# MINIATURE CIRCUIT BREAKERS



c3controls offers a comprehensive line of **Miniature Circuit Breakers** designed and manufactured to meet the needs of the machine builder. We promise durable products at a price that gives you an edge, and we guarantee same-day shipping. Check out all the features of our Series 1100 Miniature Circuit Breakers below!

# DELIVERING SUPERIOR PRODUCT QUALITY AND MANUFACTURING EXCELLENCE

<b>√</b> Proven	Our Series 1100 Miniature Circuit Breakers are UL Listed and Recognized, and CE marked to meet global standards requirements and are compliant to the RoHS directives.				
<b>√</b> Compact Design	17.5mm wide per pole construction for reduced panel size, allowing for smaller control panels.				
✓ Easy to Install	35mm DIN rail mounting for fast and easy installation and removal.				
✓ Visible Markings	High visibility labels and markings; product part number, amperage, and UL & IEC short circuit ratings can be seen from the front and side of the device for easy identification.				
<b>√</b> Added Safety	Line and load side IP20 guarded finger-safe terminals prevent accidental contact with live parts, while allowing ring, fork, and bare wire connections.				
Limited Lifetime Warranty*	Every product is backed by our lifetime warranty—unmatched in the industry—bringing you quality components that perform in the most demanding applications.				
Guaranteed Same-Day Shipping*	Product availability reduces inventory, and improves cash-flow—saving you money. With c3controls any order for standard catalog items received by 6:00pm ET is guaranteed to ship same-day.				
✓ Advantage Pricing	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, single pole + neutral, two pole, three pole, and three pole + neutral constructions and includes both thermal and magnetic trip elements for overload and short circuit protection.

#### **Industry-Leading Short Circuit Rating**

 10kA @480Y/277V short circuit current rating on all multipole constructions – the highest interruption rating available in the market.

#### **Trip-Free Design**

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

#### **Easy Wiring**

 Captive screws make it impossible to lose screws when wiring and our box lug design terminals will accept a widerange of copper wire sizes. Line/load wiring is reversible for ease of use.

#### **Visible Markings & Status Indication**

 High visibility labels and markings can be seen from the front and side of the device for easy installation. Color-coded status window for clear visual of the breaker status.





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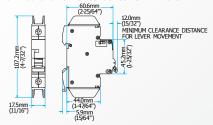
### **SPECIFICATIONS**

	UL 489 E	BRANCH C	RCUIT BREA	KERS		
	UNITS	1 POLE	1 + N POLE	2 POLE	3 POLE	3 + N POLE
<b>ELECTRICAL GENERAL</b>						
Rated Operating Current	А			0.5 ~ 63		
Operating Frequency	Hz			50/60		
Electrical Life	Ops.	6,000				
Line/Load Wiring			Suita	ble for reverse	e feed	
<b>ELECTRICAL UL/CSA A</b>	PPLICAT	ΓIONS				
Conformity to Standards			cULus, U	L 489, CSA C2	22.2 No. 5	
AC Rated Operating Voltage	V		277		480Y/277	
DC Rated Operating Voltage	V		48	96	_	_
(wired in series)	·			,,,		
MAXIMUM SHORT CIRCUIT RATING @ 120 VAC	kA			10		
@ 240 VAC	kA			10		
@ 277 VAC	kA			10		
@ 480Y/277 VAC	kA			10		
@ 48 VDC	kA	10	10	10	_	_
@ 96 VDC (wired in series)	kA	_	_	10	_	_
<b>ELECTRICAL IEC APPL</b>	CATION	S				
Conformity to Standards			IEC 6	60947-2, IEC 6	0898	
ULTIMATE SHORT CIRCUIT						
BREAKING CAPACITY (Icu)						
@ 240 VAC	kA			15		
@ 415 VAC	kA			15		
RATED SERVICE SHORT CIRCUIT						
@ 240 VAC	kA			10		
@ 415 VAC	kA			10		
CONSTRUCTION - CON		D CI7E		10		
UL/CSA	AWG	N SIZE		1 x #14 ~ #3		
Solid, Stranded, Fine Stranded	mm <sup>2</sup>			1 x 2.08 ~ 26.	7	
ROHS COMPLIANCE		Compliance o	documentation by			trols com
				•	Tto www.cscom	trois.com.
			ITARY PROTE			
	LIMITS		1 ± NI DOLE	2 POLE	3 DULE	3 T N DOLE
ELECTRICAL CENERAL	UNITS	1 POLE	1 + N POLE	2 POLE	3 POLE	3 + N POLE
ELECTRICAL GENERAL		1 POLE	1 + N POLE		3 POLE	3 + N POLE
Rated Operating Current	A	1 POLE	1 + N POLE	0.5 ~ 63	3 POLE	3 + N POLE
Rated Operating Current Operating Frequency	A Hz	1 POLE	1 + N POLE	0.5 ~ 63 50/60	3 POLE	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life	A	1 POLE		0.5 ~ 63 50/60 6,000		3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring	A Hz Ops.			0.5 ~ 63 50/60		3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A	A Hz Ops.		Suita	0.5 ~ 63 50/60 6,000 ble for reverse	e feed	3+NPOLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards	A Hz Ops.	TIONS	Suita cURus, UL	0.5 ~ 63 50/60 6,000	e feed 2.2 No. 235	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage	A Hz Ops.	TIONS	Suita cURus, UL 277	0.5 ~ 63 50/60 6,000 ble for reverse	e feed	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards	A Hz Ops.	TIONS	Suita cURus, UL	0.5 ~ 63 50/60 6,000 ble for reverse	e feed 2.2 No. 235	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage	A Hz Ops.	TIONS	Suita cURus, UL 277	0.5 ~ 63 50/60 6,000 ble for reverse	e feed 2.2 No. 235	3+NPOLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (wired in series)	A Hz Ops.	TIONS	Suita cURus, UL 277	0.5 ~ 63 50/60 6,000 ble for reverse	e feed 2.2 No. 235	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING	A Hz Ops.  PPLICAT	TIONS	Suita cURus, UL 277	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2	e feed 2.2 No. 235	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC	A Hz Ops.  PPLICAT  V V kA kA kA	TIONS	Suita cURus, UL 277	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10	e feed 2.2 No. 235	3+N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING  @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC	A Hz Ops.  PPLICAT  V V  kA kA kA	TIONS	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10	e feed 2.2 No. 235	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 48 VDC	A Hz Ops.  PPLICAT  V V  kA kA kA	TIONS	Suita cURus, UL 277	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10 10	e feed 2.2 No. 235	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 48 VDC @ 48 VDC @ 96 VDC (wired in series)	A Hz Ops.  PPLICAT  V V  kA kA kA kA	TIONS  10	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10	e feed 2.2 No. 235	3+NPOLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480V/277 VAC @ 48 VDC @ 96 VDC (wired in series)  ELECTRICAL IEC APPL	A Hz Ops.  PPLICAT  V V  kA kA kA kA	TIONS  10	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reversor 1077, CSA C2 96 10 10 10 10	e feed  2.2 No. 235  480Y/277	3+N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring  ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (wired in series)  MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 48 VDC @ 96 VDC (wired in series)  ELECTRICAL IEC APPL Conformity to Standards	A Hz Ops.  PPLICAT  V V  kA kA kA kA	TIONS  10	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10 10	e feed  2.2 No. 235  480Y/277	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPL Conformity to Standards ULTIMATE SHORT CIRCUIT	A Hz Ops.  PPLICAT  V V  kA kA kA kA	TIONS  10	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reversor 1077, CSA C2 96 10 10 10 10	e feed  2.2 No. 235  480Y/277	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPL Conformity to Standards ULITIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu)	A Hz Ops.  PPLICAT  V V  kA kA kA kA kA kA	TIONS  10	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10 10 10 10	e feed  2.2 No. 235  480Y/277	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 48 0Y/277 VAC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPL Conformity to Standards ULTIMATE SHORT CIRCUIT	A Hz Ops.  PPLICAT  V V  kA kA kA kA	TIONS  10	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reversor 1077, CSA C2 96 10 10 10 10	e feed  2.2 No. 235  480Y/277	3 + N POLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (Wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPL Conformity to Standards UITIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC	A Hz Ops.  PPLICAT  V V  kA kA kA kA kA kA	TIONS  10	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10 10 10 10 10	e feed  2.2 No. 235  480Y/277	3+NPOLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480V/277 VAC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPL Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Ibu) @ 240 VAC @ 415 VAC RATED SERVICE SHORT CIRCUIT	A Hz Ops.  PPLICAT  V V  kA kA kA kA kA kA	TIONS  10	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10 10 10 10 10	e feed  2.2 No. 235  480Y/277	3+NPOLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 48 VDC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPL Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 415 VAC RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics)	A Hz Ops.  PPLICAT  V  V  kA k	TIONS  10	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10 10 10 10 10 10 10	e feed  2.2 No. 235  480Y/277	3+NPOLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring  ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (Wired in series)  MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 480Y/277 VAC @ 480Y/277 VAC @ 48 VDC @ 96 VDC (wired in series)  ELECTRICAL IEC APPL Conformity to Standards UITIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC  @ 415 VAC  RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics) @ 240 VAC	A Hz Ops.  PPLICAT  V V  kA	10	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10 10 10 10 10 10 10	e feed  2.2 No. 235  480Y/277	3+NPOLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPL Conformity to Standards UITIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC @ 415 VAC RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics) @ 240 VAC @ 415 VAC CONSTRUCTION - CON	A Hz Ops.  PPLICAT  V V  kA	10	Suita cURus, UL 277 48	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10 10 10 10 10 10 10	e feed  2.2 No. 235  480Y/277	3+NPOLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring  ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage (wired in series)  MAXIMUM SHORT CIRCUIT RATING  @ 120 VAC  @ 240 VAC  @ 48 VDC  @ 48 VDC  @ 96 VDC (wired in series)  ELECTRICAL IEC APPL Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu)  @ 240 VAC  @ 415 VAC  @ 415 VAC  @ 415 VAC  @ 415 VAC	A Hz Ops.  PPLICAT  V V  kA	10	Suita  cURus, UL  277  48	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10 10 10 10 10 10 10 10	e feed  2.2 No. 235  480Y/277	3+NPOLE
Rated Operating Current Operating Frequency Electrical Life Line/Load Wiring ELECTRICAL UL/CSA A Conformity to Standards AC Rated Operating Voltage DC Rated Operating Voltage (wired in series) MAXIMUM SHORT CIRCUIT RATING @ 120 VAC @ 240 VAC @ 277 VAC @ 480Y/277 VAC @ 48 VDC @ 96 VDC (wired in series) ELECTRICAL IEC APPL Conformity to Standards ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu) @ 240 VAC @ 415 VAC RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics) @ 240 VAC @ 415 VAC CONSTRUCTION - CON UL/CSA	A Hz Ops.  PPLICAT  V V  kA kA kA kA kA kA LA KA	10 S	Suita  cURus, UL  277  48	0.5 ~ 63 50/60 6,000 ble for reverse 1077, CSA C2 96 10 10 10 10 10 10 10 10 10 10	e feed  2.2 No. 235  480Y/277	

For complete ratings and detailed specifications refer to www.c3controls.com.

### DIMENSIONS

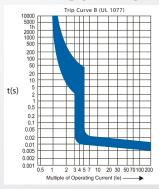
UL 489 Branch Circuit Breaker - 1 Pole

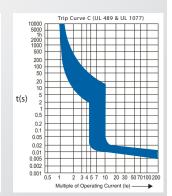


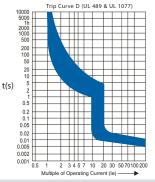
UL 1077 Supplementary Protector - 1 Pole



## TRIP CURVES







### **CERTIFICATIONS**

**Conformity to Standards:** UL 489 UL 1077 CSA C22.2 No. 5, No. 235 IEC 60947-2, IEC 60898

Certifications: UL File#: E496118 UL File#: E496119

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)



Visit www.c3controls.com to download product certifications



















