RCCBs Ex9L-H F type, 10 kA

- **Residual Current Circuit Breakers according to EN 61008-1 & EN 62423**
- **Cond. rated short circuit strength I_{nc} 10 kA**
- **2 and 4-pole versions**
- **Rated residual current 30, 100 and 300 mA**
- **Rated current up to 63 A**
- **Rated operational voltage 240/415 V AC**
- **F type**
- **Indication of electrical tripping**
- **Suitable for applications from -25 to +40 °C**

Ex9L-H F type residual current circuit breakers are suitable for domestic as well as industrial applications. They are based on permanent magnet principle. It brings the advantage of voltage independent function. F type provides a sensitivity to residual AC, pulsating DC current and detection of high frequency currents up to 1 kHz. Adequate voltage is only necessary when testing the RCCB with the test button. Magnetic RCCBs should be tested regularly. On this testing period local law or regulations may apply. Recommend is to test it every 6 months in fair environment and every month in heavy condition.

Type Key

Ex9	L	-H	2P	63 A	F	30mA
Product family	Product	Conditional short circuit strength	Poles	Rated current	Sensitivity to type of current	Rated residual current
Ex9	L: RCCB	-H : 10 kA	2P 4P	25 A 40 A 63 A	F: F	30 mA 100 mA 300 mA

Certification marks

CE

Noark

RCCBs Ex9L-H F type, 10 kA

F type, 2-pole

- F type of residual current circuit breaker sensitive on residual AC, pulsating DC current and detection of high frequency currents up to 1 kHz
- According to EN 61008-1 and EN 62423
- Without time delay
- Surge current-proof 3000 A
- 30 mA version suitable for protection of people in case of direct and indirect contact with live parts and exposed conductive parts during a fault, respectively

Rated current	Rated residual current	Poles	Article No.	Type	Packing
25 A	30 mA	2	115622	Ex9L-H 2P 25A F 30mA	1/81
40 A	30 mA	2	115623	Ex9L-H 2P 40A F 30mA	1/81
63 A	30 mA	2	115624	Ex9L-H 2P 63A F 30mA	1/81
25 A	100 mA	2	115625	Ex9L-H 2P 25A F 100mA	1/81
40 A	100 mA	2	115626	Ex9L-H 2P 40A F 100mA	1/81
63 A	100 mA	2	115627	Ex9L-H 2P 63A F 100mA	1/81
25 A	300 mA	2	115628	Ex9L-H 2P 25A F 300mA	1/81
40 A	300 mA	2	115629	Ex9L-H 2P 40A F 300mA	1/81
63 A	300 mA	2	115630	Ex9L-H 2P 63A F 300mA	1/81

F type, 4-pole

Rated current	Rated residual current	Poles	Article No.	Type	Packing
25 A	30 mA	4	115631	Ex9L-H 4P 25A F 30mA	1/45
40 A	30 mA	4	115632	Ex9L-H 4P 40A F 30mA	1/45
63 A	30 mA	4	115633	Ex9L-H 4P 63A F 30mA	1/45
25 A	100 mA	4	115634	Ex9L-H 4P 25A F 100mA	1/45
40 A	100 mA	4	115635	Ex9L-H 4P 40A F 100mA	1/45
63 A	100 mA	4	115636	Ex9L-H 4P 63A F 100mA	1/45
25 A	300 mA	4	115637	Ex9L-H 4P 25A F 300mA	1/45
40 A	300 mA	4	115638	Ex9L-H 4P 40A F 300mA	1/45
63 A	300 mA	4	115639	Ex9L-H 4P 63A F 300mA	1/45

Technical Data Ex9L-H F type

Residual Current Circuit Breakers, 10 kA

General parameters

Permanent magnet principle - voltage independent tripping function
Suitable for household as well as industrial applications
F type of residual current circuit breaker sensitive on residual AC, pulsating DC current and detection of high frequency currents up to 1 kHz
Recommend is to test it every 6 months in fair environment and every month in heavy condition
In case all wires are not connected at 4-pole RCCB, it is necessary to ensure that circuit of the test button T is supplied with appropriate voltage (by means of mutual connection of respective terminals of the RCCB, see wiring diagram)
Indication of electrical tripping

Electrical parameters

Tested according to	EN 61008, EN 62423
Rated operational voltage U_e	240/415 V AC
Min. voltage for RCD function	voltage independent
Voltage range of the test button T	150 — 254 V AC (2-pole) 150 — 440 V AC (4-pole)
Rated frequency f	50/60 Hz
Conditional short circuit strength I_{nc}	10 kA
Rated current I_n	25, 40, 63 A
Rated residual current $I_{\Delta n}$	30, 100, 300 mA
Sensitivity to residual current	F type - residual AC and pulsating DC current and detection of high frequency currents up to 1 kHz
Time characteristic	undelayed type ≤ 0.1 s
Rated impulse withstand voltage U_{imp}	6 kV
Rated insulation voltage U_i	500 V
Surge current proof	3000 A
Mechanical service life	2 000 operation cycles
Electrical service life	2 000 operation cycles
Back-up fuse for overload	
I_n = 25 A	max. 25 A gG
I_n = 40 A	max. 32 A gG
I_n = 63 A	max. 50 A gG
Back-up fuse for short circuit	
I_n = 25 A	max. 63 A gG
I_n = 40 A	max. 63 A gG
I_n = 63 A	max. 63 A gG
Rated making capacity I_m (rated residual making capacity $I_{\Delta m}$)	
I_n = 25 A	500 A
I_n = 40 A	500 A
I_n = 63 A	630 A
Line voltage connection	arbitrary above or below

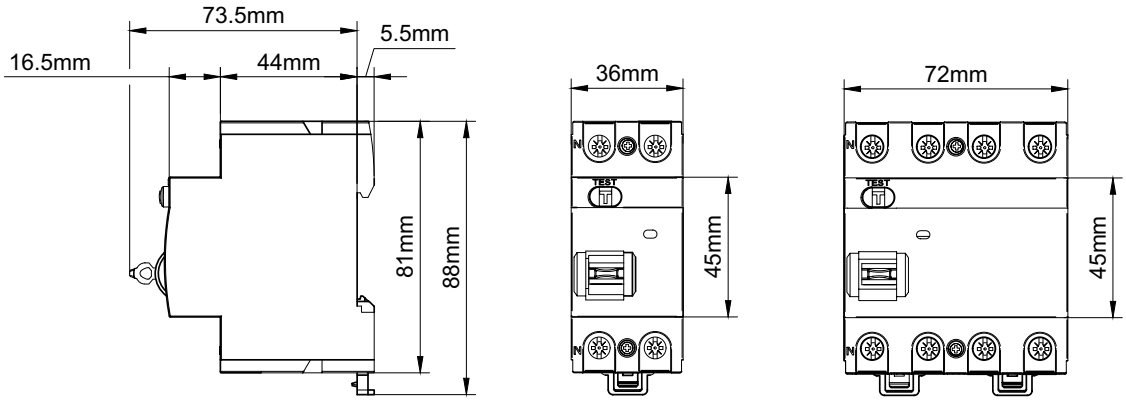
Technical Data Ex9L-H F type

Residual Current Circuit Breakers, 10 kA

Mechanical parameters

Device width	36 mm (2-pole), 72 mm (4-pole)
Device height	85 mm including rail clip
Frame size	45 mm
Mounting	easy fastening onto 35 mm device rail (DIN)
Degree of protection	IP20
Terminals	combined lift + open mouthed
Terminal capacity	1 — 25 mm^2
Fastening torque of terminals	1.5 — 2.5 Nm
Busbar thickness	0.8 — 2 mm
Ambient temperature	-25 — +40 °C
Altitude	≤ 2000 m
Relative humidity	≤ 95 %
Resistance to humidity and heat	class 2
Pollution degree	2
Installation class	III
Weight	0.22 kg (2-pole), 0.4 kg (4-pole)

Dimensions

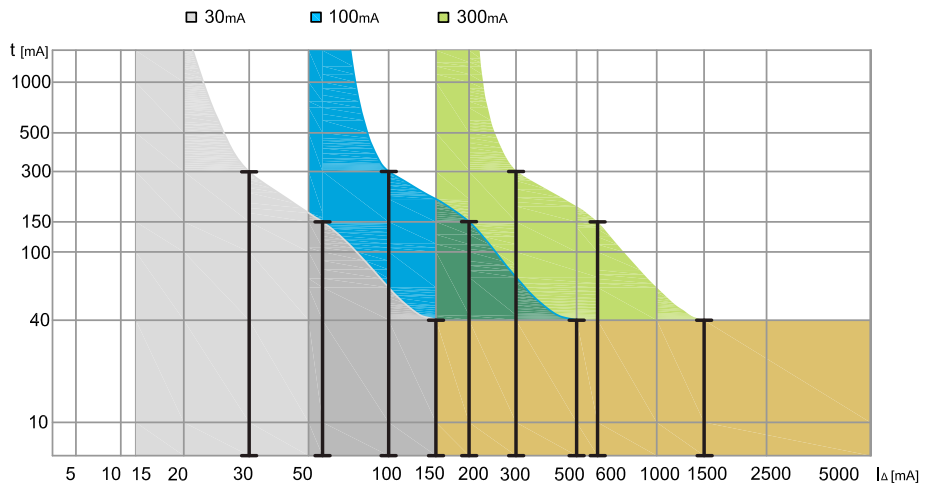


Wiring diagrams

Technical Data Ex9L-H F type

Residual Current Circuit Breakers, 10 kA

Tripping characteristics



Power loss

I_n	I_Δ	2P	4P
25 A	10 mA	3.4 W	7.2 W
	30 mA	3.4 W	7.2 W
	100 mA	3.4 W	7.2 W
	300 mA	3.4 W	7.2 W
	500 mA	3.4 W	7.2 W
40 A	30 mA	7.2 W	15.3 W
	100 mA	7.2 W	15.3 W
	300 mA	7.2 W	15.3 W
	500 mA	7.2 W	15.3 W
63 A	30 mA	15 W	24 W
	100 mA	15 W	24 W
	300 mA	15 W	24 W
	500 mA	15 W	24 W