

RCD add-on blocks Ex9LE

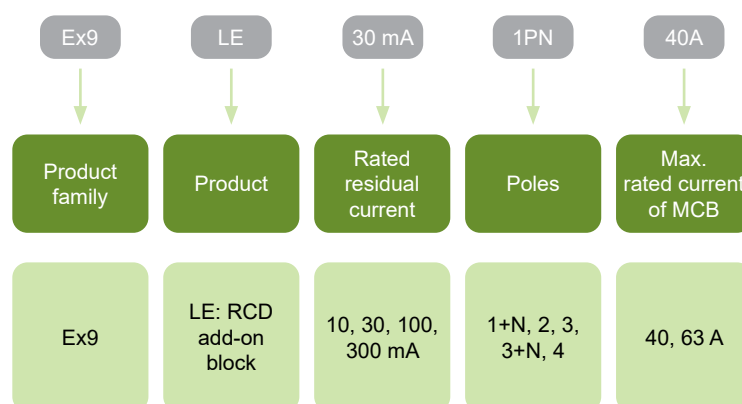


- Residual Current add-on blocks
- Tested according to IEC / EN 61009
- For combination with MCBs Ex9B
- Conditional rated short circuit strength
I_{nc} 10 kA in combination with Ex9BH
and 6 kA with Ex9BN
- 1+N up to 4-pole versions
- Rated residual current 10, 30, 100, 300 mA
- Rated currents up to 63 A
- Rated operational voltage 230/400 V AC
- AC type of RCD

Ex9LE residual current add-on blocks are suitable for domestic as well as industrial applications. They are based on electronic technology. It brings advantages of more accurate measuring of residual current and, as a consequence, reduction of unwanted tripping. (For possible use of this device, local legal requirements and conditions must be fulfilled.) These devices also do not suffer with magnetization of the tripping unit. Thus, regular testing is not necessary to preserve function of the device. To fulfill prescribed mandatory testing given by the product standard, it is recommended to test the device regularly with a period of one year.

Given pole version of the RCD add-on block must be combined with MCB of line Ex9B in the following way. 1+N-pole version of RCD add-on block is possible to combine with 1-pole MCB; 2-pole RCD block with 1+N or 2-pole MCB; 3-pole and 3+N-pole RCD block with 3-pole MCB, 4-pole RCD block with 3+N or 4-pole MCB. These variants enable to create very various combinations to obtain special devices with RCBO functionality.

Type Key



Certification marks



RCD add-on blocks Ex9LE

Mounting onto MCB



Aux. or signal contacts
AX, AL, AXL
Up to 3 units

Voltage or trip releases
SHT, UVT, OVT
Up to 2 units

MCB
Ex9B
1, 1+N, 2, 3, 3+N, 4-pole

RCD add-on block
Ex9LE
1+N, 2, 3, 3+N, 4-pole

RCD add-on blocks are mounted to the MCBs Ex9B from the right.

Use of other MCB accessories is not affected by installation of RCD add-on block anyhow.

Input voltage must be connected via MCB, other connection is not acceptable.

RCD add-on blocks Ex9LE

1+N-pole version

- AC type of residual current device sensitive on residual AC current
- Without time delay
- Surge current-proof 250 A
- 10 and 30 mA versions suitable for protection of people in case of direct and indirect contact with live parts and exposed conductive parts during a fault, respectively
- 100 and 300 mA versions suitable for protection against fire or as a protection against leakage currents (e.g. due to imperfect isolation)
- For combination with 1-pole version of MCB Ex9B



Rated residual current	Rated current	Poles	Article No.	Type	Packing
10 mA	40 A	1+N	100557	Ex9LE 10mA 1PN 40A	1/54
10 mA	63 A	1+N	100562	Ex9LE 10mA 1PN 63A	1/54
30 mA	40 A	1+N	100567	Ex9LE 30mA 1PN 40A	1/54
30 mA	63 A	1+N	100572	Ex9LE 30mA 1PN 63A	1/54
100 mA	40 A	1+N	100577	Ex9LE 100mA 1PN 40A	1/54
100 mA	63 A	1+N	100582	Ex9LE 100mA 1PN 63A	1/54
300 mA	40 A	1+N	100587	Ex9LE 300mA 1PN 40A	1/54
300 mA	63 A	1+N	100592	Ex9LE 300mA 1PN 63A	1/54

2-pole version

- AC type of residual current device sensitive on residual AC current
- Without time delay
- Surge current-proof 250 A
- 10 and 30 mA versions suitable for protection of people in case of direct and indirect contact with live parts and exposed conductive parts during a fault, respectively
- 100 and 300 mA versions suitable for protection against fire or as a protection against leakage currents (e.g. due to imperfect isolation)
- For combination with 1+N-pole or 2-pole version of MCB Ex9B



Rated residual current	Rated current	Poles	Article No.	Type	Packing
10 mA	40 A	2	100558	Ex9LE 10mA 2P 40A	1/45
10 mA	63 A	2	100563	Ex9LE 10mA 2P 63A	1/45
30 mA	40 A	2	100568	Ex9LE 30mA 2P 40A	1/45
30 mA	63 A	2	100573	Ex9LE 30mA 2P 63A	1/45
100 mA	40 A	2	100578	Ex9LE 100mA 2P 40A	1/45
100 mA	63 A	2	100583	Ex9LE 100mA 2P 63A	1/45
300 mA	40 A	2	100588	Ex9LE 300mA 2P 40A	1/45
300 mA	63 A	2	100593	Ex9LE 300mA 2P 63A	1/45

RCD add-on blocks Ex9LE

3-pole version

- AC type of residual current device sensitive on residual AC current
- Without time delay
- Surge current-proof 250 A
- 10 and 30 mA versions suitable for protection of people in case of direct and indirect contact with live parts and exposed conductive parts during a fault, respectively
- 100 and 300 mA versions suitable for protection against fire or as a protection against leakage currents (e.g. due to imperfect isolation)
- For combination with 3-pole version of MCB Ex9B



Rated residual current	Rated current	Poles	Article No.	Type	Packing
10 mA	40 A	3	100559	Ex9LE 10mA 3P 40A	1/27
10 mA	63 A	3	100564	Ex9LE 10mA 3P 63A	1/27
30 mA	40 A	3	100569	Ex9LE 30mA 3P 40A	1/27
30 mA	63 A	3	100574	Ex9LE 30mA 3P 63A	1/27
100 mA	40 A	3	100579	Ex9LE 100mA 3P 40A	1/27
100 mA	63 A	3	100584	Ex9LE 100mA 3P 63A	1/27
300 mA	40 A	3	100589	Ex9LE 300mA 3P 40A	1/27
300 mA	63 A	3	100594	Ex9LE 300mA 3P 63A	1/27

3+N-pole version

- AC type of residual current device sensitive on residual AC current
- Without time delay
- Surge current-proof 250 A
- 10 and 30 mA versions suitable for protection of people in case of direct and indirect contact with live parts and exposed conductive parts during a fault, respectively
- 100 and 300 mA versions suitable for protection against fire or as a protection against leakage currents (e.g. due to imperfect isolation)
- For combination with 3-pole version of MCB Ex9B



Rated residual current	Rated current	Poles	Article No.	Type	Packing
10 mA	40 A	3+N	100560	Ex9LE 10mA 3PN 40A	1/27
10 mA	63 A	3+N	100565	Ex9LE 10mA 3PN 63A	1/27
30 mA	40 A	3+N	100570	Ex9LE 30mA 3PN 40A	1/27
30 mA	63 A	3+N	100575	Ex9LE 30mA 3PN 63A	1/27
100 mA	40 A	3+N	100580	Ex9LE 100mA 3PN 40A	1/27
100 mA	63 A	3+N	100585	Ex9LE 100mA 3PN 63A	1/27
300 mA	40 A	3+N	100590	Ex9LE 300mA 3PN 40A	1/27
300 mA	63 A	3+N	100595	Ex9LE 300mA 3PN 63A	1/27

RCD add-on blocks Ex9LE

4-pole version

- AC type of residual current device sensitive on residual AC current
- Without time delay
- Surge current-proof 250 A
- 10 and 30 mA versions suitable for protection of people in case of direct and indirect contact with live parts and exposed conductive parts during a fault, respectively
- 100 and 300 mA versions suitable for protection against fire or as a protection against leakage currents (e.g. due to imperfect isolation)
- For combination with 3+N-pole or 4-pole version of MCB Ex9B



Rated residual current	Rated current	Poles	Article No.	Type	Packing
10 mA	40 A	4	100561	Ex9LE 10mA 4P 40A	1/24
10 mA	63 A	4	100566	Ex9LE 10mA 4P 63A	1/24
30 mA	40 A	4	100571	Ex9LE 30mA 4P 40A	1/24
30 mA	63 A	4	100576	Ex9LE 30mA 4P 63A	1/24
100 mA	40 A	4	100581	Ex9LE 100mA 4P 40A	1/24
100 mA	63 A	4	100586	Ex9LE 100mA 4P 63A	1/24
300 mA	40 A	4	100591	Ex9LE 300mA 4P 40A	1/24
300 mA	63 A	4	100596	Ex9LE 300mA 4P 63A	1/24

Technical Data Ex9LE

RCD add-on blocks Ex9LE

General parameters

RCD add-on blocks for combination with miniature circuit breakers Ex9B
Allow to create various combinations with MCBs with functionality of RCBO
AC type of residual current device
1+N, 2, 3, 3+N and 4-pole versions
Input voltage is connected via MCB
Electronic technology of residual current device - more accurate measuring of residual current, not necessary to test monthly.
Recommended testing period one year to fulfill requirements of product standards. Contrary to permanent magnet-based devices, the testing is not necessary to preserve proper sensitivity of the RCD
Given pole version of the RCD add-on block must be combined with MCB Ex9B in the following way. 1+N-pole version of RCD add-on block is possible to combine with 1-pole MCB; 2-pole RCD block with 1+N or 2-pole MCB; 3-pole and 3+N-pole RCD block with 3-pole MCB, 4-pole RCD block with 3+N or 4-pole MCB

Electrical parameters

Tested according to	IEC / EN 61009-1
Rated op. voltage U_e	230/400 V AC
Min. voltage for RCD function	50 V AC
Voltage range of the test button T	150 — 440 V AC
Rated frequency	50/60 Hz
Conditional short circuit strength I_{nc}	10 kA with Ex9BH, 6 kA with Ex9BN
Rated current (max. rated current of connected MCB)	40, 63 A
Rated residual current	10, 30, 100, 300 mA
Sensitivity to residual current	AC type - AC residual current
Time characteristic of RCD	undelayed type
Rated impulse withstand voltage U_{imp}	4 kV
Rated insulation voltage U_i	500 V
Surge current-proof	250 A
Mechanical service life	16 000 operation cycles
Electrical service life	8 000 operation cycles
Back-up fuse/breaker	co-installed MCB
Line voltage connection	above to MCB

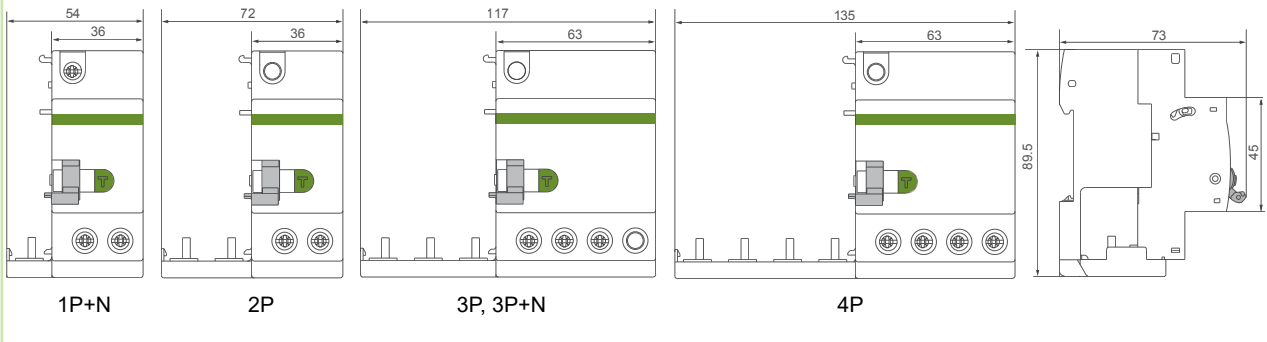
Mechanical parameters

Device width (without MCB busbar)	54 mm (1+N-pole), 72 mm (2-pole), 117 mm (3-pole), 117 mm (3+N-pole), 135 mm (4-pole)
Device height	89 mm including rail clip and connection busbar
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 — 35 mm ²
Fastening torque of terminals	2 — 3.5 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

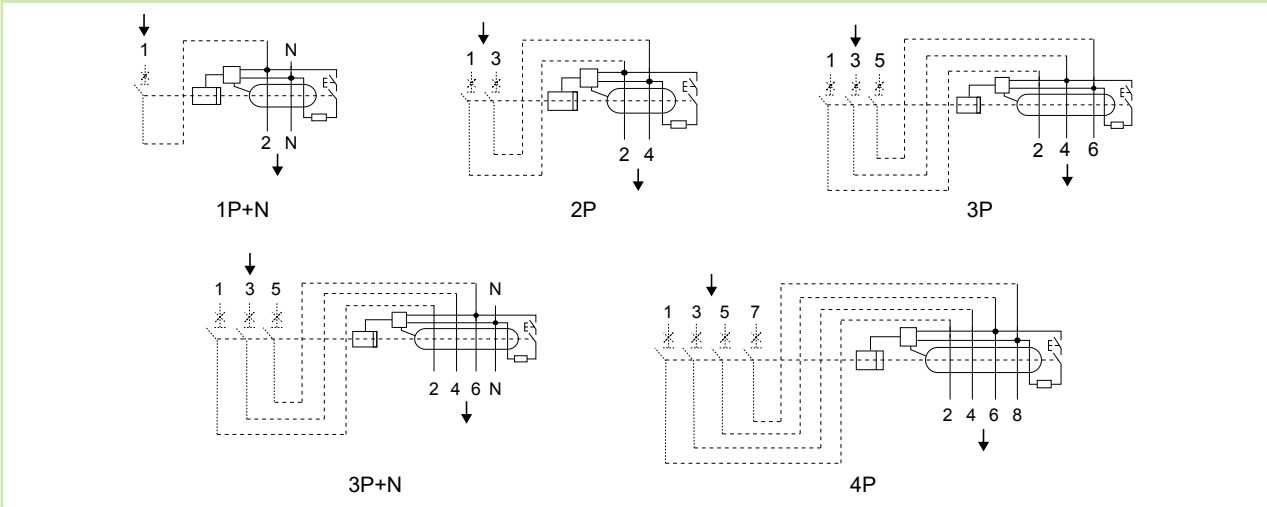
Technical Data Ex9LE

RCD add-on blocks Ex9LE

Dimensions



Wiring diagrams



Tripping characteristics of RCD

