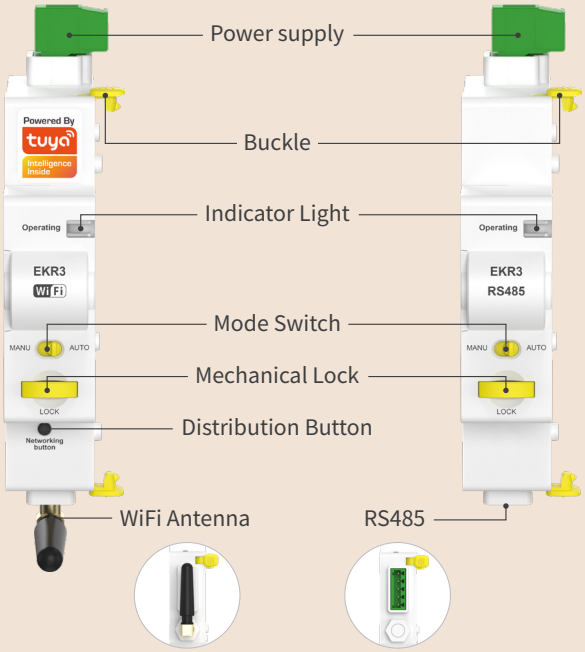
EKR3 Series
Smart MCB

Overview



EKR3 smart MCB provides not only overload and short-circuit protection like traditional circuit breakers, but also the ability to remotely control the closing and timing of the MCB through the Tuya APP or RS485 platform, as well as obtain the switch status of the device.

EKR3 smart MCB is an ideal choice for smart home and industrial automation systems, offering circuit protection, remote control, and monitoring capabilities to improve energy management efficiency, enhance power safety, and provide users with more control options.

Application

Smart home systems, which can be integrated into the overall home automation solution.

Commercial buildings, which can achieve centralized energy management.

Industrial facilities, which can remotely monitor and control individual circuits.

Locations where electricity consumption requires regular control, such as billboard lighting and public area lighting.

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Smart MCB

Features

Traditional Protection
- Overload protection
- Short-circuit protection

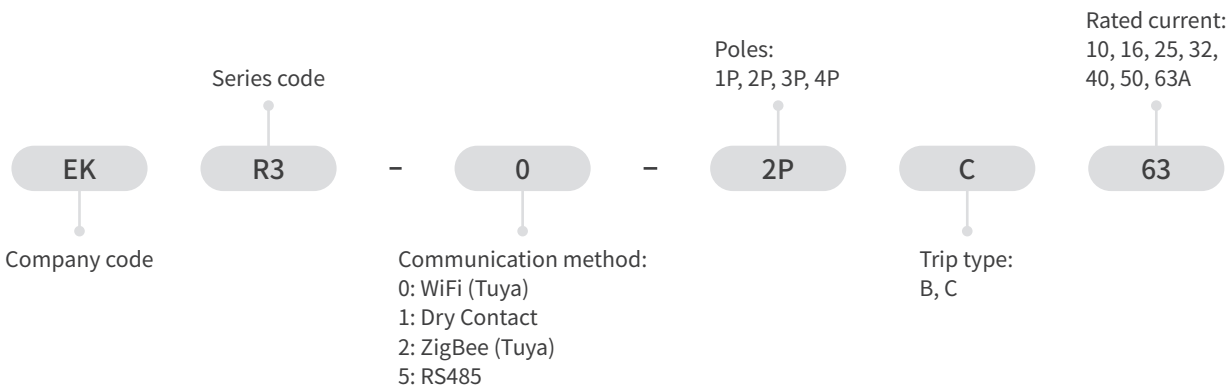
Multiple Communication Methods
- WiFi (Tuya)
- ZigBee (Tuya)
- RS485
- Dry Contact

Advanced Functionalities
- Remote closing and timing control of the circuit breaker
- Real-time switch status monitoring

Automatic, Manual Mode
- Automatic mode allow remote control (Tuya APP, RS485).
- Manual Mode, only supports local manual operation

Mechanical Padlock
When the mechanical lock is pulled out, the switch enters a locked state, preventing the switch from being turned on. To restore the device, press down the mechanical lock.

Instruction of Type Code



Technical Parameter

Poles	1P, 2P, 3P, 4P
Supply terminal	L-N (It is advisable to draw power from the incoming line)
Power supply voltage	220/230V
Standby power consumption	＜ 3W
Status indicator	LED
Operating voltage	240V (1P, 2P), 415V (3P, 4P)
Rated operating current	10, 16, 25, 32, 40, 50, 63A
Rated frequency	50/60Hz
Rated breaking capacity	6kA
Energy limiting class	3
Rated impulse withstand voltage(1.2/50) Uimp	4kV
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Trip curve	B: (3-5) x In, C: (5-10) x In
Electrical life	4000 Cycles
Mechanical life	10000 Cycles

Trip time	⩽ 1s
Communication method	WiFi (Tuya), 2.4GHz; ZigBee (Tuya); Dry contact; RS485, Baud rate: 2400/ 4800/ 9600 (default)
Operational safety	Mechanical padlock, Ensure safety during onsite maintenance
Monitoring physical data	Real-time voltage, Switch wtate, Device operating status
Function description	Overload protection, Short circuit protection, Multiple timing, Remote control
Protection degree	IP20
Ambient temperature	-5°C to +40°C (Current capacity is significantly reduced at 70°C)
Storage temperature	-25°C to +70°C
Max. Supply terminal size for cable	2.5mm^2
Terminal connection type	Cable/Pin-type busbar
Max. conductor cross-sections for cable	25mm^2
Altitude	⩽ 2000m
Mounting	Mounting on 35mm DIN rail
Connection	From top

Dimensions and Wiring Diagram