

Miniature Circuit Breakers B1E

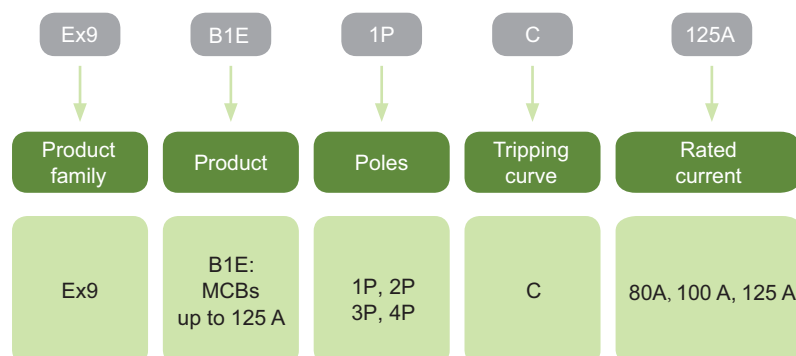


- Miniature Circuit Breakers up to 125 A
- Tested according to IEC 60947-2 & UL1077
- High rated breaking capacities up to 20 kA
- 1P/2P/3P/4P
- Rated operating voltage :
110VDC(1P); 250VDC(2P)
- Wide range of accessories
- Certifications: CE, UR, SAA

Miniature Circuit Breakers B1E are suitable mainly for low voltage battery for short-circuit and overload current protection with rated current up to 125 A and a very high rated breaking capacities (tested to both IEC 60947-2 & UL1077 standards).

These breakers can be combined with wide range of accessories including auxiliary and signal contacts, shunt trip releases, undervoltage and overvoltage releases. It is possible to create a diverse combination of accessories.

Type Key



Miniature Circuit Breakers B1E

C-Characteristic, 1-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2) for I_n 80 - 125 A = 20 kA



Rated current	Poles	Cha	r. Part no.	Model	Packing
80A	1	C	1000672	Ex9B1E 1P C80A DC110V IEC	1/12/108
100A	1	C	1000673	Ex9B1E 1P C100A DC100V IEC	1/12/108
125A	1	C	1000674	Ex9B1E 1P C125A DC110V IEC	1/12/108

C-Characteristic, 2-pole

- Rated ultimate short-circuit breaking capacity I_{cu} (EN 60947-2) for I_n 80 - 125 A = 20 kA



Rated current	Poles	Cha	r. Part no.	Model	Packing
80A	2	C	1000675	Ex9B1E 2P C80A DC220V IEC	1/6/54
100A	2	C	1000676	Ex9B1E 2P C100A DC220V IEC	1/6/54
125A	2	C	1000677	Ex9B1E 2P C125A DC220V IEC	1/6/54

C-Characteristic, 3-pole

- Rated ultimate short-circuit breaking capacity UL1077 for I_n 80 - 125 A = 10 kA



Rated current	Poles	Cha	r. Part no.	Model	Packing
80A	3	C	1000678	Ex9B1E 3P C80A DC220V	1/12/108
100A	3	C	1000679	Ex9B1E 3P C100A DC220V	1/12/108
125A	3	C	1000680	Ex9B1E 3P C125A DC220V	1/12/108

C-Characteristic, 4-pole

- Rated ultimate short-circuit breaking capacity UL1077 for I_n 80 - 125 A = 10 kA



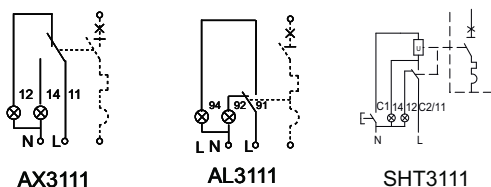
Rated current	Poles	Cha	r. Part no.	Model	Packing
80A	4	C	1000681	Ex9B1E 4P C80A DC220V	1/6/54
100A	4	C	1000682	Ex9B1E 4P C100A DC220V	1/6/54
125A	4	C	1000683	Ex9B1E 4P C125A DC220V	1/6/54

Auxiliary and signal contact units and shunt trip releases



Function	r. Part no.	Model	Packing
24 - 48VDC Shunt trip	1002609	SHT3111LB	1/96
240 - 415 VAC Shunt trip	1002610	SHT3111LA	1/96
1 C/O Auxiliary Contact	1002611	AX3111L	1/96
1 C/O Alarm Contact	1002612	AL3111L	1/96

Wiring diagrams



Technical Data Ex9B1E

General Parameters

Conformed Standard		IEC60947-2		UL 1077			
Number of Poles		1	2	1	2	3	4
Rated Operational Voltage (V)		DC60/80/110V	DC80/125/220/250V	480y/277 Vac, 110/220 Vdc			
Rated Current (A)		80~125					
Instantaneous Tripping Type		6.4~9.6 In					
IEC60947-2 Breaking Capacity	Ics	60 Vdc	15	-			
		80 Vdc	7.5	15			
		110 Vdc	7.5	-			
		125 Vdc	-	15			
		220 Vdc	-	7.5			
	Icu	60 Vdc	20	-			
		80 Vdc	10	20			
		110 Vdc	10	-			
		125 Vdc	-	10			
		220 Vdc	-	10			
UL1077 Interrupting Capacity (kA)	Interrupting (kA)	277 Vac			5	-	
		480 Vac			-	5	
		60 Vdc			10	-	
		110 Vdc			10	10	-
		220 Vdc			-	10	-
Operations	Electrical	1,500 (80~100 A)					
	Mechanical	1,000 (125 A)					
Protection Degree		IP 20					
Wire AWG (mm ²)		4~1/0 (25~50)					
Operation Temperature Range		-30 °C to +75 °C (-22 °F to 167 °F)					
Insulation Coordination	Rated Insulation Voltage (Vac)	500					
	Rated Impulse Withstand Voltage (kV)	8					
Pollution Degree		Class III					
Over Voltage Category / Mounting		Class III / 35 mm DIN rail					
Altitude ft (m)		Does not exceed 6,561 (2,000)					
Atmospheric Conditions		At +20 °C (68 °F), the relative humidity does not exceed 90% At +40 °C (104 °F), the relative humidity does not exceed 50%					

Technical Data Ex9B1E

Temperature Derating

When the ambient temperature slightly changes, please refer to the table below for the Temperature Compensation Coefficient

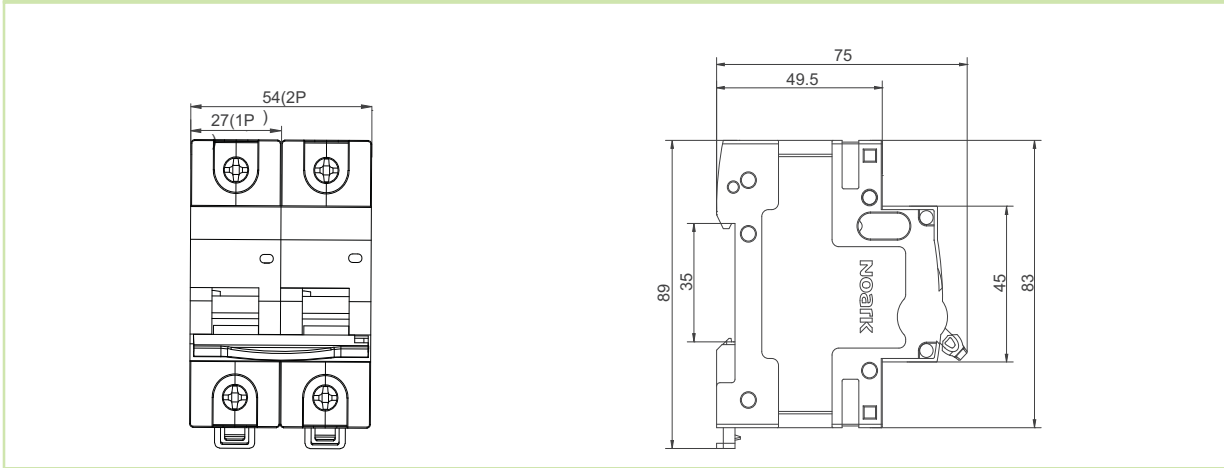
Ambient Temperature °C	-40 °C	-30 °C	-20 °C	-10 °C	0 °C	10 °C	20 °C	25 °C	30 °C	35 °C	40 °C	45 °C	50 °C	55 °C	60 °C	65 °C	75 °C
80A	1.48	1.40	1.34	1.27	1.21	1.14	1.07	1.06	1.00	0.99	0.95	0.91	0.88	0.84	0.80	0.75	0.71
100A	1.48	1.41	1.35	1.28	1.21	1.14	1.08	1.06	1.00	0.98	0.95	0.91	0.87	0.84	0.80	0.77	0.72
125A	1.46	1.39	1.32	1.25	1.19	1.13	1.08	1.08	1.00	1.00	0.97	0.94	0.90	0.86	0.83	0.80	0.74

Elevation De-rating

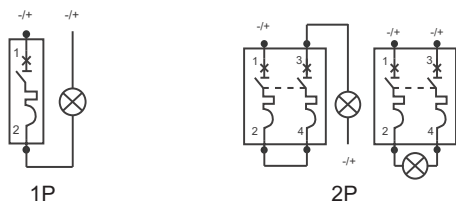
Breaker elevation de-rating with dielectric strenght above 2,000 m (6,561 ft)

Elevation m (ft)	2,000 (6,561)	3,000 (9,842)	4,000 (13,123)	5,000 (16,404)
Rated Amperes at 30 °C (86 °F) (A)	1 x In	0.96 x In	0.94 x In	0.92 x In
Rated Voltage at 30°C (86 °F) (V)	1 x Ue	0.89 x Ue	0.89 x Ue	0.68 x Ue

Dimensions



Wiring diagrams



Tripping characteristics

Characteristic C

