
- Press **BACK** to cancel and to return to the **Network Config** screen.

Default Gateway

Select **Default Gateway** from the **Network Config** screen to display the **Default Gateway** screen.

Default Router Screen



Use the **Default Gateway** screen to enter an IP address for the gateway router that connects the PC-300 to the network.

- Press up or down on the navigation pad to set the gateway IP address octets.
- Press left or right on the navigation pad to move the cursor between octets.
- Press the center button on the navigation pad to save the new gateway IP address and to return to the **Network Config** screen.
- Press **BACK** to cancel and to return to the **Network Config** screen.

DNS 1

Select **DNS 1** from the **Network** screen to display the **DNS 1** screen.

DNS 1 Screen

Use the **DNS 1** screen to enter a primary DNS address for the touch screen.

- Press up or down on the navigation pad to set the DNS address octets.
- Press left or right on the navigation pad to move the cursor between octets.
- Press the center button on the navigation pad to save the new DNS address and to return to the **Network Config** screen.
- Press **BACK** to cancel and to return to the **Network Config** screen.

DNS 2

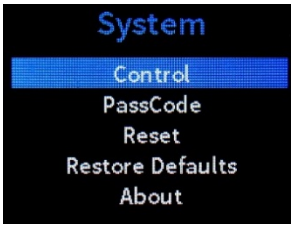
Select **DNS 2** from the **Network** screen to display the **DNS 2** screen.

Use the **DNS 2** screen to enter a secondary DNS address for the touch screen. The **DNS 2** screen and controls are similar to the **DNS 1** screen.

System

Select **System** from the **Setup** screen to display the **System** screen.

System Screen

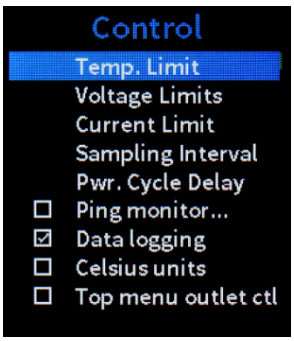


The **System** screen provides selections for configuring the system settings. The **System** screen also may be used to set a new passcode, to reset the PC-300, to restore all settings to their default factory values, and to view device information.

Control

Select **Control** from the **System** screen to display the **Control** screen.

Control Screen



The **Control** screen provides selections for configuring various system settings, including device limits, event log intervals, power cycle delay, ping monitoring, data logging, and LCD display outlet control.

Temperature High Limit

Select **Temp. Limit** from the **Control** screen to display the **Temperature High Limit** screen.

Temperature High Limit Screen

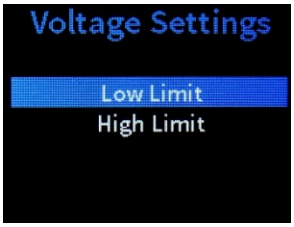
Use the **Temperature High Limit** to set a temperature cutoff limit in the selected temperature unit. The PC-300 shuts off if the temperature is detected to have gone over this value.

- Press the up and down buttons on the navigation pad to select the temperature cutoff value.
- Press the center button on the navigation pad to save the new temperature cutoff and to return to the **Control** screen.
- Press **BACK** to cancel and to return to the **Control** screen.

Voltage Settings

Select **Voltage Limit** from the **Control** screen to display the **Voltage Settings** screen.

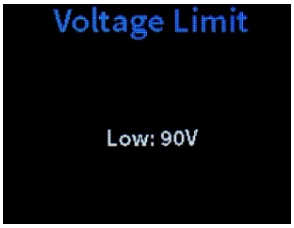
Voltage Settings Screen



The **Voltage Settings** screen provides selections for setting the under voltage (**Low Limit**) and over voltage (**High Limit**) cutoff limits in volts for the PC-300. The PC-300 shuts off power to the ac outputs when the ac input is detected to have gone over or under the set values.

The **Voltage Limit** screen for the **Low Limit** selection is shown below.

Voltage Limit Screen



- Press the up and down buttons on the navigation pad to select the voltage cutoff value.
- Press the center button on the navigation pad to save the new voltage cutoff and to return to the **Control** screen.
- Press **BACK** to cancel and to return to the **Control** screen.

Current Limit

Select **Current Limit** from the **Control** screen to display the **Current Limit** screen.

Current Limit Screen

Use the **Current Limit** screen to set the current limits in amperes for the PC-300. The PC-300 shuts off if the combined amperes of the ac outputs are detected to have gone over this value.

- Press the up and down buttons on the navigation pad to select the current cutoff value.
- Press the center button on the navigation pad to save the new current cutoff and to return to the **Control** screen.
- Press **BACK** to cancel and to return to the **Control** screen.

Sampling Interval

Select **Sampling Interval** from the **Control** screen to display the **Sampling Interval** screen.

Sampling Interval Screen

Use the **Sampling Interval** screen to set the sampling interval between event log recordings.

NOTE: The **Data logging** option must be selected on the **Control** screen to record event logs at the set interval.

- Press the left and right buttons on the navigation pad to select between minutes and seconds.
- Press the up and down buttons on the navigation pad to select a sampling interval, set in 5-second increments. The minimum is 5 seconds.
- Press the center button on the navigation pad to save the new sampling interval and to return to the **Control** screen.
- Press **BACK** to cancel and to return to the **Control** screen.

Power Cycle Delay

Select **Pwr. Cycle Delay** from the **Control** screen to display the **Power Cycle Delay** screen.

Power Cycle Delay Screen

Use the **Power Cycle Delay** screen to set the duration that power to an outlet cycles off before powering back on.

- Press the left and right buttons on the navigation pad to select between minutes and seconds.
- Press the up and down buttons on the navigation pad to select a delay time, set in 5-second increments. The minimum is 5 seconds.
- Press the center button on the navigation pad to save the new delay time and to return to the **Control** screen.
- Press **BACK** to cancel and to return to the **Control** screen.

Ping monitor/Ping Settings

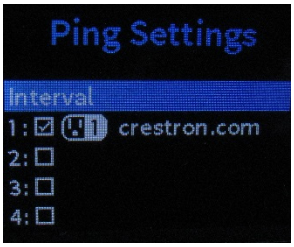
Select **Ping monitor** from the **Control** screen to toggle turning ping monitoring on or off. A check box is shown next to the **Ping monitor** selection if ping monitoring is turned on.

When ping monitoring is activated, the power conditioner pings the device connected to the chosen outlet and waits for a response. Up to four ping attempts are made during each polling interval. If the device does not respond after four attempts, the power is cycled for the associated outlet, which forces a reboot of the device hardware that has locked up or become otherwise unresponsive.

NOTE: The ping monitor becomes temporarily inactive when the associated outlet is switched off manually.

If **Ping monitor** is selected after being turned off, the **Ping Settings** screen is displayed.

Ping Settings Screen



Use the following settings to configure ping monitoring for the PC-300.

Press **BACK** to return to the **Control** screen.

Ping Interval

Select **Interval** from the **Ping Settings** screen to display the **Ping Interval** screen.

Ping Interval Screen

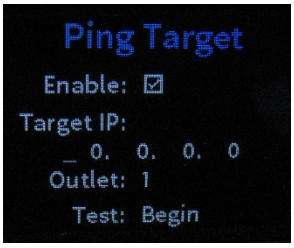
Use the **Ping Interval** screen to set the polling interval between pings.

- Press the left and right buttons on the navigation pad to select between hours and minutes.
- Press the up and down buttons on the navigation pad to select a polling interval, set in 5-minute increments. The minimum is 5 minutes.
- Press the center button on the navigation pad to save the new polling interval and to return to the **Ping Settings** screen.
- Press **BACK** to cancel and to return to the **Ping Settings** screen.

Ping Target

Select an outlet from the **Ping Settings** screen to display the **Ping Target** screen for the outlet.

Ping Target Screen (Outlet 1)



Use the **Ping Target** screen to configure the ping monitoring settings for the selected outlet.

- **Enable:** Press the center button on the navigation pad to toggle enabling or disabling ping monitoring for the outlet. If ping monitoring is enabled, a check mark is shown next to the outlet on the **Ping Settings** screen.
- **Target IP:** Use the navigation pad to the set IP address of the device connected to the outlet
  - Press up or down on the navigation pad to set the octets of the IP address.
  - Press left or right on the navigation pad to move the cursor between octets.
- **Outlet:** Press up or down on the navigation pad to change the outlet.
- **Test:** Press the center button on the navigation pad to test the ping monitor. A success message is displayed if the ping monitor connects to the device IP address, and a failure message is displayed if the ping monitor fails to connect to the device IP address.

Press **BACK** to return to the **Ping Settings** screen.

Data logging

Select **Data logging** from the **Control** screen to toggle turning data logging on or off. A check box is shown next to the **Data logging** selection if data logging is turned on.

Event logs are recorded by the power conditioner at a set interval and are saved as .csv files. These files may be downloaded from the web configuration interface and viewed in a spreadsheet program.

Celsius units

Select **Celsius units** from the **Control** screen to toggle between displaying the PC-300 temperature in Fahrenheit or Celsius. A check box is shown next to the **Celsius Units** selection if Celsius is selected. No check box is shown if Fahrenheit is selected.

Top menu outlet ctl

Select **Top menu outlet ctl** from the **Control** screen to enable or disable adding the **Outlets** selection to the LCD display main menu. A check box is shown next to the **Top menu outlet ctl** selection if this option is enabled.

For more information on outlet control via the LCD display, refer to page 38.

PassCode

Select **PassCode** from the **System** screen to display the **PassCode** screen.

PassCode Screen

Use the **PassCode** screen to create a new four-digit passcode for accessing the LCD display setup screens.

- Use the left and right buttons on the navigation pad to move between digits.
- Use the up and down characters on the navigation pad to select a digit.
- Press the center button on the navigation to enter the new passcode.
- Press **BACK** to cancel and to return to the **System** screen.

After entering a new passcode, a **Confirm Passcode** screen is displayed.

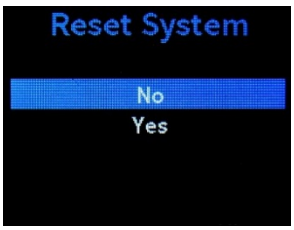
Confirm PassCode Screen

- Reenter the password created on the **PassCode** screen, then press the center button on the navigation pad to save the passcode.
- Press **BACK** to return to the **PassCode** screen.

Reset System

Select **Reset** from the **System** screen to display the **Reset System** screen.

Reset System Screen



Use the **Reset System** screen to reset the PC-300 to its factory default settings.

- Select **Yes** to reset the system. An **Are You Sure?** screen is displayed. Select **Yes** again to confirm the reset or select **No** to cancel.

  CAUTION: After a factory reset, all device, system, and outlet settings are also reset. The device firmware is restored to its factory version.

- Select **No** or press the **BACK** button to return to the **System** screen.

Restore Defaults

Select **Restore Defaults** from the **System** screen to display the **Restore Defaults** screen.

Restore Defaults Screen

Use the **Restore Defaults** screen to reset the PC-300 settings to their default values.

- Select **Yes** to restore default settings. An **Are You Sure?** screen is displayed. Select **Yes** again to confirm the restore or select **No** to cancel.
- Select **No** or press the **BACK** button to return to the **System** screen.

About

Select **About** from the **System** screen to display the **About** screen.

About Screen

The **About** screen displays the current device firmware version and the panel version.

Outlets

Select **Outlets** from the **Setup** screen to display the **Outlets** screen.

Outlets Screen

NOTE: If the **Top menu outlet ctl** setting is enabled, this menu option will also be available from the LCD display main menu, and accessing this option will not require entering a password.

Outlet Power

Select **Switch On/Off** from the **Outlets** screen to display the **Outlet Power** screen.

Outlet Power Screen

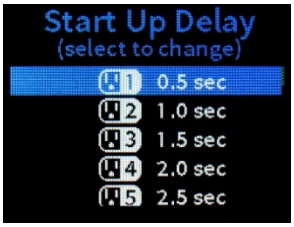
The **Outlet Power** screen is used to power the PC-300 rear outlets on or off.

- Use the up and down arrows on the navigation pad to select an outlet.
- Press the center button to toggle the power to the selected outlet. A power symbol indicates that the outlet is powered on, while an empty check box indicates that the outlet is powered off.
- Select **All Off** to power all outlets off at once. If all outlets are powered off, select **All On** to power all outlets on at once.
- Press **BACK** to return to the **Outlets** screen.

Start Up Delay

Select **Delay** from the **Outlets** screen to display the **Start Up Delay** screen.

Start Up Delay Screen



The **Start Up Delay** screen is used to adjust the start up delay time for the rear outlets. After the PC-300 is powered on, the rear outlets power on after their start up delay times elapse.

Select an outlet from the **Start Up Delay** screen to display a screen for editing the start up delay time for the outlet.

Start Up Delay Screen (Outlet 1)

- Use the left and right buttons on the navigation pad to move between digits.
- Use the up and down characters on the navigation pad to select the start up delay time in seconds.
- Press the center button on the navigation pad to enter the new start up delay time.
- Press **BACK** to cancel and to return to the **System** screen.

Monitoring via the LCD Display (PC-300)

The PC-300 LCD display also provides controls to monitor the device and outlet status. A passcode is not required to access these screens.

To access the monitoring screens from the LCD display:

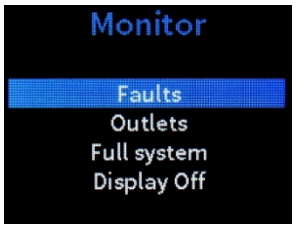
NOTE: Press up or down on the navigation pad to highlight a menu selection, then press the center button on the navigation pad to make the selection. Press **HOME** at any time to return to **PC-300** screen. Press **BACK** at any time to return to the previous screen.

1. Power on the PC-300. The **PC-300** screen is displayed.

   PC-300 Screen

2. Select **Monitor**. The **Monitor** screen is displayed.

   Monitor Screen

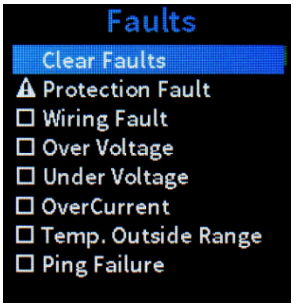
   

Use the **Monitor** screen to monitor device faults, outlet data, and system sensor readings. The LCD display may also be turned on or off by selecting **Display On/Off.**

Faults

Select **Faults** from the **Monitor** screen to display the **Faults** screen.

Faults Screen



Use the **Faults** screen to determine whether any device faults have been tripped. A caution symbol ⚠ is displayed next to a device fault if it has been tripped.

For more information on customizing device fault ranges via the LCD display, refer to page 30.

For detailed operational notes regarding device limits, refer to "Appendix C: Device Limits Operational Notes" on page 47.

The following device faults are shown:

- **Protection Fault:** Reports whether the surge protection provided by the PC-300 has been compromised
- **Wiring Fault:** Reports whether there is a fault in the power conditioner wiring
- **Over Voltage:** Reports whether the voltage level on the ac input has gone over the set limit
- **Under Voltage:** Reports whether the voltage level on the ac input has gone under the set limit
- **OverCurrent:** Reports whether the current level on the ac outputs has gone over the set limit
- **Temp. Outside Range:** Reports whether the power conditioner temperature has gone over the set limit
- **Ping Failure:** Reports whether a ping monitor failure has occurred while attempting to ping a connected device

Select **Clear Faults** to reset any fault sensors that have been tripped. An **Are You Sure?** screen is displayed. Select **Yes** to reset the fault sensors or **Cancel** to cancel.

Press **BACK** to return to the **Monitor** screen.

Outlets (Monitoring)

Select **Outlets** from the **Monitor** screen to display a screen for monitoring the rear outlets.

Outlet Monitoring Screen (Outlet 5)

Use the left and right buttons on the navigation pad to navigate between the eight outlets. The number of the selected outlet is displayed on the top of the screen.

The following information is displayed for each outlet:

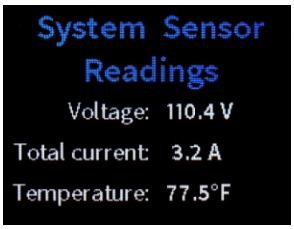
- **Current (A):** Displays the current level of the selected outlet in amperes
- **Power (W):** Displays the power level of the selected outlet in watts
- **Energy (Wh):** Displays the energy level of the selected outlet in kilowatt hours
- **Name:** Displays the user-defined name of the outlet, which may be set using the web configuration utility (For more information, refer to page 17.)

Press **BACK** to return to the **Monitor** screen.

System Sensor Readings

Select **Full System** from the **Monitor** screen to display the **System Sensor Readings** screen.

System Sensor Readings Screen



The **System Sensor Readings** screen displays the following information:

- **Voltage:** Displays the input voltage level in volts
- **Total current:** Displays the combined current level of all outlets in amperes
- **Temperature:** Displays the device temperature in the chosen temperature unit

Press **BACK** to return to the **Monitor** screen.

Appendix A: Restore the Device to Factory Defaults

If power conditioner must be restored to its factory default settings, the front panel buttons may be used to initiate the restore.

The front panel button sequences for restoring the PC-200 and PC-300 are provided below.

CAUTION: After a factory reset, all device, system, and outlet settings are also reset. The device firmware is restored to its factory version.

- **PC-200:** Rapidly press the **Setup** button five times (less than 300ms between each press).
- **PC-300**: Press the navigation buttons in the following sequence: Up, Right, Down, Left, Up, Select, Up, Right, Down, Left, Up, Select. Then, confirm the restore on the LCD display using the navigation pad.

  NOTE: Device restore may also be initiated on the PC-300 using the front panel LCD display. For more information, refer to page 36.

The power conditioner file system is not affected by a system restore, so any security certificates loaded onto the power conditioner are not deleted. However, SSL (Secure Sockets Layer) is disabled on the power conditioner after a restore.

To enable SSL after a restore:

1. Open the Text Console tool in Crestron Toolbox.
2. Issue one of the following commands:
   - Issue the `ssl self -r` command if the original key and self-signed certificate will be used.
   - Issue the `ssl ca` command along with the password used to encrypt the private key (if applicable) if a CA-signed certificate will be used.

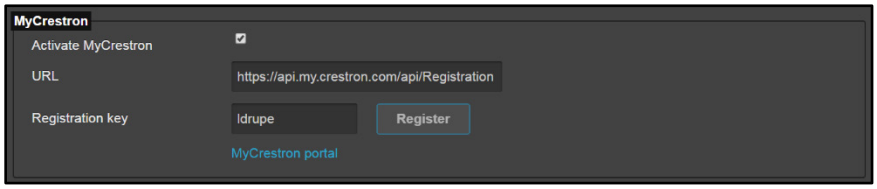
Appendix B: Register the Device with MyCrestron

The PC-200 and PC-300 may be used as remote power solutions via the MyCrestron Dynamic DNS service. Once the power conditioner has been registered with a MyCrestron account, the power conditioner may be controlled and monitored from a mobile device directly through the MyCrestron portal.

To register the power conditioner with a MyCrestron account:

1. Log in to the web configuration utility using the procedures described in "Access the Configuration Interface" on page 2.
2. Select **Device Status** from the navigation menu.
3. Copy or note the device MAC address that is displayed.
4. Select **System Settings** from the navigation menu and scroll to the **MyCrestron** section.

   System Settings - MyCrestron

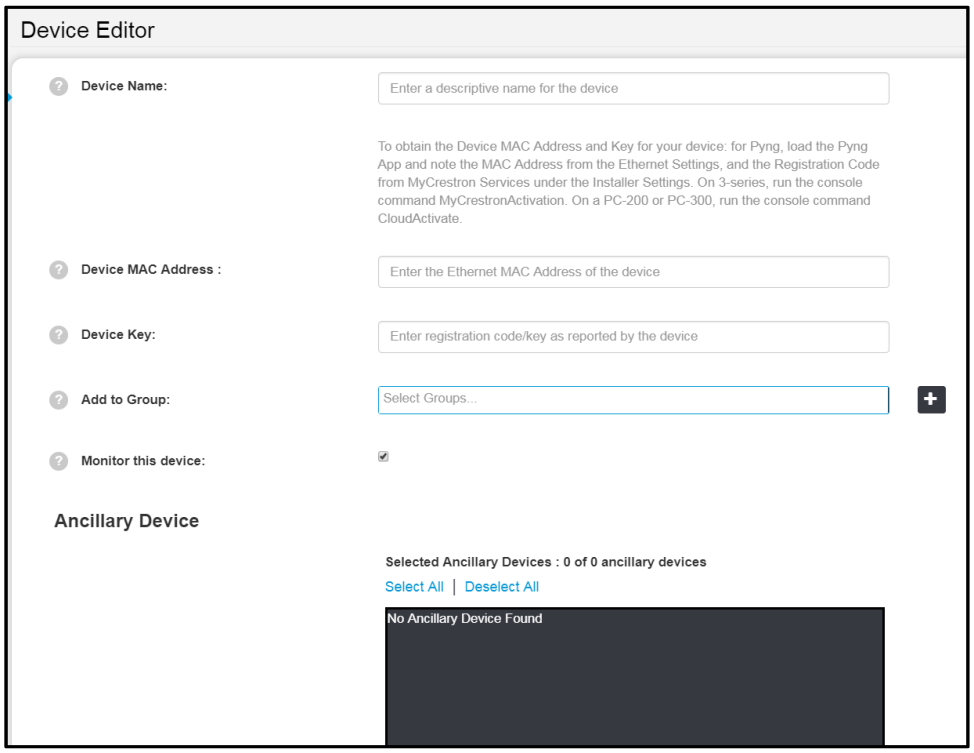
   a. Click the **Activate MyCreston** check box to enable the MyCrestron service. A filled check box indicates that the service is active.

   b. Click **Save** at the bottom of the **System Settings** screen.

   c. Copy or note the registration key provided in the **Registration key** text field. (If no registration key is displayed, click **Register** to generate a new registration key.)

5. Click **MyCrestron portal** to load the MyCrestron portal page.
6. Log in to the MyCrestron account using the appropriate credentials.
7. Select **Devices** from the navigation menu.
8. Click **Add Device** at the top left of the page. The **Device Editor** page displays.

MyCrestron Portal - Device Editor

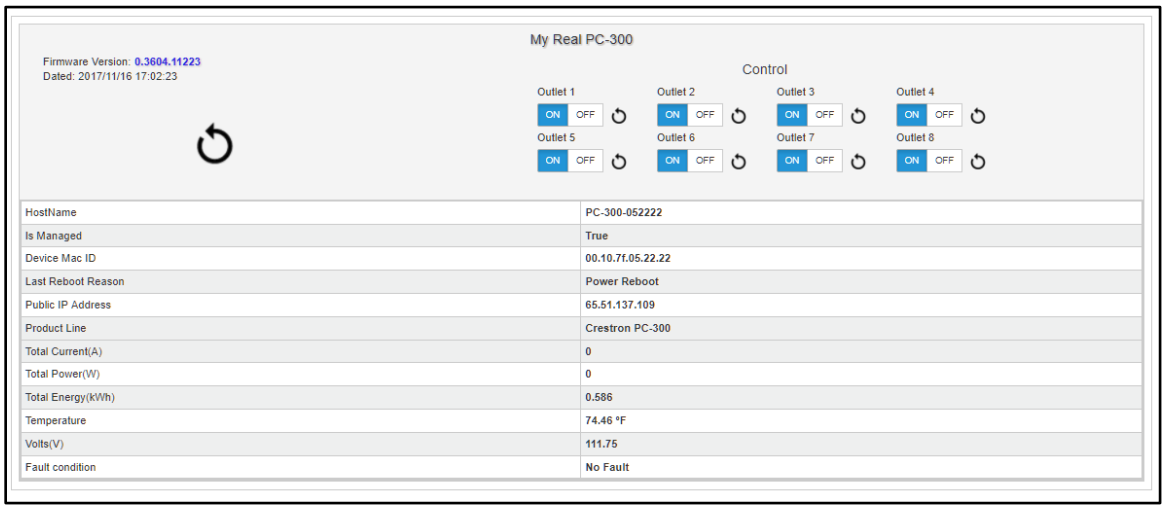


9. Enter the following information in the appropriate fields:
   - **Device Name:** Enter a descriptive name for the power conditioner.
   - **Device MAC Address**: Enter the power conditioner MAC address (obtained in step 2).
   - **Device Key:** Enter the registration key that (obtained in step 3b).
   - **Add to Group:** Add the power conditioner to a new or existing device group.
   - **Monitor this device:** Check this box to monitor the power conditioner remotely.
10. Click **Save** at the top left of the page.

If the power conditioner was registered successfully, it displays on the **Device List** page after a few minutes have elapsed.

Once the power conditioner is registered, select it from the **Device List** page to view device settings and to toggle and cycle outlet power. The device settings page for a PC-300 is shown on the following page as an example.

MyCrestron Portal - PC-300 Device Settings



HostName	PC-300-052222
Is Managed	True
Device Mac ID	00.10.7f.05.22.22
Last Reboot Reason	Power Reboot
Public IP Address	65.51.137.109
Product Line	Crestron PC-300
Total Current(A)	0
Total Power(W)	0
Total Energy(kWh)	0.586
Temperature	74.46 °F
Volts(V)	111.75
Fault condition	No Fault

Each of the controllable outlets or outlet banks is displayed under the **Control** section.

- Click **On** or **Off** to toggle the power on or off, respectively, for a chosen outlet or outlet bank.
- Click the cycling button next to an outlet to cycle the power for that outlet.
- Click the larger cycling button near the top left of the page to cycle the power for all controlled outlets.

Appendix C: Device Limits Operational Notes

The System Status page of the web configuration interface and the **Faults** screen of the PC-300 LCD display setup screens show whether any of the power conditioner device limits have been exceeded or if a surge has been detected.

Refer to the following operational notes regarding device limits.

- After a surge is detected, the SIMPL Windows signal and the web page status remain active until either the front panel switch is cycled or the "Cycle all outlets" signal is activated. Surge events will continue to be entered into the event log as they occur.
- If the voltage level drops below the under voltage cutoff point, the hysteresis needed to restore operation is calculated using the following algorithm. This algorithm is based on the last system load current value (amps in the algorithm) that is recorded immediately before an under voltage event forces a shutdown:

  Hysteresis = MAX (4, amps x 0.4 + 1)

  - Higher loads require more hysteresis to compensate for the voltage drop when the system is switched back on. Using this algorithm, the under voltage hysteresis is constrained to a range between 4 V and 7 V depending on the load current, and it is calculated as the larger of the two possible values in the algorithm (4 V or[amps x 0.4 + 1] V).

    For example, if the load current value is recorded at 12 amps prior to the under voltage event, the under voltage hysteresis needed to restore operation is calculated as 12 x 0.4 + 1 = 5.8 V.

  - If the under voltage cycles four times within 15 seconds, the power conditioner stops attempting to automatically power back on, as there is insufficient headroom between the line voltage and the configured under voltage cutoff. Reset the power conditioner by cycling the front panel switch.
- The overvoltage setting has a 4.5 V hysteresis. If the voltage level exceeds the overvoltage cutoff point, power to the controlled outlets is switched off until the input voltage is at least 4.5 V less than the overvoltage cutoff.
- Once an overcurrent condition occurs, the power conditioner remains in shutdown mode until the front panel switch is cycled.
- Once a temperature over range condition occurs, the temperature must drop two degrees Celsius below the temperature cutoff setting before power is restored to the controlled outlets.

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