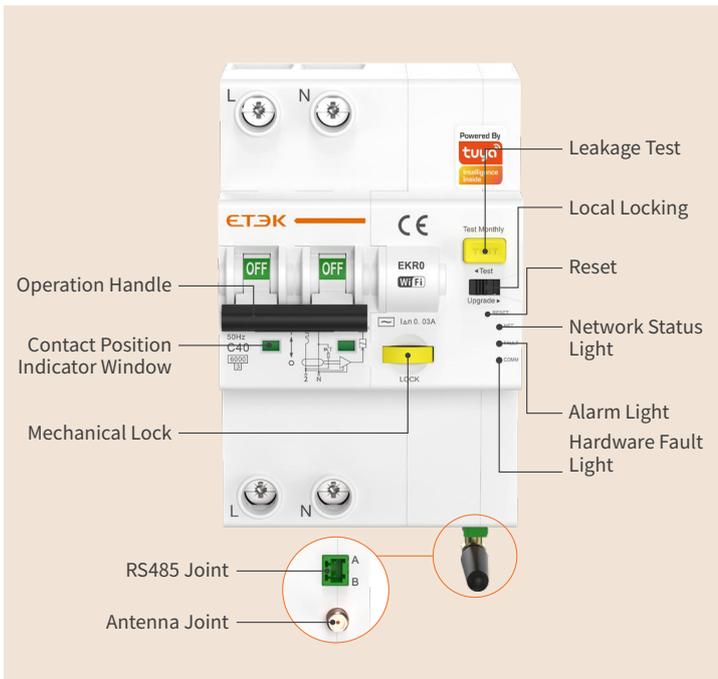




Overview



The EKR0 series smart residual current operated circuit breaker (RCBO) is suitable for indoor, AC 50Hz, rated voltage 230V/400V, rated current not exceeding 63A, industrial, commercial, civil buildings, and infrastructure low-voltage terminal distribution systems in buildings and similar places. It can also be used for infrequent on-off operations. This product integrates information collection and remote intelligent control. In addition to the overload, short circuit, and leakage protection functions of traditional leakage circuit breakers, the product also has functions such as remote control (Tuya App, RS485), electrical parameter measurement, overvoltage/undervoltage self recovery, and fault alarm.

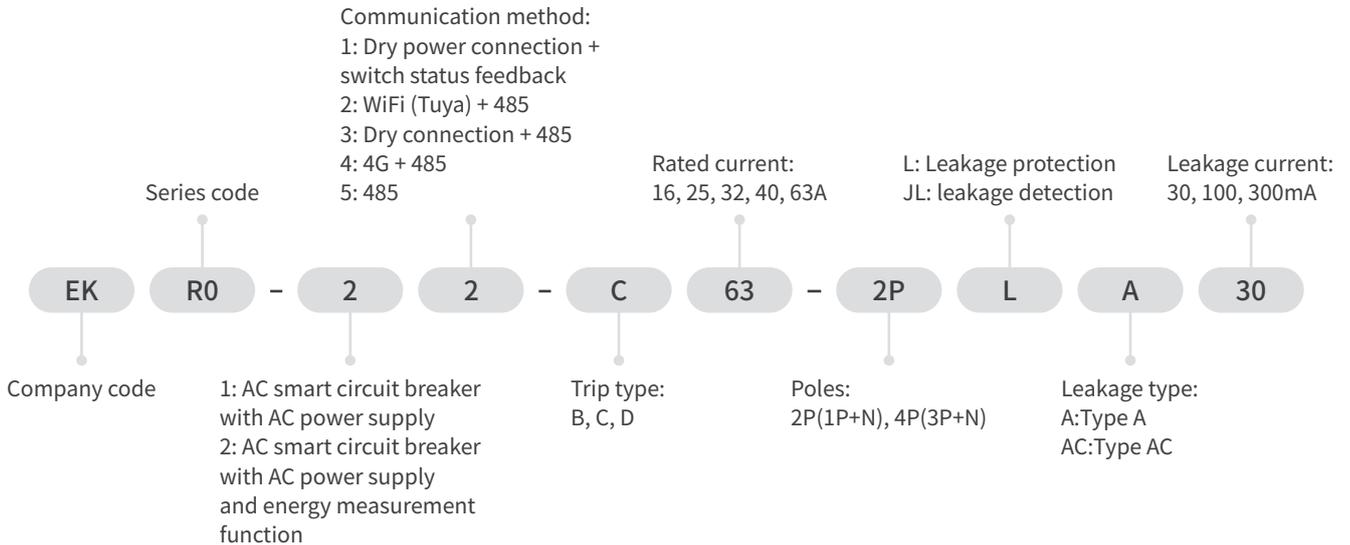
Features

- **Automatic protection:** It automatically completes the self check of leakage protection function at a fixed time, and has a self resetting overvoltage, undervoltage protection. It is equipped with automatic inspection, and when faults are eliminated, it will automatically recover without affecting normal power supply.
- **Autonomous setting:** Automatically limit power usage based on wire diameter selection under rated value, independently set distribution parameters (such as current, power, temperature, etc.), and remotely set electricity protection warning values.
- **Fault prompt function:** Intelligent monitoring of equipment operation status, timely protection of equipment and reminder to users in case of equipment abnormalities.
- **Networking module function:** Built-in networking modules (including WiFi, 4G, etc.) are used to display device status, fault information, electricity consumption statistics, etc. on the APP through networking transmission, and can be remotely controlled.
- **Multiple working modes:** with manual/automatic selection switch and mechanical locking function.
- **Easy to install:** Adopting a modular design scheme for small circuit breakers, it can be installed on a standard 35mm guide rail, and RS485 communication uses fast plug terminal wiring.

EKRO Series Smart RCBO

Residual Current Operated Circuit Breaker

Instruction of Type code



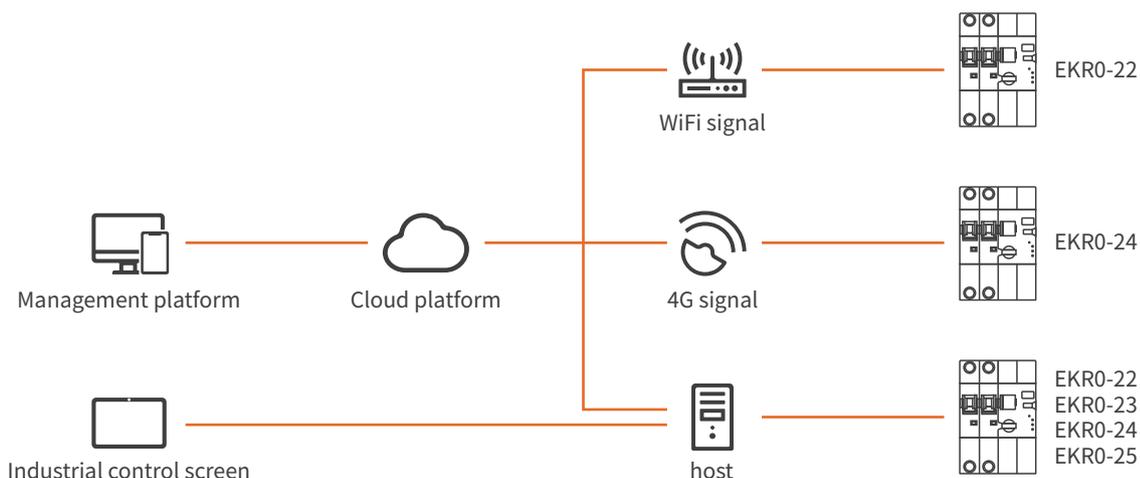
Technical Parameter

Communication method	4G, WiFi, RS485
RS485 interface baud	2400, 4800, 9600 (Default value)
Power limit	Open circuit after exceeding the limit power for 5S (default value: 22kW)
Pilot lamp	Three green LEDs
Settable parameters	Leakage detection, Overvoltage and undervoltage protection, Rated current, Voltage, power, Temperature, etc
Power consumption	< 2W
Accuracy	Voltage and current accuracy 1%, electrical energy accuracy 2%
Type of protection (electric leakage)	AC,A
Poles	1P+N, 3P+N
Rated current	16, 25, 32, 40, 63A
Rated voltage	1P+N: 230/240V, 3P+N: 400/415V
Rated frequency	50/60Hz
Rated breaking capacity	6000A
Rated sensitivity currents IΔn	30, 100, 300mA
Residual current off-time under IΔn	≤ 0.1s
Rated residual making and breaking capacity IΔm	500A (In ≤ 50A), 10In (In > 50A)
Rated impulse with standard voltage (1.5/50) Uimp	4kV
Thermal release characteristic	(1.13-1.45) × In
Magnetic release characteristic	B: (3-5) × In, C: (5-10) × In, D: (10-20) × In
Mechanical life	4000 Cycles
Electrical life	10000 Cycles
Operating temperature	-25°C to +40°C
Terminal connection type	Cable/Pin-type busbar
Max. terminal size for cable	Max. 25mm ²
Max. tightening torque	Max. 2.5N.m
Installation method	Mounting on 35mm DIN rail
Connection	From Top

Voltage, Current, Temperature Settings

Number	Protection type	Initial state	Initial value		Setting range		Recovery value	
1	Overvoltage	Disabled	60S	280V	5-600S	100-450V	60S	275V
2	Undervoltage	Disabled	60S	115V	5-600S	5-400V	60S	120V
3	Overcurrent	Disabled	5S	100A	5-600S	0.01-120A	/	/
4	Over power	Disabled	5S	22kW	5-600S	0.01-50kW	/	/
5	Phase loss	Disabled	60S	2V	5-600S	100V	60S	> 2V
6	Voltage imbalance	Disabled	60S	2%	5-600S	1-10%	60S	< 2%
7	Overtemperature	Disabled	30S	80°C	5-600S	90-85°C	30S	< 80°C

Application Example



Common Problems

1. Device network distribution failure

If the device is not bound within ten minutes after installation and power on, it needs to be powered off and restarted before binding. If the device needs to reconfigure the network, briefly press the Reset button to clear the previous binding status.

2. Green light keeps flashing after installed

Check if the toggle switch is at the right end upgrade position and should be turned to the left end operation position.

3. The device cannot be remotely closed

Check whether the switch is manually opened. After manually closing it, operate it through the Tuya app or platform with RS485 connection to see if it can be opened.

Check if the mechanical padlock is pulled out.

4. 485 device unable to communicate, sending open/close command, no action

Please ensure that the equipment is in normal operation, and then check whether the A and B of RS485 cable are connected reversely, whether the communication Baud is set correctly, and whether the communication connection is abnormal.

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5. No feedback on operation

Check if the product wiring terminals have been tightened

Check the APP settings, notification type, and whether message notifications are allowed to be turned on

6. After power on, the indicator light does not light up

Check if the power interface is reversed and if the switch power output has power.

7. LED light status description

Operating handle	Manually move the circuit breaker up and down to control the opening and closing of the circuit breaker, with upward indicating the closing and downward indicating the opening	
Contact position indication window	Red represents closing, green represents opening	
Network status light	Flashing 300ms off, 300ms on	Connected to the network
	Flashing 300ms off, 300ms on	Remote upgrade
	Flashing 100ms off, 1900ms on	Connection to the server successful
Alarm light	100ms on, 400ms off	Mechanism locked
	100ms on, 900ms off	Manual opening
	Extinguish	No alarm
	500ms flashing	With alarm
Hardware fault light	Solid light	Press the key to reboot into boot
	Extinguish	Trouble-free
	100ms on, 400ms off	Mechanism failure
	100ms on, 100ms off	Metering fault

Product Size and Wiring Method

