

Usage Manual



MINIATURE CIRCUIT BREAKER (MCB)

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Thank you for choosing EK 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)	Triggerring Characteristic	Standard
EKM1-40N	6,10,16,20,25,32,40	B,C	IEC/EN60898-1
EKM1-63S	1,2,3,4,5,6,8,10,13,16,20,25,32,40,50,63	B,C,D	
EKM1-63			
EKM3-63			
EKM1-63H			
EKM1-63DC	1,2,3,4,6,10,16,20,25,32,40,50,63	10In±20%	IEC/EN60947-2
EKM3-63			
EKM1-125	63,80,100,125		

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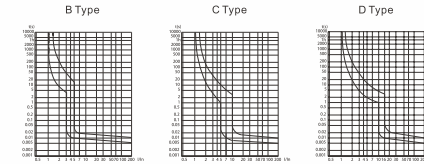
TECHNICAL SPECIFICATIONS

Model No.	Rated Voltage	Rated Breaking Capacity	Number of Poles
EKM1-40N	230/240V	6000A	1P+N
EKM1-63S	230/400V,400V	4500A	1P, 1P+N, 2P, 3P, 3P+N, 4P
EKM1-63		6000A	
EKM3-63			
EKM1-63H		10000A	
EKM1-63DC	250, 500, 1000VDC	6000/10000A	1P, 2P, 4P
EKM1-125	230/400V,400V	10000A	1P, 2P, 3P, 4P
EKM3-63	230/240V,400/415V	6000A	

CHARACTERISTICS CURVES

EKM1-40N, EKM1-63S, EKM1-63, EKM1-63H, EKM3-63						30-35°C
ThermalTripping			MagneticTripping			
Asper IEC60898	No tripping current	Tripping current	Time Limits t	Hold current	Trip current	Time Limits t
B Curve	1.13× IN	1.45× IN	≥1h	3× IN	5× IN	≥0.1s
			<1h			<0.1s
C Curve	1.13× IN	1.45× IN	≥1h	5× IN	10× IN	≥0.1s
			<1h			<0.1s
D Curve	1.13× IN	1.45× IN	≥1h	10× IN	20× IN	≥0.1s
			<1h			<0.1s

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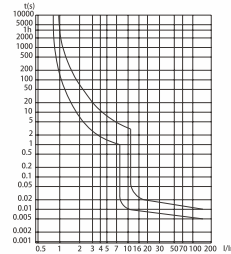
Influence of ambient temperature on load carrying capacity

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	14.80	14.00	
20	27.00	26.00	25.00	24.00	23.00	22.00	21.00	20	18.60	17.60	
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

EKM1-63DC, EKM1-125, EKM3-63					
ThermalTripping			MagneticTripping		
Asper IEC60947	No tripping current	Tripping current I2	Time Limits t	Trip current I5	Time Limits t
1-63A	1.05×IN	1.30×IN	≥2h	8×IN	≥0.2s
63-125A			<2h	12×IN	<0.2s

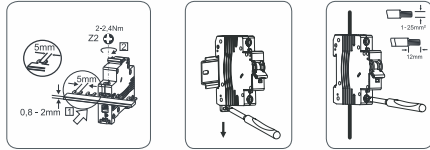


(8-12In)

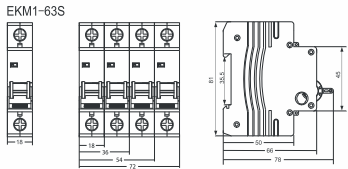
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PRODUCT ASSEMBLY

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



Overalland Installation Dimension(mm)

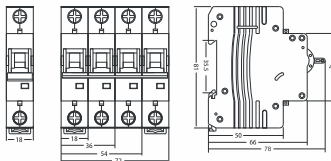


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EKM1-40N

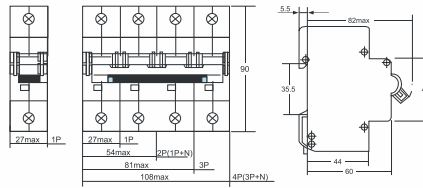


EKM1-63 EKM1-63H

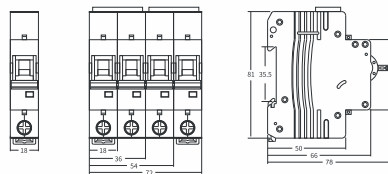


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EKM1-125

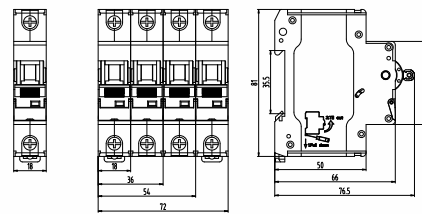


EKM1-63DC

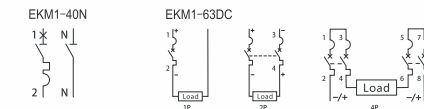


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EKM3-63

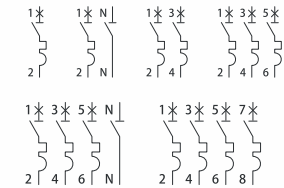


Circuit Diagram



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EKM1-63S EKM1-63 EKM1-63H EKM1-125 EKM3-63



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