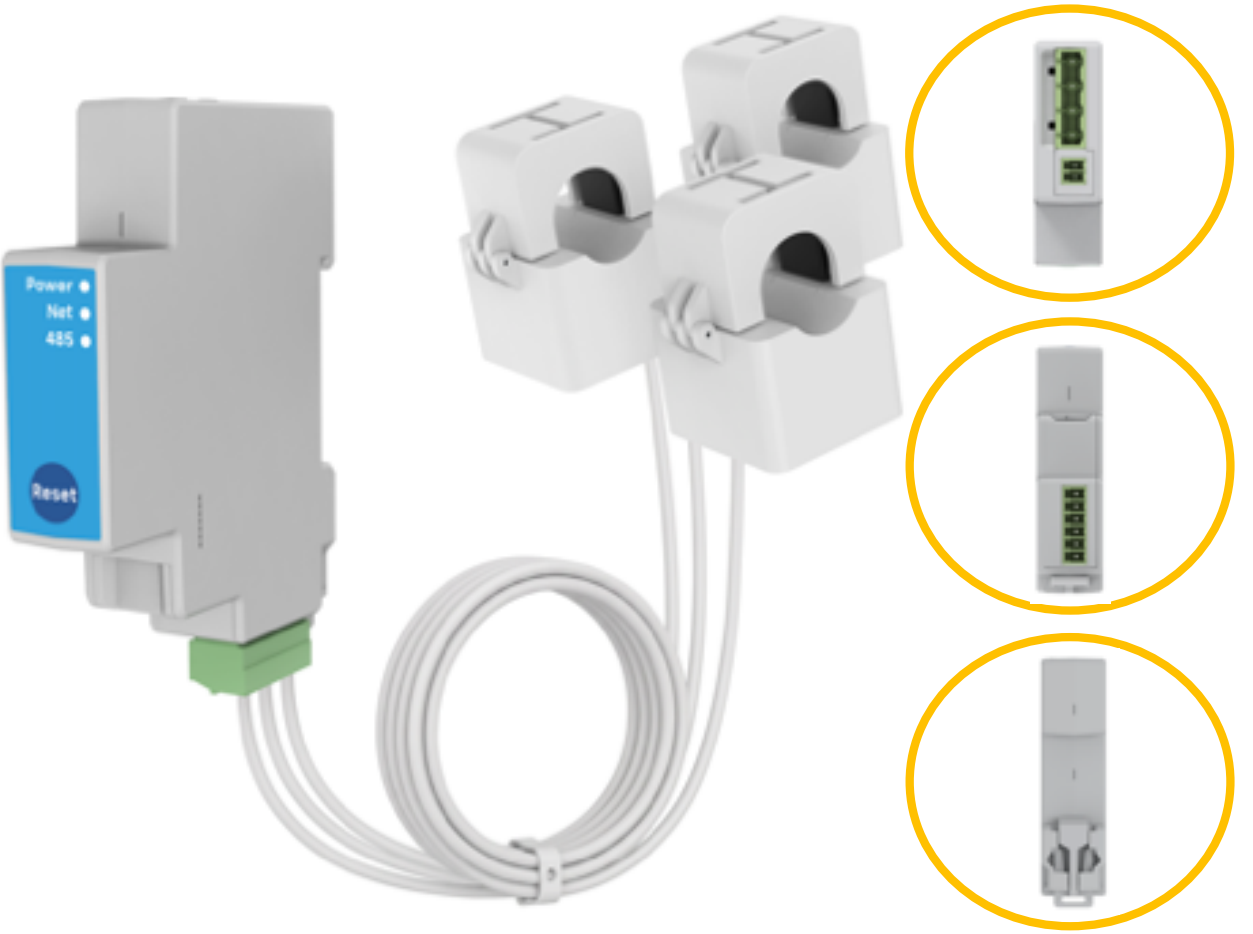


PC4713 Open Series Smart Energy Meter

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 relay.

- 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.

1 Welcome

PC4713 Open Series helps you monitor the amount of electricity consumed and produced in your three-phase power system by connecting the clamps on to the power cables. It is also compatible with split-phase and single-phase. The real-time data can be reported directly to your cloud server or be read locally without going through a third-party public cloud.

This product series includes 2 variants with different communication. All variants share identical metering core, measurement accuracy, housing dimension and power supply parameters. Differences only exist in Wi-Fi and RS485 port, as listed below:

Model Name	Wi-Fi	RS485
PC4713-W-485	✅	✅
PC4713-W	✅	X

Main Features:

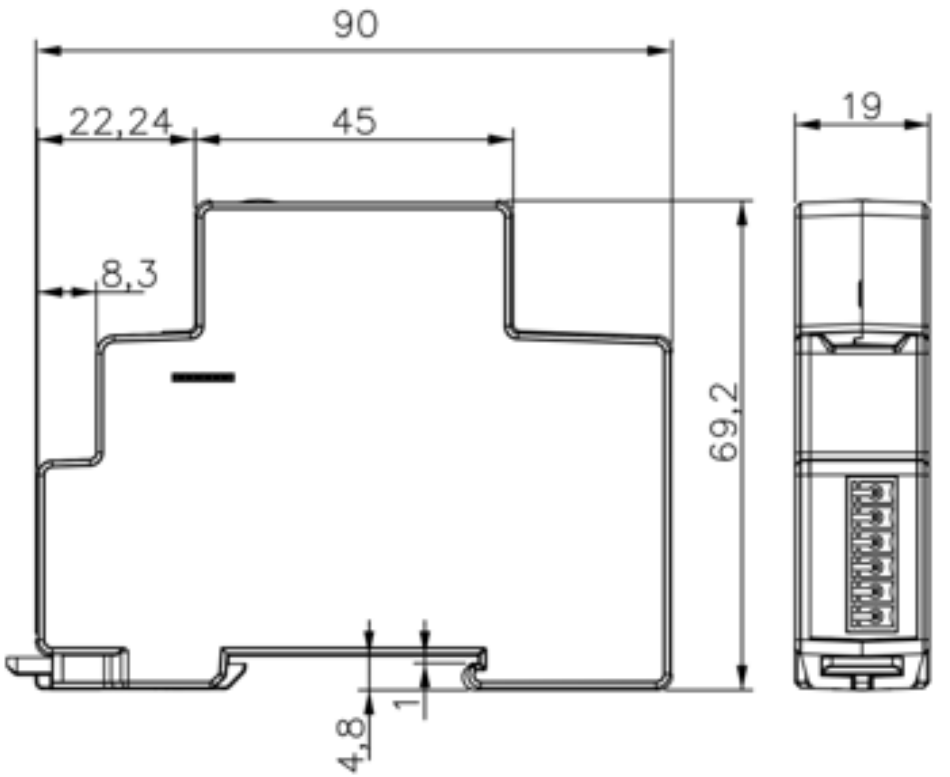
- Open API, supports Wi-Fi (HTTP / MQTT / Modbus TCP) and RS485 (Modbus RTU,optional) communication
- Three-Phase Four-Wire, Split-Phase and Single-Phase system compatible
- Remotely monitor whole home Energy with three current transformers
- Real-time Voltage, Current, PowerFactor, Frequency, ActivePower, ReactivePower, ApparentPower measurement
- Bidirectional measurement: Energy Usage / Solar Production
- Supports Four-Quadrant measurement, RMS / PQS metering modes
- Offline storage function, minute level data, automatically reporting data after network reconnection
- Functions such as Data Erasure, remote Reboot, CT Setting, Phase Sequence Error Alarm, OTA, etc
- No APP required, connect directly to the device to view real-time data or configure settings via a web browser
- Support HA platform integration
- Support Current Demand / Maximum Demand measurement (optional)

Technical Specifications

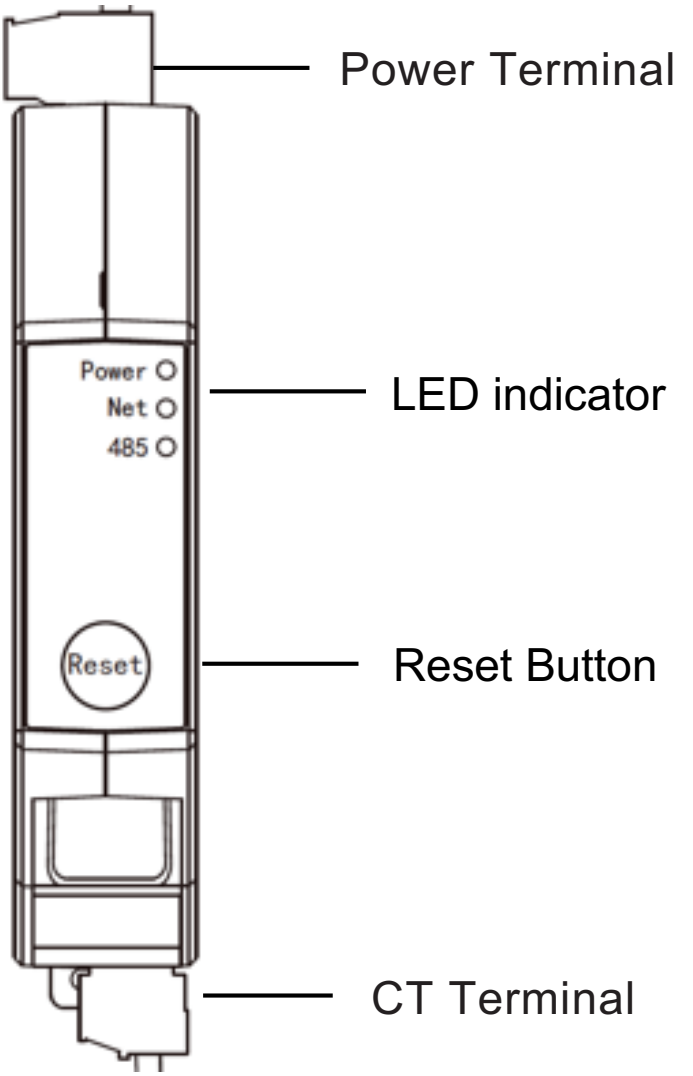
Connectivity	
Wi-Fi	• 802.11 b/g/n @2.4GHz • HTTP / MQTT / Modbus TCP
RS485 Port (optional)	• Modbus RTU

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	• ±1%
Ammeters Accuracy	• 80A CT: ±1% (1-80A) , ±2% (0-1A) • 120A CT: ±1% (2-120A) , ±2% (0-2A) • 200A CT: ±1% (2-200A) , ±2% (0-2A) • 300A CT: ±1% (6-300A) , ±2% (2-6A) , ±5% (0-2A) • 500A CT: ±1% (6-500A) , ±2% (2-6A) , ±5% (0-2A) • 750A CT: ±1% (6-750A) , ±2% (2-6A) , ±5% (0-2A)

Clamp Inner Dimension	• 80A (optional): Ø10mm • 120A(default): Ø16mm • 200A(optional): Ø20mm • 300A(optional): Ø24mm • 500A(optional): Ø36mm • 750A(optional): Ø51mm
Data Refresh	• 50ms
Response Time	• Max 50ms (Modbus RTU，optional)
Report Time	• Can be set in integration
Operating Environment	• Temperature: -20℃ ~ +55℃ • Humidity: ≤ 90% non-condensing
Mount Type	• 35mm DIN rail mounting
Dimension	• 19 (W) x 69(D) x 90 (H) mm



2 Get to know your device



Reset Button

- Press 3 times quickly to reboot the device.
- Press and hold for 5 sec to reset the network.
- Press and hold for 10 sec to factory reset

LED Indication

LED	Behavior	Status
Power	ON	Power supply is connected
	Slow blink	Phase sequence error warning
	Fast blink 1 time	Ready to reboot
	Fast blink 2 times	Ready to reset network
	Fast blink 3 times	Ready to factory reset
Net	ON	• Disable MQTT, and connected router • Enable MQTT, and connected server
	Slow blink	AP mode, wait for configuring
	Medium blink	STA mode, but failed to connect router
	Fast blink	Enable MQTT, connected router, but failed to connect server
485 (optional)	ON	Currently communicating via RS485
	OFF	Currently no communication via RS485

Note: Fast blink: 200ms ON / 200ms OFF
Medium blink: 500ms ON / 500ms OFF
Slow blink: 1500ms ON / 1500ms OFF

3 Installation

1) Before installation, please turn off the circuit breakers of the distribution box and make sure there is no voltage on their terminals.

2) Mount the main unit of energy meter onto the DIN rail.

3) According to the below wiring diagrams to install. Taking a three-phase four-wire wiring as an example.

3.1 Use four power cords to connect the Power Terminal A/B/C/N in parallel to the L1/L2/L3/N lines at the output of the circuit breaker respectively.

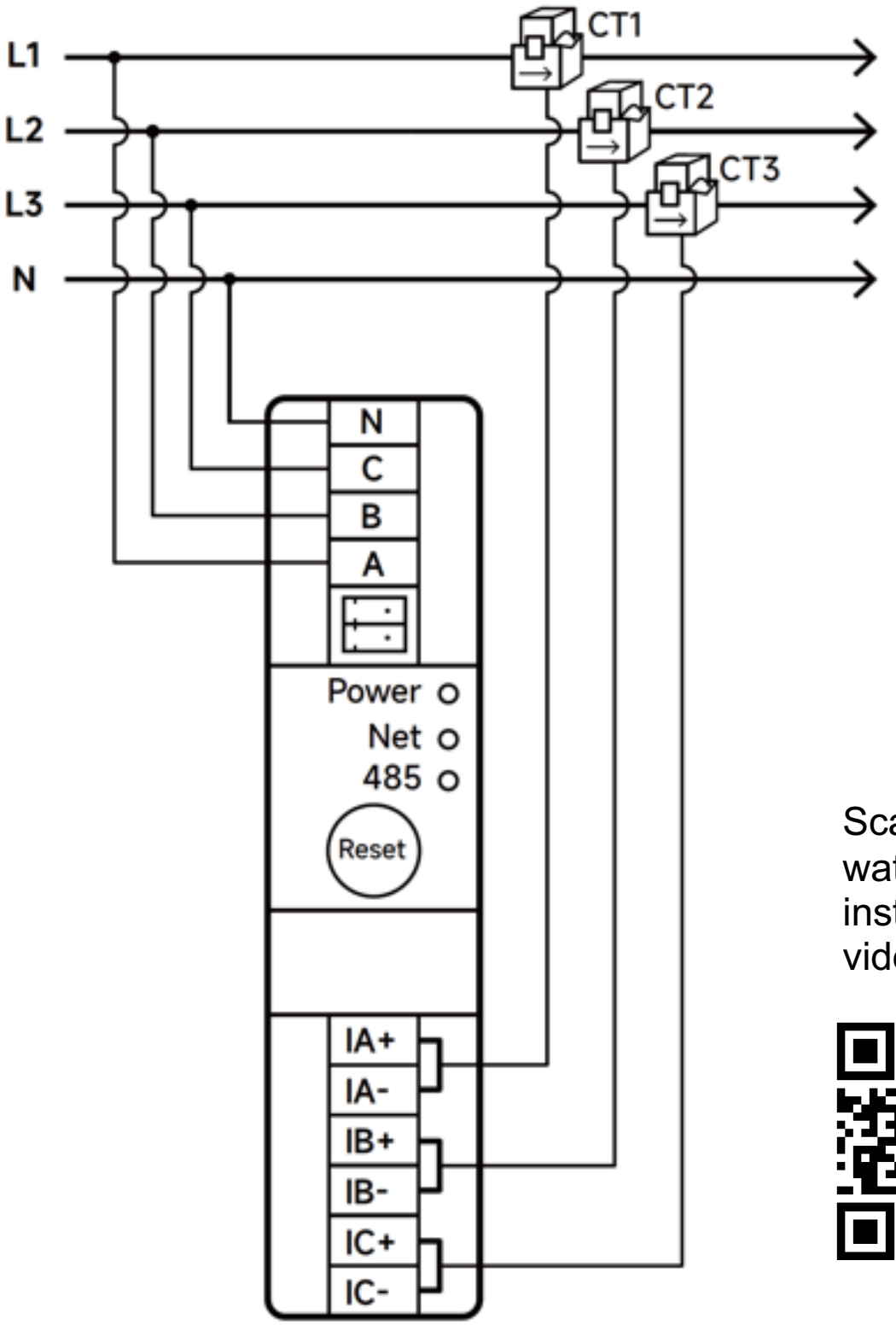
3.2 Plug the power cord of CT1 into the IA port of CT Terminal, connect the "+" wire to “IA+”, and connect the "-" wire to “IA-”. Similarly, connect CT2 to the IB port and CT3 to the IC port.

3.3 Put CT1/CT2/CT3 around the cables L1/L2/L3 respectively, with the arrow direction pointing towards the loads.

3.4 Insert the Power Terminal and CT Terminal into the corresponding positions on the main unit.

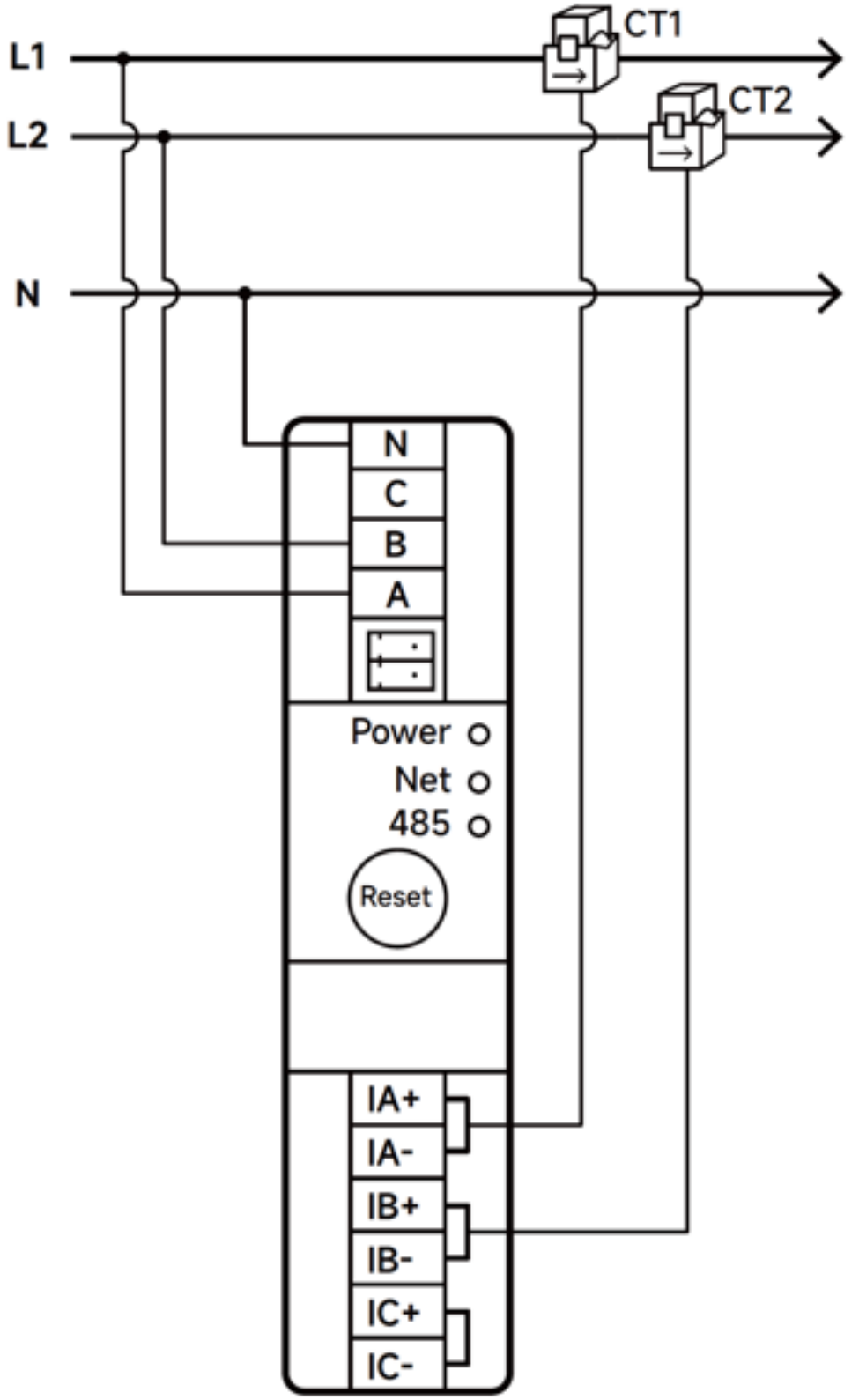
4) After confirming that all connections are correct, turn on the circuit breakers

Three-Phase Four-Wire Wiring



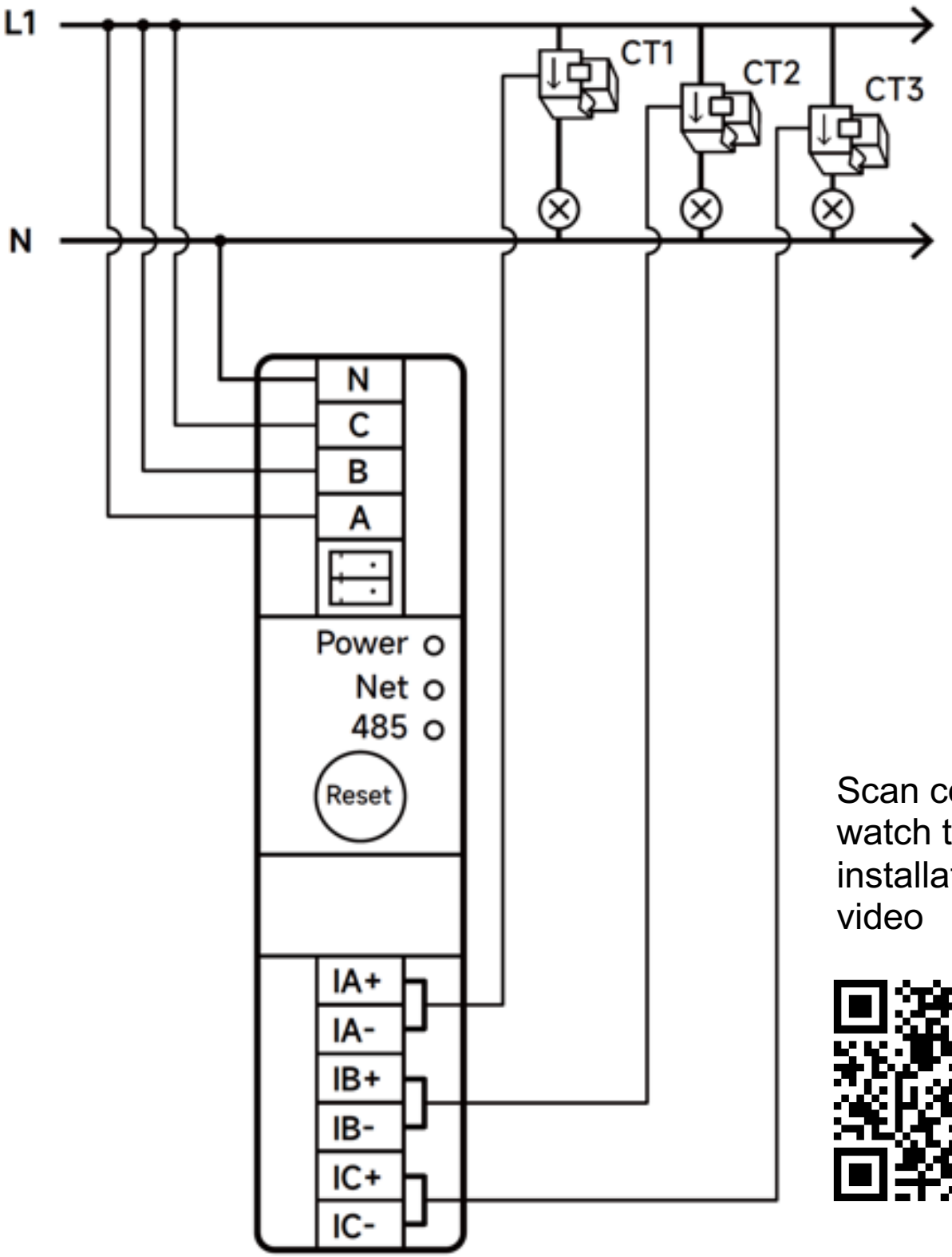
Scan code to watch the installation video

Split-Phase Wiring



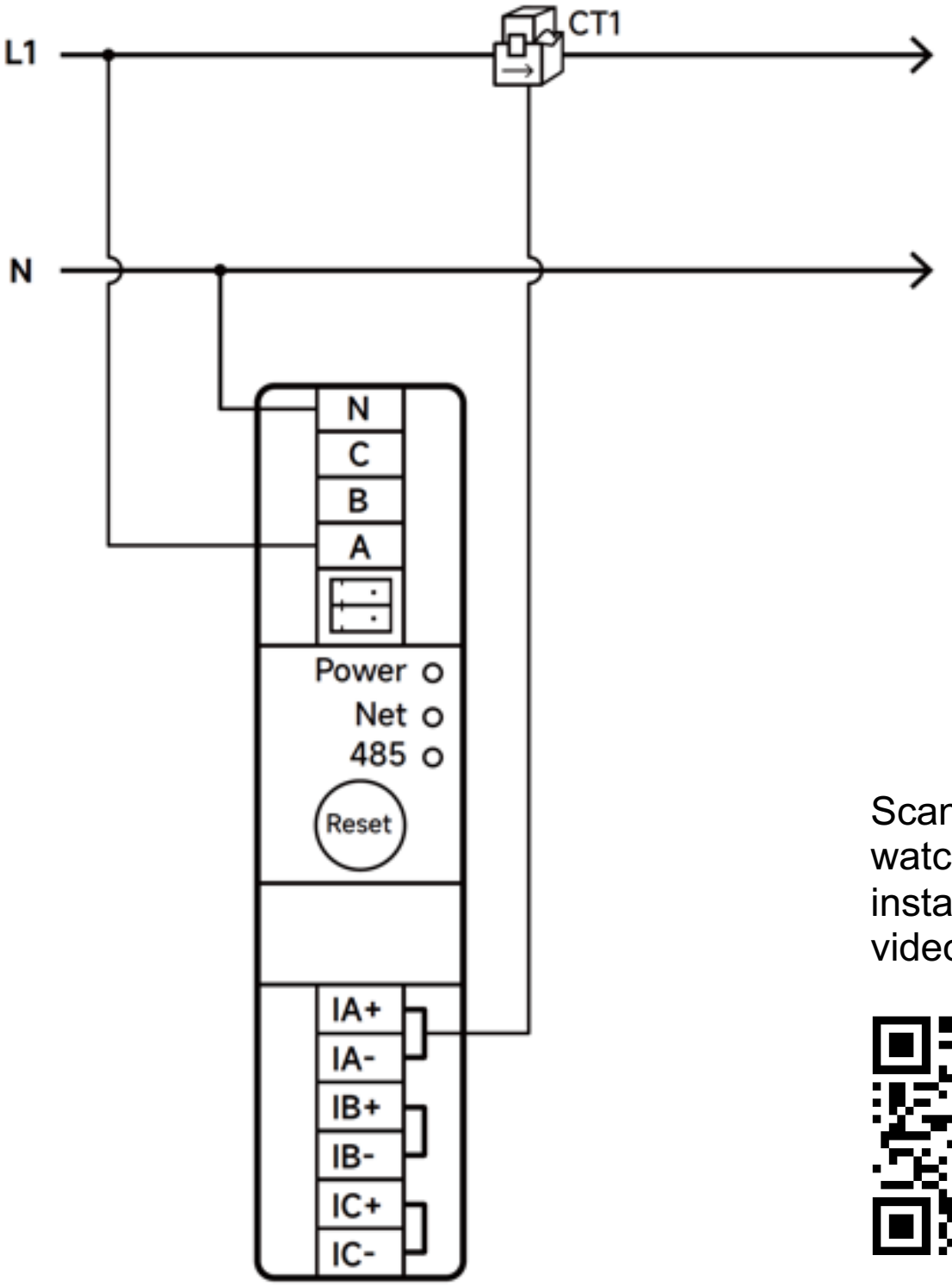
Scan code to watch the installation video

Single-Phase Three Loads Wiring



Scan code to watch the installation video

Single-Phase One Circuit Wiring



Scan code to watch the installation video

Note: Please ensure that the power supply wiring of the device and the corresponding CT measurement circuit are on the same phase

4 Configure Network

Note:

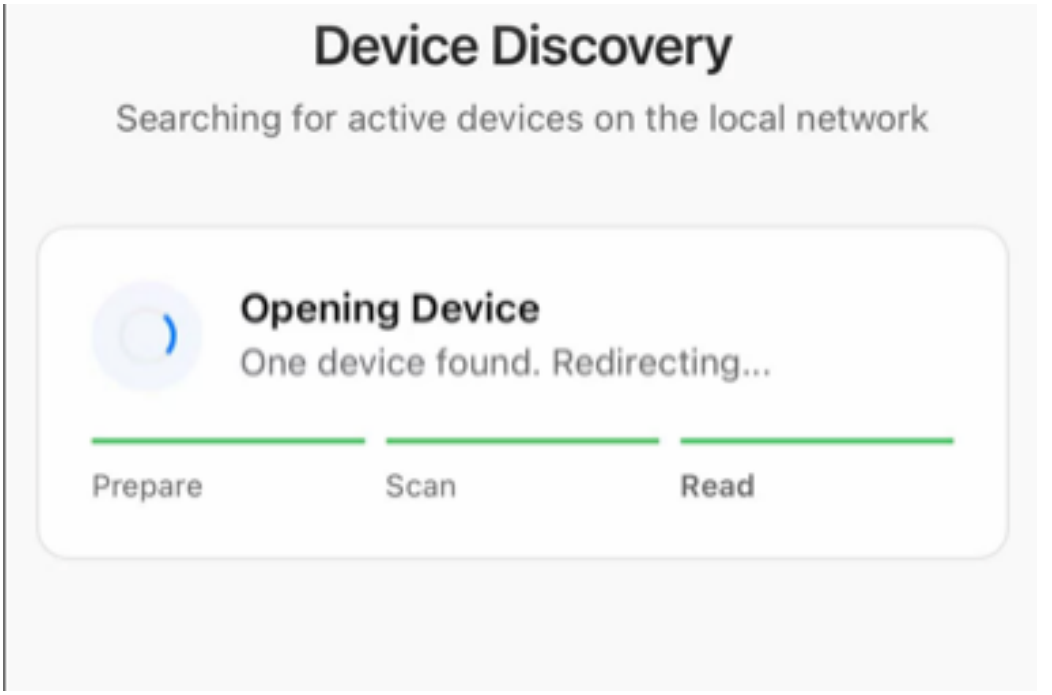
- **Wi-Fi configuration is recommended to use the latest version of Google Chrome browser for access.**
- **For Protocol Documents such as HTTP/MQTT/Modbus TCP, RTU, please contact the relevant sales personnel for support.**

Wi-Fi Communication

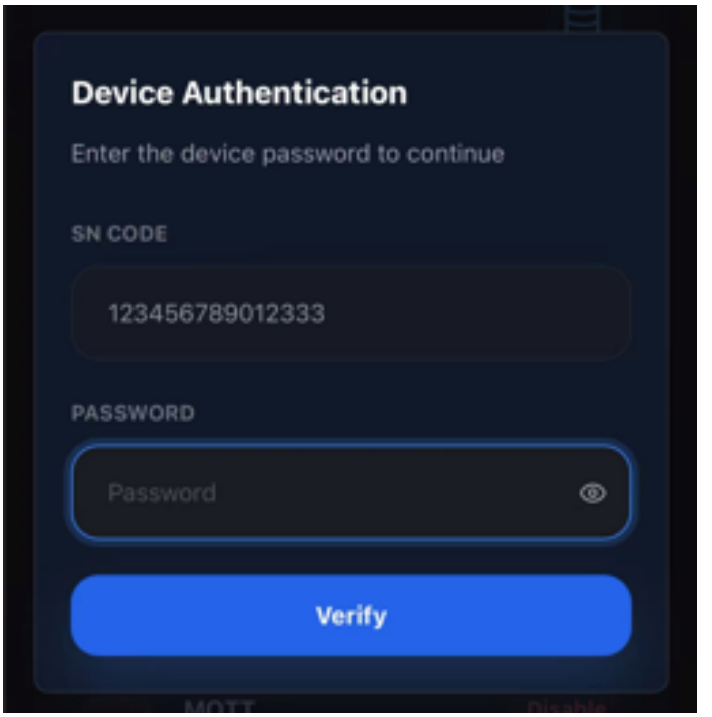
AP Access:

1. After wiring, power on the meter, the Wi-Fi LED will flash slowly, it means the meter is in AP mode. Turn on your phone's Wi-Fi and search the meter's "AP" hotspot, with the AP hotspot name "**Meter_XXXXXX**", and XXXXXX is the last 6 number of SN code.

2. When connect the AP hotspot, enter “**192.168.4.1**” or “**owon.local**” with a web browser, then it will find the device automatically.

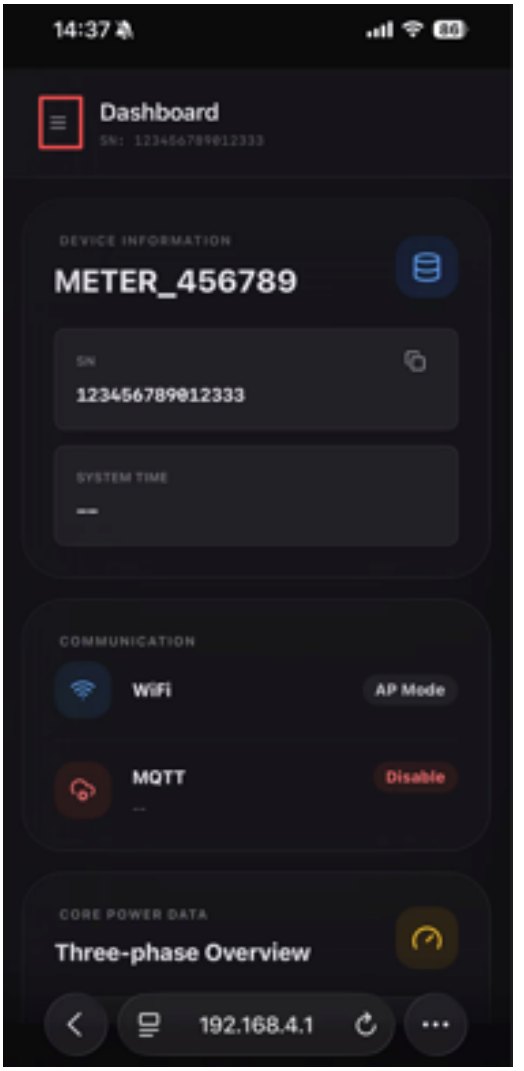


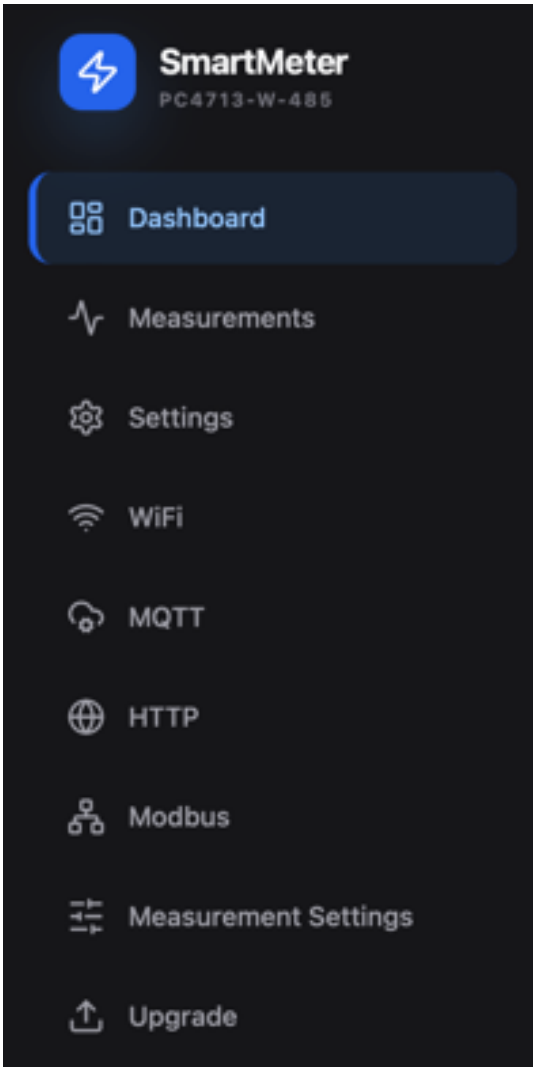
3. After finding the device, you can see the Login page, enter the default password “**112233**” and enter the device’s page.



4. In device's page, we could see the real-time's Voltage, Current, Frequency, Power Factor, Active Power, Reactive Power, Apparent Power and so on.

5. Click the button "≡" in the upper left corner of Dashboard, you could see the other settings, like Wi-Fi, MQTT, HTTP, Modbus and so on.

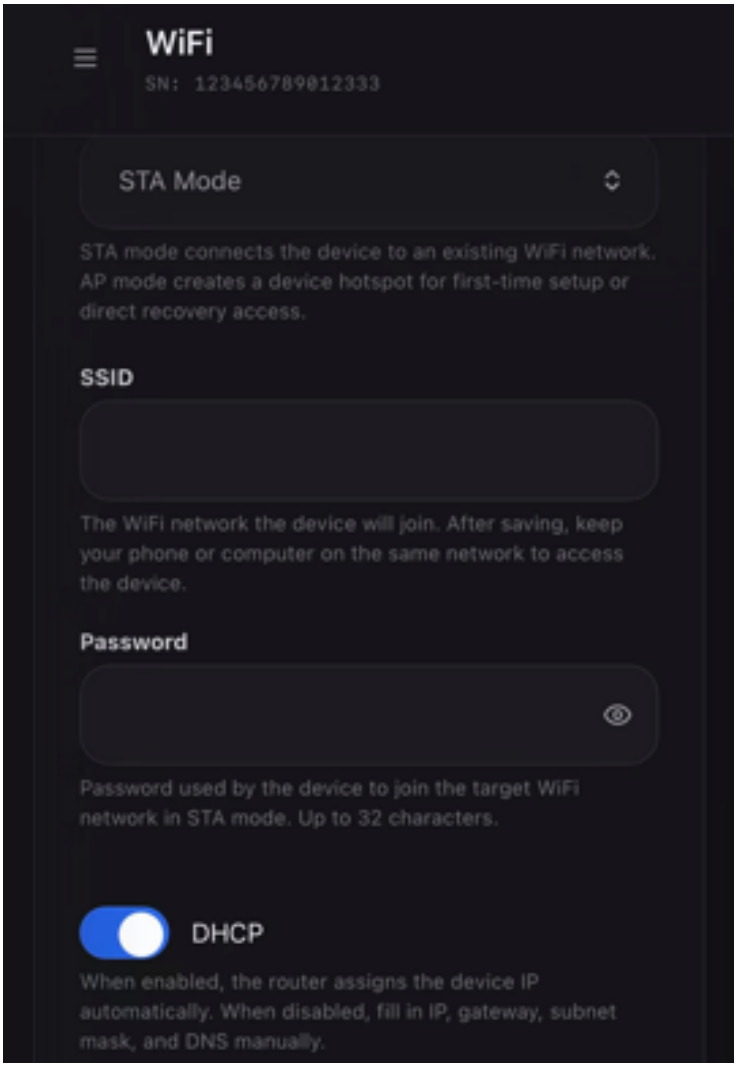




Note: owon.local address relies on the mDNS service, and the availability may be affected by the operating system, browser, network adapter, and related network settings. If you cannot open the page, please try accessing it via 192.168.4.1.

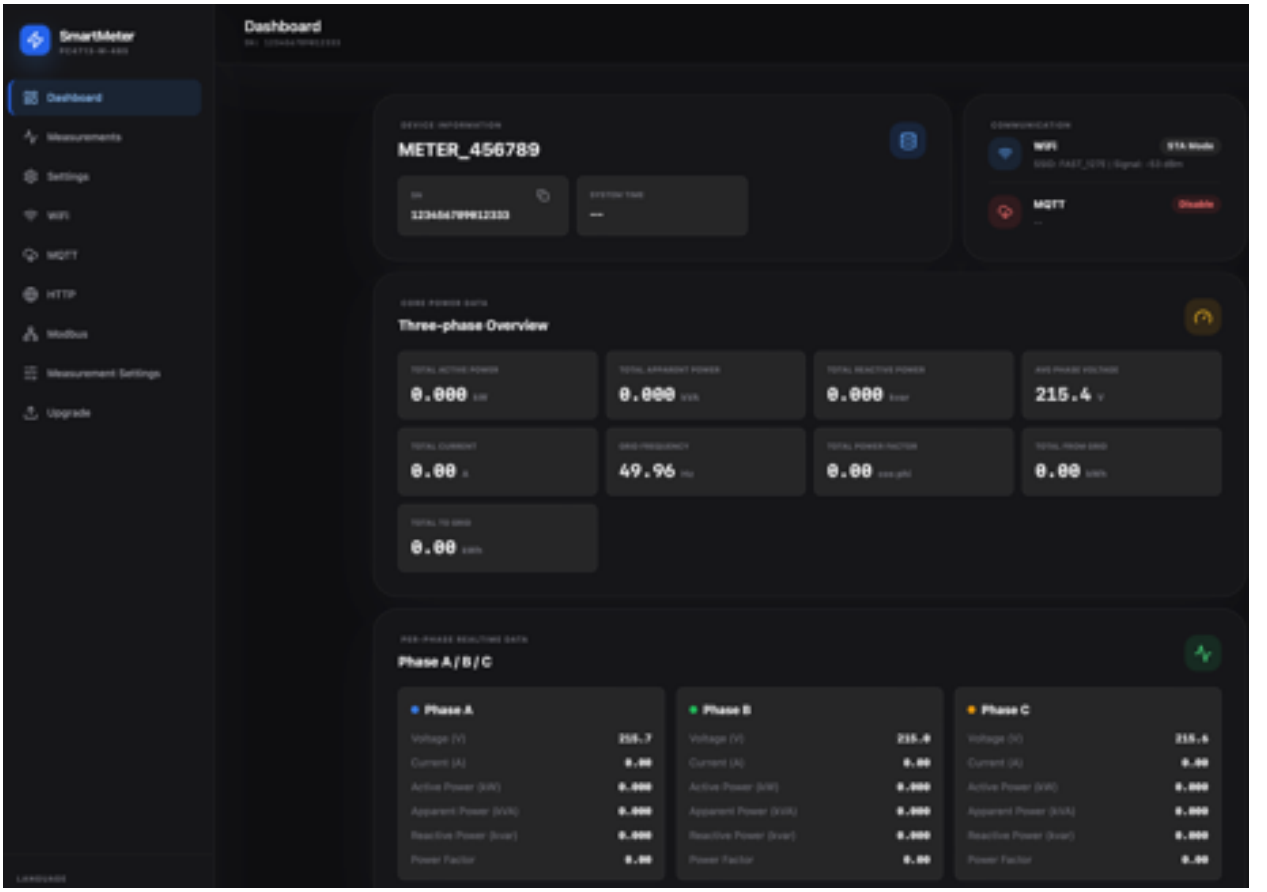
STA Access:

1. When AP is connected, on setting page, click “**WiFi**” to enter the WiFi settings page. Select “**STA Mode**”, and enter the router’s **SSID** and **Password**, which you want to connect to the meter. You can enable the DHCP to automatically distribute the IP address, or manually set static IP address.



2. Keep your phone or computer connect the router, the same router as the meter connected. Enter the **IP address** of the meter in a web browser, which can be found on the router’s manager page or DHCP page or other network tools. Alternatively, you can also enter **http://owon.local** to enter the Login page.

3. On the Login page, enter the default password “**112233**” and enter the device’s page. The following screenshot is an example of a computer web page.



Note: owon.local address relies on the mDNS service, please confirm that:

- Your mobile phone or power supply is on the same local area network (LAN) as the electricity meter
- Your router is not using client isolation, network access isolation, or VLAN isolation
- Your operating system and browser support mDNS
- Your firewall or security software is not blocking local network access

If access to the .local address fails, it is recommended to look up the electricity meter's LAN IP address and access it directly.