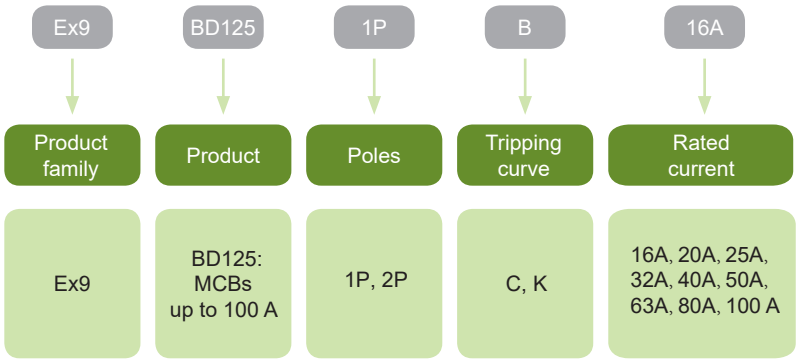
Miniature Circuit Breakers Ex9BD125

- **Miniature Circuit Breakers up to 100 A**
- **Tested according to EN 60947-2**
- **Breaking capacities up to 6 kA**
- **1P/2P**
- **Rated operating voltage : 300VDC(1P); 600VDC(2P)**
- **Wide range of accessories**
- **Certifications: CE, TUV, SAA**

Miniature Circuit Breakers Ex9BD125 are suitable mainly for power distribution and industrial applications for short-circuit and overload current protection with rated current up to 100 A and a very high rated breaking capacities (tested according to EN 60947-2).

These breakers can be combined with wide range of accessories (same as for Ex9B breakers) including auxiliary and signal contacts, shunt trip releases, undervoltage and overvoltage releases. It is possible to create diversed combination of accessories.

Type Key



Miniature Circuit Breakers Ex9BD125

Accessories

Auxiliary contacts AX3111, AX3122

Alarm contact AL3111

Auxiliary and alarm contact AXL31

Shunt trip releases SHT31, SHT3111

Undervoltage releases UVT31, UVT3101, UVT3110

Overvoltage release OVT31

All accessories are mounted to the breaker from the left side and are identical for devices of the line Ex9B, Ex9PN and Ex9IP.

Miniature Circuit Breakers Ex9BD125

C-Characteristic, 1-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2) for I_n 16 - 100 A = 6 kA

Rated current	Poles	Cha	r. Part no.	Model	Packing
16A	1	C	90195	Ex9BD125 1P C16A DC300V IEC	1/12/108
20A	1	C	90196	Ex9BD125 1P C20A DC300V IEC	1/12/108
25A	1	C	90197	Ex9BD125 1P C25A DC300V IEC	1/12/108
32A	1	C	90198	Ex9BD125 1P C32A DC300V IEC	1/12/108
40A	1	C	90199	Ex9BD125 1P C40A DC300V IEC	1/12/108
50A	1	C	90221	Ex9BD125 1P C50A DC300V IEC	1/12/108
63A	1	C	90222	Ex9BD125 1P C63A DC300V IEC	1/12/108
80A	1	C	90223	Ex9BD125 1P C80A DC300V IEC	1/12/108
100A	1	C	90224	Ex9BD125 1P C100A DC300V IEC	1/12/108

C-Characteristic, 2-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2) for I_n 16 - 100 A = 6 kA

Rated current	Poles	Cha	r. Part no.	Model	Packing
16A	2	C	90225	Ex9BD125 2P C16A DC600V IEC	1/6/54
20A	2	C	90226	Ex9BD125 2P C20A DC600V IEC	1/6/54
25A	2	C	90227	Ex9BD125 2P C25A DC600V IEC	1/6/54
32A	2	C	90228	Ex9BD125 2P C32A DC600V IEC	1/6/54
40A	2	C	90229	Ex9BD125 2P C40A DC600V IEC	1/6/54
50A	2	C	90230	Ex9BD125 2P C50A DC600V IEC	1/6/54
63A	2	C	90231	Ex9BD125 2P C63A DC600V IEC	1/6/54
80A	2	C	90232	Ex9BD125 2P C80A DC600V IEC	1/6/54
100A	2	C	90233	Ex9BD125 2P C100A DC600V IEC	1/6/54

K-Characteristic, 1-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2) for I_n 16 - 100 A = 6 kA

Rated current	Poles	Cha	r. Part no.	Model	Packing
16A	1	K	90234	Ex9BD125 1P K16A DC300V IEC	1/12/108
20A	1	K	90235	Ex9BD125 1P K20A DC300V IEC	1/12/108
25A	1	K	90236	Ex9BD125 1P K25A DC300V IEC	1/12/108
32A	1	K	90237	Ex9BD125 1P K32A DC300V IEC	1/12/108
40A	1	K	90238	Ex9BD125 1P K40A DC300V IEC	1/12/108
50A	1	K	90239	Ex9BD125 1P K50A DC300V IEC	1/12/108
63A	1	K	90240	Ex9BD125 1P K63A DC300V IEC	1/12/108
80A	1	K	90241	Ex9BD125 1P K80A DC300V IEC	1/12/108
100A	1	K	90242	Ex9BD125 1P K100A DC300V IEC	1/12/108

K-Characteristic, 2-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2) for I_n 16 - 100 A = 6 kA

Rated current	Poles	Cha	r. Part no.	Model	Packing
16A	2	K	90243	Ex9BD125 2P K16A DC600V IEC	1/6/54
20A	2	K	90244	Ex9BD125 2P K20A DC600V IEC	1/6/54
25A	2	K	90269	Ex9BD125 2P K25A DC600V IEC	1/6/54
32A	2	K	90270	Ex9BD125 2P K32A DC600V IEC	1/6/54
40A	2	K	90271	Ex9BD125 2P K40A DC600V IEC	1/6/54
50A	2	K	90272	Ex9BD125 2P K50A DC600V IEC	1/6/54
63A	2	K	90273	Ex9BD125 2P K63A DC600V IEC	1/6/54
80A	2	K	90274	Ex9BD125 2P K80A DC600V IEC	1/6/54
100A	2	K	90275	Ex9BD125 2P K100A DC600V IEC	1/6/54

Technical Data Ex9BD125

Miniature Circuit Breakers up to 100 A

General parameters

Suitable for power distribution and industrial applications		
Very high limiting of short circuit current		
Accessories (same as for Ex9B MCBs)		
Auxiliary contacts	AX3111, AX3122	
Alarm contact	AL3111	
Auxiliary and alarm contact	AXL31	
Shunt trip releases	SHT31, SHT3111	
Undervoltage releases	UVT31, UVT3101, UVT3110	
Overvoltage release	OVT31 280V AC±5%	
Max. number of installed accessories is 3 pcs of one contact units (AX3111, AL3111) or 2 pcs of two contact units (AX3122, AXL31) and 2 pcs of releases (SHT31, UVT31, OVT31)		

Electrical parameters

Tested according to	EN 60947-2
Rated operating voltage U_e	1P:300VDC 2P:600VDC
Rated current	16 — 100 A
Poles	1, 2
Tripping characteristics	C, K
Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2)	6 kA
Rated service short-cirtuit breaking capacity I_{cs} (EN 60947-2)	6 kA
Rated impulse withstand voltage U_{imp}	8 kV
Rated insulation voltage U_i	1200V DC
Electrical service life	1500 operating cycles

Mechanical parameters

Device width	27 mm (per pole)
Device height	83 mm (89 mm including rail clip)
Frame size	4P Max 108 mm
Mounting	easy fastening onto 35 mm device rail (DIN)
Degree of protection	IP20
Mechanical service life	20 000 operating cycles
Terminal capacity	10 — 50 mm^2
Fastening torque of terminals	2.5 — 3.5 Nm
Ambient temperature	-30 — +70 °C
Temperature rise	max 70K (wiring terminal)
Altitude	≤ 2000 m
Relative humidity	≤ 95 %
Pollution degree	2
Installation class	III
Weight	approx 0.2 kg (per pole)

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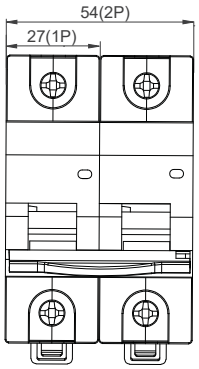
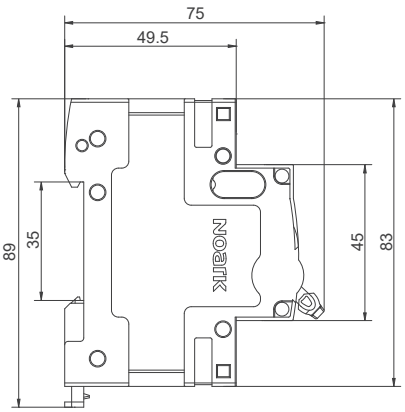
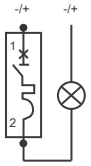
Dimensions

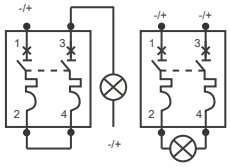




Wiring diagrams



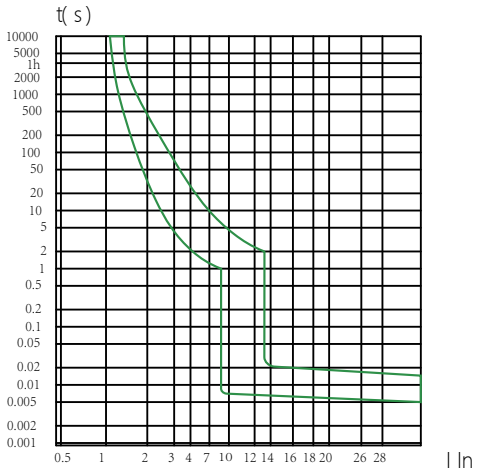
1P



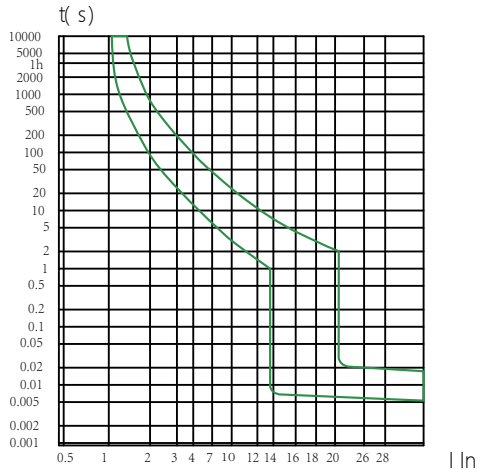
2P

Tripping characteristics

Characteristic C



Characteristic K



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Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]								
	16 A	**20 A**	**25 A**	**32 A**	**40 A**	**50 A**	**63 A**	**80 A**	**100 A**
-30	20.5	25.3	31	40.5	51	64	82	100	124
-20	19.8	24.5	30	39.2	49.2	62	79.2	96	117
-10	19.0	23.7	29	37.9	47.5	59.8	76.3	92	111.5
0	18.4	22.8	28	36.5	45.8	57.4	73.2	88	107
10	17.6	21.9	27	35.0	44	55	70.0	84.5	104
20	16.8	21.0	26	33.6	42.0	52.6	66.6	82	102
30	16	20	25	32	40	50	63	80	100
40	15	19	24	31	39	48	61	75	94
50	15.0	19	23	30	37	46	58	70	88
60	14	18	22	28	35	42	55	65	82
70	13	17	21	27	33	38	50	60	76

Power loss per pole

I_n [A]	**16 A**	**20 A**	**25 A**	**32 A**	**40 A**	**50 A**	**63 A**	**80 A**	**100 A**
P [W]	< 3.5	< 4.5	< 4.5	< 6	< 7.5	< 9	< 13	< 15	< 15