

NOARK®

Catalog

Ex9BP DC Miniature Circuit Breakers



na.noark-electric.com

Company Overview

About us

NOARK Electric is a global manufacturer of low-voltage electrical components for industrial applications. We specialize in motor controls and circuit protection for original equipment manufacturers. Our mission is to provide customers with the highest quality products at an exceptional value and back them with world-class service and support. Every NOARK product is tested and certified to the highest industry standards and covered by our exclusive five-year limited warranty.

Research and Development

The entire portfolio of high-quality NOARK products is designed for manufacturing and assembly (DFMA). Each component is developed in-house by our engineering team to meet the strictest standards and performance requirements. This dedication to excellence has led to the development of patented technology found in many of our products.

World-class Manufacturing

After being thoroughly tested, approved and certified – each NOARK product is sent into production at our state-of-the-art manufacturing facilities. This allows us to maintain strict quality control standards throughout the manufacturing process. In addition, NOARK Electric adheres to a policy of environmental protection and sustainability.

North American Distribution

NOARK's primary distribution center is located in Pomona, CA, with the aim of ensuring prompt and reliable deliveries of the entire product range to our customers all over North America. Our supply chain team works closely with our factories and logistics partners to ensure the availability of our products on the North American market and provide logistics services on the level which our customers expect.

NOARK Electric is a wholly subsidiary of the largest electrical manufacturing group in Asia with over 30 thousand employees and sales revenue of \$10 billion USD. We have corporate facilities in Los Angeles, Shanghai and Prague to service the requirements of individual markets and countries.

140+ Countries **300+** Overseas Distributors **20** Overseas Subsidiaries **22** Logistics Centers **3** R & D Centers **10,000,000+** Sq.Ft. Manufacturing Space **30,000+** Employees Worldwide



Miniature Circuit Breakers

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Miniature Circuit Breakers

Circuit Breakers

Features

- Designed for DC circuit
 - Rated current:10-63A(30°C)
 - Characteristic Tripping range(9.6-14.4 In)
 - Complied to UL1077
 - Support non-polarised connection
 - Lower current arc-breaking technology
-

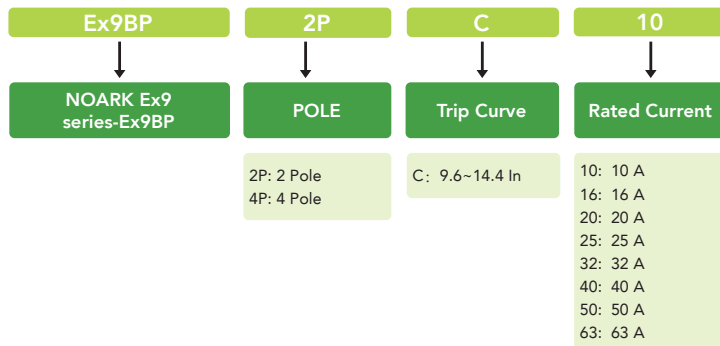
Standard and Certification

- UL1077 (E355391)
- IEC/EN 60947-2,
- IEC/EN 60947-2 ANNEX P
- SAA-203390-EA (SAA180871)
- TUV (B 075006 0047 Rev. 02)

Miniature Circuit Breakers

Product Selection Guide

Product Selection Guide



Rated Amperage (A)	2 Pole		4 Pole		
	Product	Part Number	Product	Part Number	
C Curve (9.6~14.4In)	10	Ex9BP2PC10	1002582	Ex9BP4PC10	1002590
	16	Ex9BP2PC16	1002583	Ex9BP4PC16	1002591
	20	Ex9BP2PC20	1002584	Ex9BP4PC20	1002592
	25	Ex9BP2PC25	1002585	Ex9BP4PC25	1002593
	32	Ex9BP2PC32	1002586	Ex9BP4PC32	1002594
	40	Ex9BP2PC40	1002587	Ex9BP4PC40	1002595
	50	Ex9BP2PC50	1002588	Ex9BP4PC50	1002596
	63	Ex9BP2PC63	1002589	Ex9BP4PC63	1002597

Miniature Circuit Breakers

Ex9BP Specifications

		Ex9BP	
Conformed Standard		UL 1077	
Rated Operational Voltage (V)		300Vdc	600Vdc
Rated Current (A)		10~63A	
Number of Poles		2	4
Instantaneous Tripping Type		C (9.6~14.4In)	
Inverse Time-Delay Over-Current Release Type		Thermal-magnetic	
Service Life	Mechanical	20,000	
	Electrical	6000	
Protection Degree		IP 20	
Wire AWG (mm ²)		18~4 (0.75~25)	
Operation Temperature Range		-22 °F to 158 °F (-30 °C to +70 °C)	
Insulation Coordination	Rated Insulation Voltage (Vdc)	1000V	
	Rated Impulse Withstand Voltage (kV)	4	6
Short Circuit Current Rating(kA)		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%	

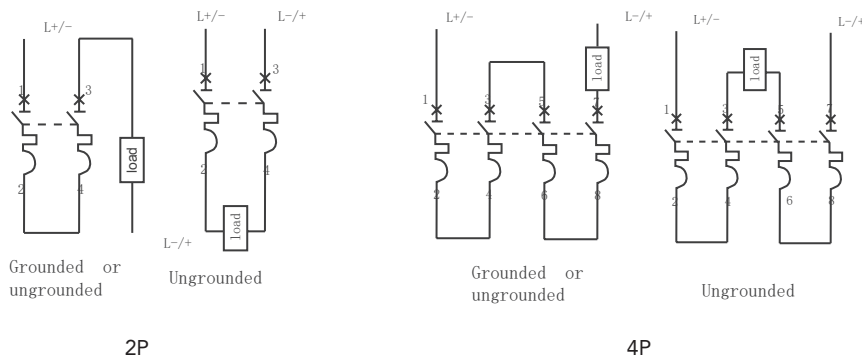
Miniature Circuit Breakers

Ex9BP Specifications

Temperature De-rating																						
When the ambient temperature 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)	
Rated Current	10	1.30	1.28	1.26	1.24	1.21	1.20	1.17	1.14	1.11	1.08	1.06	1.04	1.02	1.02	1	0.98	0.96	0.93	0.89	0.85	0.81
	16	1.25	1.23	1.21	1.19	1.16	1.15	1.13	1.11	1.09	1.06	1.05	1.03		1.02	1	0.98	0.95	0.92	0.89	0.84	0.80
	20	1.24	1.22	1.20	1.18	1.16	1.15	1.13	1.11	1.08	1.06	1.05	1.03		1.02	1	0.98	0.95	0.92	0.89	0.84	0.80
	25	1.23	1.21	1.19	1.17	1.15	1.14	1.12	1.10	1.08	1.06	1.04	1.03		1.02	1	0.98	0.95	0.92	0.88	0.84	0.79
	32	1.24	1.22	1.20	1.18	1.16	1.15	1.13	1.10	1.08	1.06	1.05	1.03		1.02	1	0.98	0.95	0.92	0.88	0.84	0.79
	40	1.24	1.22	1.20	1.18	1.16	1.15	1.13	1.11	1.09	1.06	1.05	1.03		1.01	1	0.98	0.95	0.91	0.87	0.83	0.78
	50	1.25	1.23	1.21	1.18	1.16	1.15	1.13	1.11	1.09	1.06	1.05	1.03		1.01	1	0.97	0.94	0.90	0.86	0.81	0.76
	63	1.28	1.25	1.22	1.20	1.17	1.15	1.12	1.10	1.08	1.06	1.04	1.03		1.01	1	0.97	0.93	0.90	0.85	0.80	0.75

Elevation De-rating				
Breaker elevation de-rating with dielectric strength above 6,561 ft (2,000 m)				
Elevation ft (m)	6561(2000)	9842(3000)	13123(4000)	16404(5000)
Dielectric Strength (V)	3000	2500	2000	1800
Max Working Voltage Per Pole (V)	440Vdc			
Rated Amperes at 86 °F (30 °C) (A)	1×In	0.95×In	0.93×In	0.9×In

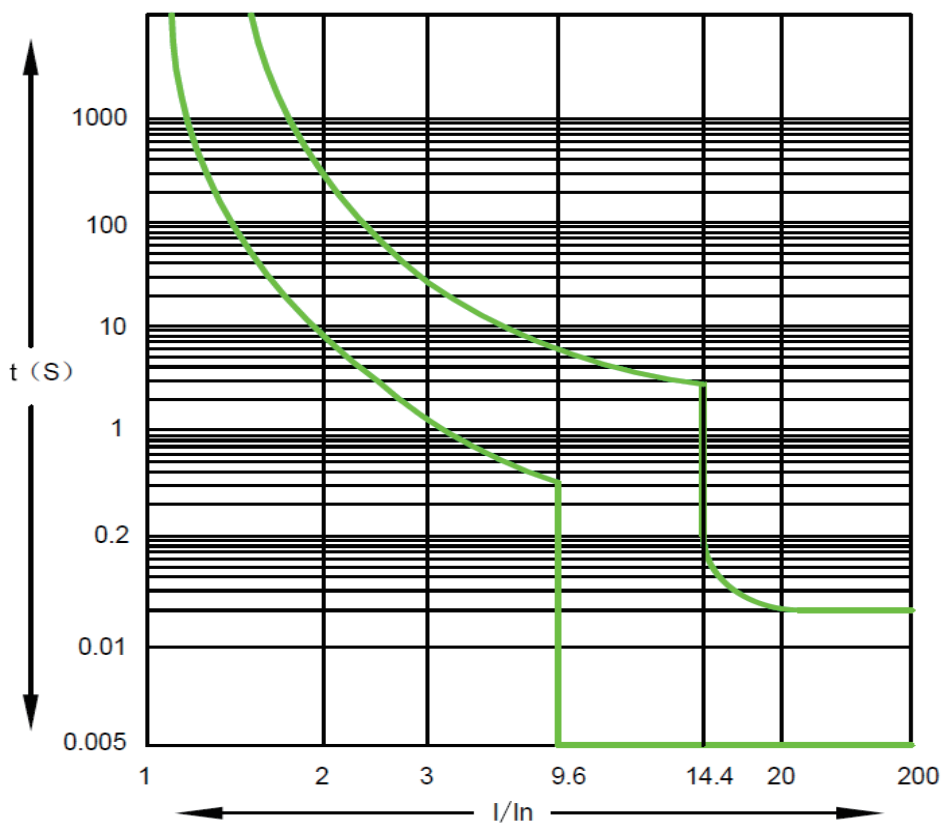
Wiring Diagram



Miniature Circuit Breakers

Trip Curve

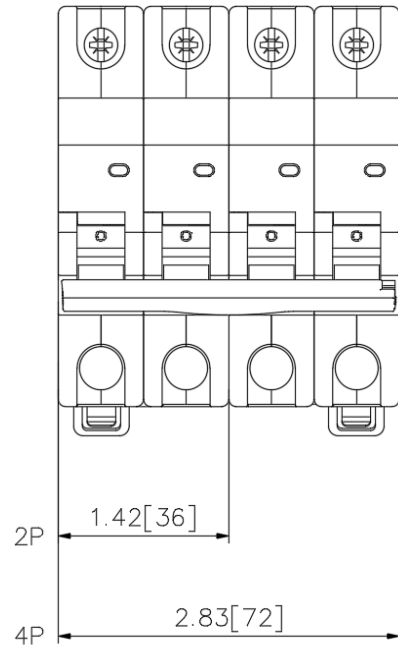
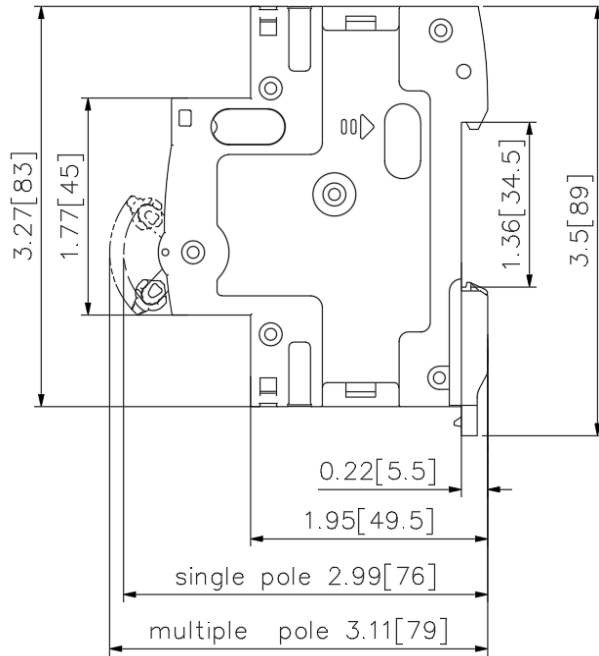
C curve:(9.6-14.4In)



Miniature Circuit Breakers

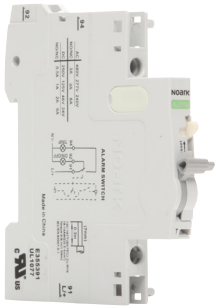
Ex9BP Dimensions

Ex9BP
2P/4P
Unit: in [mm]
1in=25.4 mm

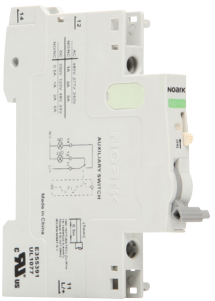
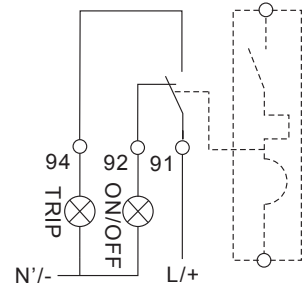


Supplementary Protectors

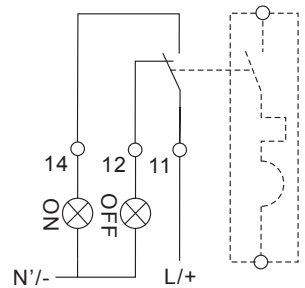
Accessories: Alarm Switch, Auxiliary Contact



AL31	11	U
Description	Auxiliary Contact	Device Category
Alarm Switch	11: 1NO+1NC	U: UL 1077 (Used for 1~63 A)
Accessory Description	Product	Part Number
Alarm Switch	AL3111U	1001216



AX31	11	U
Description	Auxiliary Contact	Device Category
Auxiliary Contact	11: 1NO+1NC	U: UL 1077 (Used for 1~63 A)
Accessory Description	Product	Part Number
Auxiliary Contact	AX3111U	1001215

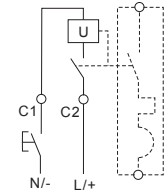


Supplementary Protectors

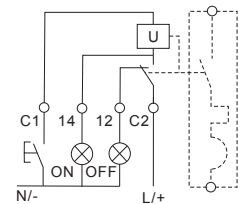
Accessories: Shunt Trip and Under-Voltage Trip



SHT31	11	U	A
Description	Auxiliary Contact	Device Category	Rated Voltage
Shunt Trip	01: 1NC 10: 1NO 11: 1NO+1NC Blank: No Auxiliary Contact	U: UL 1077 (Used for 1~63 A)	A: 110~415 Vac, 110~130 Vdc B: 48 Vac/dc C: 12~24 Vac/dc



SHT31

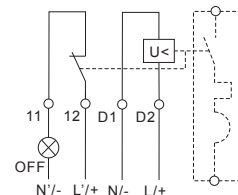


SHT3111

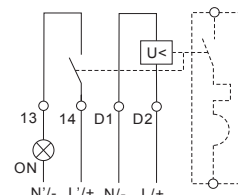
Accessory Description	Product	Part Number
1NO+1NC 110-415 Vac/110-130 Vdc	SHT3111UA	1001223
1NO+1NC 48-60 Vac/dc	SHT3111UB	1001224
1NO+1NC 12-24 Vac/dc	SHT3111UC	1001225
Shunt Trip		
110-415 Vac/110-130 Vdc	SHT31UA	1001226
48-60 Vac/dc	SHT31UB	1001227
12-24 Vac/dc	SHT31UC	1001228
1NO AC110-415V/DC110-130V	SHT3110UA	1002537
1NC AC110-415V/DC110-130V	SHT3101UA	1002540



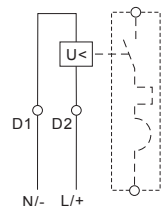
UVT31	01	U	B
Description	Auxiliary Contact	Device Category	Rated Voltage
Under-Voltage Trip	01: 1NC 10: 1NO Blank: No Auxiliary Contact	U: UL 1077 (Used for 1~63 A)	B: 48 Vac/dc



UVT3101



UVT3110



N/- L/+

Supplementary Protectors

Accessories: Specifications

	Alarm Contact	Auxiliary Contact	Shunt Trip		Under-Voltage Trip	
	AL	AX	SHT	SHT+AX	UVT	UVT+AX
Applicable Standard	UL 489 / UL 489A					
Ratings (50/60 Hz)	Vdc	250/0.5 A, 125/1 A, 48/2 A, 24/6 A	110~130		-	
	Vac/dc	-	48~60, 12~24		48	
Auxiliary Contact Configuration	-	1NO+1NC	-	1NO,1NC,1NO+1NC	-	1NO/1NC

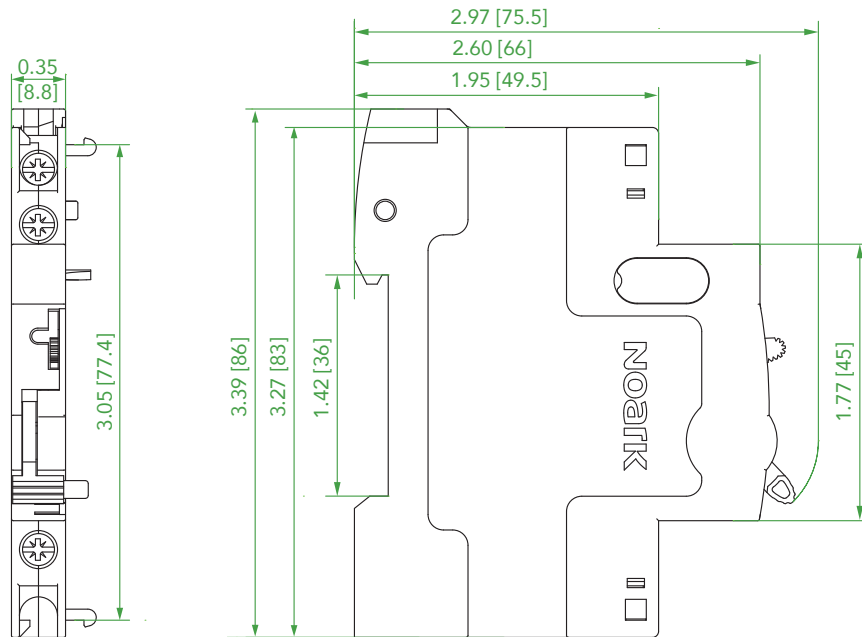
Supplementary Protectors

Accessory Dimensions: Alarm Switch/Aux Contact & Shunt/Under Voltage Trip

AL31U/AX31U

Alarm Switch/Auxiliary Contact

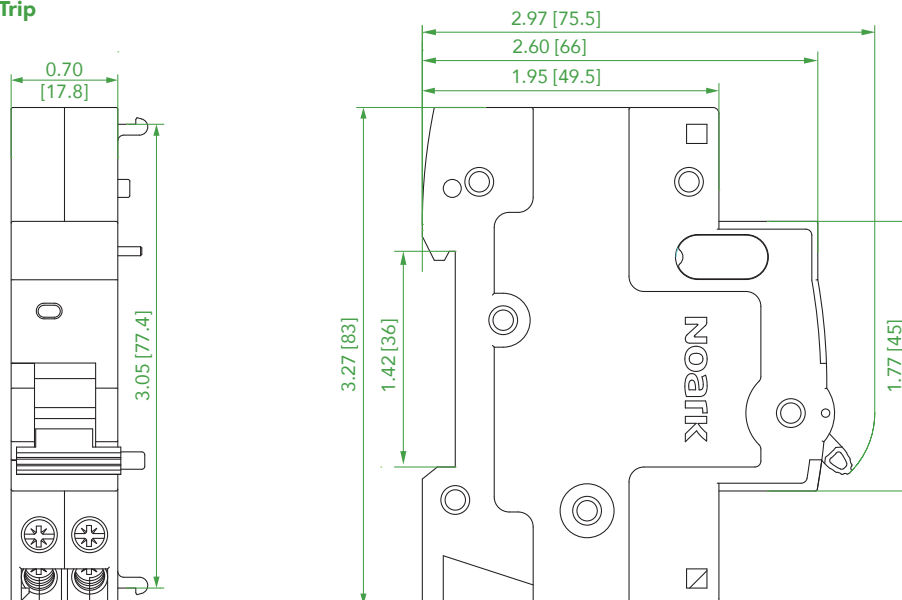
Unit: in [mm]



SHT31U/UVT31U

Shunt Trip/Under-Voltage Trip

Unit: in [mm]



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