



Smart Series

Smart Electric
Protection Device Series



www.elcb.net elcb@elcb.net

tongou

Benefit
Your Life



Download specified APP control settings



Smart Electric Protection
Energy Management System



www.elcb.net
elcb@elcb.net

About Tongou

80 + Staff

Strong production team excellent after-sales service

30 + Years

Rich professional and customer service experience

3000 + Customers

Rich customer solutions and experience

8000m² + Area

Rapid order fulfillment capabilities and intelligent production workshops

20 + R&D Engineers

Strong R&D capabilities to meet various development needs.

tongou, established in 1993, is renowned for its expertise in high-end, low-voltage electrical system solutions. We are committed to alleviating the challenges faced by our customers and consistently strive to add value through our offerings. Our extensive range of electricity safety products caters to household, commercial, industrial, and various other installations. This range includes Miniature Circuit Breakers (MCB), Residual Current Circuit Breakers (RCCB), Residual Current Circuit Breakers with Over-current Protection (RCBO), Switch-Disconnectors, Distribution Boxes, Moulded Case Circuit Breakers (MCCB), and Air Circuit Breakers (ACB).

A standout in our product line is our innovative Internet of Things (IoT) smart circuit breakers. These state-of-the-art devices represent the cutting edge of electrical safety and management technology. Integrated with IoT capabilities, these smart circuit breakers offer remote monitoring and control, allowing users to manage their electrical systems with unprecedented ease and precision. They provide real-time data on electrical usage, detect irregularities, and can automatically shut off power in case of faults, significantly enhancing safety. Furthermore, their predictive maintenance capabilities ensure timely alerts before potential issues escalate, thereby minimizing downtime and maintenance costs. By combining robust electrical protection with advanced connectivity and data analytics, our IoT smart circuit breakers are at the forefront of electrical safety innovation, delivering enhanced efficiency, safety, and control to our customers.

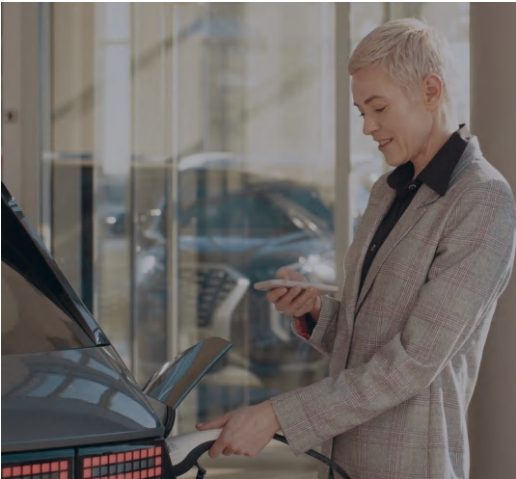
I Contents

Applicable Scenarios and Product Feature	P4 - P9
Smart Circuit Breaker - TOQCB2 Series	P10 - P19
Smart Circuit Breaker - TOQCB2L Series	P20 - P27
Smart Circuit Breaker - TOSMR1 Series	P28 - P31
DIN Rail Smart Switch - TO-Q-SY1 TO-Q-SY2 Series	P32 - P39
DIN Rail Smart Meter - TO-Q-SYS Series	P40 - P43
Smart Energy Accessory - TO-Q-SA1 Series	P44 - P48

I Applicable Scenarios

Extensive scenario applications, controlling and managing a variety of devices.

Electric energy reserve



Energy industry

Control and manage household electricity, urban energy, commercial energy, and industrial energy.



Security industry

Control and manage surveillance security equipment, intelligent automation devices, and base station tower equipment



Sockets

For powering, monitoring controlling various devices.



Switches

For turning on/off lights and other electrical appliances, with remote and timed control capabilities.



Home Appliances

For daily household tasks and convenience, featuring timed operation, scenario linkage, and energy monitoring.



Lighting

For indoor and outdoor illumination needs, with various timing settings and automated scene capabilities.



Charging Piles

For electric vehicle charging and power management.



Solar Energy

For solar power distribution system and energy monitoring management.



Wind Energy

For wind power generation and distribution system with energy monitoring and management.



Utility Power

For controlling, managing, and configuring grid electricity.



Security

For surveillance and protection of property and assets.



DIY Devices

For custom home automation and control solutions.

I Product Feature

Rich functional settings,
more flexible, reliable, and safe.



Flexible installation and configuration



Suitable for most distribution cabinet installation systems, supports various protocols, and allows for flexible configuration.



Remote Control

Control and obtain device information anytime, anywhere.



Operation Log

To record all information about events, setting operations, and recharges for easy viewing.



Voice Control

Supports mainstream voice speakers like Amazon Alexa, Google Assistant, etc., allowing for control, settings, and data retrieval through voice commands.



Multiple Timing

Timing, countdown, cyclic timing, sunrise and sunset timing.



Electricity Consumption

Record daily/monthly/yearly electricity usage logs for easy reference.



Circuit Protection

Overload, overcurrent, overvoltage, undervoltage, and fire protection to make the circuit safer.



Real-Time Power / Current / Voltage

Real-time data can be viewed on the interface.



Temperature Protection

Flexible application in different scenarios with detection and protection of the operating environment and terminal temperature of the equipment.



DIN Rail Installation

Rail mounted installation, standard modular dimensions.



Maintenance Mode

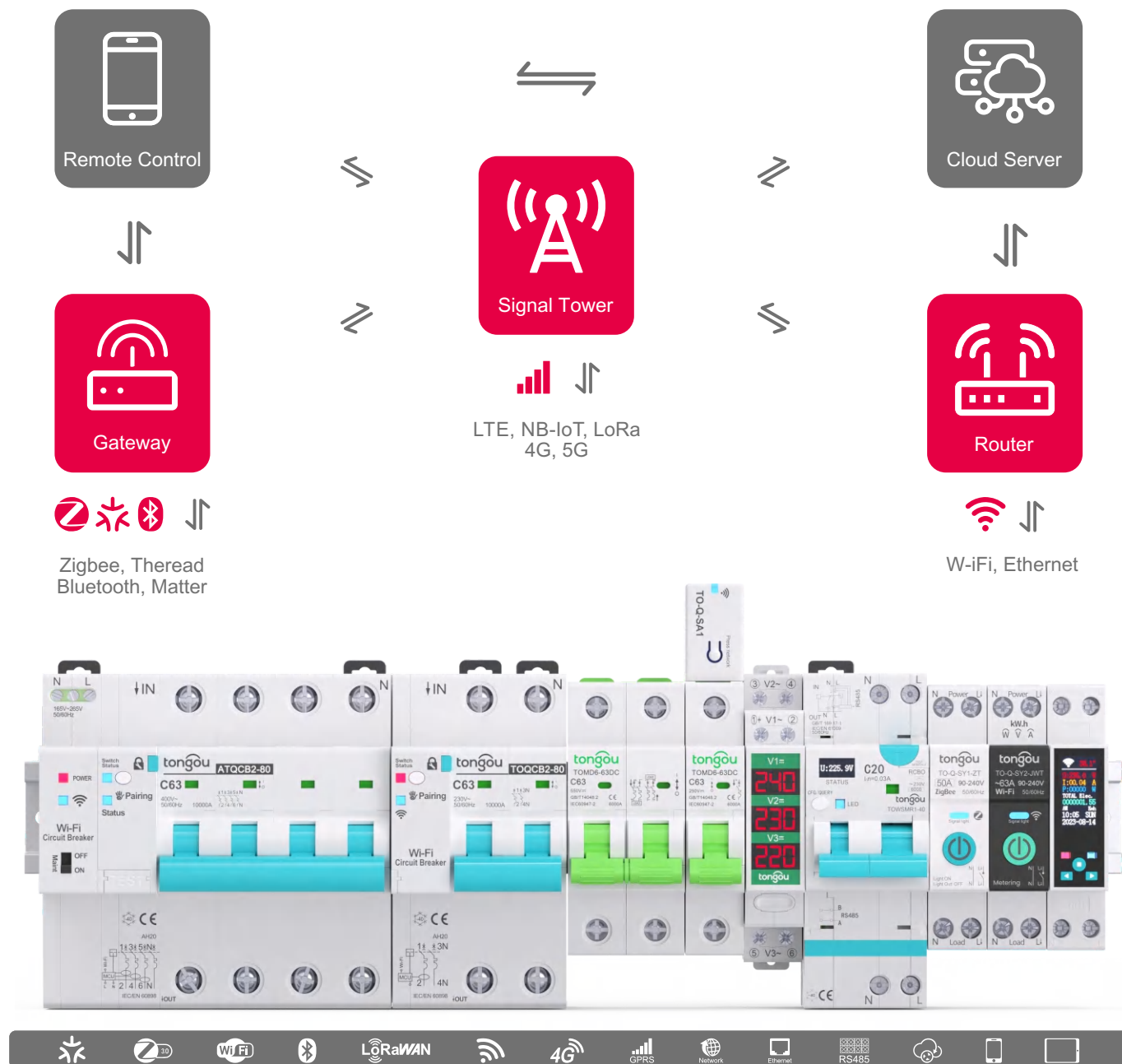
Maintenance circuit activated, network signal disconnected, local operation only, to avoid the risk of remote misoperation.



Leakage protection

Detecting and displaying the leakage current value of the circuit to prevent personal electric shock accidents.

I Network Configuration



 Voice Control



Amazon Alexa GoogleAssistant SmartThings Apple HomeKit

The smart electric protection device series represents cutting-edge electrical security supervision and power management solutions, embodying the synergy of state-of-the-art hardware and software components. This innovative system integrates local automation, cloud data interaction, multi-platform data interaction, and AI intelligence to deliver unparalleled performance and efficiency. By harnessing the power of AI algorithms and leveraging large amounts of data, intelligent monitoring, predictive analytics, and proactive management of electrical systems are ensured to improve safety, optimize energy usage, and maximize operational reliability.

I Benefits

Smart interaction mode

Intelligently and automatically localized.

Localized central control systems

Multiple security encryption and global-local server deployment, with API cloud interaction capability, can also be localized for local operation without cloud support, providing users with more flexible and convenient configuration and usage.

Energy monitoring and management

Real-time monitoring and viewing of equipment electricity usage, providing detailed insights into expenses, and promptly addressing any equipment electricity issues.

Remote electricity usage safety management

Remote monitoring of equipment and circuits

Receive fault reports of equipment and circuits in real-time, analyze them, and issue instructions promptly.

Multiple protection functions

Over-current, short-circuit, over-power, over-voltage, under-voltage, high temperature, arc fault, and phase loss protection are included.

Reliable mechanical structure

The mechanical part of the main body has passed international IEC electrical standard tests, ensuring normal local protection operation even if network signals and software fail.

Cloud network security

Cloud support is provided by leading cloud server providers such as Amazon Cloud, Alibaba Cloud, Tencent Cloud, and other localized deployments.

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Smart Electric Protection Device Series

P/7

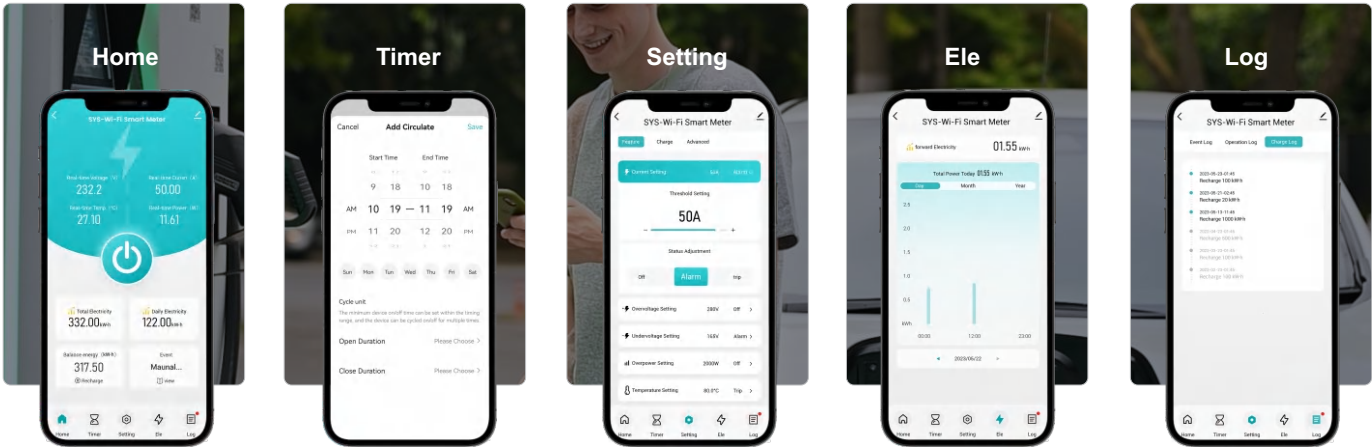
I App operating interface

About Smart Electric App

Discover our 24/7 accessible application for accessing our app services. Download and register for usage according to the user manual provided on our respective product.

Top features at a glance

- Homepage:** Clear visibility of current electric current, voltage, temperature, and equipment operation status.
- Ele:** Real-time monitoring of electricity consumption, recording daily, yearly, and monthly electricity consumption data.
- Timer:** Provides various timing functions including one-time timing, cyclic timing, and sunrise-sunset timing.
- Log:** Record every operation data, event information, operational status, and recharge records.
- Setting:** Set up functions and threshold values according to different products.



I Integrated Application

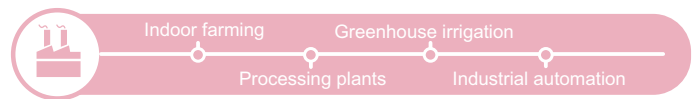
The smart electric protection device

Series is based on standardized integration and installation environments, giving it greater flexibility and making it more suitable for applications in different fields.

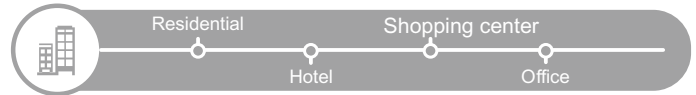
In the industrial sector, the solution can be installed in small to medium-sized factories, infrastructure, and processing plants for monitoring and remote control. By utilizing data analysis, it aims to minimize downtime and ensure equipment and circuit safety.



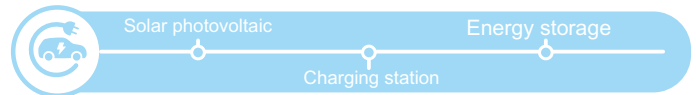
In the agricultural farming and irrigation sector, real-time collection of equipment usage data enables timely receipt of real-time data on equipment operation and faults. This addresses issues such as delayed monitoring and difficulty in manual operation due to long distances and wide coverage in farming and irrigation, thus mitigating potential property losses.



Commercial and public buildings can also utilize the scalable solution to enhance energy efficiency and achieve more detailed monitoring and control of their facilities. Offices, shopping malls, hotels, retail or chain stores can enhance their awareness of energy consumption and cost allocation to improve performance.



Public facilities such as schools, sports centers and medical care, Unified monitoring and management can ensure the standardized use of electrical equipment, the safety of circuits, and the continuity of services, and reduce safety hazards.



In the smart home scenario, utilizing DIN rail-mounted standardization and modular installation methods for household terminal distribution boxes can achieve functions such as remote control, automation control, and energy management, thereby enhancing the comfort, convenience, and energy efficiency of home living.

In the new energy and solar photovoltaic industry, safety monitoring and protection are conducted for electrical faults such as power faults, arc faults, overloads, and short circuits in circuits. Real-time monitoring of circuit parameters, electricity consumption data, and system operation status is available to optimize energy distribution and utilization. Predictive maintenance based on recorded data helps improve system reliability and stability.



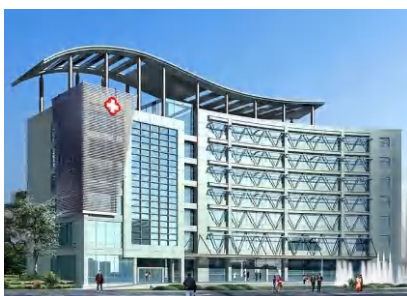
Residential



Factory



Hotel



Hospital



Solar photovoltaic



Office

Smart Circuit Breaker TOQCB2 Series



Company Code

TO

Maximum Current Frame

80

Communication method:
W - Wi-Fi, R - RS 485
Z - Zigbee, L - LTE, M - Matter

J

W

T

1 - 1P
2 - 2P
3 - 3P
4 - 4P

1

Current Frame:
16, 20, 32, 40, 63, 80

C

63

DC

Series Code

Blank:
Without Metering Function
L:
With Metering Function

Platform Technical Support:
T - Tuya, E - eWeLink
X - Mi, C - Customized
M - Tasmota

C - Curve C
B - Curve B
D - Curve D

Ambient Voltage:
Blank:
Alternating Current
DC:
Direct Current

The future mode of electricity usage will feature efficient energy management, enhanced safety with integrated electrical protection functions, remote monitoring of electricity data, more convenient and rapid power maintenance, and integrated application with intelligent automation systems.



**Remote
Control**



**Voice
Control**



**Time
Mode**



**Circuit
Protection**



**Electricity
Consumption**



**Real-Time
Power / Current / Voltage**



**Temperature
Protection**



**Operation
Log**



**DIN Rail
Installation**



**Maintenance
Mode**

I TOQCB2-80 1P

⚡ Over-current Protection

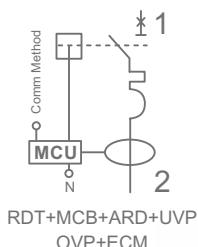
Threshold Setting: 1 - 63A
 Default: 63A
 Status Setting: Off/Alarm/Trip
 Electronic Component Response Time: 3s

+⚡ Over-voltage Protection

Threshold Setting: 245V - 295A
 Default: 280V
 Status Setting: Off/Alarm/Trip
 Electronic Component Response Time: 3s

-⚡ Under-voltage Protection

Threshold Setting: 145V - 220A
 Default: 165V
 Status Setting: Off/Alarm/Trip
 Electronic Component Response Time: 3s

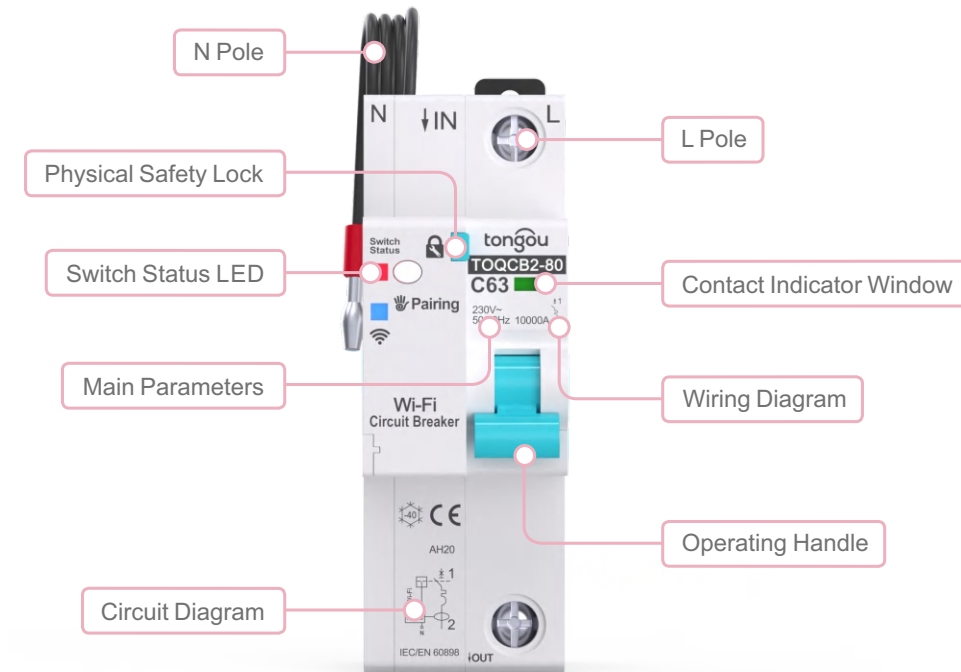


LED Indicator

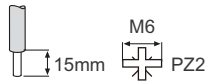
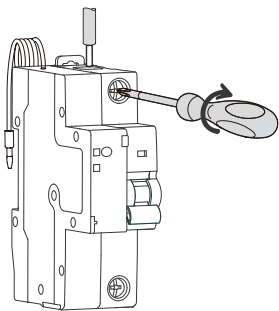
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-  The network LED flashing blue slowly indicates that the circuit breaker is in the connected mode.

PRODUCT MODEL		TOQCB2-80-JW	TOQCB2-80-JZ	TOQCB2-80-JR	TOQCB2-80-JL	TOQCB2-80-JM
Standards		IEC/EN 60947, IEC/EN 60898, IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000				
Poles Description		1P				
Operating Rated Voltage	Ue (V)	AC 145V - 230V				
Frequency	Hz	50/60Hz				
Current Frame	In (A)	16, 20, 32, 40, 63, 80				
Curve Code		B、C、D				
Rated Insulation Voltage	Ui (V)	AC 500V				
Rated Ultimate Short-circuit Breaking Capacity	Icu (kA)	10kA				
Short Circuit Protection		acc. to IEC/EN 60947-2, IEC/EN 60898-1				
Operational Safety		Physical Safety Lock, which prevents the device from being closed once engaged				
Communication Protocol		TOQCB2-80-JW	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n			
		TOQCB2-80-JZ	Zigbee (2.400~2.483GHz) IEEE 802.15.4			
		TOQCB2-80-JR	Modbus-RTU			
		TOQCB2-80-JL	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800			
		TOQCB2-80-JM	TCP/UDP: Matter			
Energy Consumption Measurement Accuracy		Class 1.0				
Monitoring Physical Data		Real-time Voltage, Real-time Current, Real-time Power (Forward/Reverse), Power Factor, Power Consumption (Forward/Reverse),Temperature, Phase Angle, Switch State, Device Operating Status, Frequency				
Function Description		Multiple Timing, Over-voltage Protection, Under-voltage Protection, Over-current Protection, Over-Power Protection, Temperature protection, Short Circuit Protection, Auto-reclosing, Remote Control, Voice Control				
Mounting Support		DIN Rail 35mm				

I TOQCB2-80 1P

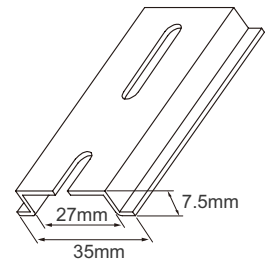
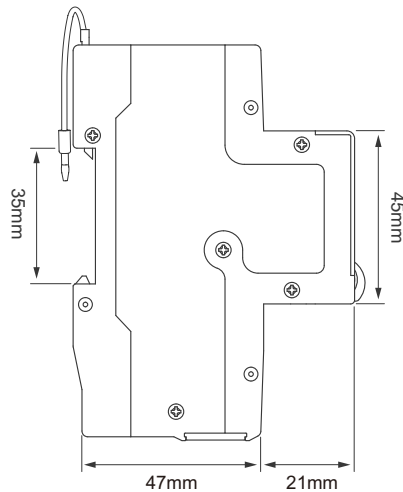
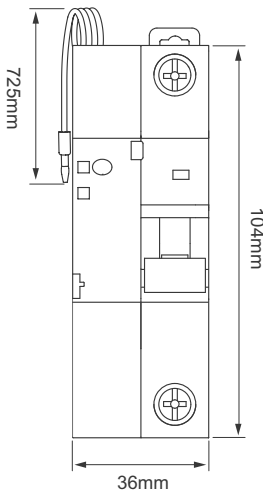


Connection



Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 80A	2.5 N.m	1 - 25mm ²	1 - 16mm ²

Dimensions (mm)



I TOQCB2-80 2P

⚡ Over-current Protection

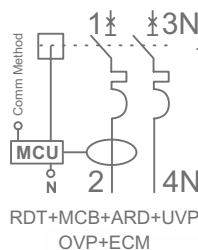
Threshold Setting: 1 - 63A
Default: 63A
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

+⚡ Over-voltage Protection

Threshold Setting: 245V - 295A
Default: 280V
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

-⚡ Under-voltage Protection

Threshold Setting: 145V - 220A
Default: 165V
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

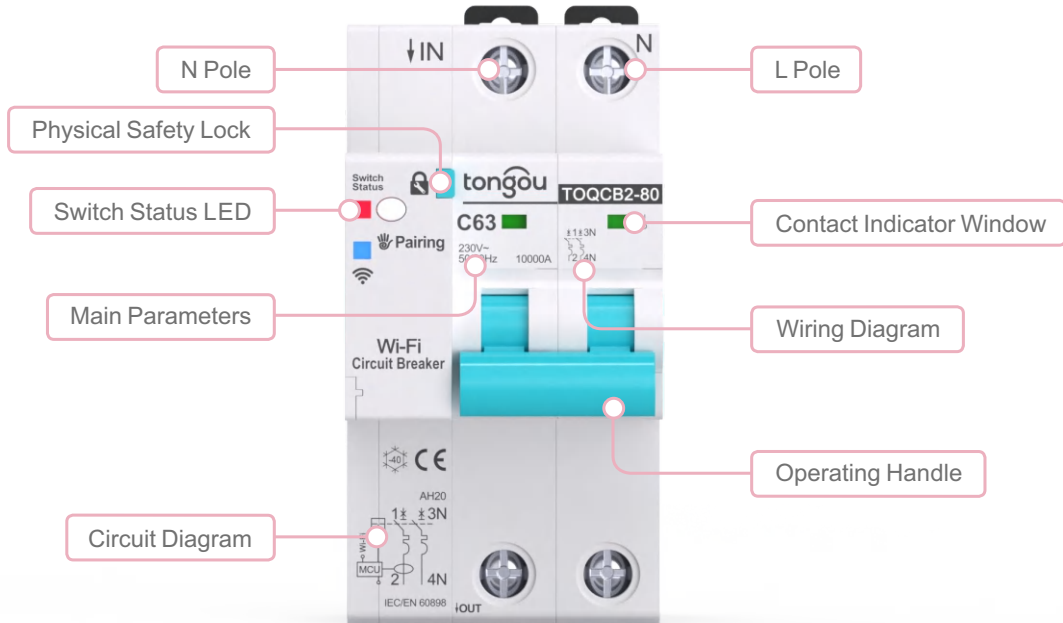


LED Indicator

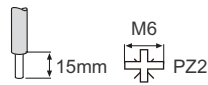
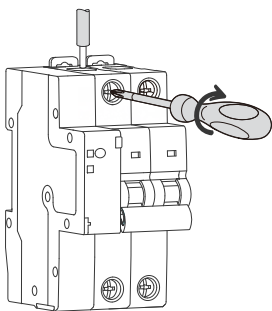
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-  The network LED flashing blue slowly indicates that the circuit breaker is in the connected mode.

PRODUCT MODEL		TOQCB2-80-JW	TOQCB2-80-JZ	TOQCB2-80-JR	TOQCB2-80-JL	TOQCB2-80-JM
Standards		IEC/EN 60947, IEC/EN 60898, IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000				
Poles Description		2P				
Operating Rated Voltage	Ue (V)	AC 145V - 230V				
Frequency	Hz	50/60Hz				
Current Frame	In (A)	16, 20, 32, 40, 63, 80				
Curve Code		B、C、D				
Rated Insulation Voltage	Ui (V)	AC 500V				
Rated Ultimate Short-circuit Breaking Capacity	Icu (kA)	10kA				
Short Circuit Protection		acc. to IEC/EN 60947-2, IEC/EN 60898-1				
Operational Safety		Physical Safety Lock, which prevents the device from being closed once engaged				
Communication Protocol		TOQCB2-80-JW	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n			
		TOQCB2-80-JZ	Zigbee (2.400~2.483GHz) IEEE 802.15.4			
		TOQCB2-80-JR	Modbus-RTU			
		TOQCB2-80-JL	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800			
		TOQCB2-80-JM	TCP/UDP: Matter			
Energy Consumption Measurement Accuracy		Class 1.0				
Monitoring Physical Data		Real-time Voltage, Real-time Current, Real-time Power (Forward/Reverse), Power Factor, Power Consumption (Forward/Reverse),Temperature, Phase Angle, Switch State, Device Operating Status, Frequency				
Function Description		Multiple Timing, Over-voltage Protection, Under-voltage Protection, Over-current Protection, Over-Power Protection, Temperature protection, Short Circuit Protection, Auto-reclosing, Remote Control, Voice Control				
Mounting Support		DIN Rail 35mm				

I TOQCB2-80 2P

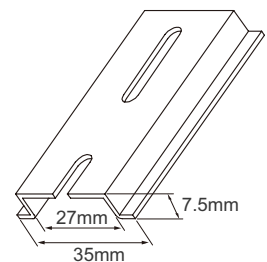
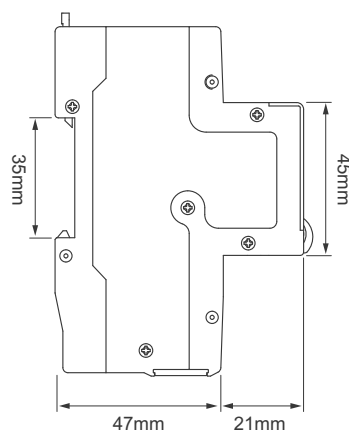
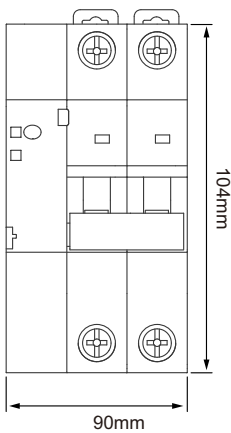


Connection



Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 80A	2.5 N.m	1 - 25mm ²	1 - 16mm ²

Dimensions (mm)



I TOQCB2-80 3P

⚡ Over-current Protection

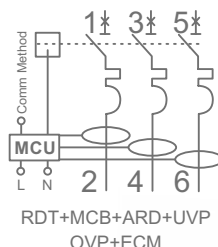
Threshold Setting: 1 - 63A
Default: 63A
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

+⚡ Over-voltage Protection

Threshold Setting: 245V - 295A
Default: 280V
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

-⚡ Under-voltage Protection

Threshold Setting: 145V - 220A
Default: 165V
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

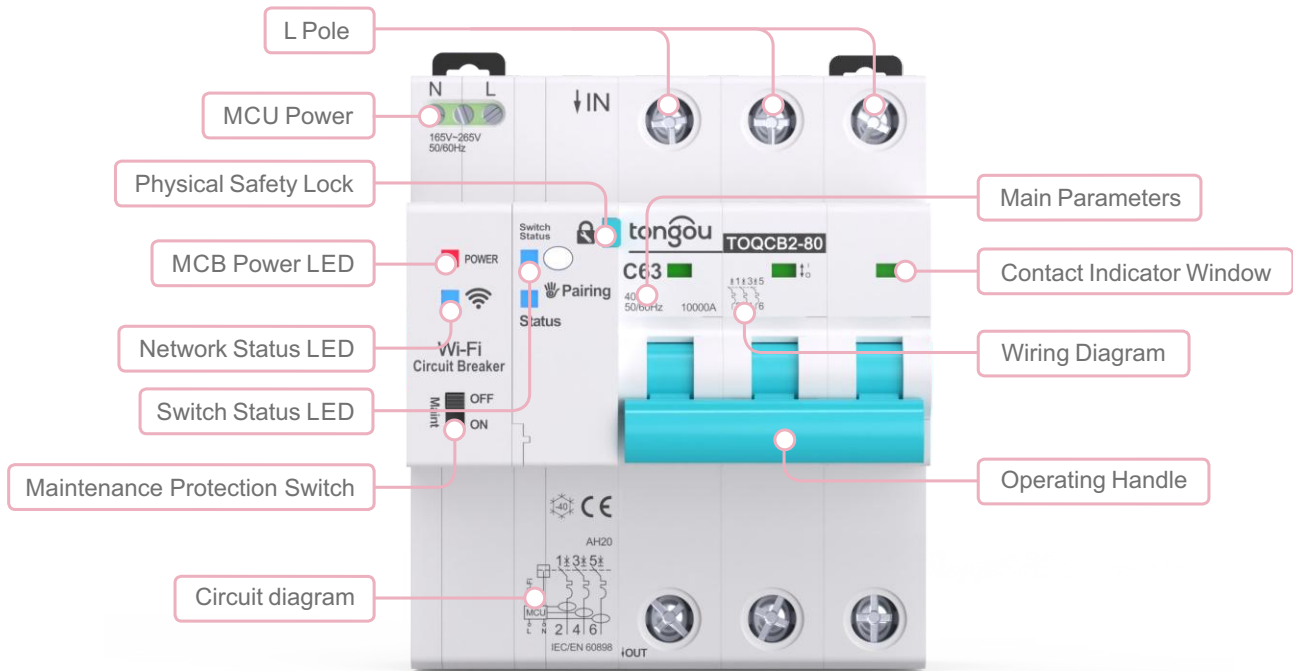


LED Indicator

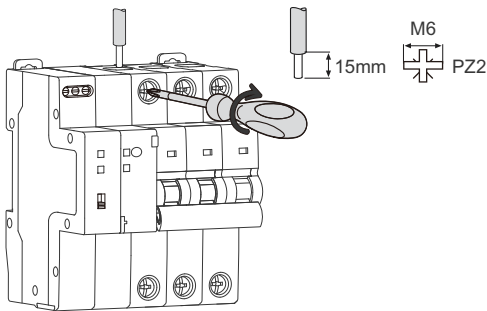
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Standards		IEC/EN 60947, IEC/EN 60898, IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000				
Poles Description		3P				
MCU Power Rated Operational Voltage	Ue (V)	AC 380V - 415V				
Phase Line Operational Voltage	Ue (V)	AC 230V(L1-N, L2-N, L3-N)				
Frequency	Hz	50/60Hz				
Current Frame	In (A)	16, 20, 32, 40, 63, 80				
Curve Code		B、C、D				
Rated Insulation Voltage	Ui (V)	AC 500V				
Rated Ultimate Short-circuit Breaking Capacity	Icu (kA)	10kA				
Short Circuit Protection		acc. to IEC/EN 60947-2, IEC/EN 60898-1				
Operational Safety		Physical Safety Lock, which prevents the device from being closed once engaged				
Communication Protocol		TOQCB2-80-JW	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n			
		TOQCB2-80-JZ	Zigbee (2.400~2.483GHz) IEEE 802.15.4			
		TOQCB2-80-JR	Modbus-RTU			
		TOQCB2-80-JL	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800			
		TOQCB2-80-JM	TCP/UDP: Matter			
Energy Consumption Measurement Accuracy		Class 1.0				
Monitoring Physical Data		Real-time Voltage, Real-time Current, Real-time Power (Forward/Reverse), Power Factor, Power Consumption (Forward/Reverse),Temperature, Phase Angle, Switch State, Device Operating Status, Frequency				
Function Description		Multiple Timing, Over-voltage Protection, Under-voltage Protection, Over-current Protection, Over-Power Protection, Temperature protection, Short Circuit Protection, Auto-reclosing, Remote Control, Voice Control				
Mounting Support		DIN Rail 35mm				

I TOQCB2-80 3P

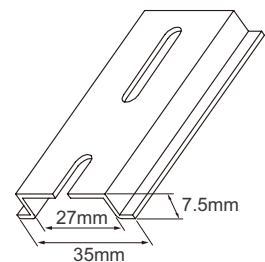
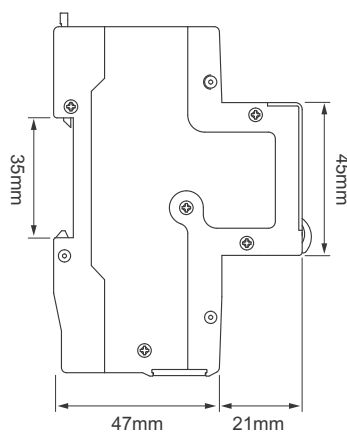
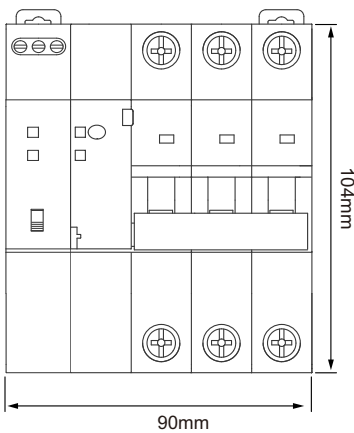


Connection



Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 80A	2.5 N.m	1 - 25mm ²	1 - 16mm ²

Dimensions (mm)



I TOQCB2-80 4P

⚡ Over-current Protection

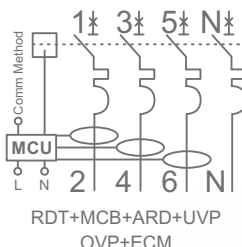
Threshold Setting: 1 - 63A
 Default: 63A
 Status Setting: Off/Alarm/Trip
 Electronic Component Response Time: 3s

+⚡ Over-voltage Protection

Threshold Setting: 245V - 295A
 Default: 280V
 Status Setting: Off/Alarm/Trip
 Electronic Component Response Time: 3s

-⚡ Under-voltage Protection

Threshold Setting: 145V - 220A
 Default: 165V
 Status Setting: Off/Alarm/Trip
 Electronic Component Response Time: 3s

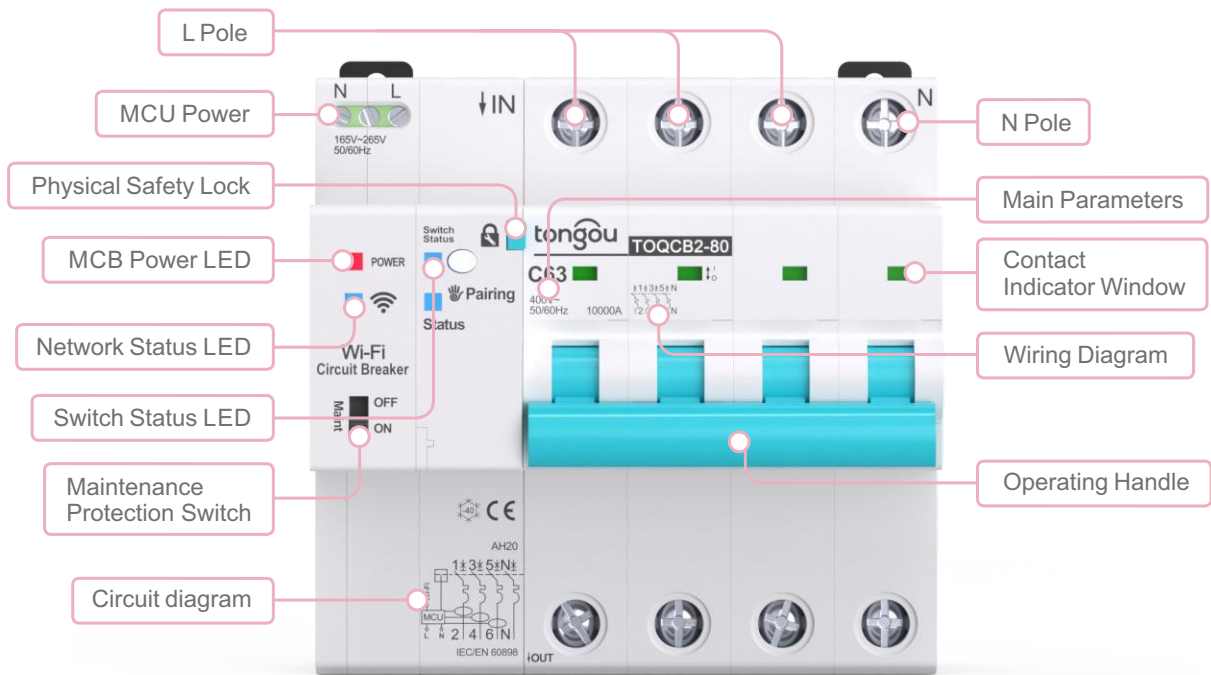


LED Indicator

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-  The network LED flashing blue slowly indicates that the circuit breaker is in the connected mode.

PRODUCT MODEL	TOQCB2-80-JW	TOQCB2-80-JZ	TOQCB2-80-JR	TOQCB2-80-JL	TOQCB2-80-JM
Standards	IEC/EN 60947, IEC/EN 60898, IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000				
Poles Description	4P				
MCU Power Rated Operational Voltage U _e (V)	AC 380V - 415V				
Phase Line Operational Voltage U _e (V)	AC 230V(L1-N, L2-N, L3-N)				
Frequency Hz	50/60Hz				
Current Frame I _n (A)	16, 20, 32, 40, 63, 80				
Curve Code	B、C、D				
Rated Insulation Voltage U _i (V)	AC 500V				
Rated Ultimate Short-circuit Breaking Capacity I _{cu} (kA)	10kA				
Short Circuit Protection	acc. to IEC/EN 60947-2, IEC/EN 60898-1				
Operational Safety	Physical Safety Lock, which prevents the device from being closed once engaged				
Communication Protocol	TOQCB2-80-JW	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n			
	TOQCB2-80-JZ	Zigbee (2.400~2.483GHz) IEEE 802.15.4			
	TOQCB2-80-JR	Modbus-RTU			
	TOQCB2-80-JL	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800			
	TOQCB2-80-JM	TCP/UDP: Matter			
Energy Consumption Measurement Accuracy	Class 1.0				
Monitoring Physical Data	Real-time Voltage, Real-time Current, Real-time Power (Forward/Reverse), Power Factor, Power Consumption (Forward/Reverse),Temperature, Phase Angle, Switch State, Device Operating Status, Frequency				
Function Description	Multiple Timing, Over-voltage Protection, Under-voltage Protection, Over-current Protection, Over-Power Protection, Temperature protection, Short Circuit Protection, Auto-reclosing, Remote Control, Voice Control				
Mounting Support	DIN Rail 35mm				

TOQCB2-80 4P



Connection

Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 80A	2.5 N.m		
		1 - 25mm ²	1 - 16mm ²

Dimensions (mm)

Smart Circuit Breaker TOQCB2L Series



Company Code TO	Series Code QCB2 Blank: Without Leakage Protection L: With Leakage Protection	Maximum Current Frame 63 Blank: Without Metering Function L: With Metering Protection	Communication method: W - Wi-Fi, R - RS 485 Z - Zigbee, L - LTE, M - Matter Platform Technical Support: T - Tuya, E - eWeLink X - Mi, C - Customized M - Tasmota	Current Frame: 16, 20, 32, 40, 63 C - Curve C B - Curve B D - Curve D Ambient Voltage: Blank: Alternating Current DC: Direct Current
	L	J	W	
	-	-	T	
			1	
				C
				63
				DC

Smart Circuit Breaker **TOQCB2L Series**

Tongou envisions a future of smart electricity consumption, ensuring safety, efficiency, and seamless integration with intelligent automation systems through advanced electrical protection, leakage protection, efficient energy management, and streamlined power maintenance.



**Remote
Control**



**Voice
Control**



**Time
Mode**



**Circuit
Protection**



**Electricity
Consumption**



**Real-Time
Power / Current / Voltage**



**Temperature
Protection**



**Operation
Log**



**DIN Rail
Installation**



**Maintenance
Mode**



**Leakage
Protection**

I TOQCB2L-63 2P

⚡ Over-current Protection

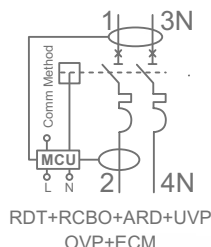
Threshold Setting: 1 - 63A
Default: 63A
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

+⚡ Over-voltage Protection

Threshold Setting: 245V - 295A
Default: 280V
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

-⚡ Under-voltage Protection

Threshold Setting: 145V - 220A
Default: 165V
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

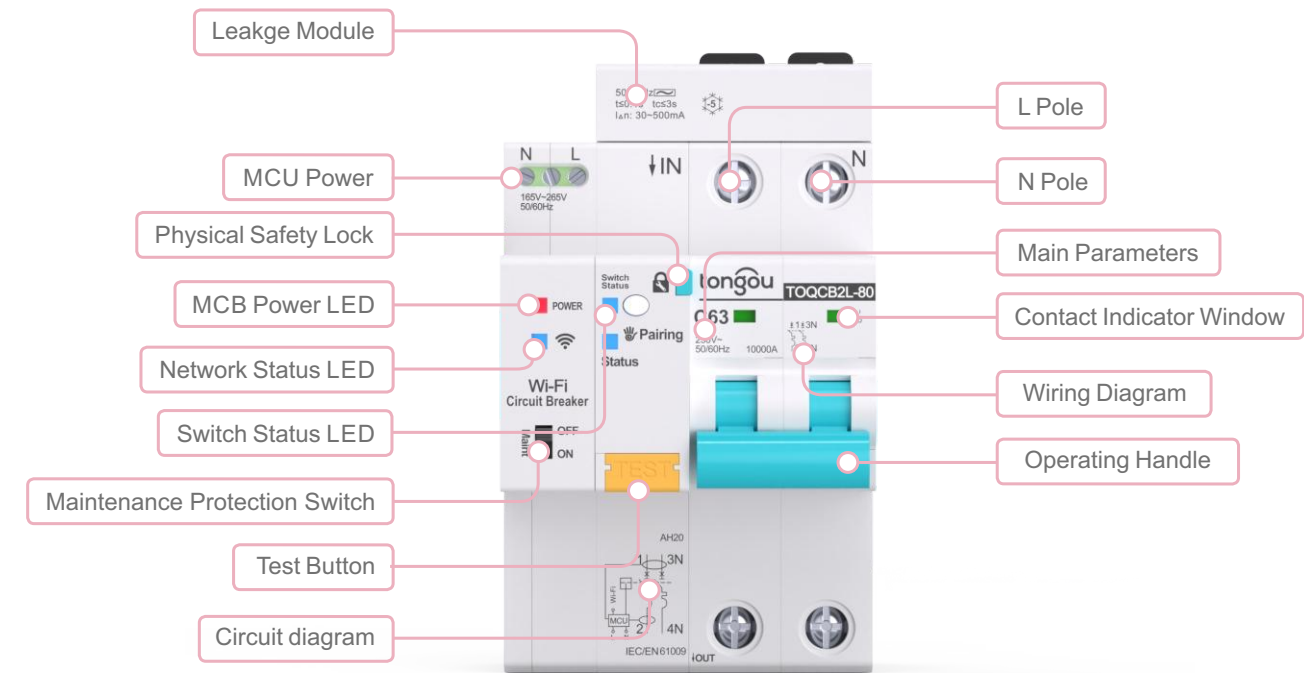


LED Indicator

-  The switch Status LED steady blue, indicating that circuit breaker is disconnected.
-  The switch Status LED steady red, indicating that circuit breaker is closed.
-  The network LED flashing red slowly indicates that circuit breaker is in off-grid mode.
-  The network LED flashing red quickly indicates that circuit breaker is in pairing mode.
-  The network LED flashing blue slowly indicates that the circuit breaker is in the connected mode.

PRODUCT MODEL		TOQCB2L-63-JW	TOQCB2L-63-JZ	TOQCB2L-63-JR	TOQCB2L-63-JL	TOQCB2L-63-JM
Standards		IEC/EN 61009, IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000				
Poles Description		2P				
MCU Power Rated Operational Voltage	U _e (V)	AC 145V - 230V				
Phase Line Operational Voltage	U _e (V)	AC 230V				
Frequency	Hz	50/60Hz				
Current Frame	I _n (A)	16, 20, 32, 40, 63				
Rated Residual Operating Current	I _{Δn} (mA)	30, 100, 300, 500				
Residual Current Type		AC, A				
Curve Code		B、C、D				
Rated Insulation Voltage	U _i (V)	AC 500V				
Rated Ultimate Short-circuit Breaking Capacity	I _{cu} (kA)	10kA				
Short Circuit Protection		acc. to IEC/EN 60947-2, IEC/EN 60898-1				
Operational Safety		Physical Safety Lock, which prevents the device from being closed once engaged				
Communication Protocol		TOQCB2L-63-JW	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n			
		TOQCB2L-63-JZ	Zigbee (2.400~2.483GHz) IEEE 802.15.4			
		TOQCB2L-63-JR	Modbus-RTU			
		TOQCB2L-63-JL	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800			
		TOQCB2L-63-JM	TCP/UDP: Matter			
Energy Consumption Measurement Accuracy		Class 1.0				
Monitoring Physical Data		Real-time Voltage, Real-time Current, Real-time Power (Forward/Reverse), Power Factor, Power Consumption (Forward/Reverse),Temperature, Phase Angle, Switch State, Device Operating Status, Frequency				
Function Description		Multiple Timing, Over-voltage Protection, Under-voltage Protection, Over-current Protection, Over-Power Protection, Temperature protection, Short Circuit Protection, Auto-reclosing, Remote Control, Voice Control				
Mounting Support		DIN Rail 35mm				

TOQCB2L-63 2P



Connection

Top: 30mm

Bottom: 15mm

M6

PZ2

Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 40A	2.5 N.m	1 - 10mm ²	1 - 6mm ²
50 - 63A	2.5 N.m	16 - 25mm ²	1 - 16mm ²

Dimensions (mm)

54mm

15mm

104mm

72mm

48mm

35mm

45mm

47mm

21mm

27mm

35mm

7.5mm

TOQCB2L-63 3P

Over-current Protection

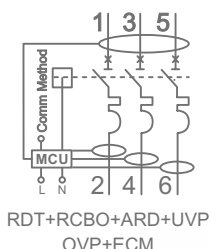
Threshold Setting: 1 - 63A
Default: 63A
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

Over-voltage Protection

Threshold Setting: 245V - 295A
Default: 280V
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

Under-voltage Protection

Threshold Setting: 145V - 220A
Default: 165V
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

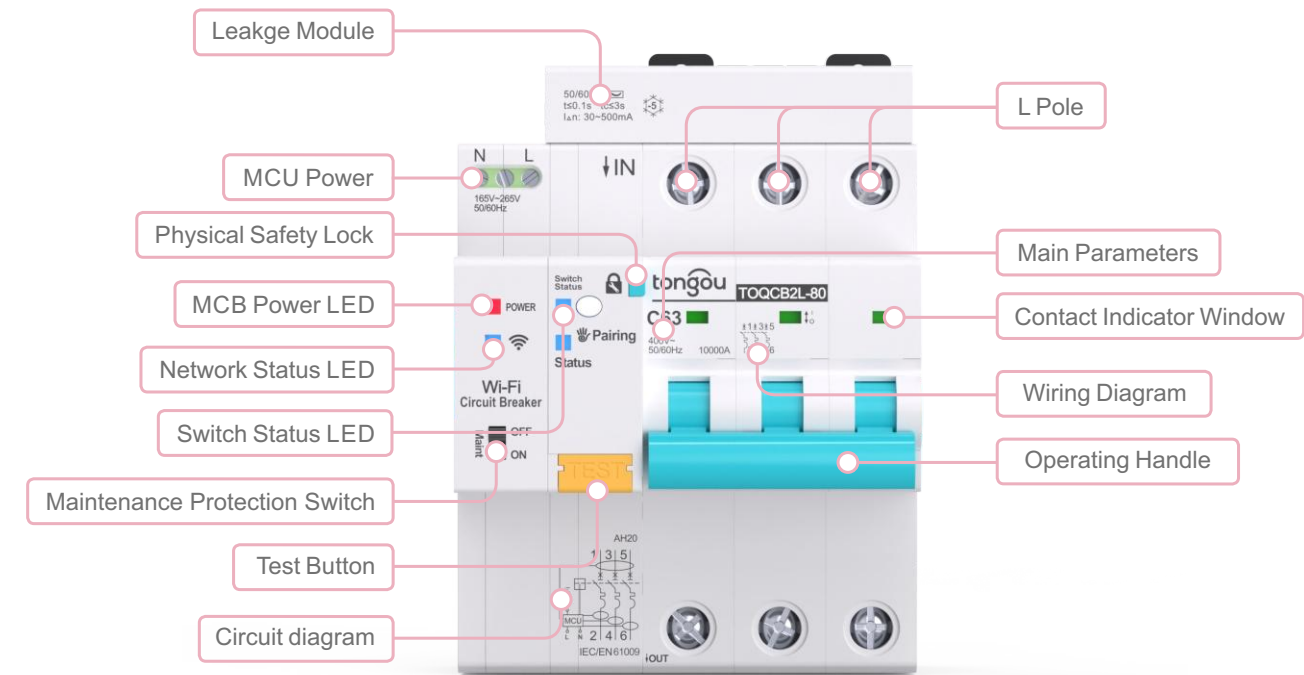


LED Indicator

- The switch Status LED steady blue, indicating that circuit breaker is disconnected.
- The switch Status LED steady red, indicating that circuit breaker is closed.
- The network LED flashing red slowly indicates that circuit breaker is in off-grid mode.
- The network LED flashing red quickly indicates that circuit breaker is in pairing mode.
- The network LED flashing blue slowly indicates that the circuit breaker is in the connected mode.

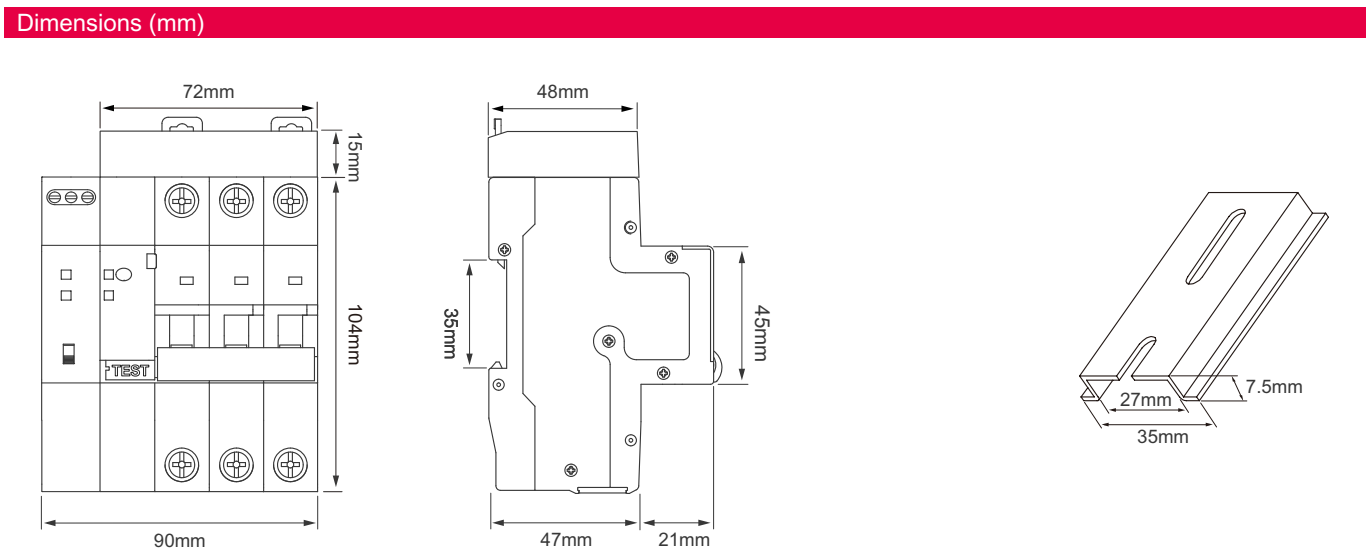
PRODUCT MODEL		TOQCB2L-63-JW	TOQCB2L-63-JZ	TOQCB2L-63-JR	TOQCB2L-63-JL	TOQCB2L-63-JM
Standards		IEC/EN 61009, IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000				
Poles Description		3P				
MCU Power Rated Operational Voltage	U _e (V)	AC 145V - 230V				
Phase Line Operational Voltage	U _e (V)	AC 230V (L1-N, L2-N, L3-N)				
Frequency	Hz	50/60Hz				
Current Frame	I _n (A)	16, 20, 32, 40, 63				
Rated Residual Operating Current	I _{Δn} (mA)	30, 100, 300, 500				
Residual Current Type		AC, A				
Curve Code		B、C、D				
Rated Insulation Voltage	U _i (V)	AC 500V				
Rated Ultimate Short-circuit Breaking Capacity	I _{cu} (kA)	10kA				
Short Circuit Protection		acc. to IEC/EN 60947-2, IEC/EN 60898-1				
Operational Safety		Physical Safety Lock, which prevents the device from being closed once engaged				
Communication Protocol		TOQCB2L-63-JW	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n			
		TOQCB2L-63-JZ	Zigbee (2.400~2.483GHz) IEEE 802.15.4			
		TOQCB2L-63-JR	Modbus-RTU			
		TOQCB2L-63-JL	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800			
		TOQCB2L-63-JM	TCP/UDP: Matter			
Energy Consumption Measurement Accuracy		Class 1.0				
Monitoring Physical Data		Real-time Voltage, Real-time Current, Real-time Power (Forward/Reverse), Power Factor, Power Consumption (Forward/Reverse),Temperature, Phase Angle, Switch State, Device Operating Status, Frequency				
Function Description		Multiple Timing, Over-voltage Protection, Under-voltage Protection, Over-current Protection, Over-Power Protection, Temperature protection, Short Circuit Protection, Auto-reclosing, Remote Control, Voice Control				
Mounting Support		DIN Rail 35mm				

TOQCB2L-63 3P



Connection

Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 40A	2.5 N.m	1 - 10mm ²	1 - 6mm ²
50 - 63A	2.5 N.m	16 - 25mm ²	1 - 16mm ²



I TOQCB2L-63 4P

⚡ Over-current Protection

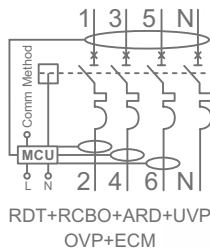
Threshold Setting: 1 - 63A
Default: 63A
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

+⚡ Over-voltage Protection

Threshold Setting: 245V - 295A
Default: 280V
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

-⚡ Under-voltage Protection

Threshold Setting: 145V - 220A
Default: 165V
Status Setting: Off/Alarm/Trip
Electronic Component Response Time: 3s

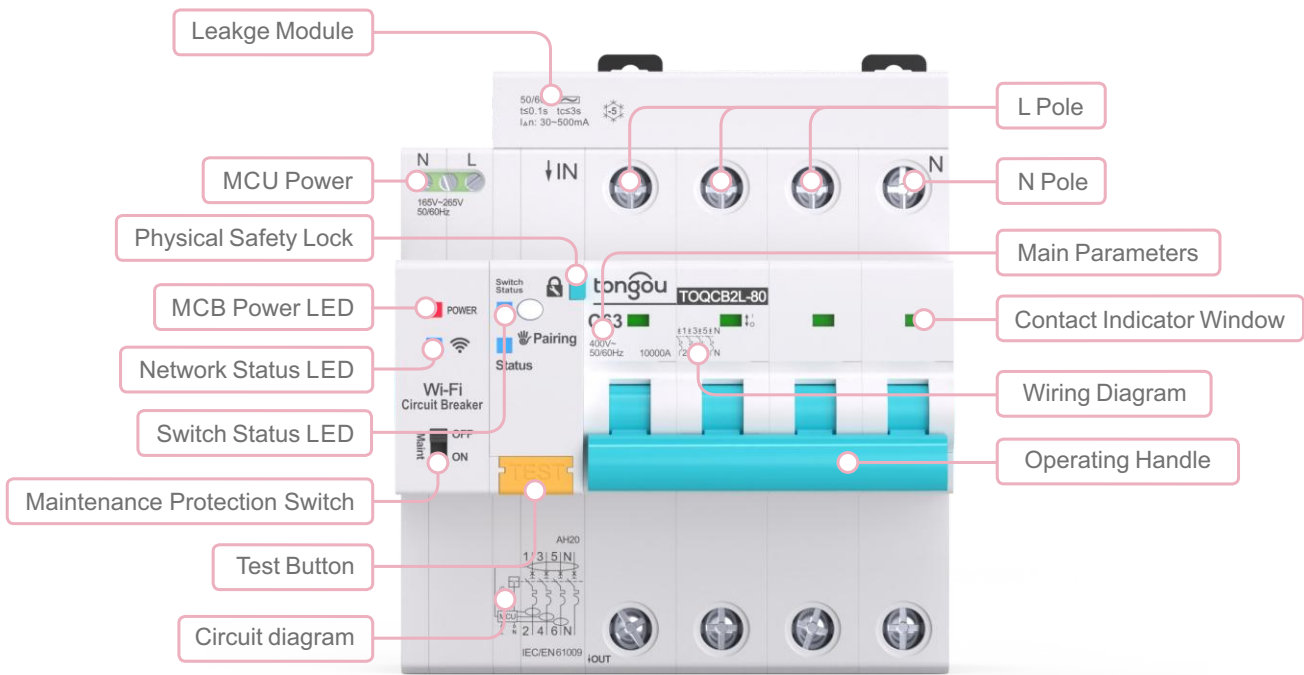


LED Indicator

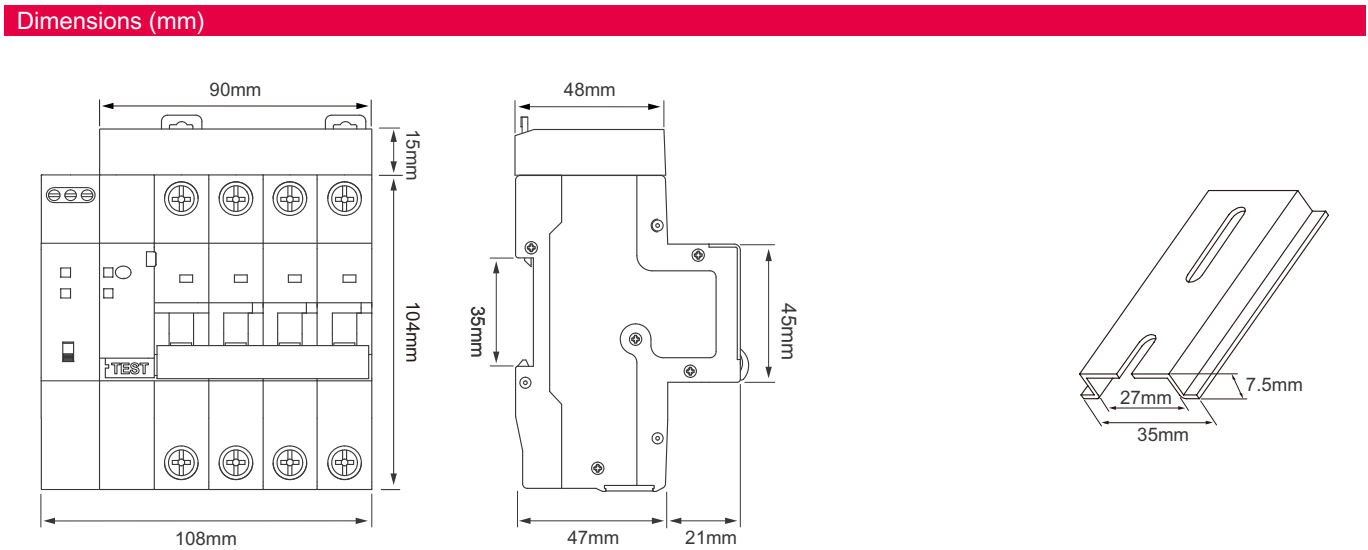
-  The switch Status LED steady blue, indicating that circuit breaker is disconnected.
-  The switch Status LED steady red, indicating that circuit breaker is closed.
-  The network LED flashing red slowly indicates that circuit breaker is in off-grid mode.
-  The network LED flashing red quickly indicates that circuit breaker is in pairing mode.
-  The network LED flashing blue slowly indicates that the circuit breaker is in the connected mode.

PRODUCT MODEL		TOQCB2L-63-JW	TOQCB2L-63-JZ	TOQCB2L-63-JR	TOQCB2L-63-JL	TOQCB2L-63-JM
Standards		IEC/EN 61009, IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000				
Poles Description		4P				
MCU Power Rated Operational Voltage	U _e (V)	AC 145V - 230V				
Phase Line Operational Voltage	U _e (V)	AC 230V (L1-N, L2-N, L3-N)				
Frequency	Hz	50/60Hz				
Current Frame	I _n (A)	16, 20, 32, 40, 63				
Rated Residual Operating Current	I _{Δn} (mA)	30, 100, 300, 500				
Residual Current Type		AC, A				
Curve Code		B、C、D				
Rated Insulation Voltage	U _i (V)	AC 500V				
Rated Ultimate Short-circuit Breaking Capacity	I _{cu} (kA)	10kA				
Short Circuit Protection		acc. to IEC/EN 60947-2, IEC/EN 60898-1				
Operational Safety		Physical Safety Lock, which prevents the device from being closed once engaged				
Communication Protocol		TOQCB2L-63-JW	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n			
		TOQCB2L-63-JZ	Zigbee (2.400~2.483GHz) IEEE 802.15.4			
		TOQCB2L-63-JR	Modbus-RTU			
		TOQCB2L-63-JL	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800			
		TOQCB2L-63-JM	TCP/UDP: Matter			
Energy Consumption Measurement Accuracy		Class 1.0				
Monitoring Physical Data		Real-time Voltage, Real-time Current, Real-time Power (Forward/Reverse), Power Factor, Power Consumption (Forward/Reverse),Temperature, Phase Angle, Switch State, Device Operating Status, Frequency				
Function Description		Multiple Timing, Over-voltage Protection, Under-voltage Protection, Over-current Protection, Over-Power Protection, Temperature protection, Short Circuit Protection, Auto-reclosing, Remote Control, Voice Control				
Mounting Support		DIN Rail 35mm				

TOQCB2L-63 4P



Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 40A	2.5 N.m	1 - 10mm ²	1 - 6mm ²
50 - 63A	2.5 N.m	16 - 25mm ²	1 - 16mm ²



Smart Circuit Breaker TOSMR1 Series



Company Code

TO

Maximum Current Frame

40

Communication method:

W - Wi-Fi, R - RS 485

Z - Zigbee, L - LTEM - Matter

C - Curve C

B - Curve B

Ambient Voltage:

Blank:

Alternating Current

DC:

Direct Current

SMR1

Series Code

J

Blank:
Without Metering Function
L:
With Metering Function

W

Platform Technical Support:
T - Tuya, E - eWeLink
X - Mi, C - Customized
M - Tasmota

T

C

40

Current Frame:
16, 20, 32, 40

DC

Smart Circuit Breaker TOSMR1 Series

TOSMR1 series upgrades your energy management, gracefully replacing traditional DPN RCBO product with a smart formfactor. This product range not only saves space but also integrates intelligent control and energy monitoring functions, offering comprehensive protection against leakage, over-voltage and under-voltage. Its advanced design ensures efficient and reliable electrical safety, regardless of space size or installation distance.



**Remote
Control**



**Voice
Control**



**Time
Mode**



**Circuit
Protection**



**Electricity
Consumption**



**Real-Time
Power / Current / Voltage**



**Temperature
Protection**



**Operation
Log**



**DIN Rail
Installation**



**Maintenance
Mode**



**Leakage
Protection**

TOSMR1-40

⚡ Over-current Protection

Threshold Setting:

TOSMR1-40: 20 - 40A Default: 40A

TOSMR1-20: 1 - 40A Default: 20A

Status Setting: Off/Alarm/Trip

Electronic Component Response Time: 3s

⚡ Over-voltage Protection

Threshold Setting: 245V - 295A

Default: 280V

Status Setting: Off/Alarm/Trip

Electronic Component Response Time: 3s

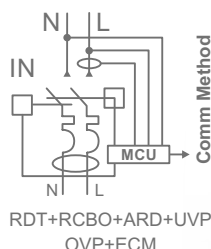
⚡ Under-voltage Protection

Threshold Setting: 145V - 220A

Default: 165V

Status Setting: Off/Alarm/Trip

Electronic Component Response Time: 3s

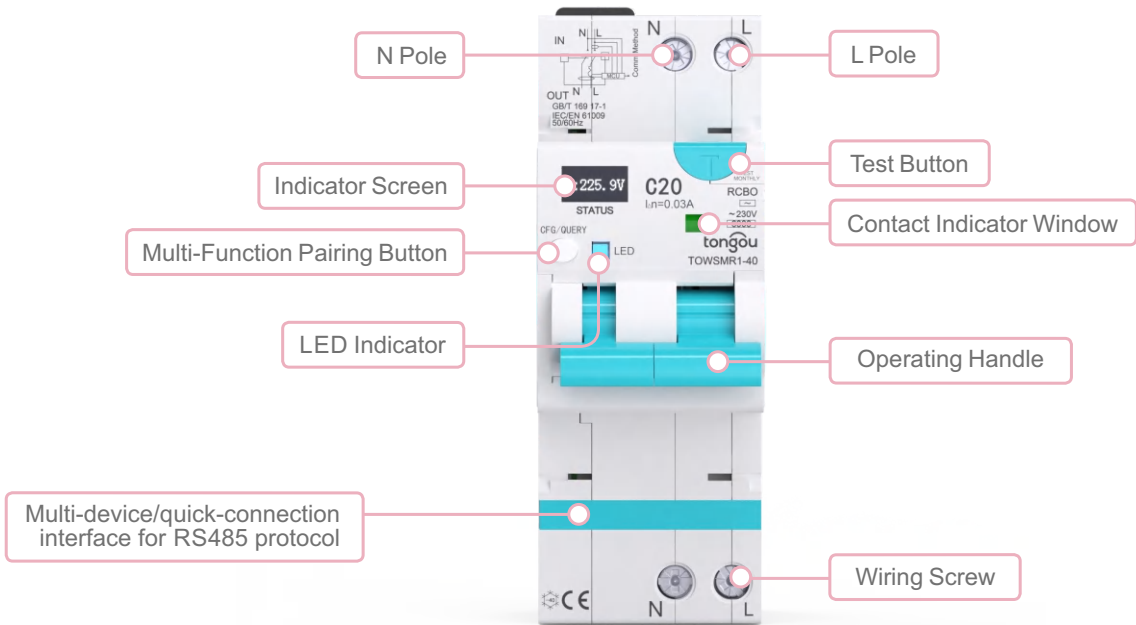


LED Indicator

-  The LED indicator shows a steady blue light to indicate that the device is disconnected.
-  The LED indicator shows a steady red light to indicate that the device is connected.
-  The LED indicator shows red and blue lights alternately flashing slowly, indicating that the device is configured but not connected to the router.
-  The LED indicator shows red and blue lights alternately flashing quickly, indicating that the device has lost configuration.
-  The LED indicator shows red light flashing slowly to indicate the initial state.
-  The LED indicator shows red light flashing quickly to indicate the status of the network pairing.

PRODUCT MODEL		TOSMR1-40-JW	TOSMR1-40-JZ	TOSMR1-40-JR	TOSMR1-40-JL	TOSMR1-40-JM
Standards		IEC/EN 61009,IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000				
Poles Description		2P				
MCU Power Rated Operational Voltage	U _e (V)	AC 145V - 230V				
Phase Line Operational Voltage	U _e (V)	AC 230V				
Frequency	Hz	50/60Hz				
Current Frame	I _n (A)	16, 20, 32, 40				
Rated Residual Operating Current	I _{Δn} (mA)	10, 30, 100				
Residual Current Type		AC, A				
Curve Code		B、C、D				
Rated Insulation Voltage	U _i (V)	AC 500V				
Rated Ultimate Short-circuit Breaking Capacity	I _{cu} (kA)	6kA				
Operational Safety		Physical Safety Lock, which prevents the device from being closed once engaged				
Communication Protocol		TOSMR1-40-JW	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n			
		TOSMR1-40-JZ	Zigbee (2.400~2.483GHz) IEEE 802.15.4			
		TOSMR1-40-JR	Modbus-RTU			
		TOSMR1-40-JL	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800			
		TOSMR1-40-JM	TCP/UDP: Matter			
Energy Consumption Measurement Accuracy		Class 1.0				
Monitoring Physical Data		Real-time Voltage, Real-time Current, Real-time Power (Forward/Reverse), Power Factor, Power Consumption (Forward/Reverse),Temperature, Switch State, Device Operating Status, Frequency				
Function Description		Multiple Timing, Over-voltage Protection, Under-voltage Protection, Over-current Protection, Over-Power Protection, Temperature protection, Short Circuit Protection, Earth Leakage Protection, Auto-reclosing, Remote Control, Voice Control				

TOSMR1-40



Connection

Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 40A	1.8 N.m	1 - 10mm ²	1 - 6mm ²

Dimensions (mm)

DIN Rail Smart Switch

TO-Q-SY1 TO-Q-SY2 Series



Communication method:
W - Wi-Fi, R - RS 485
Z - Zigbee, L - LTE, M - Matter

Rated Current:
6, 10, 16, 20, 25, 32, 40, 50, 63

Company Code: **TO** - Series Code: **Q-SY1** - **J** - **W** - **T** - **63** - **DC**

Blank: Without Metering Function
L: With Metering Protection

Platform Technical Support:
T - Tuya, E - eWeLink
X - Mi, C - Customized
M - Tasmota

Ambient Voltage:
Blank: Alternating Current
DC: Direct Current

DIN Rail Smart Switch TO-Q-SY1 TO-Q-SY2 Series

The TO-Q-SY1 and TO-Q-SY2 are rail-mounted smart series switches, compact in size and versatile in application. They address the issue of limited installation space in circuits, transforming traditional distribution boxes into smart ones. They feature low power consumption, power consumption monitoring, over and under voltage protection, temperature protection, overcurrent protection, and integration with intelligent automation systems.



**Remote
Control**



**Voice
Control**



**Time
Mode**



**Circuit
Protection**



**Electricity
Consumption**



**Real-Time
Power / Current / Voltage**



**Temperature
Protection**



**Operation
Log**



**DIN Rail
Installation**



**Maintenance
Mode**

I TO-Q-SY1 Non-Metering Type

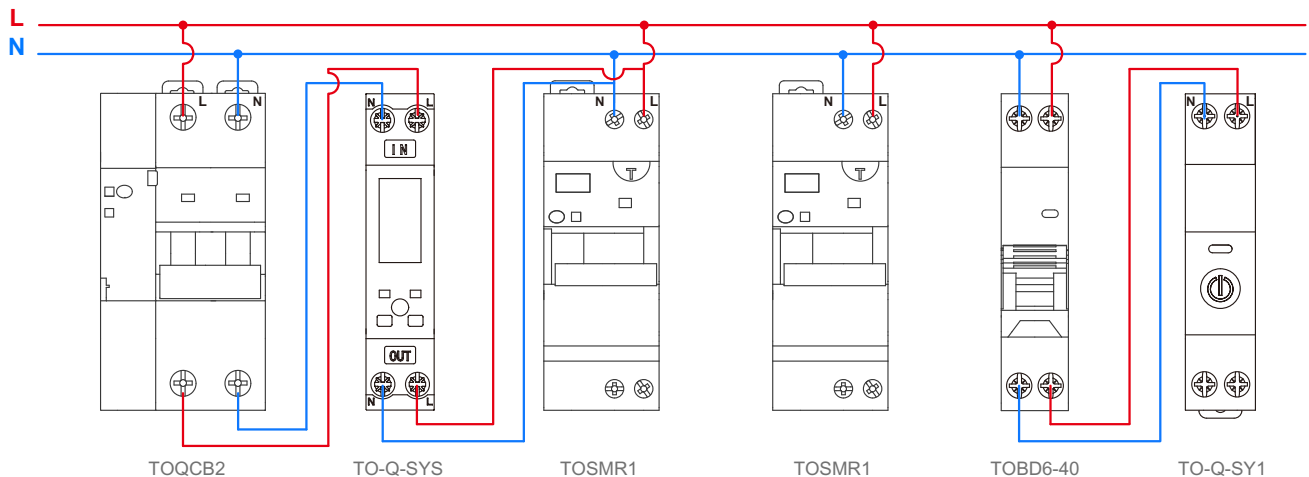


LED Indicator

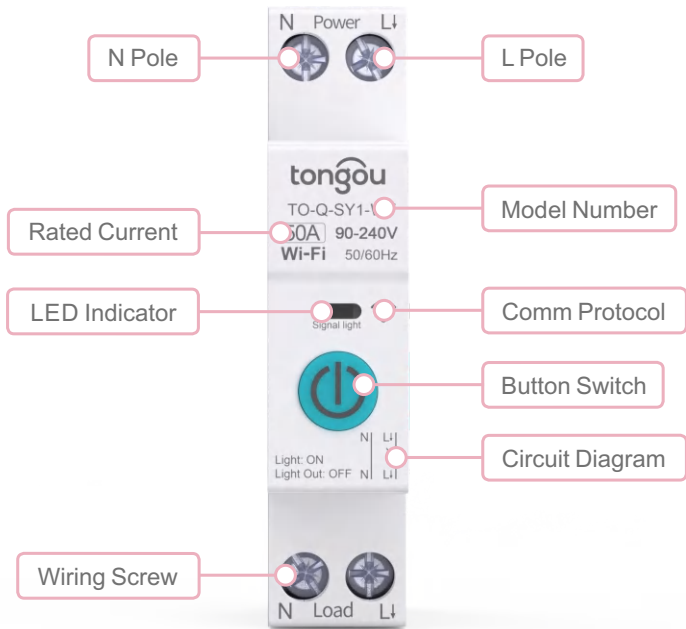
-  The LED indicator flashing blue indicates the network pairing mode.
-  The LED indicator solid blue shows the switch is on.
-  The LED off indicates the switch is off.

PRODUCT MODEL		TO-Q-SY1-W		TO-Q-SY1-Z		TO-Q-SY1-L		TO-Q-SY1-M	
Standards		IEC/EN 60947, IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000							
Wiring Mode		DPN 18mm							
Poles Description		Disconnectable L Pole, Direct N Pole							
Operating Rated Voltage	Ue (V)	AC 90 - 240V							
Frequency	Hz	50/60Hz							
Rated Current	In (A)	6, 10, 16, 20, 25, 32, 40, 50, 63							
Operational Safety		Remote setting maintenance switch: which can be set via Apps or other ports to prevent remote accidental switch activation. It requires four consecutive presses to exit maintenance mode							
Communication Protocol		TO-Q-SY1-W	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n						
		TO-Q-SY1-Z	Zigbee (2.400~2.483GHz) IEEE 802.15.4						
		TO-Q-SY1-L	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800						
		TO-Q-SY1-M	TCP/UDP: Matter						
Energy Consumption Measurement Accuracy		None							
Function Description		Multiple Timing, Remote Control, Voice Control							
Mounting Support		DIN Rail 35mm							

Wiring Diagram



TO-Q-SY1 Metering Type

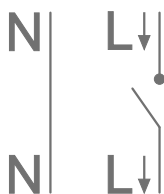


Connection

Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 50A	1.8 N.m	1 - 16mm ²	1 - 10mm ²
63A	1.8 N.m	16mm ²	/

Dimensions (mm)

I TO-Q-SY1 Metering Type



RDT+RELAY

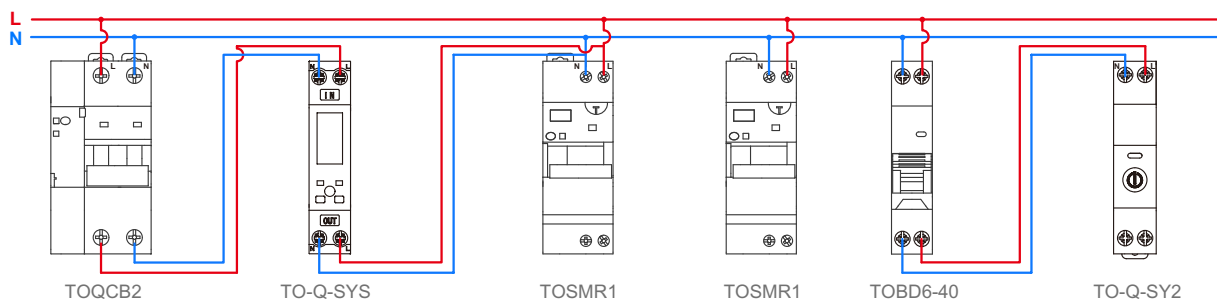


LED Indicator

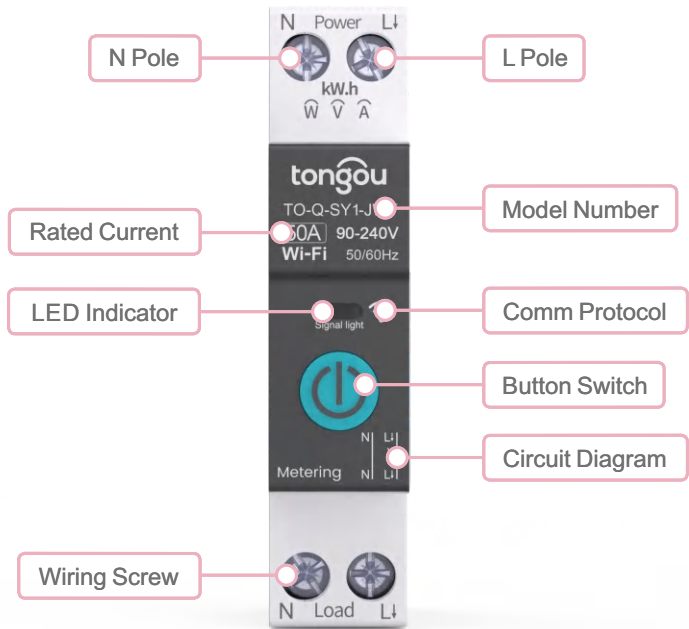
-  The LED indicator flashing blue indicates the device is in pairing mode.
-  The LED solid blue shows the network is connected.
-  The LED off indicates no network connection.
-  The button indicator solid red indicates the switch is on.
-  The button indicator off indicates the switch is off.

PRODUCT MODEL		TO-Q-SY1-JW	TO-Q-SY1-JZ	TO-Q-SY1-JL	TO-Q-SY1-JM
Standards		IEC/EN 60947, IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000			
Wiring Mode		DPN 18mm			
Poles Description		Disconnectable L Pole, Direct N Pole			
Operating Rated Voltage	Ue (V)	AC 90 - 240V			
Frequency	Hz	50/60Hz			
Rated Current	In (A)	6, 10, 16, 20, 25, 32, 40, 50, 63			
Operational Safety		Remote setting maintenance switch: which can be set via Apps or other ports to prevent remote accidental switch activation. It requires four consecutive presses to exit maintenance mode			
Communication Protocol		TO-Q-SY1-JW	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n		
		TO-Q-SY1-JZ	Zigbee (2.400~2.483GHz) IEEE 802.15.4		
		TO-Q-SY1-JL	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800		
		TO-Q-SY1-JM	TCP/UDP: Matter		
Energy Consumption Measurement Accuracy		Class 2.0			
Monitoring Physical Data		Real-time Voltage, Real-time Current, Real-time Power (Forward), Power Consumption (Forward), Switch State, Device Operating Status			
Function Description		Multiple Timing, Remote Control, Voice Control			
Mounting Support		DIN Rail 35mm			

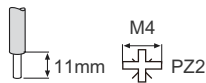
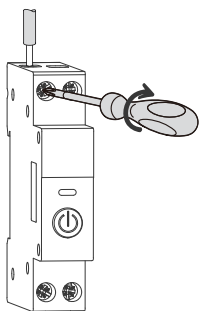
Wiring Diagram



TO-Q-SY1 Metering Type

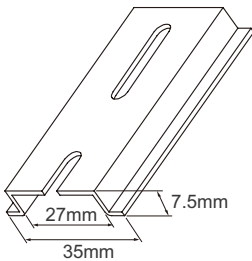
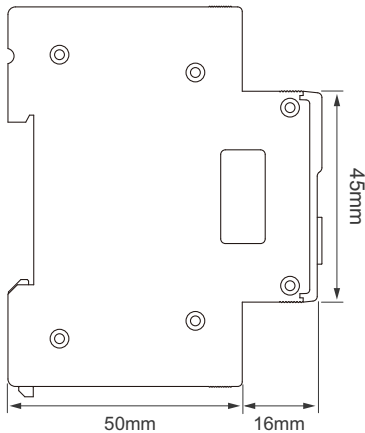
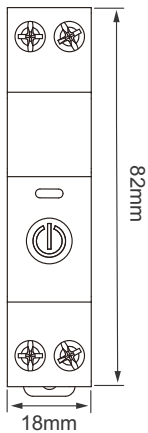


Connection



Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 50A	1.8 N.m	1 - 16mm ²	1 - 10mm ²
63A	1.8 N.m	16mm ²	/

Dimensions (mm)



I TO-Q-SY2

⚡ Over-Current Protection

Threshold Setting: 1A - 63A

Status Setting: Off/Alarm/Trip

Electronic Component Response Time: 5s

+⚡ Over-Voltage Protection

Threshold Setting: 245V - 295A

Status Setting: Off/Alarm/Trip

Electronic Component Response Time: 5s

-⚡ Under-Voltage Protection

Threshold Setting: 145V - 220A

Status Setting: Off/Alarm/Trip

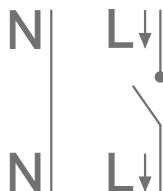
Electronic Component Response Time: 5s

📶 High Power Protection

Threshold Setting: 1KW - 26KW

Status Setting: Off/Alarm/Trip

Electronic Component Response Time: 5s



RDT+RELAY+UVP/OVP+ECM

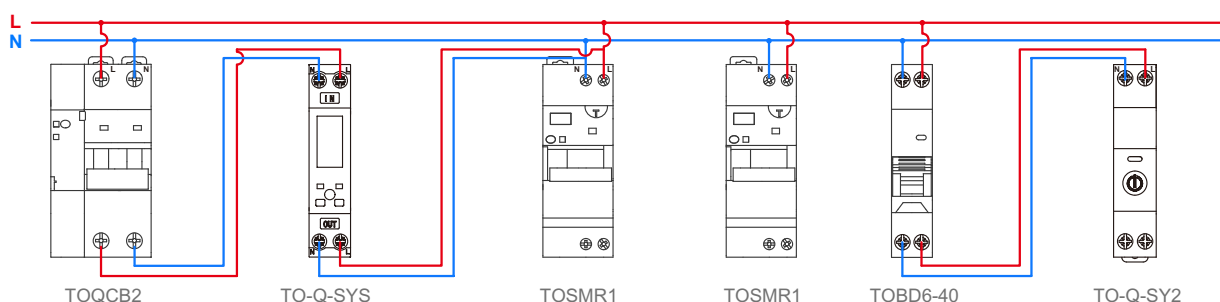


LED Indicator

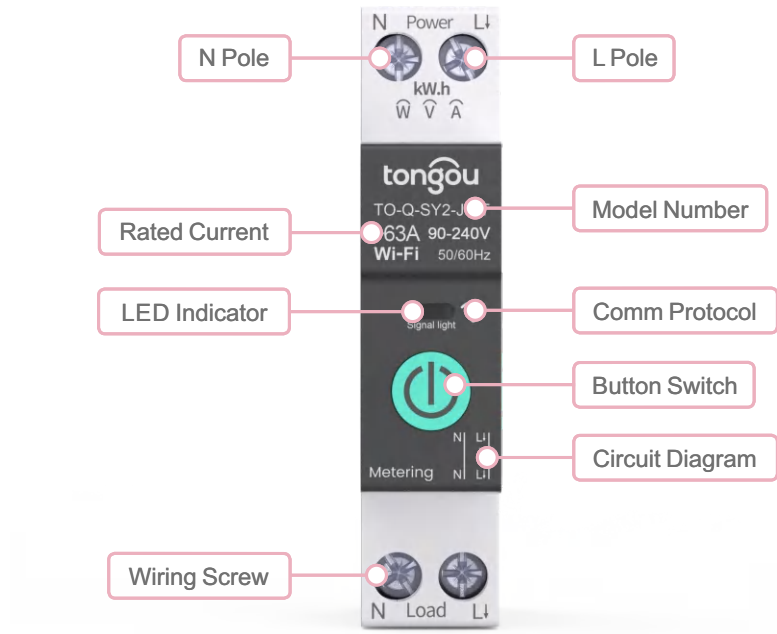
- 🔦 The LED indicator flashing blue indicates the device is in pairing mode.
- 🔦 The LED solid blue shows the network is connected.
- 🔦 The LED off indicates no network connection.
- 🔴 The button indicator solid red indicates the switch is on.
- 🔴 The button indicator off indicates the switch is off.

PRODUCT MODEL		TO-Q-SY2-JW	TO-Q-SY2-JZ	TO-Q-SY2-JL	TO-Q-SY2-JM
Standards		IEC/EN 60947, IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000			
Wiring Mode		DPN 18mm			
Poles Description		Disconnectable L Pole, Direct N Pole			
Operating Rated Voltage	Ue (V)	AC 90 - 240V			
Frequency	Hz	50/60Hz			
Current Frame	In (A)	63			
Operational Safety		Remote setting maintenance switch: which can be set via Apps or other ports to prevent remote accidental switch activation. It requires four consecutive presses to exit maintenance mode			
Communication Protocol		TO-Q-SY2-JW	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n		
		TO-Q-SY2-JZ	Zigbee (2.400~2.483GHz) IEEE 802.15.4		
		TO-Q-SY2-JL	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800		
		TO-Q-SY2-JM	TCP/UDP: Matter		
Energy Consumption Measurement Accuracy		Class 2.0			
Monitoring Physical Data		Real-time Voltage, Real-time Current, Real-time Power (Forward), Power Consumption (Forward), Switch State, Device Operating Status			
Function Description		Multiple Timing, Over-voltage Protection, Under-voltage Protection, Over-current Protection, Over-Power Protection, Temperature protection, Remote Control, Voice Control			
Mounting Support		DIN Rail 35mm			

Wiring Diagram



|
TO-Q-SY1 Metering Type



Connection

Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 50A	1.8 N.m		
63A	1.8 N.m	16mm ²	/

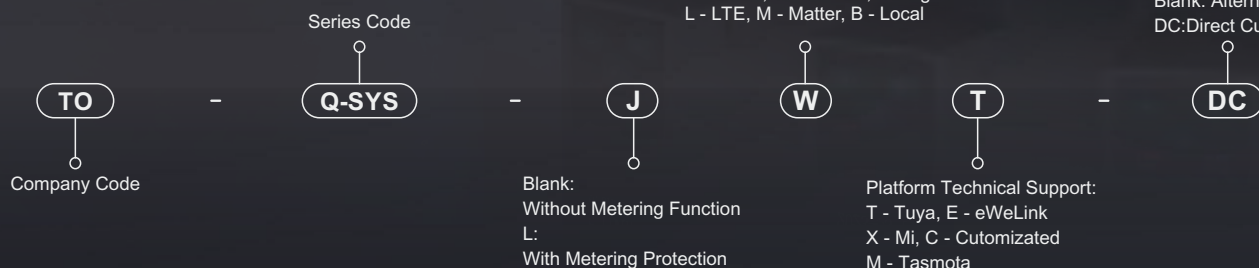
Dimensions (mm)

DIN Rail Smart Meter TO-Q-SYS Series



Communication method:
W - Wi-Fi, R - RS 485, Z - Zigbee
L - LTE, M - Matter, B - Local

Ambient Voltage:
Blank: Alternating Current
DC: Direct Current



DIN Rail Smart Meter TO-Q-SYS Series

The TO-Q-SYS series rail-mounted smart meters offer compact design, high accuracy, and LCD display for real-time monitoring of voltage, current, and power. They provide local settings, prepaid functionality, and seamless integration with automation systems.



**Remote
Control**



**Voice
Control**



**Time
Mode**



**Circuit
Protection**



**Electricity
Consumption**



**Real-Time
Power / Current / Voltage**



**Temperature
Protection**



**Operation
Log**



**DIN Rail
Installation**



**Maintenance
Mode**



**LCD
Display**

TO-Q-SYS

⚡ Over-current Protection
Threshold Setting: 1A - 50A
Status Setting: Off/Alarm/Trip
Tripping Response Time: 3s - 10s (Adjustable)
+⚡ Over-voltage Protection
Threshold Setting: 240V - 295A
Status Setting: Off/Alarm/Trip
Tripping Response Time: 3s - 10s (Adjustable)
-⚡ Under-voltage Protection
Threshold Setting: 90V - 220A
Status Setting: Off/Alarm/Trip
Tripping Response Time: 3s - 10s (Adjustable)
📶 Over-power Protection
Threshold Setting: 1KW - 26KW
Status Setting: Off/Alarm/Trip
Tripping Response Time: 3s - 10s (Adjustable)
🌡 High Temperature Protection
Threshold Setting: -25°C - 80°C
Status Setting: Off/Alarm/Trip
Tripping Response Time: 3s - 10s (Adjustable)

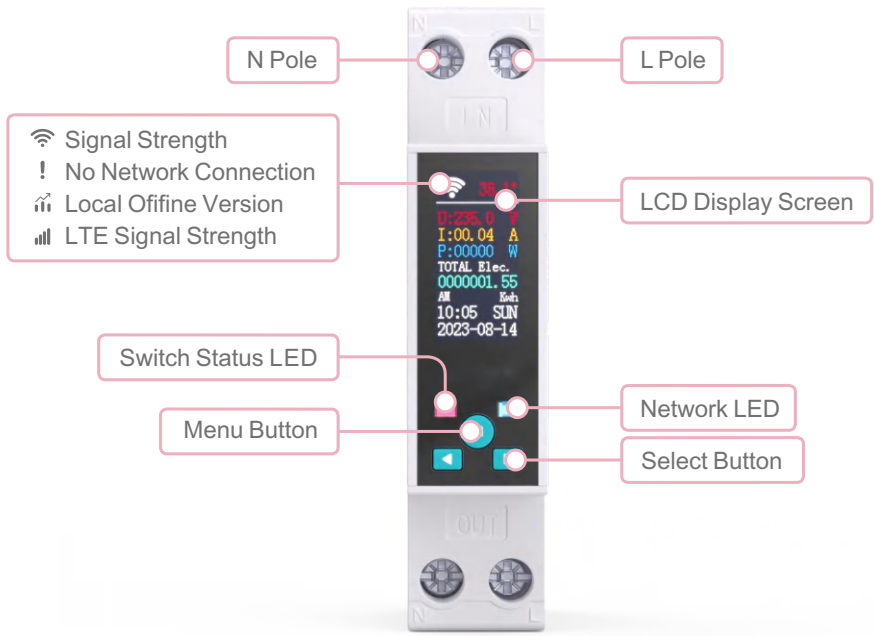
RDT+RELAY+UVP/OVP+ECM

LED Indicator

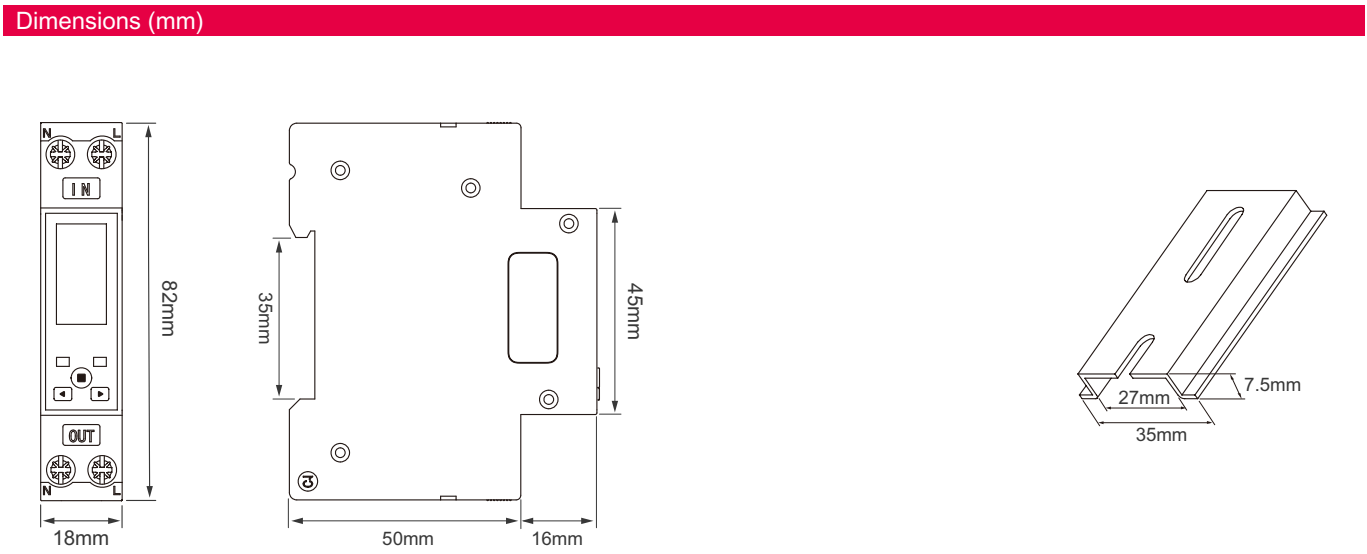
- The switch status LED is constantly red, indicating that the Relay is in the connected state.
- The switch status LED is black, indicating that the Relay is in the disconnected state.
- The network LED is constantly blue, indicating that the network connection is normal.
- The network LED is flashing blue, indicating the pairing status.

PRODUCT MODEL		TO-Q-SYS-JW	TO-Q-SYS-JZ	TO-Q-SYS-JL	TO-Q-SYS-JM	TO-Q-SYS-JB
Standards		IEC/EN 60947, IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000				IEC/EN 60947
Wiring Mode		DPN 18mm				
Poles Description		Disconnectable L Pole, Direct N Pole				
Operating Rated Voltage	Ue (V)	AC 100 - 240V				
Frequency	Hz	50/60Hz				
Current Frame	In (A)	50				
Operational Safety		Remote setting maintenance switch: which can be set via Apps or other ports to prevent remote accidental switch activation. It requires four consecutive presses to exit maintenance mode (TO-Q-SYS-JB Not)				
Communication Protocol		TO-Q-SYS-JW	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n			
		TO-Q-SYS-JZ	Zigbee (2.400~2.483GHz) IEEE 802.15.4			
		TO-Q-SYS-JL	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800			
		TO-Q-SYS-JM	TCP/UDP: Matter			
		TO-Q-SY2-JB	Local			
Energy Consumption Measurement Accuracy		Class 1.0				
Initial Current Value		100mA				
Monitoring Physical Data		TO-Q-SYS-JW/TO-Q-SYS-JZ/TO-Q-SYS-JL/TO-Q-SYS-JM Real-time Voltage, Real-time Current, Real-time Power (Forward), Power Consumption (Forward), Switch State, Device Operating Status				
		TO-Q-SYS-JB Local Screen Display				
Function Description		TO-Q-SYS-JW/TO-Q-SYS-JZ/TO-Q-SYS-JL/TO-Q-SYS-JM Multiple Timing, Over-voltage Protection, Under-voltage Protection, Over-current Protection, Over-Power Protection, Temperature protection, Remote Control, Voice Control				
		TO-Q-SYS-JB Multiple Timing, Over-voltage Protection, Under-voltage Protection, Over-current Protection, Over-Power Protection, Temperature Protection				
Mounting Support		DIN Rail 35mm				

TO-Q-SYS



Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 - 50A	1.8 N.m	1 - 16mm ²	1 - 10mm ²
63A	1.8 N.m	16mm ²	/



Smart Energy Accessory TO-Q-SA1 Series



Blank:
Mountable Both Top and Bottom
U: Top Installation
D: Bottom Installation

Communication method:
W - Wi-Fi, R - RS 485, Z - Zigbee
L - LTE, M - Matter

Series Code

TO - Q-SA1 - 1N U 50 W T

Company Code

01 - 1P, 1N- 1P+N
03 - 3P, 3N- 3P+N

Current Frame Max: 50A

Platform Technical Support:
T - Tuya, E - eWeLink
M - Mi, C - Customized



Electricity
Consumption



Real-Time
Power / Current / Voltage



Operation
Log



Circuit
Fault Alarm



High
Temperature Alarm

I TO-Q-SA1



(1P, 1N) RDT+ECM

⚡ Over-current Alarm

Threshold Setting: 1A - 50A

Status Setting: Off/Alarm

+⚡ Over-voltage Alarm

Threshold Setting: 245V - 295A

Status Setting: Off/Alarm

-⚡ Under-voltage Alarm

Threshold Setting: 145V - 220A

Status Setting: Off/Alarm

📶 Over-power Alarm

Threshold Setting: 5KW - 12KW

Status Setting: Off/Alarm

PRODUCT MODEL	TO-Q-SA1-0150W TO-Q-SA1-0150Z TO-Q-SA1-0150L TO-Q-SA1-0150M			
	TO-Q-SA1-1N50W TO-Q-SA1-1N50Z TO-Q-SA1-1N50L TO-Q-SA1-1N50M			
Standards	IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000			
Nominal Voltage	Un (V)	AC 230V		
Operating Rated Voltage	Ue (V)	AC 110- 240V		
Operating Temperature		- 25°C to +60°C/ -13°F to + 140°F		
Frequency	Hz	50/60Hz		
Current Frame Maximum	In (A)	50		
Communication Protocol	TO-Q-SA1-0150W/TO-Q-SA1-1N50W	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n		
	TO-Q-SA1-0150Z/TO-Q-SA1-1N50Z	Zigbee (2.400~2.483GHz) IEEE 802.15.4		
	TO-Q-SA1-0150L/TO-Q-SA1-1N50L	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800		
	TO-Q-SA1-0150M/TO-Q-SA1-1N50M	TCP/UDP: Matter		
Energy Consumption		Class 2.0		
Measurement Accuracy		100mA		
Initial Current Value				
Monitoring Physical Data		Real-time Voltage, Real-time Current, Real-time Power (Forward), Power Consumption (Forward), Internal Temperature		
Function Description		Over-voltage Alarm, Under-voltage Alarm, Over-current Alarm, Over-Power Alarm, Temperature Alarm, Prepaid Monitoring		
Matched Model of MCB		TOMD6-63		

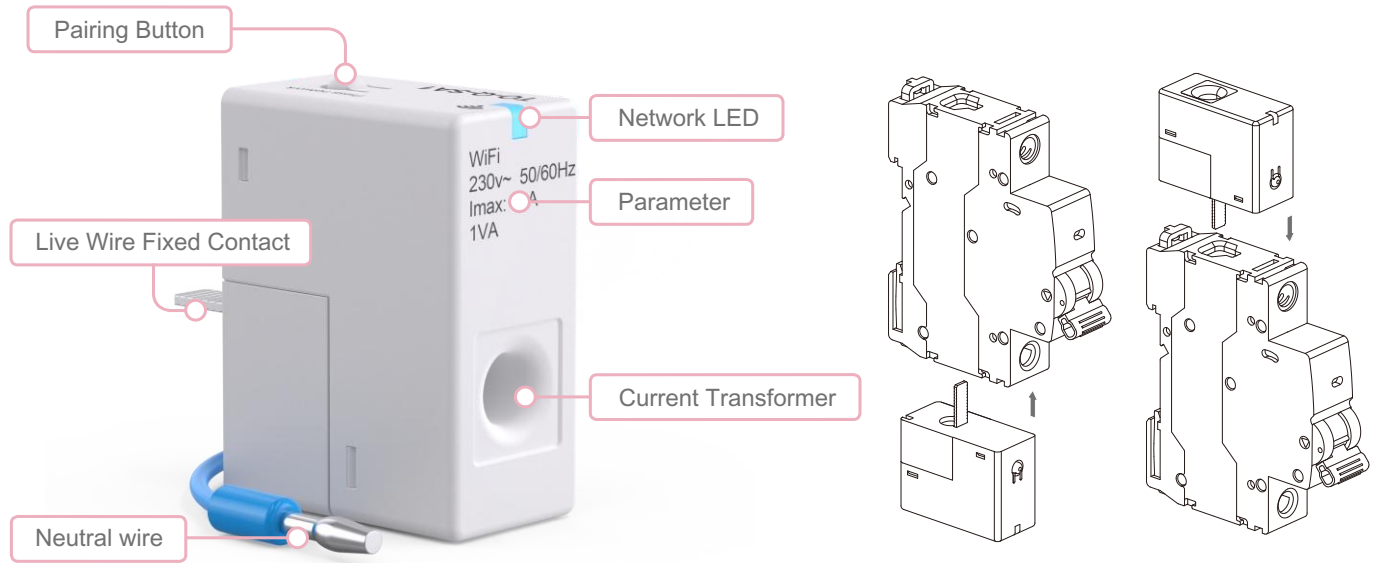
I TO-Q-SA1



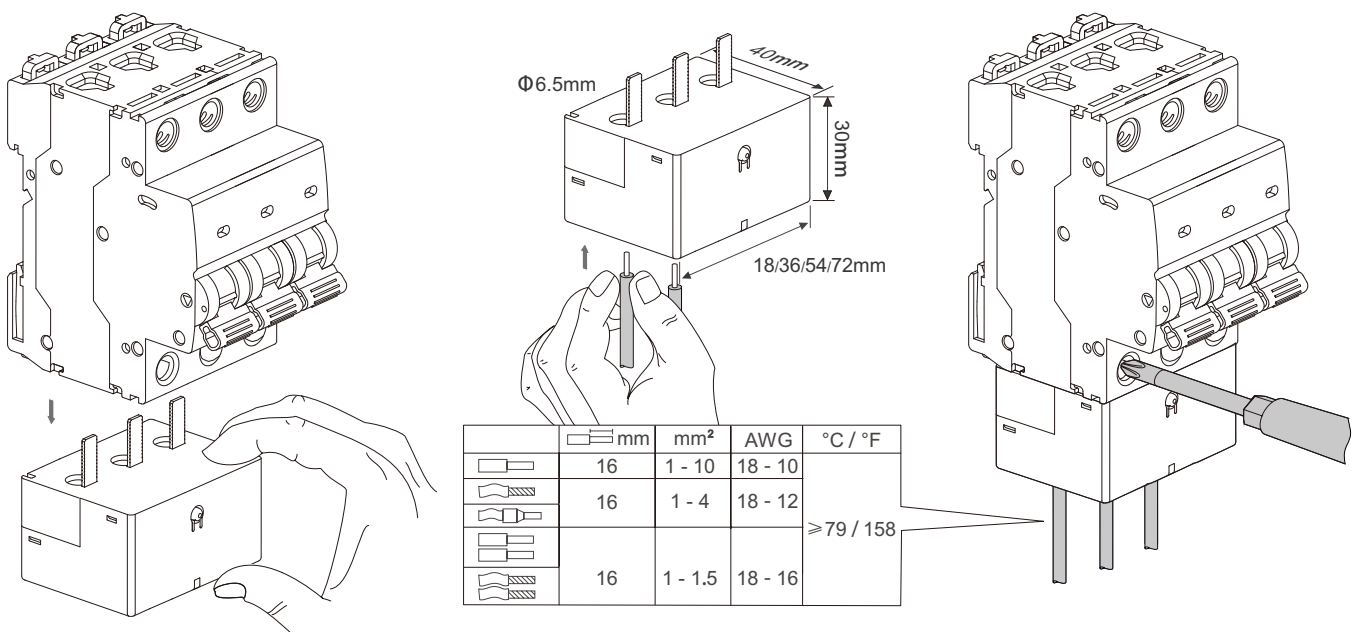
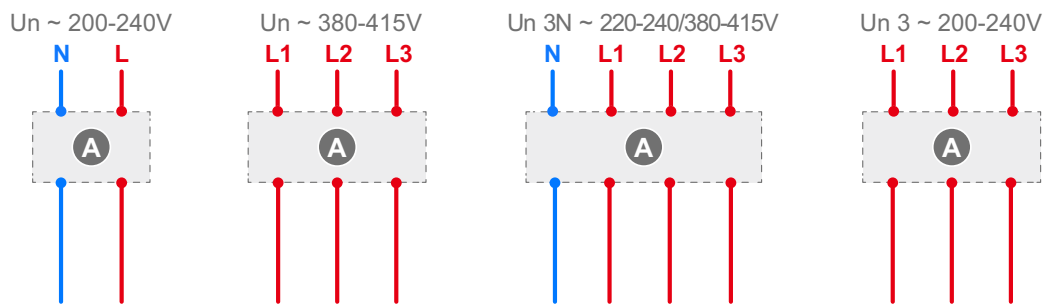
 Over-current Alarm	 Over-voltage Alarm	 Under-voltage Alarm	 Over-power Alarm
Threshold Setting: 1A - 50A	Threshold Setting: 245V - 295A	Threshold Setting: 145V - 220A	Threshold Setting: 5KW - 12KW
Status Setting: Off/Alarm	Status Setting: Off/Alarm	Status Setting: Off/Alarm	Status Setting: Off/Alarm

PRODUCT MODEL		TO-Q-SA1-0350W	TO-Q-SA1-0350Z	TO-Q-SA1-0350L	TO-Q-SA1-0350M
		TO-Q-SA1-3N50W	TO-Q-SA1-3N50Z	TO-Q-SA1-3N50L	TO-Q-SA1-3N50M
Standards		IEC/EN 50557, EN 301 489, EN 300 328, EN IEC 61000			
Nominal Voltage	Un (V)	AC 230/400V			
Operating Rated Voltage	Ue (V)	TO-Q-SA1-0350W/3N50W	TO-Q-SA1-0350Z/3N50Z: AC 230V		
		TO-Q-SA1-0350L/3N50L	TO-Q-SA1-0350M/3N50M: AC 110- 240V (L1-N, L2-N, L3-N)		
Operating Temperature		- 25°C to +60°C/ -13°F to + 140°F			
Frequency	Hz	50/60Hz			
Current Frame Maximum	In (A)	50			
Communication Protocol		TO-Q-SA1-0150W/TO-Q-SA1-1N50W	TCP/IP: Wi-Fi (2.412~2.484GHz) IEEE 802.11b/g/n		
		TO-Q-SA1-0150Z/TO-Q-SA1-1N50Z	Zigbee (2.400~2.483GHz) IEEE 802.15.4		
		TO-Q-SA1-0150L/TO-Q-SA1-1N50L	LTE Cat.1: LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/38/39/40/41 (2535~2655MHz) LTE-FDD: B1/B3/B5/B7/B8/B20/B28A* LTE-TDD: B38/40/41 GSM/GPRS: GSM900/DCS1800		
		TO-Q-SA1-0150M/TO-Q-SA1-1N50M	TCP/UDP: Matter		
Energy Consumption Measurement Accuracy		Class 2.0			
Initial Current Value		100mA			
Monitoring Physical Data		Real-time Voltage, Real-time Current, Real-time Power (Forward), Power Consumption (Forward), Internal Temperature			
Function Description		Over-voltage Alarm, Under-voltage Alarm, Over-current Alarm, Over-Power Alarm, Temperature Alarm, Prepaid Monitoring			
Matched Model of MCB		TOMD6-63			

TO-Q-SA1



Wiring Diagram



I Note



Tongou Smart



@tongou



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