ETEK®

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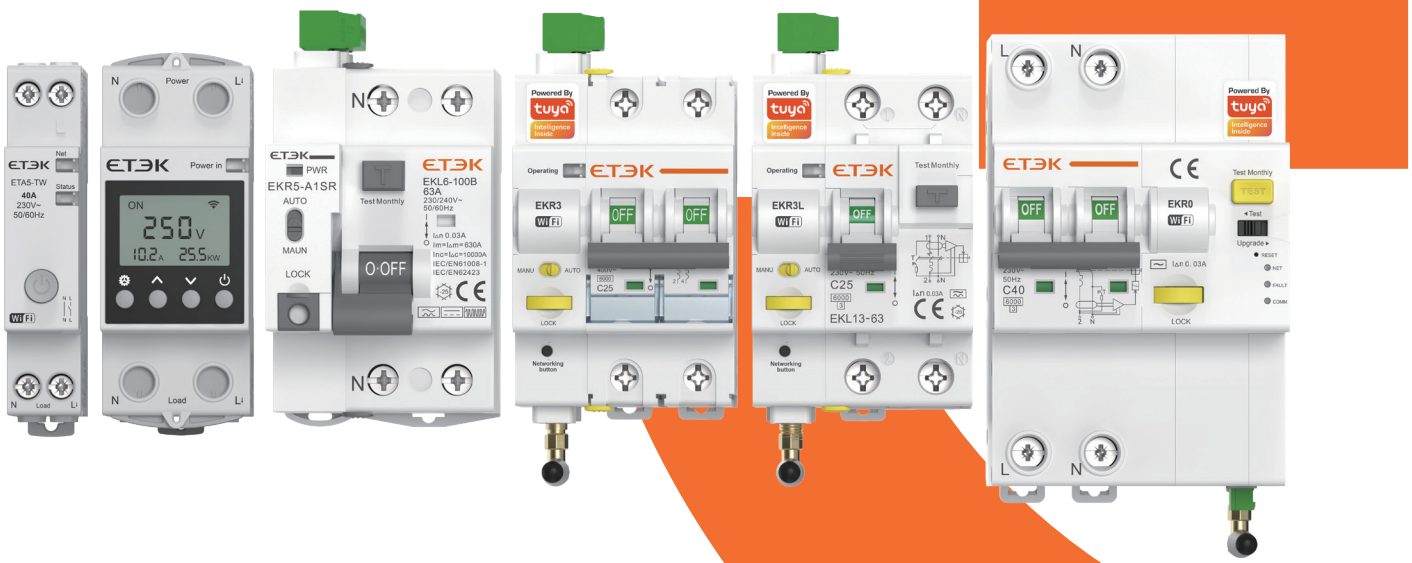
IOT SMART DEVICES

- Smart Circuit Breakers
- Auto Reclosers
- Smart Relay Switches

Always for your safety



ZHEJIANG ETEK
ELECTRICAL TECHNOLOGY CO.,LTD.

Ver. 2024.1

Always for your safety

COMPANY INTRODUCTION

Zhejiang ETEK Electrical Technology Co., Ltd. (Abbreviation: ETEK Electric) is a professional manufacturing company dedicated to the research, development, production, and sales of low-voltage electrical appliances. The company was established in 2011 and is located in Wenzhou City, Zhejiang Province. At present, the company has 40K sqm of modern manufacturing bases in Wenzhou and Wuhu with over 500 employees, including over 50 R&D and technical personnel.

ETEK Electric has multiple production workshops for mold design, parts manufacturing, welding, and assembly. Additionally, they have multiple automated production lines for MCB and RCCB. Our products include MCB, RCCB, RCBO, AFDD, MCCB, ACB, EV Chargers, Photovoltaic DC products, etc., which can meet the needs of different countries and are widely used in fields such as residential, commercial, and industrial.

ETEK Electric has built our own low-voltage electrical testing center, and most of the testing items can meet the requirements of international IEC standards. The company has obtained ISO9001, ISO14001, and ISO45001 system certifications as well as products have obtained international CB, TUV, VDE, CE, RoHS, and other quality certificates.

ETEK Electric constantly masters and breaks through the core technology of circuit breakers, with more than 100 national patents. Focusing on independent brand construction is crucial for the company's development. The "ETEK" trademark is registered in over 80 countries. Products are exported to over 100 countries and regions including the European Union, South America, the Middle East, Africa, and Southeast Asia.

We also support OEM, ODM, OBM, SKD, CKD and other business cooperation models, and provide customers with a full range of services covering market cultivation, technical training, and factory construction.

ETEK Electric has been adhering to the business policy of "Growth", "Quality", "Efficiency", and "Innovation". In 2023, ETEK Electric has formulated the fifth 3-year strategic plan, which specifies the three major initiatives of expanding the production scale, enhancing the new energy market share, and expanding the independent brand, to realize the annual revenue target of $50 million by 2026.

Looking forward to the future, ETEK Electric will be committed to becoming a globally renowned manufacturer in the power distribution and electrical industry, safeguarding the power safety of global customers, and helping the development of green and digital energy.

Wenzhou Factory

Wuhu Factory

WORKSHOPS

OEM & ODM BUSINESS

OEM & OEM

Customer request provide quotation

Research & development product design

Comfirmation PO & arrange advanced payment

Planning production & raw material inspection

Arrange production & quality inspection

Shipment ready & arrange balance payment

Delivery to customer

CONTENTS

SMART CIRCUIT BREAKERS

Smart circuit breaker is an electronic device that operates the circuit breaker to open or close, monitor and collect the usage status of the circuit and the load device through the remote control. The smart circuit breaker can feedback and record the information status of circuits and equipment in real time through the Internet.

It can be remotely controlled using multiple protocols, such as RS485, WiFi, etc. At the same time, collect some data in the device circuit, so that we can use the device in a more reasonable combination, so as to improve the effectiveness of power supply.

WiFi RS485

Smart Circuit Breakers

Application

It can be widely used in power grid terminal lines, unattended mobile phone base stations, elevators, air conditioners, smart phones, smart homes, smart factories, new energy vehicle charging piles, etc.



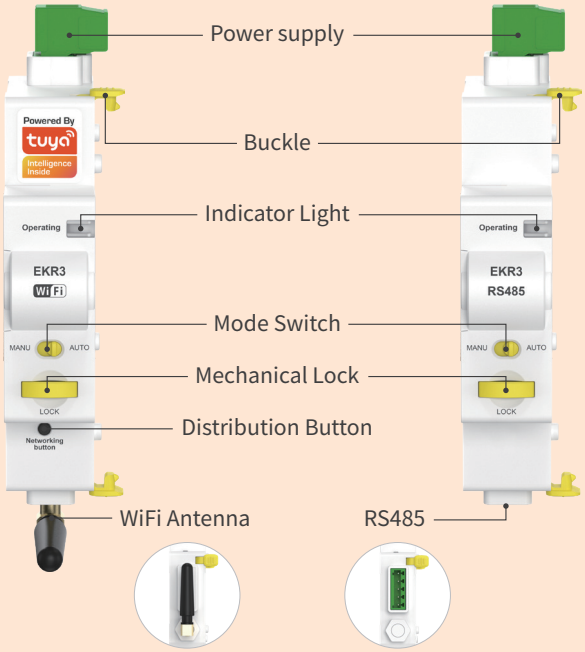

Difference between EKR3, EKR3S, EKR3L, EKR0

Ref No.	EKR3	EKR3S	EKR3L	EKR0
Picture				
No.of poles	1P, 2P, 3P, 4P	1P, 2P, 3P, 4P	1P+N	1P+N, 3P, 3P+N
Rated voltage (U_e)	240V (1P, 2P) 415V (3P, 4P)	230/240V (1P, 2P) 380/400V (3P, 4P)	230/240V	230/240V (1P+N) 400/415V (3P, 3P+N)
Rated currents (I_n)	10-63A	10-100A	10-63A	16-63A
Rated breaking capacity	6kA	6kA	6kA, 10kA	6kA, 10kA
Rated sensitivity currents ($I_{\Delta n}$)	-	-	10, 30, 100, 300mA	10, 30, 100, 300mA
Remote control	●	●	●	●
Padlocker	●	●	●	●
Timed task	●	●	●	●
Automatic reclosing	/	/	○	/
Power metering	/	●	/	●
Fault feedback	●	●	●	●
Overvoltage protection	/	●	/	●
Undervoltage protection	/	●	/	●
Over-current protection	/	●	/	●
Overload protection	●	●	●	●
Leakage protection	/	/	●	●
Leakage detection	/	/	/	●
Over temperature protection	/	●	/	●
Short circuit protection	●	●	●	●
Data monitoring	●	●	●	●
Power limit	/	●	/	●
Fault record	●	●	●	●

Note: ● Standard ○ Optional / None

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.

EKR3 Series
Smart MCB

Features

Traditional Protection
- Overload protection
- Short-circuit protection

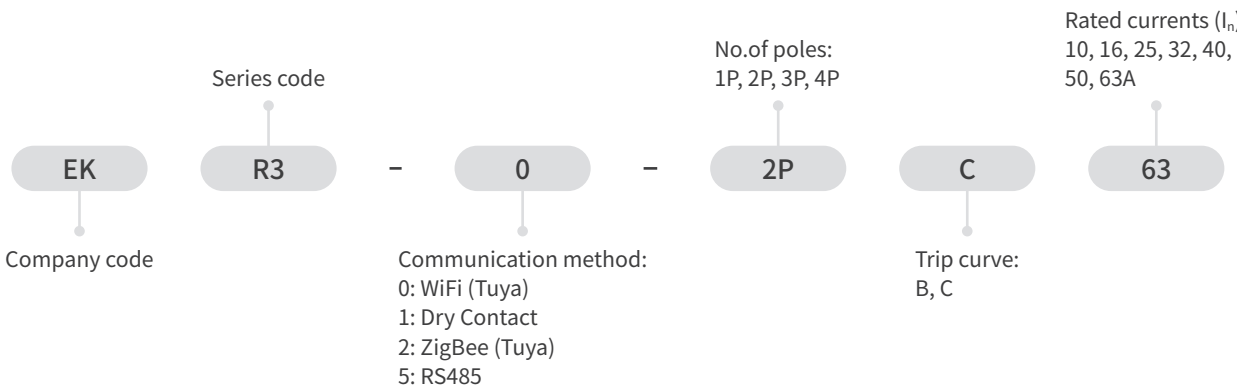
Multiple Communication Methods
- WiFi (Tuya)
- ZigBee (Tuya)
- RS485
- Dry Contact

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

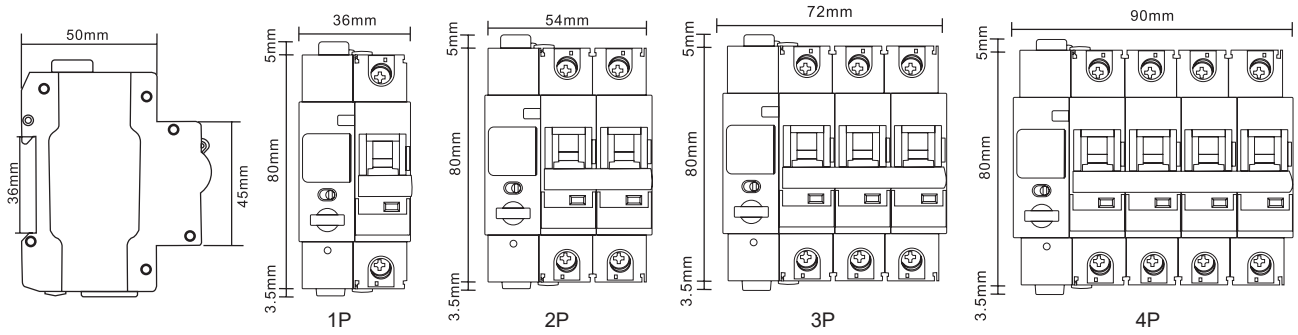


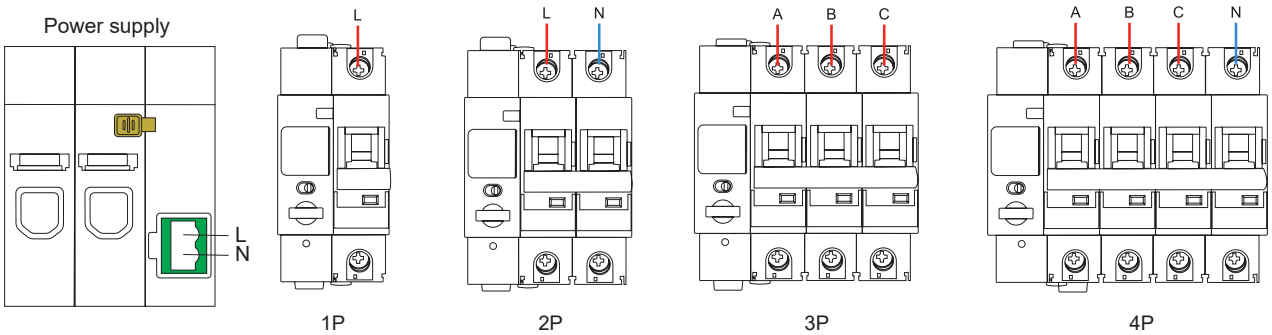
Technical Parameter

No.of 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
Rated voltage (U_e)	240V (1P, 2P), 415V (3P, 4P)
Rated currents (I_n)	10, 16, 25, 32, 40, 50, 63A
Rated frequency	50/60Hz
Rated short-circuit capacity (I_{cn})	6kA
Energy limiting class	3
Rated impulse withstand voltage (U_{imp}) (1.2/50μs)	4kV
Dielectric test voltage	2kV (50/60Hz, 1 min.)
Trip curve	B: (3-5) x I_n, C: (5-10) x I_n
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
Installation	Mounting on 35mm DIN rail
Incoming method	From top

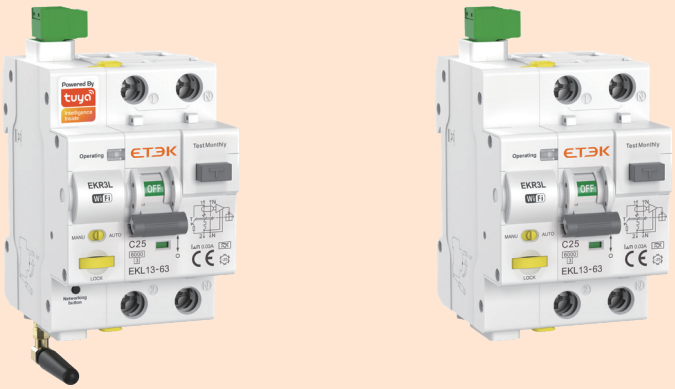
Dimensions and Wiring Diagram



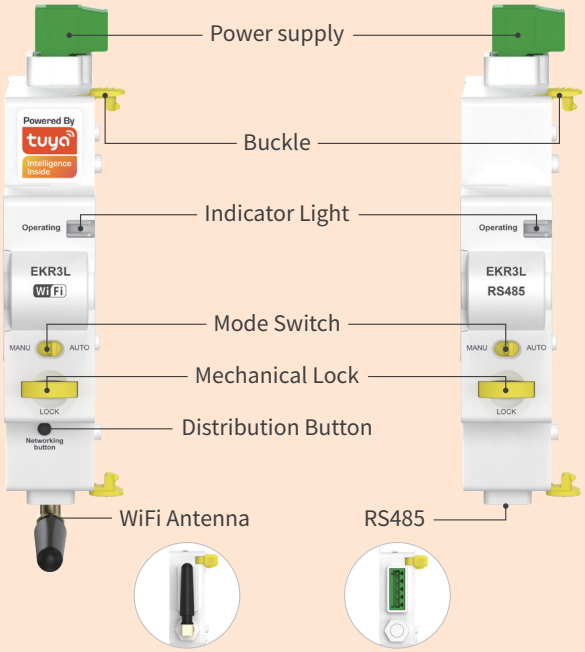


EKR3L Series

Smart RCBO



Overview



EKR3L smart RCBO offers not only overload, short-circuit, and leakage protection like traditional circuit breakers, but also the ability to be remotely controlled and monitored through the Tuya APP or RS485 platform. It also provides an automatic reclosing function to improve the reliability of the circuit power supply.

EKR3L Smart RCBO combines traditional RCBO protection features with modern smart home technology, providing users with enhanced safety, convenience, and control over their electrical systems. It is particularly useful for remote management of electrical circuits and can be integrated into broader smart homes or building automation systems.

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.

EKR3L Series
Smart RCBO

Features

Traditional Protection
- Overload protection
- Short-circuit protection
- Leakage protection (residual current)

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

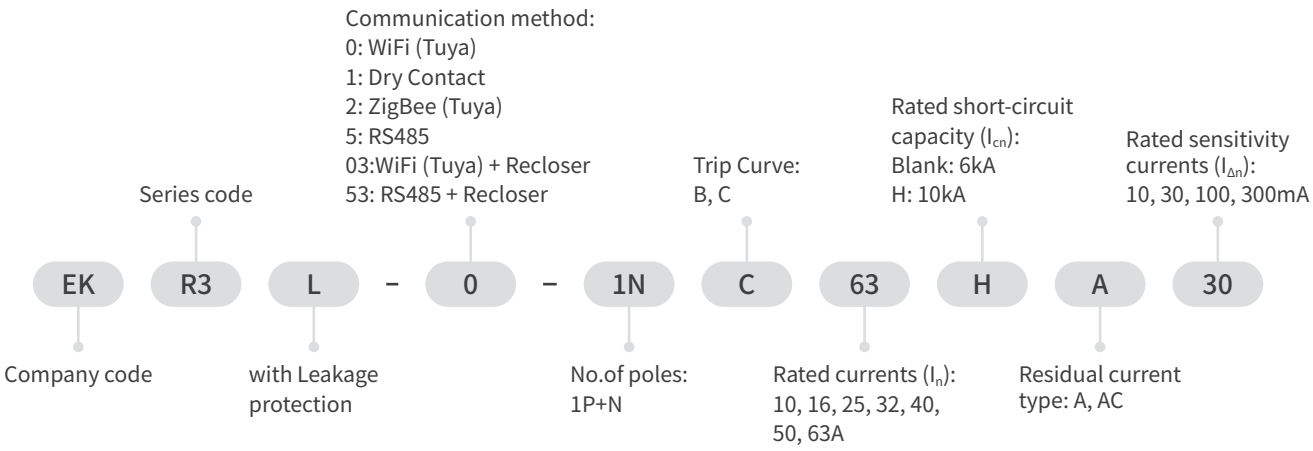
Advanced Functions
- Remote opening and closing control
- Timing tasks (power on/off scheduling)
- Real-time switch status monitoring
- Optional built-in automatic reclosing function

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.

Benefits
- Reduces manual maintenance costs
- Improves efficiency through remote control and monitoring
- Enhances circuit power supply reliability with automatic reclosing
- Integrates with smart home systems for improved automation

Instruction of Type Code



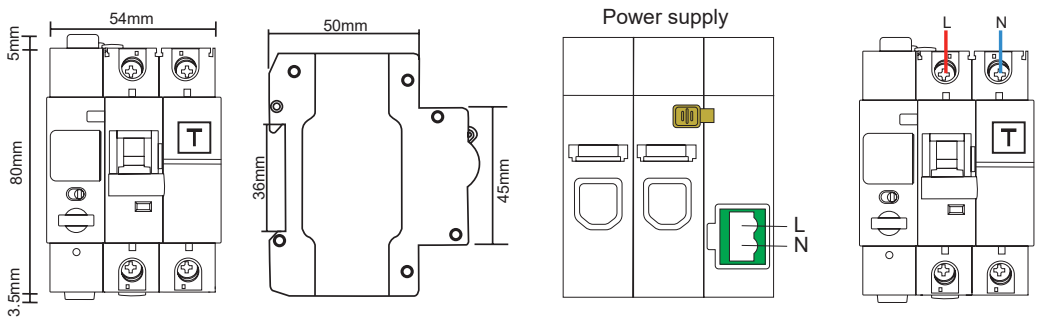
Technical Parameter

Residual current type	A, AC
No.of poles	1P+N (with switched neutral)
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
Rated voltage (U_e)	230/ 240V
Rated frequency	50/60Hz
Rated currents (I_n)	10, 16, 25, 32, 40, 50, 63A
Rated sensitivity currents ($I_{\Delta n}$)	10,30,100,300mA
Rated current off-time under ($I_{\Delta n}$)	⩽ 0.1S

EKR3L Series
Smart RCBO

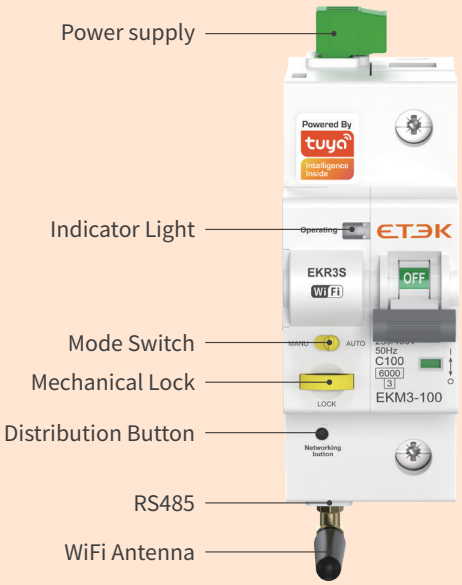
Reted residual making and breaking capacity ($I_{\Delta m}$)		500A ($I_n \leqslant$ 50A), 10I_n (I_n>50A)	
Rated short-circuit capacity (I_{cn})		6kA, 10kA	
Energy limiting class		3	
Rated impulse withstand voltage (U_{imp}) (1.2/50μs)		4kV	
Dielectric test voltage		2kV (50/60Hz, 1 min.)	
Trip curve		B: (3-5) x I_n, C: (5-10) x I_n	
Trip time		< 0.2s	
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, Switch state, Device operating status	
Function description		Overload protection, Short circuit protection, Leakage protection, Multiple timing, Remote control, Auto reclose	
Auto Reclose	Reclosing times	3 times (WiFi-Tuya)	5 times (RS485)
	Reclosing time	First time: 10 seconds; Second time: 60 seconds; Third time: 300 seconds;	First time: 60 seconds; Second time: 90 seconds; The third time: 1800 seconds; Fourth time: 2700 seconds; Fifth time: 3600 seconds;
	Reset reclosing time	No more tripping or manual reset within 15 minutes after successful closing.	No tripping or manual reset within 60 seconds after successful closing, Adjustable time setting range: 5-600 seconds.
Protection degree		IP20	
Ambient temperature		-20°C to +55°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/Fork-type busbar	
Max. conductor cross-sections for cable		25mm^2	
Altitude		$\leqslant$ 2000m	
Installation		Mounting on 35mm DIN rail	
Incoming method		From top	

Dimensions and Wiring Diagram



EKR3S Series
Smart MCB

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.

EKR3S Series
Smart MCB

Features

Traditional Protection
- Overload protection
- Short-circuit protection

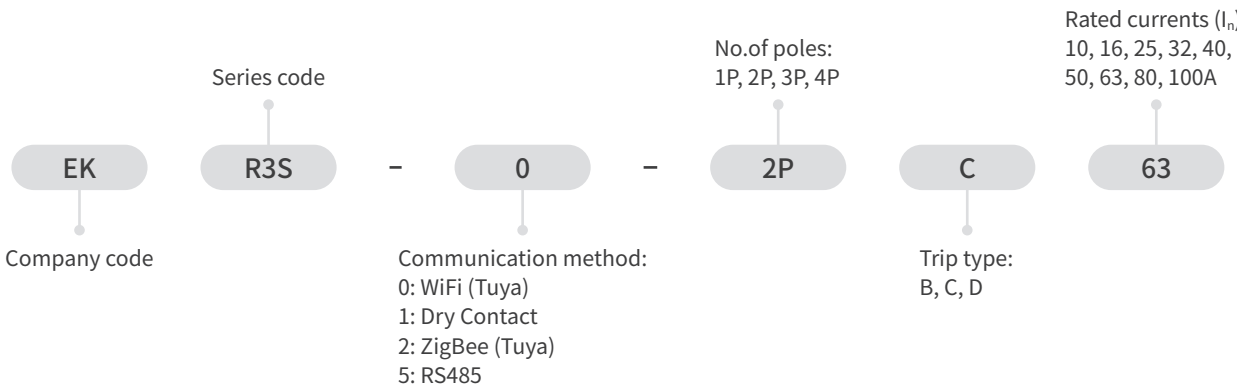
Smart Capabilities
- Remote control through Tuya APP or RS485 platform
- Wi-Fi, ZigBee, RS485, or Dry contact communication options
- Supported Apps: Tuya, Smart Life

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

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

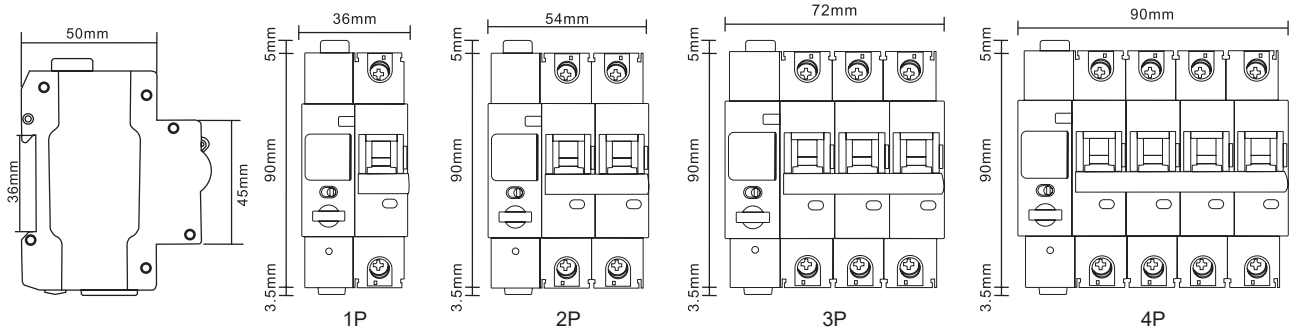


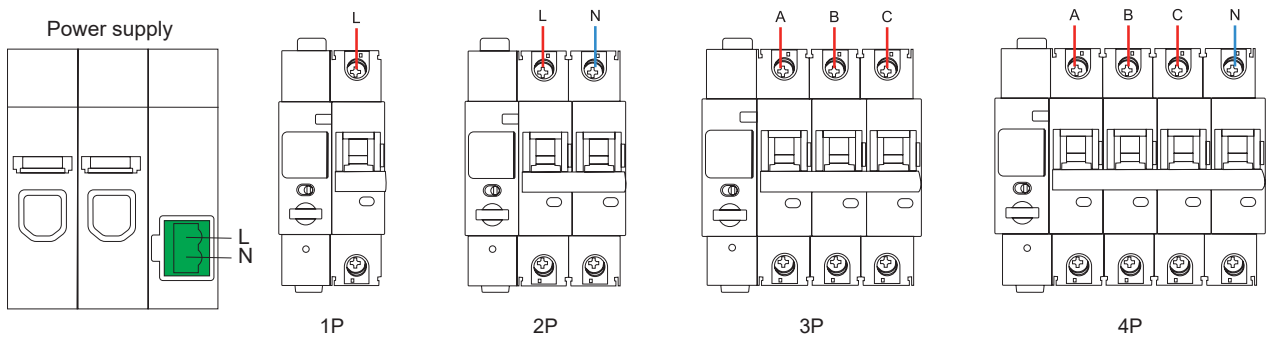
Technical Parameter

Standard	IEC/EN 60898-1, IEC/EN 60947-2
No.of 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
Rated voltage (U_e)	230/ 240V (1P, 2P), 380/400V(3P, 4P)
Rated frequency	50/60Hz
Rated currents (I_n)	10, 16, 25, 32, 40, 50, 63, 80, 100A
Rated short-circuit capacity (I_{cn})	6kA
Rated impulse withstand voltage (U_{imp}) (1.2/50μs)	4kV
Dielectric test voltage	2kV (50/60Hz, 1 min.)
Trip curve	B: (3-5) x I_n, C: (5-10) x I_n, D: (10-20) x I_n

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
Installation	Mounting on 35mm DIN rail
Incoming method	From top

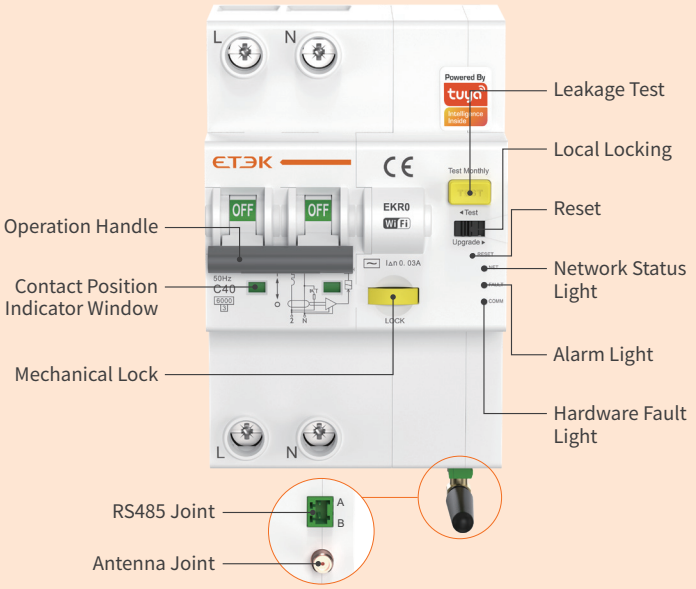
Dimensions and Wiring Diagram





EKR0 Series
Smart RCBO

Overview



EKR0 Smart RCBO combines the functions of traditional circuit breakers with modern electronic technology to provide overload, short circuit, and leakage protection for circuits rated at 63A. It also supports remote control through the Tuya App or RS485 communication platform, allowing monitoring and adjustment of various electrical parameters. The EKR0 Smart RCBO has been widely used in smart building power management, industrial power monitoring, and energy efficiency optimization.

Features

Traditional Protection

- Overload protection
- Short-circuit protection
- Leakage protection (residual current)

Smart Capabilities

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

Advanced Functions

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

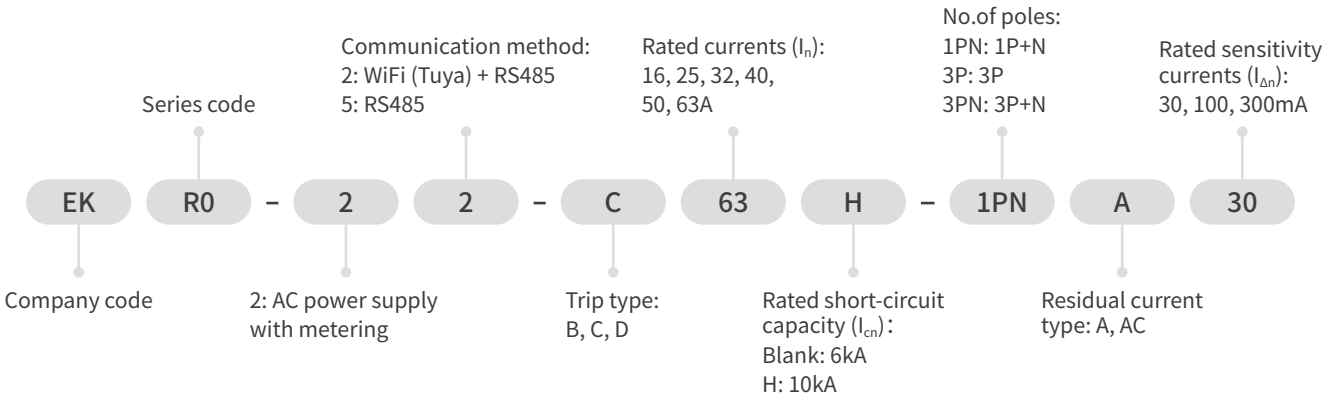
Automatic, Manual Mode

- 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

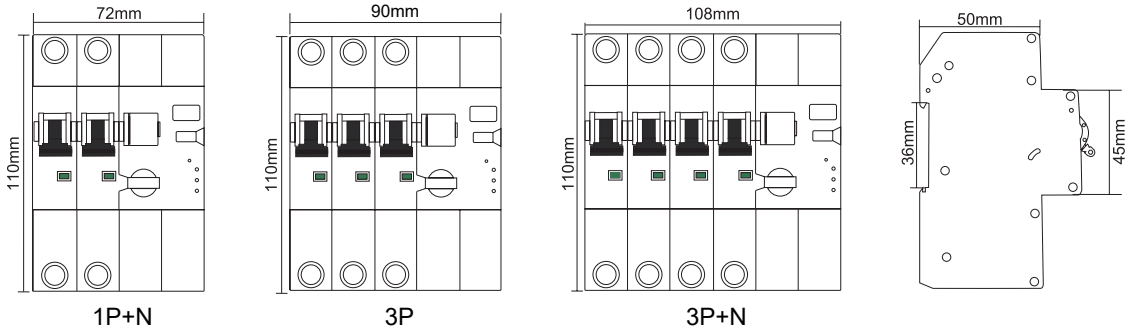


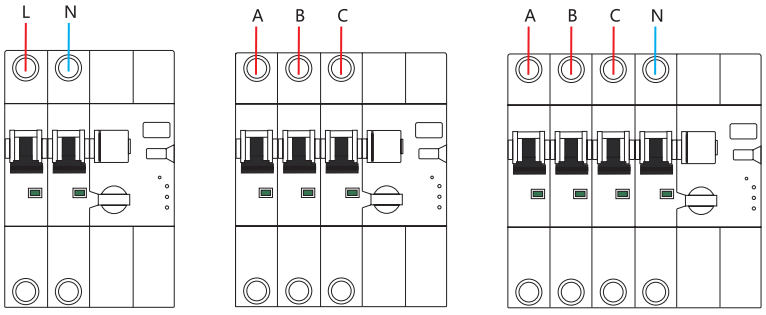
Technical Parameter

Standard	IEC/EN 61009-1
Residual current type	A, AC
No.of poles	1P+N, 3P, 3P+N (with switched neutral)
Standby power consumption	< 5W
Status indicator	LED
Rated voltage (U_e)	230/ 240V (1P+N), 400/415V (3P,3P+N)
Rated frequency	50/60Hz
Rated currents (I_n)	16, 25, 32, 40, 50, 63A
Rated sensitivity currents ($I_{\Delta n}$)	10,30,100,300mA
Residual current off-time under ($I_{\Delta n}$)	⩽ 0.1S
Reted residual making and breaking capacity ($I_{\Delta m}$)	500A (I_n ⩽ 50A), 10I_n (I_n>50A)
Rated short-circuit capacity (I_{cn})	6kA, 10kA
Energy limiting class	3
Rated impulse withstand voltage (U_{imp}) (1.2/50μs)	4kV
Dielectric test voltage	2kV (50/60Hz, 1 min.)
Trip curve	B: (3-5) x I_n, C: (5-10) x I_n, D: (10-20) x I_n
Trip time	⩽ 0.1S
Electrical life	4000 Cycles
Mechanical life	10000 Cycles
Communication method	WiFi (Tuya), 2.4GHz; 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, Leakage 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	-25°C to +55°C (Current capacity is significantly reduced at 70°C)
Storage temperature	-25°C to +70°C
Terminal connection type	Cable/Pin-type busbar/Fork-type busbar
Max. conductor cross-sections for cable	25mm^2
Altitude	⩽ 2000m
Installation	Mounting on 35mm DIN rail
Incoming method	From top

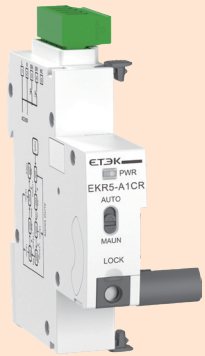
Dimensions and Wiring Diagram



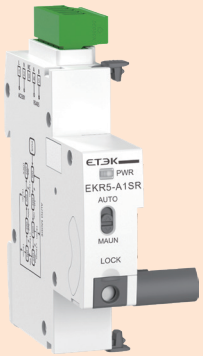


EKR5 Series

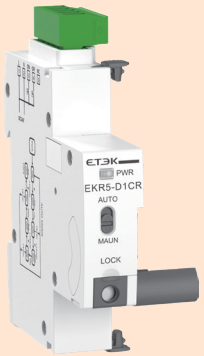
Recloser for RCCB



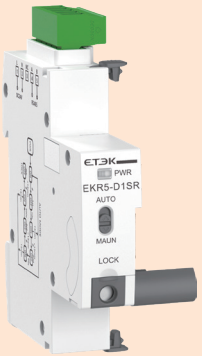
EKR5-A1CR



EKR5-A1SR

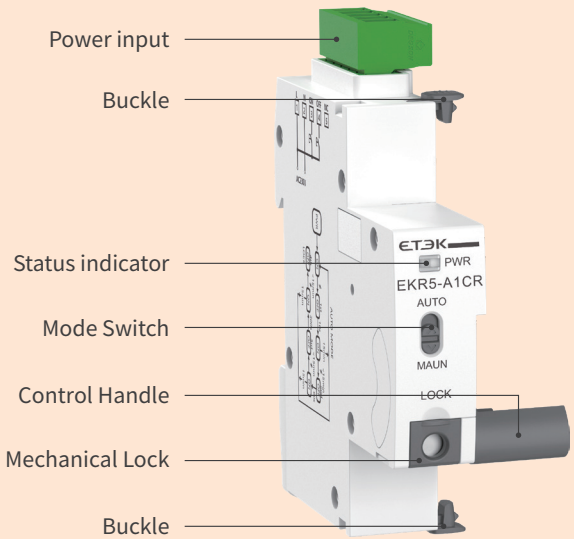


EKR5-D1CR



EKR5-D1SR

Overview



EKR5 Series Recloser is a reclosing device compatible with switch control and RS485 remote control, designed for use with RCCBs.

It features an automatic reclosing function that attempts to restart up to three times. If a line protection device trips due to manual opening, short circuit, leakage, or overload, the EKR5 will automatically attempt to restore power, enhancing the reliability of the power supply system.

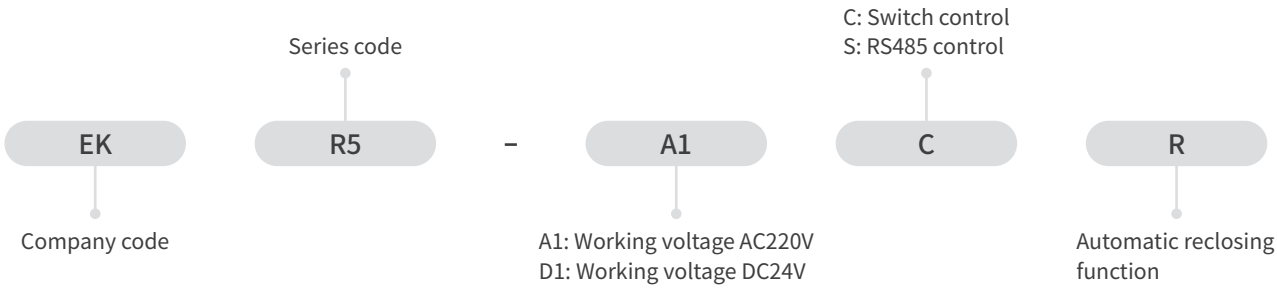
This device is extensively used in areas such as home smart power distribution and photovoltaic equipment, making it a practical and widely adopted solution for reclosing needs.

Features

- Can be used with ETEK's RCCBs.
- Supports switch control or RS485 control of RCCB, remote closing and opening.
- Type R has automatic reclosing function (3 times).
- Includes manual/automatic selector switch.
- The working status is indicated by an LED.
- The operating mechanism is only 18mm wide.
- A padlock can be used to secure the circuit breaker in the open position, ensuring safe operation on site.

EKR5 Series
Recloser for RCCB

Instruction of Type code

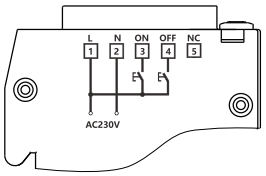


Technical Parameter

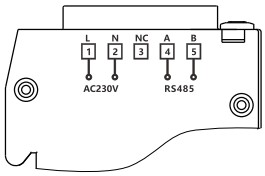
Basics Model				
Ref No.	EKR5-A1C	EKR5-D1C	EKR5-A1S	EKR5-D1S
Control mode	Switching input control		RS485 control (MODBUS-RTU)	
Power terminals	A1-A2			
Power supply voltage	AC230V±10%	DC24V±10%	AC230V±10%	DC24V±10%
Power consumption	AC max.1VA(standby) max.20VA(operation)	DC max.1VA(standby) max.20VA(operation)	AC max.1VA(standby) max.20VA(operation)	DC max.1VA(standby) max.20VA(operation)
Frequency range	50Hz-60Hz			
Supply indication	Red and green LEDs			
Action time	⩽ 1s			
Electrical life	4000 Cycles			
Mechanical life	10000 Cycles			
Operating ambient temperature	-20°C to+55°C			
Storage temperature	-35°C to+75°C			
Installation	Mounting on 35mm DIN rail			
Protection degree	IP20			
Overvoltage cathegory	III			
Pollution degree	2			
Max. Supply terminal size for cable	2.5mm²			
Dimensions	84×18×78mm			
Matching products	EKL6-100, EKL6-100B, EKL6-63EV			

Built-in automatic recloser				
Ref No.	EKR5-A1CR	EKR5-D1CR	EKR5-A1SR	EKR5-D1SR
Control mode	Switching input control + automatic reclosing		RS485 control (MODBUS-RTU) + automatic reclosing	
Power terminals	A1-A2			
Power supply voltage	AC230V±10%	DC24V±10%	AC230V±10%	DC24V±10%
Power consumption	AC max.1VA(standby) max.20VA(operation)	DC max.1VA(standby) max.20VA(operation)	AC max.1VA(standby) max.20VA(operation)	DC max.1VA(standby) max.20VA(operation)
Frequency range	50Hz-60Hz			
Supply indication	Red and green LEDs			
Action time	⩽ 1s			
Auto reclosing times	3			
Auto reclosing interval time	10S - 60S - 300S			
Reset the closing times	No trip or manual reset within 15 minutes after the successful closing			
Electrical life	4000 Cycles			
Mechanical life	10000 Cycles			
Operating ambient temperature	-20°C to+55°C			
Storage temperature	-35°C to+75°C			
Installation	Mounting on 35mm DIN rail			
Protection degree	IP20			
Overvoltage cathegory	III			
Pollution degree	2			
Max. Supply terminal size for cable	2.5mm²			
Dimensions	84×18×78mm			
Matching products	EKL6-100, EKL6-100B, EKL6-63EV			

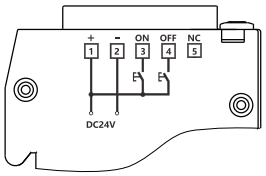
Wiring diagram



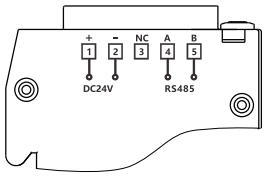
EKR5-A1C
EKR5-A1CR



EKR5-A1S
EKR5-A1SR



EKR5-D1C
EKR5-D1CR



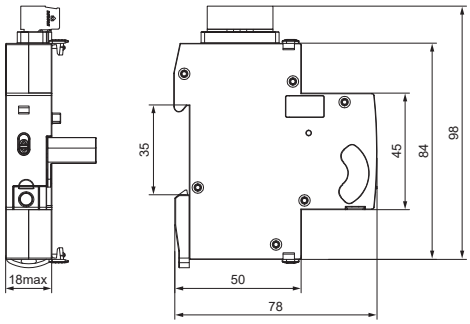
EKR5-D1S
EKR5-D1SR

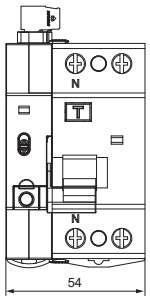
EKR5 Series
Recloser for RCCB

Adapt to the Main Parameters of RCCB

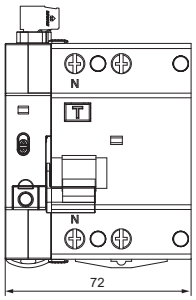
			
RCCB Ref No.	EKL6-100	EKL6-100B	EKL6-63EV
Standard	IEC/EN61008-1	IEC61008-1, IEC62423	IEC61008-1, IEC62955
Type of trip	Electro-magnetic		
Residual current type	AC, A, A-G / A-SI, A-S	B	A+DC 6mA
No.of poles	2P(1P+N), 4P(3P+N), N Pole on left		
Rated voltage (U_e)	1P+N: 230/240V~, 3P+N: 400/415V~		
Rated currents (I_n)	16,25,32,40,63,80,100A		16,25,32,40,63A
Rated sensitivity currents ($I_{\Delta n}$)	10,30,100,300mA (10mA only for I_n=16-25A)	30,100,300mA	30mA DC trip threshold($I_{\Delta dc}$)=6mA
Rated conditional short-circuit current (I_{nc})	EKL6-100: 6kA EKL6-100H: 10kA	10kA	10kA
Electrical life	2,000 Cycles		
Mechanical life	4,000 Cycles		
Ambient temperature	-25°C to +40°C		-25°C to +55°C
Ground fault indicator	Yes		
Protection degree	IP20		
Terminal connection type	Cable/Pin-type busbar/Fork-type busbar		
Max.terminal size for cable	35mm^2		
Max.tightening torque	2.5N.m		
Installation	Mounting on 35mm DIN rail		
Incoming method	From top and bottom		

Dimension (mm)

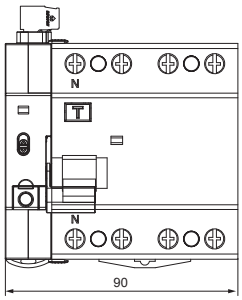




EKR5 + EKL6-100 2P
EKR5 + EKL6-100B 2P



EKR5 + EKL6-100B 2P
EKR5 + EKL6-63EV 2P



EKR5 + EKL6-100 4P
EKR5 + EKL6-100B 4P
EKR5 + EKL6-63EV 4P

EKA1 Series
Smart Relay Switch


EKA1-TW


EKA1-R-E2S


EKA1-R-V2

Overview

EKA1 Series Smart Protection Switch combines multiple circuit protection functions, including over-voltage, under-voltage, and over-current. It is designed for current working environments up to 63A and is available in two versions: one with Wi-Fi communication and one without. The Wi-Fi version allows for remote control of the switch status via smartphone and enables real-time monitoring of electrical parameters such as voltage, current, and power using the Tuya app. Users can also set the thresholds of the main electrical parameters through the front panel of the device or the smartphone app.

EKA1 Series Smart Switch is widely used in both home and industrial settings due to its easy installation and user-friendly operation and can be wired to any existing DB or distribution board.

Features

- **Integrated Protection:** Combines over-voltage, under-voltage, and over-current protection in one device.
- **High Current Capacity:** Suitable for environments with working currents up to 63A.
- **Remote Control:** Wi-Fi-enabled model allows for remote on/off control via smartphone.
- **Real-time Monitoring:** Uses the Tuya app to monitor voltage, current, and power in real-time.
- **Adjustable Parameters:** Thresholds for main electrical parameters can be set via the device's front panel or smartphone app.
- **Metering Function:** Provides accurate measurement of electrical parameters.
- **Timing Control:** Improve energy management efficiency, enhance power safety.

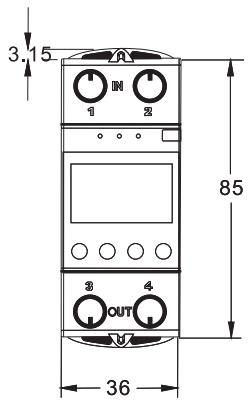
Technical Parameter

Standard		IEC 60947-5-1			
Model		EKA1-TW-E3	EKA1-TW-E2S	EKA1-R-E2S	EKA1-R-V2
Function	Overvoltage protection	✓	✓	✓	✓
	Undervoltage protection	✓	✓	✓	✓
	Overcurrent protection	✓	✓	✓	×
	Metering function	✓	✓	✓	×
	Screen off	No operation for 60 seconds	×	×	×
Display type		LCD	Double digital tube	Double digital tube	Single Digital tube

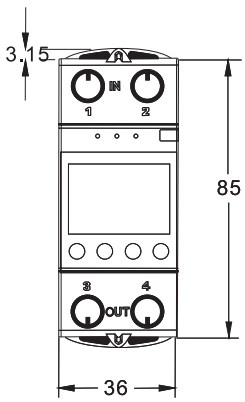
EKA1 Series
Smart Relay Switch

Display data	Real-time voltage	✓	✓	✓	✓
	Real-time current	✓	✓	✓	×
	Real-time power	✓	✓	✓	×
	Switch state	✓	×	×	×
	Network status	✓	✓	×	×
Power button		Yes			
Power status indicator		Yes			
Network button		Up button (short press for 3 seconds)		×	×
Communication method		Wi-Fi (Tuya)		Local operation	
Control type		Remote, Manual		Manual	
Poles		1P+N, N pole on the left			
Standby power consumption		⩽ 1.5W			
Operating voltage range		90V~265V			
Rated frequency		50/60Hz			
Rated operating current		1-63A			
Voltage and current measuring accuracy		Class 1.0			Class 2.0
Energy measurement accuracy		Class 2.0			Class 2.0
Protection degree		IP20			
Ambient temperature		-25°C to +70°C , Max. 95% humidity			
Terminal block protection		Lead seal			
Setpoint	Over-voltage range	230V~300V (default:280V)			
	Over-voltage recovery range	225V~295V (default:275V)			
	Over-voltage tripping time	5s~600s (default:60s)			
	Over-voltage recovery delay time	5s~600s (default:60s)			
	Under-voltage range	100V~210V (default:115V)			
	Under-voltage recovery range	100V~215V (default:120V)			
	Under-voltage tripping time	5s~600s (default:60s)			
	Under-voltage recovery delay time	5s~600s (default:60s)			
	Over-current adjustable range	1A-63A (default:63A)			×
	Over-current tripping time	5s~600s (default:60s)			×
	Over-current recovery delay time	5s~600s (default:60s)			×

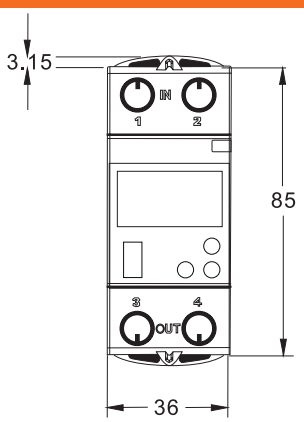
Dimension (mm)



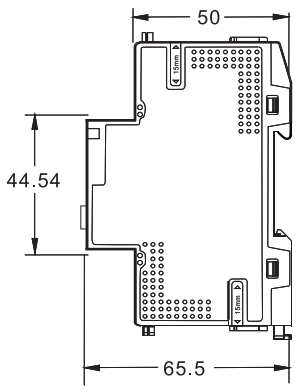
EKA1-TW-E3



EKA1-R-E2S
EKA1-TW-E2S



EKA1-R-V2



EKA3 Series
Smart Relay Switch

Overview

EKA3 Series Smart Protection Switch integrates multiple circuit protection functions such as over-voltage, under-voltage, over-current, etc., and is equipped with a timing function, designed for current working environments up to 63A. Users can remotely control the switch status, monitor electrical parameters such as voltage, current, power in real time, and set corresponding protection thresholds.

EKA3 is easy to install and operate and is widely used in homes and industrial places.

Features

- **Integrated Protection:** Combines over-voltage, under-voltage, and over-current protection in one device.
- **High Current Capacity:** Suitable for environments with working currents up to 63A.
- **Remote Control:** Allows remote on/off control via the Tuya app or RS485 platform.
- **Real-time Monitoring:** Uses the Tuya app or RS485 platform to monitor voltage, current, and power in real-time.
- **Adjustable Parameters:** Thresholds for main electrical parameters can be set Tuya app or RS485 platform.
- **Metering Function:** Provides accurate measurement of electrical parameters.
- **Timing Control:** Improve energy management efficiency, enhance power safety.

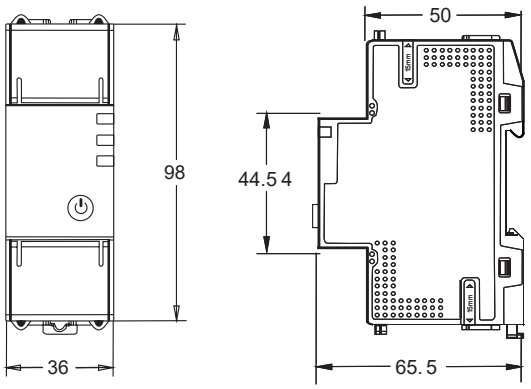
Technical Parameter

Standard		IEC 60947-5-1	
Model		EKA3-TW	EKA3-M
Function	Overvoltage protection	✓	✓
	Undervoltage protection	✓	✓
	Overcurrent protection	✓	✓
	Metering function	✓	✓
Power status indicator		Yes	
Network status indicator		Yes	
Working Status Indicator		Yes	
Power button	two-in-one button	Yes	
Network button		Yes	

EKA3 Series
Smart Relay Switch

Communication method		Wi-Fi (Tuya)	RS485
Control type		Remote, Manual	
Poles		1P+N, N Pole on the left	
Standby power consumption		⩽ 1.5W	
Operating voltage range		90V~265V	
Rated frequency		50/60Hz	
Rated operating current		1-63A	
Voltage and current measuring accuracy		Class 1.0	
Energy measurement accuracy		Class 2.0	
Protection degree		IP20	
Ambient temperature		-20°C to +70°C , Max. 95% humidity	
Terminal block protection		Integrated cover	
Setpoint	Over-voltage range	230V~265V (default:265V)	230V~300V (default:280V)
	Over-voltage recovery range	Automatic adjustment according to overvoltage protection value -5V	225V~295V (default:275V)
	Over-voltage tripping time	-	5s~600s (default:60s)
	Over-voltage recovery delay time	-	5s~600s (default:60s)
	Under-voltage range	140V~210V (default:160V)	100V~210V (default:115V)
	Under-voltage recovery range	Automatic adjustment according to overvoltage protection value +5V	100V~215V (default:120V)
	Under-voltage tripping time	-	5s~600s (default:60s)
	Under-voltage recovery delay time	-	5s~600s (default:60s)
	Over-current adjustable range	1A-63A (default:63A)	1A-63A (default:63A)
	Over-current tripping time	-	5s~600s (default:5s)

Dimension (mm)



EKA5 Series

Smart Relay Switch with Metering

Overview

EKA5 is an 18mm width DIN rail mount smart switch that provides convenient and intelligent control of your appliances, protecting circuits with an operating current of up to 40A. Connect it to your home Wi-Fi network and control it remotely via the Tuya App. Integrated energy metering allows you to track power consumption, optimize energy usage, and save money on electricity bills.

EKA5 Multi-function Switch is ideal for a variety of applications, including home automation, industrial control, and energy management.

Features

- **Remote Control:** Manage your switch from anywhere using the Tuya or Smart Life app.
- **Timing Functions:** Set schedules, countdowns, and cycle timings for automated control.
- **Energy Metering:** Monitor power consumption statistics in real-time.
- **Adjustable Current Rating:** Customizable from 1A to 40A via the app.
- **Multiple Protection Features:** Includes over-current, under-voltage, and over/under-voltage protection.
- **Wide Voltage Range:** Operates from AC 90V to 265V.
- **Easy Installation:** Standard DIN rail mounting for quick setup.

Technical Parameter

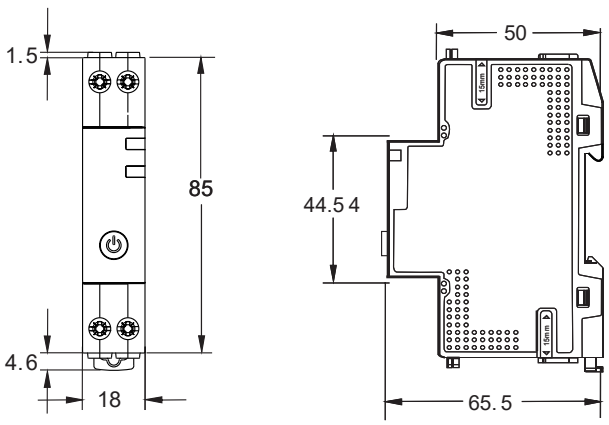
Standard		IEC 60947-5-1
Model		EKA5-TW
Function	Overvoltage protection	✓
	Undervoltage protection	✓
	Overcurrent protection	✓
	Metering function	✓
Network status indicator		Yes
Working Status Indicator		Yes
Power button	two-in-one button	Yes
Network button		Yes

EKA5 Series

Smart Relay Switch with Metering

Communication method		Wi-Fi (Tuya)
Control type		Remote, Manual
Poles		1P+N, N Pole on the left
Standby power consumption		⩽ 1.5W
Operating voltage range		90V~265V
Rated frequency		50/60Hz
Rated operating current		1-40A
Voltage and current measuring accuracy		Class 1.0
Energy measurement accuracy		Class 2.0
Protection degree		IP20
Ambient temperature		-20°C to +70°C , Max. 95% humidity
Connection		From top
Setpoint	Over-voltage range	230V~265V (default:265V)
	Over-voltage recovery range	Automatic adjustment according to overvoltage protection value -5V
	Under-voltage range	140V~210V (default:160V)
	Under-voltage recovery range	Automatic adjustment according to overvoltage protection value +5V
	Over-current adjustable range	1A-40A (default:40A)

Dimension (mm)



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