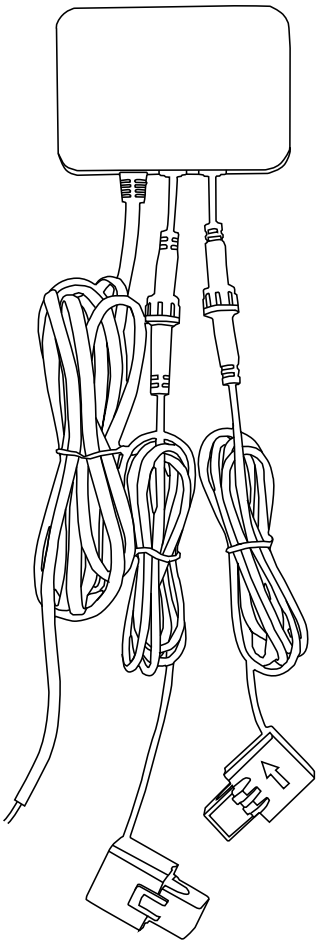
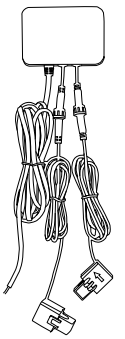


PC301 Single-phase Power Clamp

Quick Start Guide

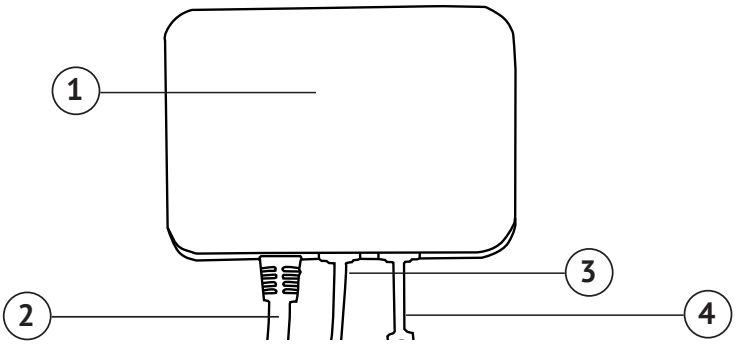
1 Introduction



The PC301 is a ZigBee power clamp used to monitor and report the total amount of electricity uses in your facility by connecting the clamp onto the power cable.

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

2 Get to know your device



1. LED indicator

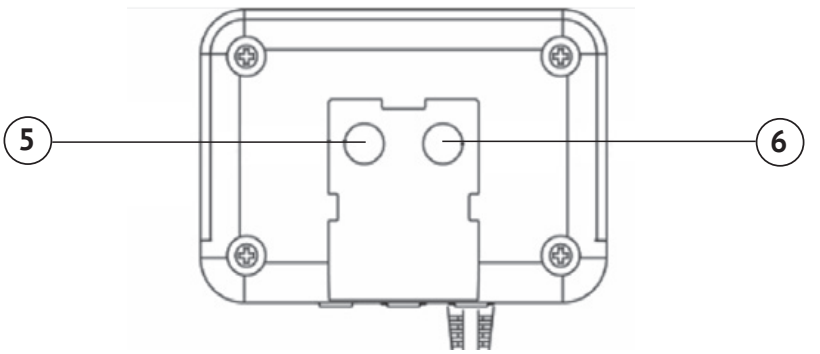
The LED status gives the following information:

LED Status	What it means
Flash twice quickly	Device joined a ZigBee network.
Flashes once	Return to Factory Settings.
Flash once every 20 minutes	ZigBee connection lost.

2. AC Input cable

3. Current Transformer Cable (CT1)

4. Current Transformer Cable (CT2)

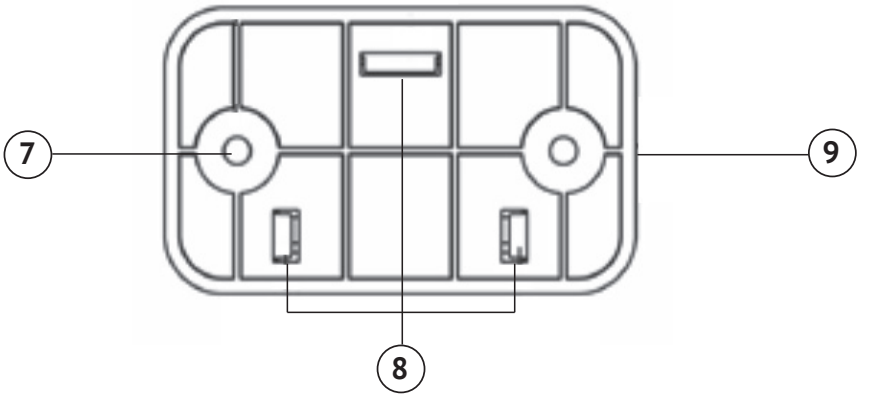


5. Function Button

• **Report value.** Press the function button once to report the value of the power clamp to the ZigBee network.

• **Reset.** Press and hold the function button for ten seconds until the LED indicator flashes once to restore the power clamp to default factory settings.

6. Reserved



7. Mounting Hole

8. Mounting Hooks

9. Mounting Bracket

3 Get Started

3.1 Installaion

Warning!

• 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.

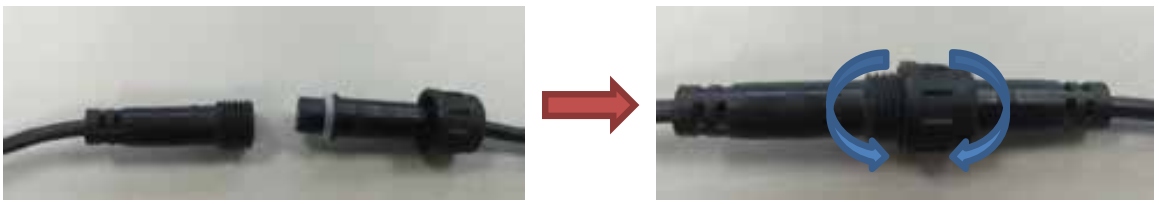
Failure to follow these instructions will result in death or serious injury.

• Wiring

Please make sure the main power in your facility is off before installing. Follow the steps below:

1. Connect AC Input cable to a socket near the Electrical Box to power on the Power Clamp.

2. Attach both ends of the Current Transformer Cables first as picture shown below. Once you have attached the Current Transformer Cable, start spinning the waterproof latch clock-wise until you have tighten and secure both ends of the Current Transformer Cable.



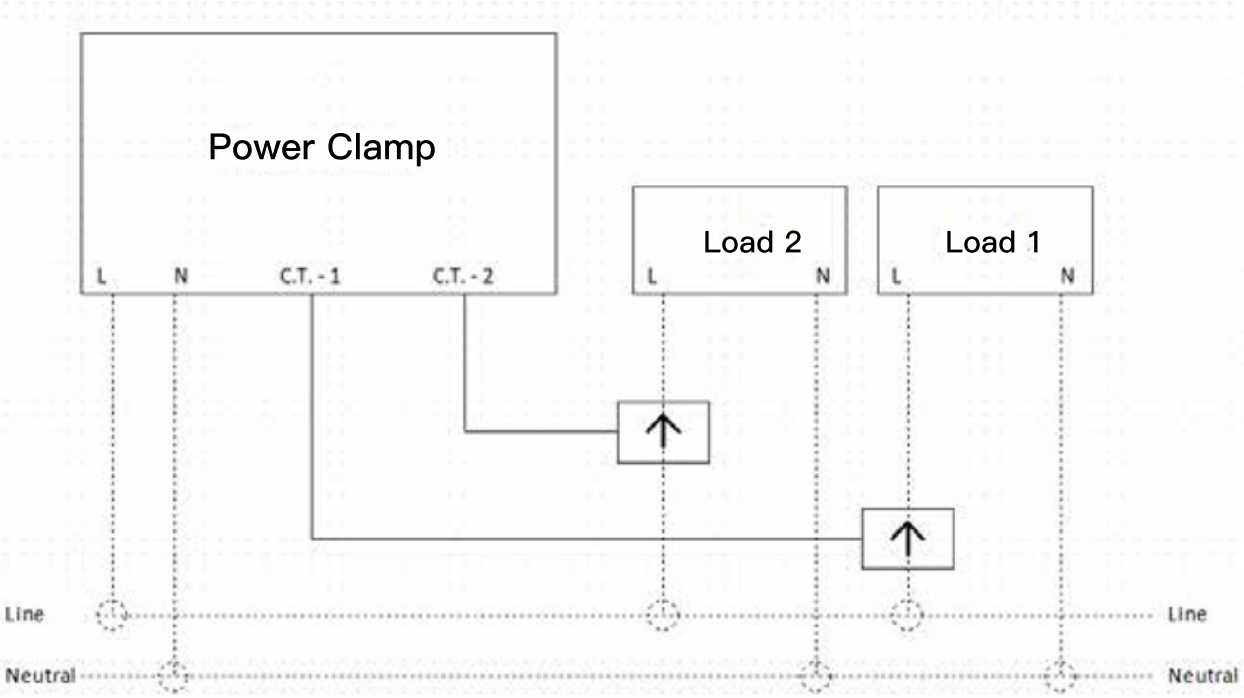
3. Open the clamp as indicated by below picture. Then apply it to the electricity cable of the Electricity Meter . The arrow on the clamp need to face to the correct direction of the electricity current flows (L→N). If arrow is faced in reverse direction, the reading meter will display negative value (-) however it will not influence the readings.



4. Follow the schematics below as an example to wire the Power Clamp according to the desired installation.

• The clamp can be applied to any size of the electric cable as the cable can fit into the clamp hole. Cable diameter does not affect usage as long as the cable can pass through the clamp hole.

• The meter has two clamps which can be applied to cable devices for separate measurement. If applied to the same cable, both clamp will produce same reading.



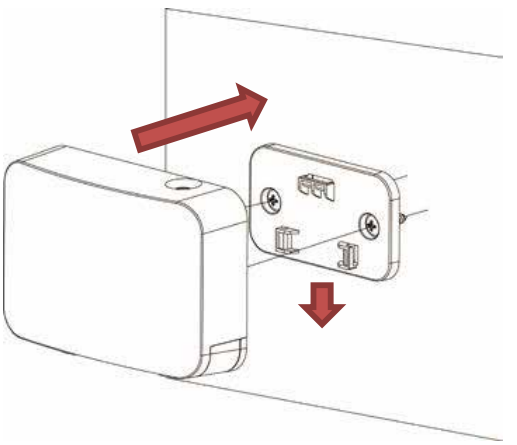
• Mounting

The Power Clamp has a mounting bracket for mounting purposes.

1. Use the mounting bracket as 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. Fit the hooks into the mounting holes as shown on the picture below. Installation is now complete.



3.2 Network setup

To get started, you will need:

A Gateway

The mobile app

Follow the steps below to join the power clamp to the gateway's network:

1. Plug in the AC Input cable into the socket to power on the Power Clamp.
2. Set your gateway to permit joining.
3. Press and hold the function button for 10 seconds until the LED indicator flashes in red then release, the power clamp will be ready to join the gateway's network.
4. The power clamp will join the gateway's network automatically and the LED indicator will flash twice quickly when successfully joined.
5. Now you can use your mobile app to remotely monitor the home energy usage.

4 Technical Specifications

Wireless Connectivity	• ZigBee 2.4GHz IEEE 802.15.4
RF Characteristics	• Operating frequency: 2.4GHz • Outdoor/Indoor range: 100m/30m
ZigBee Profile	• Home Automation Profile
Operating Voltage	• AC 100~240V
Max. Load Current	• 60 Amps 6600W @ 110VAC; • 60 Amps 13800W @ 220 VAC
Operating Ambient	• Temperature: -10°C to +50°C • Humidity: up to 85% non- condensing
Dimension	• 93(W) x 65.5(L) x 33(H) mm (with bracket)

5 Safety Notice

WARNING: Failure to follow these safety notices could result in fire, electric shock, other injuries, or damage to the Power Clamp and other property. 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 yourself.
- Do not expose the unit or its accessories to flammable liquids, gases or other explosives.