

# **Bedienungsanleitung**

**FI/RCD**

**Fehlerstromschutzschalter  
(RCCB)**

**EKL6-100**

Thank you for choosing Marko Elektrotech  
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






### Technical Data

Electrical characteristics		
Standard		IEC/EN61008-1
Type		AC, A, S
Poles		2P(1P+N), 4P(3P+N)
Rated current(A)		16,25,32,40,63,80,100
Rated residual operating current I $\Delta$ 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/I $\Delta$ m)	25/40 A 63/100A	500 A 10In
Conditional rated short circuit current (Inc/I $\Delta$ c)		6000, 10000A
Degree of protection	Device only Device in modular enclosure	IP20 IP40 with screw shield IP40 Insulation classe II
Endurance (O-C)	Electrical Mechanical	> 2 000 cycles > 5 000 cycles
Operating temperature		-25°C to +40°C

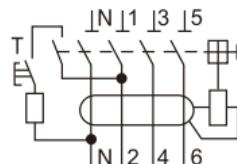
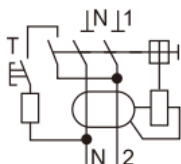
## Tripping Current Range

Lagging Angle	$I_{\Delta n} > 0.01A$	$I_{\Delta n} \leq 0.01A$
0°	$0.35I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.35I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$
90°	$0.25I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.25I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$
135°	$0.11I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.11I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$

Alternative Current Sensitive	Pulsating direct current sensitive	Surge current proof
 They react to AC current which, whether suddenly applied or slowly arising.	 They react to AC and pulsating DC fault current which reach 0 or almost 0 within one time period of the mains frequency.	 RCCB's surge capacity. Not tripping at standardized 8/20 us surge-current waves acc. to VDE 0432 Part 2 with surge current values of up to 250A.

## Circuit Diagramm

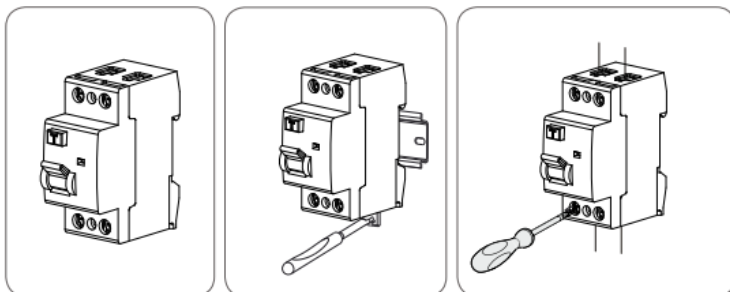


## Product Assembly

- 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.

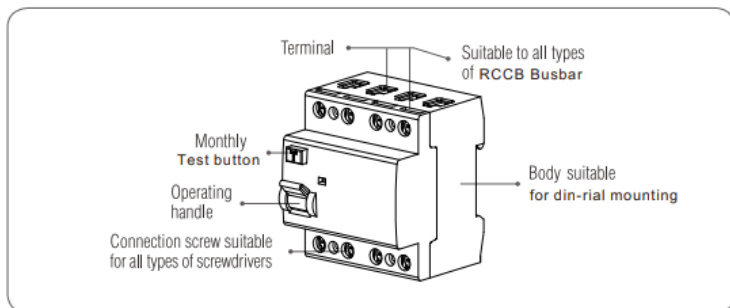


Cable sections	: 13mm
Momentum power for electrical terminal connection	: 2.5Nm max.
Tools required for product assembly (Allen key, screwdriver etc.)	: 5,3-6,0 (including 6.0)
Suitable panel and rail for product assembly	: 35mm Din rail

## Things To Consider During RCCB 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



## Overall and installation dimensions (mm)

