

Miniature Circuit Breakers Ex9B125

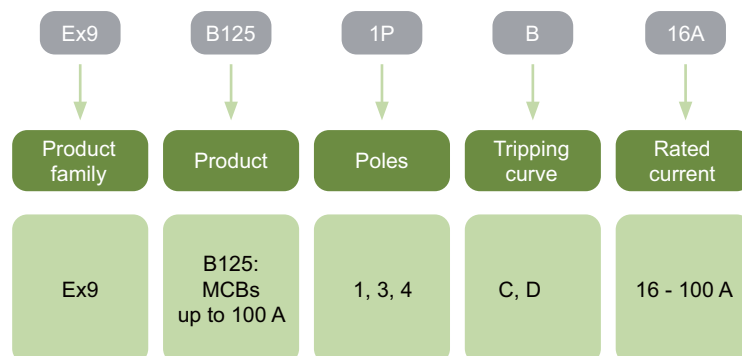


- Miniature Circuit Breakers up to 100 A
- Tested according to IEC 60947.2
- High rated breaking capacities up to 25 kA
- 1 up to 4-pole versions
- Rated operating voltage 230/400 V AC
- Wide range of accessories
- Toggle colour according to rated current I_n

Miniature Circuit Breakers Ex9B125 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 IEC 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 diversified combination of accessories.

Type Key



Certification marks



Miniature Circuit Breakers Ex9B125

Accessories



Auxiliary or signal contacts
AX, AL, AXL
Up to 3 units

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

MCB
Ex9B125
1, 3, 4-pole

Auxiliary contacts AX3111, AX3122	see page 132
Alarm contact AL3111	see page 132
Auxiliary and alarm contact AXL31	see page 132
Shunt trip releases SHT31, SHT3111	see page 132
Undervoltage releases UVT31, UVT3101, UVT3110	see page 133
Overtoltage release OVT31	see page 133

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

Miniature Circuit Breakers Ex9B125

C-Characteristic, 1-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (IEC 60947.2)
 for I_n 16 - 63 A = 25 kA
 for I_n 80, 100 A = 20 kA



Rated current	Poles	Char.	Part no.	Model	Packing
16A	1	C	102694	Ex9B125 1P C16A IEC	1/12/108
20A	1	C	102695	Ex9B125 1P C20A IEC	1/12/108
25A	1	C	102696	Ex9B125 1P C25A IEC	1/12/108
32A	1	C	102697	Ex9B125 1P C32A IEC	1/12/108
40A	1	C	102698	Ex9B125 1P C40A IEC	1/12/108
50A	1	C	102699	Ex9B125 1P C50A IEC	1/12/108
63A	1	C	102700	Ex9B125 1P C63A IEC	1/12/108
80A	1	C	102701	Ex9B125 1P C80A IEC	1/12/108
100A	1	C	102702	Ex9B125 1P C100A IEC	1/12/108

Miniature Circuit Breakers Ex9B125

C-Characteristic, 3-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2)
 - for I_n 16 - 63 A = 25 kA
 - for I_n 80, 100 A = 20 kA



Rated current	Poles	Char.	Part no.	Model	Packing
16A	3	C	102784	Ex9B125 3P C16A IEC	1/4/36
20A	3	C	102785	Ex9B125 3P C20A IEC	1/4/36
25A	3	C	102786	Ex9B125 3P C25A IEC	1/4/36
32A	3	C	102787	Ex9B125 3P C32A IEC	1/4/36
40A	3	C	102788	Ex9B125 3P C40A IEC	1/4/36
50A	3	C	102789	Ex9B125 3P C50A IEC	1/4/36
63A	3	C	102790	Ex9B125 3P C63A IEC	1/4/36
80A	3	C	102791	Ex9B125 3P C80A IEC	1/4/36
100A	3	C	102792	Ex9B125 3P C100A IEC	1/4/36

C-Characteristic, 4-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2)
 - for I_n 16 - 63 A = 25 kA
 - for I_n 80, 100 A = 20 kA



Rated current	Poles	Char.	Part no.	Model	Packing
16A	4	C	102844	Ex9B125 4P C16A IEC	1/3/27
20A	4	C	102845	Ex9B125 4P C20A IEC	1/3/27
25A	4	C	102846	Ex9B125 4P C25A IEC	1/3/27
32A	4	C	102847	Ex9B125 4P C32A IEC	1/3/27
40A	4	C	102848	Ex9B125 4P C40A IEC	1/3/27
50A	4	C	102849	Ex9B125 4P C50A IEC	1/3/27
63A	4	C	102850	Ex9B125 4P C63A IEC	1/3/27
80A	4	C	102851	Ex9B125 4P C80A IEC	1/3/27
100A	4	C	102852	Ex9B125 4P C100A IEC	1/3/27

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D-Characteristic, 1-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2)
 for I_n 16 - 63 A = 25 kA
 for I_n 80, 100 A = 20 kA



Rated current	Poles	Char.	Part no.	Model	Packing
16A	1	D	102704	Ex9B125 1P D16A IEC	1/12/108
20A	1	D	102705	Ex9B125 1P D20A IEC	1/12/108
25A	1	D	102706	Ex9B125 1P D25A IEC	1/12/108
32A	1	D	102707	Ex9B125 1P D32A IEC	1/12/108
40A	1	D	102708	Ex9B125 1P D40A IEC	1/12/108
50A	1	D	102709	Ex9B125 1P D50A IEC	1/12/108
63A	1	D	102710	Ex9B125 1P D63A IEC	1/12/108
80A	1	D	102711	Ex9B125 1P D80A IEC	1/12/108
100A	1	D	102712	Ex9B125 1P D100A IEC	1/12/108

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D-Characteristic, 3-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2)
 - for I_n 16 - 63 A = 25 kA
 - for I_n 80, 100 A = 20 kA



Rated current	Poles	Char.	Part no.	Model	Packing
16A	3	D	102794	Ex9B125 3P D16A IEC	1/4/36
20A	3	D	102795	Ex9B125 3P D20A IEC	1/4/36
25A	3	D	102796	Ex9B125 3P D25A IEC	1/4/36
32A	3	D	102797	Ex9B125 3P D32A IEC	1/4/36
40A	3	D	102798	Ex9B125 3P D40A IEC	1/4/36
50A	3	D	102799	Ex9B125 3P D50A IEC	1/4/36
63A	3	D	102800	Ex9B125 3P D63A IEC	1/4/36
80A	3	D	102801	Ex9B125 3P D80A IEC	1/4/36
100A	3	D	102802	Ex9B125 3P D100A IEC	1/4/36

D-Characteristic, 4-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2)
 - for I_n 16 - 63 A = 25 kA
 - for I_n 80, 100 A = 20 kA



Rated current	Poles	Char.	Part no.	Model	Packing
16A	4	D	102854	Ex9B125 4P D16A IEC	1/3/27
20A	4	D	102855	Ex9B125 4P D20A IEC	1/3/27
25A	4	D	102856	Ex9B125 4P D25A IEC	1/3/27
32A	4	D	102857	Ex9B125 4P D32A IEC	1/3/27
40A	4	D	102858	Ex9B125 4P D40A IEC	1/3/27
50A	4	D	102859	Ex9B125 4P D50A IEC	1/3/27
63A	4	D	102860	Ex9B125 4P D63A IEC	1/3/27
80A	4	D	102861	Ex9B125 4P D80A IEC	1/3/27
100A	4	D	102862	Ex9B125 4P D100A IEC	1/3/27

Technical Data Ex9B125

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
Oversvoltage 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	IEC 60947.2
Rated operating voltage U_e	230/400 V AC 48 V DC
Rated frequency	50/60 Hz
Rated current	16 — 100 A
Poles	1, 1+N, 2, 3, 3+N, 4
Tripping characteristics	B, C, D
Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2)	
16, 20, 25, 32, 40, 50, 63 A	25 kA
80, 100 A	20 kA
Rated service short-circuit breaking capacity I_{cs} (EN 60947-2)	
16, 20, 25, 32, 40, 50, 63 A	20 kA
80, 100 A	15 kA
Rated impulse withstand voltage U_{imp}	8 kV
Rated insulation voltage U_i	690 V AC
Electrical service life	10 000 operating cycles
Utilization category	A
Selectivity class	3
Max. back-up fuse	200 A gG
Line voltage connection	arbitrary above or below

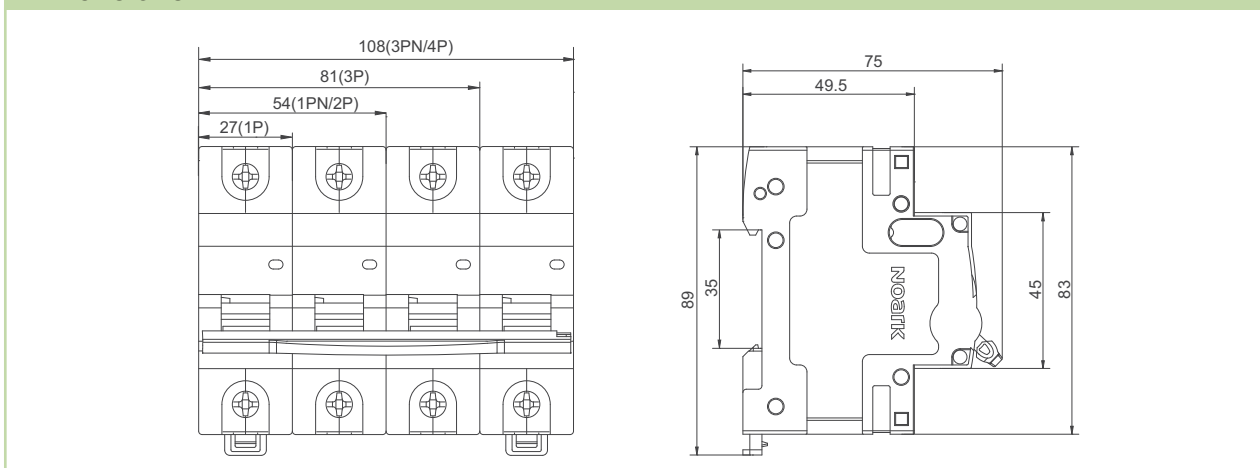
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Miniature Circuit Breakers up to 100 A

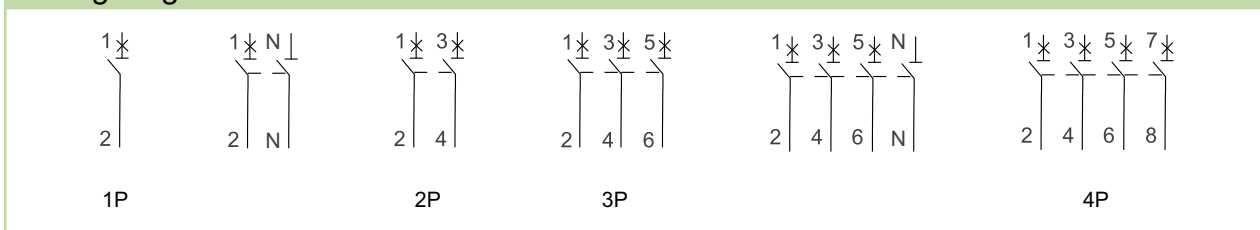
Mechanical parameters

Device width	27 mm (per pole)
Device height	83 mm (89 mm including rail clip)
Frame size	45 mm
Mounting	easy fastening onto 35 mm device rail (DIN)
Degree of protection	IP20
Mechanical service life	20 000 operating cycles
Terminals	open mouthed
Terminal capacity	2.5 — 50 mm ²
Fastening torque of terminals	3.5 — 6 Nm
Ambient temperature	-30 — +70 °C
Altitude	≤ 2000 m
Relative humidity	≤ 95 %
Resistance to humidity and heat	class 2
Pollution degree	2
Installation class	III
Weight	approx 0.2 kg (per pole)

Dimensions



Wiring diagrams



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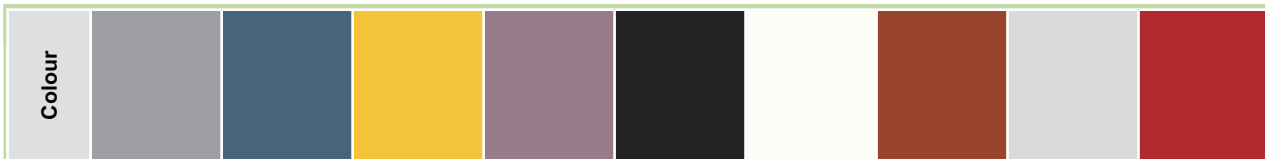
Miniature Circuit Breakers up to 100 A

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	31.1	40.5	51.3	64.2	82.1	105.2	132.6
-20	19.8	24.5	30.2	39.2	49.2	62.4	79.2	103.1	129.8
-10	19.0	23.7	29.6	37.9	47.5	59.8	76.3	99.1	124.0
0	18.4	22.8	28.2	36.5	45.8	57.4	73.2	94.9	118.1
10	17.6	21.9	27.7	35.0	44.3	55.4	70.0	90.3	113.3
20	16.8	21.0	26.1	33.6	42.0	52.6	66.6	86.7	108.2
30	16	20	25	32	40	50	63	80	100
40	15.4	19.3	24.5	31.4	39.2	48.7	61.6	75.8	94.2
50	15.0	18.8	23.2	30.9	37.6	46.2	58.8	71.3	89.6
60	14.2	18.1	22.1	28.6	35.8	42.6	55.4	67.9	85.1
70	13.5	17.7	20.6	27.5	33.1	38.3	50.5	66.3	82.2

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]	2.1	2.5	2.9	3.1	3.8	4.4	5.6	6.7	7.7



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Miniature Circuit Breakers up to 100 A

Tripping characteristics

