

Product Catalogue

Smart Electrical Monitoring Devices



Simple. Reliable. Open

What we offer

Future-proof Electrical Monitoring Technologies

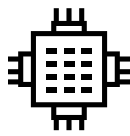
Founded in 2018 by a team of industry experts in Shanghai, Bituo Technik is a forward-looking provider of electrical monitoring technologies, with a strong R&D focus on electrical safety and energy efficiency. Our product range includes:



Electrical Monitoring Devices ¹⁾

Smart devices designed for fast, seamless integration into new or existing panels and boxes— ensuring safe, efficient, and connected operation.

1) This catalogue only includes our smart electrical monitoring devices. For information about our electrical measurement components, please visit our official website or contact our sales team.



Electrical Measurement Components ¹⁾

Reliable built-in solutions for residual current detection and power measurement, tailored for renewable energy and industrial applications.

BITUOTECHNIK

Our smart electrical monitoring devices installed invisibly at electrical panels and boxes are featuring:

↓ **Simple**

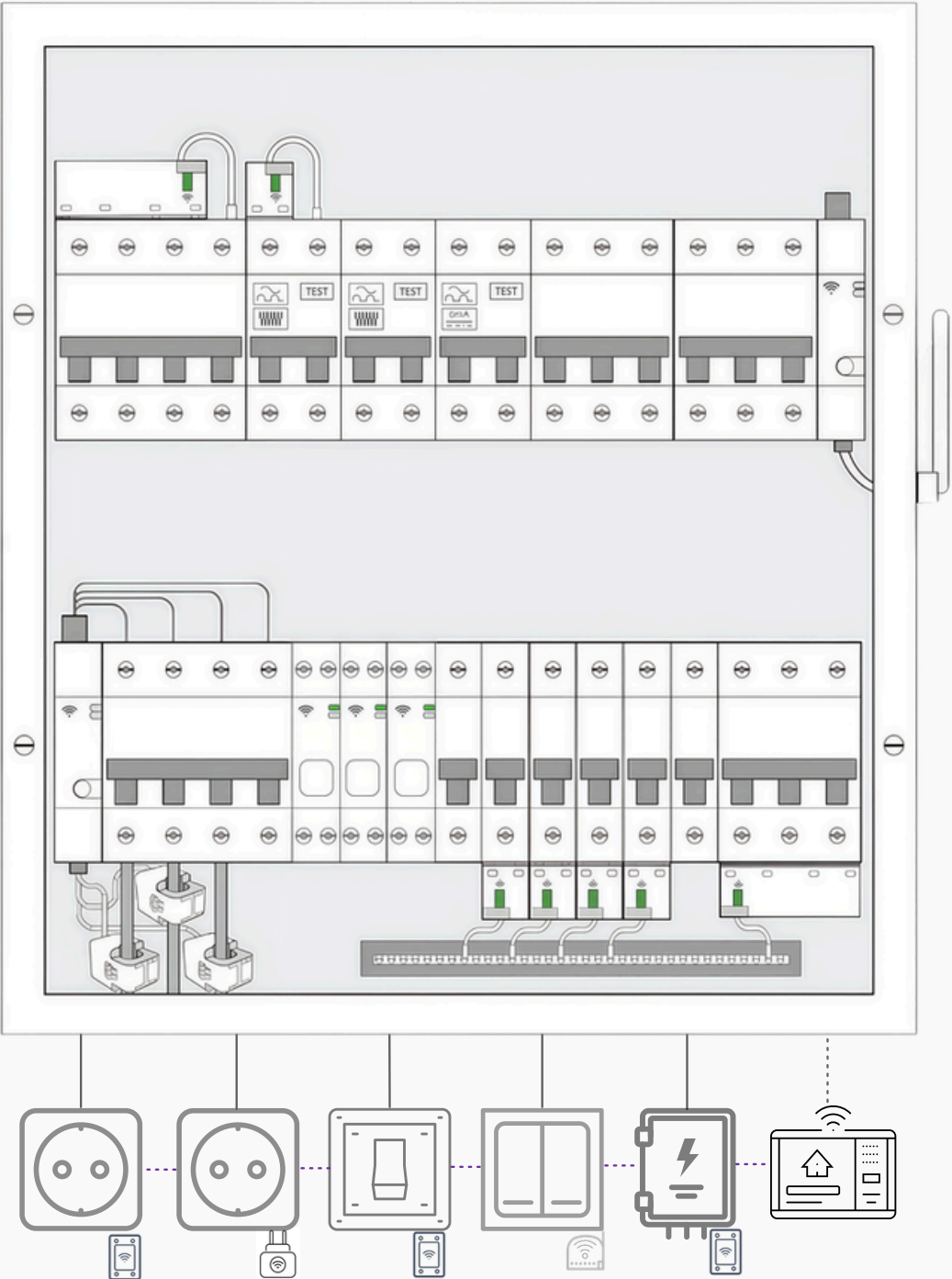
Designed for quick installation and seamless integration in both retrofits and new projects, empowering electricians with efficient system integration.

⚙️ **Reliable**

From stand-alone meters to protection and control devices with monitoring, our products are engineered for dependable performance in real-world systems.

🔌 **Open**

Supports open protocols like Modbus, Zigbee, and LoRaWAN for seamless integration into energy systems, smart homes, and industrial platforms.



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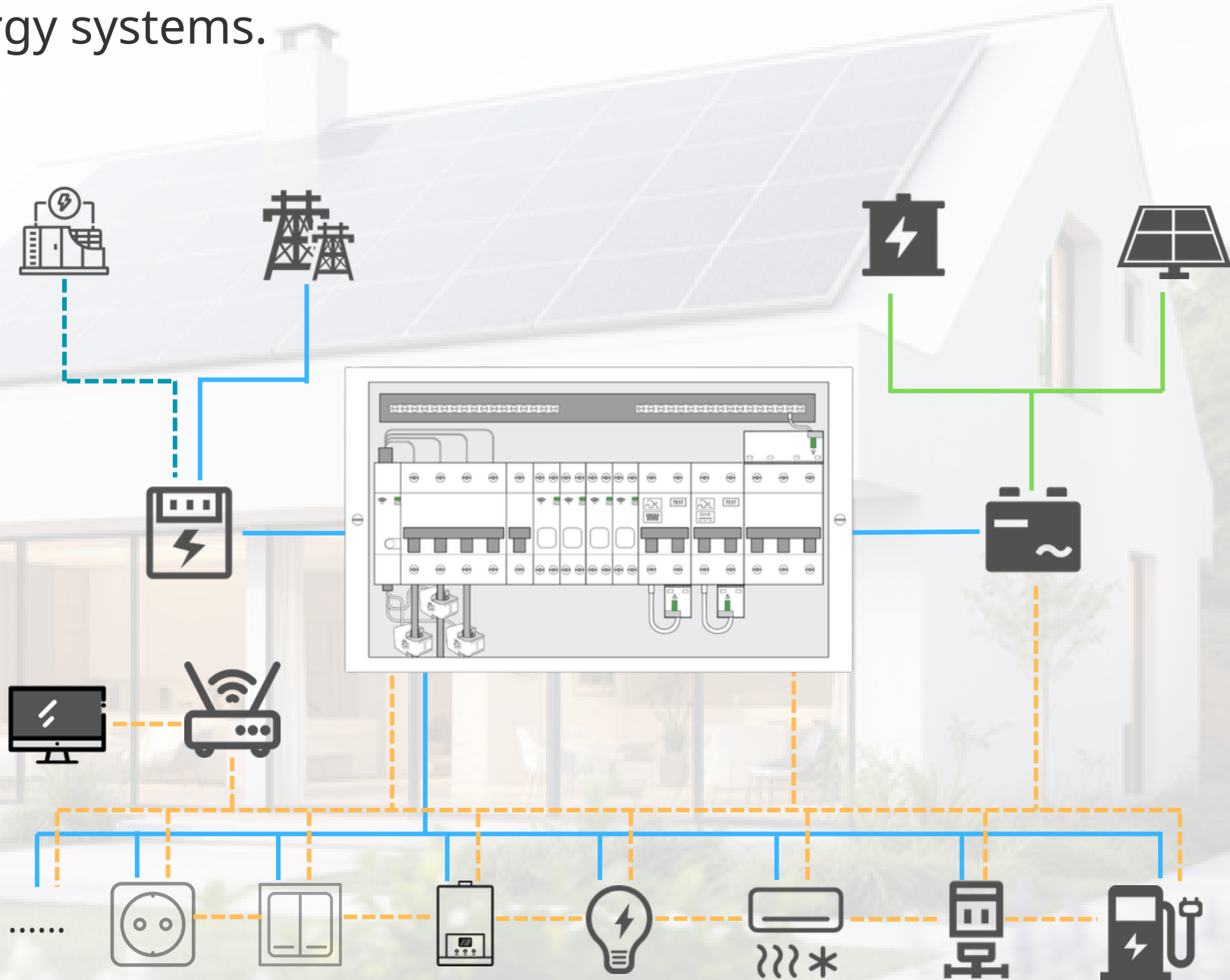
Featured Application - 1

Home Energy Management System

Retrofit-ready Power Monitoring & Metering Devices (PMDs) for smarter, connected energy systems.

Our smart PMDs integrate into existing electrical panels and boxes, working with inverters, batteries, appliances, and smart home hubs to enable intelligent energy monitoring and control. No need to replace the distribution box, breakers, or sockets—just install, connect, and optimize.

- AC Network
- DC Network
- Home Communication
- Infrastructure Communication



Customer Benefits



Energy Saving

Track total and individual appliance power usage to identify savings opportunities. AI-assisted analysis helps reduce waste and supports automatic optimization.



Risk Alarming

Get instant alerts on abnormal events like over-voltage, high consumption, or device faults - sent directly to your mobile device.



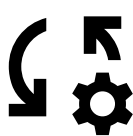
Predictive Diagnosis

Use AI-powered pattern recognition to detect early signs of aging circuits or abnormal device behavior—reducing maintenance and fire risks.



Appliance Control

Remotely switch appliances on/off based on schedule, usage patterns, or real-time power availability, improving convenience and efficiency.



Export Limitation

Automatically regulate inverter output to prevent overfeeding the grid, ensuring compliance with utility requirements.



Dynamic Load Balancing

Balance household loads in real time to avoid overloads and improve the utilization of adjustable loads like EV chargers and water heaters.



Home Assistant



Tuya



Homey



SmartThings



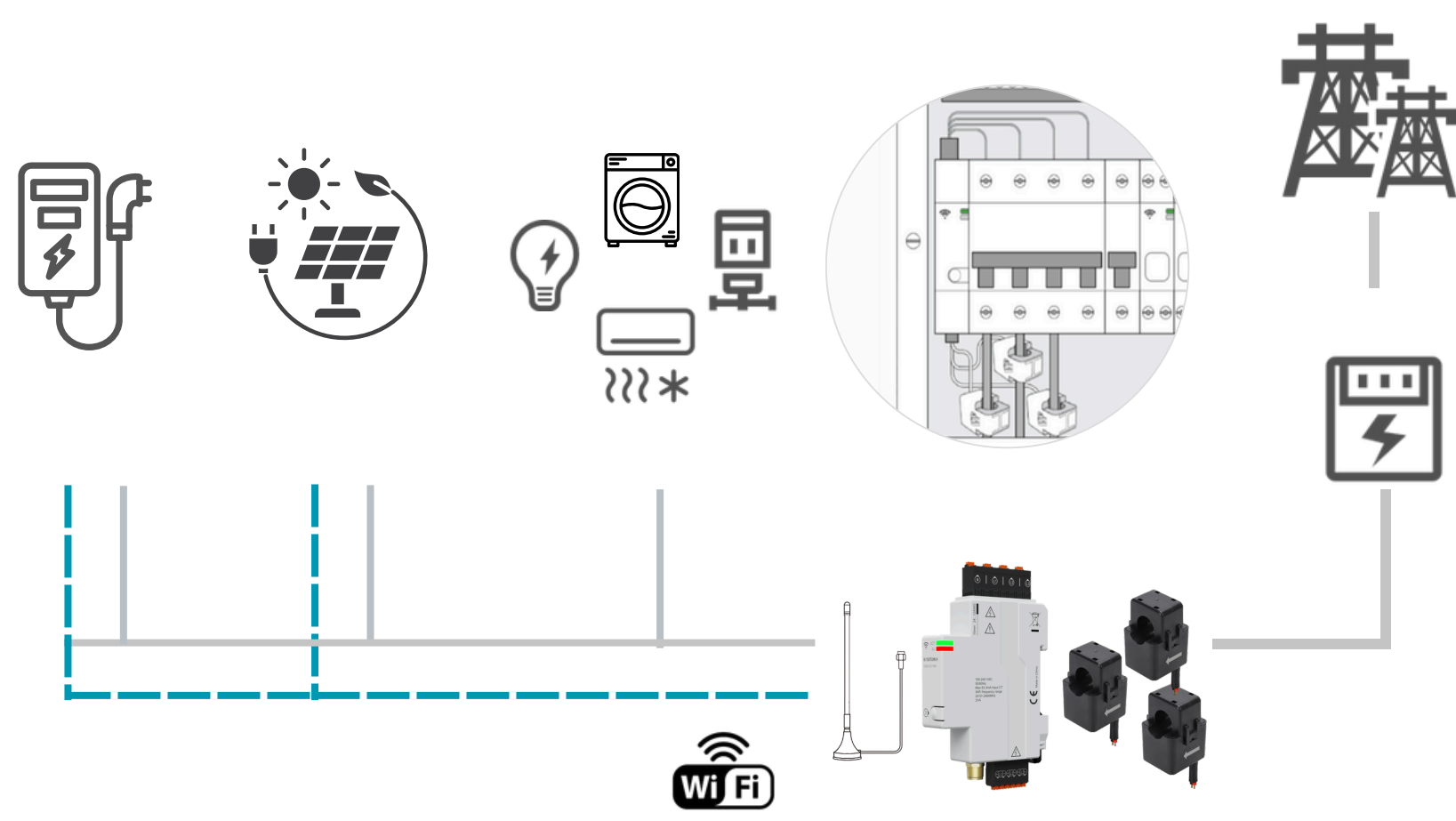
Jeedom

Integration into Popular Smart Home System via Standard Zigbee Clusters or via Local Wi-Fi APIs.

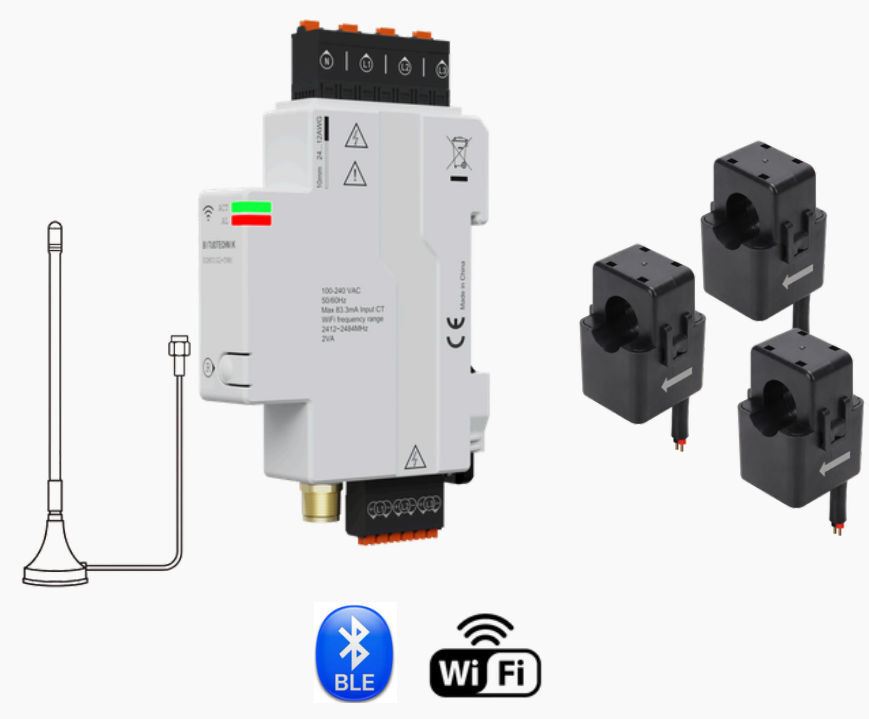
Export Limiting & Dynamic Load Balancing

Experience WiFi-based Home Energy Control with the SDM01 Gen2 and SDM01G2X

Optimized for high-speed bi-directional power measurement, the SDM01G2/G2X platform delivers real-time power RMS value with a latency of under 200ms. Utilizing Tuya T3-M or ESP32-C6 Wi-Fi modules, it transmits data over the Local Area Network (LAN) directly to EV chargers, PV, and ESS, enabling dynamic load balancing (DLB) and export limiting via local Wi-Fi network.



SDM01 Combo Gen2



SDM01G2X (Ext. Antenna)



Tuya Ecosystem (LAN+) ¹⁾

Features Tuya LAN+ technology for cloud-free, local communication. It seamlessly integrates with EV chargers, solar inverters, and energy storage systems equipped with Tuya LAN+ Wi-Fi modules.



Open Standard (Rich APIs)

Powered by Bituo's self-developed ESP32-C6 firmware, offering comprehensive APIs such as BLE, UDP, mDNS, MQTT, Modbus TCP, and more, for seamless third-party integration. Full API documentation is available in our [Doc Center](#).



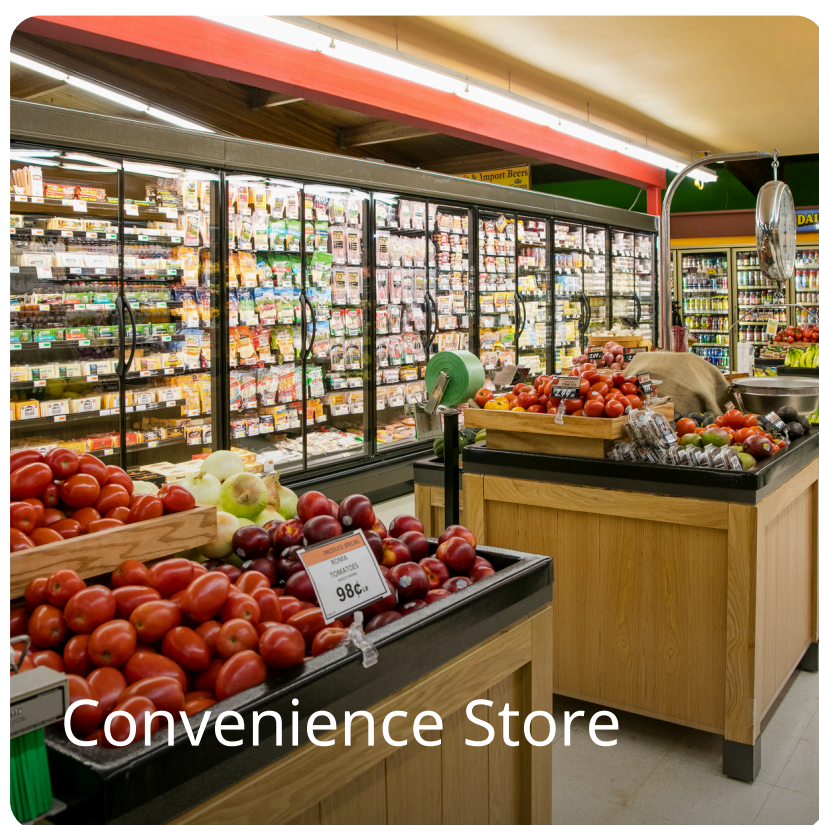
Custom Flashing (SoC+MCU)

SoC + MCU architecture empowers system integrators and OEMs to develop custom firmware on the ESP32-C6. Real-time electrical data is directly accessed from the MCU via UART. Achieve Class 1 accuracy with Bituo-specified CTs, simplifying field maintenance.

Note: SDM01 Combo Gen2 and SDM01G2X with Tuya LAN+ Wi-Fi modules must be purchased via Tuya Smart directly.

Small Business Energy Efficiency

Integrate our Smart Electrical Monitoring Devices to drive smarter energy use for Small Business Owners and Operators.

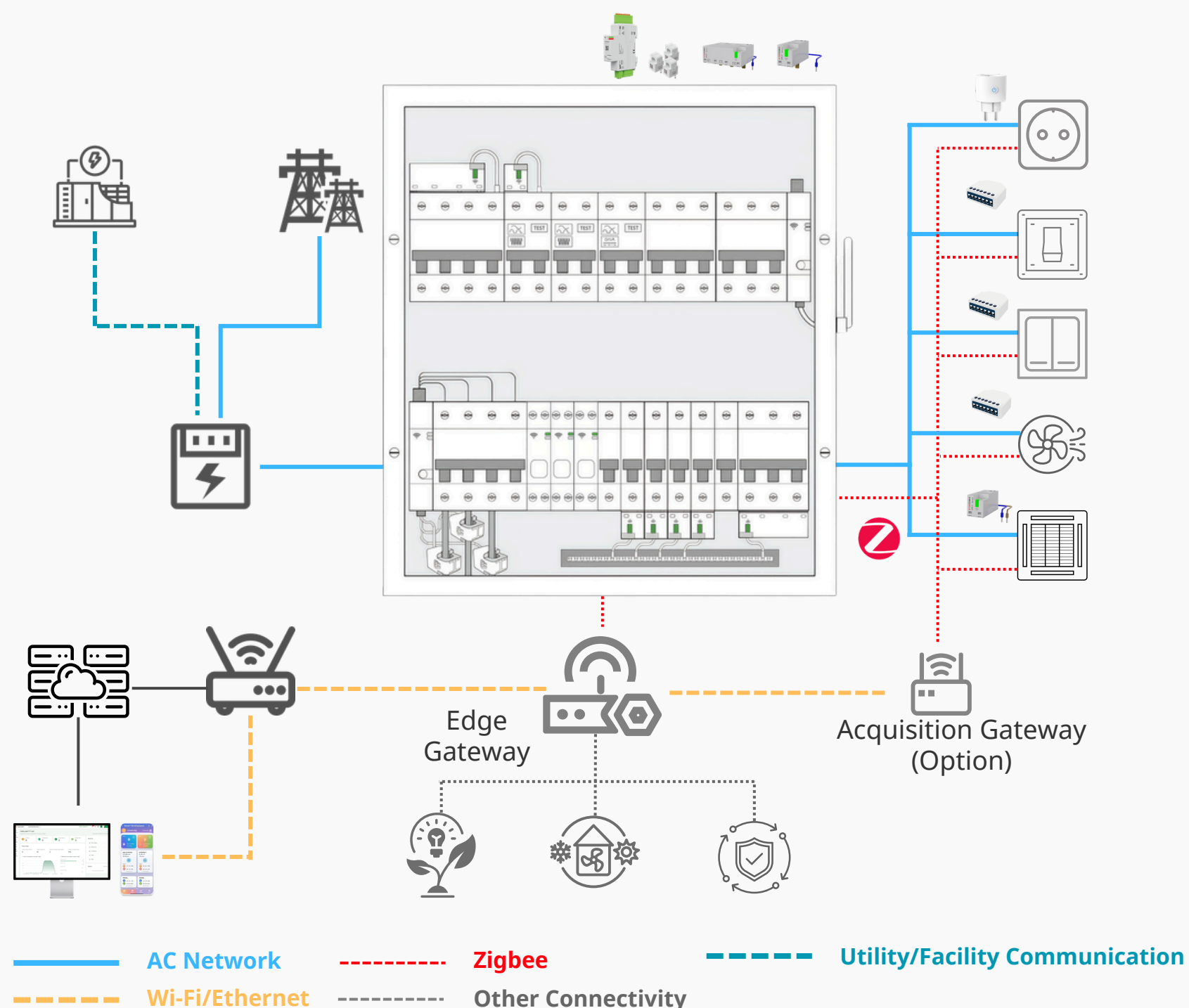


Compact, easy-to-install, open-standard devices are ideal for retrofitting retail shops, cafés, restaurants, and gyms. They capture real-time power data for analysis, saving energy through optimized usage habits and automated controls.

Seamless Integration via Standard Zigbee 3.0

Ideal for small businesses, Standard Zigbee 3.0 easily adapts to various existing setups through three flexible paths:

- **Direct to Edge Gateway:** For sites already equipped with Zigbee-enabled edge gateways.
- **Via Acquisition Gateway:** For edge gateways using Modbus TCP over IP instead of Zigbee.
- **Direct to Cloud:** For systems requiring direct cloud transmission via a data acquisition gateway.



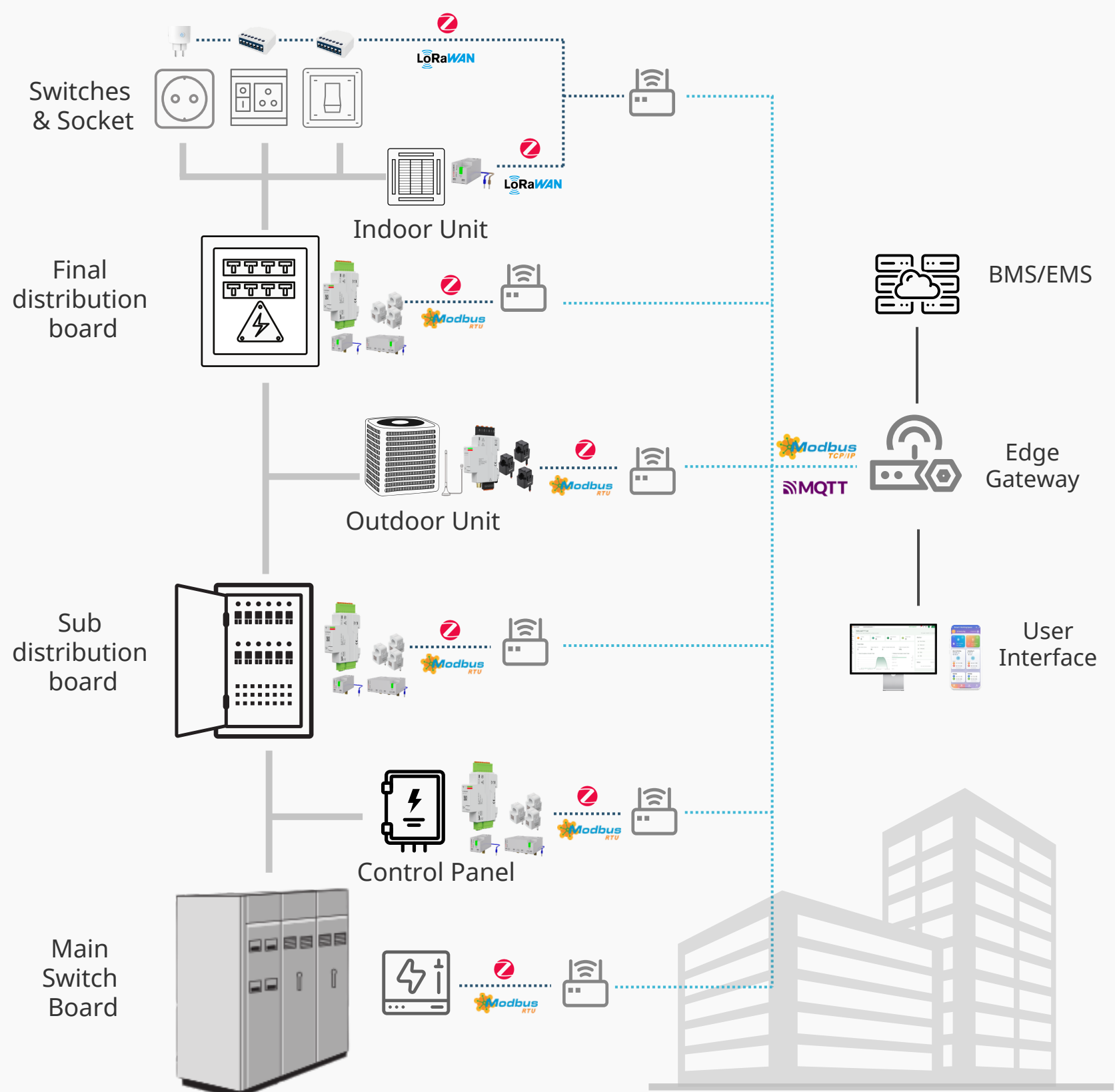
Building Energy Efficiency

Our compact energy meters deliver real-time power data for smart energy management. Using standard and secure protocols, they seamlessly integrate into existing gateways and BMS/EMS, making them the ultimate retrofit solution for buildings.

Customer Benefits

-  Quick Deployment
-  Low Learning Curve
-  Energy Efficiency Gains
-  Scalable & Flexible
-  High Security & Compliance

Monitoring is the essential first step for building energy optimization.



Southbound Communication at Acquisition Gateway

- | | |
|---|--|
| Zigbee
Field-proven SoC and protocol with Bituo's proprietary optimizations. | Modbus RTU
Classic Modbus RTU over RS485 connection for maximum stability and reliability. |
| LoRaWAN
Ideal wireless option for distributed loads in large spaces or multi-wall environments. | BLE
Simplifies on-site configuration and inspection for select Modbus RTU products. |

Northbound Communication at Acquisition Gateway

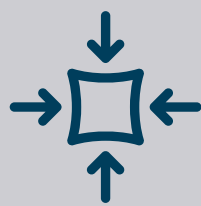
- | | |
|--|---|
| Modbus TCP
Ethernet/Wi-Fi based for effortless edge gateway integration. | MQTT
Industry-standard protocol for lightweight, reliable edge/cloud integration. |
|--|---|

Note: Southbound APIs are available in our Doc Center. Users can choose their own acquisition gateways, or contact us for compatibility recommendations.

SPM Series

Miniature Energy Meters

The ultimate power metering & monitoring devices designed for final power distribution boards and control boards.



Space-Saving

Easy fitting into existing or new power distribution board with minimal space occupation



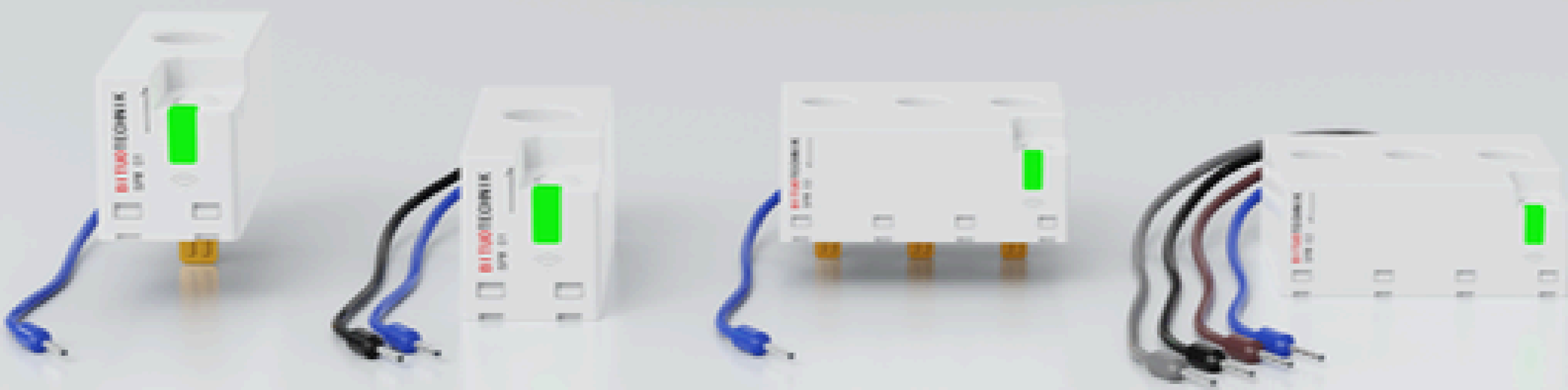
High-Precision

High-accuracy measurement of U, I and P, and bi-directional energy measurement at Class 1 accuracy



Real-Time

Complete electrical data measured in real time, which facilitates energy automation and alarming



Overview

- 09 SPM01 FLEX 1PN 63A
- 10 SPM02 FLEX 3PN 63A
- 11 SPM01 MCBM 1PN 63A
- 12 SPM02 MCBM 3PN 63A

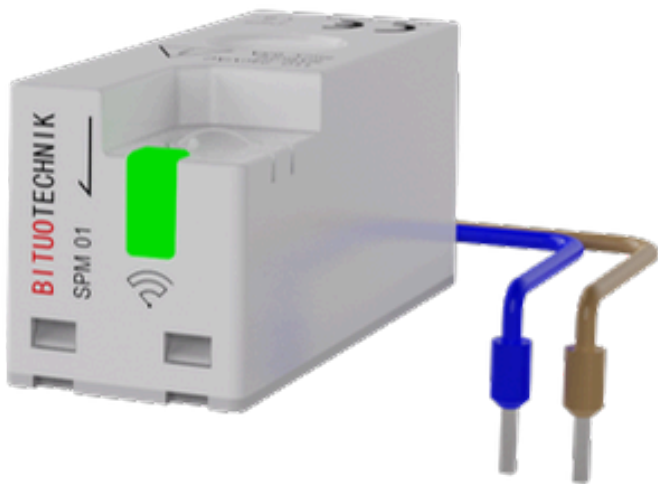


Are you missing any information?
Scan the QR code to see all our products on
our website or visit: www.bituo-technik.com

SPM01 FLEX

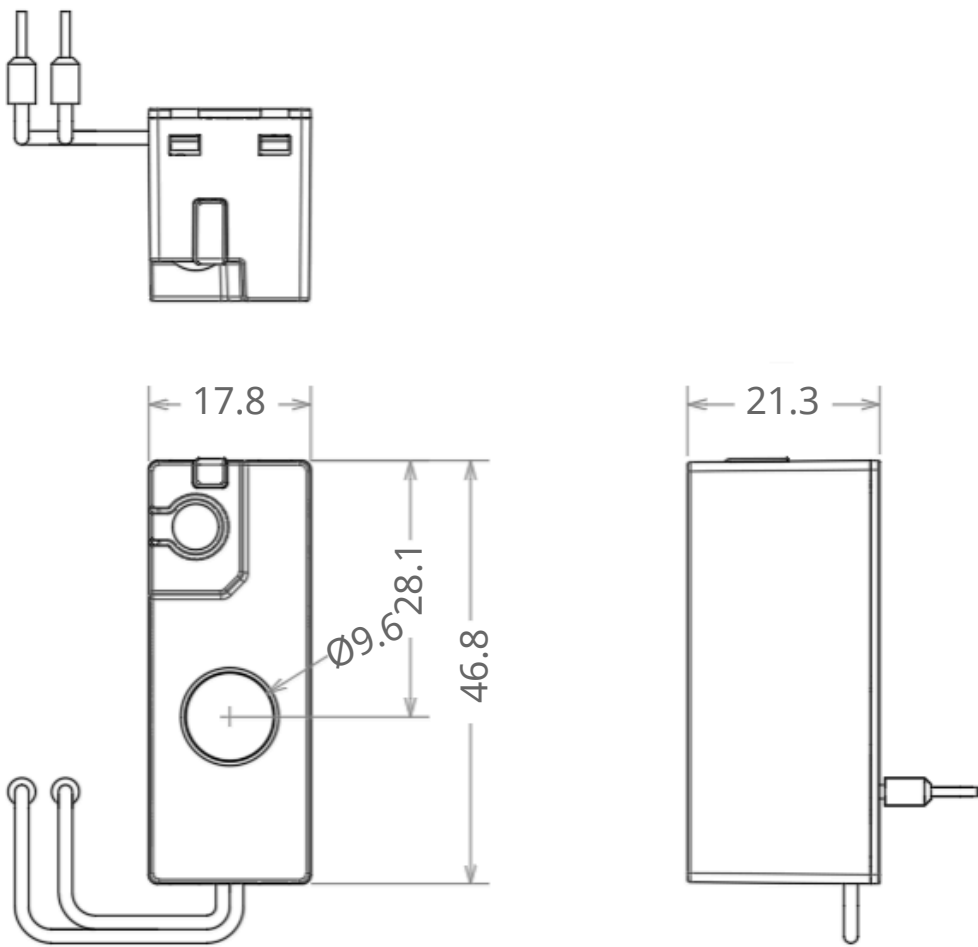
1-Phase 63A Flexible-Installation Miniature Energy Meter

The SPM01 Miniature Energy Meter (Flexible Version) is the perfect solution for retrofit projects and installations with space or compatibility constraints. Designed for easy installation where traditional MCB-mounting may not be compatible, this flexible energy meter fits seamlessly into existing power distribution boards without requiring DIN-rail space.

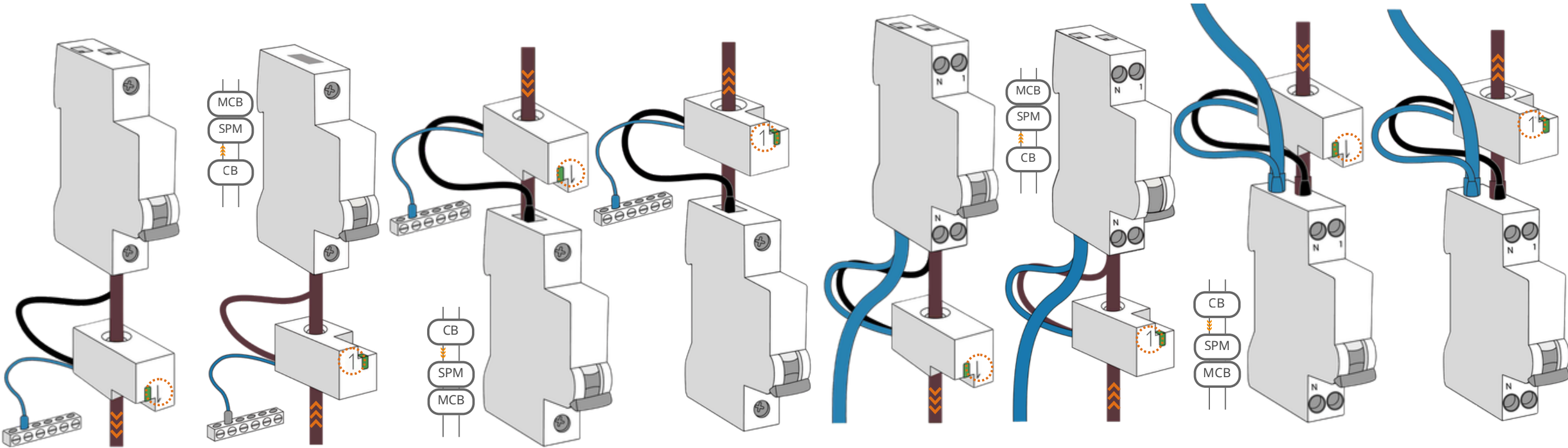


Technical Data

Rated voltage	220-240 VAC, 50/60 Hz
Max monitoring current	63A
Over-voltage category	III
Rated insulating voltage	250V
Rated impulse withstand voltage	4kV
Pollution degree	3
Protection degree	IP20
Measurement accuracy	±1% (resistive load)
Maximum power consumption	≤ 2VA
Rated operating temperature	-25°C to 70°C
Dimension	46.8x17.8x21.3mm
Communication Type	BLE+Wi-Fi; Zigbee



Wiring Diagrams



Remark

1) The device must be associated with an easily accessible upstream protective device – such as miniature circuit breakers (MCB).

2) ⚠ The device must be installed, operated, serviced, and maintained ONLY by qualified professionals. Please read the user guide carefully before installation. The user guide is a separate document from the datasheet.

Ordering Code

SPM01-D2TW	1PN FLEX/63A Tuya Wi-Fi	SPM01-D2EW	1PN FLEX/63A ESP32 Wi-Fi
SPM01-D2TZ	1PN FLEX/63A Tuya Zigbee	SPM01-D2TZ-U01	1PN FLEX/63A Std. Zigbee

SPM02 FLEX

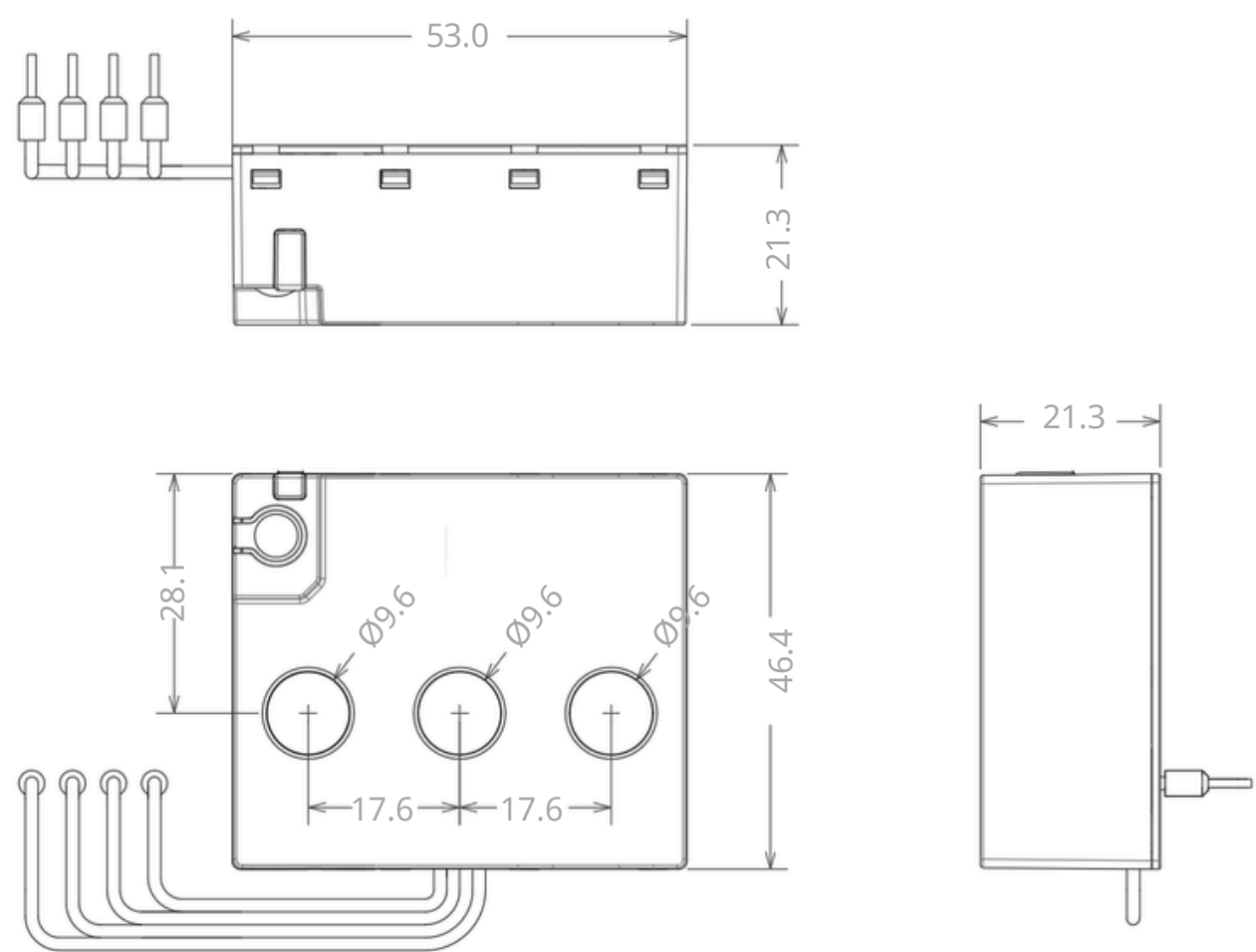
3-Phase 63A Flexible-Installation Miniature Energy Meter

The SPM02 Miniature Energy Meter (Flexible version) is an advanced electrical monitoring device designed for three-phase applications. With its compact size, it is ideal to be installed above or below circuit breakers, requiring no space on Din-rails. The SPM02 offers precise, real-time data collection for energy consumption, ensuring seamless integration into energy management systems.

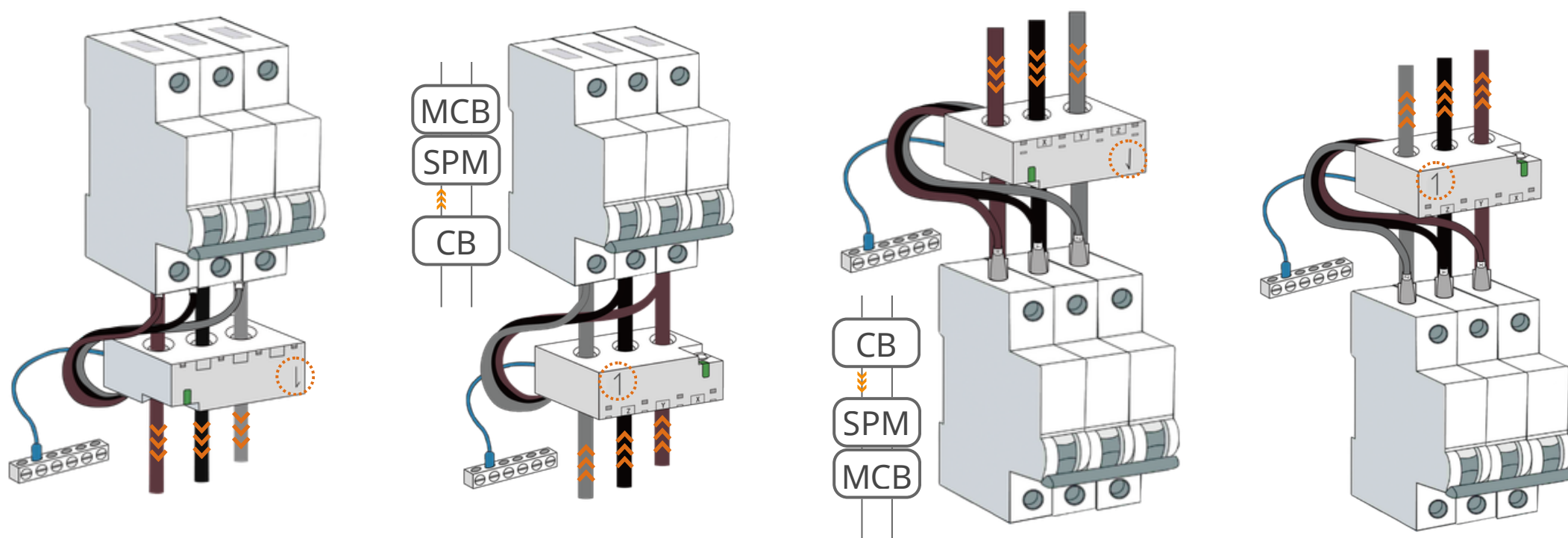


Technical Data

Rated voltage	220-240 VAC L-N, 50/60 Hz 380-415 VAC L-L, 50/60 Hz
Max monitoring current	63A
Over-voltage category	III
Rated insulating voltage	440V
Rated impulse withstand voltage	4kV
Pollution degree	3
Protection degree	IP20
Measurement accuracy	Class 1 (active energy)
Maximum power consumption	≤ 2VA
Rated operating temperature	-25°C to 70°C
Dimension	46.4x53.0x21.3mm
Communication Type	BLE+Wi-Fi; Zigbee



Wiring Diagrams



Remark

- 1) The device must be associated with an easily accessible upstream protective device – such as miniature circuit breakers (MCB).
- 2) ⚠ The device must be installed, operated, serviced, and maintained ONLY by qualified professionals. Please read the user guide carefully before installation. The user guide is a separate document from the datasheet.

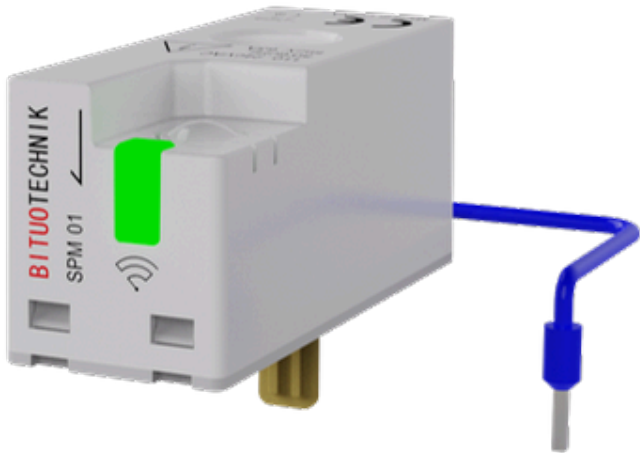
Ordering Code

SPM02-D2TW	3PN FLEX/63A Tuya Wi-Fi	SPM02-D2EW	3PN FLEX/63A ESP32 Wi-Fi
SPM02-D2TZ	3PN FLEX/63A Tuya Zigbee	SPM02-D2TZ-U01	3PN FLEX/63A Std. Zigbee

SPM01 MCBM

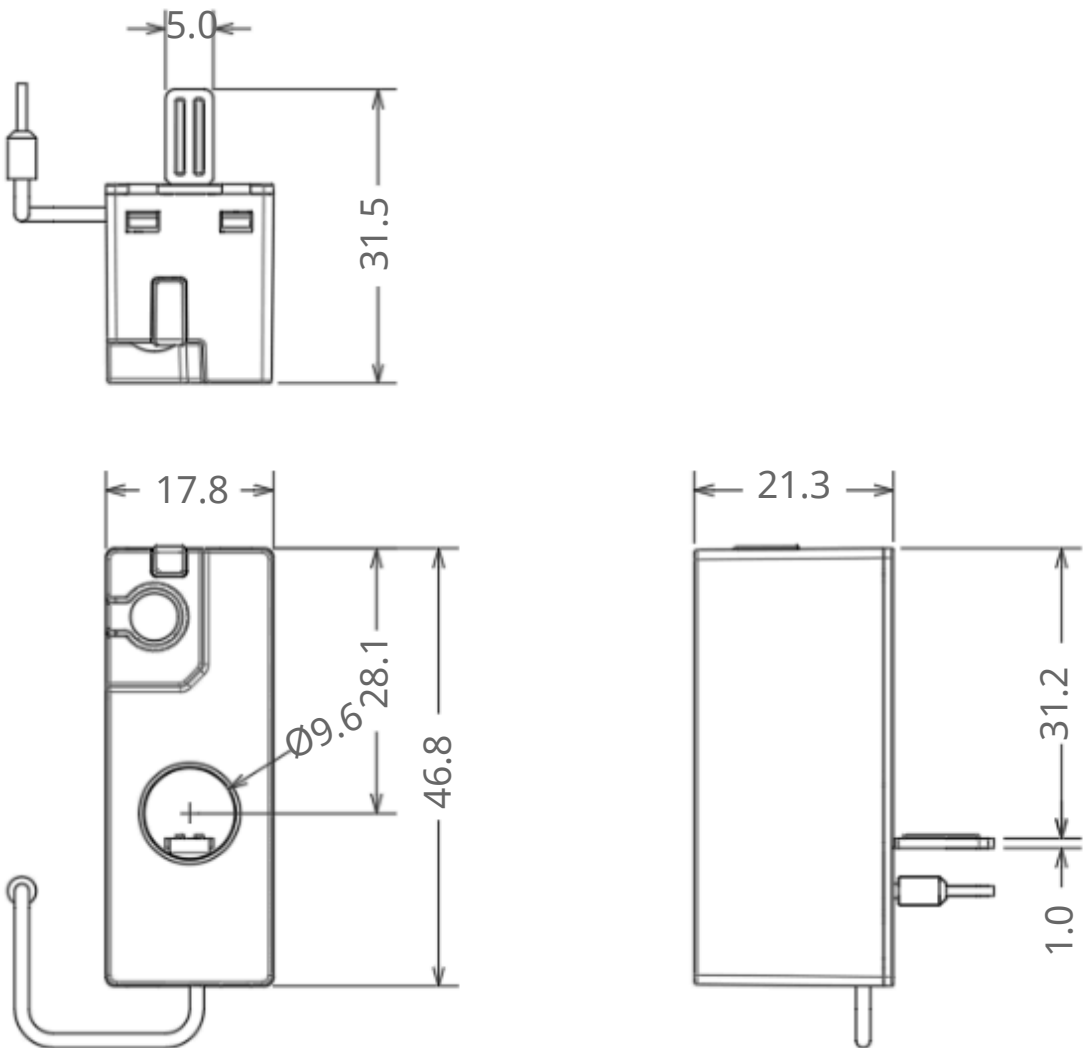
1-Phase 63A MCB-Mounting Miniature Energy Meter

The SPM01 Miniature Energy Meter (MCB-mounting version) is specifically designed for seamless integration with miniature circuit breakers (MCBs). It ensures easy and efficient energy monitoring within existing electrical systems, delivering real-time data and precise measurement.



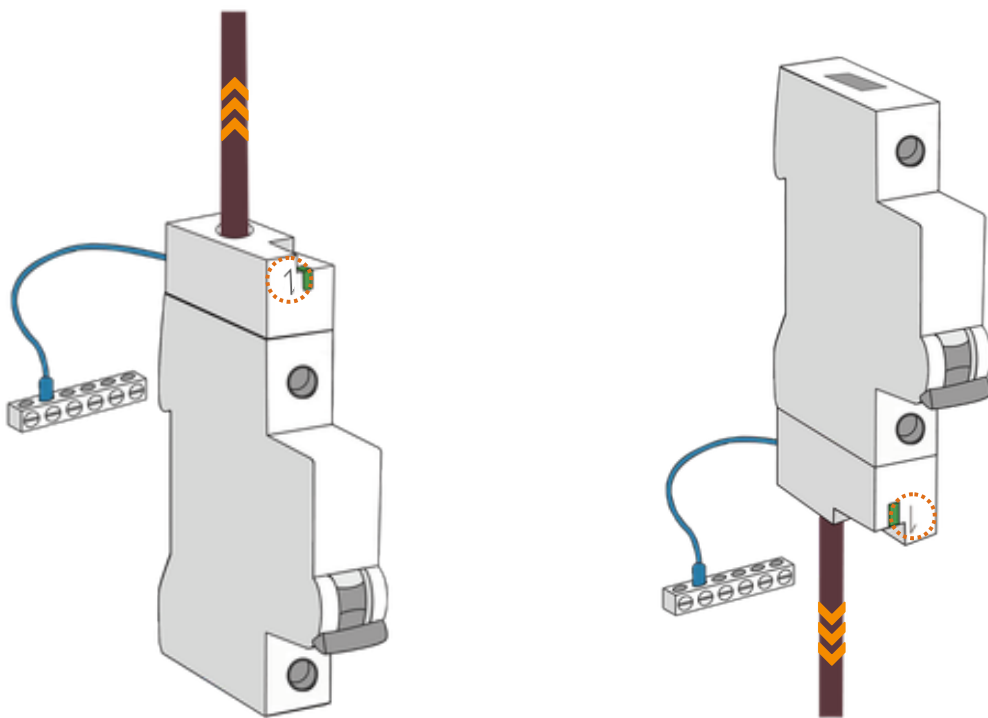
Technical Data

Rated voltage	220-240 VAC, 50/60 Hz
Max monitoring current	63A
Over-voltage category	III
Rated insulating voltage	250V
Rated impulse withstand voltage	4kV
Pollution degree	3
Protection degree	IP20
Measurement accuracy	±1% (resistive load)
Maximum power consumption	≤ 2VA
Rated operating temperature	-25°C to 70°C
Dimension	46.8x17.8x21.3mm
Communication Type	BLE+Wi-Fi; Zigbee

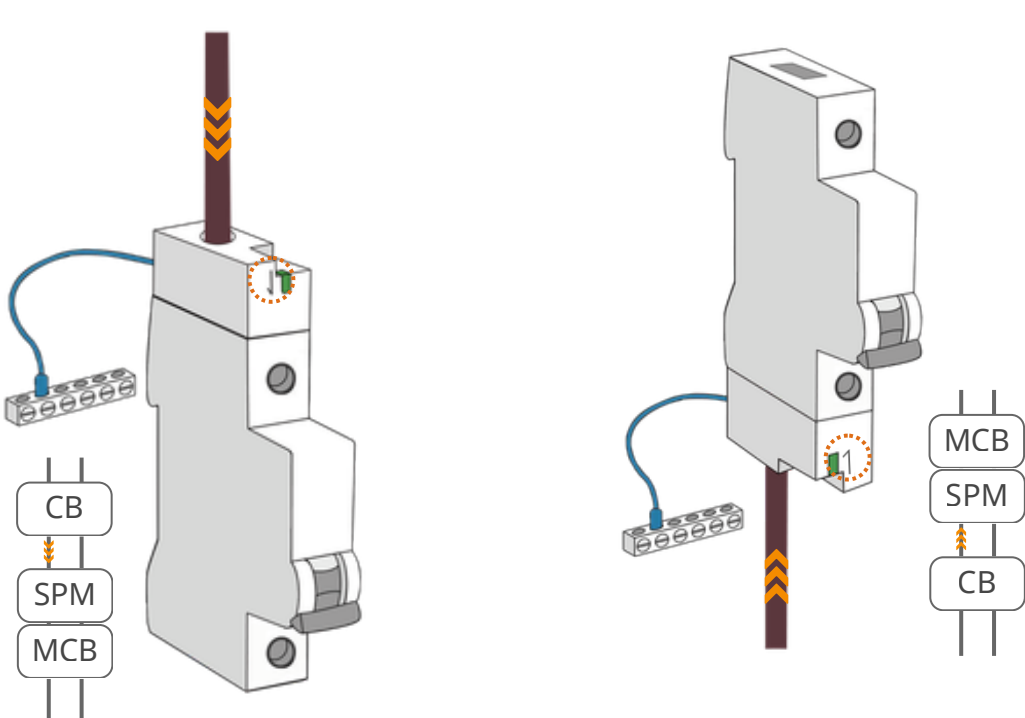


Wiring Diagrams

Downstream Installation



Upstream Installation



Remark

- 1) The device must be associated with an easily accessible upstream protective device – such as miniature circuit breakers (MCB).
- 2) ⚠️ The device must be installed, operated, serviced, and maintained ONLY by qualified professionals. Please read the user guide carefully before installation. The user guide is a separate document from the datasheet.
- 3) The manufacturer has only verified the compatibility of SPM01 MCBM with Siemens 5SY/5SL series, including tests on wiring capacity, thermal performance, and mechanical fit etc. The flexible version is recommended if you are unsure about MCB-mounting compatibility with your circuit breakers.

Ordering Code

Downstream Installation

SPM01-D1TW	1PN MCBM-DI/63A Tuya Wi-Fi
SPM01-D1TZ	1PN MCBM-DI/63A Tuya Zigbee
SPM01-D1EW	1PN MCBM-DI/63A Open BLE+Wi-Fi
SPM01-D1TZ-U01	1PN MCBM-DI/63A Standard Zigbee

Upstream Installation

SPM01-U1TW	1PN MCBM-UI/63A Tuya Wi-Fi
SPM01-U1TZ	1PN MCBM-UI/63A Tuya Zigbee
SPM01-U1EW	1PN MCBM-UI/63A Open BLE+Wi-Fi
SPM01-U1TZ-U01	1PN MCBM-UI/63A Standard Zigbee

SPM02 MCBM

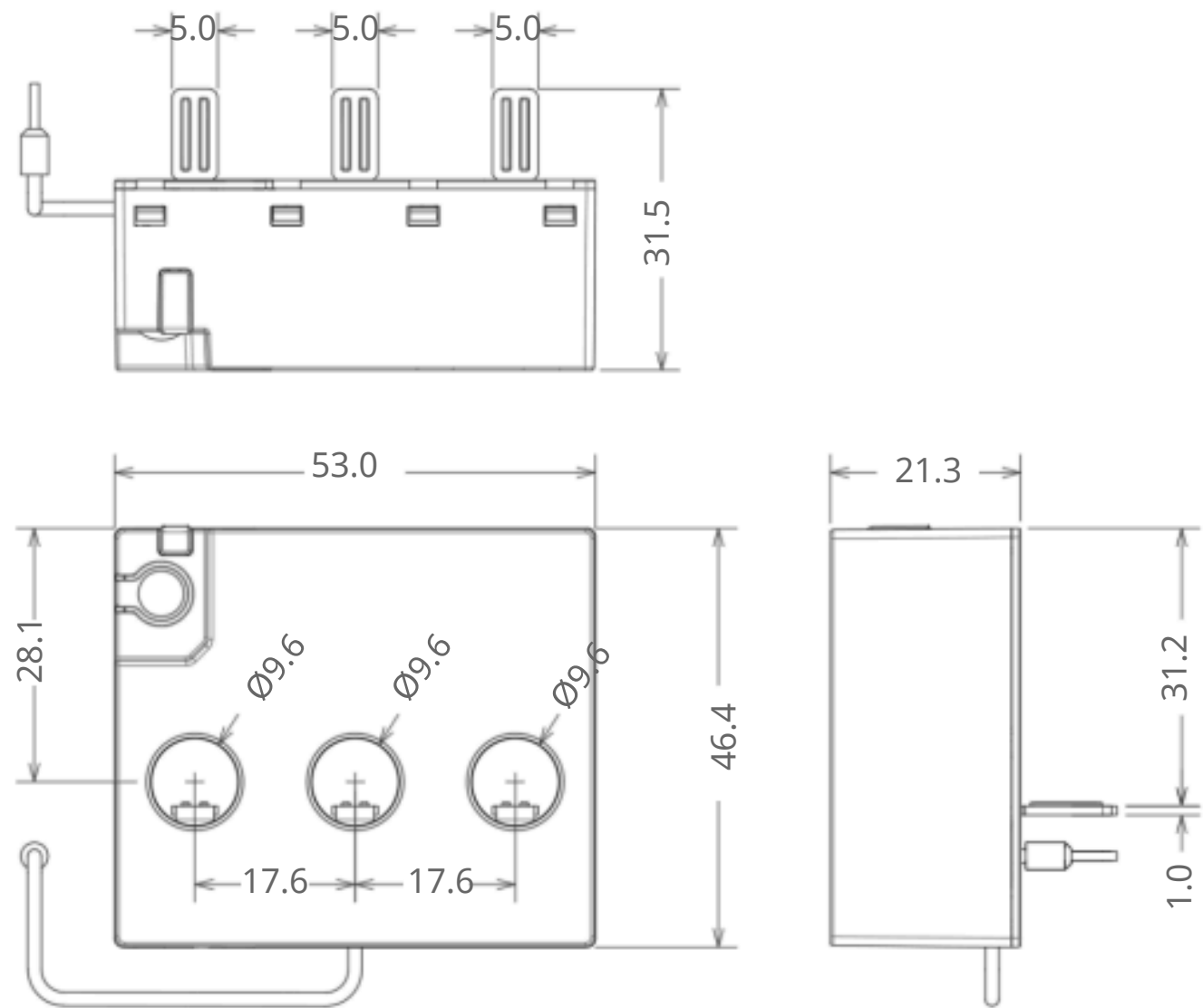
3-Phase 63A MCB-mounting Miniature Energy Meter

The SPM02 Miniature Energy Meter (MCB-mounting Version) is an advanced electrical monitoring device designed for three-phase applications, specifically designed for seamless integration with miniature circuit breakers (MCB).

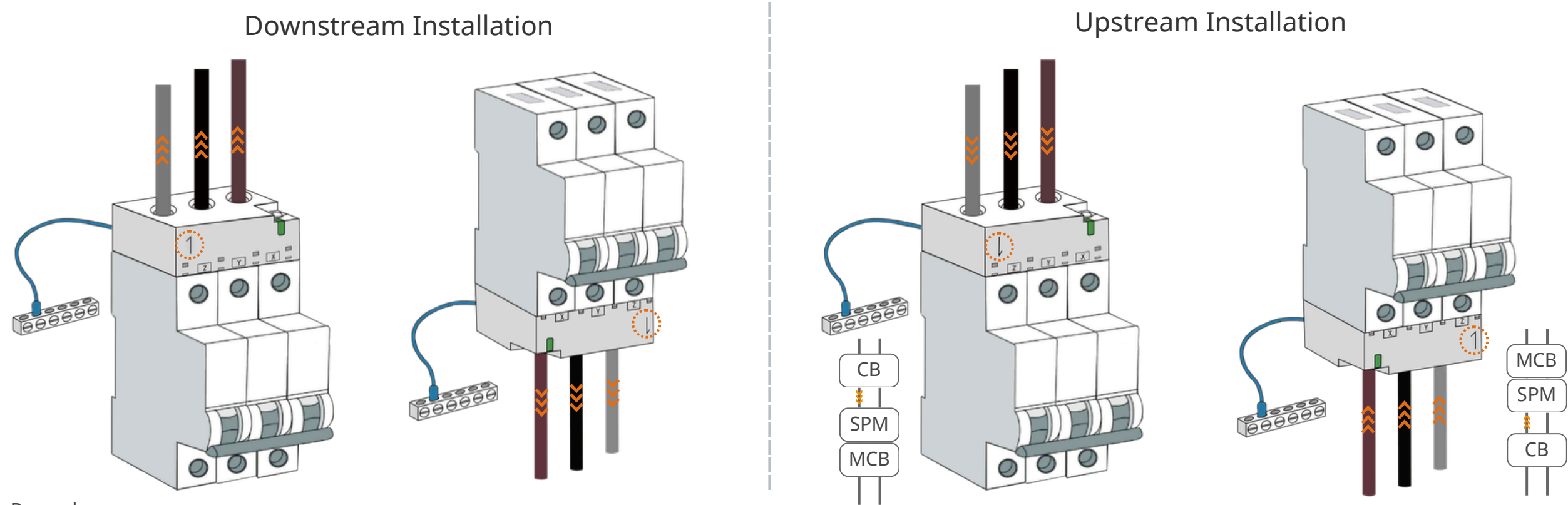


Technical Data

Rated voltage	220-240 VAC L-N, 50/60 Hz 380-415 VAC L-L, 50/60 Hz
Max monitoring current	63A
Over-voltage category	III
Rated insulating voltage	440V
Rated impulse withstand voltage	4kV
Pollution degree	3
Protection degree	IP20
Measurement accuracy	Class 1 (active energy)
Maximum power consumption	≤ 2VA
Rated operating temperature	-25°C to 70°C
Dimension	46.4x53.0x21.3mm
Communication Type	BLE+Wi-Fi; Zigbee



Wiring Diagrams



- Remark
- 1) The device must be associated with an easily accessible upstream protective device – such as miniature circuit breakers (MCB).
 - 2) ⚠ The device must be installed, operated, serviced, and maintained ONLY by qualified professionals. Please read the user guide carefully before installation. The user guide is a separate document from the datasheet.
 - 3) The manufacturer has only verified the compatibility of SPM02 MCBM with Siemens 5SY/5SL series, including tests on wiring capacity, thermal performance, and mechanical fit etc. The flexible version is recommended if you are unsure about MCB-mounting compatibility with your circuit breakers.

Ordering Code

Downstream Installation

SPM02-D1TW	3PN MCBM-DI/63A Tuya Wi-Fi
SPM02-D1TZ	3PN MCBM-DI/63A Tuya Zigbee
SPM02-D1EW	3PN MCBM-DI/63A Open BLE+Wi-Fi
SPM02-D1TZ-U01	3PN MCBM-DI/63A Standard Zigbee

Upstream Installation

SPM02-U1TW	3PN MCBM-UI/63A Tuya Wi-Fi
SPM02-U1TZ	3PN MCBM-UI/63A Tuya Zigbee
SPM02-U1EW	3PN MCBM-UI/63A Open BLE+Wi-Fi
SPM02-U1TZ-U01	3PN MCBM-UI/63A Standard Zigbee

SDM Series

Compact Energy Meters with Clamp CTs

Future-ready smart energy meters equipped with clamp current transformers (CTs), designed for versatile applications. Engineered to meet both IEC and UL standards, these meters ensure seamless integration into electrical panels across global markets.



Overview

- 14 SDM01 Gen 2 Combo
- 15 SDM01 G2X
- 16 SDM01 Combo
- 17 SDM02 SP

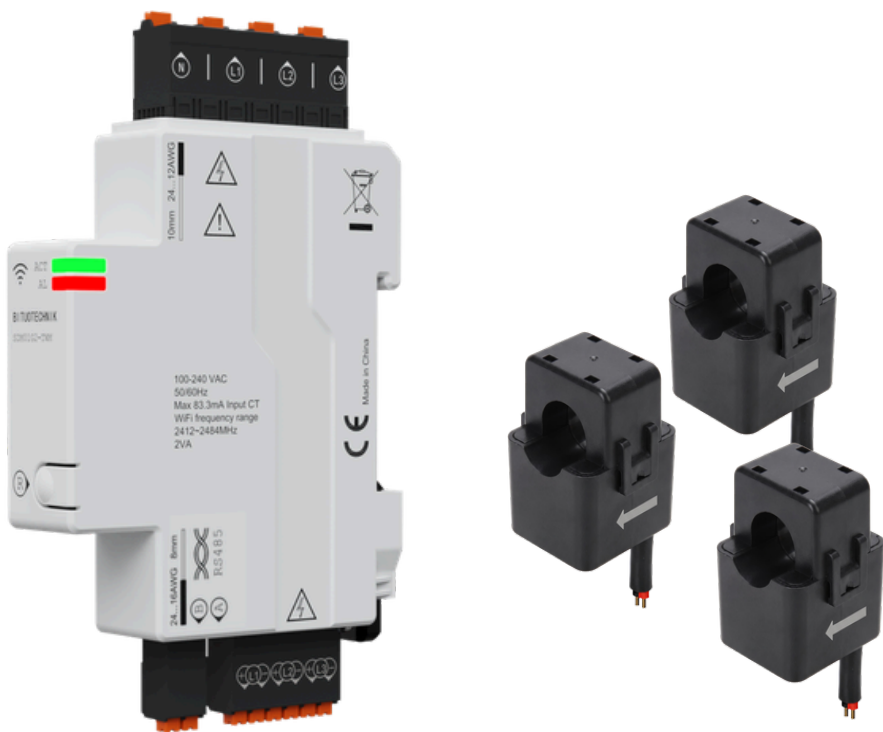


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our website or visit: www.bituo-technik.com

SDM01 Combo Gen2

Three-Phase Compact Energy Meter with Clamp CTs

The SDM01 Combo Gen2 maintains the ultra-slim 18mm (1-module) profile for precise monitoring of three-phase or multiple single-phase circuits. Equipped with three split-core CTs, it accurately measures voltage, current, power, and energy. It supports both wired and wireless communication for flexible and seamless system integration. Its ultra-fast bi-directional power measurement makes it particularly suitable for export limiting application.

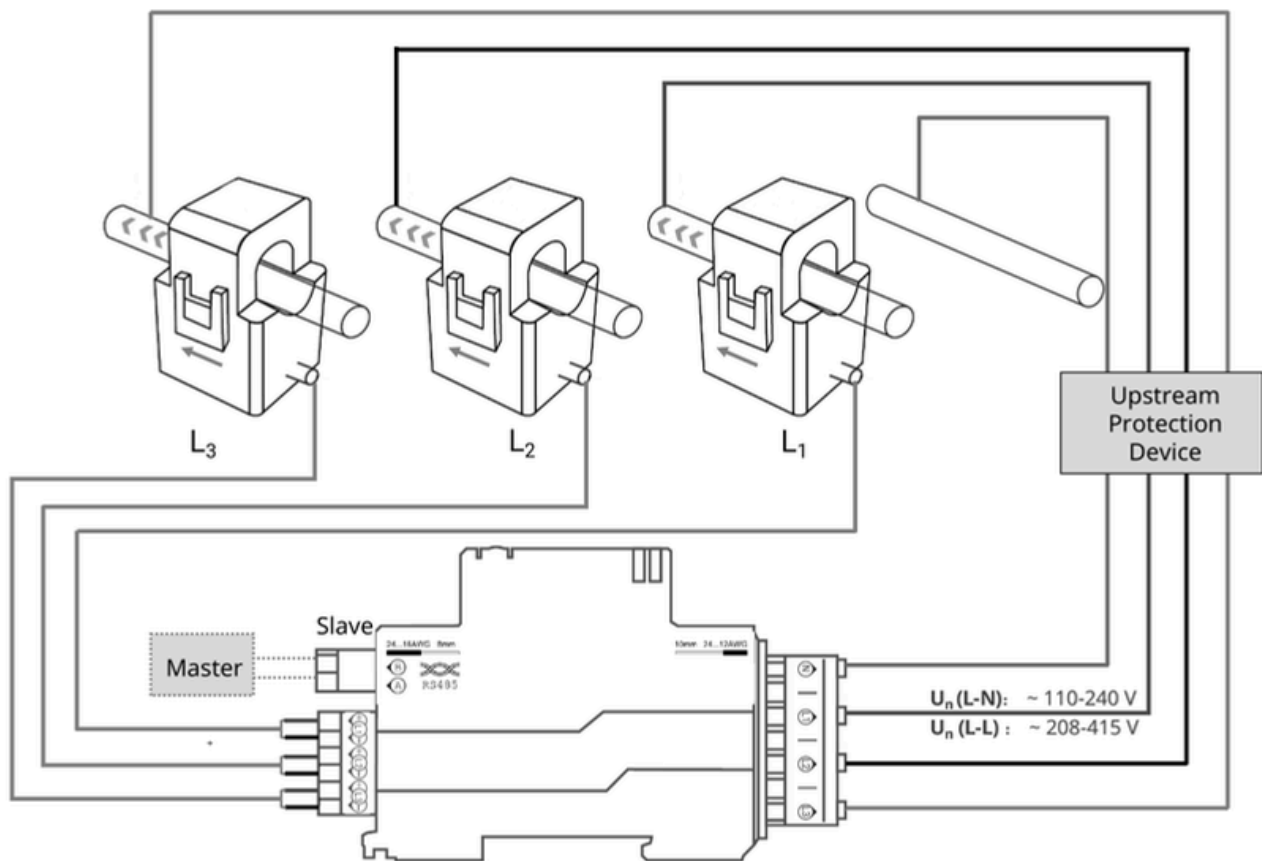


Technical Data

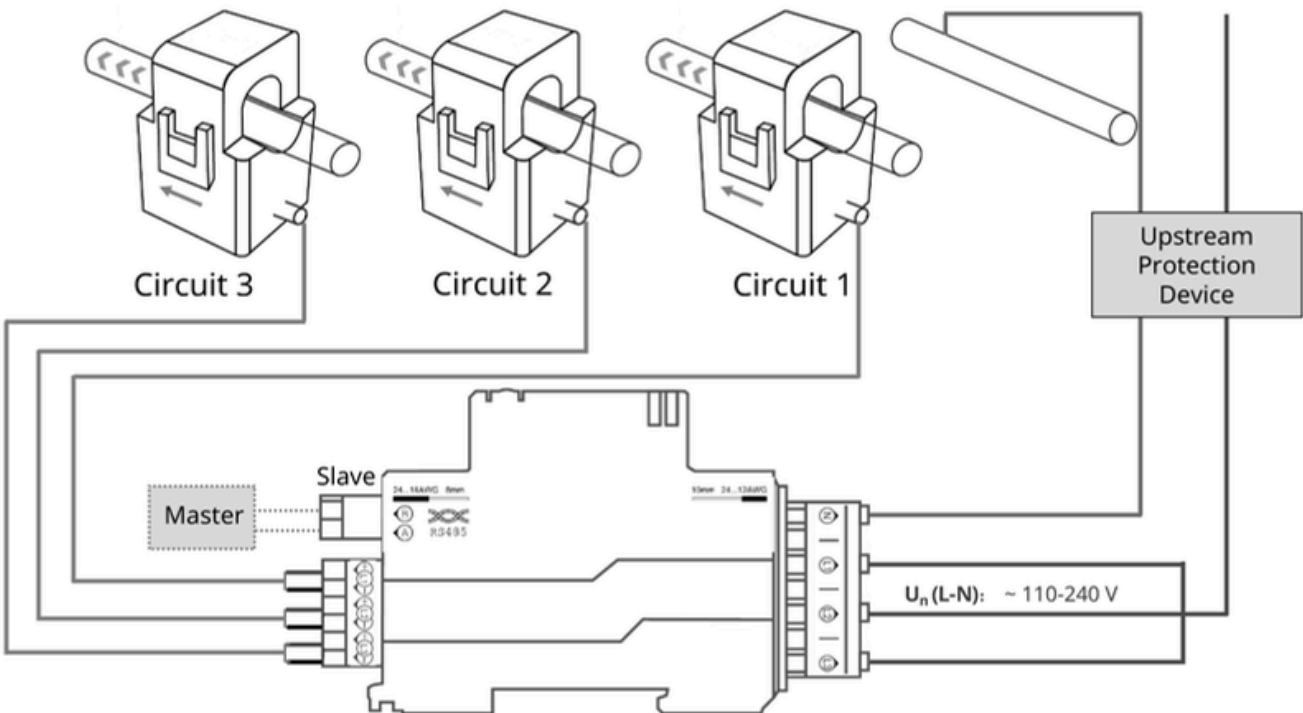
Rated voltage (Input)	220~240 VAC L-N, 50/60 Hz 380~415 VAC L-L, 50/60 Hz	Power Supply	100~240 VAC (L ₁ -N)
Max monitoring current	50 / 120 / 200 / 300 / 400A	Maximum Power consumption	≤ 2VA
Over-voltage category	III	Rated operating temperature	-25 to 55 °C
Rated insulating voltage	440V	Main module dimension	113.7×18.0×65.9mm
Rated impulse withstand voltage	4kV	Clamp CT apertures	Ø10 / 16 / 20 / 24 / 36 mm
Pollution degree	3	Communication Type	
Protection degree	IP20	- Wireless	BLE+Wi-Fi; Zigbee
Measurement accuracy	Class 1 (active energy)	- Wired	RS485

Wiring Diagrams

Three-phase (3P4W) System Wiring



Single-phase System Wiring up to 3 Branch Circuits



Remark

- 1) Not suitable for 3P3W installation.
- 2) ⚠ The device must be installed, operated, serviced, and maintained ONLY by qualified professionals. Please read the user guide carefully before installation. The user guide is a separate document from the datasheet.

Ordering Code

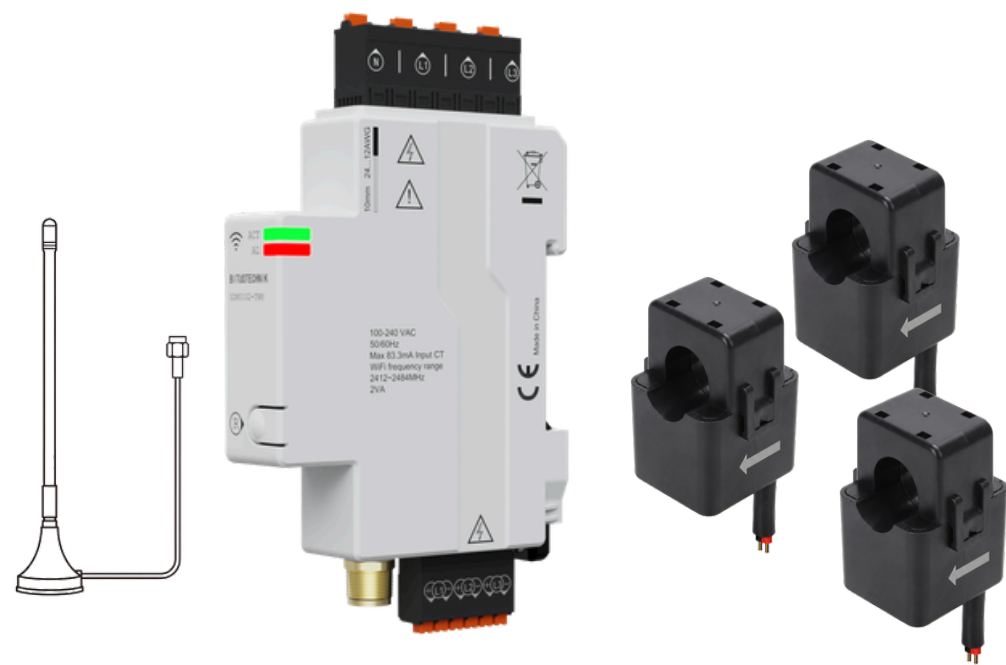
SDM01G2-TWM-12	3PN 120A Tuya Wi-Fi + 485 (1 x TW+485 Main Unit and 3 x 120A Clamp CTs)
SDM01G2-SZM-12	3PN 120A Standard Zigbee + 485 (1 x ZB+485 Main Unit and 3 x 120A Clamp CTs)
SDM01G2-TWM	SDM01 Gen2 Main Unit TW+485 (spare part only)
SDM01G2-SZM	SDM01 Gen2 Main Unit SZ+485 (spare part only)
BSCT-16B 120A/40mA	Clamp CT 16-B White 120A/40mA (spare part only)

Note: 120A CTs are included as standard for home and small business application, and 50A, 200A, 300A, and 400A CTs are available upon request.

SDM01 G2X

Compact Energy Meter with Clamp CTs

The SDM01 G2X is an ultra-slim 18mm energy meter for precise three-phase or multiple single-phase monitoring. It delivers high-speed reporting for dynamic load balancing and export limiting, alongside an external antenna for reliable connectivity.

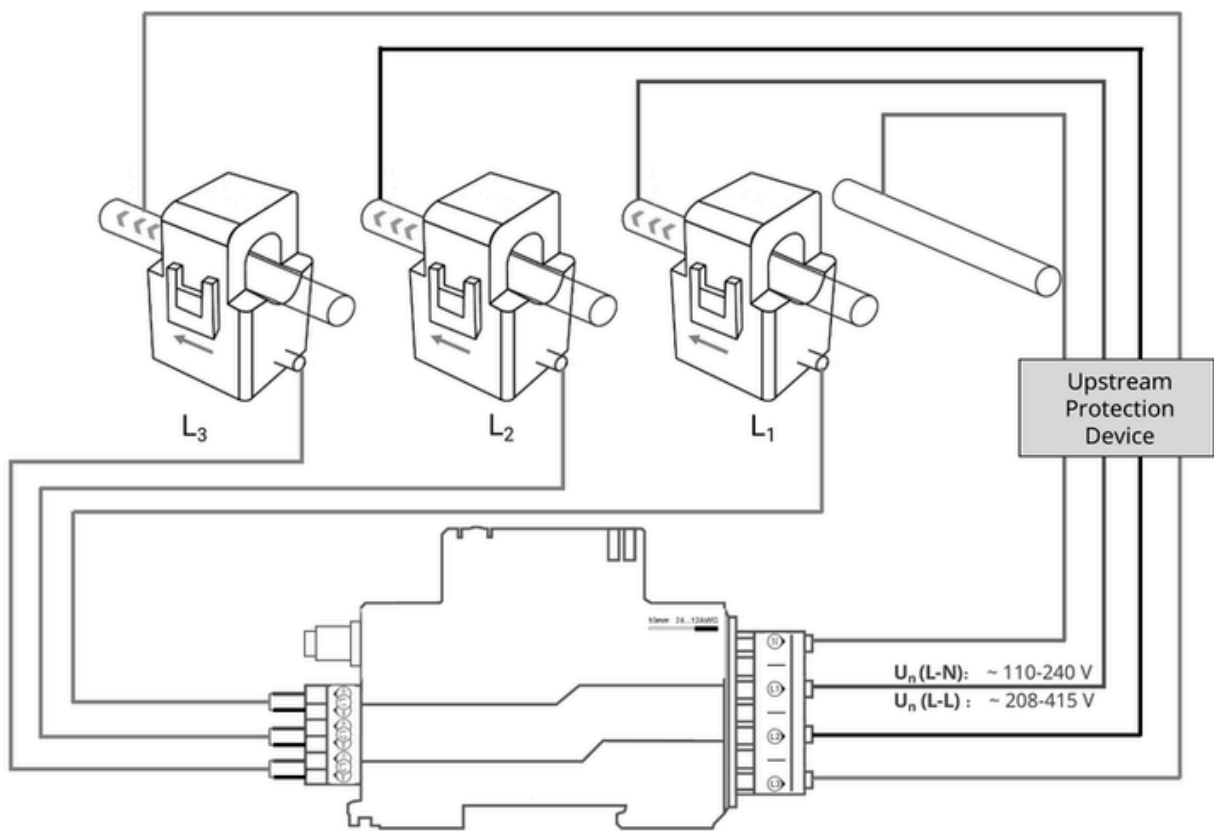


Technical Data

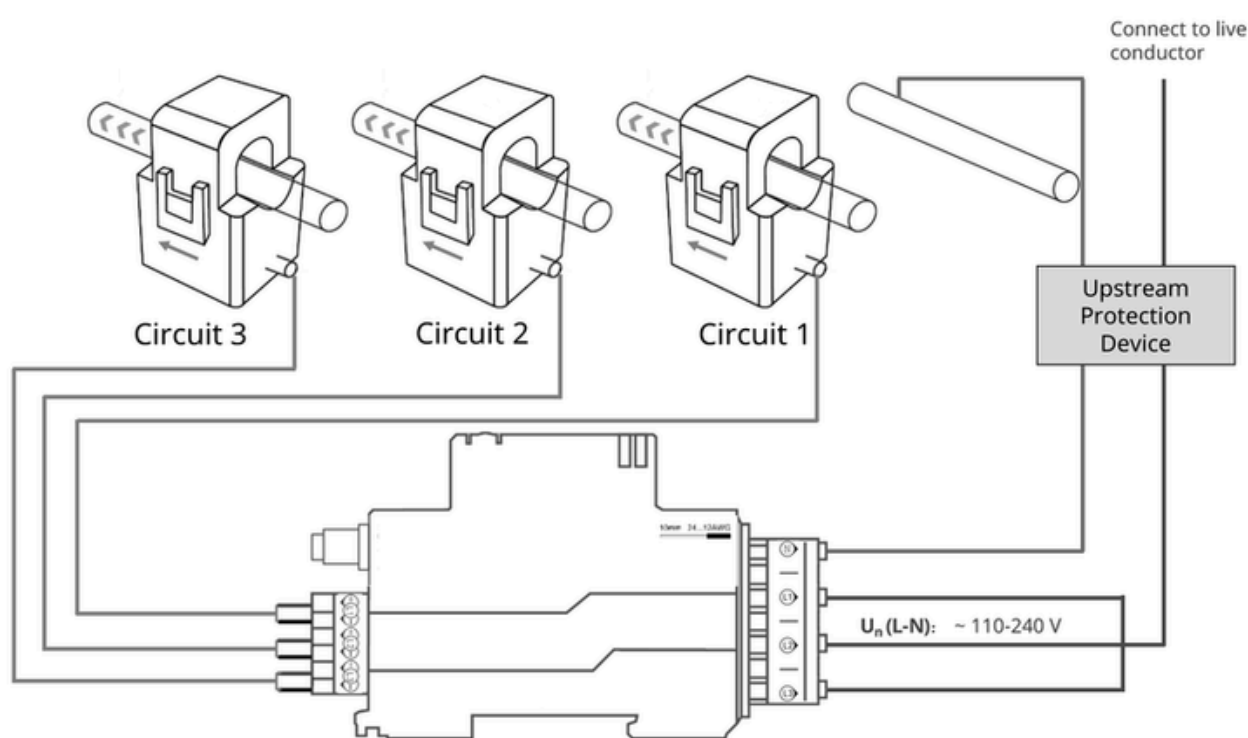
Rated voltage (Input)	220~240 VAC L-N, 50/60 Hz 380~415 VAC L-L, 50/60 Hz	Power Supply	100~240 VAC (L ₁ -N)
Max monitoring current	50 / 120 / 200 / 300 / 400A	Maximum Power consumption	≤ 2VA
Over-voltage category	III	Rated operating temperature	-25 to 55 °C
Rated insulating voltage	440V	Main module dimension	113.7×18.0×65.9mm
Rated impulse withstand voltage	4kV	Clamp CT apertures	Ø10 / 16 / 20 / 24 / 36 mm
Pollution degree	3	Communication Type	BLE+Wi-Fi
Protection degree	IP20		
Measurement accuracy	Class 1 (active energy)		

Wiring Diagrams

Three-phase (3P4W) System Wiring



Single-phase System Wiring up to 3 Branch Circuits



Remark

1) Not suitable for 3P3W installation.

2) ⚠ The device must be installed, operated, serviced, and maintained ONLY by qualified professionals. Please read the user guide carefully before installation. The user guide is a separate document from the datasheet.

Ordering Code

SDM01G2X-TW-12	3PN 120A Tuya Wi-Fi (1 x Tuya WiFi Main Unit and 3 x 120A Clamp CTs)
SDM01G2X-EW-12	3PN 120A Open Wi-Fi (1 x ESP32-C6 WiFi Main Unit and 3 x 120A Clamp CTs)
BSCT-16B 120A/40mA	Clamp CT 16-B White 120A/40mA (Spare part only)

Note:

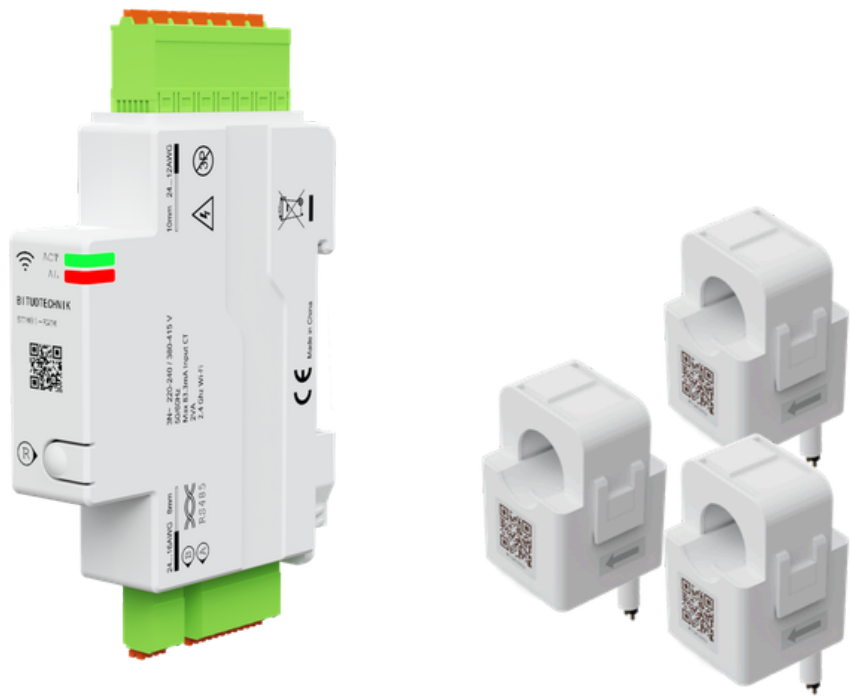
1) 120A CTs are included as standard for home and small business application, and 50A, 200A, 300A, and 400A CTs are available upon request.

2) SDM01 Combo Gen2 and SDM01G2X with Tuya LAN+ Wi-Fi modules must be purchased via Tuya Smart directly

SDM01 Combo

Three-Phase Compact Energy Meter with Clamp CTs

The SDM01 Combo is a compact 18mm-wide DIN-rail smart energy meter designed for real-time monitoring of three-phase systems or multiple single-phase branches. Equipped with three split-core CTs, it accurately measures voltage, current, power, and energy. It supports both wired and wireless communication for flexible and seamless system integration.

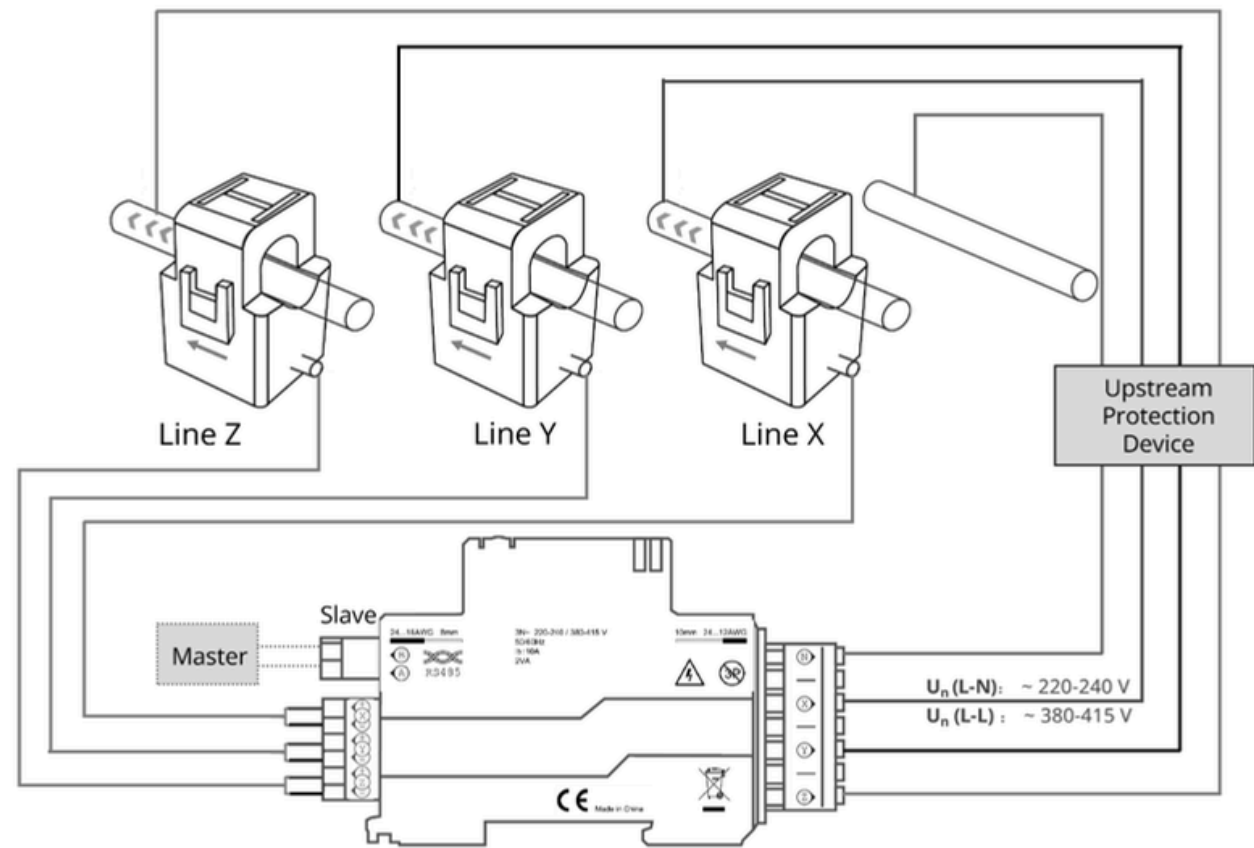


Technical Data

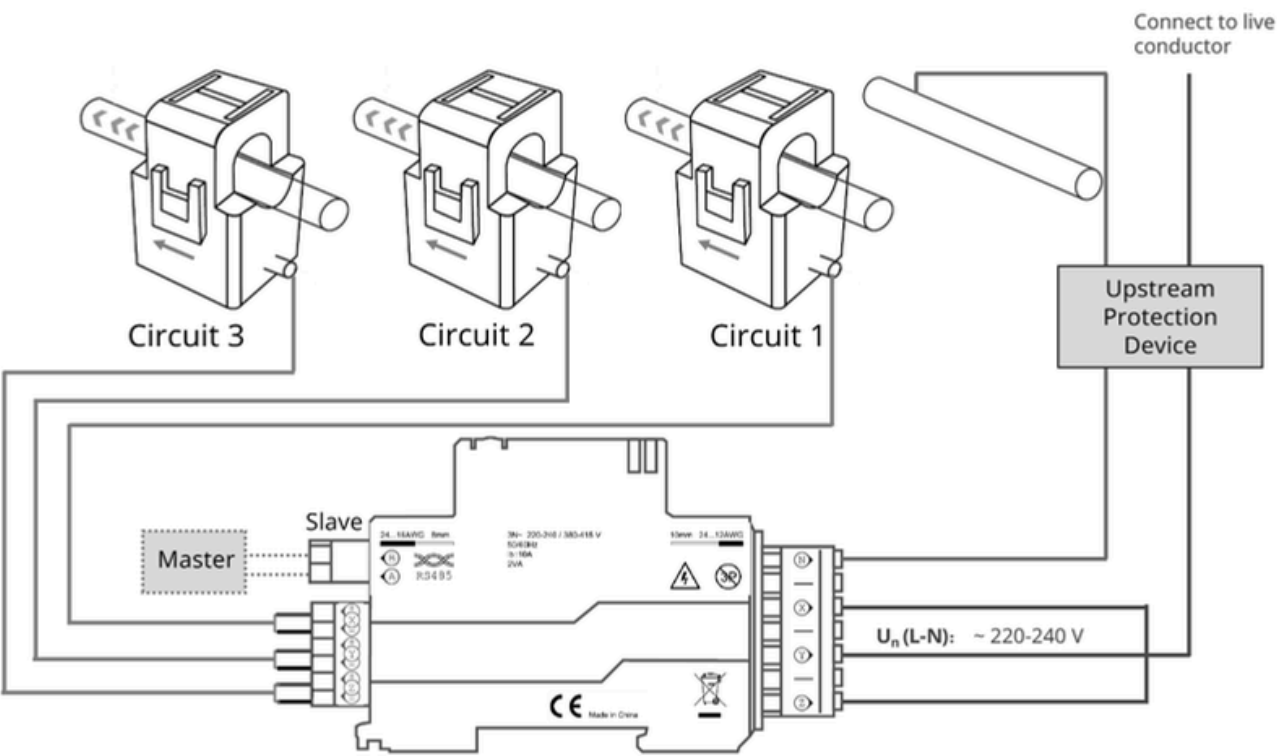
Rated voltage	220~240 VAC L-N, 50/60 Hz 380~415 VAC L-L, 50/60 Hz	Maximum Power consumption	≤ 2VA
Max monitoring current	120A / 200A	Rated operating temperature	-25 to 55 °C
Over-voltage category	III	Main module dimension	113.7×18.0×65.9mm
Rated insulating voltage	440V	Clamp CT apertures	Ø16mm / Ø20mm
Rated impulse withstand voltage	4kV	Communication Type	- Wireless - Wired
Pollution degree	3		BLE; Wi-Fi; Zigbee RS485
Protection degree	IP20		
Measurement accuracy	Class 1 (active energy)		

Wiring Diagrams

Three-phase (3P4W) System Wiring



Single-phase System Wiring up to 3 Branch Circuits



Remark

- 1) Not suitable for 3P3W installation.
- 2) ⚠ The device must be installed, operated, serviced, and maintained ONLY by qualified professionals. Please read the user guide carefully before installation. The user guide is a separate document from the datasheet.

Ordering Code

Complete Package with 1 x Main and 3 x 120A Clamp CTs

SDM01-TWM-12	3PN 120A Tuya Wi-Fi + 485
SDM01-TZM-12	3PN 120A Tuya Zigbee + 485
SDM01-EWM-12	3PN 120A Open BLE+Wi-Fi + 485
SDM01-TZM-12-U01	3PN 120A Standard Zigbee +485

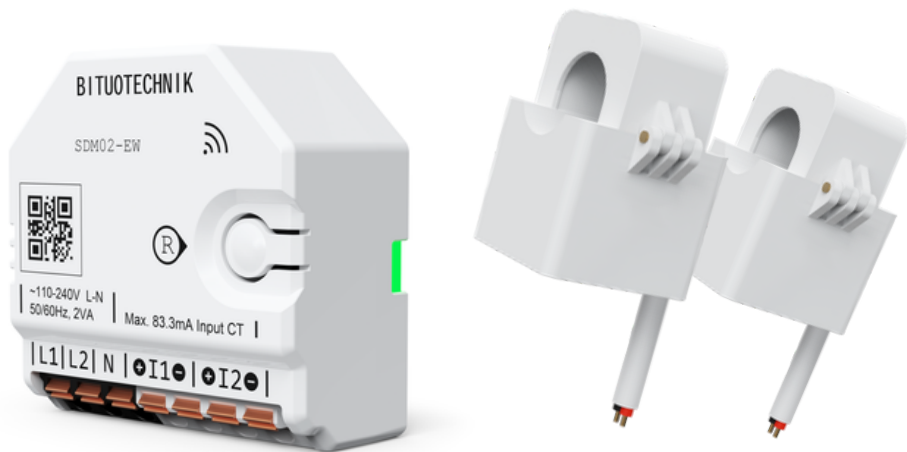
Complete Package with 1 x Main and 3 x 200A Clamp CTs

SDM01-TWM-20	3PN 200A Tuya Wi-Fi + 485
SDM01-TZM-20	3PN 200A Tuya Zigbee + 485
SDM01-EWM-20	3PN 200A Open BLE+Wi-Fi +485
SDM01-TZM-20-U01	3PN 200A Standard Zigbee +485

SDM02 SP

Split-Phase Compact Energy Meter with Clamp CTs

The SDM02 is a compact smart energy monitor designed for split-phase and two-phase systems. Using two split-core CTs, it provides precise measurement of voltage, current, power, and energy. With integrated wireless communication, it offers effortless integration into smart energy ecosystems.

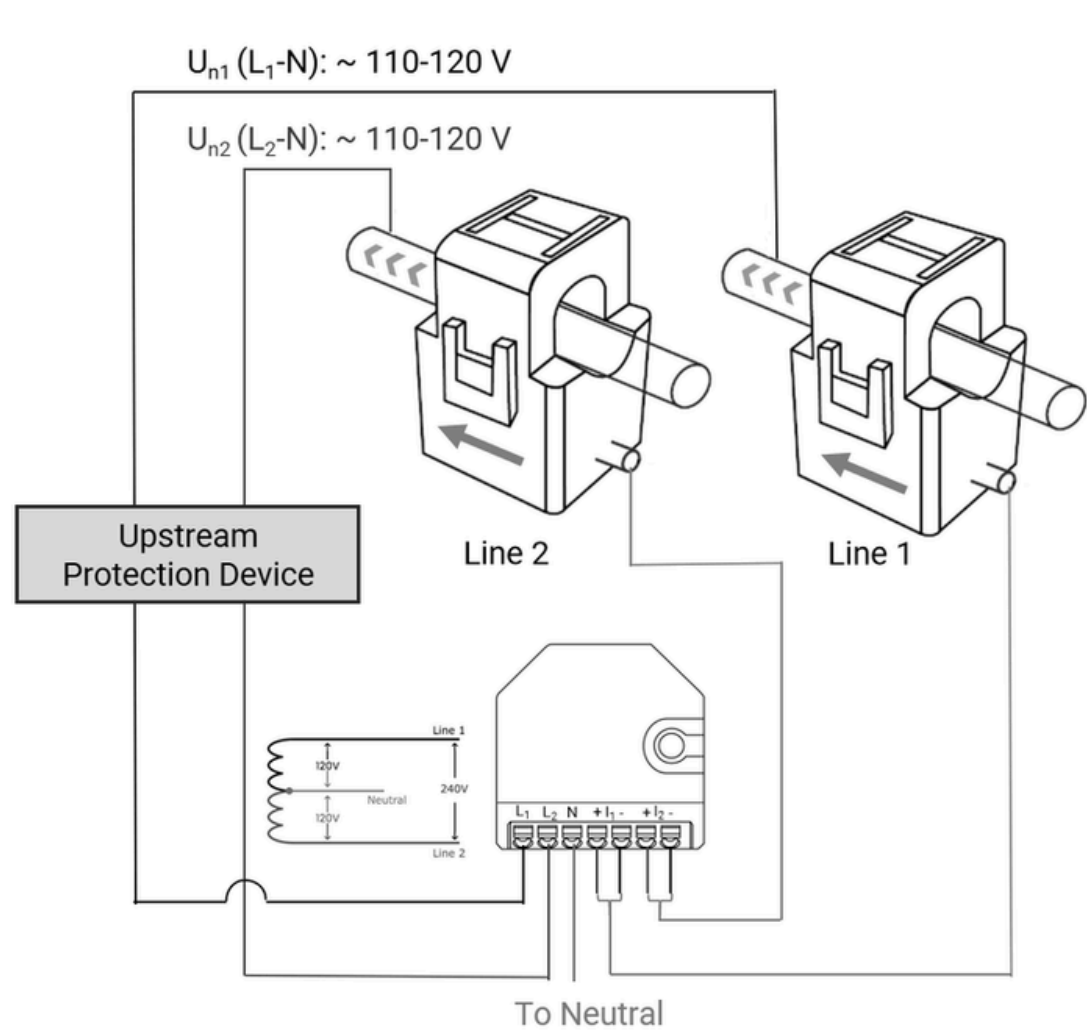


Technical Data

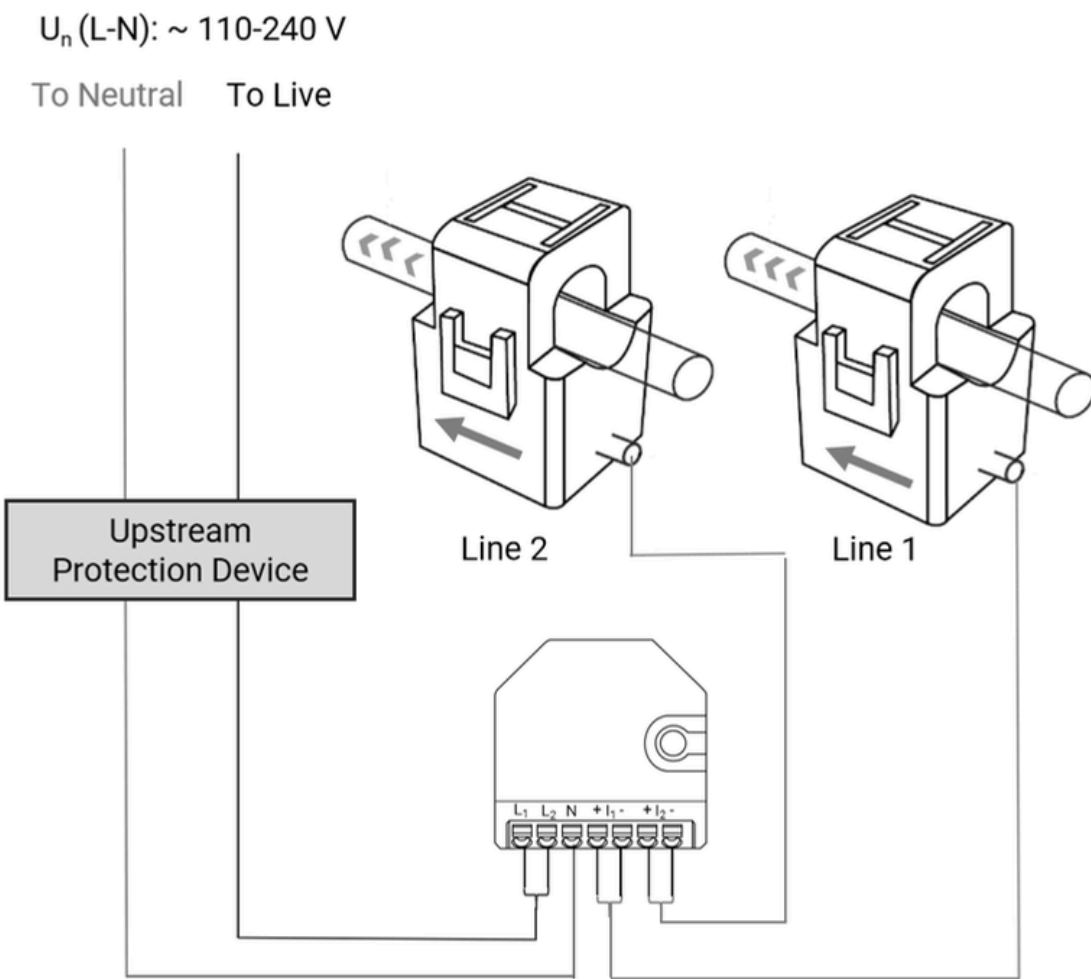
Rated voltage	110~240 VAC L-N, 50/60 Hz 208~240 VAC L ₁ -L ₂ , 50/60 Hz	Maximum Power consumption	≤ 2VA
Max monitoring current	120A / 200A	Rated operating temperature	-25 to 55 °C
Over-voltage category	III	Main module dimension	42.2×41.6×20mm
Rated insulating voltage	250V	Clamp CT apertures	Ø16mm / Ø20mm
Rated impulse withstand voltage	4kV	Communication Type	BLE; Wi-Fi; Zigbee
Pollution degree	3		
Protection degree	IP20		
Measurement accuracy	Class 1 (active energy)		

Wiring Diagrams

UL Split-phase System Wiring



UL/IEC 1P+N System up to 2 Branch Circuits



Remark

1) Designed for Split-phase systems (1P3W) and Single-phase systems (1P2W). **NOT** compatible with IEC Three-phase systems (380~415 VAC L-L, 50/60 Hz).

2) ⚠ The device must be installed, operated, serviced, and maintained **ONLY** by qualified professionals. Please read the user guide carefully before installation. The user guide is a separate document from the datasheet.

Ordering Code

Complete Package with 1 x Main and 2 x 120A Clamp CTs		Complete Package with 1 x Main and 2 x 200A Clamp CTs	
SDM02-TW-12	Split-Phase 120A Tuya Wi-Fi	SDM02-TW-20	Split-Phase 200A Tuya Wi-Fi
SDM02-TZ-12	Split-Phase 120A Tuya Zigbee	SDM02-TZ-20	Split-Phase 200A Tuya Zigbee
SDM02-EW-12	Split-Phase 120A Open BLE+Wi-Fi	SDM02-EW-20	Split-Phase 200A Open BLE+Wi-Fi
SDM02-TZ-12-U01	Split-Phase 120A Standard Zigbee	SDM02-TZ-20-U01	Split-Phase 200A Standard Zigbee

Smart Relay Switches with Built-in Power Monitoring

Compact, reliable puck-style smart relays with integrated power monitoring. Designed for flush-mounted wall boxes and ceiling installations, ideal for controlling lighting, appliances, and HVAC systems.



Overview

19	SRS01 1PM
20	SRS01 2PM



Are you missing any information?
Scan the QR code to see all our products on
our website or visit: www.bituo-technik.com

SRS01 1PM

Single-Channel Smart Relay Switch with Power Monitoring

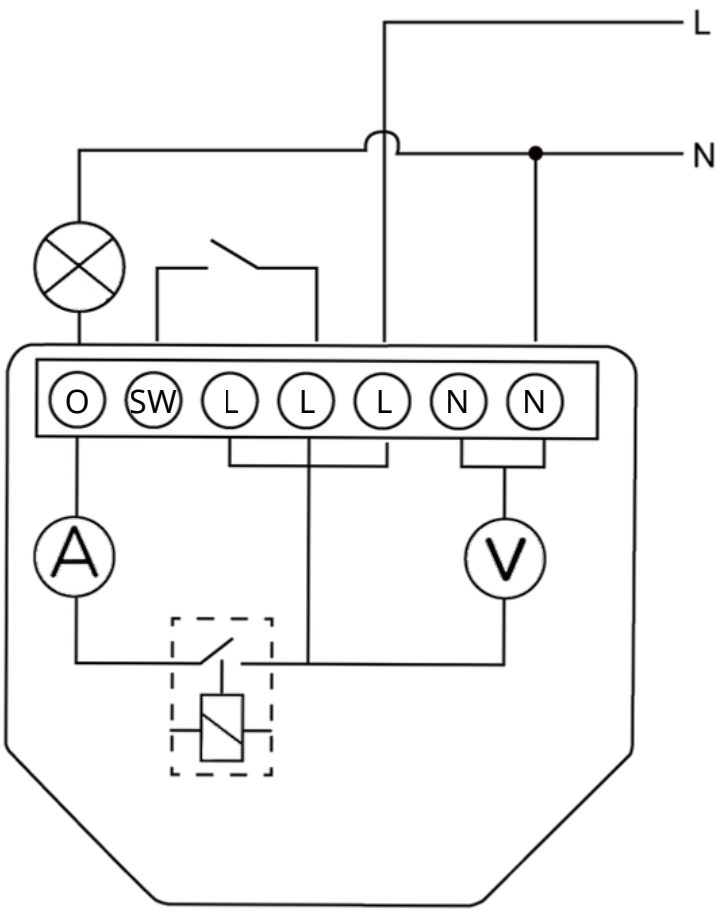
SRS01 1PM is a compact single-channel relay switch with integrated power monitoring and wireless communication. It provides real-time measurement of voltage, current, power, and energy, making it ideal for smart home automation and lighting control.



Ordering Code

SRS01-P1TW	1×16A, Tuya Wi-Fi
SRS01-P1SZ	1×16A, Standard Zigbee

Wiring Diagrams



Technical Data

Rated voltage	110–240 VAC, 50/60 Hz
Max switching load	16A (Resistive)
Type of switching	Relay, Micro gap (μ)
Dimensions	38×42×16mm
Rated operating temperature	-20 to 40°C
Conductor cross section	24 to 14AWG / 0.2 to 2.5mm²
Conductor stripped length	6 to 7mm
Screw terminals max torque	0.4Nm
Measurement accuracy	±2% (Active energy)
Connectivity	BLE+Wi-Fi; Zigbee

Nominal power of typical loads^{1) 2)}

Incandescent & halogen lamps	2000 W
LED lamps ^{3) 4)}	600 W
Fluorescent lamps	500 VA
Inductive motors (e.g., fans, pumps, compressors)	1000 VA
Resistive heaters (e.g., boilers, room heaters)	2500 W

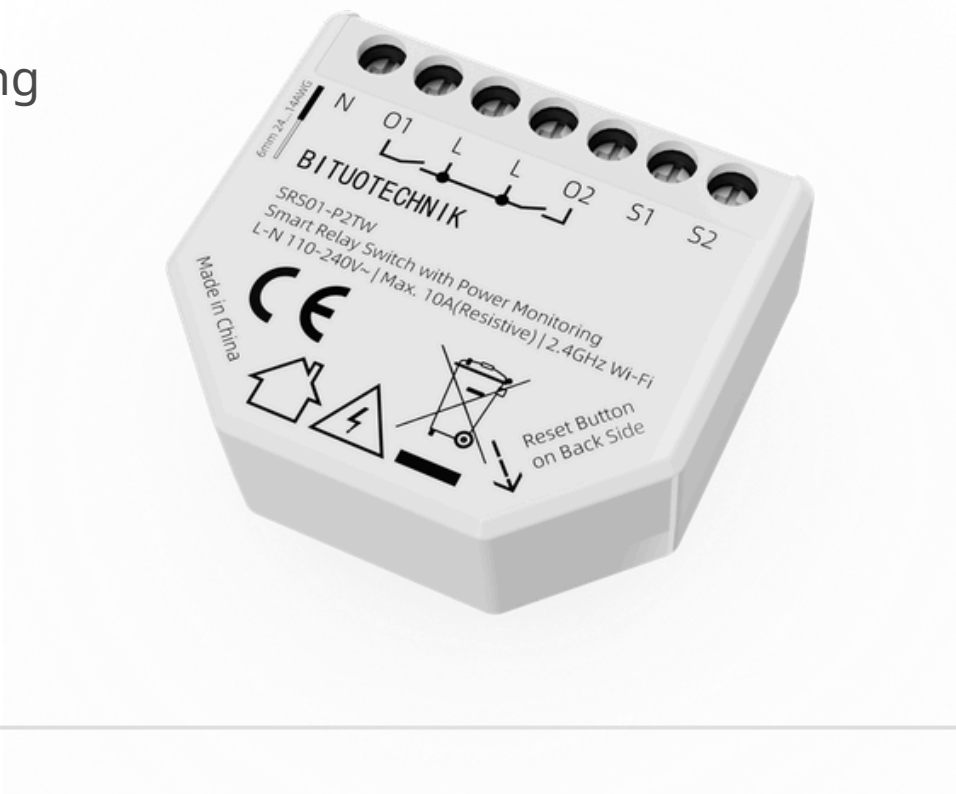
Remarks

- 1) If you are unsure about the load type or its impact on the smart relay switch, please contact our technical support.
- 2) Individual channel value based on 220–240 VAC power supply.
- 3) Inrush current $I_{on} \leq 78 \text{ A} / 5 \text{ ms}$
- 4) Due to variations in lamp electronics and manufacturers, the maximum value of controllable lamps may vary.

SRS01 2PM

Dual-Channel Smart Relay Switch with Independent Power Monitoring

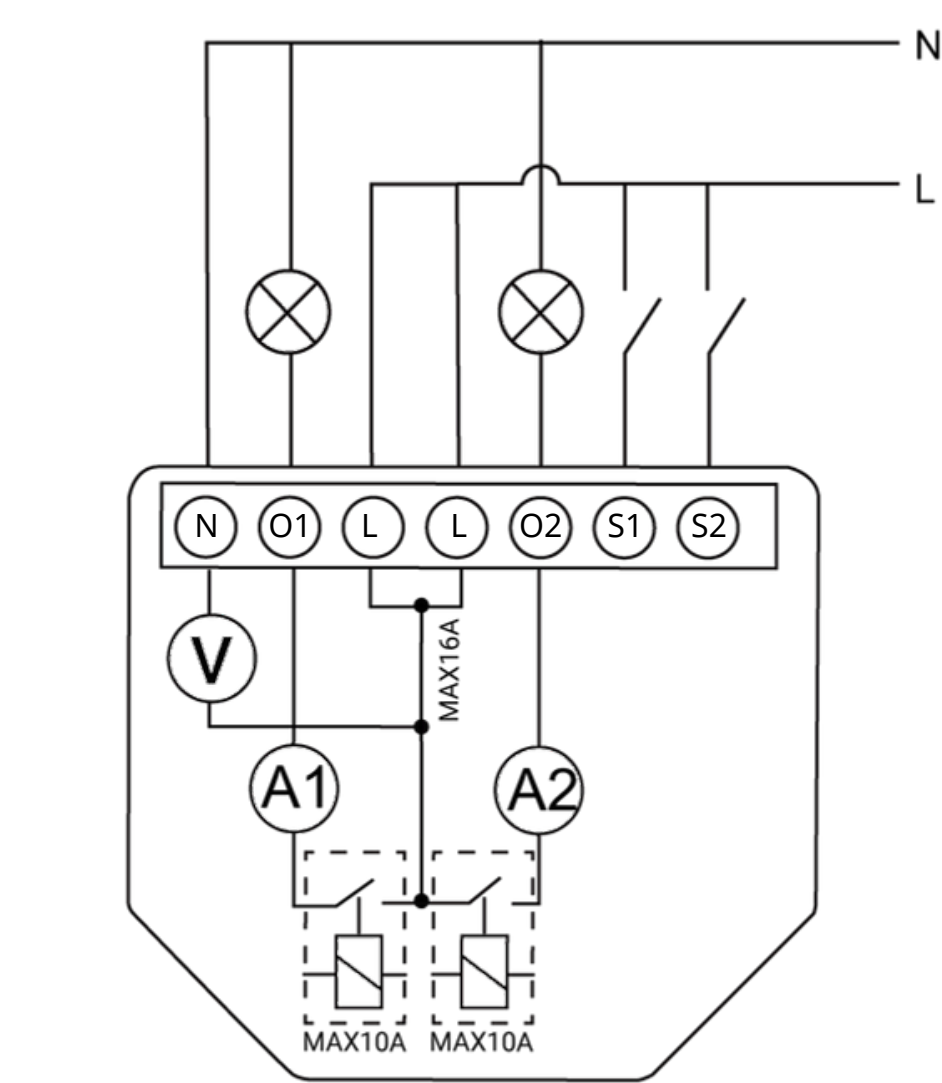
SRS01 2PM is a compact dual-channel relay switch featuring independent power monitoring and wireless connectivity. It allows real-time control and monitoring of two separate AC loads, making it suitable for dual-circuit automation scenarios.



Ordering Code

SRS01-P2TW	2×10A, Tuya Wi-Fi
SRS01-P2SZ	2×10A, Standard Zigbee

Wiring Diagrams



Technical Data

Rated voltage	110–240 VAC, 50/60 Hz
Max switching load	10A per channel, max 16 A total (Resistive)
Type of switching	Relay, Micro gap (μ)
Dimensions	38×42×16mm
Rated operating temperature	-20 to 40°C
Conductor cross section	24 to 14AWG / 0.2 to 2.5mm²
Conductor stripped length	6 to 7mm
Screw terminals max torque	0.4Nm
Measurement accuracy	±2% (Active energy)
Connectivity	BLE+Wi-Fi; Zigbee

Nominal power of typical loads per channel^{1) 2)}

Incandescent & halogen lamps	800 W
LED lamps ³⁾⁴⁾	240 W
Fluorescent lamps	200 VA

Remarks

1) If you are unsure about the load type or its impact on the smart relay switch, please contact our technical support.

2) Individual channel value based on 220–240 VAC power supply.

3) Inrush current $I_{on} \leq 32 \text{ A} / 5 \text{ ms}$

4) Due to variations in lamp electronics and manufacturers, the maximum value of controllable lamps may vary.

Ordering Code and Description ^{1) 2) 3) 4)}

Tuya Ecosystem

Tuya Wi-Fi

SPM01-D2TW	SPM01 FLEX 63A/1PN TW
SPM01-U1TW	SPM01 MCBM-UI 63A/1PN TW
SPM01-D1TW	SPM01 MCBM-DI 63A/1PN TW
SPM02-D2TW	SPM02 FLEX 63A/3PN TW
SPM02-U1TW	SPM02 MCBM-UI 63A/3PN TW
SPM02-D1TW	SPM02 MCBM-DI 63A/3PN TW
SDM01-TWM-12	SDM01 3×120A/Φ16-SCT TW+M1
SDM01G2-TWM-12	SDM01G2 3×120A/Φ16-SCT TW+M1
SDM01G2X-TW-12	SDM01G2X 3×120A/Φ16-SCT TW
SDM02-TW-12	SDM02 2×120A/Φ16-SCT TW
SRS01-P1TW	SRS01 1×16A TW
SRS01-P2TW	SRS01 2×10A TW

Tuya Zigbee

SPM01-D2TZ	SPM01 FLEX 63A/1PN TZ
SPM01-U1TZ	SPM01 MCBM-UI 63A/1PN TZ
SPM01-D1TZ	SPM01 MCBM-DI 63A/1PN TZ
SPM02-D2TZ	SPM02 FLEX 63A/3PN TZ
SPM02-U1TZ	SPM02 MCBM-UI 63A/3PN TZ
SPM02-D1TZ	SPM02 MCBM-DI 63A/3PN TZ
SDM01-TZM-12	SDM01 3×120A/Φ16-SCT TZ+M1
SDM02-TZ-12	SDM02 2×120A/Φ16-SCT TZ

Open Standard

Standard Zigbee

SPM01-D2TZ-U01	SPM01 FLEX 63A/1PN SZ
SPM01-U1TZ-U01	SPM01 MCBM-UI 63A/1PN SZ
SPM01-D1TZ-U01	SPM01 MCBM-DI 63A/1PN SZ
SPM02-D2TZ-U01	SPM02 FLEX 63A/3PN SZ
SPM02-U1TZ-U01	SPM02 MCBM-UI 63A/3PN SZ
SPM02-D1TZ-U01	SPM02 MCBM-DI 63A/3PN SZ
SDM01-TZM-12-U01	SDM01 3×120A/Φ16-SCT SZ+M1
SDM01G2-SZM-12	SDM01G2 3×120A/Φ16-SCT SZ+M1
SDM02-TZ-12-U01	SDM02 2×120A/Φ16-SCT SZ
SRS01-P1SZ	SRS01 1×16A SZ
SRS01-P2SZ	SRS01 2×10A SZ

Open Wi-Fi

SPM01-D2EW	SPM01 FLEX 63A/1PN EW
SPM01-U1EW	SPM01 MCBM-UI 63A/1PN EW
SPM01-D1EW	SPM01 MCBM-DI 63A/1PN EW
SPM02-D2EW	SPM02 FLEX 63A/3PN EW
SPM02-U1EW	SPM02 MCBM-UI 63A/3PN EW
SPM02-D1EW	SPM02 MCBM-DI 63A/3PN EW
SDM01-EWM-12	SDM01 3×120A/Φ16-SCT EW+M1
SDM01G2X-EW-12	SDM01G2X 3×120A/Φ16-SCT EW
SDM02-EW-12	SDM02 2×120A/Φ16-SCT EW

Modbus RTU over RS485

SPM01-D2M1	SPM01 FLEX 63A/1PN M1
SPM01-U1M1	SPM01 MCBM-UI 63A/1PN M1
SPM01-D1M1	SPM01 MCBM-DI 63A/1PN M1
SPM02-D2M1	SPM02 FLEX 63A/3PN M1
SPM02-U1M1	SPM02 MCBM-UI 63A/3PN M1
SPM02-D1M1	SPM02 MCBM-DI 63A/3PN M1
SDM01-EWM-12-B01	SDM01 3×120A/Φ16-SCT EB+M1

Remark

- 1) Integration: Tuya Ecosystem offers plug-and-play via Tuya IoT solution. Open Standard provides 3rd-party integration via standard Zigbee 3.0 or Open BLE+Wi-Fi API.
- 2) Connectivity: TW=Tuya Wi-Fi; TZ=Tuya Zigbee; EW=ESP32 Open Wi-Fi; SZ (or TZ..-U01)=Standard Zigbee 3.0; EB=ESP32 BLE; M/M1=Modbus RTU.
- 3) Installation: MCBM-DI(D1) =Miniature Circuit Breaker Mounting-Downstream Installation; MCBM-UI(U1)=Miniature Circuit Breaker Mounting-Upstream Installation; FLEX=Flexibly fits all circuit breakers via voltage take-off wires.
- 4) CT Options: For SDM series, 120A/Φ16 CT clamps are standard. Larger current transformers are available upon request; please contact us for details.



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