

# DC MINIATURE CIRCUIT BREAKERS


series  
**1110**

## SERIES 1110 PRODUCT PROFILE

c3controls is one of the few to introduce **Direct Current (DC) Miniature Circuit Breakers (MCBs)** designed and manufactured for all your DC industrial control, transportation, energy storage system and photovoltaic applications. With market leading design at a price that gives you an edge, this product cannot be missed. Check out the amazing features of our Series 1110 DC MCBs below.



### DELIVERING SUPERIOR PRODUCT QUALITY AND MANUFACTURING EXCELLENCE

✓ <b>Proven</b>	Our Series 1110 DC Miniature Circuit Breakers are UL Listed per UL489B, the standard for DC photovoltaic systems and are compliant to the RoHS directives. 
✓ <b>Compact Design</b>	17.5mm wide per pole construction for reduced panel size, allowing for smaller control panels.
✓ <b>Easy to Install</b>	35mm DIN rail mounting for fast and easy installation and removal.
✓ <b>Visible Markings</b>	High visibility labels and markings; product part number, amperage, breaking capacity and configuration type can be seen from the front and side of the device for easy identification.
✓ <b>Added Safety</b>	Line and load side IP20 guarded finger-safe terminals prevent accidental contact with live parts, while allowing ring, fork, and bare wire connections.
✓ <b>Limited Lifetime Warranty*</b>	Every product is backed by our limited lifetime warranty—unmatched in the industry—bringing you quality components that perform in the most demanding applications.
✓ <b>Advantage Pricing</b>	Our approach to product development, manufacturing, and focus on servicing the OEM and Electrical Equipment Builder reduces cost. The result—the best value in the industry.

\*See c3controls Terms & Conditions

### UNIQUE FEATURES

#### Full Range Circuit Protection

- Available in single pole, two pole, and four pole constructions that includes both magnetic and thermal elements for overload and short circuit protection, finely designed to work with DC ratings.

#### Market Leading Ratings

- Rated 250V DC per pole, and current ratings from 0.5A to 63A. Short circuit current rating is 10kA and Breaking capacity is rated for 10kA.

#### Trip Free Mechanism

- Holding the operating handle in the ON position will not prevent the miniature circuit breaker from tripping.

#### Polarized Design

- Provides unidirectional protection for overloads and short circuits.

#### Customizable Options

- With up to 10 shorting link / jumper configurations, there is a plethora of options to suit all applications.



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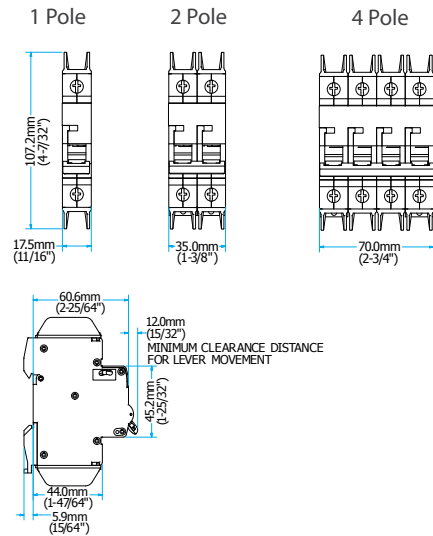
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## SPECIFICATIONS

ELECTRICAL				
	UNITS	1 POLE	2 POLE	4 POLE
<b>ELECTRICAL GENERAL</b>				
Rated Operating Current	A		0.5 ~ 63	
Electrical Life	Ops.		6,000	
Tripping Curves			C, D	
<b>ELECTRICAL UL/CSA APPLICATIONS</b>				
Conformity to Standards		UL 489B, CSA C22.2 No. 305 as Photovoltaic Breakers		
DC Rated Operating Voltage	VDC	250	500	1000
<b>MAXIMUM SHORT CIRCUIT RATING</b>				
@ 250 VDC	kA		10	
@ 500 VDC	kA		10	
@ 750 VDC	kA		10	
@ 1000 VDC	kA		10	
<b>MECHANICAL, ENVIRONMENTAL &amp; CONSTRUCTION</b>				
	UNITS	1 POLE	2 POLE	4 POLE
<b>MECHANICAL</b>				
Mechanical Endurance	Ops.		20,000	
<b>ENVIRONMENTAL</b>				
Ambient Operating Temperature	°C / °F		-20 to 50 / -4 to 122	
Ambient Storage Temperature	°C / °F		-25 to 80 / -13 to 176	
Calibration Temperature	°C / °F		40 / 104	
Altitude	m / ft.		2,000 / 6,562	
Shock	G		15	
<b>CONSTRUCTION</b>				
Poles (availability)			1, 2, 3 and 4 Pole	
Mounting			Standard 35mm DIN Rail	
Width of MCB			17.5mm	
Terminal Screws			Captive	
<b>INGRESS PROTECTION</b>				
Line & Load Terminations	IP		20	
<b>WEIGHT</b>				
	kgs	0.125	0.25	0.50
	lbs	0.275	0.55	1.10
<b>CONDUCTOR SIZE</b>				
UL/CSA	AWG		1 x #18 ~ #3, 2 x #18 ~ #10	
Solid, Stranded, Fine Stranded	mm <sup>2</sup>		1 x 0.82 ~ 26.7	
<b>TERMINAL WIRING CONNECTION</b>				
Wire Type			Copper wire only, 75°C	
<b>TERMINAL TORQUE</b>				
	Nm / lb-in		2.5 / 22.2	
<b>CONTACT INDICATION</b>				
			Green and Red	
<b>DESIGN</b>				
			Trip Free Design (breaker cannot be defeated by holding the handle in the "ON" position)	
<b>ROHS COMPLIANCE</b>				
			For RoHS compliance documentation by product, refer to <a href="http://c3controls.com">c3controls.com</a>	

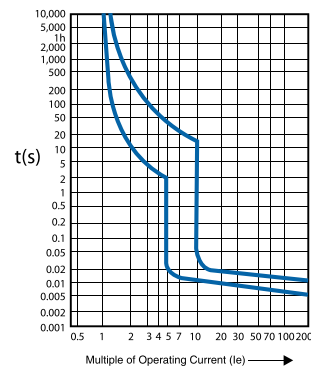
For complete ratings, detailed specifications, or to download product certifications visit [c3controls.com](http://c3controls.com).

## DIMENSIONS

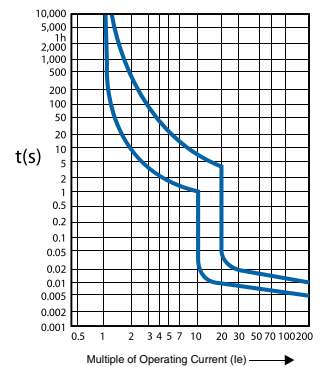


## TRIP CURVES

Trip Curve C



Trip Curve D



## CERTIFICATIONS

### Conformity to Standards:

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



**Accessories**  
UL 489



### Certifications:

UL File#: E533935  
UL File#: E533935

UL File#: E508090

