



Usage Manual

MINIATURE CIRCUIT BREAKER (MCB)

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Thank you for choosing **HX** Series Miniature Circuit Breaker. Please read this manual before installation, operation and maintenance.

OVERVIEW

Miniature Circuit Breaker are magnetic switching devices that can conduct, transport and break electrical currents at normal operating conditions.

They conduct the current for estimated period, break the current at abnormal circuit conditions such as over-current or short-circuit. They include units providing thermal and magnetic protection.

STANDARD AND QUALITY CERTIFICATES



Model No.	In (A)	Tripping Characteristic	Standard
APEXB7-40 N APEXB7-100S	6,10,16,20,25,32,40	B,C	IEC/EN60898-1
APEXB7-100 APEXM3-63	1,2,3,4,5,6,8,10,13,16,20,25,32,40,50,63	B,C,D	
APEXB7-100H APEXM3-63H			
APEXB7-100DC APEXM3-63	1,2,3,4,6,10,16,20,25,32,40,50,63		
APEXB7-125	63,80,100,125	10In±20%	IEC/EN60947-2

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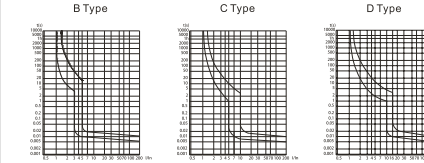
TECHNICAL SPECIFICATIONS

Model No.	Rated Voltage Ue	Rated Breaking Capacity	Number of Poles
APEXB7-40 N	230/240V	6000A	1P+N
APEXB7-100S	230/400V,400V	4500A	1P,1P+N,2P,3P,3P+N,4P
APEXB7-100		6000A	
APEXM3-63		10000A	
APEXB7-100H			
APEXM3-63H			
APEXB7-100DC	250, 500, 1000VDC	6000 / 10000A	1P, 2P, 4P
APEXM3-63	230/400V,400V	10000A	1P, 2P, 3P, 4P
APEXB7-125	230/240V,400/415V	6000A	

CHARACTERISTICS CURVES

HXB7-63, HXB7-100		30-35°C				
		Thermal Tripping		Magnetic Tripping		
Asper IEC60898	No tripping current	Tripping current t	Time Limits t	Hold current	Trip current	Time Limits t
B Curve	1.13× IN	1.45× IN	>1h <1h	3× IN	5× IN	>0.1s <0.1s
C Curve	1.13× IN	1.45× IN	>1h <1h	5× IN	10× IN	>0.1s <0.1s
D Curve	1.13× IN	1.45× IN	>1h <1h	10× IN	20× IN	>0.1s <0.1s

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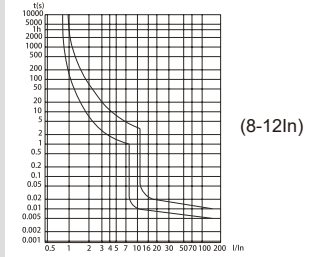
Influence of ambient temperature on load carrying capacity

Rated current In(A)	Ambient temperature / °C										
	-40	-30	-20	-10	0	10	20	30	40	50	
1	1.35	1.30	1.20	1.20	1.15	3.30	1.05	1	0.90	0.88	
2	2.70	2.60	2.50	2.40	2.30	2.20	2.10	2	1.90	1.80	
3	4.05	3.90	3.75	3.60	3.45	3.30	3.15	3	2.80	2.60	
4	5.40	5.20	5.00	4.80	4.60	4.40	4.20	4	3.70	3.50	
5	6.75	6.50	6.25	6.00	5.75	5.50	5.25	5	4.70	4.50	
6	8.10	7.80	7.50	7.20	6.90	6.60	6.30	6	5.60	5.30	
8	11.20	10.80	10.00	9.60	9.20	8.80	8.40	8	7.40	7.00	
10	13.50	13.00	12.50	12.00	11.50	11.00	10.50	10	9.30	8.80	
13	17.70	17.00	16.30	15.60	15.00	14.30	13.70	13	12.00	11.40	
16	21.60	20.80	20.00	19.20	18.40	17.60	16.80	16	14.90	14.00	
20	27.00	26.00	25.00	24.00	23.00	22.00	21.00	20	18.60	17.50	
25	33.90	32.60	31.30	30.00	28.80	27.50	26.30	25	23.20	22.00	
32	43.20	41.60	40.00	38.40	36.80	35.20	33.60	32	30.00	28.20	
40	54.00	52.00	50.00	48.00	46.00	44.00	42.00	40	37.20	35.20	
50	67.50	65.00	62.50	60.00	57.50	55.00	52.50	50	46.50	44.00	
63	85.00	82.00	78.80	75.60	72.50	69.30	66.20	63	58.60	55.40	

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CHARACTERISTICS CURVES

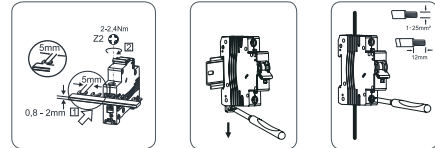
APEXB7-100DC APEXB7-125 APEXM3-63		Thermal Tripping		Magnetic Tripping		
Asper IEC60947	No tripping current	Tripping current I _z	Time Limits t	Hold current I ₄	Trip current I ₅	Time Limits t
1-63A	1.05×IN		>2h	8×IN		>0.2s
63-125A		1.30×IN	<2h		12×IN	<0.2s



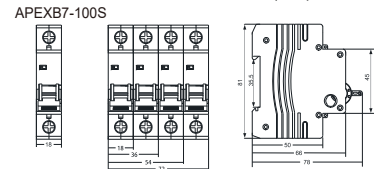
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PRODUCT ASSEMBLY

• Product calibrating and programming are performed during manufacturing and each product is offered to sales after a thorough quality control. There are no maintenance or programming tasks that the users can perform.



Overall Installation Dimension (mm)

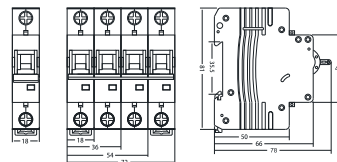


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APEXB7-40N

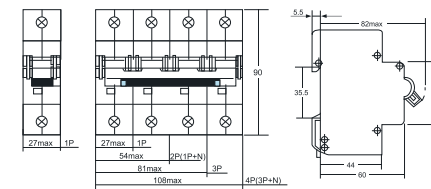


APEXB7-100H APEXB7-100

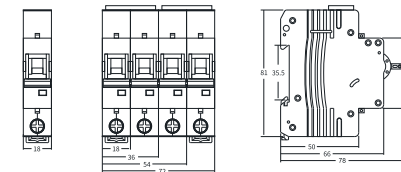


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APEXB7-125

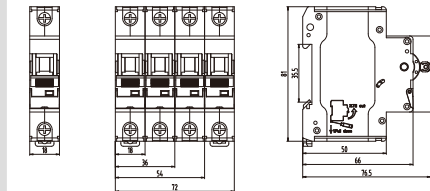


APEXB7-100DC

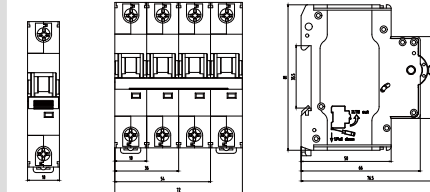


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APEXM3-63

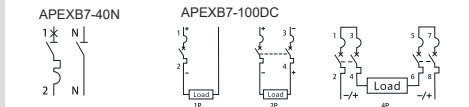


APEXM3-63H

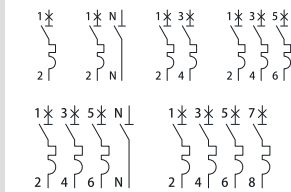


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Circuit Diagram



APEXB7-100S APEXB7-100 APEXB7-100H APEXB7-125 APEXM3-63 APEXM3-63H



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