PC321
Single/3 - phase Power Clamp

Quick Start Guide

Safety Handling

> **WARNING:** Failure to follow these safety notices could result in fire, electric shock, injuries, even damage to the Power Clamp and other property. Please read all the safety notices below before using the Power Clamp.

- Avoid high humidity or extreme temperatures.
- Avoid long exposure to direct sunlight or strong ultraviolet light.
- Do not drop or expose the unit to intense vibration.
- Do not disassemble or try to repair the unit on your own.
- Do not expose the unit or its accessories to flammable liquids, gases or other explosives.

Technical Specifications

Wireless Connectivity

ZigBee	• 2.4GHz IEEE 802.15.4
ZigBee Profile	• ZigBee HA1.2
RF Characteristics	• Operating frequency: 2.4GHz • Range outdoor/indoor: 100m / 30m
Antenna	• Internal Antenna (default) • External Antenna (optional)

Physical Specifications

Operating Voltage	• 100~240 Vac 50/60 Hz
Power consumption	• < 1W
Calibrated Metering Accuracy	• $\leq$ 100W (Within $\pm$2W) • >100W (Within $\pm$2%)
Electrical parameters measured	• Irms, Vrms, Active Power & Energy, Reactive Power & Energy
Operating environment	• Temperature: -20℃ ~+55℃ • Humidity: $\leq$ 90% non-condensing
Dimensions	• 86(L) x 86(W) x 37(H) mm
Weight	• 415g

1 Welcome
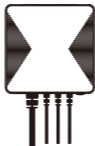
PC321 ZigBee Power Clamp helps you monitor the amount of electricity usage in your facility by connecting the clamp to the power cable. It can also measure Voltage, Current, Power Factor, Active Power.

This guide will provide you with an overview of the product and help you get through the initial setup to installation.

Features:

- ZigBee HA 1.2 compliant
- Extend the range and strengthen ZigBee network communication
- Single/3 - phase electricity compatible
- Three current transformers for Single phase application
- Measures real-time Voltage, Current, PowerFactor, ActivePower and total energy consumption
- Statistical historical energy consumption
- Suitable for both residential and commercial application
- Optional antenna to enhance the signal strength
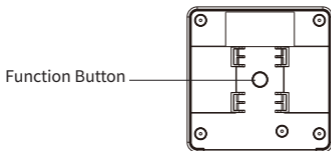- Lightweight and easy to install

2 **Get to know your device**

LED indicator

Antenna port

CT1

CT2

CT3

CT: Current Transformer Cable

AC Input cable

Clamp
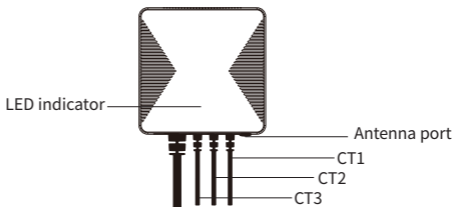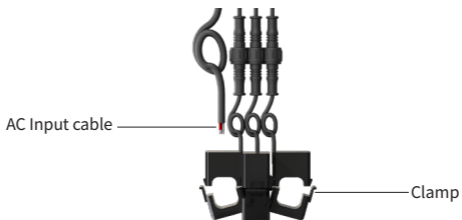
Function Button

Function Button

• **Reset.** Press and hold the function button for ten seconds until the LED indicator flashes in green for three time. Then the LED indicator will start flashing in red, which means it is ready to join the network. (energy data will not be cleared).

• **Clear Energy Data.** Reset the Power Clamps twice consecutively. The interval between two reset must be less than 10S.

LED indicator

The LED status gives the following information of the power clamp:

| LED Status	What it means
Flash in green and red alternatively	Clearing energy data
Flash three times in green	Return to Factory Setting.
Flash in red	Device did not join the ZigBee network

3 **Installaion**

Important safety information!

• The power clamp must be installed and serviced only by a qualified electrical personnel.

• Do not touch the terminals of the device during testing.

• Turn off all the power supply for this equipment before installing.

• Make sure that the power supply is off before connecting or disconnecting it to an auxiliary device.

• Always use a properly rated voltage sensing device to confirm power is off.

• Replace all devices, doors and covers before applying power to the equipment.

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

Get started:

Please make sure the main power in your facility is off before installing. Follow the schematics below as an example to wire the Power Clamp for different phase.
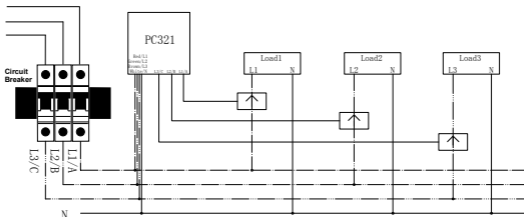
**3 Phase electricity wiring diagram**
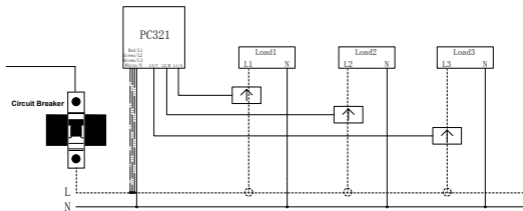
Single Phase electricity wiring diagram

Follow the steps below:
1. Connect AC Input cable to a socket near the Electrical Box to power on the Power Clamp according to the corresponding phase wiring diagram.
2. Attach both ends of the Current Transformer Cables first like the picture shown below. Then spinning the waterproof latch clockwise until both ends have been tightened and secured.

3. Open the clamp as shown below. Apply it on the electric meter cable. The arrow on the clamp should face to the correct direction of the electricity current flows (P1 → P2). If the arrow faces the reverse direction, the reading meter will display 0.

| P1 | → | P2 |
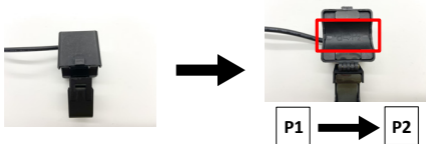
Tips about the clamp:
• Cable diameter does not affect usage as long as the cable can pass through the clamp hole.
• The meter has three clamps which can be applied to cable devices for separate measurement. If applied to the same cable, all clamps will produce the same reading.

4   Configure Network

4.1 Before starting, you will need:
• A ZigBee Gateway.
• The Smartlift APP installed in a mobile phone .

4.2 Adding to the gateway's network:
Follow the steps below to join the power clamp to the gateway's network:
1. Power on the Power Clamp, the LED indicator will start flashing in

red, which meas it is ready to join the network. If not, please reset it.

2. Set your gateway to permit joining.

3. The power clamp will join the gateway's network automatically and the LED indicator will go out when successfully joined.

5. Now you can use your mobile app to remotely monitor the home energy usage.

5 Mounting

The Power Clamp has a mounting bracket for mounting purposes.

1. Use the mounting bracket as the template to mark the two holes on the wall for installing screws.

2. Screw the mounting bracket onto the wall according to marked location. Install wall plugs if necessary.

3. Locate the hooks of the mounting bracket and line up the hooks with the mounting holes on the Power Clamp. Then fit the hooks into the mounting holes as the picture below. Installation is now completed.