SUPPLEMENTARY PROTECTORS

UL 1077

Supplementary Protectors
UL 1077 Product Overview

Features

- UL 1077 recognized miniature circuit breakers up to a 63 A current rating
- Breakers mount on standard 35 mm DIN rail
- Standard ratings of 5 kA at 480Y/277 Vac
- Suitable for supplementary protection
- Thermal-magnetic over current protection – three levels of short-circuit protection, categorized by B, C and D curves
- Trip-free design – breaker cannot be defeated by holding the handle in the ON position
- Captive screws cannot be lost
- Fulfill UL 1077, IEC 60947-2 standard
- Field-installable shunt trip and auxiliary switch subsequent mounting
- Module width of only 0.71 in (18 mm) per pole
- Contact position indicator (red/green)
- Possibility for locking the toggle in ON or OFF position

Typical Application

- Supplementary Protection
  - ✓ Control circuits
  - ✓ Lighting
  - ✓ Business equipment
  - ✓ Appliances

Supplementary Protectors
UL 1077 National and International Standards

Certifications

UL 1077 No. E355391 / CSA C22.2 No.235 / IEC 60947-2

- Supplementary Protectors are UL Recognized for use in the United States in accordance with NFPA® 70 (NEC).
- The devices comply with UL 1077 No. E355391 and certified for Canada according to CSA 22.2 No. 235, meeting the requirements for supplementary protectors.
- These devices are for international and domestic use, and also comply with IEC 60947-2 and are CE marked.

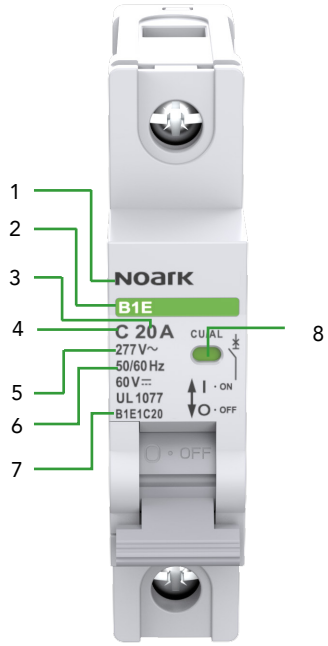
RoHS

- These devices are RoHS compliant.

Supplementary Protectors
UL 1077 Product Selection Guide

Label

These supplementary protectors are available in two terminal configurations: standard box terminals that accept multiple conductors and ring-tongue terminals. All breakers mount on standard 35 mm DIN rail. Bus connectors and feeder terminal facilitate mounting and wiring of multiple miniature circuit breaker arrays in control panel assemblies. Breakers can also be reverse feed.



1. Brand
2. Product Type
3. Rated Current
4. Tripping Curve
5. Rated Voltage
6. Frequency
7. SKU
8. Breaker Status Indicator

Product Selection Guide

B1E	1	C	63
NOARK Ex9 Series - B1E	Pole	Trip Curve	Rated Current
	1: 1 Pole	B: 3~5 In	1: 1 A, 1.6: 1.6 A, 2: 2 A, 3: 3 A, 4: 4 A, 5: 5 A, 6: 6 A, 8: 8 A, 10: 10 A, 13: 13 A, 15: 15 A, 16: 16 A, 20: 20 A, 25: 25 A, 30: 30 A, 32: 32 A, 40: 40 A, 50: 50 A, 60: 60 A, 63: 63 A
	2: 2 Poles	C: 5~10 In	
	3: 3 Poles	D: 10~20 In	
	4: 4 Poles		

Supplementary Protectors

B1E 1-63 A UL 1077 480Y/277 Vac; 60/125 Vdc

Certifications

IEC/EN 60947-2

Rated Amperage (A)		1 Pole - 277 Vac		2 Poles - 480 Vac		3 Poles - 480 Vac		4 Poles - 480 Vac	
		Product	Part Number	Product	Part Number	Product	Part Number	Product	Part Number
B Curve (3~5 In)	1	B1E1B1	1000420	B1E2B1	1000483	B1E3B1	1000546	B1E4B1	1000609
	1.6	B1E1B1.6	1000421	B1E2B1.6	1000484	B1E3B1.6	1000547	B1E4B1.6	1000610
	2	B1E1B2	1000422	B1E2B2	1000485	B1E3B2	1000548	B1E4B2	1000611
	3	B1E1B3	1000423	B1E2B3	1000486	B1E3B3	1000549	B1E4B3	1000612
	4	B1E1B4	1000424	B1E2B4	1000487	B1E3B4	1000550	B1E4B4	1000613
	5	B1E1B5	1000425	B1E2B5	1000488	B1E3B5	1000551	B1E4B5	1000614
	6	B1E1B6	1000426	B1E2B6	1000489	B1E3B6	1000552	B1E4B6	1000615
	8	B1E1B8	1000427	B1E2B8	1000490	B1E3B8	1000553	B1E4B8	1000616
	10	B1E1B10	1000428	B1E2B10	1000491	B1E3B10	1000554	B1E4B10	1000617
	13	B1E1B13	1000429	B1E2B13	1000492	B1E3B13	1000555	B1E4B13	1000618
	15	B1E1B15	1000430	B1E2B15	1000493	B1E3B15	1000556	B1E4B15	1000619
	16	B1E1B16	1000431	B1E2B16	1000494	B1E3B16	1000557	B1E4B16	1000620
	20	B1E1B20	1000432	B1E2B20	1000495	B1E3B20	1000558	B1E4B20	1000621
	25	B1E1B25	1000433	B1E2B25	1000496	B1E3B25	1000559	B1E4B25	1000622
	30	B1E1B30	1000434	B1E2B30	1000497	B1E3B30	1000560	B1E4B30	1000623
	32	B1E1B32	1000435	B1E2B32	1000498	B1E3B32	1000561	B1E4B32	1000624
	35	B1E1B35	1000436	B1E2B35	1000499	B1E3B35	1000562	B1E4B35	1000625
	40	B1E1B40	1000437	B1E2B40	1000500	B1E3B40	1000563	B1E4B40	1000626
	50	B1E1B50	1000438	B1E2B50	1000501	B1E3B50	1000564	B1E4B50	1000627
	60	B1E1B60	1000439	B1E2B60	1000502	B1E3B60	1000565	B1E4B60	1000628
	63	B1E1B63	1000440	B1E2B63	1000503	B1E3B63	1000566	B1E4B63	1000629

Supplementary Protectors

B1E 1-63 A UL 1077 480Y/277 Vac; 60/125 Vdc

Certifications

IEC/EN 60947-2




Rated Amperage (A)		1 Pole - 277 Vac		2 Poles - 480 Vac		3 Poles - 480 Vac		4 Poles - 480 Vac	
		Product	Part Number	Product	Part Number	Product	Part Number	Product	Part Number
C Curve (5~10 In)	1	B1E1C1	1000441	B1E2C1	1000504	B1E3C1	1000567	B1E4C1	1000630
	1.6	B1E1C1.6	1000442	B1E2C1.6	1000505	B1E3C1.6	1000568	B1E4C1.6	1000631
	2	B1E1C2	1000443	B1E2C2	1000506	B1E3C2	1000569	B1E4C2	1000632
	3	B1E1C3	1000444	B1E2C3	1000507	B1E3C3	1000570	B1E4C3	1000633
	4	B1E1C4	1000445	B1E2C4	1000508	B1E3C4	1000571	B1E4C4	1000634
	5	B1E1C5	1000446	B1E2C5	1000509	B1E3C5	1000572	B1E4C5	1000635
	6	B1E1C6	1000447	B1E2C6	1000510	B1E3C6	1000573	B1E4C6	1000636
	8	B1E1C8	1000448	B1E2C8	1000511	B1E3C8	1000574	B1E4C8	1000637
	10	B1E1C10	1000449	B1E2C10	1000512	B1E3C10	1000575	B1E4C10	1000638
	13	B1E1C13	1000450	B1E2C13	1000513	B1E3C13	1000576	B1E4C13	1000639
	15	B1E1C15	1000451	B1E2C15	1000514	B1E3C15	1000577	B1E4C15	1000640
	16	B1E1C16	1000452	B1E2C16	1000515	B1E3C16	1000578	B1E4C16	1000641
	20	B1E1C20	1000453	B1E2C20	1000516	B1E3C20	1000579	B1E4C20	1000642
	25	B1E1C25	1000454	B1E2C25	1000517	B1E3C25	1000580	B1E4C25	1000643
	30	B1E1C30	1000455	B1E2C30	1000518	B1E3C30	1000581	B1E4C30	1000644
	32	B1E1C32	1000456	B1E2C32	1000519	B1E3C32	1000582	B1E4C32	1000645
	35	B1E1C35	1000457	B1E2C35	1000520	B1E3C35	1000583	B1E4C35	1000646
	40	B1E1C40	1000458	B1E2C40	1000521	B1E3C40	1000584	B1E4C40	1000647
	50	B1E1C50	1000459	B1E2C50	1000522	B1E3C50	1000585	B1E4C50	1000648
	60	B1E1C60	1000460	B1E2C60	1000523	B1E3C60	1000586	B1E4C60	1000649
	63	B1E1C63	1000461	B1E2C63	1000524	B1E3C63	1000587	B1E4C63	1000650

Supplementary Protectors

B1E 1-63 A UL 1077 480Y/277 Vac; 60/125 Vdc

Certifications

IEC/EN 60947-2




Rated Amperage (A)		1 Pole - 277 Vac		2 Poles - 480 Vac		3 Poles - 480 Vac		4 Poles - 480 Vac	
		Product	Part Number	Product	Part Number	Product	Part Number	Product	Part Number
D Curve (10~20In)	1	B1E1D1	1000462	B1E2D1	1000525	B1E3D1	1000588	B1E4D1	1000651
	1.6	B1E1D1.6	1000463	B1E2D1.6	1000526	B1E3D1.6	1000589	B1E4D1.6	1000652
	2	B1E1D2	1000464	B1E2D2	1000527	B1E3D2	1000590	B1E4D2	1000653
	3	B1E1D3	1000465	B1E2D3	1000528	B1E3D3	1000591	B1E4D3	1000654
	4	B1E1D4	1000466	B1E2D4	1000529	B1E3D4	1000592	B1E4D4	1000655
	5	B1E1D5	1000467	B1E2D5	1000530	B1E3D5	1000593	B1E4D5	1000656
	6	B1E1D6	1000468	B1E2D6	1000531	B1E3D6	1000594	B1E4D6	1000657
	8	B1E1D8	1000469	B1E2D8	1000532	B1E3D8	1000595	B1E4D8	1000658
	10	B1E1D10	1000470	B1E2D10	1000533	B1E3D10	1000596	B1E4D10	1000659
	13	B1E1D13	1000471	B1E2D13	1000534	B1E3D13	1000597	B1E4D13	1000660
	15	B1E1D15	1000472	B1E2D15	1000535	B1E3D15	1000598	B1E4D15	1000661
	16	B1E1D16	1000473	B1E2D16	1000536	B1E3D16	1000599	B1E4D16	1000662
	20	B1E1D20	1000474	B1E2D20	1000537	B1E3D20	1000600	B1E4D20	1000663
	25	B1E1D25	1000475	B1E2D25	1000538	B1E3D25	1000601	B1E4D25	1000664
	30	B1E1D30	1000476	B1E2D30	1000539	B1E3D30	1000602	B1E4D30	1000665
	32	B1E1D32	1000477	B1E2D32	1000540	B1E3D32	1000603	B1E4D32	1000666
	35	B1E1D35	1000478	B1E2D35	1000541	B1E3D35	1000604	B1E4D35	1000667
	40	B1E1D40	1000479	B1E2D40	1000542	B1E3D40	1000605	B1E4D40	1000668
	50	B1E1D50	1000480	B1E2D50	1000543	B1E3D50	1000606	B1E4D50	1000669
	60	B1E1D60	1000481	B1E2D60	1000544	B1E3D60	1000607	B1E4D60	1000670
	63	B1E1D63	1000482	B1E2D63	1000545	B1E3D63	1000608	B1E4D63	1000671

Supplementary Protectors

UL 1077 B1E 1-63 A Specifications

		B1E 1-63 A			
Conformed Standard		UL 1077			
Rated Operational Voltage (V)		480Y/277 Vac; 60/125 Vdc			
Rated Frequency (Hz)		50/60			
Rated Current (A)		1~63			
Number of Poles		1	2	3	4
Instantaneous Tripping Type		B (3~5 In), C (5~10 In), D (10~20 In)			
Interrupting (kA)	120 Vac	10	-		
	120/240 Vac	-			
	208 Vac	-			
	240 Vac	10			
	277 Vac	5	-		
	480 Vac	-	5		
	60 Vdc	10	-		
	110 Vdc				
	125 Vdc	-	10	-	
	220 Vdc	-			
Inverse Time-Delay Over-Current Release Type		Thermal-Magnetic			
Operations	Electrical	6,000			
	Mechanical	20,000			
Protection Degree		IP 20			
Wire AWG (mm^2)		18~4 (0.75~25)			
Operating Temperature Range		-22 °F to 167 °F (-30 °C to +75 °C)			
Insulation Coordination	Rated Insulation Voltage (Vac)	500			
	Rated Impulse Withstand Voltage (kV)	6			
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 68 °F (+20°C), the relative humidity does not exceed 90% At 104 °F (+40°C), the relative humidity does not exceed 50%			

Miniature Circuit Breakers

CE B1E 1-63A Specifications

		B1E0.5~63			
Conformed Standard		IEC60947-2			
Number of Poles		1	2	3	4
Rated Operational Voltage (V)		AC240/DC60	AC415/DC125	AC415	
Rated Frequency (Hz)		50/60			
Rated Current (A)		0.5~63			
Instantaneous Tripping Type		B (3~5 In), C (5~10 In), D (10~20 In)			
Ics (kA)	60 Vdc	7.5	-		
	125 Vdc	-	7.5	-	
	240Vac	7.5	-		
	415Vac	-	7.5	7.5	
Icu (kA)	60 Vdc	10	-		
	125 Vdc	-	10	-	
	240Vac	10	-		
	415Vac	-	10	10	
Inverse Time-Delay Over-Current Release Type		Thermal-Magnetic			
Operations	Electrical	6000			
	Mechanical	20000			
Protection Degree		IP 30 (except for terminals)			
Wire AWG (mm2)		18~4 (0.75~25)			
Operating Temperature Range		-22 °F to 167 °F (-30 °C to +75 °C)			
Insulation Coordination	Rated Insulation Voltage (Vac)	500			
	Rated Impulse Withstand Voltage (kV)	6			
Pollution Degree		Class III			
Over Voltage Category		Class III			
Mounting		35 mm DIN rail			
Altitude ft (m)		Does not exceed 6,561 (2,000)			
Atmospheric Conditions		At 68 °F (+20°C), the relative humidity does not exceed 90%			
		At 104 °F (+40°C), the relative humidity does not exceed 50%			

B

Supplementary Protectors
UL 1077 B1E 1-63 A Specifications

Temperature De-rating

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

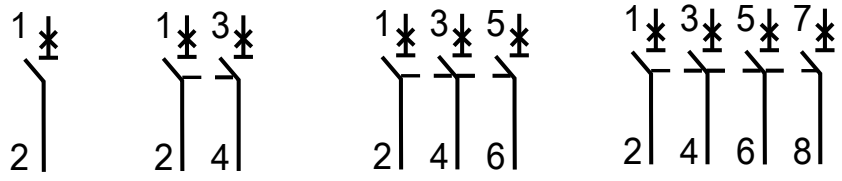
Ambient Temperature °F (°C)	-22 (-30)	-13 (-25)	-4 (-20)	5 (-15)	14 (-10)	23 (-5)	32 (0)	41 (5)	50 (10)	59 (15)	68 (20)	77 (25)	86 (30)	95 (35)	104 (40)	113 (45)	122 (50)	131 (55)	140 (60)	149 (65)	158 (70)	167 (75)
1	1.21	1.19	1.18	1.16	1.14	1.12	1.10	1.08	1.06	1.04	1.02					0.91	0.89	0.87	0.84	0.80	0.77	0.73
1.6	1.32	1.29	1.28	1.24	1.21	1.19	1.16	1.13	1.10	1.08	1.03					0.85	0.81	0.77	0.73	0.68	0.63	0.58
2	1.21	1.19	1.18	1.16	1.14	1.12	1.10	1.08	1.06	1.04	1.02					0.91	0.89	0.87	0.84	0.80	0.74	0.68
3	1.27	1.25	1.22	1.20	1.18		1.13	1.11	1.08							0.88	0.85	0.82	0.78	0.75	0.71	0.67
4	1.25	1.23	1.21	1.19	1.17	1.15	1.12	1.10	1.07	1.05	1.03					0.89	0.86	0.83	0.80	0.77	0.73	0.68
5	1.26	1.24	1.22				1.13		1.08										0.79	0.75	0.70	0.65
6	1.23	1.21	1.19	1.17	1.15	1.13	1.11	1.09	1.07		1.02					0.90	0.87	0.85	0.82	0.77	0.72	0.68
8	1.29	1.26	1.24	1.22	1.19	1.17	1.14	1.11	1.09	1.06	1.03					0.88	0.84	0.80	0.76	0.72	0.64	0.56
10	1.28	1.25	1.23	1.21	1.18	1.16	1.13		1.08								0.85	0.82	0.78	0.73	0.68	0.62
13	1.20	1.18	1.16	1.15	1.13	1.11	1.09	1.08	1.06	1.04	1.02					0.92	0.90	0.88	0.85	0.80	0.75	0.68
15	1.28	1.25	1.23	1.21	1.18	1.16	1.13	1.11	1.08	1.06	1.03			1.00		0.88	0.85	0.82	0.78	0.72	0.65	0.58
16	1.24	1.22	1.20	1.18	1.16	1.14														0.75	0.70	0.64
20	1.23	1.21	1.19	1.17	1.15	1.13	1.11	1.09	1.07	1.05	1.02					0.90	0.87	0.84	0.81	0.76	0.71	0.66
25	1.24	1.22	1.20	1.18	1.16	1.14												0.85	0.82	0.77	0.72	0.67
30	1.30	1.27	1.25	1.22	1.20	1.17	1.15	1.12	1.09	1.06	1.03					0.87	0.83	0.79	0.75	0.69	0.64	0.58
32	1.23	1.21	1.19	1.17	1.15	1.13	1.11	1.09	1.07	1.04	1.02					0.91	0.88	0.85	0.78	0.73	0.68	0.62
35	1.31	1.29	1.26	1.23	1.21	1.18	1.15	1.12	1.09	1.06	1.03					0.86	0.82	0.78	0.74	0.69	0.64	0.58
40	1.23	1.21	1.19	1.17	1.15	1.13	1.11	1.09	1.07	1.05	1.02					0.91	0.88	0.85	0.82	0.74	0.66	0.56
45																						0.58
50																				0.75	0.68	0.60
60	1.29	1.27	1.24	1.22	1.19	1.17	1.14	1.11	1.09	1.06	1.03					0.87	0.84	0.80	0.76	0.70	0.63	0.55
63	1.27	1.25	1.22	1.20	1.18	1.15	1.13		1.08	1.05	0.87					0.88	0.85	0.82	0.78	0.72	0.65	0.57

Elevation De-rating

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

Elevation ft (m)	6,561 (2,000)	9,842 (3,000)	13,123 (4,000)	16,404 (5,000)
Dielectric Strength (V)	3,000	2,500	2,000	1,800
Max Working Voltage Per Pole (V)	277 Vac / 60 Vdc			
Rated Amperes at 77 °F (25 °C) (A)	1 x In	0.95 x In	0.93 x In	0.90 x In

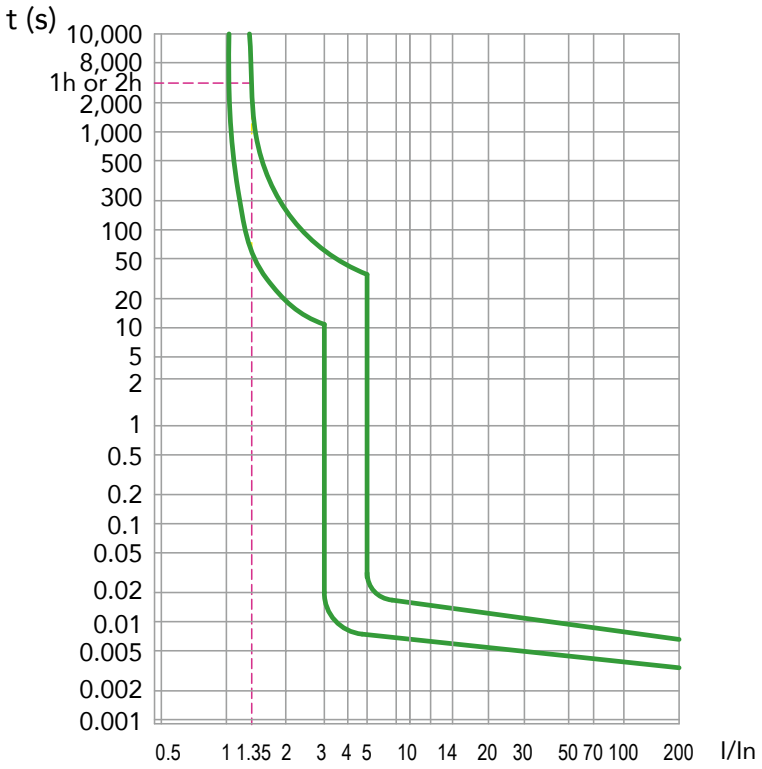
Wiring Diagram



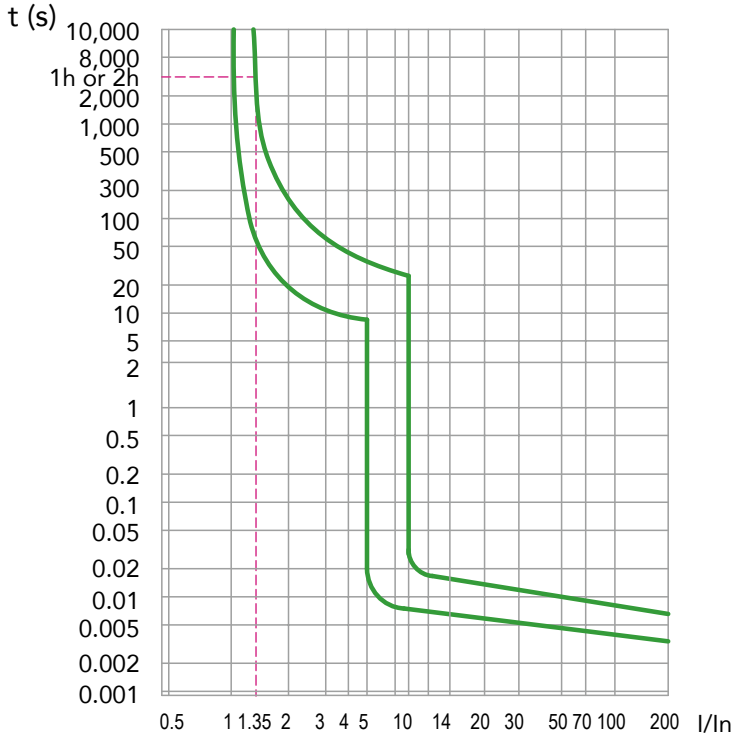
Supplementary Protectors

UL 1077 B1E 1-63 A Trip Curve

B Curve - 1~63 A
(3~5 In)



C Curve - 1~63 A
(5~10 In)

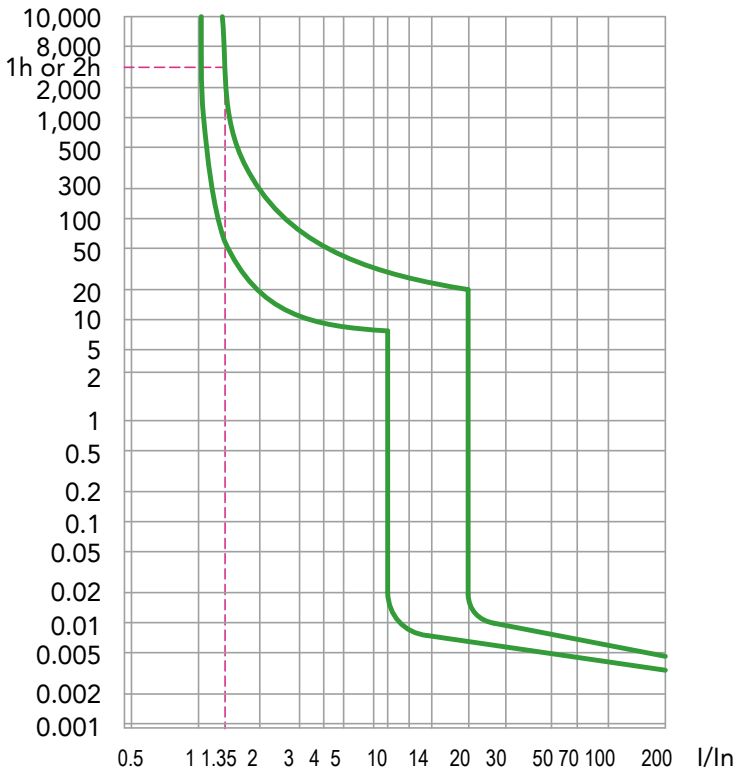


B

Supplementary Protectors

UL 1077 B1E 1-63 A Trip Curve

D Curve - 1~63 A
(10~20 In)



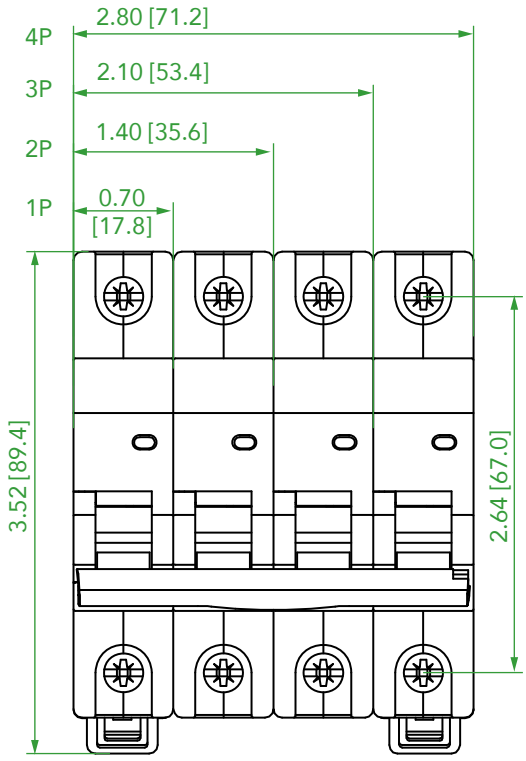
Supplementary Protectors

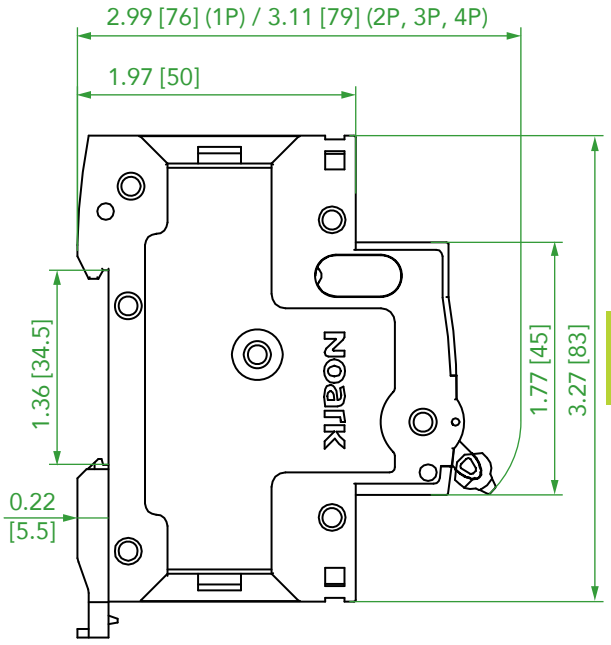
UL 1077 B1E 1-63 A Dimensions

B1E - 1~63 A

1P/2P/3P/4P

Unit: in [mm]





B

SUPPLEMENTARY PROTECTORS

UL 1077

Features

- UL 1077 recognized miniature circuit breakers from 80 to 125 A current rating
- Breakers mount on standard 35 mm DIN rail
- Standard ratings of 5 kA at 480Y/277 Vac
- Suitable for supplementary protection
- Thermal-magnetic over current protection – short-circuit protection 9.6-14.4 In curve
- Trip-free design – breaker cannot be defeated by holding the handle in the ON position
- Captive screws cannot be lost
- Fulfill UL 1077, IEC 60947-2 standard
- Module width of 1.06 in (27 mm) per pole
- Contact position indicator (red/green)

Typical Application

- Supplementary Protection
  - ✓ Control circuits
  - ✓ Lighting
  - ✓ Business equipment
  - ✓ Appliances

Supplementary Protectors
UL 1077 National and International Standards

Certifications

UL 1077 No. E355391 / IEC 60947-2

- Supplementary Protectors are UL Recognized for use in the United States in accordance with NFPA® 70 (NEC).
- The devices comply with UL 1077 No. E355391
- These devices are for international and domestic use, and also comply with IEC 60947-2 and are CE marked.
- B1E 80~125A series has SAA certificate.

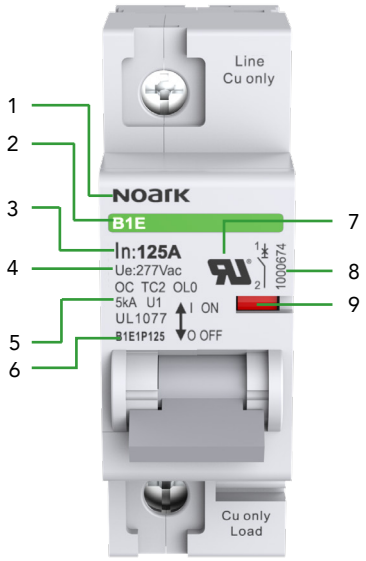
RoHS

- These devices are RoHS compliant.

Supplementary Protectors
UL 1077 Product Selection Guide

Label

These supplementary protectors are equipped with: standard box terminals that accept multiple conductors. All breakers mount on standard 35 mm DIN rail. Breakers can also be reverse feed.



1. Brand
2. Product Type
3. Rated Current
4. Rated Voltage
5. Frequency
6. SKU
7. UL Recognized Component
8. Part Number
9. Breaker Status Indicator

C

Product Selection Guide

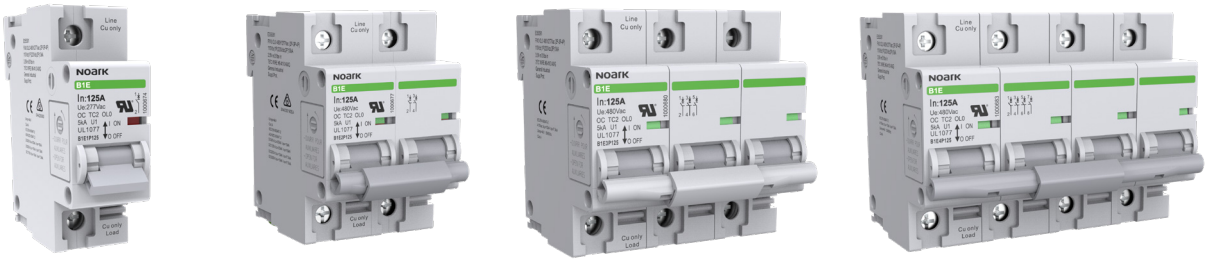
B1E	1P	80
NOARK Ex9 Series - B1E	Pole	Rated Current
	1P:1 Pole	80: 80 A 100: 100 A 125: 125 A
	2P:2 Poles	
	3P:3 Poles	
	4P:4 Poles	

Supplementary Protectors

B1E 80-125 A UL 1077 480Y/277 Vac; 110/220 Vdc

Certifications

IEC/EN 60947-2



Rated Amperage (A)	1 Pole		2 Poles		3 Poles		4 Poles	
	Product	Part Number	Product	Part Number	Product	Part Number	Product	Part Number
80	B1E1P80	1000672	B1E2P80	1000675	B1E3P80	1000678	B1E4P80	1000681
100	B1E1P100	1000673	B1E2P100	1000676	B1E3P100	1000679	B1E4P100	1000682
125	B1E1P125	1000674	B1E2P125	1000677	B1E3P125	1000680	B1E4P125	1000683

Supplementary Protectors

UL 1077 B1E 80-125 A Specifications

		B1E			
Conformed Standard		UL 1077			
Rated Operational Voltage (V)		480Y/277 Vac, 110/220 Vdc			
Rated Frequency (Hz)		50/60			
Rated Current (A)		80~125			
Number of Poles		1	2	3	4
Instantaneous Tripping Type		9.6-14.4 In			
Interrupting (kA)	120 Vac	-			
	120/240 Vac	5	-		
	208 Vac				
	240 Vac				
	277 Vac				
	480 Vac	-	5		
	60 Vdc	10	-		
	110 Vdc	10	10	-	
	125 Vdc	-			
	220 Vdc	-	10	-	
Inverse Time-Delay Over-Current Release Type		Thermal-Magnetic			
Operations	Electrical	1,500 (80~100 A) 1,000 (125 A)			
	Mechanical	8,000 (80~100 A) 7,000 (125 A)			
Protection Degree		IP 20			
Wire AWG (mm^2)		4~1/0 (25~50)			
Operating Temperature Range		-22 °F to 167 °F (-30 °C to +75 °C)			
Insulation Coordination	Rated Insulation Voltage (Vac)	500			
	Rated Impulse Withstand Voltage (kV)	4			
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 68 °F (+20°C), the relative humidity does not exceed 90% At 104 °F (+40°C), the relative humidity does not exceed 50%			

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Miniature Circuit Breakers

CE B1E 80-125A Specifications

		B1E 80~125			
Conformed Standard		IEC60947-2			
Number of Poles		1	2	3	4
Rated Operational Voltage (V)		AC220/230/240V	AC380/400/415V		
		DC60/80/110V	DC80/125/220/250V	-	-
Rated Current (A)		80~125			
Instantaneous Tripping Type		6.4~9.6 In			
Ics(kA)	220Vac	10	-		
	230Vac	10	-		
	240Vac	10	-		
	380Vac	-	10		
	400Vac	-	10		
	415Vac	-	10		
	60 Vdc	15	-	-	-
	80 Vdc	7.5	15	-	-
	110 Vdc	7.5	-	-	-
	125 Vdc	-	15	-	-
	220 Vdc	-	7.5	-	-
	250 Vdc	-	7.5	-	-
Icu(kA)	220Vac	7.5	-		
	230Vac	7.5	-		
	240Vac	7.5	-		
	380Vac	-	7.5		
	400Vac	-	7.5		
	415Vac	-	7.5		
	60 Vdc	20	-	-	-
	80 Vdc	10	20	-	-
	110 Vdc	10	-	-	-
	125 Vdc	-	20	-	-
	220 Vdc	-	10	-	-
	250 Vdc	-	10	-	-
Inverse Time-Delay Over-Current Release Type		Thermal-Magnetic			
Operations	Electrical	1500 (80~100A);1000 (125A)			
	Mechanical	8000 (80~100A);7000 (125A)			
Protection Degree		IP 20			
Wire AWG (mm^2)		4~1/0 (25~50)			
Operating Temperature Range		-22 °F to 167 °F (-30 °C to +75 °C)			
Insulation Coordination	Rated Insulation Voltage (Vac)	500			
	Rated Impulse Withstand Voltage (kV)	4			
Pollution Degree		Class III			
Over Voltage Category		Class III			
Mounting		35 mm DIN rail			
Altitude ft (m)		Does not exceed 6,561 (2,000)			
Atmospheric Conditions		At 68 °F (+20°C), the relative humidity does not exceed 90%			
		At 104 °F (+40°C), the relative humidity does not exceed 50%			

Supplementary Protectors
UL 1077 B1E 80-125 A Specifications

Temperature De-rating

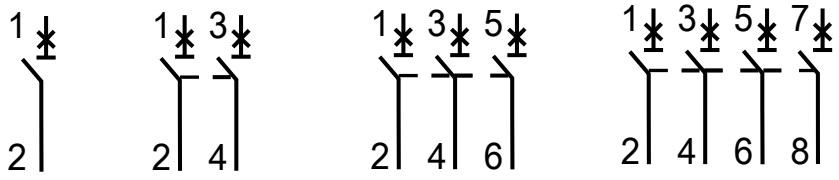
Ambient Temperature °F (°C)	When the ambient temperature slightly changes, please refer to the table below for the Temperature Compensation Coefficient																
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	75°C
80A	1.48	1.40	1.34	1.27	1.21	1.14	1.07	1.06	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 strength above 6,561 ft (2,000 m)

Elevation ft (m)	6,561 (2,000)	9,842 (3,000)	13,123 (4,000)	16,404 (5,000)
Rated Amperes at 86 °F (30 °C) (A)	1 x In	0.96 x In	0.94 x In	0.92 x In
Rated Voltage at 86 °F (30 °C) (V)	1 x Ue	0.89 x Ue	0.78 x Ue	0.68 x Ue

Wiring Diagram



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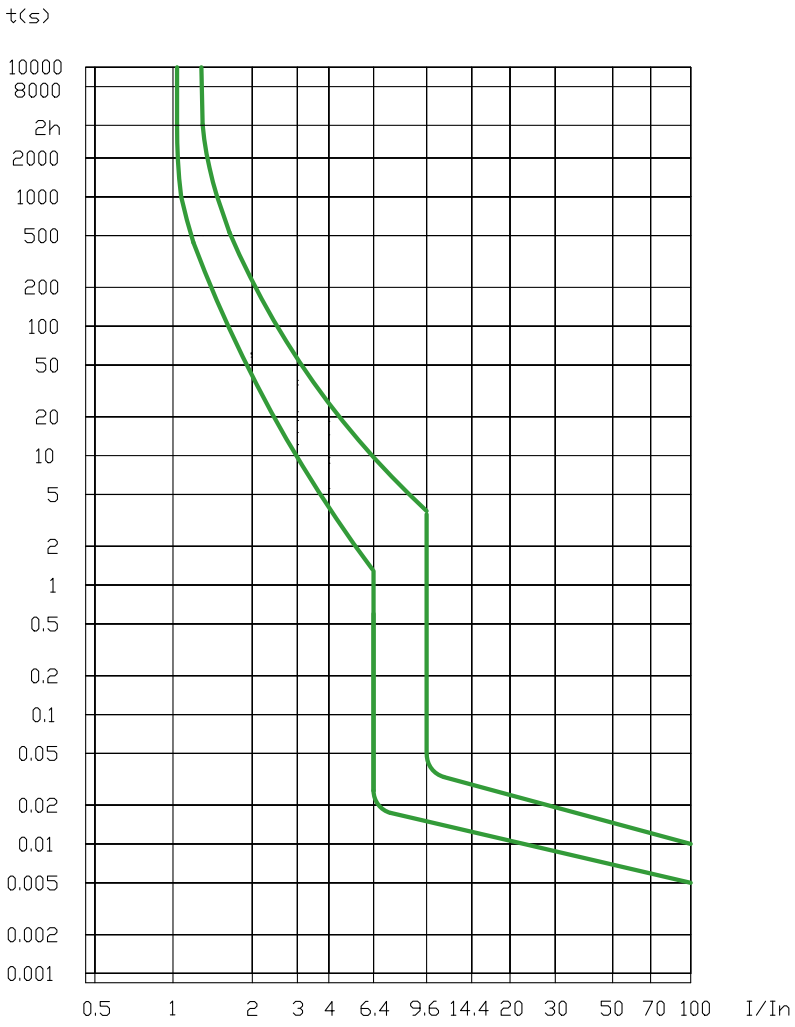
Supplementary Protectors

UL 1077 B1E 80-125 A Trip Curve

Curve - 80~125 A
(6.4~9.6 In)



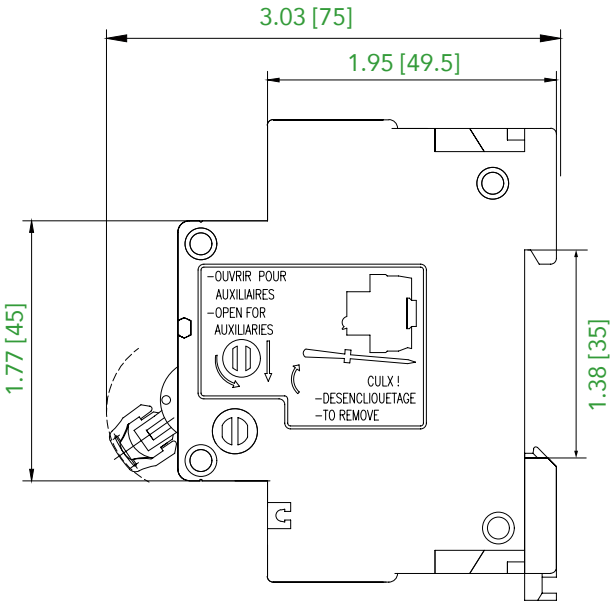
Supplementary Protectors

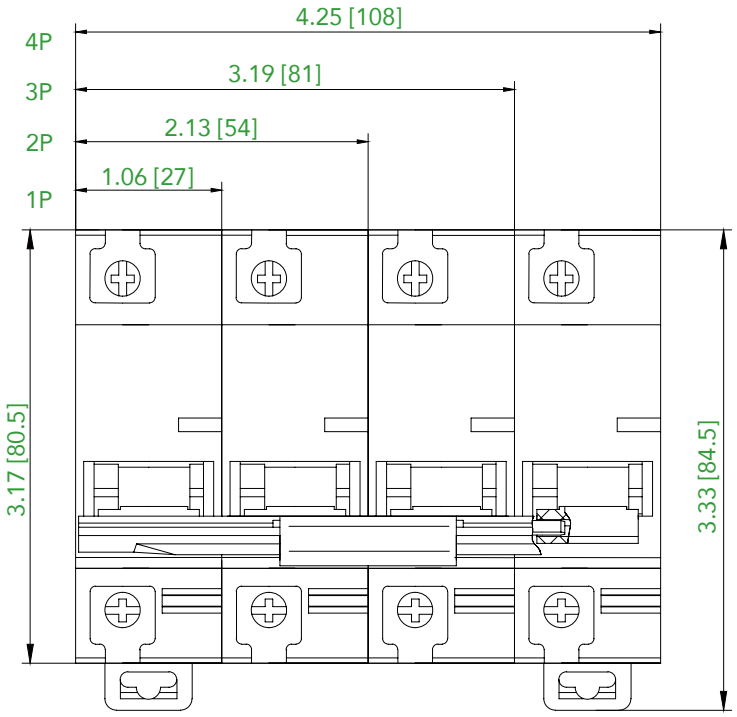
UL 1077 B1E 80-125 A Dimensions

B1E - 80~125 A

1P/2P/3P/4P

Unit: in [mm]





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Supplementary Protectors

UL 1077 Accessories: Alarm Switch,Auxiliary Contact

AL31	11	L
Description	Auxiliary Contact	Device Category
Alarm Switch	11: 1NO+1NC	L: UL 1077(Used for 80~125 A)

Accessory Description	Product	Part Number
1NO+1NC 480Vac / 130Vdc	AL3111L	1002612

AX31	11	L
Description	Auxiliary Contact	Device Category
Auxiliary Contact	11: 1NO+1NC	L: UL 1077(Used for 80~125 A)

Accessory Description	Product	Part Number
1NO+1NC 480Vac / 130Vdc	AX3111L	1002611

SHT31	11	L	A
Description	Auxiliary Contact	Device Category	Rated Voltage
Shunt Trip	11: 1NO+1NC	L: UL 1077(Used for 80~125 A)	A:240-415 Vac
			B:24-48 Vac/dc

Accessory Description		Product	Part Number
Shunt Trip	1NO+1NC 24-48 Vac/dc	SHT3111LB	1002609
	1NO+1NC 240-415 Vac	SHT3111LA	1002610

Supplementary Protectors

UL 1077 Accessories: Alarm Switch,Auxiliary Contact

UVT31	L
Description	Device Category
Under-Voltage Trip	L: UL 1077(Used for 80~125 A)

Accessory Description		Product	Part Number
Under-Voltage Trip	240Vac	UVT31L	1002608

		Alarm Contact	Auxiliary Contact	Shunt Trip	Under-Voltage Trip
		AL	AX	SHT+AX	UVT
Applicable Standard		UL1077			
Ratings (50/60 Hz)	Vac	480		240-415	240
	Vdc	130		-	-
	Vac/dc	-		24-48	-
Auxiliary Contact Configuration		1NO+1NC	1NO+1NC	1NO+1NC	-

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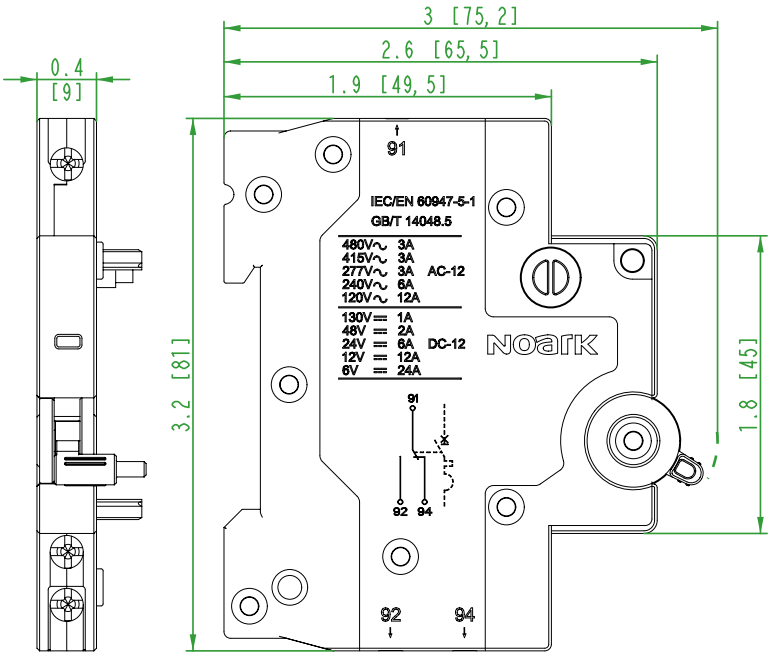
Supplementary Protectors

UL 1077 Accessories: Alarm Switch,Auxiliary Contact

AL31L/AX31L

Alarm Switch/Auxiliary contact

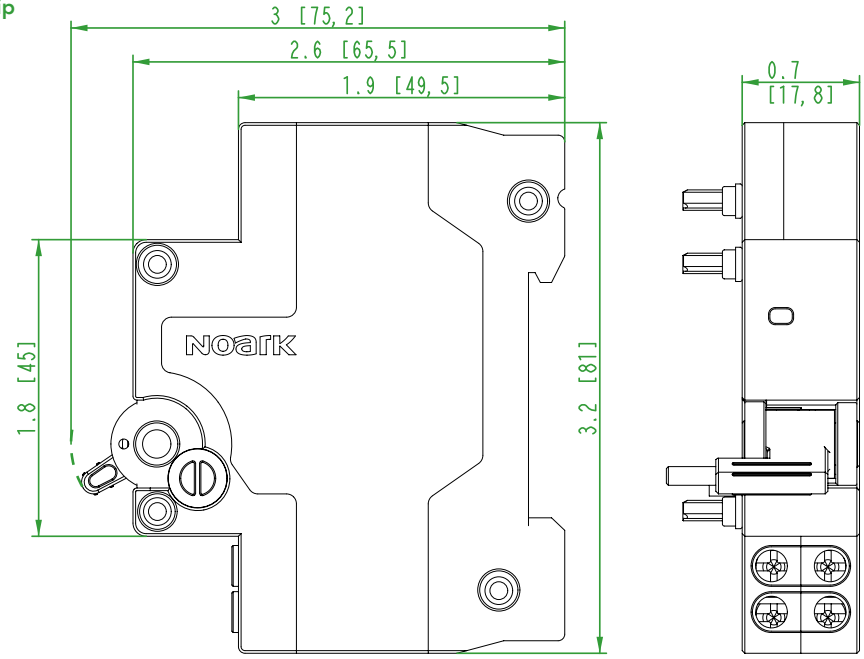
Unit: in [mm]



SHT3111L/ UVT31L

Shunt Trip/Under-Voltage Trip

Unit: in [mm]



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