

Serial Power Control Module PCM620



User Manual

Manual Version 1.1

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1. Serial Power Control Module

1.1 PCM620 - Two outputs 10 Amp Each

The Power Control Module “PCM620” amp is a dual power relay designed to work in conjunction with any Serial interface, However the device has additional features when used with a CDI Secure Out of Band Management device. The purpose of the device is to remotely power reset devices that are in a “locked up” condition.

The PCM620 will interrupt the power to a connected device when it is commanded to “switch off” the power relay to that particular output connector. The PCM620 can “reboot” the connected device by interrupting the power for a few seconds, or it can turn off the device off for longer periods of time.

Features of the PCM620:

1. Single power input
2. Dual individually controlled power outputs
3. Voltage – 100VAC to 240VAC
4. Current – 10AMP

1.2 Power Connections

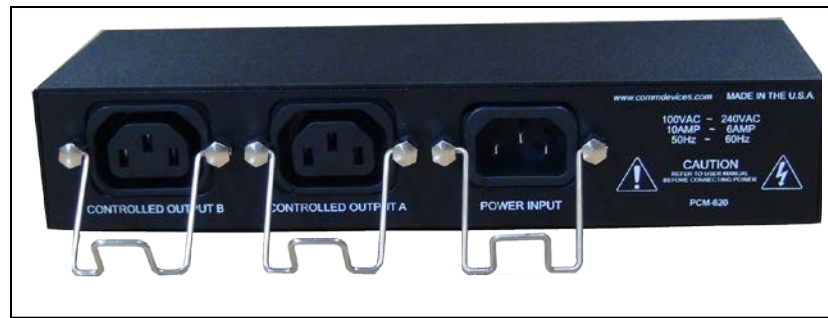


Figure 1 PCM620 rear view

The PCM620 has 3 power connectors:

1. Power in – rear panel - This is an IEC C20 for connection to the power source
2. Controlled Power Out A — This is an IEC C13 for connection to the control device
3. Controlled Power Out B — This is an IEC C13 for connection to the control device

The IEC C13 output connectors are purposely used for the most flexibility at installs. CDI provides a C13 to NEMA (USA OUTLET) so that the devices can plug into boxes that only have a NEMA Plug on them.

For device that have a Detachable Line Cord, CDI can supply a DIRECT CONNECT Cord based on the interface used on the device , usually C13-C14 cord.

1.3 Serial Connections

The PCM620 has Two Serial connections

CONNECT TO SERIAL PORT OF OOB DEVICE



Figure 2 PCM620 Front View

1. Serial Input – this is connected the device that is controlling the PCM
 - a. This is a 9600 BAUD interface
 - b. It is pinned out to connect directly with a straight RJ45-RJ45 cable to the SERIAL HOST PORT of ANY CDI OOB device.
2. Serial Output – This can connect to the Serial Input of an additional CDI PCM620 device to realize more power control interfaces off of one serial interface.
 - a. The MASTER PCM620 device will DETECT any co0nnect CDIPCM devices and present a SINGLE MENU to the OOB device.
 - b. It is pinned out to connect directly with a straight RJ45-RJ45 cable to the input of a connected CDI SERIAL PCM device.
 - c. You can LINK multiple PCM620 devices together.
3. The connection to All of the interfaces is a STRIAGHT RJ45 to RJ45 cable.

1.4 SERIAL PINOUTS

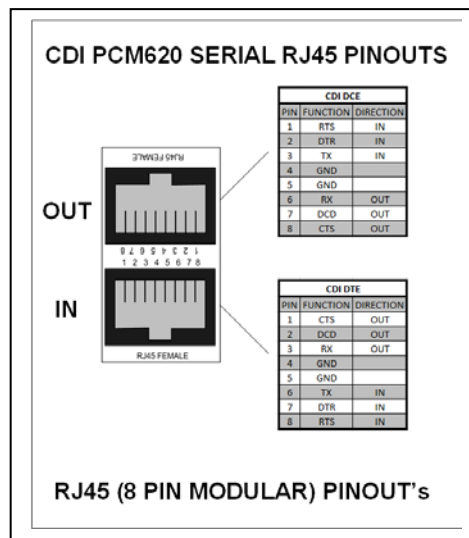
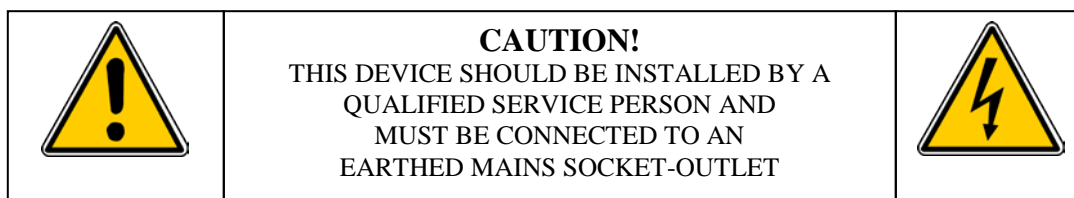


Figure 3 CDI RJ45 SERIAL PINOUT

1.5 Getting Started

1.5.1 Connecting Power to Device.



The device will connect to a standard alternating current (AC) wall outlet (100VAC ~ 240VAC, 50/60Hz). The socket outlet should be installed near the equipment and should be easily accessible. Make sure the power cord supplied is of the correct type for the country being installed.

The user is to disconnect all telecommunication network connectors before disconnecting the power supply cord. In addition the equipment should be installed by a qualified service person and connected to a socket-outlet with a protective earthing contact.

In English: equipment must be connected to an earthed mains socket-outlet.

In Finland: Laite on liitettava suojakosketinpistorasiaan

In Norway: Apparatet må tilkoples jordet stikkontakt

In Sweden: Apparaten skall anslutas till jordat uttag

The power parameters are:

Voltage	Frequency	Current
110VAC	60Hz	10amp
240VAC	50Hz	6amp

1.5.2 Power on

When the device is properly powered, the status LED on the front panel will illuminate. This is an indication that the device is powered and the relay is closed (“on”). When the relay is opened (“switched off”) the LED will extinguish.

1.5.3 Circuit Breaker

The PCM620 has a single 10AMP breaker that is accessible from the front panel. If the breaker trips, it will protrude from the front of the device and BOTH OUTPUTS will not receive power

To reset the breaker FIRST DETERMINE WHY IT TRIPPED.

1. Is the combination of the two devices more than 10 amps?
2. Is one of the device in failure and overloading the device?

To determine this, unplug both connected devices and reset the breaker by depressing the button.

1. Plug the “A” device into the PCM620 and confirm the device works
 - a. If it fails then the device connected to the “A” circuit is overloading the PCM620

- b. If it does not then unplug the “A” device
2. Plus the “B” device into the PCM620 with the breaker reset.
 - a. If it fails then the device connected to the “B” circuit is overloading the PCM620
3. If you have made it this far without tripping the breaker then plug BOTH device into the PCM620 with the breaker reset
 - a. If the breaker does NOT trip you should observe for a while and check to see of the connected devices are running hot.
 - b. If they remain powered on , you may have had a power surge.
 - c. If the breaker trips then the combination of the two devices is over 10 AMPS.
 - d. One of the device may be running in an overload condition and should be swapped out.

1.5.4 Serial Power Control Port

Each PCM has two RJ45 interfaces. The INPUT interface is used to connect to an OOB device through a straight RJ45-RJ45 cable, and accepts serial commands to control the device. The Power Modules are used to power cycle the remote devices that may have become inoperative. This will reset the device and usually restore operation.

Power Ports can also be used to shut down (turn off the power to) a device that should not be operating. The power can also be restored to a Power Module that has been turned off.

The SERIAL OUTPUT interface is used to LINK PCM’s together using straight RJ45-RJ45 cables. The OUTPUT of the first PCM is connected to the INPUT of the next PCM. Multiple PCM’s can be linked to realize larger power control configurations from a single serial interface.

The MASTER PCM will detect all devices connected through the OUTPUT interface and present a single menu to the OOB device connected to the SERIAL INPUT interface.

1.5.5 RJ45 Pinout

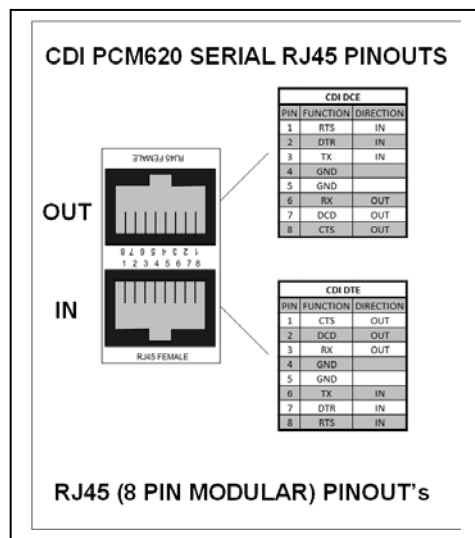




Figure 4 CDI RJ45 SERIAL PINOUT

The RJ45 connection uses serial 9600 BAUD 8 Data bits, no Parity.

1.5.6 Cable connection for Power Modules

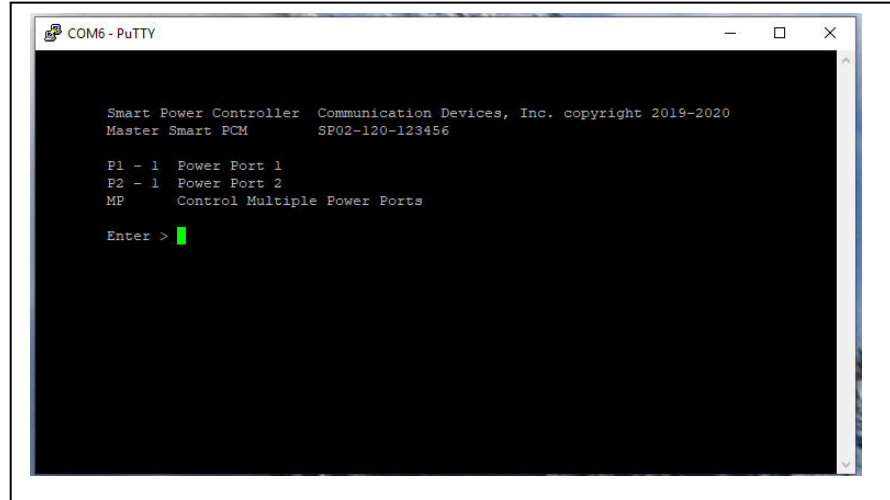
All RJ45-RJ45 cables are straight.

1.5.7 Service

	<p>There are no user serviceable parts inside the PCM. Do not open or attempt to repair this device. Return it to the factory if it is suspect of operating improperly.</p>	
---	---	---

3. Menu's

3.1 Initial menu



```
COM6 - PuTTY

Smart Power Controller Communication Devices, Inc. copyright 2019-2020
Master Smart PCM      SP02-120-123456

P1 - 1 Power Port 1
P2 - 1 Power Port 2
MP   Control Multiple Power Ports

Enter > █
```

Figure 5 PCM620 Menu

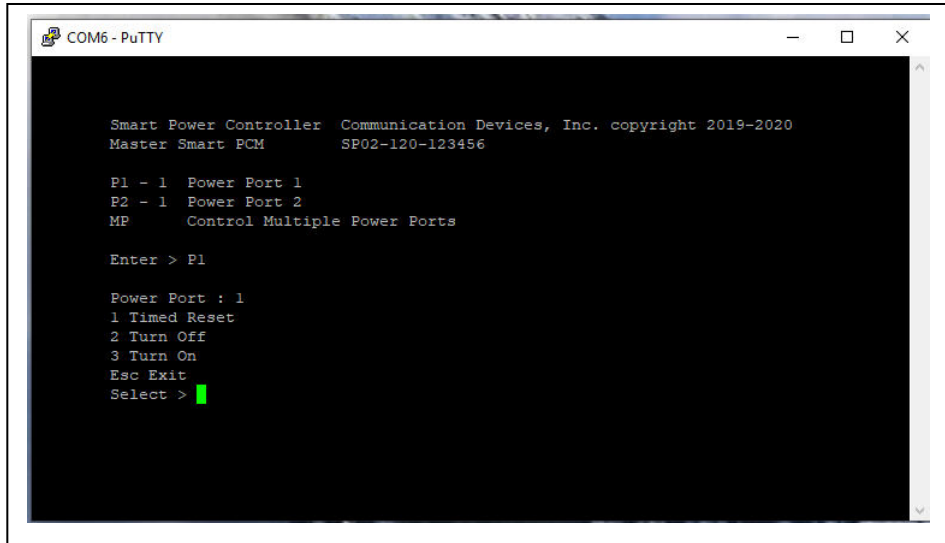
P1 – Power Port 1

P2 – Power Port 2

MP Control Multiple Power Ports

3.2 Power Control 1

Enter P1 to control POWER OUTPUT 1



```
COM6 - PuTTY

Smart Power Controller  Communication Devices, Inc. copyright 2019-2020
Master Smart PCM      SP02-120-123456

P1 - 1  Power Port 1
P2 - 1  Power Port 2
MP      Control Multiple Power Ports

Enter > P1

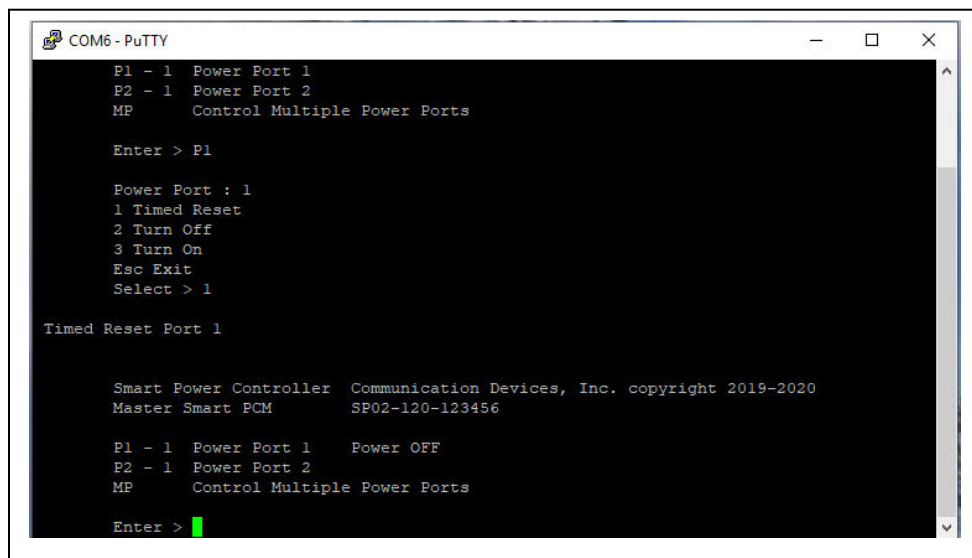
Power Port : 1
1 Timed Reset
2 Turn Off
3 Turn On
Esc Exit
Select > █
```

Figure 6 PCM620 Power Control Menu

You will be prompted for:

- 1 Timed reset : This will turn the power off for 5 seconds and turn it back on automatically
- 2 Turn Off : This will turn the power off to the output forever until you turn it back on
- 3 Turn On : This will turn the power back on to the power output

An Escape will ALWAYS return you to the previous menu



```
COM6 - PuTTY

P1 - 1  Power Port 1
P2 - 1  Power Port 2
MP      Control Multiple Power Ports

Enter > P1

Power Port : 1
1 Timed Reset
2 Turn Off
3 Turn On
Esc Exit
Select > 1

Timed Reset Port 1

Smart Power Controller  Communication Devices, Inc. copyright 2019-2020
Master Smart PCM      SP02-120-123456

P1 - 1  Power Port 1   Power OFF
P2 - 1  Power Port 2
MP      Control Multiple Power Ports

Enter > █
```

Figure 7 PCM620 Power Control Status

4. Linking PCM620's

You can link several PCM620's together using serial RJ45 cables to achieve more power control outputs off of a single Serial connection to an OOB device.

When you link devices together, they “learn” about each other so that the “First” PCM620 will display a menu including all the connected devices. So you may see 8 Power powers instead of two.

The Linked devices will assume higher numbers in the menu so that the primary device may show

P1 – Power Port 1

P2 – Power Port 2

P3 – Power Port 3

P4 – Power Port 4

P5 – Power Port 5

P6 – Power port 6

P7 – power Port 7

P8 – Power Port 8

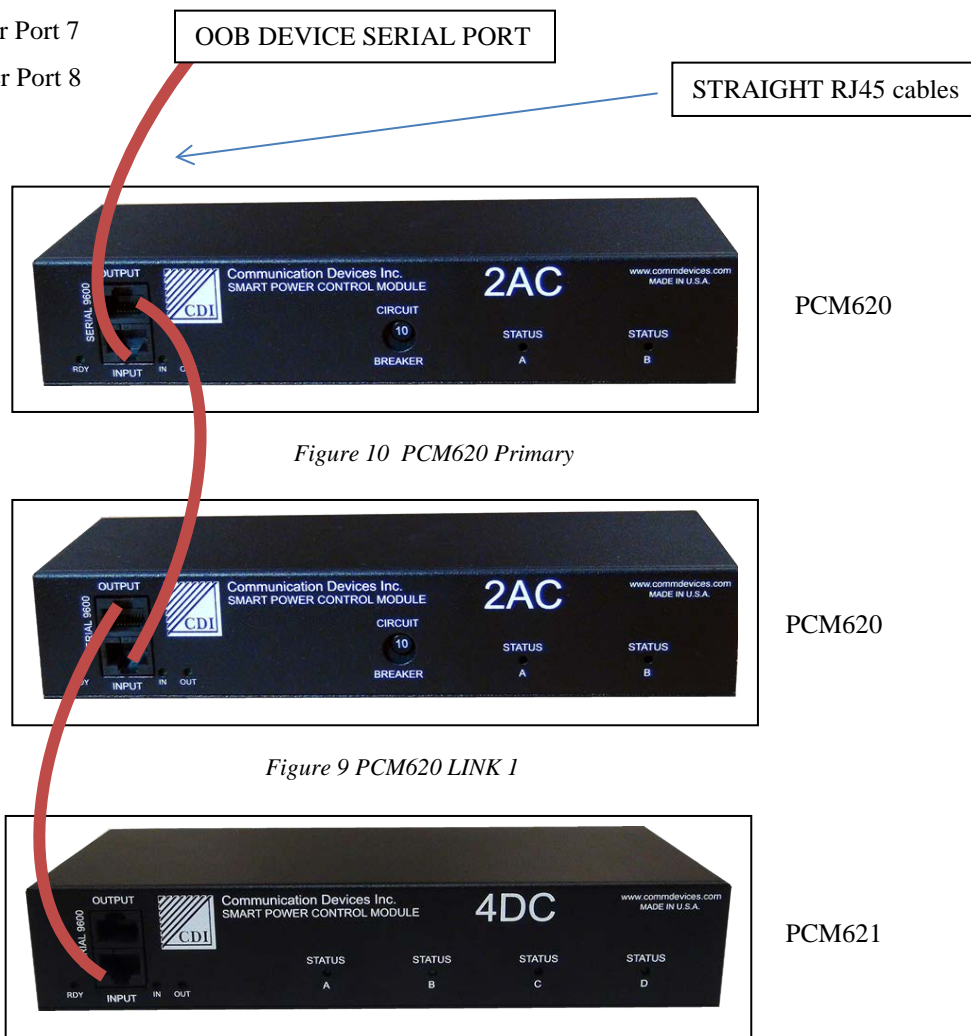


Figure 10 PCM620 Primary

Figure 9 PCM620 LINK 1

Figure 8 PCM621 LINK 2

5. Programming

5.1 Programming Menus

To access the programming menu's enter "\$\$CDI\$" followed by the ENTER KEY in the main menu.

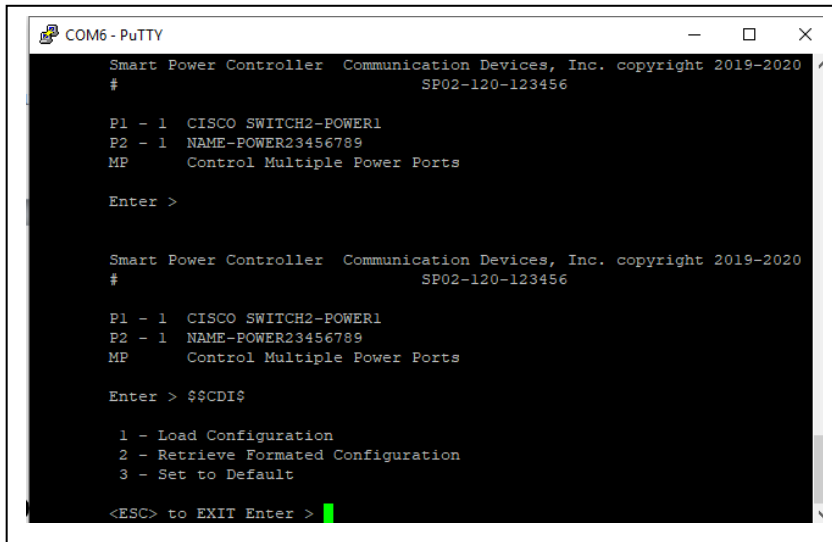


Figure 11 Programming Menu

You will receive

- 1 – Load Configuration
- 2 – Retrieve Configuration
- 3 – Set to Default

5.2 Script file

Enter “2”

You will receive the SCRIPT FILE that will load these parameters

The Script file can be saved and edited then sent to the device to program the port names.

The script file uses:

a Hash “#” to denote anything after as a COMMENT

a Semi Colon “;” to denote the end of a field or section

LABELS to denote what is being configured.

For PCM620 the only files are:

DEVICENAME:

POWER PORT NAMES:

END:

#SCRIPT FILE START

#Smart PCM Configuration

DEVICENAME:

Device name can be 25 characters followed by a semicolon

CDI POWER CONTROL 620;

;

;

#POWER PORT NAMES

You can customize the power port names as well as the number of seconds for power recycle - default=5

Power port names can be 50 characters in length

POWER:

P1=CISCO SWITCH2-POWER1,5;

P2=NAME-POWER23456789,10;

;

END:

;

Save the SCRIPT FILE IN TEXT FORMAT NOT WORD OR ANYTHING WITH FORMATTING –

USE NOTEPAD - and change the DEVICE NAME or PORTS NAMES

Then go into the PROGRAMMING MENU by entering \$\$CDI\$ followed by the ENTER KEY

5.3 Loading the SCRIPT file

Enter the PROGRAMMING MODE via \$\$\$CDI\$ followed by the ENTER KEY

Get your new script and highlight all the text.
Copy it to the clipboard.

Enter 1 – to Load the script

Then PASTE the script into the device.

You will see “READING DATA” several times from the device and then it will display the new load

```
Enter > $$$CDI$

 1 - Load Configuration
 2 - Retrieve Formated Configuration
 3 - Set to Default

<ESC> to EXIT Enter > 1

Load Configuration File

      Reading Data

      Reading Data

      Reading Data

Smart Power Controller  Communication Devices, Inc. copyright 2019-2020
CDI POWER CONTROL 620  SP02-120-123456


P1 - 1  DSL ROUTER 1
P2 - 1  CABLE ROUTER 2
MP      Control Multiple Power Ports

Enter > █
```

Figure 12 Script Load

Here is the script file that was used to load the above

```
#SCRIPT FILE START
#Smart PCM Configuration
DEVICENAME:
CDI POWER CONTROL 620;
# Device name can be 25 characters followed by a semicolon
#           ;
;
#POWER PORT NAMES
# You can customize the power port names as well as the number of seconds for power recycle - default=5
# Power port names can be 50 characters in length
POWER:
P1=DSL ROUTER 1,5;
P2=CABLE ROUTER 2,10;
;
END:
;
```



Don't forget this Semi colon to end

6. Environmental

- Operating temperature: 0° Celsius to 45° Celsius (32° Fahrenheit to 113° Fahrenheit)
- Storage temperature: -20° Celsius to 70° Celsius (-4° Fahrenheit to 158° Fahrenheit)
- Operating humidity: 10% to 85%, non-condensing
- Storage humidity: 5% to 90%, non-condensing
- Operating altitude: up to 10,000 ft (3049 m)
- Storage altitude: up to 15,000 ft (4573 m)
- Voltage Parameters 100~240VAC 20~ 10Amp 50/60Hz