

显示面板（光伏 WiFi 版本）
Display panel（PV-WiFi version）

The display panel shows the following parameters:

- U <**: Over/Under voltage warning
- A <**: Three-phase imbalance warning
- Asy**: Over/Under current warning
- HZ <**: Three-phase imbalance warning
- Pulse**: Energy pulse indicator
- ↔**: Reverse Total Active Energy
- : Forward Total Active Energy

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相序错误指示
Phase sequence error indication

When a phase sequence fault occurs, the display will show L1-L3-L2 (phase sequence identification), and the protector will disconnect the output power supply.

When a phase fault occurs, L1-L3-L2 is displayed, and the protector is disconnected from the output power supply.

注意事项
Matters needing attention

1. 本设备必须由具备资质的专业人员安装。
 2. 操作设备前，需切断所有电源；电源接通时，切勿触摸任何端子。
 3. 确认各端子连接正确无误。
 4. 无论设备是否正常运行，均不得擅自拆卸或维修；否则，生产商及销售商不承担任何责任。
 5. 请勿在可能引起气体腐蚀、强光直射或雨淋的场所使用本设备。
 6. 请使用干布清洁设备。
 7. 若未遵守本说明要求，可能导致严重人身伤害或重大事故。
1. This equipment must be installed by qualified professionals.
 2. Before operating the device, disconnect all power supplies; do not touch any terminals when the power is connected.
 3. Verify that all terminals are connected correctly.
 4. Whether the equipment is operating normally or not, do not disassemble or repair it without authorization; otherwise, the manufacturer and seller shall not be liable for any responsibilities.
 5. Do not use this equipment in locations that may be exposed to gas corrosion, direct strong sunlight, or rain.
 6. Clean the equipment with a dry cloth.
 7. Failure to comply with these instructions may result in serious personal injury or major accidents.

产品特性 Product characteristics

- 基于微控制器设计
- 数字显示工作电压、电流、电能及频率；
- 具备过压、欠压、过流、欠流、三相不平衡及相序错误保护功能；
- 测量精度为 0.5 级；
- 按键式参数设定；
- 具备过压、欠压、过频、欠频、过流、欠流及三相不平衡保护故障；
- (导轨式 DIN 9 槽) 安装；
- Microcontroller-based.
- Digital display of working voltage, current, electric energy and frequency.
- Prevent the electrical set voltage is too high/too low current, three-phase asymmetry and phase sequence error.
- Measurement accuracy is 0.5 class.
- Key setting parameter.
- LED indicates overvoltage/undervoltage/overfrequency/underfrequency/overcurrent/undercurrent and three-phase unbalanced protection faults.
- DIN Rail Mounting

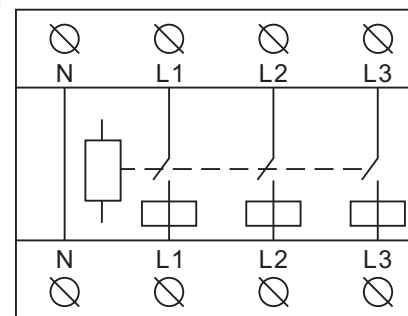
技术参数 Technical data

额定供电电压 Rated supply voltage	AC 230V
工作电压范围 Operating voltage range	AC 60-300V
额定频率 Rated frequency	30-80Hz
延迟 lag	过压/欠压/不对称: 5V Overvoltage and asymmetry: 5V Undervoltage: 5V
精度 Measurement accuracy	Class 0.5
额定绝缘电压 Rated insulation voltage	450V
输出触点 Output contact	3NO (3 Normally Open Contacts)
电气寿命 Electrical life	10 ⁶
机械寿命 Mechanical life	10 ⁶
防水等级 IP rating	Ip20
污染程度 Pollution degree	3
海拔 Altitude	<2000m
操作温度 Operating temperature	-20°C ~70°C
湿度 Humidity	≤50%或40°C (无凝结 Condensation free)
环境温度 Storage temperature	-20°C ~70°C
产品尺寸 Product size	110*108*70mm

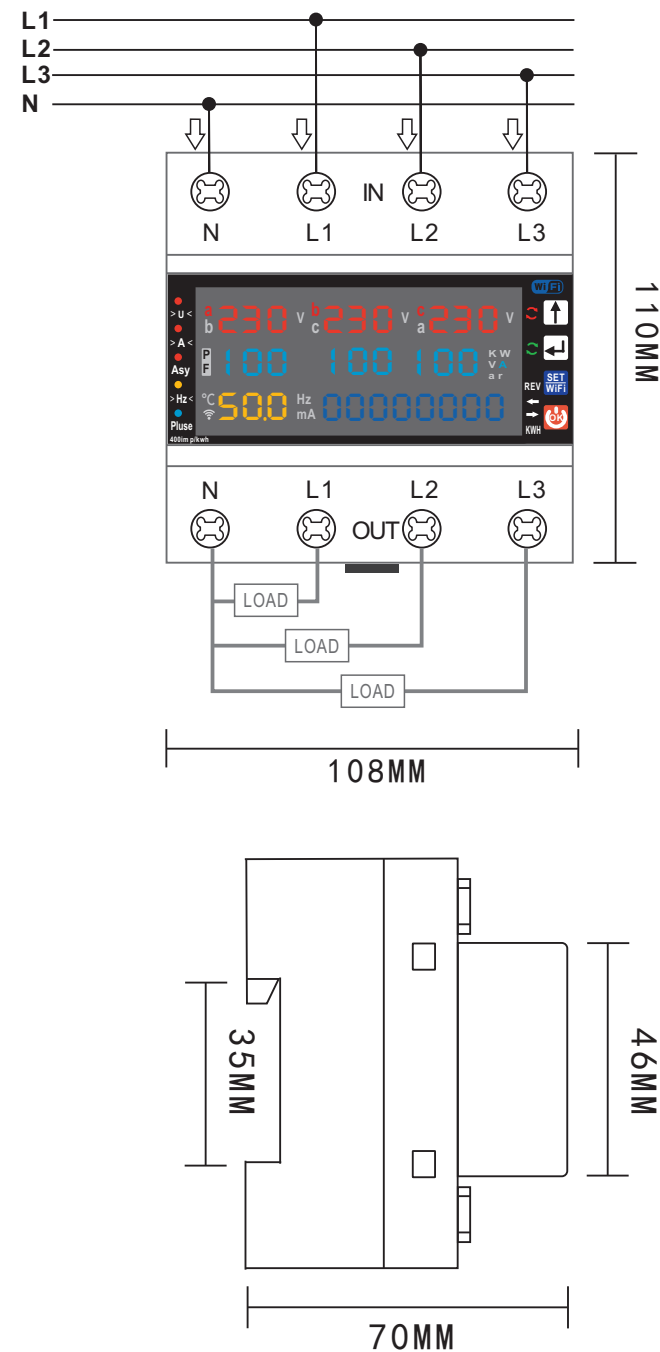
技术参数 Parameter setting

设置菜单 Code	功能 Function	设置范围 Set range	默认值 Default	步级 Step	功能描述 Function description
Fdy	上电延时 Power on delay time	1s~999s	5s	1s	电源恢复时重新上电所需时间。 The time required for re-powering when the power supply is restored.
OPF	恢复延时 Recovery delay time	1s~999s	30s	1s	电源不平衡、短路故障、温度保护、漏电保护、短路保护所需要的重新保护时间。 The delay duration for the voltage imbalance, current overload, temperature overheating, leakage and phase loss recovery can be re-protected set its preset parameters.
HV	过压保护值 Overvoltage protection	ON/OFF 120V~300V	ON/270V	1V	当电压高于设定值时，保护器将切断线路。 When the voltage is above the set value, the protector will cut broken line.
LV	欠压保护值 Undervoltage protection	ON/OFF 60V~210V	ON/170V	1V	当电压低于设定值时，保护器将切断线路。 When the voltage falls below the set value, the protector will cut the line.
VtE	电压动作延时 Voltage action delay	1s~999s	3s	1s	电压保护动作所需的时间。 The time required for voltage protection action.
VtF	电压恢复所需 Voltage recovery delay	1s~999s	20s	1s	电压恢复所需的时间。 The delay time required for voltage recovery.
OC	过流保护值 Overcurrent protection	ON/OFF 1A~100A	80A	0.1A	当电流高于设定值时，保护器会切断线路。 Protector when the current is higher than the set value will cut the line.
CH	电流动作延时 Overcurrent action delay	1s~999s	5s	1s	过流保护动作所需的时间。 Time required for overcurrent protection action.
CHr	过流恢复所需 Overcurrent recovery delay	1s~999s	20s	1s	过流恢复所需的延迟时间。 Delay time required for overcurrent recovery.
UC	欠流保护值 Undercurrent Protection	ON/OFF 1A~79.5A	OFF	0.1A	当电流低于设定值时，保护器会切断线路。 Undercurrent protection threshold.
CtE	欠流动作延时 Undercurrent action delay	1s~999s	10s	1s	进行欠流保护动作所需的时间。 Undercurrent protection threshold.
CtF	欠流恢复所需 Undercurrent recovery delay	1s~999s	20s	1s	欠流恢复所需的延迟时间。 Delay time required for undercurrent recovery.
OH	过频保护值 Overfrequency protection	ON/OFF 65Hz(61Hz~80Hz)	OFF	1Hz	当频率高于设定值时，线路将被切断。 When the frequency is higher than the set value, the line will be cut off.
UH	欠频保护值 Underfrequency protection	ON/OFF 45Hz(30Hz~49Hz)	OFF	1Hz	当频率低于设定值时，线路将被切断。 When the frequency is lower than the set value, the line will be cut off.
HtE	频率动作延时 Frequency action delay	1s~999s	5s	1s	频率保护动作所需延迟时间。 Time required for frequency protection action.
Ud	三相电压不平衡 Three-phase voltage unbalance protection	ON/OFF (1V~100V)	ON/20V	1V	当三相电压的不平衡误差达到设定值时，将执行断电延时保护。 When the unbalanced voltage error of three-phase voltage is at the set value, the power-off of protection is implemented.
Id	三相电流不平衡 Current imbalance protection	ON/OFF (10A~100A)	ON/20A	1V	当三相电流的不平衡误差达到设定值时，将实施断电延时保护。 When the unbalanced current of three-phase current is at the set value, the power-off of delay protection is implemented.
IdE	三相电流不平衡动作延时 Current imbalance protection action delay	1s~999s	5s	1s	三相不平衡保护动作所需时间。 Time required for Current imbalance protection action.
UnS	相序保护 Phase sequence protection	ON/OFF	OFF		防止由相序错误引起的电气故障和设备损坏。 Prevent electrical faults and equipment damage caused by phase sequence errors.
USL	缺相保护 Phase failure protection	ON/OFF	OFF		当由于线路断线、接线松动等原因导致一相电压缺失时，将启动断电保护。 When one phase of power is lost due to line breakage, loose wiring, etc., power-off protection is activated.
OCt	连续过流计数 Continuous overcurrent counting	ON/OFF 5times(1~30times)	OFF	1 times	过流次数统计。 If the product leaks electricity, it will automatically cut off power for protection.
ECh	电度保护 Electric Kwh protection	ON/OFF (0~99999999Kwh)	OFF		当用电量超过预设阈值时，断路器将启动以进行保护。 When the power consumption surpasses the preset threshold, the circuit breaker will activate for protection.
FtP	温度保护 Temperature protection	ON/OFF (10℃~85℃)	ON/85℃	1℃	过高温度会触发断路器保护。 Over-temperature triggers circuit breaker protection.
OH1	漏电保护 Leakage protection	ON/OFF 10mA(30~99mA)	OFF	1mA	漏电电流断电保护 Upon detecting an electric leakage, the protector will activate automatic power-off protection.

电气符号
Electrical symbol



接线图
Wiring diagram



菜单
Setup Menu

The diagram illustrates the sequence of menu items and settings for the device, organized into five main sections, each with a digital display showing the menu name, a numerical value, and the status (ON/OFF).

- Section 1: Power on delay time**
 - Menu: **SER** (Power on delay time)
 - Value: **001** (Minimum)
 - Value: **005** (Default)
 - Value: **999** (Maximum)
 - Setting: **5s(1-999s)**
- Section 2: Recovery delay time**
 - Menu: **SER** (Recovery delay time)
 - Value: **001** (Minimum)
 - Value: **030** (Default)
 - Value: **999** (Maximum)
 - Setting: **30s(1-999s)**
- Section 3: Overvoltage protection**
 - Menu: **SER** (Overvoltage protection)
 - Value: **120** (Minimum)
 - Value: **270** (Default)
 - Value: **300** (Maximum)
 - Setting: **270V(120-300V)**
- Section 4: Undervoltage protection**
 - Menu: **SER** (Undervoltage protection)
 - Value: **060** (Minimum)
 - Value: **170** (Default)
 - Value: **210** (Maximum)
 - Setting: **170V(60-210V)**
- Section 5: Voltage action and recovery delay**
 - Menu: **SER** (Voltage action delay)
 - Value: **001** (Minimum)
 - Value: **003** (Default)
 - Value: **999** (Maximum)
 - Setting: **3s(1-999s)**
- Section 6: Voltage recovery delay**
 - Menu: **SER** (Voltage recovery delay)
 - Value: **001** (Minimum)
 - Value: **020** (Default)
 - Value: **999** (Maximum)
 - Setting: **20s(1-999s)**

Arrows indicate the flow from one menu to the next, starting from the top and moving downwards.

The diagram illustrates the sequence of parameter settings for the inverter, showing the progression from basic protection settings to more detailed action and recovery delays.

Row 1: Overcurrent Protection

- Parameter: 过流保护值 (Overcurrent protection)
- ON/OFF
- Range: 80A(1.5-100A)
- Display values: SER (Minimum), 0C (Default value), 0N (Maximum)

Row 2: Overcurrent Action Delay

- Parameter: 电流动作延时 (Overcurrent action delay)
- Range: 5s(1-999s)
- Display values: SER (Minimum), CH (Default value), 999 (Maximum)

Row 3: Overcurrent Recovery Delay

- Parameter: 过流恢复延时 (Overcurrent recovery delay)
- Range: 20s(1-999s)
- Display values: SER (Minimum), CH (Default value), 999 (Maximum)

Row 4: Undercurrent Protection

- Parameter: 欠流保护值 (Undercurrent protection)
- ON/OFF
- Range: 1.0A(1-79.5A)
- Display values: SER (Minimum), UC (Default value), OFF (Maximum)

Row 5: Undercurrent Action Delay

- Parameter: 欠流动作延时 (Undercurrent action delay)
- Range: 10s(1-999s)
- Display values: SER (Minimum), Ct (Default value), 999 (Maximum)

Row 6: Undercurrent Recovery Delay

- Parameter: 欠流恢复延时 (Undercurrent recovery delay)
- Range: 20s(1-999s)
- Display values: SER (Minimum), Ct (Default value), 999 (Maximum)

The diagram illustrates the configuration steps for the inverter's protection functions. It consists of five rows, each representing a different protection setting. Each row has a 3-digit display showing 'SER', a 3-digit display showing the current value, and a 3-digit display showing the range. Arrows indicate the sequence from top to bottom.

Function	Default Value	Range
Overfrequency protection (过频保护)	ON/OFF	Default Value: OFF
Underfrequency protection (欠频保护)	ON/OFF	Default Value: OFF
Frequency action delay (频率动作延时)	5s	1-999s
Three-phase voltage unbalance protection (三相电压不平衡)	ON/OFF	Default Value: ON
Three-phase current unbalance protection (三相电流不平衡)	ON/OFF	Default Value: ON
Three-phase current unbalance protection action delay (三相电流不平衡动作延时)	5s	1-999s

The diagram illustrates the sequence of button presses to set various parameters on the device. The sequence starts with SER, UN5, OFF and proceeds through 10 steps, each showing a different parameter being set. Red arrows indicate the flow from one step to the next. Each step includes a button layout, a description of the parameter, and its default value.

- Step 1:** SER UN5 OFF. 相序保护 (Phase sequence protection). ON/oFF 默认值 OFF.
- Step 2:** SER USL ON. 缺相保护 (Phase failure protection). ON/oFF 默认值 ON.
- Step 3:** SER OCT ON. 连续过电流计数 (Continuous overcurrent counting). ON/oFF 默认值 OFF. 001 005 030 (最小 默认值 最大). 5times(1-30times).
- Step 4:** SER ECh OFF. 电度保护 (Electric Kwh protection). ON/oFF 默认值 OFF. 0-99999999Kwh.
- Step 5:** SER FnP ON. 温度保护 (Temperature protection). ON/oFF 默认值 ON. 010 085 085 (最小 默认值 最大). 85℃(10-85℃).
- Step 6:** SER OH1 OFF. 漏电保护 (Leakage protection). ON/oFF 默认值 OFF. 010 030 099 (最小 默认值 最大). 30mA(30-99mA).

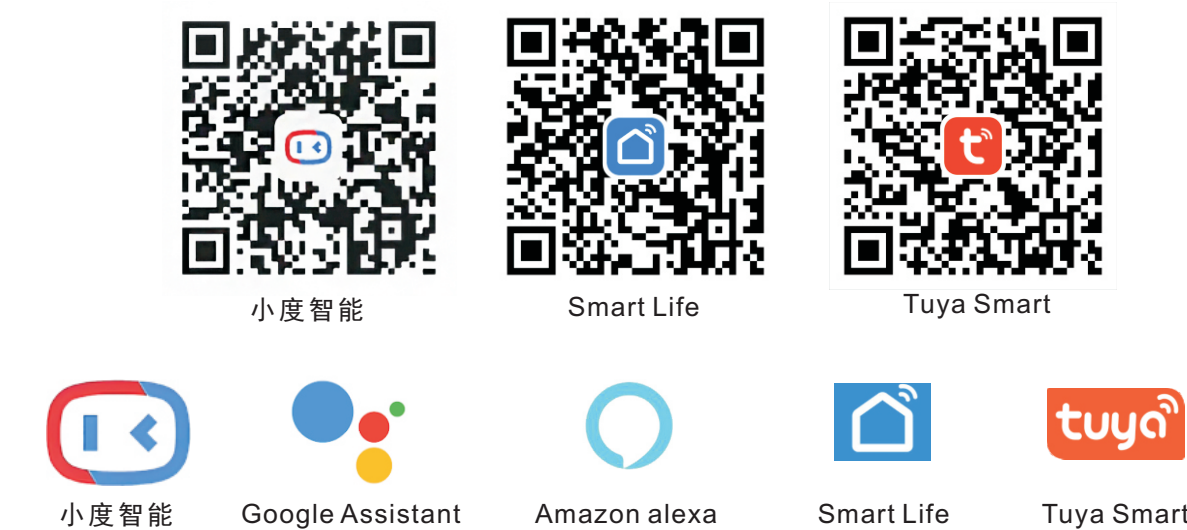
end

end

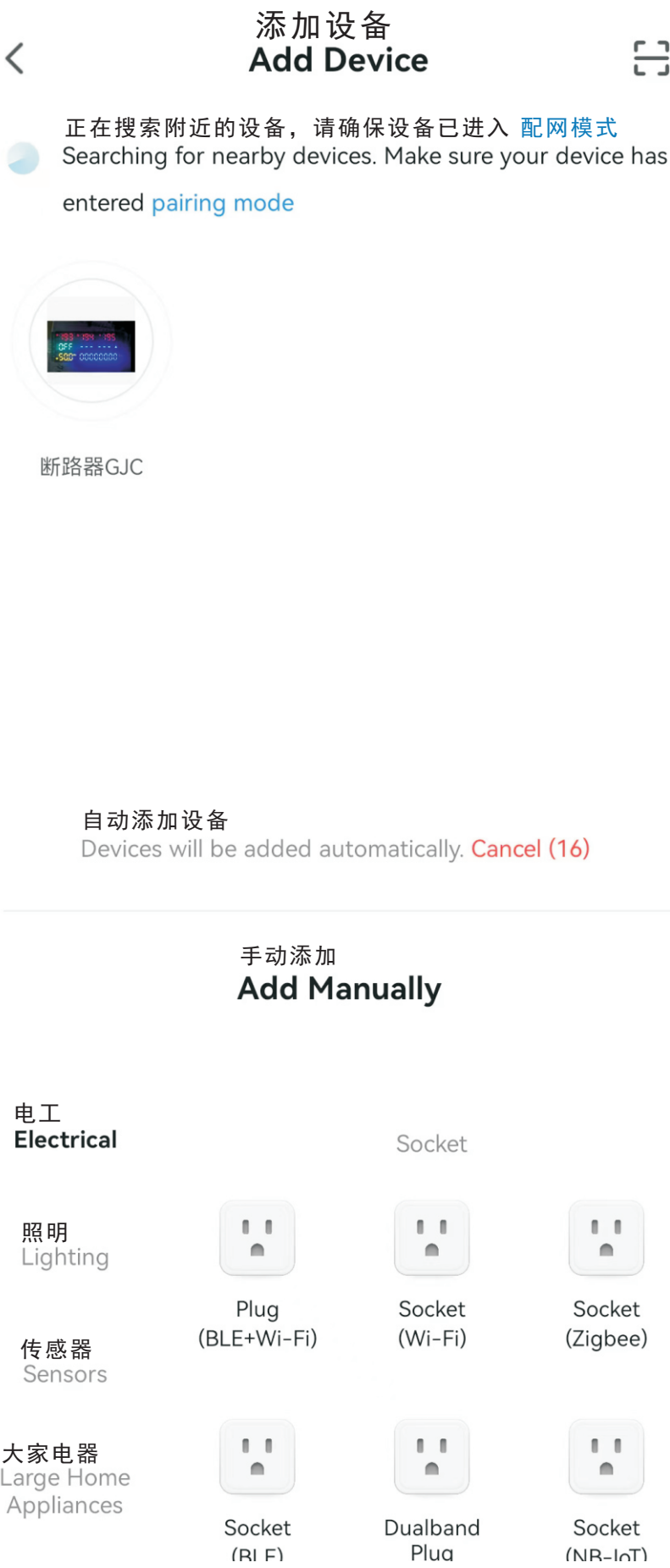
如何将设备添加到 APP” → 点击查看详细步骤
HOW TOADD DEVCETOAPP

用智能手机扫描二维码，或在 Google Play 商店/苹果应用商店（APP Store）中搜索 “SmartLife” 或 “Tuya Smart” 应用，下载并安装。用手机号码注册账号。将手机连接至家中的 Wi-Fi 路由器。点击首页右上角的 “+” 号，或点击 “添加设备”，随后在 “能源” 分类中选择断路器对应的 “开关模块”（Wi-Fi 版）长按 Wi-Fi 按键5秒，等待 Wi-Fi指示灯快速闪烁后，打开应用进行配对。

1.Use your smart phone to scan QR codes, or search "SmartLife" or "Tuya Smart" app in Google play or APP Store todownload and instal.
2. Create an account with your mobile number.3.Connect you mobile to your Wi-Fi router. Click "+" inthe upperright conner of homepage or click "Adddevice" then selectbreaker "Switch module (Wi-Fi)" from "Energy", long press WiFibutton for 5 seconds, after the WiFi indicators starts to flashquickly, open app to pair.



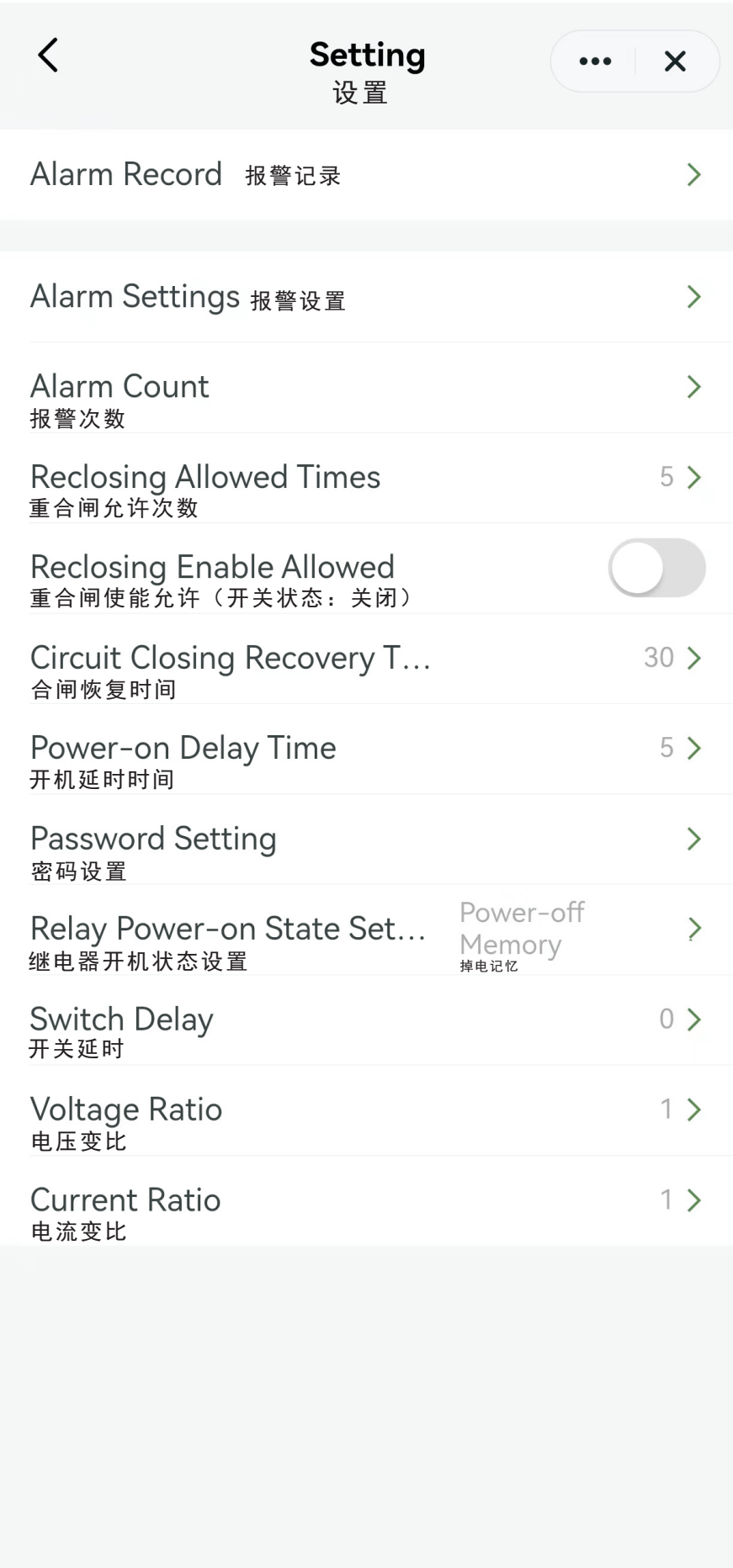
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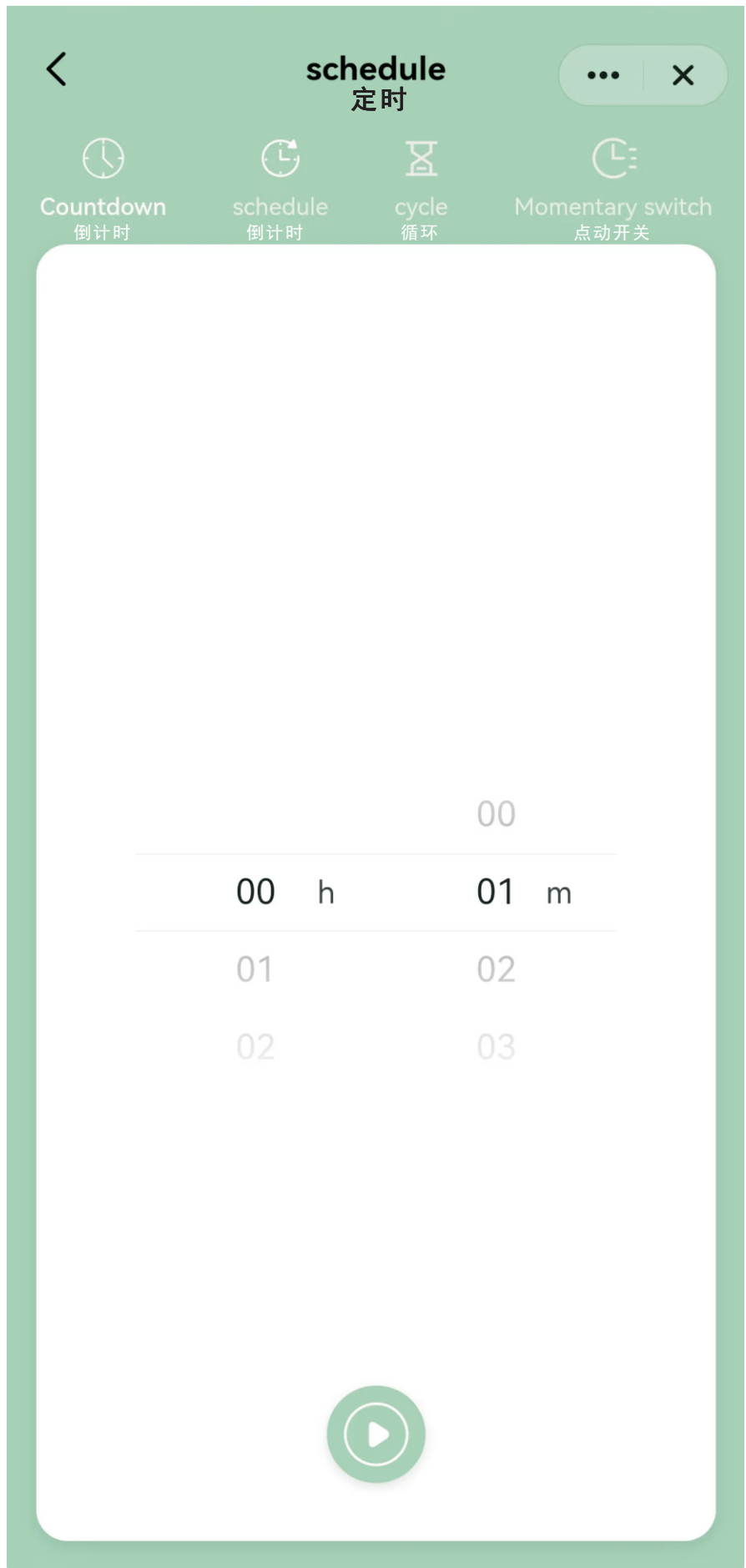
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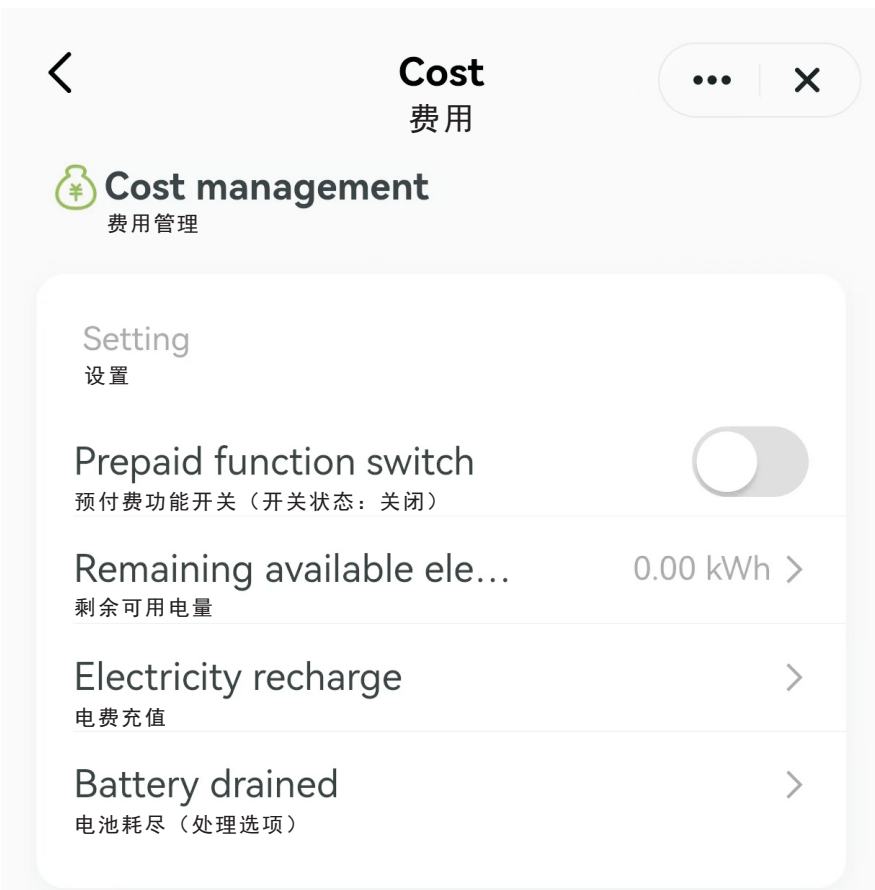
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