

Usage Manual



RCBO EKL9-40 With Arc Fault Protective

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Thank you for choosing EK Series RCCB with Overcurrent Protection. Please read this manual before installation, operation and maintenance.

STANDARD AND QUALITY CERTIFICATES

IEC/EN61009-1 IEC62026  

Protection

- ① Arc Fault Protection
- ② Overload Protection
- ③ Short-Circuit Protection
- ④ Earth-Leakage Protection

Technical Data

Type	AC,A
Rated current I_n	6,10,16,20,25,32,40A
Poles	1P+N(N pole can be connected and disconnected)
Rated voltage U_e	230V~
Insulation voltage U_i	400V
Rated frequency	50/60Hz
Rated residual operating current ($I_{\Delta n}$)	10,30,100,300mA

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Break time under $I_{\Delta n}$	$\leq 0.1s$
Rated short-circuit capacity I_{cn}	6,000A
Energy limiting class	3
Rated impulse withstand voltage (1.5/50) U_{imp}	4,000V
Dielectric test voltage at ind.Freq. for 1min	2kV
Pollution degree	2
Instantaneous tripping current	B,C
Electrical life	2,000 Cycles
Mechanical life	4,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Reference temperature for setting of thermal element	30°C
Ambient temperature (with daily average $\leq 35^\circ C$)	$-5^\circ C \sim +40^\circ C$
Storage temperature	$-25^\circ C \sim +70^\circ C$
Terminal connection type	Cable/Pin-type busbar
Terminal size top/bottom for cable	25mm ² 18-3AWG
Tightening torque	2.5Nm 22In-lbs

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Mounting	On DIN rail EN60715(35mm) by means of fast clip device
Connection	Power supply from button

Characteristics

Type	Tripping current I_{Δ}/A		
AC	$0.5I_{\Delta n} < I_{\Delta} < I_{\Delta n}$		
A	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°	$0.11I_{\Delta n} \leq I_{\Delta} \leq 1.4I_{\Delta n}$	$0.11I_{\Delta n} \leq I_{\Delta} \leq 2I_{\Delta n}$

CHARACTERISTICS CURVES

IEC/EN61009-1				30~35°C		
	Thermal Tripping			Magnetic Tripping		
	No tripping current	Tripping current	Time Limits t	Hold current	Trip current	Time Limits t
B Curve	1.13× In	1.45× In	≥1h	3× In	5× In	≥0.1s
			<1h			<0.1s
C Curve	1.13× In	1.45× In	≥1h	5× In	10× In	≥0.1s
			<1h			<0.1s

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Limit of action judgment for small arc current below 63A

Test arc current (effective value)	3A	6A	13A	20A	40A	63A
Max breaking time	1S	0.5S	0.25S	0.15S	0.12S	0.12S
The test arc current is the expected current before ignition occurs in the test circuit						

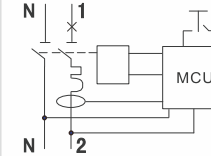
Led indicator instruction

When install the product, need disconnect the superior power supply, and then connect the incoming Line(Line) and outgoing Line(Load), the detailed instruction is as follows:

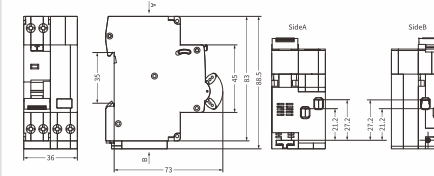
1. Connect the superior power supply, close the handle, and the green indicator light is on, indicating the normal operation of the product;
2. When the handle is closed, switch on the load, press the test button, the product will trip, and the green indicator light will turn off;
3. During normal operation of the load, if the product is tripping, close all the load and closes the handle. If the red LED blinks for 5-6 times and then goes out, judge that the last tripping of the product is caused by the fault arc. If the red indicator light is off, judge that the last tripping of the product is caused by short circuit, overload or leakage.
4. Confirm the arc fault of the lower line, first of all, operate No. 3, then close the handle, connect and run the load before the last tripping, if the red indicator light flashes momentarily, the product tripping, the lower power is disconnected, there is arc fault in the line, please ask a professional electrician to troubleshoot the line fault.
5. Contact the supplier or manufacturer for any abnormal instructions.

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CircuitDiagram



Overalland Installation Dimension(mm)



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