

Usage Manual



RCCB with Overcurrent Protection (RCBO)

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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 CE RoHS

Technical Data

Mode	Electronic
Type	AC, A, S, B
Rated current I _n	6, 8, 10, 13, 16, 20, 25, 32, 40, 50, 63A
Poles	2P(1P+N), 4P(3P+N)
Rated voltage U _e	2P 230/240V~ 4P 400/415V~
Insulation voltage U _i	500V
Rated frequency	50/60Hz
Rated residual operating current(I _{Δn})	10, 30, 100, 300mA
Break time under I _{Δn}	≤0.1s(S type <0.5s)
Rated breaking capacity	6000A, 10000A
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
Thermo-magnetic release characteristic	B, C, D
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Reference temperature for setting of thermal element	30+5°C
Ambient temperature (with daily average ≤35°C)	-25°C ~ +55°C
Storage temperature	-25°C ~ +70°C

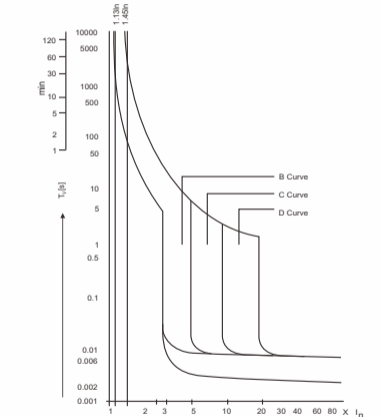
Terminal connection type	Cable/Pin-type busbar/U-type busbar
Terminal size top/bottom for cable	25mm ² 18-3AWG
Terminal size top/bottom for busbar	25mm ² 18-3AWG
Tightening torque	2.5Nm 22In-lbs
Mounting	On DIN rail EN60715(35mm) by means of fast clip device
Connection	From top
Auxiliary contact	OF
Alarm contact	FB
Shunt release	MX

Characteristics

Type	Tripping current I _Δ /A	
AC	0.5I _{Δn} < I _Δ < I _{Δn}	
A, B	Lagging Angle	I _{Δn} > 0.01A
	0°	0.35I _{Δn} ≤ I _Δ ≤ 1.4I _{Δn}
	90°	0.25I _{Δn} ≤ I _Δ ≤ 1.4I _{Δn}
135°	0.11I _{Δn} ≤ I _Δ ≤ 1.4I _{Δn}	

TECHNICAL SPECIFICATIONS (TYPE B)

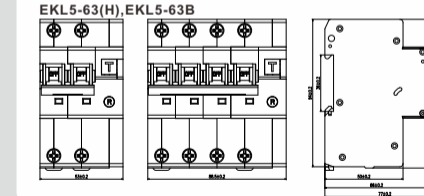
Detectable wave form	Pulsating direct current sensitive	Surge current proof
B class Tripping is ensured for sinusoidal AC residual currents pulsed DC residual currents, alternating residual sinusoidal currents up to 1000Hz, pulsating direct residual currents and for smooth direct residual currents, whether applied suddenly or increasing slowly.	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-s surge-current waves acc. to VDE 0432 Part 2 with surge current values of up to 250A.



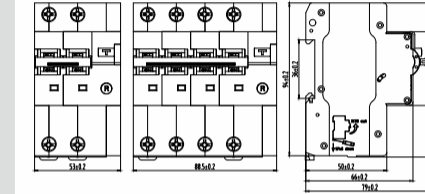
CHARACTERISTICS CURVES

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× I _N	1.45× I _N	≥1h <1h	3× I _N	5× I _N	≥0.1s <0.1s
C Curve	1.13× I _N	1.45× I _N	≥1h <1h	5× I _N	10× I _N	≥0.1s <0.1s
D Curve	1.13× I _N	1.45× I _N	≥1h <1h	10× I _N	20× I _N	≥0.1s <0.1s

Overall Installation Dimension(mm)

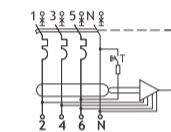
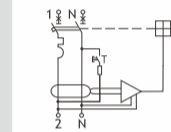


EKL15-63(H), EKL15-63B



Circuit Diagram

Type A AC



Type B:

