



**Adjustable voltage, current and  
leakage protective device  
with kilowatt-hour meter**



**Instruction manual**

## **I. Application**

Adjustable voltage, current and leakage protective device with kilowatt-hour meter is an intelligent protector integrated with over-voltage protector, under-voltage protector, over-current protector and leakage protector. In case of over-voltage fault, under-voltage fault, over-current fault or leakage in line, this product can instantly power off to prevent electrical equipment from being burnt. The over-voltage, under-voltage, over-current and leakage protection values of this product can all be set up by yourself and can be adjusted on the basis of local practical condition.

## **II. Product features**

2.1 In case of over-voltage fault, under-voltage fault, over-current fault or leakage fault in single phase line, the product can power off the line and can automatically restore connecting the line over a time delay after voltage or current of the line is recovered to normal condition.

2.2 In case of transient over voltage in line, the product can protect the equipment from false operation.

2.3 In case that the line subjects to unstable voltage or sudden power-off and power-on due to loosened connection and other fault, the product will disconnect the line.

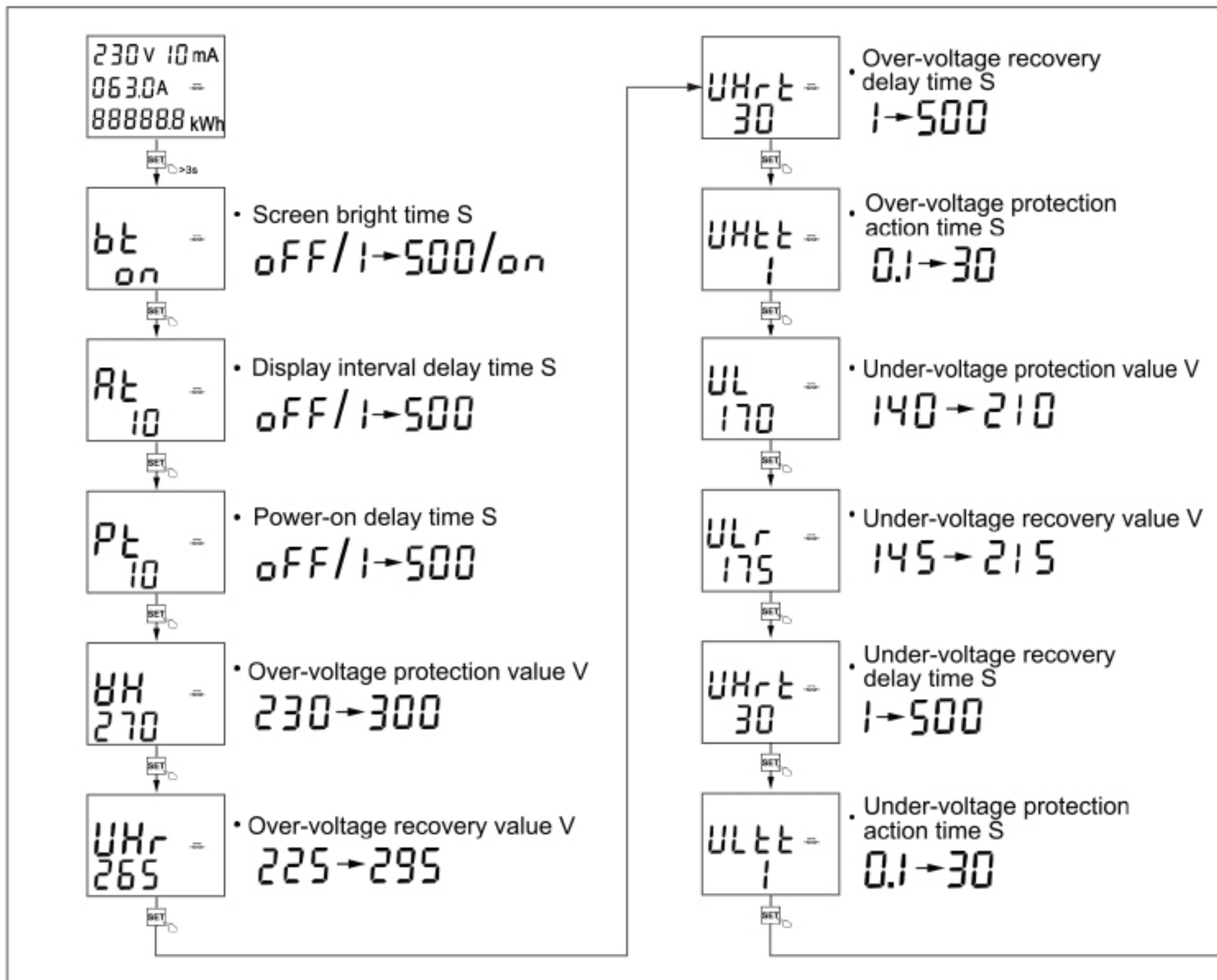
2.4 When fault voltage of the line reaches the peak, the product itself will not be damaged.

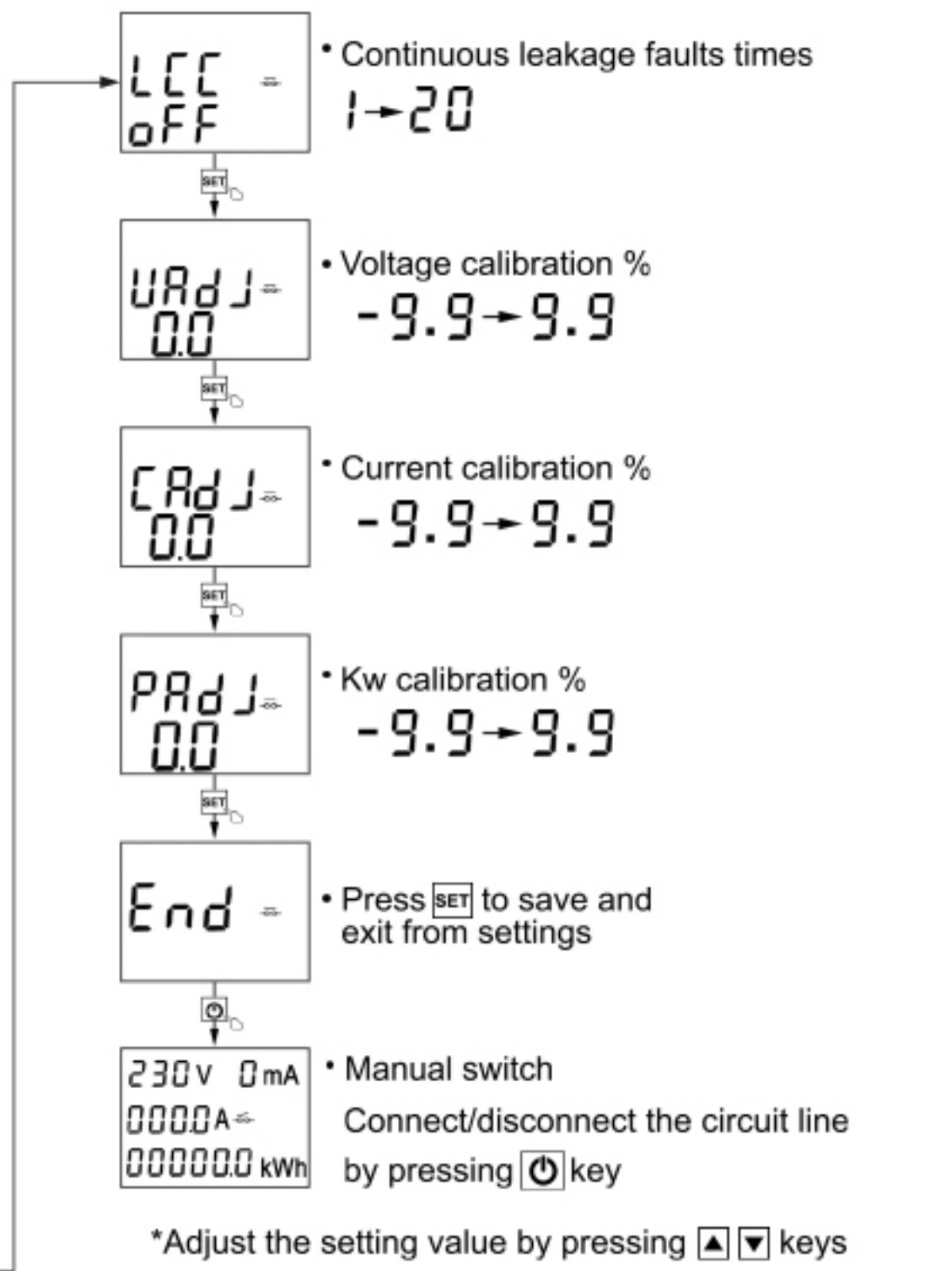
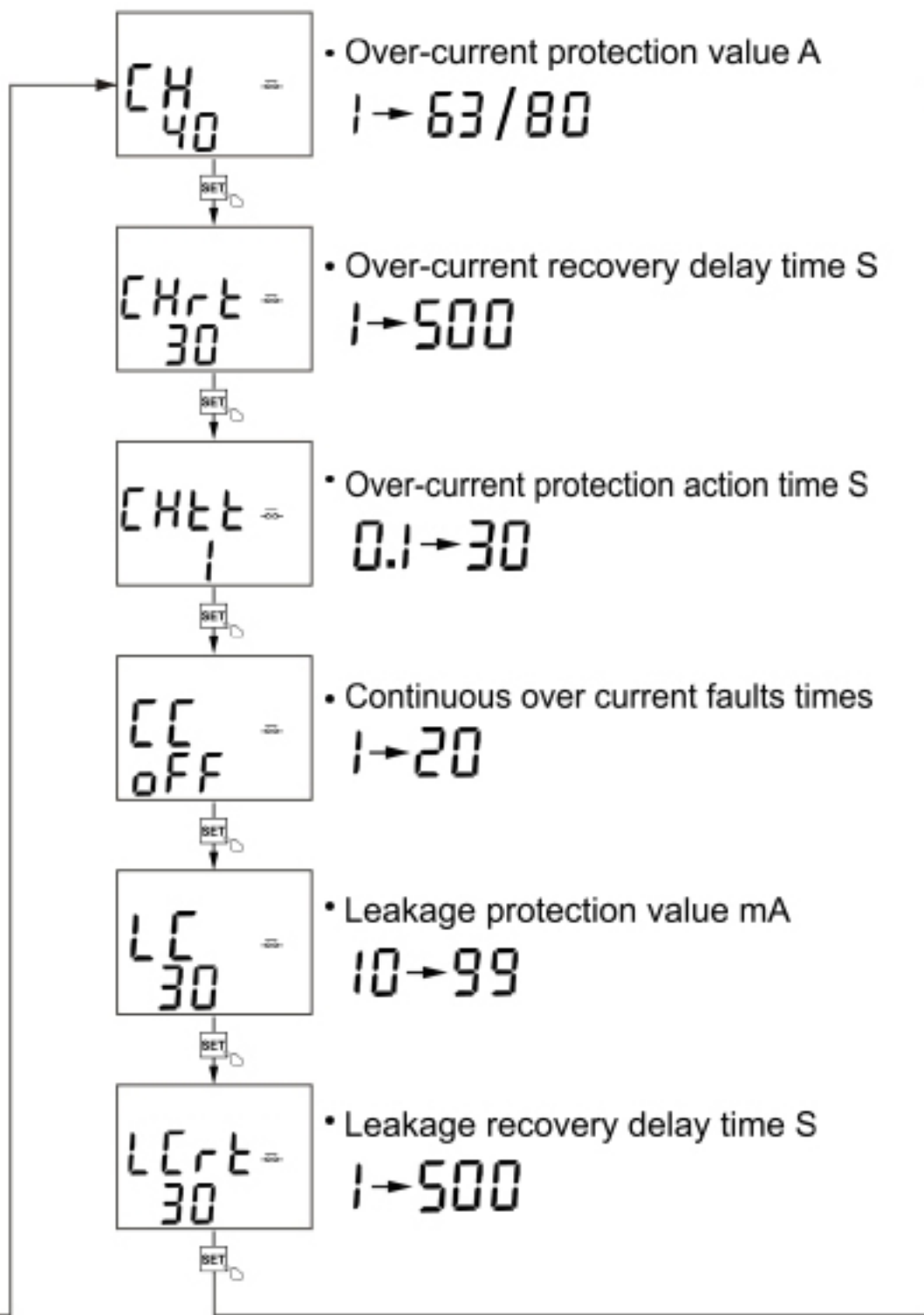
2.5 The protector can display kilowatt-hour, kW and power factor.

### III. Main technical parameters

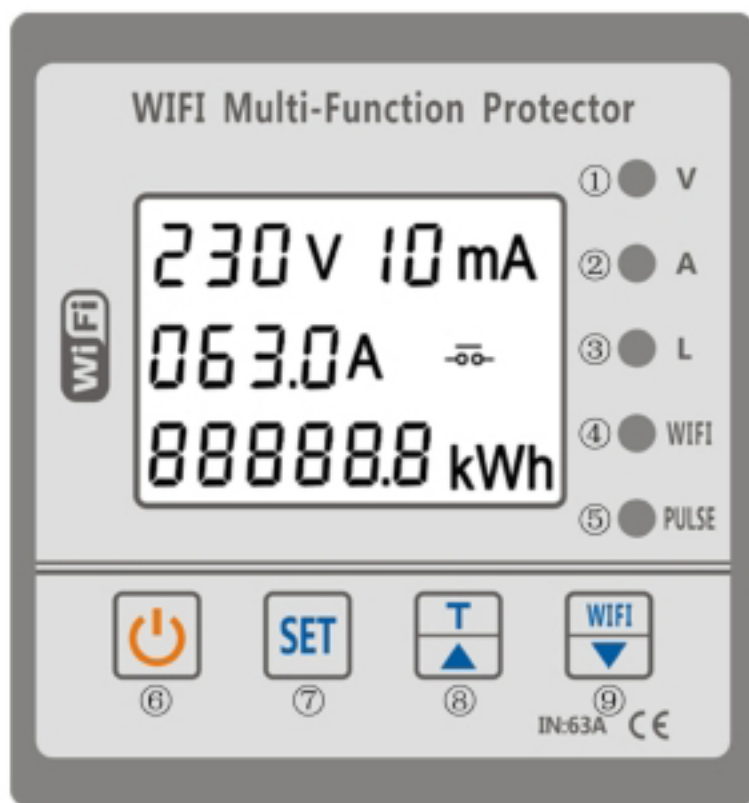
Function	Technical Parameter	Function	Technical Parameter
Input voltage	AC 140–300V	Power-on/ display interval delay time	1–500s default 10s
Over-voltage protection value	230–300V default 270V	Over-voltage recovery value	225–295V default 265V
Under-voltage protection value	140–210V default 170V	Under-voltage recovery value	145–215V default 175V
Over-current protection value	63A:1–63A default 40A	Over-current recovery value	0.5–62.5A
	80A:1–80A default 60A		0.5–79.5A
Leakage protection value	10–99mA default 30mA	Continuous over current /leakage faults times	1–20 times default OFF
Recovery delay time	1–500s default 30s	Action time	0.1–30s default 1s
Voltage/current/ kW calibration	–9.9–9.9%	Power consumption	$\leq 2W$
Electrical and mechanical life	$\geq 100000$ cycles	Boundary dimention	95 × 45 × 68MM

## IV. Product setting:





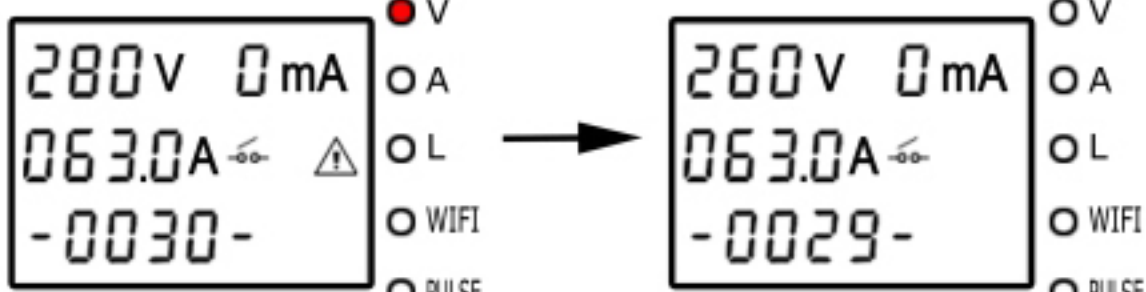
## V. Panel indicator lamps and keys instructions



- ① Over/under voltage alarm indicator
- ② Over-current alarm indicator
- ③ Leakage alarm indicator
- ④ WIFI indicator
- ⑤ Kilo-watt hour meter pulse indicator
- ⑥ Manual switch
- ⑦ Set key: Long press for 3 seconds to enter the setting interface
- ⑧ Adjustment key +  
Test key: Long press for 3 seconds to test the leakage
- ⑨ Adjustment key -  
WIFI key: Long press for 5 seconds to configure the Wifi

## VI. Screen display description

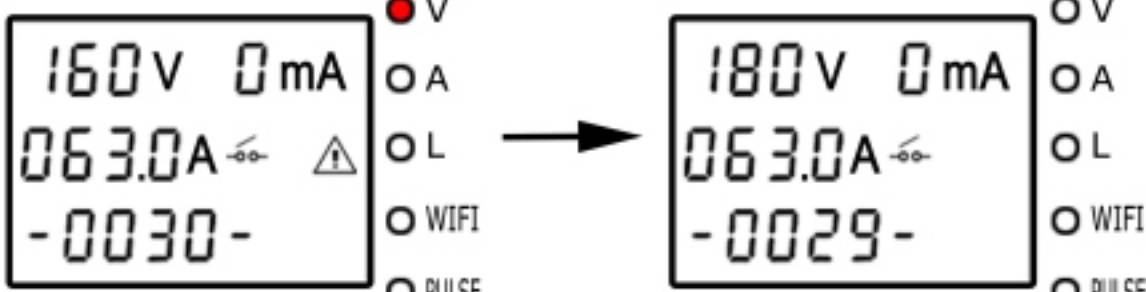
### 6.1 Over voltage protection status



**●** When over-voltage, the protector automatically disconnects, the over-voltage alarm indicator on, and the screen shows the over-voltage value and recovery delay time.

**●** When the voltage turns normal, the over-voltage alarm indicator off, and the protector resets automatically within the set recovery time.

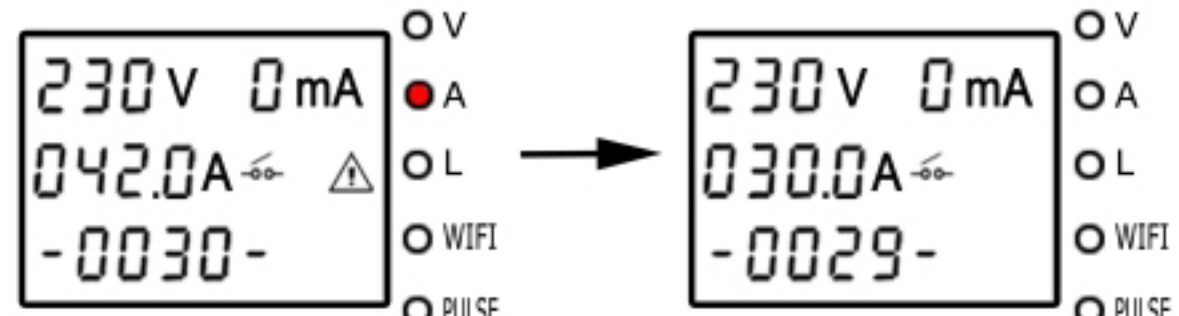
### 6.2 Under voltage protection status




**●** When under-voltage, the protector automatically disconnects, the under-voltage alarm indicator on, and the screen shows the under-voltage value and recovery delay time.

**●** When the voltage turns normal, the under-voltage alarm indicator off, and the protector resets automatically within the set recovery time.

## 6.3 Over current protection status

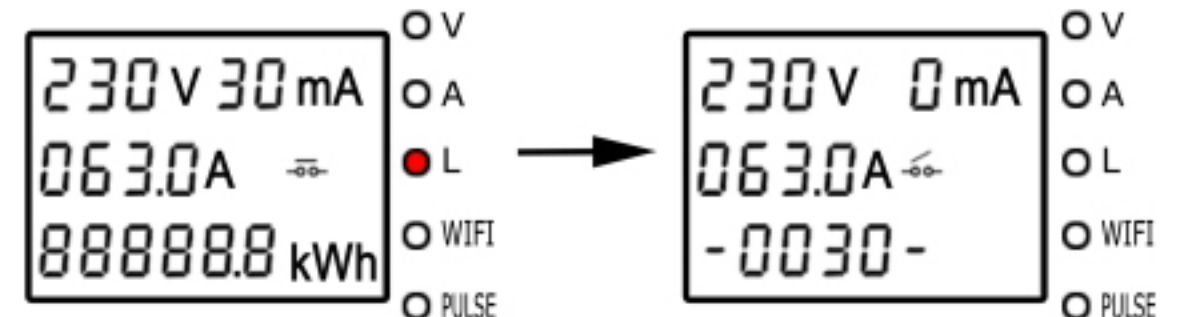


● When over-current, the protector automatically disconnects, the over-current alarm indicator on, and the screen shows the over-current value and recovery delay time.


● When continuous over current faults times reaches the set value, the protector will not reset automatically, it needs to be reset manually by pressing  key.

● When the current turns normal, the over-current alarm indicator off, and the protector resets automatically within the set recovery time.

## 6.4 Leakage protection status



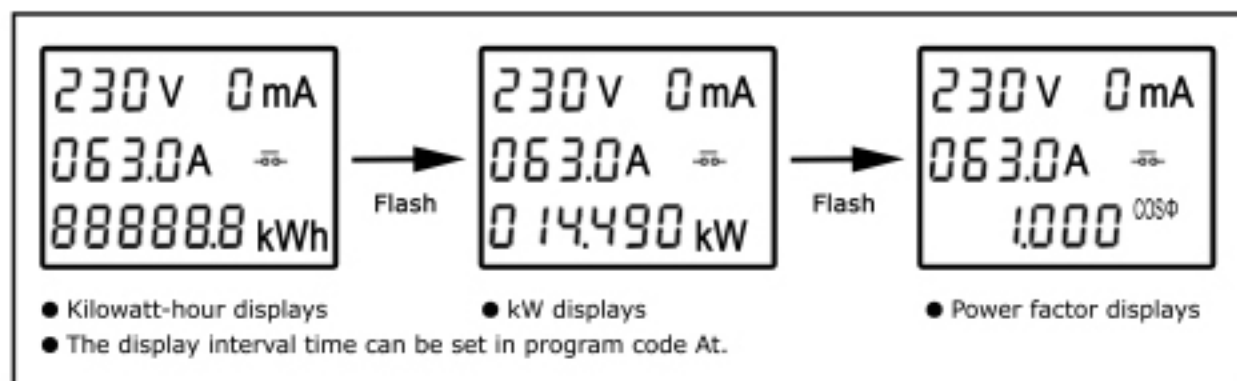
● When leakage occurs, the protector automatically disconnects, the leakage alarm indicator on, and the screen shows the leakage value and recovery delay time.

● When continuous leakage faults times reaches the set value, the protector will not reset automatically, it needs to be reset manually by pressing  key.

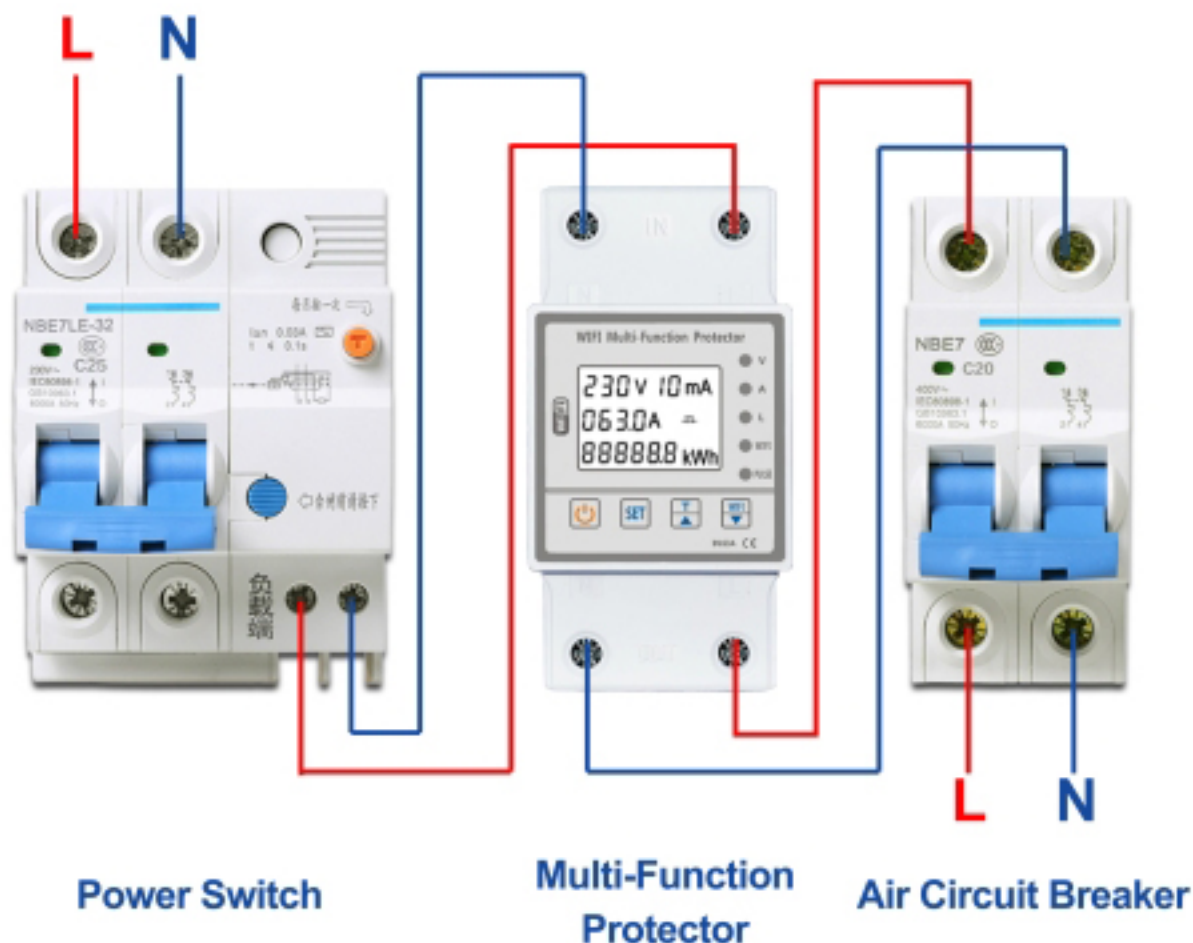
● When the leakage disappears, the leakage alarm indicator off, and the protector resets automatically within the set recovery time.



## 6.5 Kilowatt-hour, kW and power factor display by turns



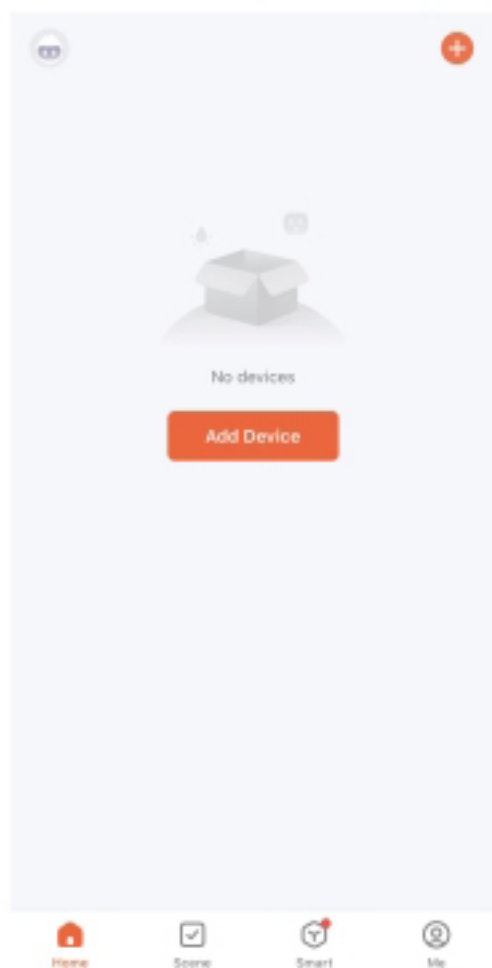
## VI. Wiring diagram



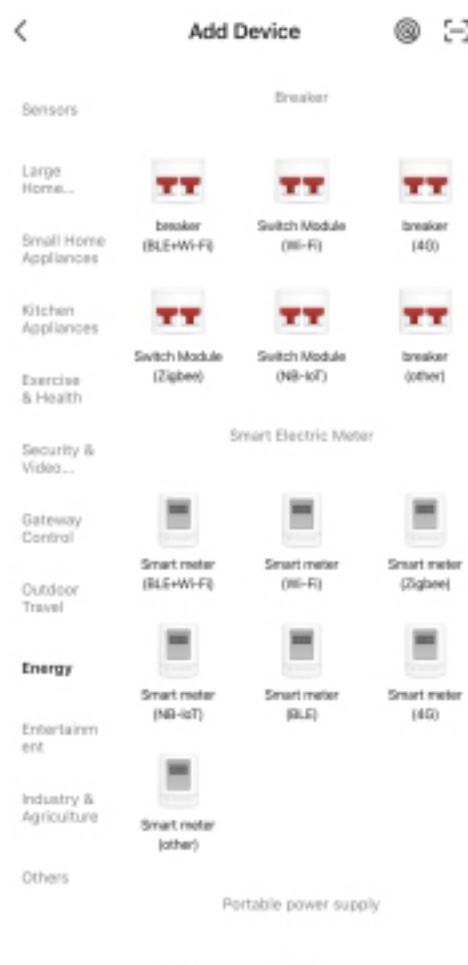
## VII.Protector networking steps



Scan QR code or search "tuya" in App Store to download APP

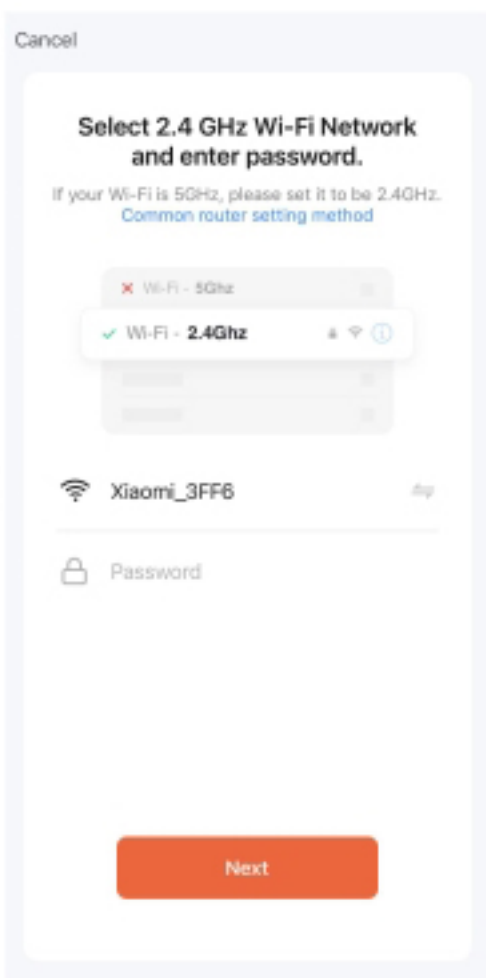


Click Add Device to start adding protector

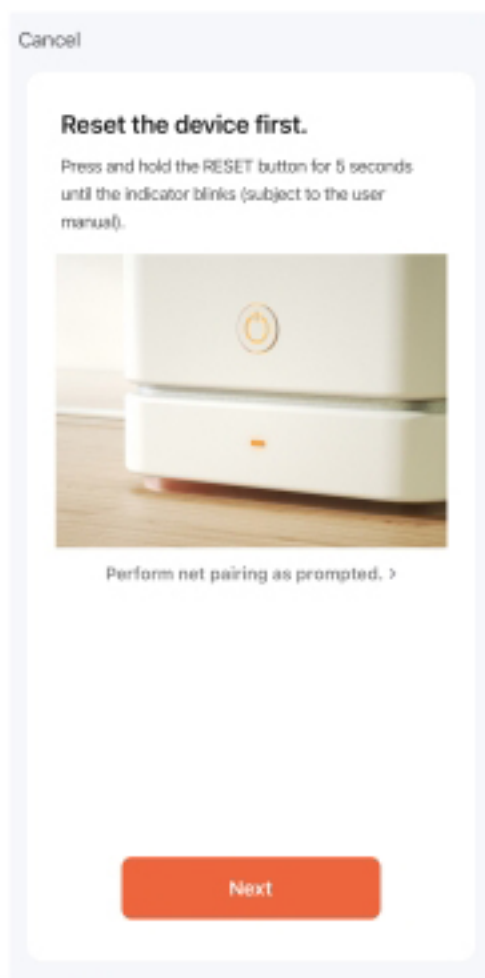



Choose Energy - Switch Module(Wi-Fi)

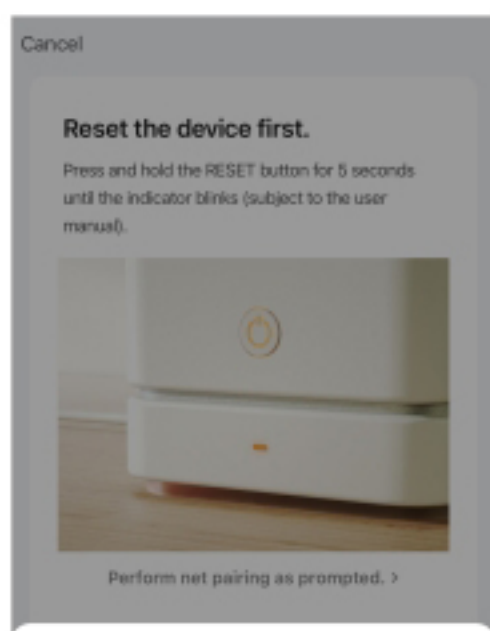




Enter Wi-Fi password to connect to the network



Press  key for 5 seconds to reset the protector and press Next

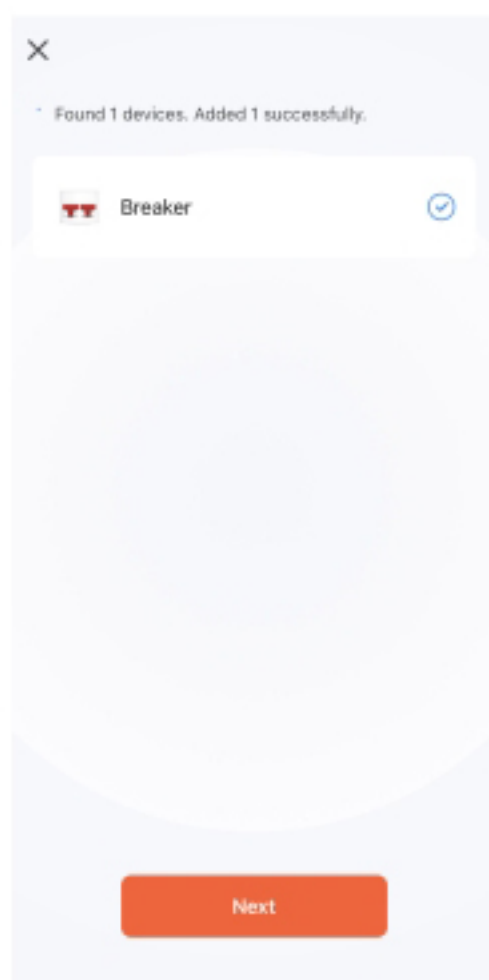


Select the status of the indicator light or hear the beep:

Blink Slowly

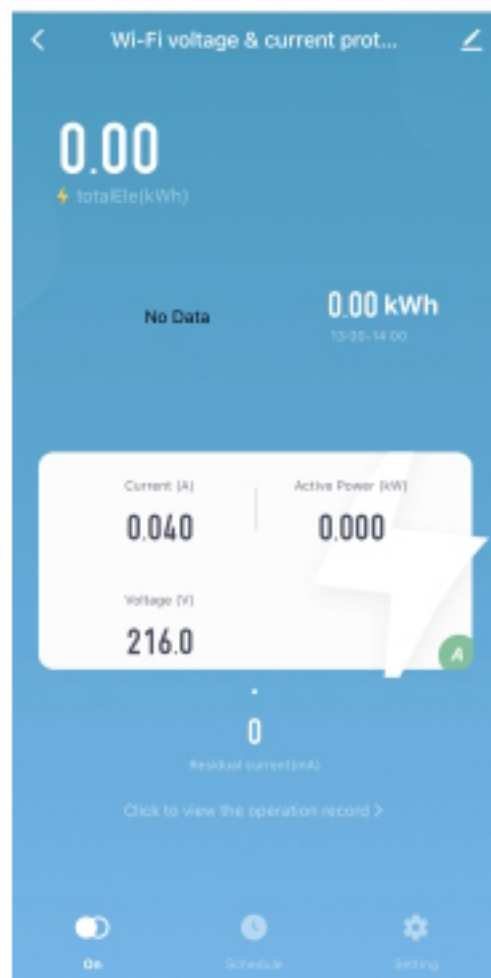
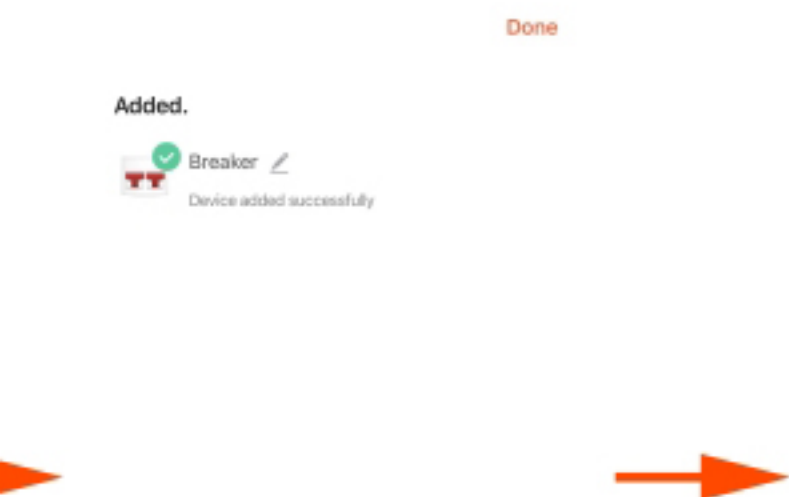


Blink Quickly



Select the status of the indicator light on the protector

Wait for the protector to appear and select



The protector is added successfully, then the WIFI indicator stays bright.

Enter the mobile phone operation interface