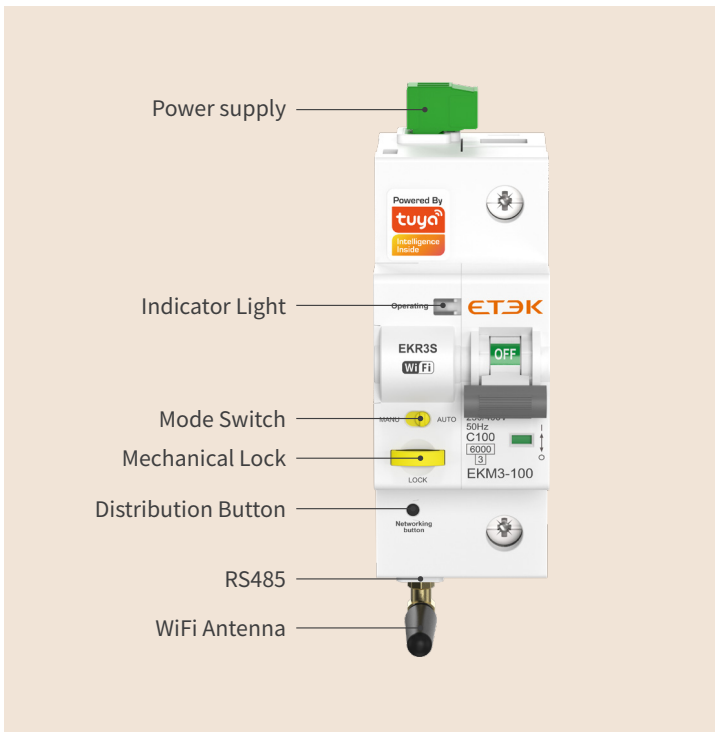




Overview

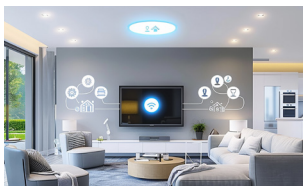


EKR3S Smart MCB offers overload and short-circuit protection for circuits up to 100A, and can also monitor various electrical parameters in real-time, with remote control capabilities through the Tuya APP or RS485 platform.

EKR3S 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.

Features

Traditional Protection

- Overload protection
- Short-circuit protection

Advanced Functions

- Remote opening and closing control
- Timing tasks (power on/off scheduling)
- Real-time switch status monitoring
- Electricity metering (only 1P&2P)

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.

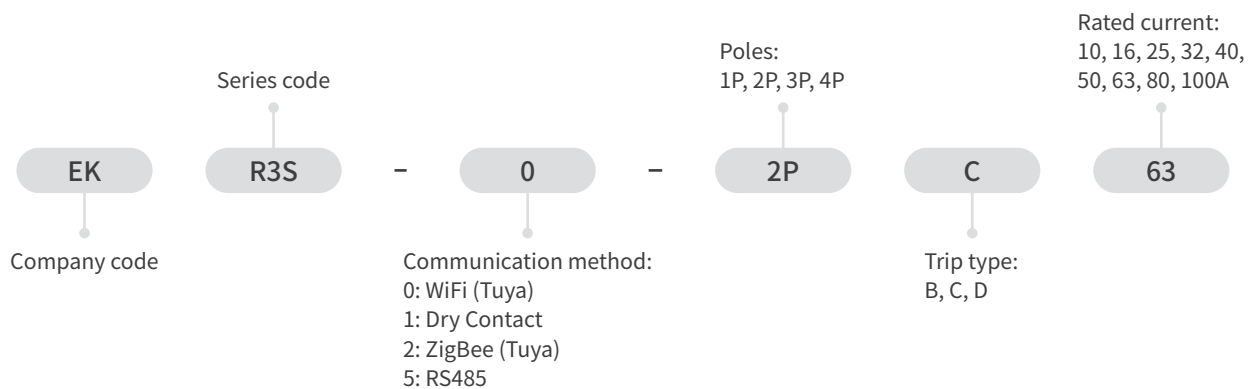
Smart Capabilities

- Remote control through Tuya APP or RS485 platform
- Wi-Fi, ZigBee, RS485, or Dry contact communication options
- Supported Apps: Tuya, Smart Life

Automatic, Manual Mode

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

Instruction of Type Code



Technical Parameter

Standard	IEC/EN 60898-1, IEC/EN 60947-2
Poles	1P, 2P (with metering); 3P, 4P (without metering)
Supply terminal	L-N (It is advisable to draw power from the incoming line)
Power supply voltage	220/230V
Standby power consumption	< 5W
Status indicator	LED
Operating voltage	230/ 240V (1P, 2P), 380/400V(3P, 4P)
Rated frequency	50/60Hz
Rated operating current	10, 16, 25, 32, 40, 50, 63, 80, 100A
Rated breaking capacity	6kA
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, D: (10-20) x In

Trip time	≤ 1S
Electrical life	4000 Cycles
Mechanical life	10000 Cycles
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, Real-time current, Real-time power, Temperature, Switch state, Device operating status
Function description	Overload protection, Short circuit protection, Over-temperature protection, Multiple timing, Remote control, Electricity metering
Characteristic set up	Over/under voltage action time, Over/under voltage value, Overcurrent value, Voltage imbalance value, Over power value, Phase loss value, Overtemperature value
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	50mm ²
Altitude	≤ 2000m
Mounting	Mounting on 35mm DIN rail
Connection	From top

Dimensions and Wiring Diagram

