

Smart Life App



Scan code to watch the installation video



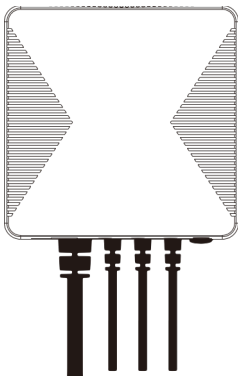
Three Phase



Split Phase



Single Phase



PC321-W-TY/N

Single/3-Phase Power Clamp

Quick Start Guide

Safety Handling

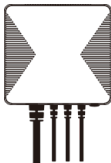
WARNING: Failure to follow these safety notices could result in fire, electric shock, other injuries, or damage to the Power Clamp and other property. Read all the safety notices below before using the Power Clamp.

- 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 your own.
- Do not expose the unit or its accessories to flammable liquids, gases or other explosives.

Technical Specifications

Connectivity	
Wi-Fi	• 802.11 b/g/n @2.4GHz
BLE	• For Pairing
RF Characteristics	• Operating frequency: 2.4GHz • External magnetic antenna
Physical Specifications	
Un	• 3x230/400V AC, 50/60Hz
Voltage Range	• 90-277 V
Supported Systems	• Single-Phase • Split-Phase • Three-Phase (3-Phase 3-Wire & Delta system are not supported)
Power Consumption	• <2W
Voltmeters Accuracy	• $\pm 1\%$
Ammeters Accuracy	• 80A CT: $\pm 1\%$ (1-80A) , $\pm 2\%$ (0-1A) • 120A CT: $\pm 1\%$ (2-120A) , $\pm 2\%$ (0-2A) • 200A CT: $\pm 1\%$ (2-200A) , $\pm 2\%$ (0-2A) • 300A CT: $\pm 1\%$ (6-300A) , $\pm 2\%$ (2-6A) , $\pm 5\%$ (0-2A) • 500A CT: $\pm 1\%$ (6-500A) , $\pm 2\%$ (2-6A) , $\pm 5\%$ (0-2A) • 750A CT: $\pm 1\%$ (6-750A) , $\pm 2\%$ (2-6A) , $\pm 5\%$ (0-2A)
Reporting Cycle	• Every 15 seconds
Operating Environment	• Temperature: -20 °C~ +55 °C • Humidity: $\leq 90\%$ non-condensing
Mount Type	• Wall mounting (default) • DIN rail mounting (optional)
Dimension	• 86(W) x 37(D) x 86(H) mm

1 Welcome



PC321-W-TY/N helps you monitor the amount of electricity Consumed and Produced in your three phase power system by connecting the clamp on to the power cable. It is also compatible with single phase and split phase.

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

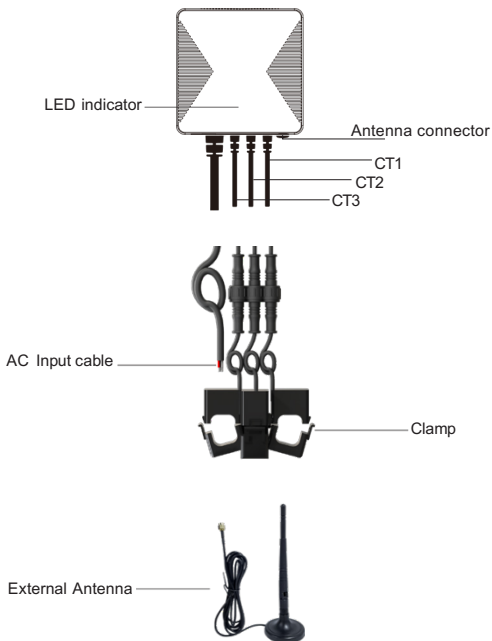
Main Features:

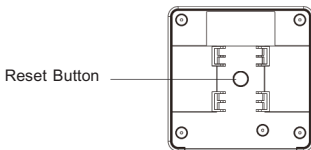
- TUYA compliant, supporting automation scenarios and HA platform integration
- Three-Phase Four-Wire, Split-Phase and Single-Phase system compatible
- Remotely monitor whole home Energy with three current transformers
- Wi-Fi communication, fast configuration, suitable for environments with inconvenient wiring.
- Real-time Voltage, Current, PowerFactor, ActivePower, Frequency, measurement
- Bidirectional measurement: Energy Usage / Solar Production
- Historical data can be displayed and exported in the App
- External antenna prevents signal from being shielded
- Functions such as Data Erasure, CT Setting, Notification, etc

2

Get to know your device

CT: Current Transformer





Reset Button

- **Reset.** Press and hold the reset button for 5 seconds until the LED indicator flashes red 3 times quickly to restore the power clamp to default factory settings (energy data will not be cleared). And it will start pairing for 3 minutes.

If you want to clear the energy data, please delete the device and wipe data on the app and add it again.

LED indicator

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

LED Status	What it means
Green LED blinking	Wait for pairing
Green LED solid on	Device has connected to cloud.
Red LED solid on	Device is connected to the router, but failed to connect to the cloud.
Red LED blinking	Wi-Fi has been configured, but failed to connect to the router.

3 Installation

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 death or serious injury.

Get started:

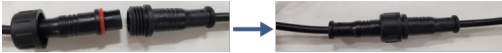
Please make sure the main power in your facility is off before installing!

Follow the steps below:

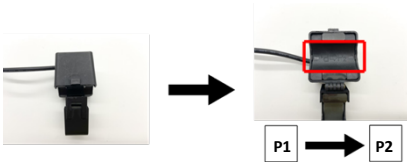
1. Place the External Antenna outside the electrical panel to ensure that the device's signal is not blocked by the metal (The base of the antenna has a magnetic and can be adsorbed on iron materials). After that, screw the External Antenna assembly cable to the Antenna connector.



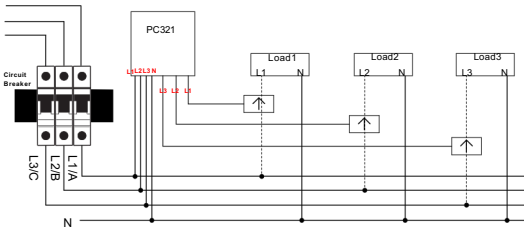
2. Attach both ends of the Current Transformer Cables first like the picture shown below. Then spinning the waterproof latch clockwise until both ends have been tightened and secured.



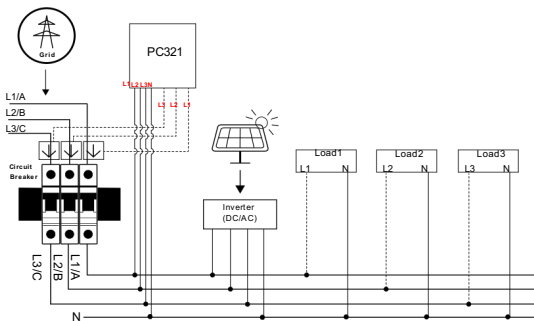
3. Open the clamp to see the arrow (P1→P2) or (K→L) or you can find it on the sticker on the outside of the clamp. This is the direction of CT. The CT support bi-directional sensing.



To measure energy consumption, the arrow on the CT should follow the direction of the current flows. In this case, the power will be positive, and the energy consumption will be accumulated.

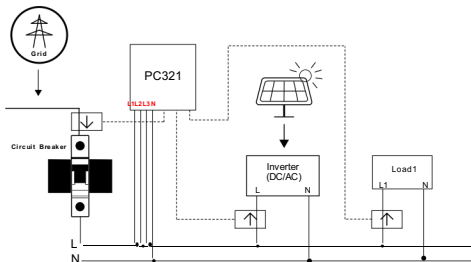


3 Phase electricity wiring diagram



3 Phase with PV system wiring diagram

To measure energy production, the arrow on the CT should opposite to the direction of the current flows. In this case, the power will be negative, and the energy generation will be accumulated.



Single Phase with PV system wiring diagram

4. Connect AC Input cable to a socket near the Electrical Box to power on the Power Clamp according to the corresponding wiring diagram. And apply the CT on the electric cable and ensure the direction of CT is correct.

Note: The circuit measured by each CT is the same phase as the power supply of that CT. For example, the circuit measured by the CT of L1 is in the same phase as the power supply of L1. Just like the wiring diagram. You cannot clamp the the CT of L1 on the L2 phase, and the power supply of L1 is still connected to the L1 phase.

4 Configure Network

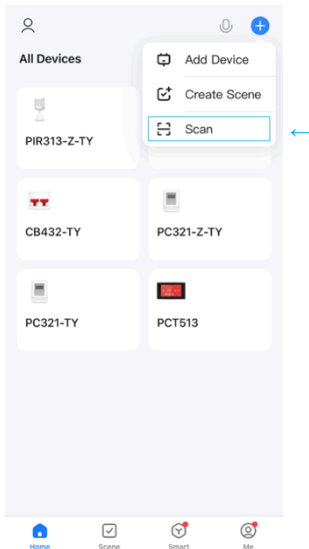
Download App

Please download the application: **Smart Life** from App Store or App Market. Also you can scan below QR code to download and install.



Method 1:

1. Open **Smart Life** app and click the 'Scan' button in the upper right corner of the App Home page.



2. Scan the following QR code to configure the network.



Method 2:

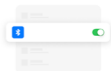
1. Power on the power clamp.
2. Make sure the LED indicator is flashing green. If not, please reset it.
3. Open **Smart Life** app and turn on Bluetooth on your phone.



You are advised to enable Bluetooth.

Enable Bluetooth to add some Wi-Fi devices easily.

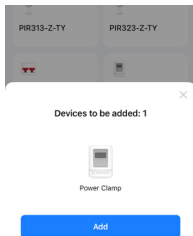
Allow Bluetooth
Permission
Enabled ✓



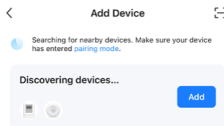
Turn on Bluetooth



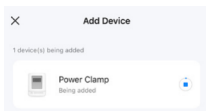
4. Open the app and the scanned devices will pop up automatically.



5. If no prompt box pops up automatically, please click the '+' on the top right of the home page to add device. It will search nearby devices.



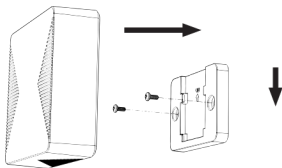
6. After clicking 'Add', enter your home Wi-Fi account and password (Only support 2.4Ghz Wi-Fi) and wait for it to be added. If it fails, please refer to the FAQ.



5 Mounting

The Power Clamp has a mounting bracket for mounting purposes.

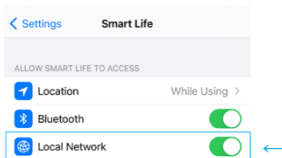
1. Use the mounting bracket as template to mark the two holes on the wall for installing screws.
2. Screw the mounting bracket onto the wall according to marked location. Install wall plugs if necessary.
3. Locate the hooks of the mounting bracket and line up the hooks with the mounting holes on the Power Clamp. Fit the hooks into the mounting holes as the picture below. Installation is now completed.



6 FAQ

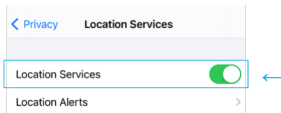
1. Wi-Fi configuration of the device failed

- Confirm the entered router password is correct.
- If you have already upgrade the iOS system to 14, you need to enable the "Local network" of **Smart Life** App.

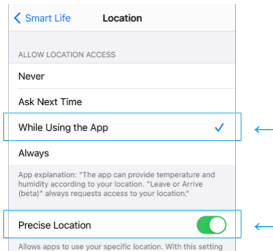


- Confirm that both the location permission of phone system and **Smart Life** App are enabled.

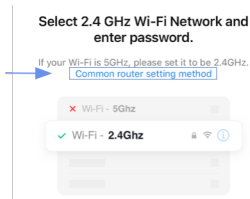
Phone system



Smart Life



- Ensure that the DHCP service is enabled for the router. If not, the IP address will be occupied.
- If your router supports both 2.4Ghz and 5Ghz, please enable the 2.4Ghz channel and add device under 2.4G Wi-Fi channel. You can follow the following step on the App to configure the router.



- If it still does not work, it is recommended to change the router and try again.

2. Device offline

- Confirm whether the Power Clamp is powered on.
- Please confirm whether the home Wi-Fi network is normal, or whether the Wi-Fi name and password has been modified:

Put the phone besides your device and make sure they are in the same network environment, try to open a website to judge if the network can be used.

- If there still have problems after the above checking, it is recommended to remove the device or change the router to add it again.