

Smart Life App



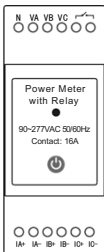
Scan code to watch the installation video



Three Phase



Single Phase



# PC473-W-TY/R/N

## Power Meter with Relay

Quick Start Guide

## Safety Handling

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

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

# Technical Specifications

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## Connectivity

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|                           |                                                     |
|---------------------------|-----------------------------------------------------|
| <b>Wi-Fi</b>              | • 802.11 b/g/n @2.4GHz                              |
| <b>BLE</b>                | • For Pairing                                       |
| <b>RF Characteristics</b> | • Operating frequency: 2.4GHz<br>• Internal antenna |

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## Physical Specifications

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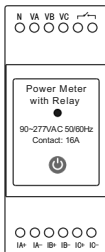
|                            |                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Un</b>                  | • 3x230/400V AC, 50/60Hz                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Voltage Range</b>       | • 90-277 V                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Supported Systems</b>   | • Single-Phase<br>• Three-Phase<br>( 3-Phase 3-Wire & Delta system are not supported )                                                                                                                                                                                                                                                                                                                    |
| <b>Power Consumption</b>   | • < 2W                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Voltmeters Accuracy</b> | • $\pm 1\%$                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Ammeters Accuracy</b>   | • 80A CT: $\pm 1\%$ ( 1-80A ) , $\pm 2\%$ ( 0-1A )<br>• 120A CT: $\pm 1\%$ ( 2-120A ) , $\pm 2\%$ ( 0-2A )<br>• 200A CT: $\pm 1\%$ ( 2-200A ) , $\pm 2\%$ ( 0-2A )<br>• 300A CT: $\pm 1\%$ ( 6-300A ) , $\pm 2\%$ ( 2-6A ) , $\pm 5\%$ ( 0-2A )<br>• 500A CT: $\pm 1\%$ ( 6-500A ) , $\pm 2\%$ ( 2-6A ) , $\pm 5\%$ ( 0-2A )<br>• 750A CT: $\pm 1\%$ ( 6-750A ) , $\pm 2\%$ ( 2-6A ) , $\pm 5\%$ ( 0-2A ) |

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|                              |                                                                                                                                                                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Clamp Inner Dimension</b> | <ul style="list-style-type: none"> <li>• 80A (default): Ø10mm</li> <li>• 120A(optional): Ø16mm</li> <li>• 200A(optional): Ø20mm</li> <li>• 300A(optional): Ø24mm</li> <li>• 500A(optional): Ø36mm</li> <li>• 750A(optional): Ø51mm</li> </ul> |
| <b>Relay Type</b>            | <ul style="list-style-type: none"> <li>• Dry contact relay, resistive current rated 10A, max.16A</li> </ul>                                                                                                                                   |
| <b>Reporting Cycle</b>       | <ul style="list-style-type: none"> <li>• Energy data: every 15 seconds</li> <li>• Relay status: immediately</li> </ul>                                                                                                                        |
| <b>Operating Environment</b> | <ul style="list-style-type: none"> <li>• Temperature: -20°C ~ +55°C</li> <li>• Humidity: ≤ 90% non-condensing</li> </ul>                                                                                                                      |
| <b>Mount Type</b>            | <ul style="list-style-type: none"> <li>• 35mm DIN rail mounting</li> </ul>                                                                                                                                                                    |
| <b>Dimension</b>             | <ul style="list-style-type: none"> <li>• 35 (W) x 65(D) x 90 (H) mm</li> </ul>                                                                                                                                                                |



# 1 Welcome



PC473-W-TY/R/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. It allows you to turn On/Off of relay and check real-time or historical energy data via mobile App.

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

## **Features:**

- TUYA compliant, supporting automation scenarios and HA platform integration
- Three-Phase Four-Wire 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
- Dry contact relay, resistive current rated 10A, max.16A, overload protection and relay setting
- Functions such as Data Erasure, CT Setting, Notification, etc
- Support Alexa, Google Assistant voice control relay

## **2 Wiring**

**Please make sure the main breaker is off before installing!**

# 1. Check the direction of CT

**For Split Core CT:** 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.



**For Donut CT:** The direction is from the concave surface of the CT to the flat surface. The CT support bi-directional sensing.

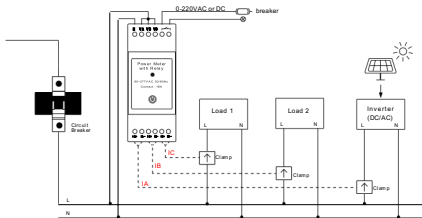


2. Connect AC Input cable to a socket near the Electrical Box to power on the PC473-W-TY/R/N according to the wiring diagram. And apply the CT on the electric cable and ensure the direction of CT is correct.

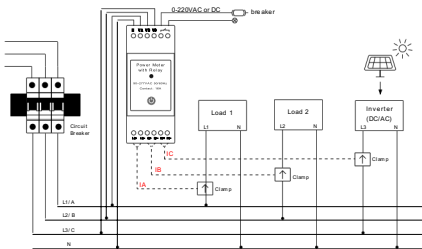
3. To measure energy consumption, the direction of the CT should be consistent with the direction of the electricity current flows. The power will be positive.

To measure energy production, the direction of the CT should be opposite to the direction of the electricity current flows. The power will be negative.

4. Please make sure the main power in your facility is off before installing. Follow the schematics below as an example to wire the Power Meter with Relay for different phase.



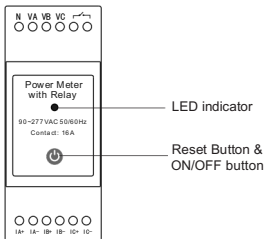
Single Phase electricity wiring diagram



Three Phase electricity wiring diagram

**Note:** When installing, please ensure that the circuit measured by CT is in the same phase as the circuit powered by PC473-W-TY/R/N.

### 3 Get to know your device



#### Reset button

- **Reset.** Press and hold the reset button for 5 seconds until the LED indicator flashes Red 3 times quickly to clear the Wi-Fi information (energy data will not be cleared). After that, the LED indicator will constantly blink and wait for pairing.

#### ON/OFF button

- **On/Off.** Press once to switch the relay ON/OFF.

## LED indicator

The LED status gives the following information of the Relay:

| LED color      | Status                       | Relay | Network                                                                |
|----------------|------------------------------|-------|------------------------------------------------------------------------|
| Green          | Blinking                     | ON    | Wait for pairing.                                                      |
|                | Solid on                     |       | Device has connected with cloud.                                       |
| Red            | Blinking                     | OFF   | Wait for pairing.                                                      |
|                | Solid on                     |       | Device has connected with cloud.                                       |
| Yellow / Green | Rapidly blinking alternately | ON    | Device is connected to the router, but failed to connect to the cloud. |
| Yellow / Red   |                              | OFF   |                                                                        |
| Yellow / Green | Slowly blinking alternately  | ON    | Wi-Fi has been configured, but failed to connect to router.            |
| Yellow / Red   |                              | OFF   |                                                                        |

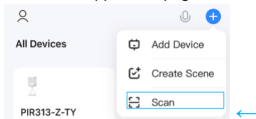
## 4 Configure Network

### 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.



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.

