ETEK®

ETEK ELECTRIC

RESIDUAL CURRENT CIRCUIT BREAKER

EKL6-100B

No.288th. Wei 17 Road, Economic Development Zone, Yueqing City Zhejiang China.
Tel: 0086-577-62718777 Fax: 0086-577-62774090
Email: sales@etek-china.com

Thank you for choosing EK Series Residual Current Circuit Breakers. Please read this manual before installation, operation and maintenance.

OVERVIEW

Residual Current Circuit Breaker is a switch that must be used against electrical shocks occurring in the respective grid and endangering human lives or against fires resulting from the mistakes in isolation. Residual Current Circuit Breaker is produced in the following two types with its fully "electromechanical" operating principle:

- Life Protection (30 mA)
- Fire Protection (300 mA)

STANDARD AND QUALITY CERTIFICATES

IEC/EN61008-1 IEC/EN62423

CE CB RoHS

Technical data

Electrical characteristics	
Standard	IEC/EN61008-1,IEC/EN62423
Type	B
Poles	2P(1P+N),4P(3P+N)
Rated current(A)	16,25,32,40,63,80,100
Rated residual operating current I△n (mA)	30,100,300
Rated frequency	50/60Hz
Insulation voltage (Ui)	230/240V~ (2P) 400/415V~ (4P)
Rated impulse withstand voltage (Uimp)	4 kV

Making and breaking capacity (Im/IΔm)	25/40 A	500 A
	63/100A	10In
Conditional rated short circuit current (Inc/IΔc)		10,000 A
Degree of protection	Device only	IP20 IP40 with screw shield
	Device in modular enclosure	IP40 Insulation classe II
Endurance (O-C)	Electrical	> 2 000 cycles
	Mechanical	> 5 000 cycles
Operating temperature		-25°C to +40°C

If you need to add DC6mA features, please inform us when ordering

This type of RCCB is also the protective device for 6 mA DC.

* The relevant tests about character of 6 mA DC were done according to IEC 62955:2018.
* The rating 6mA DC is only for In:16A to 63A, **I△n 30mA.**

Tripping Current Range

Lagging Angle	I△n>0.01A	I△n≤0.01A
0°	0.35I△n≤I△≤1.4I△n	0.35I△n≤I△≤2I△n
90°	0.25I△n≤I△≤1.4I△n	0.25I△n≤I△≤2I△n
135°	0.11I△n≤I△≤1.4I△n	0.11I△n≤I△≤2I△n

Detectable wave form

B class
Tripping is ensured for sinusoidal AC residual currents pulsed DC residual currents,alternating residual sinusoidal currents up to 1000Hz,pulsating direct residual currents and for smooth direct residual currents,whether applied suddenly or increasing slowly.

Surge current proof

RCCB' s surge capacity.
Not tripping at standardized 8/20us surge-current waves acc.to VDE 0432 Part 2 with surge current values of up to 250A.

Pulsating direct current sensitive

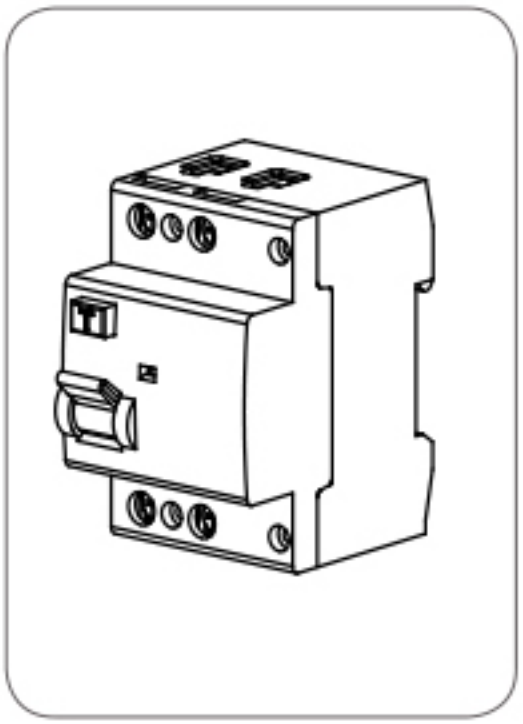
They react to AC and pulsating DC fault current which reach 0 or almost 0 within one time period of the mains frequency.

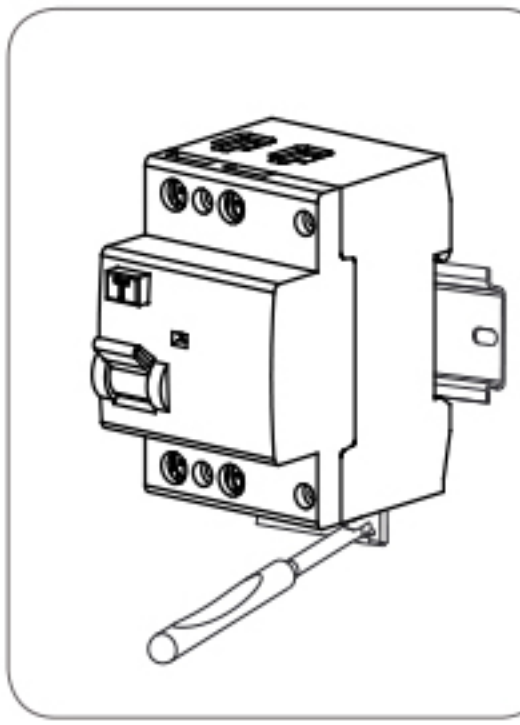
PRODUCT ASSEMBLY

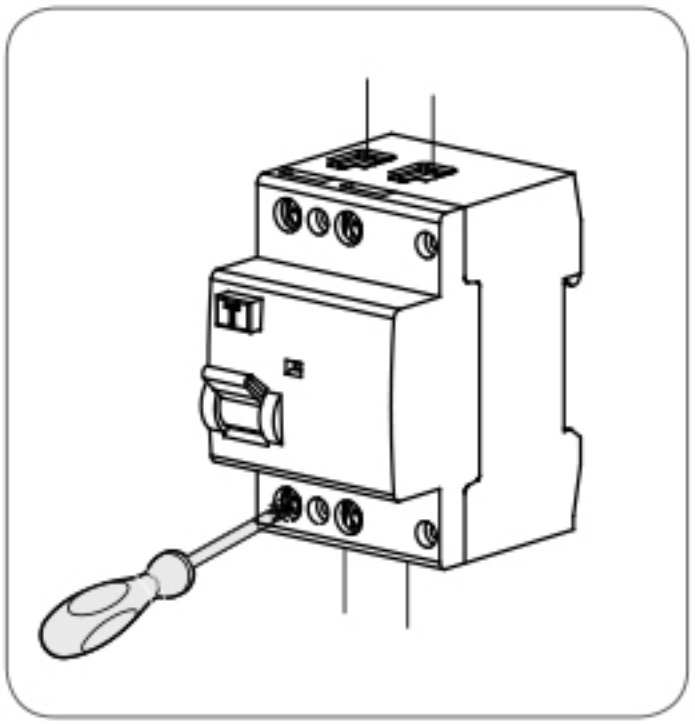
- Product calibrating and programming are performed during manufacturing and each product is offered to sales after a through quality control. There are no maintenance or programming tasks that the users can perform.

⚠ WARNING

- Ensure that the power is cut off before the assembly of the products.
- Connection and assembly of the electrical devices should be carried out only by the technical personnel having certificate of competency.





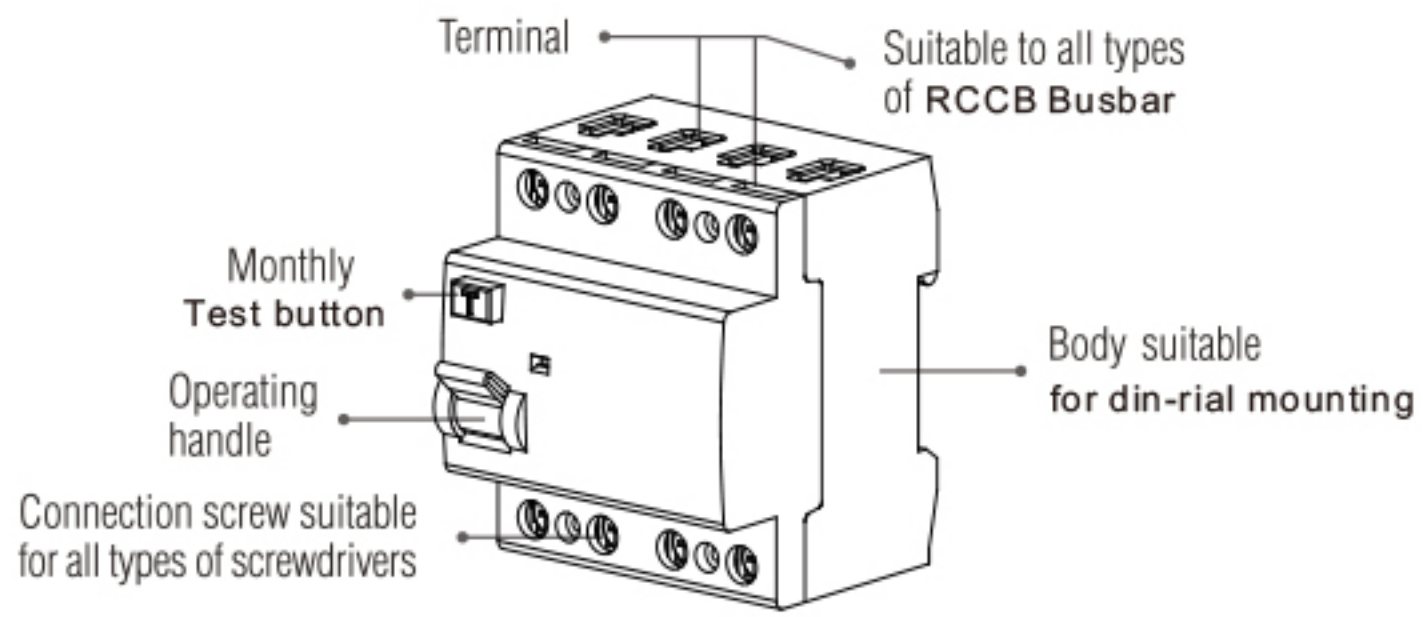


Cable sections	: 13mm
Momentum power for electrical terminal connection	: 2.5Nm max.
Tools required for product assembly (Allen key, screwdriver etc.)	: 5.3-6.0 (including 6.0)
Suitable panel and rail for product assembly	: 35mm Din rail

THINGS TO CONSIDER DURING RESIDUAL CURRENT CIRCUIT BREAKER ASSEMBLY

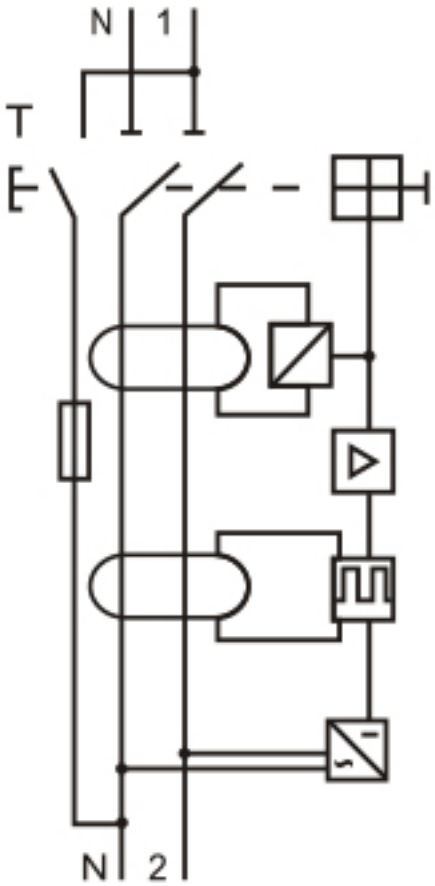
- The nominal currents of the Residual Current Circuit Breaker should be at values in line with the size of the protected grid.
- The installation should be grounded.
- In two-pole Residual Current Circuit Breaker, one phase and one neutral, and in four-pole Residual Current Circuit Breaker, one phase wire and one neutral wire,three phase wire +one neutral wire should be connected.
- To test Residual Current Circuit Breaker, “Test Monthly” button should be pressed. This test should be repeated once a month. Phase and neutral should never be bypassed to test Residual Current Circuit Breaker.
- Grounding resistance should be maximum 2160 ohm for 30 mA Residual Current Circuit Breaker and 216 ohm for 300 mA Residual Current Circuit Breaker.

PRODUCT FUNCTIONS

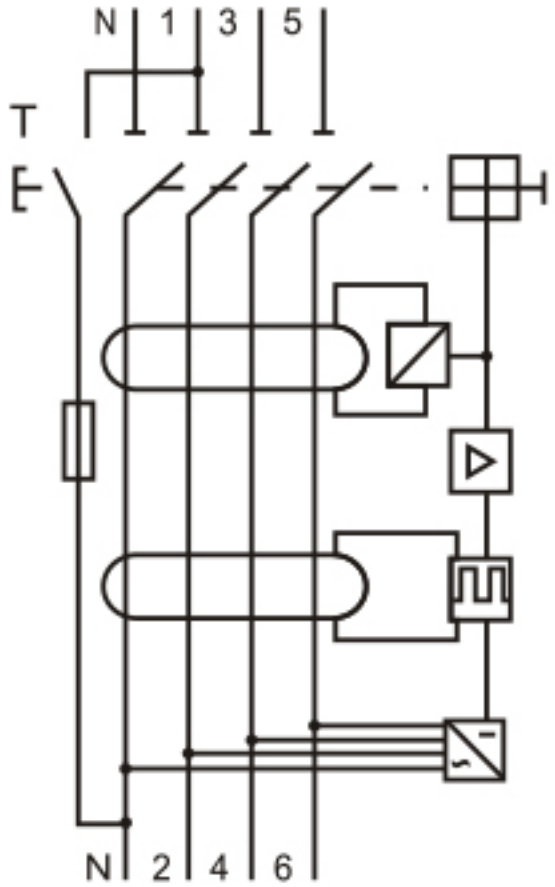


IEC/EN61008-1
IEC/EN62423

Type B (2P)

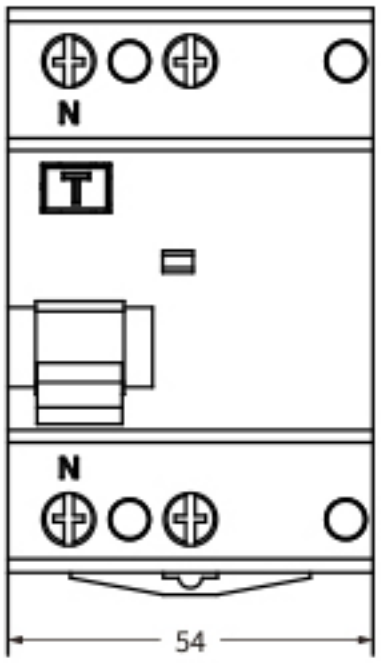


Type B (4P)



Overall and Installation Dimension(mm)

2 Pole



4 Pole