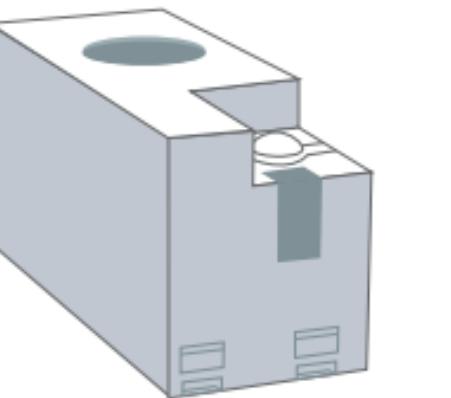


Smart Energy Sensor

Quick Installation Guide



1P+N
Flexible Installation



HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Turn off all power supply sources before installing and during maintenance of this equipment.
- Do not use an The sensor for voltage testing purposes. A Voltage Tester must be used instead.



FIRE HAZARD

- The sensors must be associated with an easily accessible upstream protection and circuit-breaker system.
- The terminals of the voltage measuring cables must be adjusted according to the equipment for monitoring. It is the responsibility of the qualified professionals to provide such cable terminals.



RISK OF DAMAGING The SENSORS

- Comply with the neutral phase. (BLACK=Phase, BLUE=Neutral)
- Disconnect The sensors before performing the dielectric withstand test.
- The sensors can only be installed upstream if associated with a contactor, variable frequency drive or motor starter.
- Limit the insulation measurements up to 500 VDC.

Warning: Failure to follow these instructions can result in death, serious injury, or equipment damage.

Please Note

- The sensors must only be installed and maintained by qualified professionals.
- The sensors should not be installed if, while unpacking, any damage is observed.
- The sensors must be installed inside electrical panels or switchboards, behind a door or plate, so that they are inaccessible to unauthorized persons.
- The electrical panels must meet the requirements of the applicable standards (IEC 61439-1) and be installed in compliance with current installation and safety rules (IEC 61140).
- All relevant local, regional, and national regulations must be respected while installing and using The sensors.
- The sensors' manufacturer is not liable in case the instructions mentioned in this document and other referred documents are not respected.

Addition Notes

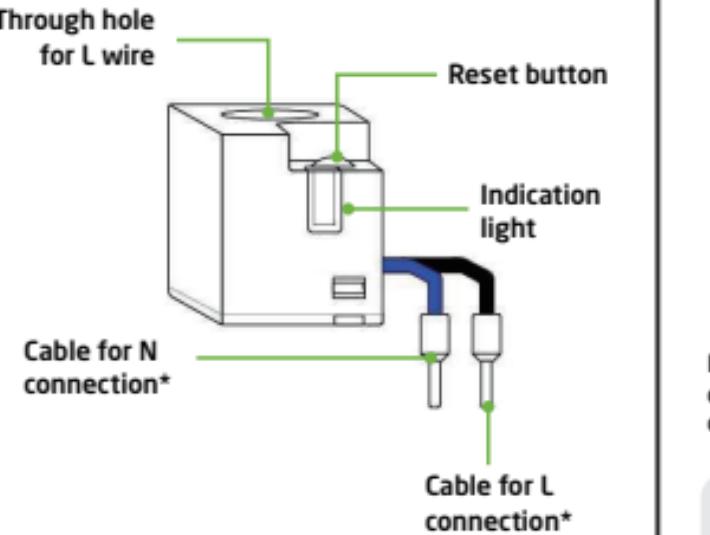
- Please do not disassemble, modify or short-circuit the product, otherwise, it may cause electric shock, fire or electrical damage.
- This product is an electronic product, please avoid a strong beating, collision or dropping the product.
- Exposing to extreme heat, cold or humidity is strictly prohibited.
- Please place the product in a safe place out of the reach of children to avoid danger.

Specification

- Product name: Smart Energy Sensor
- Communication type: Wi-Fi / Zigbee
- Rated voltage Un (FCC) : ~110-240 V, 50/60Hz
- Rated voltage Un (CE) :~220-240 V, 50/60Hz
- Max current Imax: 63 A
- Over-voltage category: III
- Rated insulating voltage Ui: 250V
- Rated impulse withstand voltage Uimp: 4kV
- Pollution degree: 3
- Protection degree: IP20
- Rated operating temperature: -25~60 °C
- Power consumption at normal using: 0.5 W
- Power consumption at pairing mode: 1 W
- Energy measurement accuracy: 1%

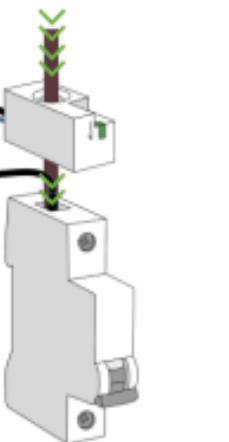
Product Introduction

The smart energy sensor is a real-time electrical monitoring device with wireless communication. It can be flexibly installed like a smart accessory for protective and control devices.



* The sensor powered itself and measures voltage via the cables for L and N connection.

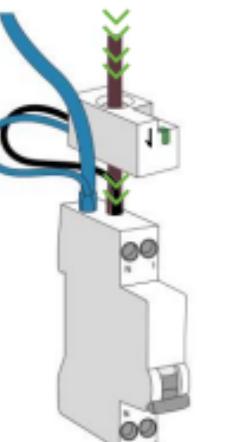
Installation Scheme (BPM1111)



Note: The energy flowing in the same direction as the current flow arrow printed on the sensor housing is counted as forward energy.

- It can cause product damage, if the blue cable for N connection is connected to phase conductors by mistake.
- Installation of The sensors downstream of control devices - such as a contactor, variable frequency drive or motor starter - is forbidden because of possible product damage.

Installation Scheme (BPM1113)



Note: The energy flowing in the same direction as the current flow arrow printed on the sensor housing is counted as forward energy.

- It can cause product damage, if the blue cable for N connection is connected to phase conductors by mistake.
- Installation of The sensors downstream of control devices - such as a contactor, variable frequency drive or motor starter - is forbidden because of possible product damage.

Indicator Light Description

ON, normal using, connected to cloud



Flashing at 2Hz, in pairing mode¹⁾



Flashing at 0.5Hz, paired, searching for cloud²⁾



Flashing at 1Hz, wireless communication failed³⁾



Flashing at 0.25Hz, self-checking failed⁴⁾



1) Press the reset button 3~5 seconds till the LED is quickly flashing to enter the pairing mode; After removing the device in APP, the device will automatically enter pairing mode.

2) The product has successfully connected to a wireless network but is unable to establish a connection to the cloud server.

3) Failed to communicate with the cloud, and need to check whether the supply voltage is too low.

4) Please try restarting the device - disconnecting power supply, switching on, then pairing the device again.

Quick Setup

Before activating The sensor, please make sure you have the latest version of Smart Life app downloaded and installed.

If your device is of the Zigbee version, please install a Tuya Smart Zigbee gateway properly beforehand.

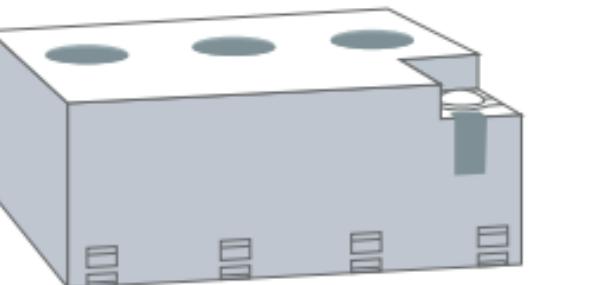


Smart Life App

Please connect the mobile phone to the wireless network, open the App, tap "Home" and then tap "+" in the top right corner to enter the "Add Device" page. The APP will scan the smart devices to be configured, and operate according to the APP prompts after The sensor appears.

Smart Energy Sensor

Quick Installation Guide



3P+N
Flexible Installation



HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Turn off all power supply sources before installing and during maintenance of this equipment.
- Do not use an The sensor for voltage testing purposes. A Voltage Tester must be used instead.



FIRE HAZARD

- The sensors must be associated with an easily accessible upstream protection and circuit-breaker system.
- The terminals of the voltage measuring cables must be adjusted according to the equipment for monitoring. It is the responsibility of the qualified professionals to provide such cable terminals.



RISK OF DAMAGING The SENSORS

- Comply with the neutral phase. (BLACK=Phase, BLUE=Neutral)
- Disconnect The sensors before performing the dielectric withstand test.
- The sensors can only be installed upstream if associated with a contactor, variable frequency drive or motor starter.
- Limit the insulation measurements up to 500 VDC.

Warning: Failure to follow these instructions can result in death, serious injury, or equipment damage.

Please Note

- The sensors must only be installed and maintained by qualified professionals.
- The sensors should not be installed if, while unpacking, any damage is observed.
- The sensors must be installed inside electrical panels or switchboards, behind a door or plate, so that they are inaccessible to unauthorized persons.
- The electrical panels must meet the requirements of the applicable standards (IEC 61439-1) and be installed in compliance with current installation and safety rules (IEC 61140).
- All relevant local, regional, and national regulations must be respected while installing and using The sensors.
- The sensors' manufacturer is not liable in case the instructions mentioned in this document and other referred documents are not respected.

Addition Notes

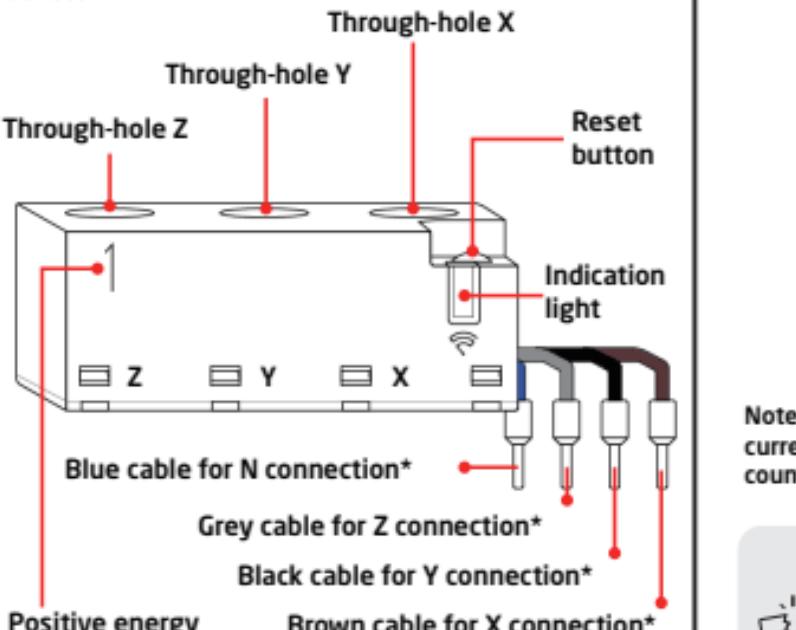
- Please do not disassemble, modify or short-circuit the product, otherwise, it may cause electric shock, fire or electrical damage.
- This product is an electronic product, please avoid a strong beating, collision or dropping the product.
- Exposing to extreme heat, cold or humidity is strictly prohibited.
- Please place the product in a safe place out of the reach of children to avoid danger.

Specification

- Product name: Smart Energy Sensor
- Communication type: Wifi / Zigbee
- Rated voltage Un: 3N~ 120-240/208-415V 50/60Hz
- Max current Imax: 63 A
- Over-voltage category: III
- Rated insulating voltage Ui: 250V
- Rated impulse withstand voltage Uimp: 4kV
- Pollution degree: 3
- Protection degree: IP20
- Rated operating temperature: -25~ 60 °C
- Power consumption at normal using: 0.7 W
- Power consumption at pairing mode: 1.4 W
- Energy measurement accuracy: 1%

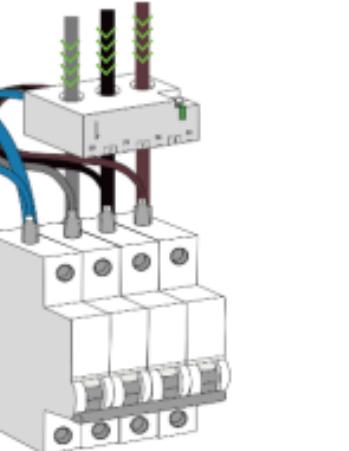
Product Introduction

The smart energy sensor is a real-time electrical monitoring device with wireless communication. It can be flexibly installed like a smart accessory for protective and control devices.



* The sensor powered itself and measures voltage via the cables for L and N connection.

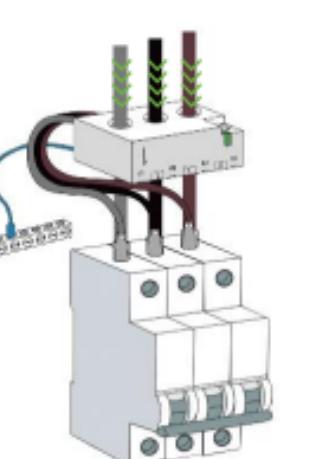
Installation Scheme (BPM3113)



Note: The energy flowing in the same direction as the current flow arrow printed on the sensor housing is counted as forward energy.

- It can cause product damage, if the blue cable for N connection is connected to phase conductors by mistake.
- The sensors must be associated with an easily accessible upstream protection and circuit-breaker system - marked with callout A in the schematic above.

Installation Scheme (BPM3111)



Note: The energy flowing in the same direction as the current flow arrow printed on the sensor housing is counted as forward energy.

- It can cause product damage, if the blue cable for N connection is connected to phase conductors by mistake.
- The sensors must be associated with an easily accessible upstream protection and circuit-breaker system - marked with callout A in the schematic above.

Indicator Light Description

ON, normal using, connected to cloud



0s

Flashing at 2Hz, in pairing mode¹⁾



0s

1s

2s

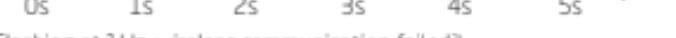
3s

4s

5s



Flashing at 0.5Hz, paired, searching for cloud²⁾



Flashing at 1Hz, wireless communication failed³⁾



Flashing at 0.25Hz, self-checking failed⁴⁾



0s

1s

2s

3s

4s

5s

- 1) Press the reset button 3~5 seconds till the LED is quickly flashing to enter the pairing mode; After removing the device in APP, the device will automatically enter pairing mode.

- 2) The product has successfully connected to a wireless network but is unable to establish a connection to the cloud server.

- 3) Failed to communicate with the cloud, and need to check whether the supply voltage is too low.

- 4) Please try restarting the device - disconnecting power supply, switching on, then pairing the device again.

Quick Setup

Before activating The sensor, please make sure you have the latest version of Smart Life app downloaded and installed.

If your device is of the Zigbee version, please install a Tuya Smart Zigbee gateway properly beforehand.



Smart Life App

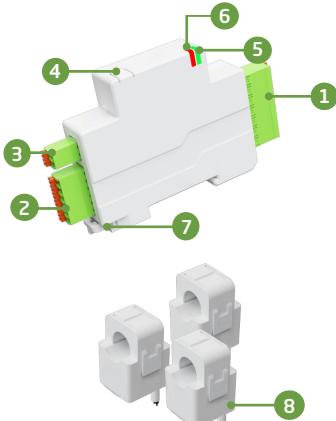
Please connect the mobile phone to the wireless network, open the App, tap "Home" and then tap "+" in the top right corner to enter the "Add Device" page. The APP will scan the smart devices to be configured, and operate according to the APP prompts after The sensor appears.

Smart Energy Monitors with Split-core Current Transformers

Quick Installation Guide 3P+N



Product Description



No.	Describe
1	Connector for voltage take-offs connection
2	Connector for current transformer connection
3	Connector for RS485 communication (optional)
4	Reset button
5	Status LED (ACT)
6	Alarm LED (AL)
7	Locking Clip for DIN rail mounting
8	Split-core CT locking clasp

Please Note

Please note before starting Installation

- The CT sensors must only be installed and maintained by qualified professionals.
- The CT sensors should not be installed if, while unpacking, any damage is observed.
- The CT sensors must be installed inside electrical panels or switchboards, behind a door or plate, so that they are inaccessible to unauthorized persons.
- The electrical panels must meet the requirements of the applicable standards (IEC 61439-1) and be installed in compliance with current installation and safety rules (IEC 61140).
- All relevant local, regional, and national regulations must be respected while installing and using The CT sensors.
- The CT sensors' manufacturer is not liable in case the instructions mentioned in this document and other referred documents are not respected.

Technical Data

Rated operating voltage U_n : 220~240 VAC phase to neutral, 50/60 Hz
380~415 VAC phase to phase, 50/60 Hz

Max current I_{max} : 80 A / 120 A / 200 A / 250 A

Over-voltage category: III

Rated insulating voltage Ui : 440 V

Rated impulse withstand voltage U_{imp} : 4 kV

Pollution degree: 3

Protection degree: IP20

Energy measurement accuracy: 1%

Maximum power consumption: ≤ 2 VA

Rated operating temperature: -25~70 °C

RISK OF DAMAGING

- Comply with the phase and the neutral position. Connect the N pole of the voltage measurement connector to phase voltage is strictly forbidden.
- Please ensure that the split-core current transformers not in direct contact with non insulated conductors.
- Disconnect the voltage take-offs of The CT before performing the dielectric withstand test or insulation measurements.
- Limit the insulation measurements up to 500 VDC.
- The CT can only be installed upstream if associated with a contactor, frequency converter or motor starters.

Warning: Failure to follow these instructions can result in death, serious injury, or equipment damage.

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

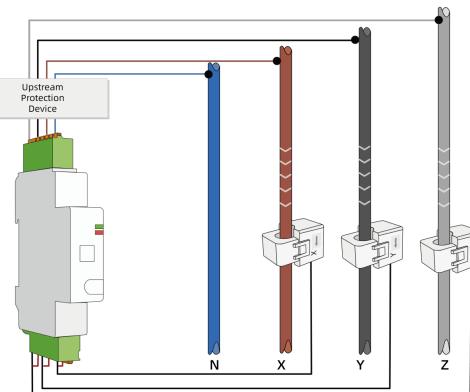
- The CT should be installed, operated, serviced and maintained ONLY by qualified professionals.
- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NPPA 70E, CSA 2462, DL/T 320 or local equivalent.
- Turn off all power supply sources before installing and during maintenance of this equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Do not use a The CT for voltage testing purposes. A Voltage Tester must be used instead.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

FIRE HAZARD

- The CT must be associated with an easily accessible upstream protection and circuit breaker system.
- The ends of voltage take-offs cables must be adjusted to the according equipment and device. Such an adjustment can only be handled by qualified professionals.
- Failure to follow these instructions can result in death, serious injury, or equipment damage.

Installation and Connection

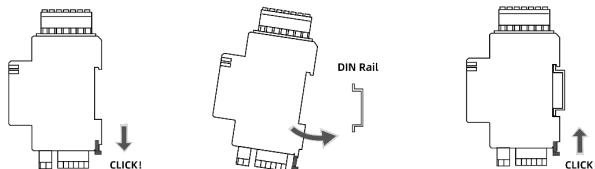


NOTICE

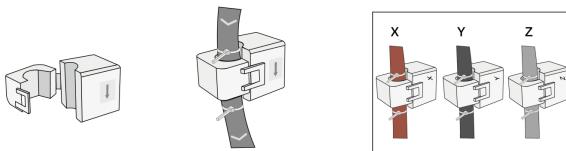
- Voltage measurement must match current measurement - Vx (X); Vy (Y); Vz (Z), to measure electrical data correctly.
- It can cause product damage, if the blue cable for N connection is connected to phase conductors by mistake.

Product Description

1 Install the Monitor

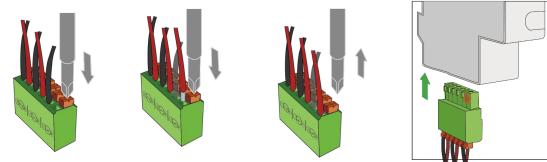


2 Install the Current Transformer

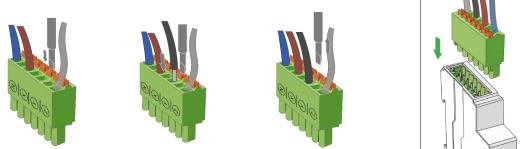


Installation and Connection

3 Install the Current Transformer connector



4 Install the voltage connector



NOTICE

- To guarantee measurement accuracy it is recommended to keep the conductor adherent to the CT body by two fixing loops, see figure.
- Associate correctly the correspondent phase to CT line (e.g. L1 with CT1).

Indicator Light Description

	ON, normal using, connected to cloud.
	Flashing at 2Hz, in pairing mode. Press the reset button till the LED is quickly flashing to enter the pairing mode.
	Flashing at 0.5Hz, paired, searching for cloud. The product is not connected to the wireless network now and is searching for the network.
	Flashing at 1Hz, wireless communication failed. Failed to communicate with the cloud, and need to check whether the supply voltage is too low.
	Flashing at 0.25Hz, self-checking failed. Please try restarting the device-disconnecting power supply, switching on, then repairing the device.
	Flashing at 1Hz, alarm reminding. Please check the device wiring and the alarm information at the APP.

Quick Setup



- Before activating The CT sensor, please make sure you have the latest version of Smart Life app downloaded and installed. If your device is of the Zigbee version, please install a Tuya Smart Zigbee gateway properly beforehand.
- Please connect the mobile phone to the wireless network, open the App, tap "Home" and then tap "+" in the top right corner to enter the "Add Device" page. The APP will scan the smart devices to be configured, and operate according to the AP.