



PCU-4

4 Ports Power Controller

User Manual



Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated till December 27, 2023. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



SAFETY PRECAUTIONS

To ensure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment.
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

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1. Product Introduction

Thanks for choosing the 4 Ports Power Controller with redundant TCP/IP port. The controller is designed for power control and monitoring. It supports up to AC110V~250V 10A IEC C14 power input and four 10A IEC C13 outlets.

The controller supports power control and monitoring via TCP/IP, which provide multiple network protocols and IoT protocols.

1.1 Features

- 4x 10A IEC C13 female power output;
- 1x 10A universal IEC C14 male power input;
- Monitoring and statistics of voltage, current, power, and energy consumption data;
- Switch control, current and power consumption monitoring;
- Provide remote monitoring, monitoring and configuration through Web-GUI;
- 2x redundant backup TCP/IP network ports to provide uninterrupted network services;
- Safety guarantee: overload protection, interference filtering, wiring error protection, remote login verification;
- Supports multiple network protocols and IoT protocols.

1.2 Package List

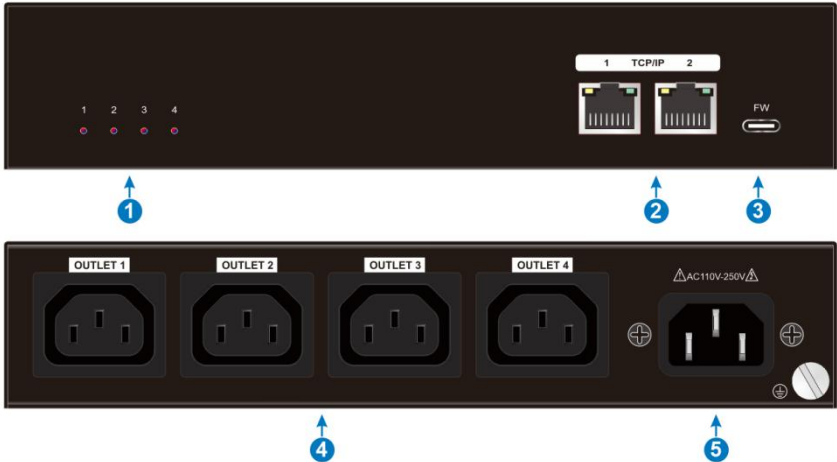
- 1x PCU-4
- 1x Mounting Kit
- 1x Power Cable
- 1x User Manual

Note: Please contact your distributor immediately if any damage or defect in the components is found.

2. Specification

Input	
Power Input	(1) Power input socket
Input Connector	(2) IEC C14
Power Input Parameter	Up to AC110~250V 50Hz 10A
Power Output	(4) Power output socket
Power Output Connector	(4) IEC C13
Power Output Parameter	Up to AC110~250V 50Hz 10A
Control Part	
Control	(2) TCP/IP
Control Connector	(2) RJ45
General	
Voltage Range	90 ~ 250 V
Current Range	0 ~ 10 A
Frequency Range	45 ~ 65 Hz
Power Factor	0 ~ 1
Operation Temperature	-10°C ~ +55°C
Storage Temperature	-25°C ~ +70°C
Relative Humidity	10% ~ 90%
External Power Supply	AC110~250V 50Hz 10A
No-load Power Consumption	3.3W
Dimension (W*H*D)	220mm x 44mm x 120mm
Net Weight	970g

3. Panel Description



① **Power LED:**

- Steady blue: Normal power supply;
- Flashing blue: Delay state before ON;
- OFF: Power Supply is completely OFF;
- Steady red: The outlet is overloaded;
- Flashing red: The outlet is restarting.

② **TCP/IP:** Two TCP/IP ports for connecting to PC or network device to achieve the GUI control.

③ **FW:** 1x USB-C for firmware upgrade.

④ **Outlet:** 4x IEC C13 connector for the power output.

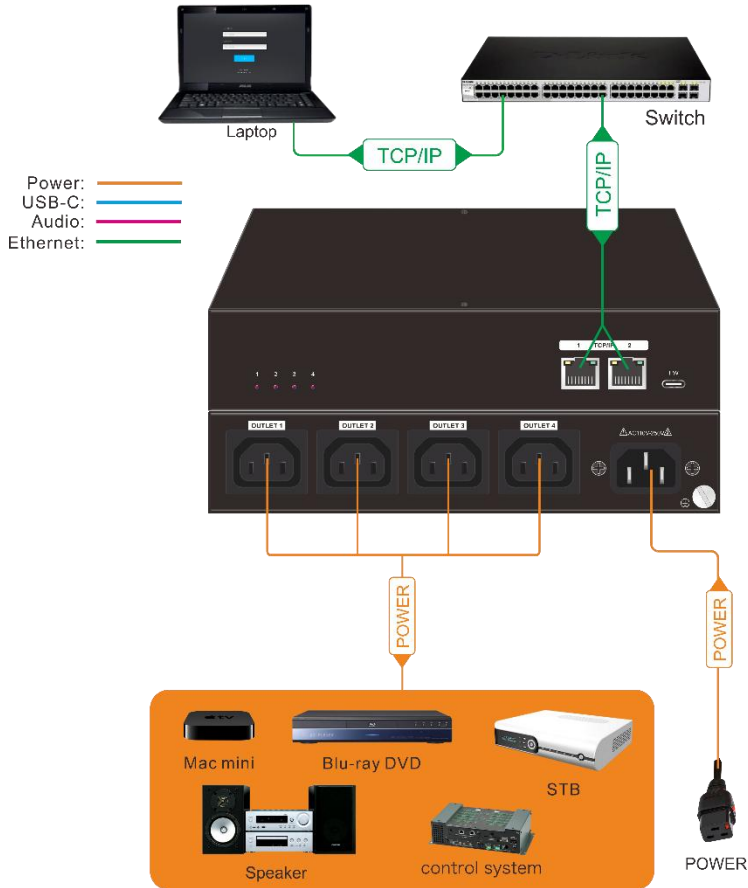
⑤ **AC 110~250V:** 1x IEC C14 connector for power input.

4. System Connection

4.1 Usage Precaution

- Make sure all components and accessories included before installation.
- System should be installed in a clean environment with proper temperature and humidity.
- All of the power switches, plugs, sockets, and power cords should be insulated and safe.
- All devices should be connected before power on.

4.2 System Diagram



5. GUI Control

The PCU-4 can be controlled via TCP/IP. The default IP settings are:

IP Address

- Port 1: 10.10.0.1(Fixed address)
- Port 2: 192.168.0.178(Default static IP, DHCP optional)

Subnet Mask: 255.255.255.0

Gateway: 192.168.0.1

Telnet port: 4001

Please type the IP Address of the control PC in the internet browser, and it will enter the below log-in webpage.



Username: admin

Password: admin

Please type the username and the password, and then click **LOGIN**.

5.1 Dashboard

- Outlet 1-4: ON/OFF the power, set the label, Re-Power delay and reset duration, select the status.

5.2 Network

- Network Setting: Set the IPv4 and IPV6 protocol.

5.3 Schedule

Schedule Settings

Schedule Timer for: ALL OUTLETS Turn ON All Time Turn OFF All Time

Please click below numbers to set the whole column to 'ON' or 'OFF'

Date/Time	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
MON ▶																								
TUE ▶																								
WED ▶																								
THU ▶																								
FRI ▶																								
SAT ▶																								
SUN ▶																								

Please click above week days to set the whole row to 'ON' or 'OFF'.
Please click above little squares to set schedule individually, once save changes, new schedule will be activated from next planning hour or after system reboot.

Blue box: Power ON
White box: Power OFF

Save Changes

System Time: 2023-5-1 12:34 Uptime: 90days 12 hrs 59 mins GUI Version: 1.0.0.1 System auto logout in 6000 seconds Maintenance Logout

- Schedule setting: select the outlets' power ON/OFF time by choose the squares.

5.4 Protocols

SNMP **Telnet** **SSH** **MQTT** **Modbus TCP**

Enable SNMP V1 options SNMP GET SNMP SET

SNMP UDP port:

sysContact:

sysName:

sysLocation:

Enable SNMP V2C Yes No

SNMP v2 public Community: (Max: 16 Chars)

SNMP v2 private Community: (Max: 16 Chars)

Enable SNMP V3 Yes No

Enable SNMP Trap V1 Trap V2C Trap V3 Trap
 Disable SNMP Trap

SNMP trap receiver 1: prtg.mysite.org

SNMP trap receiver 2: nagios.mysite.org

Save Changes Download MIB

System Time: 2023-5-1 12:34 Uptime: 90days 12 hrs 59 mins GUI Version: 1.0.0.1 System auto logout in 6000 seconds Maintenance Logout

- Set the protocols: SNMP, Telnet, SSH, MQTT, Modbus TCP.

5.5 Email

Dashboard	Network	Schedule	Protocols	Email	Clock	System	Security
-----------	---------	----------	-----------	-------	-------	--------	----------

SMTP Settings

SMTP server:

SMTP server Port:

Connection encryption:

Enable SMTP authentication

Username:

Password:

Repeat Password:

Default Sender Email:

Notes: System alert will send by above Email Sender

[Save Changes](#)

Email Testing

Finish left-hand side settings before testing email sending

To recipient:

From sender:

Custom email sender address
Leave blank for default address

[Send](#)

System Time: 2023-5-1 12:34
Uptime: 90days 12 hrs 59 mins
GUI Version: 1.0.0.1
System auto logout in 6000 seconds
[Maintenance](#)
[Logout](#)

- Setting the alarm email address.
- When the current is too large, an alarm email will be sent to the set address.

5.6 Clock

Dashboard	Network	Schedule	Protocols	Email	Clock	System	Security
-----------	---------	----------	-----------	-------	-------	--------	----------

NTP Settings

Enable NTP Server: Yes No

Primary NTP server:

Secondary NTP server:

Timezone/Time

Timezone:

Daylight Saving Time (DST): Yes No

Set date manually: (Format: yyyy-mm-dd)

Set time manually: (Format: hh:mm:ss)

[Save Changes](#)

System Time: 2023-5-1 12:34
Uptime: 90days 12 hrs 59 mins
GUI Version: 1.0.0.1
System auto logout in 6000 seconds
[Maintenance](#)
[Logout](#)

- NTP Setting: Enable server, Primary server or Secondary server.
- Setting the time corresponding to the time zone.

5.7 System

The screenshot shows the 'System Settings' page. The navigation bar includes Dashboard, Network, Schedule, Protocols, Email, Clock, System (highlighted), and Security. The main content area contains the following settings:

- Device name: [Text input field]
- All outlets Initialization status: On Off Last State / User Defined
- System Initialization delay: [3] seconds (Default: 3 seconds)
- All outlets re-power interval (For sequential re-power): [1] seconds (Default: 1 second)
- All outlets reset duration: [10] seconds (Default: 10 seconds)

A blue 'Save Changes' button is located below the settings. At the bottom of the page, the status bar shows: System Time: 2023-5-1 12:34, Uptime: 90days 12 hrs 59 mins, GUI Version: 1.0.0.1, System auto logout in 6000 seconds, Maintenance, and Logout.

- System setting: Device name, status, delay, re-power interval, reset duration.

5.8 Security

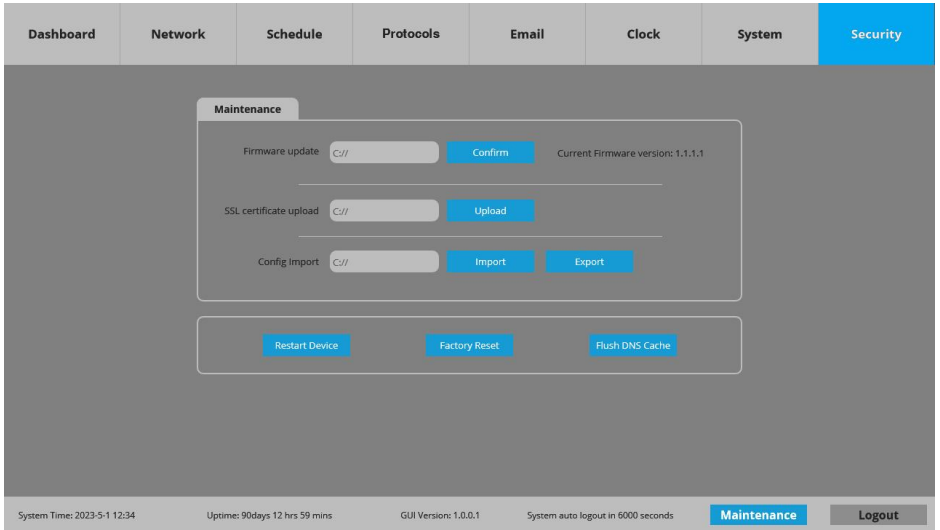
The screenshot shows the 'Security Settings' page. The navigation bar includes Dashboard, Network, Schedule, Protocols, Email, Clock, System, and Security (highlighted). The main content area contains the following settings:

- Web-GUI Login: Password [Web-GUI login pass] [Confirm]
- RADIUS:
 - Enable Radius Client Authentication Protocol: Yes No
 - Use Message Authentication: PAP CHAP
 - Default Session Timeout: [1800] seconds
 - Primary Server: [Text input field] Timeout: [5]
 - New shared password: [Masked] Retries: [3]
 - Repeat password: [Masked]

A blue 'Save Changes' button is located below the settings. At the bottom of the page, the status bar shows: System Time: 2023-5-1 12:34, Uptime: 90days 12 hrs 59 mins, GUI Version: 1.0.0.1, System auto logout in 6000 seconds, Maintenance, and Logout.

- Setting the GUI login password and radius parameters.

5.9 Maintenance



- Firmware update, SSL certificate upload, config import and export.
- Restart Device, Factory Reset, Flush DNS Cache.

6. TCP/IP Command

Parameter setting:

- IP Address
Port 1: 10.10.0.1(Fixed address)
Port 2: 192.168.0.178(Default static IP, DHCP optional)
- Telnet port: 4001
- Instruction terminator: <CR><LF>
- Error command feedback code: <Command Error > <Out of Range>

Command	Description	Example & Feedback
>GetStatus	Query device status	>GetStatus GUI Or RS232 Query Status: PCU-4 <V1.0.0 <OUTLET 1 On <OUTLET 2 On <OUTLET 3 On <OUTLET 4 On

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		<p><GetSystemStatus last <GetSystemDelay 3s <SetSystemInterval 1s <GetSystemReset 10s <GetOutletStatus 1 on <GetOutletRepower 1 3s <GetOutletReset 1 10s <GetOutletStatus 2 on <GetOutletRepower 2 3s <GetOutletReset 2 10s <GetOutletStatus 3 on <GetOutletRepower 3 3s <GetOutletReset 3 10s <GetOutletStatus 4 on <GetOutletRepower 4 3s <GetOutletReset 4 10s <GuiIP:192.168.0.178 <GuiMask:255.255.255.0 <GuiGate:192.168.0.1</p>
<p>>GetElectric</p>	<p>Query device power</p>	<p>>GetElectric GUI Or RS232 Query Status: <Total Current 9.9A <Total Power 2400.0W <Total Energy Consumed 999.9kWh <Voltage 240V <Frequency 50Hz <Power Factor 0.8 <GetOutletVoltage 1 240V <GetOutletVoltage 2 240V <GetOutletVoltage 3 240V <GetOutletVoltage 4 240V <GetOutletCurrent 1 9.9A <GetOutletCurrent 2 9.9A <GetOutletCurrent 3 9.9A <GetOutletCurrent 4 9.9A <GetOutletPower 1 600.0W <GetOutletPower 2 600.0W <GetOutletPower 3 600.0W <GetOutletPower 4 600.0W <GetOutletConsumed 1 999.9kWh <GetOutletConsumed 2</p>

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		<p>999.9kWh</p> <p><GetOutletConsumed 3 999.9kWh</p> <p><GetOutletConsumed 4 999.9kWh</p> <p><GetOutletPowerFactor 1 0.8</p> <p><GetOutletPowerFactor 2 0.8</p> <p><GetOutletPowerFactor 3 0.8</p> <p><GetOutletPowerFactor 4 0.8</p>
>SetSystemStatus	<p>Set the system initial switch state</p> <p>>SetSystemStatus [Param1] param1 = on off last</p>	>SetSystemStatus last
		<SetSystemStatus last
>SetSystemDelay	<p>Set system initial delay</p> <p>>SetSystemDelay [Param1] param1 = All outlets Initialization delay</p>	>SetSystemDelay 3
		<SetSystemDelay 3s
>SetSystemInterval	<p>Set system interval delay</p> <p>>SetSystemInterval [Param1] param1 = All outlets Interval delay</p>	>SetSystemInterval 1
		<SetSystemInterval 1s
>SetSystemReset	<p>Set system reset delay</p> <p>>SetSystemReset [Param1] param1 =All outlets Reset duration</p>	>SetSystemReset 10
		<SetSystemReset 10s
>SetOutletStatus	<p>Set the initial switch state of the outlet</p> <p>>SetOutletStatus [Param1] [Param2] param1 = 1-4 1: OUTLET 1 2: OUTLET 2 3: OUTLET 3 4: OUTLET 4 param2 = on off</p>	>SetOutletStatus 1 on
		<SetOutletStatus 1 on
>SetOutletRepower	<p>Set outlet restart delay</p> <p>>SetOutletRepower [Param1] [Param2] param1 = 1-4 1: OUTLET 1 2: OUTLET 2 3: OUTLET 3 4: OUTLET 4 param2 = Repower delay</p>	>SetOutletRepower 1 3
		<SetOutletRepower 1 3s
>SetOutletReset	<p>Set outlet reset delay</p> <p>>SetOutletReset [Param1] [Param2] param1 = 1-4 1: OUTLET 1</p>	>SetOutletReset 1 10
		<SetOutletReset 1 10s

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	2: OUTLET 2 3: OUTLET 3 4: OUTLET 4 param2 = Reset duration	
>SetAllOutlet	Set all the outlet power ON/OFF >SetAllOutlet [Param1] param1 = On, Off	>SetAllOutlet On >SetAllOutlet Off <SetAllOutlet On <SetAllOutlet Off
>SetOutlet	Set the outlet power ON/OFF >SetOutlet [Param1] [Param2] param1 = 1 - 4 1: OUTLET 1 2: OUTLET 2 3: OUTLET 3 4: OUTLET 4 Param2 = On, Off	>SetOutlet 1 On >SetOutlet 1 Off <SetOutlet 1 On <SetOutlet 1 Off
>RsOutlet	Reset the outlet power value >RsOutlet [Param1] param1 = 1-4 1: OUTLET 1 2: OUTLET 2 3: OUTLET 3 4: OUTLET 4	>RsOutlet 1 <RsOutlet 1
>RsSystemOutlet	Reset the system power value >RsSystemOutlet	>RsSystemOutlet <RsSystemOutlet
>GetRunTime	Query the unit run time >GetRunTime	>GetRunTime <GetRunTime 90:12:59 (Days, hours, minutes)
>SetSystemTime	Set the unit internal Time >SetSystemTime [Param1] param1 = year, month, day, hour, minutes, seconds	>SetSystemTime 2023-5-1;12:34:18 <SetSystemTime 2023-05-01 12:34:18
>GetSystemTime	Get the unit internal time >GetSystemTime	>GetSystemTime <GetSystemTime 2023-05-01 12:34:18 Mon
>Reset	Factory default	>Reset <Factory Reset
>Restart	Restart	>Restart <Restart
>SetDhcpOn	Set GUI DHCP ON	>SetDhcpOn <SetDHCP On
>SetDhcpOff	Set GUI DHCP OFF	>SetDhcpOff

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		<SetDHCP Off
>GetDhcp	Query GUI DHCP status	>GetDhcp <SetDHCP Off
>SetGuiIP:xxx.xxx.xxx.xxx	Set the IP address to access GUI SetGuiIP xxx.xxx.xxx.xxx.	>SetGuiIP 192.168.0.176 <SetGuiIP 192.168.0.178.
>GetGuiIP	Get the IP address to access GUI	>GetGuiIP <GuiIP 192.168.0.178.

7. Panel Drawing

