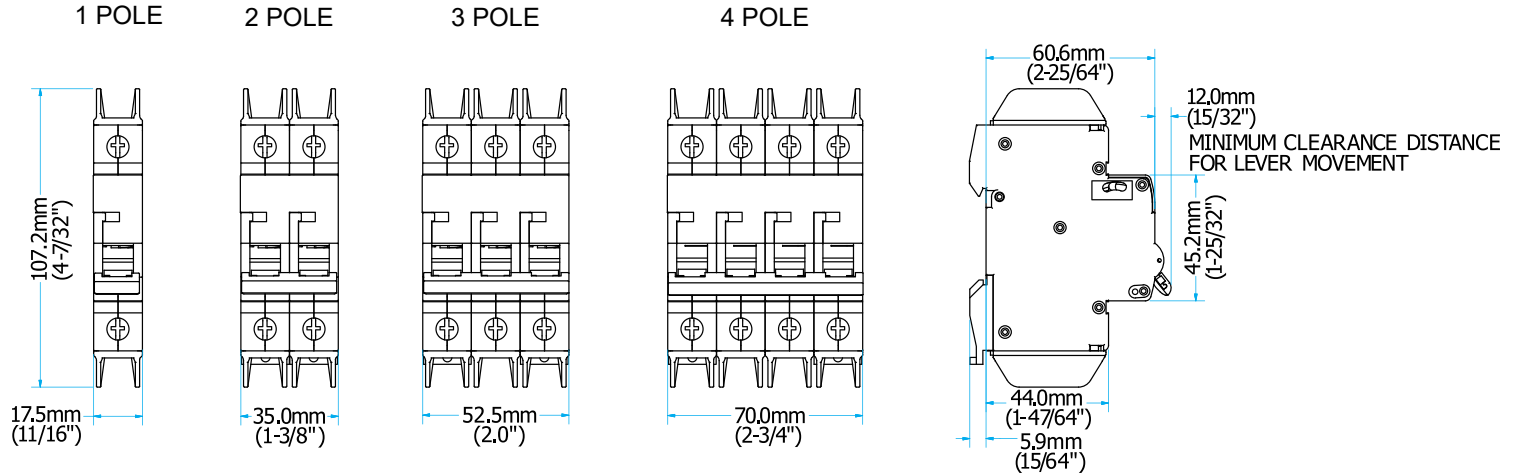


UL 489B DC MINIATURE CIRCUIT BREAKERS

Installation Instructions

PRODUCT OVERALL DIMENSIONS



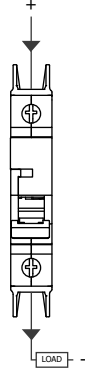
SPECIFICATIONS

POLES		1	2	3	4
Short Circuit Current Protection					
Electrical General					
Conformity to Standards	A	UL 489B, CSA C22.2 No. 305 as Photovoltaic Breakers			
DC Rated Operating Voltage	V	250	500	750	1000
MAXIMUM SHORT CIRCUIT RATING					
@250 VDC	kA		10		
@500 VDC	kA		10		
@750 VDC	kA		10		
@1000 VDC	kA		10		
ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Ics)					
@250 VDC	kA		10		
@500 VDC	kA		10		
@750 VDC	kA		10		
@1000 VDC	kA		10		
RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY(Ics)					
@250 VDC	kA		10		
@500 VDC	kA		10		
@750 VDC	kA		10		
@1000 VDC	kA		10		
Construction Specifications					
Wire Size		1 x #18-#3 AWG, 2 x #18-#10 AWG / 1 x 0.82mm ² - 26.70mm ²			
Terminal Torque		2.5 Nm / 22.2 lb-in			
Terminal Guard		IP20			
Operating Temperature		-20 to 50°C			

CIRCUIT DIAGRAMS

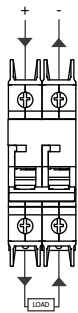
1 POLE

1110-CB1*2***

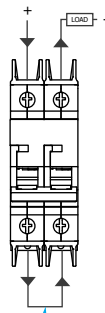


2 POLE

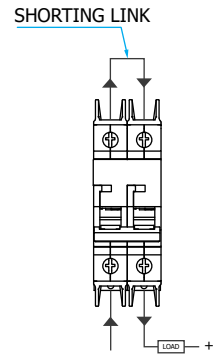
1110-CB2*2*****



1110-CB2*2***-SB

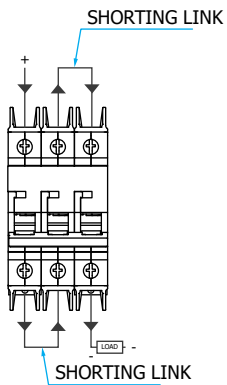


1110-CB2*2***-ST

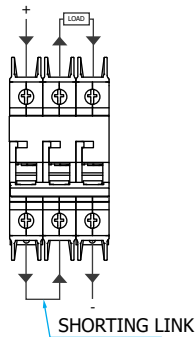


3 POLE

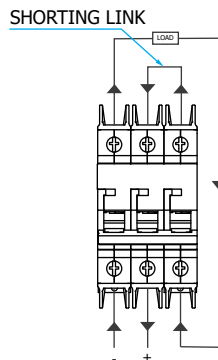
1110-CB3*2***-SBT



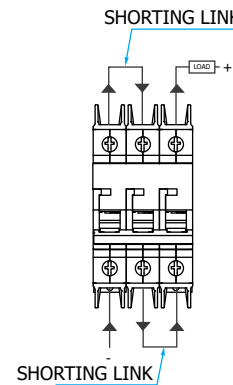
1110-CB3*2***-SB



1110-CB3*2***-ST

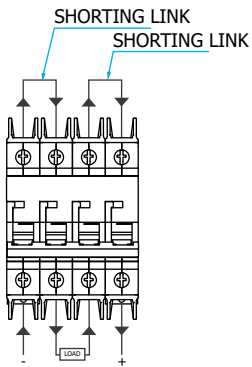


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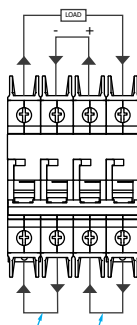


4 POLE

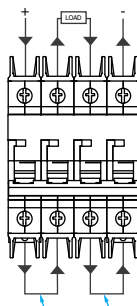
1110-CB4*2***-STLT



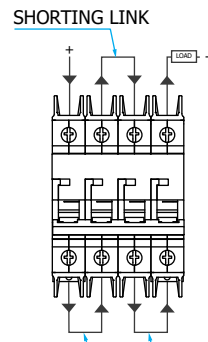
1110-CB4*2***-SBB



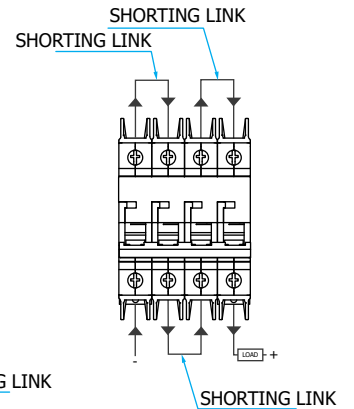
1110-CB4*2***-SBLB



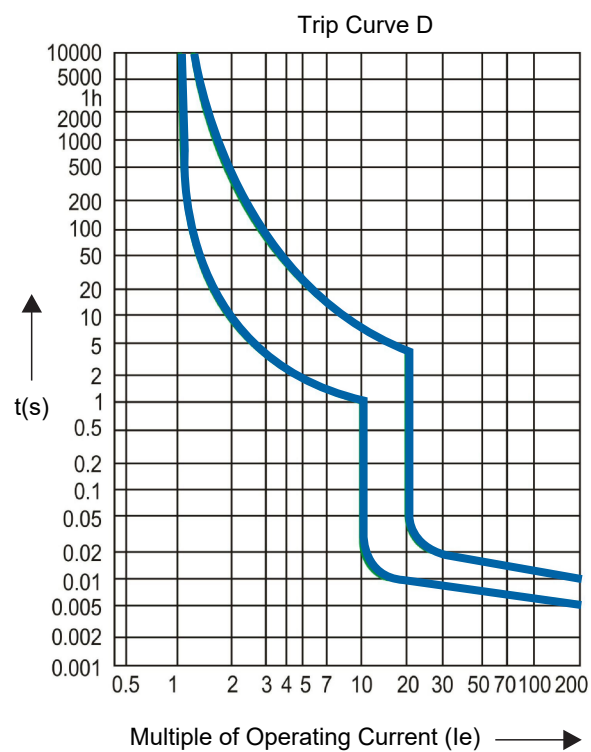
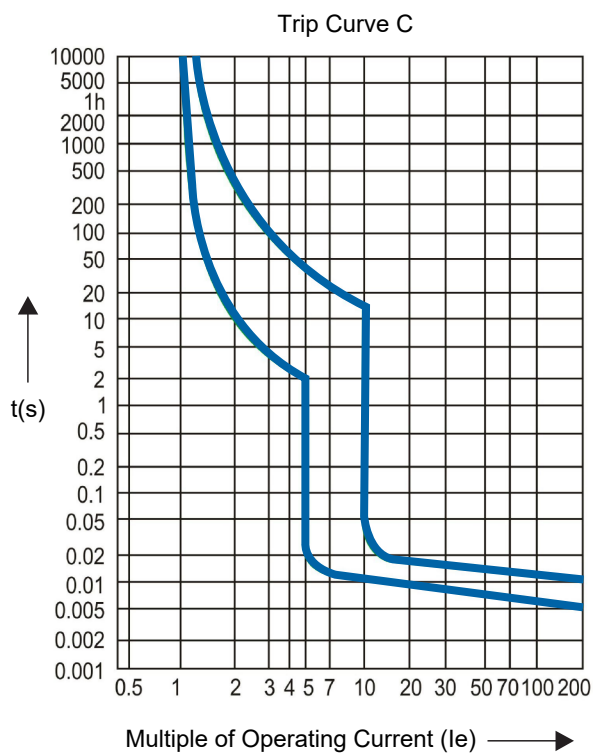
1110-CB4*2***-SBTB



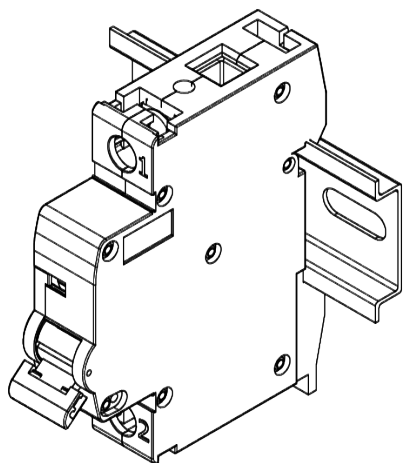
1110-CB4*2***-STBT



TRIP CHARACTERISTICS

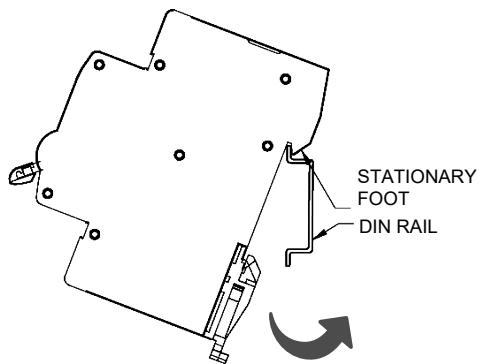


MOUNTING INSTRUCTIONS



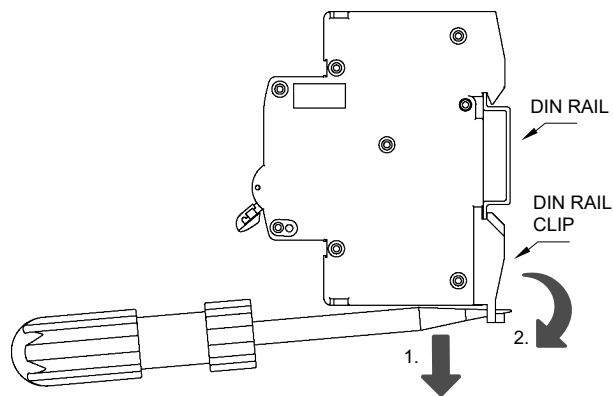
Snaps on 35mm DIN rail

How to Install?



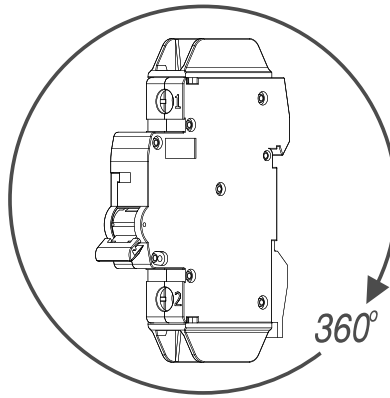
Latch stationary foot onto din rail, then rotate the circuit breaker until the bottom clip snaps into place.

How to Uninstall?



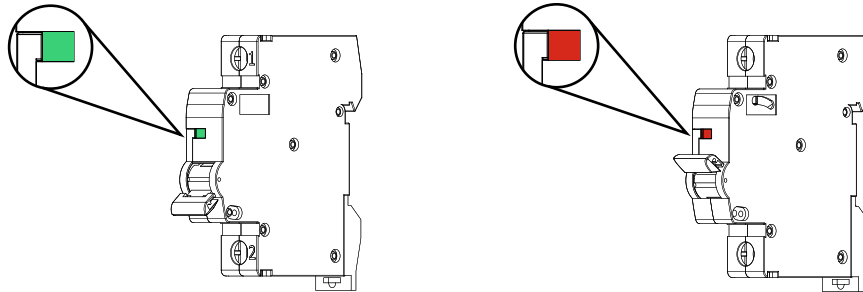
1. Insert the screwdriver in DIN rail clip slot of breaker and pull it downwards.
2. Move the breaker away in order to disengage it from DIN rail as shown above.

MOUNTING POSITION



TRIP INDICATION

Apart from handle movement, breaker status is clearly indicated via the color-coded status window. Green flag indicates open/ tripped breaker and Red is an indication of flowing current.



AMBIENT TEMPERATURE DERATING

1. The Series 1110 circuit breakers are rated in RMS amperes at 50°C ambient temperature.
2. If a circuit breaker is applied in a temperature below or above 50°C, then the following table should be used to derate the circuit breaker.

Influence of Ambient Temperature T on Load Carrying Capacity												
Device Current Rating (A) at 50°C	In (A) at various Temperatures											
	-20°C	-10°C	0°C	10°C	20°C	30°C	35°C	40°C	45°C	50°C	55°C	70°C
0.5	0.6	0.58	0.56	0.54	0.52	0.5	0.5	0.5	0.48	0.46	0.45	0.42
1	1.2	1.2	1.12	1.1	1	1	1	1	0.97	0.95	0.92	0.88
1.6	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.4	1.1
2	2.4	2.3	2.2	2.2	2.1	2	2	2	1.9	1.9	1.8	1.5
3	3.6	3.5	3.4	3.3	3.1	3	3	3	2.9	2.8	2.6	2.1
4	4.8	4.7	4.5	4.3	4.2	4	4	4	3.8	3.7	3.6	3.2
5	6.1	5.8	5.6	5.4	5.2	5	5	5	4.8	4.7	4.5	4
6	7.2	7	6.7	6.5	6.3	6	6	6	5.8	5.5	5.4	5
7	8.5	8.2	7.8	7.6	7.4	7	7	7	6.8	6.6	6.3	5.6
8	9.7	9.4	9	8.7	8.4	8	8	8	7.6	7.4	7.3	7
10	12	12	11	11	10.2	10	10	10	9.7	9.5	9.2	8.5
13	16	15	15	14	14	13	13	13	12.2	12	12	11.5
15	18	17	17	16	16	15	15	15	14.5	14.2	14	13.5
16	19.5	19	18	17	17	16	16	16	15.5	15	14.2	12.5
20	24.5	24	23	22	21	20	20	20	19.5	19	18.2	17
25	30	29	28	27	26.5	25	25	25	24.5	23.5	23	22
30	35	33.8	32.4	33.2	32.2	31	30	30	29	28.8	28.5	28
32	38.5	37.5	36.5	35	33.5	32	32	32	30.5	30	29	26
40	48.5	47.5	45.5	43.5	42	40	40	40	38	37	36	33
50	60.5	59.5	57	55	52.5	50	50	50	47	46	45	42
63	76	74	71.5	69	66	63	63	63	60	58	57	54



WARNING

- Disconnect power before proceeding with any work on this equipment.
- Installation and maintenance by technical personnel only.
- Install products in accordance with the operation instructions and the NEC (U.S. National Electrical Code) regulations or local applicable codes and standards.



CONFORMITY TO STANDARDS

DC Miniature Circuit Breakers
UL 489B & CSA C22.2 No. 305

Accessories
UL 489

CERTIFICATIONS

UL File #: E533935

UL File #: E508090

IL100194