

# MINIATURE CIRCUIT BREAKERS



c3controls' line of Series 1100 Miniature Circuit Breakers provide reliable short circuit and overload protection for all your branch and downstream device circuit protection. Our branch circuit breakers and supplementary protectors offer a wide range of pole sizes, amperage ranges, and trip curves—providing superior performance and flexible application environments.



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**PROVEN**



**Conformity to Standards:**

UL 489  
 UL 1077  
 UL 508  
 CSA C22.2 No. 5, No. 235  
 IEC 60947-2, IEC 60898

**Certifications:**

UL File#: E496118  
 UL File#: E537465  
 UL File#: E336563  
 UL File#: E508090  
 CE Marked (per EU Low Voltage Directive 2006/95/EC and  
 RoHS Directive 2011/65/EU)

Visit [www.c3controls.com](http://www.c3controls.com) to download product certifications.

NOTE: The scope (range, description, price, specifications, dimensions, etc.) of the product featured in this section is subject to change without notice. Refer to [www.c3controls.com](http://www.c3controls.com) for product updates.

# 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

<p>✓ <b>Proven</b></p>	<p>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.</p>	
<p>✓ <b>Easy to Install</b></p>	<p>35mm DIN rail mounting for fast and easy installation and removal.</p>	
<p>✓ <b>Visible Markings</b></p>	<p>High visibility labels and markings; product part number, amperage, and UL &amp; IEC short-circuit ratings can be seen from front and side of the device for easy identification.</p>	
<p>✓ <b>Compact</b></p>	<p>Control panel sizes can be reduced because the small size, 17.5mm width per pole, allows for smaller control panels.</p>	
<p>✓ <b>Added Safety</b></p>	<p>Line and load side IP20 guarded finger-safe terminals prevent accidental contact with live parts.</p>	
<p>✓ <b>Limited Lifetime Warranty*</b></p>	<p>Every product is backed by our limited lifetime warranty—unmatched in the industry—bringing you quality components that perform in the most demanding applications.</p>	
<p>✓ <b>Guaranteed Same-Day Shipping*</b></p>	<p>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.</p>	
<p>✓ <b>Advantage Pricing</b></p>	<p>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.</p>	

\*See c3controls Terms & Conditions

“ *The reliability of components and overnight delivery is crucial to our profitability, and counting on c3controls to deliver at the time of need makes them a good fit for the packaging industry.* ”

Jim Kidder, Engineering Manager • **Eriez Magnetics**

UL 489 Branch Circuit Breaker



UL 1077 Supplementary Protector



**UNIQUE PRODUCT LINE FEATURES**

**FULL-RANGE CIRCUIT PROTECTION**



Available in multiple poles, up to 3 plus neutral, and trip curves to meet our customers needs, all of which are available for Guaranteed Same-Day shipping.

**SHORT CIRCUIT CURRENT RATING**



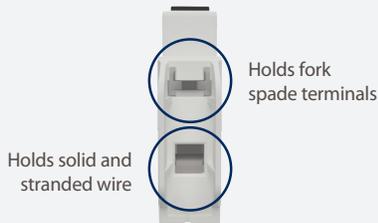
10kA @ 480Y/277V short circuit current rating on all constructions.

**TRIP-FREE DESIGN**



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

**WIRING MADE EASY**



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

**SAFETY**



All c3controls miniature circuit breakers have built-in IP20 finger-safe protection from accidental contact. Also, breaker status is clearly indicated via the color-coded status window.

**ACCESSORIES & BUS BARS**



Snap-on accessories are easily installed without the use of tools, further the bus bars also help lower assembly and installation costs.

**FIND IT  
FAST**

Miniature Circuit Breakers



- Certifications
- Specifications
- Dimension Drawings
- Installation Instructions
- Easy to Buy

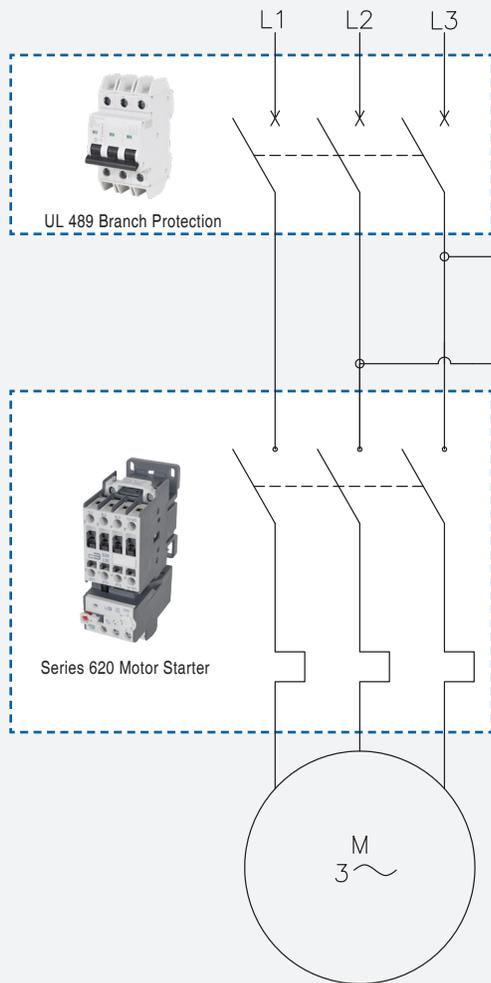
[www.c3controls.com](http://www.c3controls.com)

# THE DIFFERENCES BETWEEN UL 489 BRANCH PROTECTION AND UL 1077 SUPPLEMENTARY PROTECTION

## Power Circuit

### UL 489 Branch Circuit Breakers

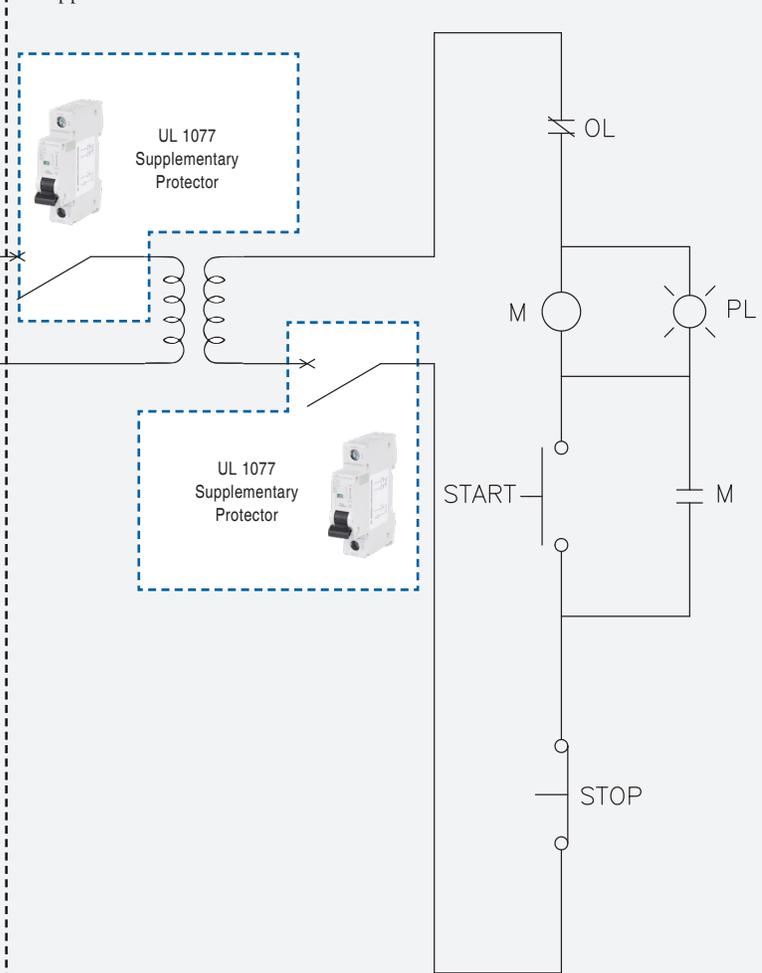
UL 489 Branch Circuit Breakers are designed to serve as the primary overcurrent and short-circuit upstream circuit protection of an electrical panel. In addition to downstream equipment and systems, branch protectors guard the connected wires and cables against improper pole spacings. UL 489 miniature circuit breakers can be used in both UL 489 and UL 1077 applications.



## Control Circuit

### UL 1077 Supplementary Protectors

UL 1077 Supplementary Protectors, while not the primary device of circuit protection, can be used within or directly upstream from single electrical equipment devices to open the circuit or provide supplementary protection. One common method to test whether or not a supplementary protector is being used properly is by evaluating the circuit integrity when it is removed from the circuit. If a UL 1077 type circuit breaker can be removed and maintain proper protection due to upstream protective devices, then the UL 1077 Miniature Circuit Breaker is used correctly. UL 1077 supplementary protectors can only be used in UL 1077 applications.



## UL 489 BRANCH CIRCUIT BREAKERS

c3controls Series 1100 Miniature Circuit Breakers include both thermal and magnetic trip elements for overload and short circuit protection. Our Series 1100-CB circuit breakers provide branch circuit protection and fully meet UL 489 circuit breaker standards. They are available in one, one + neutral, two, three, and three + neutral configurations with current ratings from 0.5A to 63A. In addition, cULus and CE Markings make them suitable for use anywhere in the world.

Product features include:

- Line/load reversible construction makes field wiring error-proof.
- Combination head terminal screws allow the use of “straight”, “phillips”, or “posidrive” screwdrivers for fast and reliable wiring.
- Compact 17.5mm width per pole construction reduces panel size and mounts onto 35mm DIN rail.
- Dual style terminals accept stranded wire  $0.8\text{mm}^2 - 2.67\text{mm}^2$  (#18 - #3 AWG) and busbar stabs, and are IP20 guarded against accidental contact with live parts.
- Trip-free design provides assurance that holding the operating handle in the ON position will not prevent the miniature circuit breaker from tripping.
- Up to 21 unique current rating configurations from 0.5 to 63A for a broad range of applications.
- Flexible for use in both alternating current and direct current applications.
- Suitable for use per IEC 60947-2 and IEC 60898.
- Dual trip curve offering (Trip Curves C & D) provides protection for a broad range of AC applications. C trip curves have a low thermal trip delay and a mid-range magnetic trip function to protect low inrush motors, resistive loads, and control circuits. D trip curves have a high thermal trip delay and a very high magnetic trip point to protect high inrush motors, heaters, transformers, and reactive loads while preventing nuisance tripping. DC applications include uninterruptable power supplies (UPS), computer hardware, and telecommunication equipment.



## UL 1077 SUPPLEMENTARY PROTECTORS



c3controls Series 1100 Miniature Circuit Breakers include both thermal and magnetic trip elements for overload and short circuit protection. Our Series 1100-SP circuit breakers provide downstream device protection and fully meet UL 1077 supplementary protector standards. They are available in one, one + neutral, two, three, and three + neutral configurations with current ratings from 0.5A to 63A. In addition, cURus and CE Markings make them suitable for use anywhere in the world.

Product features include:

- Line/load reversible construction makes field wiring error-proof.
- Combination head terminal screws allow the use of “straight”, “phillips”, or “posidrive” screwdrivers for fast and reliable wiring.
- Compact 17.5mm width per pole construction reduces panel size and mounts onto 35mm DIN rail.
- Dual style terminals accept stranded wire  $0.8\text{mm}^2 - 26.7\text{mm}^2$  (#18 - #3 AWG) and busbar stabs, and are IP20 guarded against accidental contact with live parts.
- Trip-free design provides assurance that holding the operating handle in the ON position will not prevent the miniature circuit breaker from tripping.
- Up to 21 unique current rating configurations from 0.5 to 63A for a broad range of applications.
- Flexible for use in both alternating current and direct current applications.
- Suitable for use per IEC 60947-2 and IEC 60898.
- Triple trip curve offering (Trip Curves B, C, & D) provides protection for a broad range of AC applications. B trip curves are specialized for resistive and slightly inductive loads such as lighting and coils. C trip curves have a low thermal trip delay and a mid-range magnetic trip function to protect low inrush motors, resistive loads, and control circuits. D trip curves have a high thermal trip delay and a very high magnetic trip point to protect high inrush motors, heaters, transformers, and reactive loads while preventing nuisance tripping. DC applications include uninterruptable power supplies (UPS), computer hardware, and telecommunication equipment.

**IT'S EASY TO BUILD YOUR OWN CIRCUIT BREAKER**

Simply pick the code number from each of the sections below and combine them to build your part number.

**Miniature Circuit Breakers  
UL 489 Branch Circuit Breakers**

**1100 - CB**     **2**    
 I II III IV V VI

Example: To build one of our most popular UL 489 Miniature Circuit Breakers, the part number would be **1100 + CB + III + IV + 2 + VI** or **1100-CB1C2U10**



**I. PRODUCT TYPE**

CODE	DESCRIPTION
1100	Series 1100 Miniature Circuit Breaker

**II. DEVICE TYPE**

CODE	DESCRIPTION
CB	UL 489 Circuit Breaker

**III. NUMBER OF POLES**

CODE	DESCRIPTION	LIST
1	Single Pole	\$ 58.00
1N	Single Pole + Neutral*	\$116.00
2	Two Pole	\$116.00
3	Three Pole	\$174.00
3N	Three Pole + Neutral*	\$232.00

\*NOTE: Consult factory for neutral pole availability.

**IV. TRIP CHARACTERISTICS**

CODE	DESCRIPTION
C	Trip Curve C
D	Trip Curve D

**V. FRAME SIZE**

CODE	DESCRIPTION
2	17.5mm Frame per Pole

**VI. OPERATING CURRENT**

CODE	DESCRIPTION
C50	0.5A
D10	1.0A
D16	1.6A
D20	2.0A
D30	3.0A
D40	4.0A
D50	5.0A
D60	6.0A
D70	7.0A
D80	8.0A
U10	10A
U13	13A
U15	15A
U16	16A
U20	20A
U25	25A
U30	30A
U32	32A
U40	40A
U50	50A
U63	63A

DISCOUNT  
SCHEDULE **F**

**SOME OF OUR POPULAR CONFIGURATIONS:**

**MINIATURE CIRCUIT BREAKERS, UL 489 BRANCH CIRCUIT BREAKERS**

CATALOG NUMBER	DESCRIPTION	LIST
1100-CB1C2U10	Miniature Circuit Breaker, 1 Pole, 10A, Trip Curve C, UL 489, IEC 60947-2, IEC 60898	\$ 58.00
1100-CB1C2D60	Miniature Circuit Breaker, 1 Pole, 6A, Trip Curve C, UL 489, IEC 60947-2, IEC 60898	\$ 58.00
1100-CB1D2U10	Miniature Circuit Breaker, 1 Pole, 10A, Trip Curve D, UL 489, IEC 60947-2, IEC 60898	\$ 58.00
1100-CB1D2D60	Miniature Circuit Breaker, 1 Pole, 6A, Trip Curve D, UL 489, IEC 60947-2, IEC 60898	\$ 58.00
1100-CB2C2U10	Miniature Circuit Breaker, 2 Pole, 10A, Trip Curve C, UL 489, IEC 60947-2, IEC 60898	\$116.00
1100-CB2D2D40	Miniature Circuit Breaker, 2 Pole, 4A, Trip Curve D, UL 489, IEC 60947-2, IEC 60898	\$116.00
1100-CB3C2U20	Miniature Circuit Breaker, 3 Pole, 20A, Trip Curve C, UL 489, IEC 60947-2, IEC 60898	\$174.00
1100-CB3D2U10	Miniature Circuit Breaker, 3 Pole, 10A, Trip Curve D, UL 489, IEC 60947-2, IEC 60898	\$174.00

**IT'S EASY TO BUILD YOUR OWN CIRCUIT BREAKER**

Simply pick the code number from each of the sections below and combine them to build your part number.

**Miniature Circuit Breakers  
UL 1077 Supplementary Protectors**

**1100 - SP**     **2**    
I II III IV V VI

Example: To build one of our most popular UL 1077 Miniature Circuit Breakers, the part number would be **1100 + SP + III + IV + 2 + VI** or **1100-SP1B2U10**



I. PRODUCT TYPE	
CODE	DESCRIPTION
1100	Series 1100 Miniature Circuit Breaker

II. DEVICE TYPE	
CODE	DESCRIPTION
SP	UL 1077 Supplementary Protector

III. NUMBER OF POLES		
CODE	DESCRIPTION	LIST
1	Single Pole	\$ 29.00
1N	Single Pole + Neutral*	\$ 58.00
2	Two Pole	\$ 58.00
3	Three Pole	\$ 87.00
3N	Three Pole + Neutral*	\$116.00

\*NOTE: Consult factory for neutral pole availability.

IV. TRIP CHARACTERISTICS	
CODE	DESCRIPTION
B	Trip Curve B
C	Trip Curve C
D	Trip Curve D

V. FRAME SIZE	
CODE	DESCRIPTION
2	17.5mm Frame per Pole

VI. OPERATING CURRENT	
CODE	DESCRIPTION
C50	0.5A
D10	1.0A
D16	1.6A
D20	2.0A
D30	3.0A
D40	4.0A
D50	5.0A
D60	6.0A
D70	7.0A
D80	8.0A
U10	10A
U13	13A
U15	15A
U16	16A
U20	20A
U25	25A
U30	30A
U32	32A
U40	40A
U50	50A
U63	63A



**SOME OF OUR POPULAR CONFIGURATIONS:**

MINIATURE CIRCUIT BREAKERS, UL 1077 SUPPLEMENTARY PROTECTORS		
CATALOG NUMBER	DESCRIPTION	LIST
1100-SP1C2D60	Miniature Circuit Breaker, 1 Pole, 6A, Trip Curve C, UL 1077 Supplementary Protector, IEC 60947-2, IEC 60898	\$ 29.00
1100-SP1C2U10	Miniature Circuit Breaker, 1 Pole, 10A, Trip Curve C, UL 1077 Supplementary Protector, IEC 60947-2, IEC 60898	\$ 29.00
1100-SP1D2D60	Miniature Circuit Breaker, 1 Pole, 6A, Trip Curve D, UL 1077 Supplementary Protector, IEC 60947-2, IEC 60898	\$ 29.00
1100-SP1D2U10	Miniature Circuit Breaker, 1 Pole, 10A, Trip Curve D, UL 1077 Supplementary Protector, IEC 60947-2, IEC 60898	\$ 29.00
1100-SP2C2U10	Miniature Circuit Breaker, 2 Pole, 10A, Trip Curve C, UL 1077 Supplementary Protector, IEC 60947-2, IEC 60898	\$ 58.00
1100-SP2D2D50	Miniature Circuit Breaker, 2 Pole, 5A, Trip Curve D, UL 1077 Supplementary Protector, IEC 60947-2, IEC 60898	\$ 58.00
1100-SP3C2U10	Miniature Circuit Breaker, 3 Pole, 10A, Trip Curve C, UL 1077 Supplementary Protector, IEC 60947-2, IEC 60898	\$ 87.00
1100-SP3C2U16	Miniature Circuit Breaker, 3 Pole, 16A, Trip Curve C, UL 1077 Supplementary Protector, IEC 60947-2, IEC 60898	\$ 87.00

**SIDE MOUNTED  
AUXILIARY CONTACT**



Our side mounted auxiliary contacts allow remote indication of the status of a circuit breaker or supplementary protector to which it is attached. These contacts come with IP20 guarded terminals and snap onto the left side of the circuit breaker or supplementary protector without the use of tools.

Ratings: AC12 - 6A @ 240V AC (50/60Hz)  
DC12 - 1A @ 130V DC  
2A @ 48V DC  
6A @ 24V DC

CODE	DESCRIPTION	LIST
1100-SA211	1 Normally Open and 1 Normally Closed	\$ 52.60

**SIDE MOUNTED  
SHUNT-TRIP MODULES**



Shunt-trip modules enable the circuit breaker or supplementary protector to trip, there by cutting off the power supply to any machine or equipment remotely. These modules snap onto the right side of the circuit breaker or supplementary protector without the use of tools. IP20 guarded terminals protect against accidental contact with live parts and can be used in conjunction with auxiliary contacts.

CODE	DESCRIPTION	LIST
1100-SRXD	110V AC, 50/60Hz	\$ 96.20
1100-SRXF	230V AC, 50/60Hz	\$ 96.20

**SIDE MOUNTED AUXILIARY  
CONTACTS WITH ALARM**



This accessory provides remote indication when a circuit breaker or supplementary protector is tripped. The trip can be a result of an overload, short-circuit, operation of shunt-trip accessory, or undervoltage/ overvoltage module. Features IP20 guarded terminals to protect against accidental contact with live parts and snaps-on and installs without the use of tools.

Ratings: AC12 - 3A @ 400V AC (50/60Hz)  
6A @ 230V AC (50/60Hz)

CODE	DESCRIPTION	LIST
1100-STA211	1 Normally Open and 1 Normally Closed	\$ 67.60



**HEAVY DUTY LOCK-OFF ATTACHMENT**



This lock-off attachment when used with a padlock ensures that no unauthorized person switches the circuit breaker or supplementary protector to the ON state after a trip.



CODE	DESCRIPTION	LIST
1100-L01	Lock-Off Attachment	\$ 9.80

SPECIFICATIONS:

		<b>UL 489 BRANCH CIRCUIT BREAKERS ELECTRICAL SPECIFICATIONS</b>				
		<b>1 POLE</b>	<b>1 + N POLE</b>	<b>2 POLE</b>	<b>3 POLE</b>	<b>3 + N POLE</b>
<b>ELECTRICAL GENERAL</b>						
	<b>UNITS</b>					
Rated Operating Current	A	0.5 - 63				
Operating Frequency	Hz	50/60				
Electrical Life	Ops.	6,000				
Line/Load Wiring		Suitable for reverse feed				
<b>ELECTRICAL UL/CSA APPLICATIONS</b>						
Conformity to Standards		cULus, UL 489, CSA C22.2 No. 5				
AC Rated Operating Voltage	V	277		480Y/277		
DC Rated Operating Voltage	V	60*	—	125* (wired in series)	—	—
<b>MAXIMUM SHORT CIRCUIT RATING</b>						
@ 120 VAC	kA	10				
@ 240 VAC	kA	10				
@ 277 VAC	kA	10				
@ 480Y/277 VAC	kA	10				
@ 60 VDC	kA	10	—	10	—	—
@ 125 VDC (wired in series)	kA	—	—	10	—	—
<b>ELECTRICAL IEC APPLICATIONS</b>						
Conformity to Standards		IEC 60947-2, IEC 60898				
<b>ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (I<sub>cs</sub>)</b>						
@ 240 VAC	kA	10				
@ 415 VAC	kA	10				
<b>RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (I<sub>cs</sub>)</b>						
@ 240 VAC	kA	10				
@ 415 VAC	kA	10				

\*NOTE: Available on request, please consult factory.

		<b>UL 489 BRANCH CIRCUIT BREAKERS MECHANICAL, ENVIRONMENTAL &amp; CONSTRUCTION SPECIFICATIONS</b>				
		<b>1 POLE</b>	<b>1 + N POLE</b>	<b>2 POLE</b>	<b>3 POLE</b>	<b>3 + N POLE</b>
<b>MECHANICAL</b>						
	<b>UNITS</b>					
Mechanical Endurance	Ops.	20,000				
<b>ENVIRONMENTAL</b>						
Ambient Operating Temperature	°C/°F	-25 to 55 / -13 to 131				
Ambient Storage Temperature	°C/°F	-40 to 80 / -40 to 176				
Calibration Temperature	°C/°F	40 / 104				
Altitude	m/ft.	2,000 / 6,562				
Shock	G	15				
<b>CONSTRUCTION</b>						
<b>INGRESS PROTECTION</b>						
Line & Load Terminations	IP	20				
<b>WEIGHT</b>	kg	0.125	0.25	0.25	0.37	0.50
	lbs	0.275	0.55	0.55	0.825	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 0.8 ~ 26.7				
<b>TERMINAL WIRING CONNECTION</b>						
Wire Type		Copper wire only, 60/75° C				
<b>TERMINAL TORQUE</b>						
	Nm/lb-in.	2.5 / 22.2				
<b>ROHS COMPLIANCE</b>		For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a>				

**SPECIFICATIONS:**

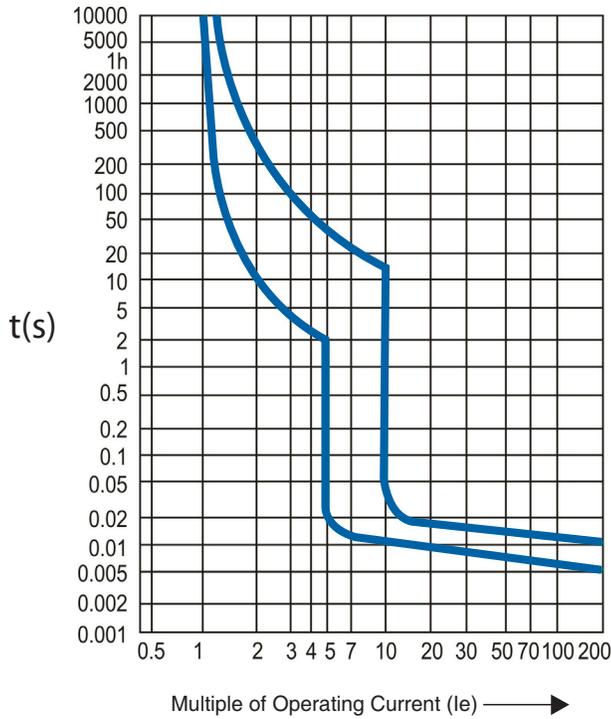
<b>UL 1077 SUPPLEMENTARY PROTECTORS ELECTRICAL SPECIFICATIONS</b>						
		<b>1 POLE</b>	<b>1 + N POLE</b>	<b>2 POLE</b>	<b>3 POLE</b>	<b>3 + N POLE</b>
<b>ELECTRICAL GENERAL</b>						
	<b>UNITS</b>					
Rated Operating Current	A	0.5 ~ 63				
Operating Frequency	Hz	50/60				
Electrical Life	Ops.	6,000				
Line/Load Wiring		Suitable for reverse feed				
<b>ELECTRICAL UL/CSA APPLICATIONS</b>						
Conformity to Standards		cURus, UL 1077, CSA C22.2 No. 235				
AC Rated Operating Voltage	V	277		480Y/277		
DC Rated Operating Voltage	V	60*	—	125* (wired in series)	—	—
<b>MAXIMUM SHORT CIRCUIT RATING</b>						
@ 120 VAC	kA	10				
@ 240 VAC	kA	10				
@ 277 VAC	kA	10				
@ 480Y/277 VAC	kA	10				
@ 60 VDC	kA	10	—	10	—	—
@ 125 VDC (wired in series)	kA	—	—	10	—	—
<b>ELECTRICAL IEC APPLICATIONS</b>						
Conformity to Standards		IEC 60947-2, IEC 60898				
<b>ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (I<sub>cs</sub>)</b>						
@ 240 VAC	kA	10				
@ 415 VAC	kA	10				
<b>RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (I<sub>cs</sub>)</b>						
@ 240 VAC	kA	10				
@ 415 VAC	kA	10				

\*NOTE: Available on request, please consult factory.

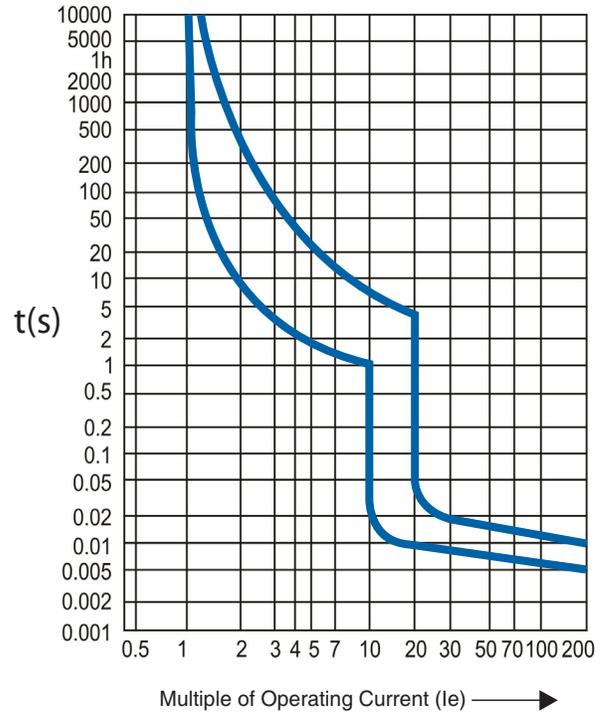
<b>UL 1077 SUPPLEMENTARY PROTECTORS MECHANICAL, ENVIRONMENTAL &amp; CONSTRUCTION SPECIFICATIONS</b>						
		<b>1 POLE</b>	<b>1 + N POLE</b>	<b>2 POLE</b>	<b>3 POLE</b>	<b>3 + N POLE</b>
<b>MECHANICAL</b>						
	<b>UNITS</b>					
Mechanical Endurance	Ops.	20,000				
<b>ENVIRONMENTAL</b>						
Ambient Operating Temperature	°C/°F	-25 to 70 / -13 to 131				
Ambient Storage Temperature	°C/°F	-40 to 80 / -40 to 176				
Calibration Temperature	°C/°F	40 / 104				
Altitude	m/ft.	2,000 / 6,562				
Shock	G	15				
<b>CONSTRUCTION</b>						
<b>INGRESS PROTECTION</b>						
Line & Load Terminations	IP	20				
<b>WEIGHT</b>	kg	0.12	0.24	0.24	0.36	0.48
	lbs	0.265	0.53	0.53	0.795	1.06
<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 0.8 ~ 26.7				
<b>TERMINAL WIRING CONNECTION</b>						
Wire Type		Copper wire only, 60/75° C				
<b>TERMINAL TORQUE</b>						
	Nm/lb-in.	2.5 / 22.2				
<b>ROHS COMPLIANCE</b>		For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a>				

**UL 489 BRANCH CIRCUIT BREAKER TRIP CHARACTERISTICS**

TRIP CURVE C



TRIP CURVE D

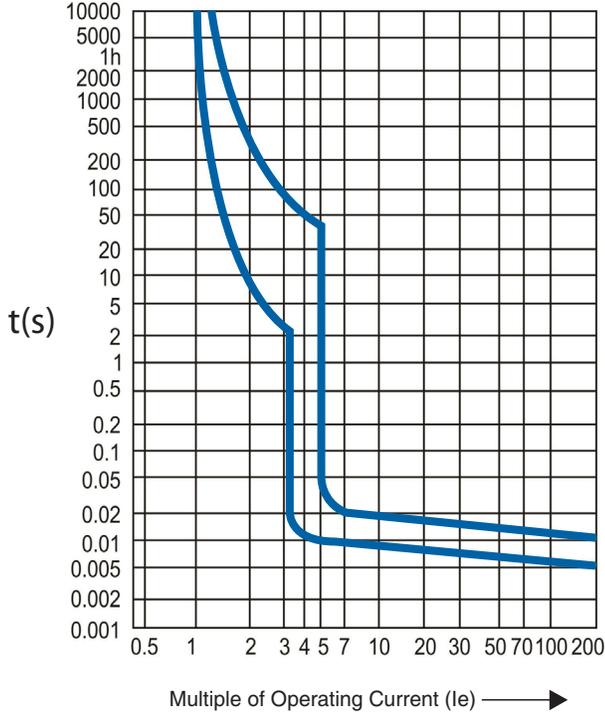


**UL 489 BRANCH CIRCUIT BREAKER OPERATING POSITION**

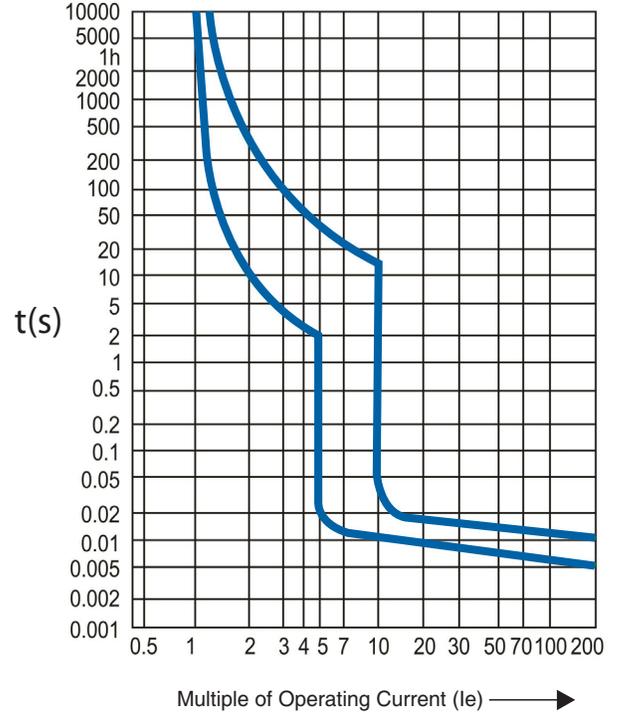


**UL 1077 SUPPLEMENTARY PROTECTOR  
TRIP CHARACTERISTICS**

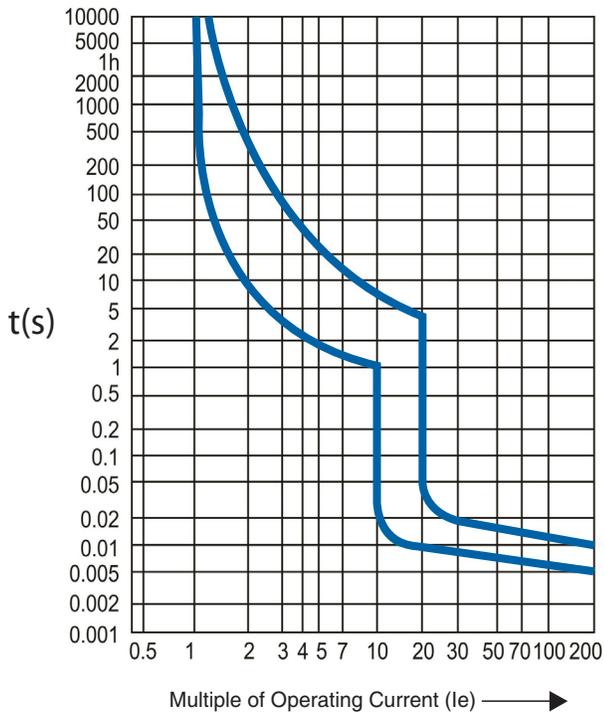
TRIP CURVE B



TRIP CURVE C



TRIP CURVE D

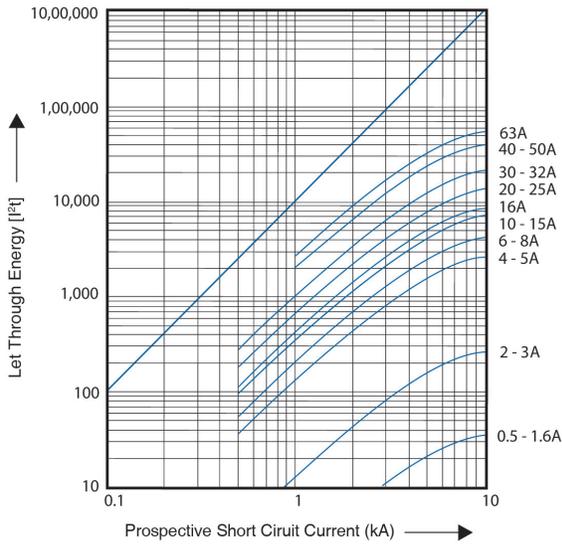


**UL 1077 SUPPLEMENTARY  
PROTECTOR OPERATING  
POSITION**



**UL 489 BRANCH CIRCUIT BREAKER  
& UL 1077 SUPPLEMENTARY PROTECTOR  
LET THROUGH ENERGY CURVES**

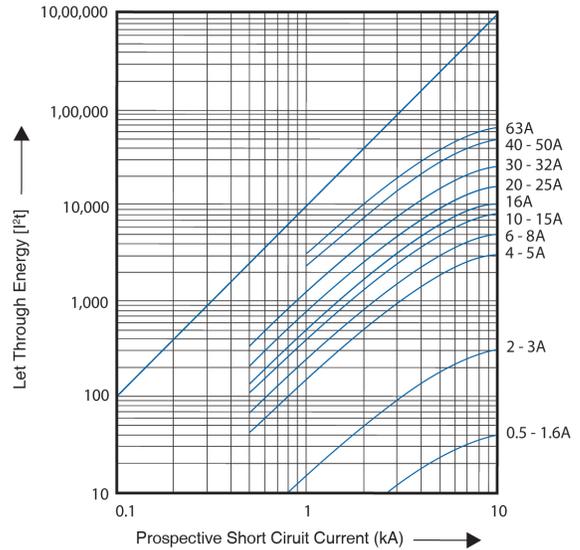
THREE POLE BREAKER WITH TRIP CURVE C



**Multipliers for other poles**

1 Pole Curve Values = 0.77 x 3 Pole Curve Values  
2 Pole Curve Values = 0.66 x 3 Pole Curve Values

THREE POLE BREAKER WITH TRIP CURVE D

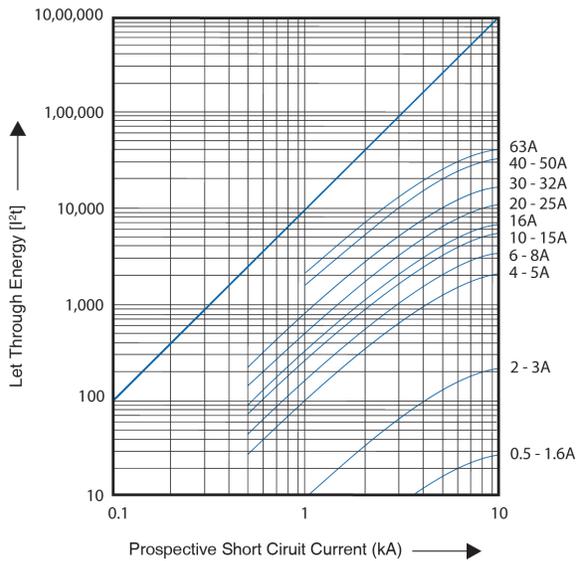


**Multipliers for other poles**

1 Pole Curve Values = 0.92 x 3 Pole Curve Values  
2 Pole Curve Values = 0.81 x 3 Pole Curve Values

**UL 1077 SUPPLEMENTARY PROTECTOR  
LET THROUGH ENERGY CURVE**

THREE POLE BREAKER WITH TRIP CURVE B



**Multipliers for other poles**

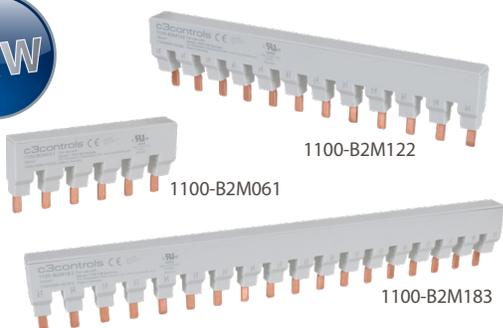
1 Pole Curve Values = 0.68 x 3 Pole Curve Values  
2 Pole Curve Values = 0.63 x 3 Pole Curve Values

## BUS BAR SYSTEM FOR SERIES 1100-CB (UL 489) & 1100-SP (UL 1077) DEVICES

Bus bars are expertly designed for the most efficient MCB installation, offering a dependable solution. Tailored to the needs of contemporary installations, this bus bar boasts a compact design that maximizes space without sacrificing performance.

- **Compatible:** Our bus bar is specifically engineered to work seamlessly with both UL 489 & UL 1077 miniature circuit breakers, ensuring versatile applications.
- **Panel Space Savings:** Its streamlined design facilitates the efficient use of panel space, resulting in a more organized and compact electrical configuration.
- **Reduced Maintenance:** Compared to traditional wiring, the MCB Bus Bar requires minimal to no maintenance, helping to significantly reduce upkeep costs and downtime.
- **High Electrical Ratings:** Designed to support demanding electrical loads, the 115A MCB Bus Bar adheres to strict industry standards for performance and reliability, making it ideal for both commercial and industrial environments.

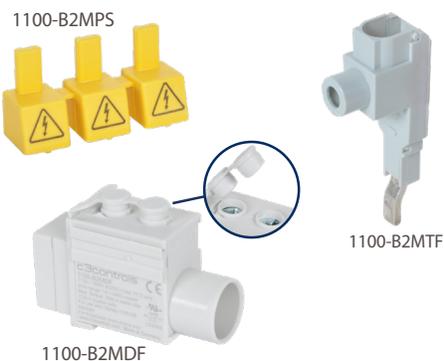
### 115A BUS BARS



CODE	NO. OF PINS	NO. OF BREAKERS	PHASE	LIST
<b>FOR USE WITH 1 POLE DEVICES</b>				
1100-B2M061	6	6	1	\$ 38.00
1100-B2M121	12	12	1	\$ 69.00
1100-B2M181	18	18	1	\$106.00
<b>FOR USE WITH 2 POLE DEVICES</b>				
1100-B2M062	6	3	2	\$ 43.00
1100-B2M122	12	6	2	\$ 86.00
1100-B2M182	18	9	2	\$127.00
<b>FOR USE WITH 3 POLE DEVICES</b>				
1100-B2M063	6	2	3	\$ 47.00
1100-B2M123	12	4	3	\$ 89.00
1100-B2M183	18	6	3	\$136.00



### ACCESSORIES FOR USE WITH BUS BARS



CODE	DESCRIPTION	LIST
1100-B2MPS	Protective Shroud (for 3 unused pins)	\$ 7.00
1100-B2MTF	Terminal Power Feed, 35mm <sup>2</sup>	\$ 50.00
1100-B2MDF	Dedicated Power Feed, 50mm <sup>2</sup>	\$ 50.00



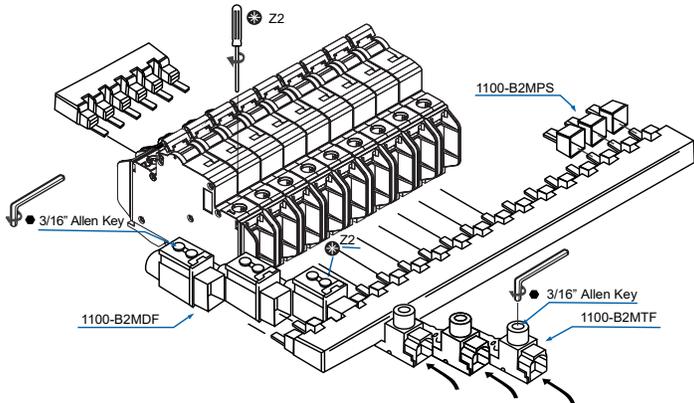
SPECIFICATIONS:

**BUS BAR SYSTEM**

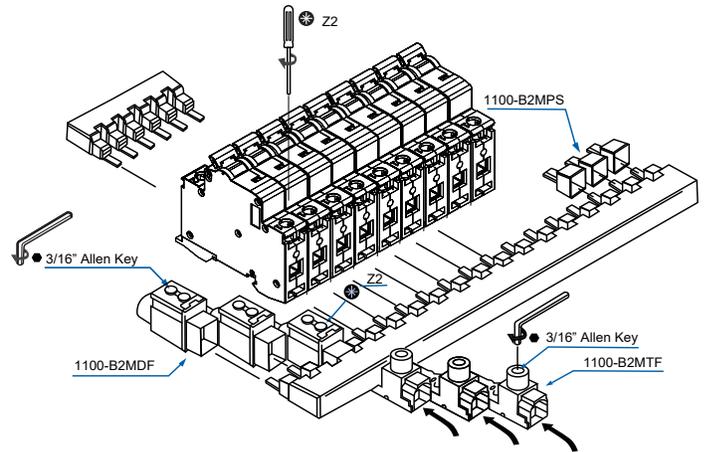
GENERAL	UNITS	1100-B2MXX BUS BAR	1100-B2MTF TERMINAL FEED	1100-B2MDF DEDICATED FEED
Operational Voltage	VAC	480 Y/277 V		
Impulse Withstand Voltage	kV	8		
Rated Operational Current	A	115		
Wire Range	AWG / mm <sup>2</sup>	—	(14 - 8 / 2.5 - 10) #	
		—	(6 - 2 / 16 - 35) ##	
Tightening Torque (Wire Side)	Nm / lb-in	—	(2.3 / 21) #	
		—	(4.5 / 40) ##	
Tightening Torque (Busbar Side)	Nm / lb-in	—	—	2.5 / 22
Wire Strip Length	in / mm	—	0.56 / 14	
Wire Type	—	—	Copper wire only, 75°C	
Cross Section	mm <sup>2</sup>	16.5	—	
<b>ROHS COMPLIANCE</b>	For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a> .			

- 6-pin and 12-pin busbars are suitable for use in circuits with a maximum of 10,000 RMS symmetrical amperes for MCBs rated up to 32 A, and 5,000 RMS symmetrical amperes for MCBs rated up to 63 A, at voltages up to 480Y/277 VAC.
- 18-pin busbars are suitable for use in circuits with a maximum fault capacity of 5,000 RMS symmetrical amperes for MCBs rated up to 63 A, at voltages up to 480Y/277 VAC
- Busbars and power feeds are rated for 115 A when installed in an enclosure with minimum dimensions of 30 × 30 × 10 inches or larger

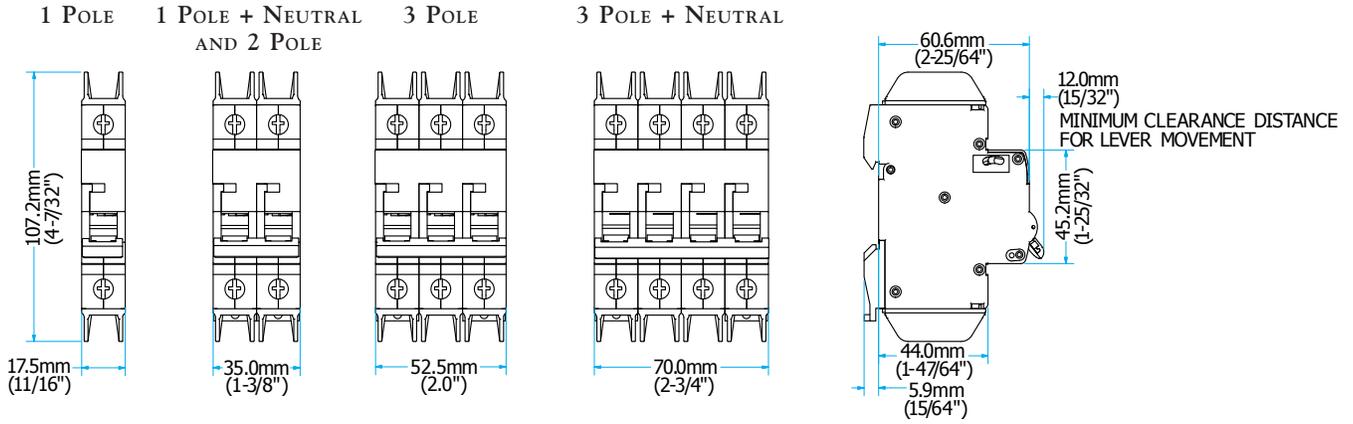
**BUS BAR SYSTEM FOR SERIES 1100-CB (UL 489) DEVICES**



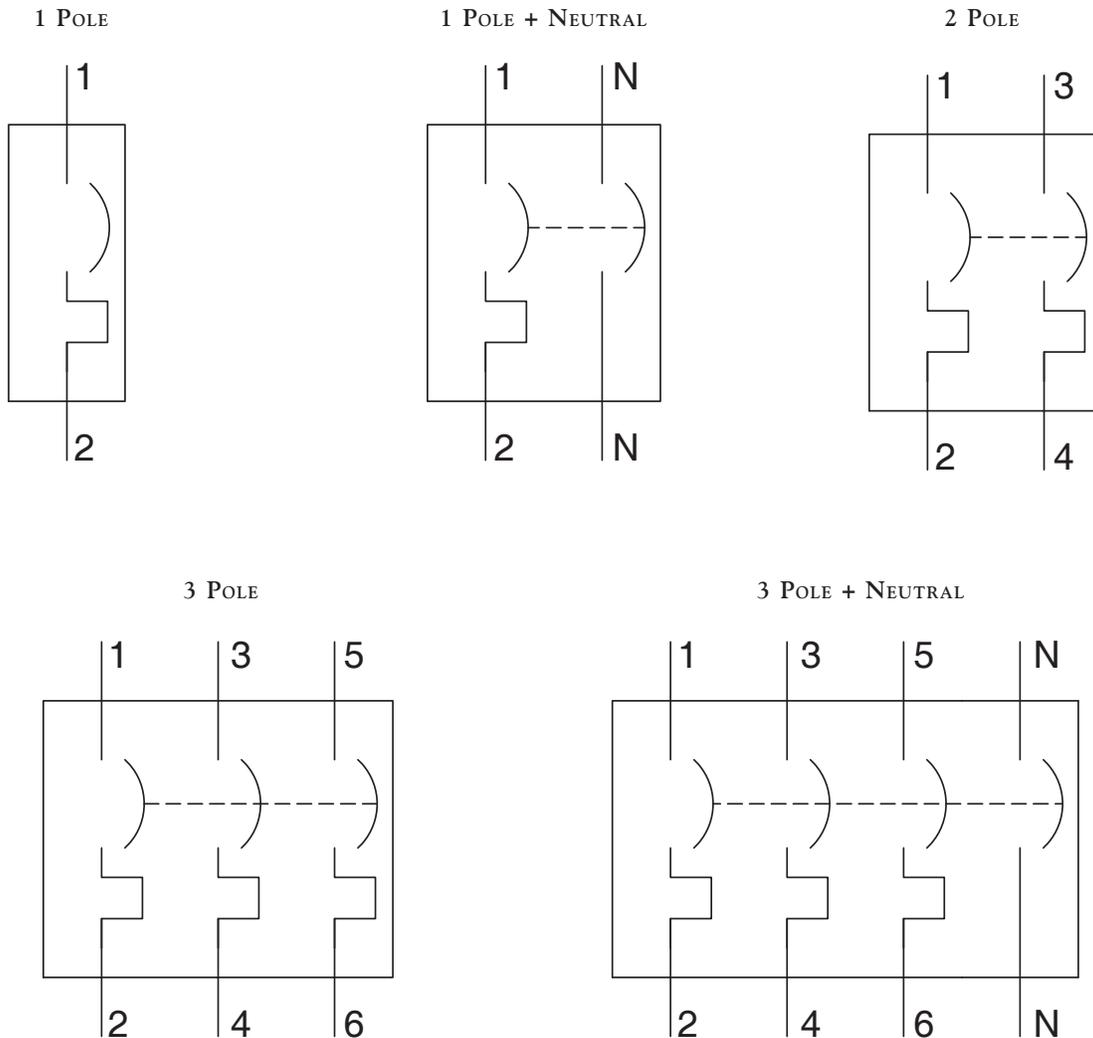
**BUS BAR SYSTEM FOR SERIES 1100-SP (UL 1077) DEVICES**



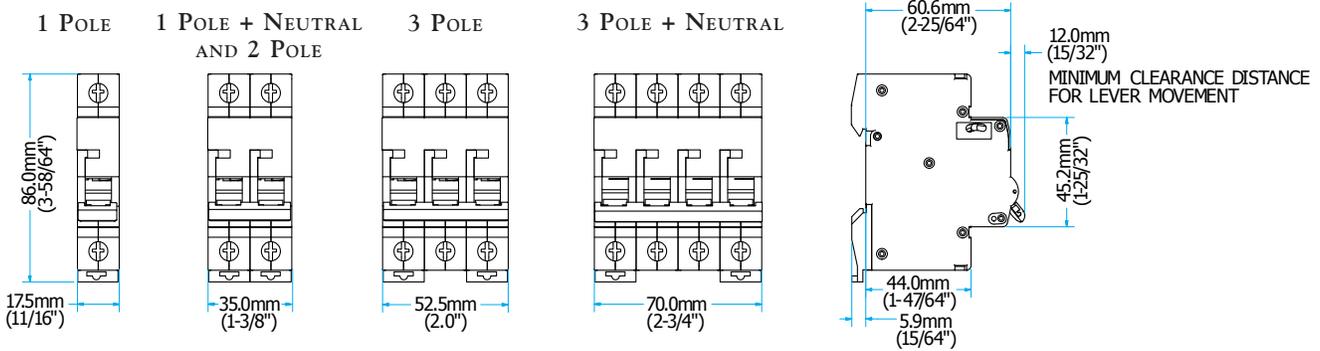
**UL 489 BRANCH CIRCUIT BREAKER DIMENSIONS**



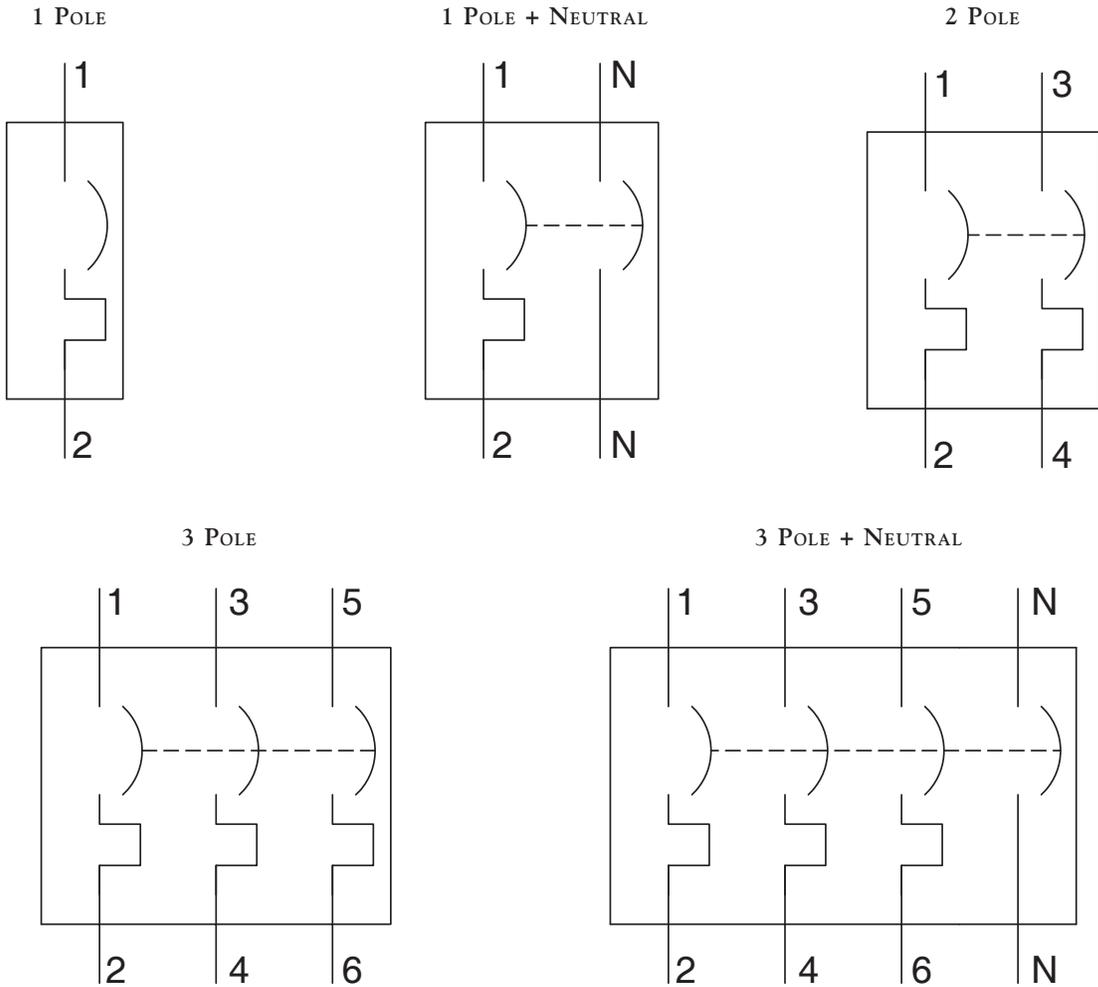
**UL 489 BRANCH CIRCUIT BREAKER CIRCUIT DIAGRAMS**



**UL 1077 SUPPLEMENTARY PROTECTOR DIMENSIONS**

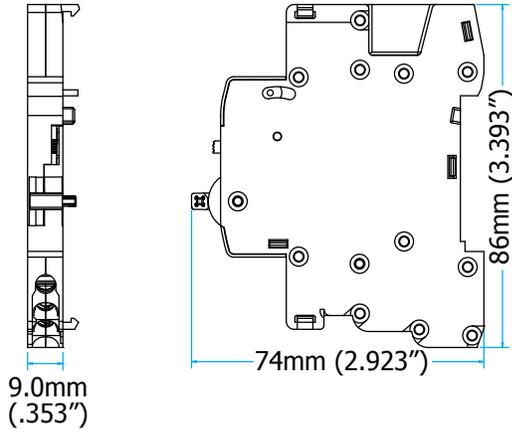


**UL 1077 SUPPLEMENTARY PROTECTOR CIRCUIT DIAGRAMS**



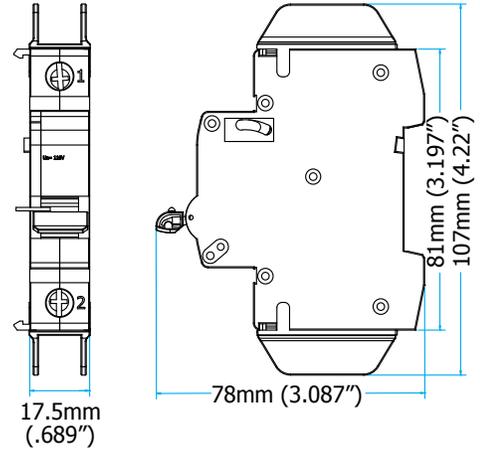
**SIDE MOUNTED  
AUXILIARY CONTACT**

1100-SA211



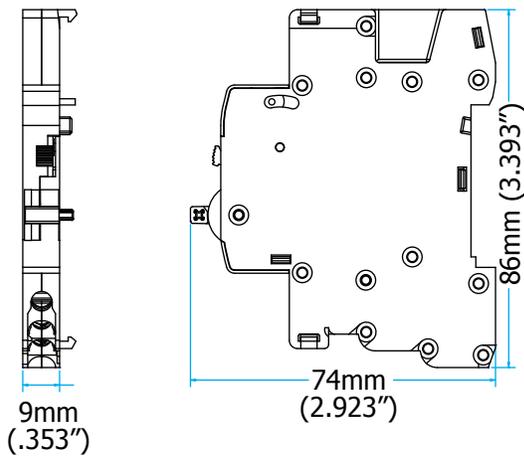
**SIDE MOUNTED  
SHUNT-TRIP MODULES**

1100-SRXD & 1100-SRXF



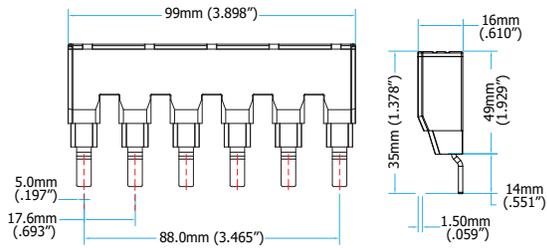
**SIDE MOUNTED AUXILIARY  
CONTACTS WITH ALARM**

1100-STA211



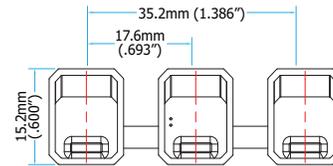
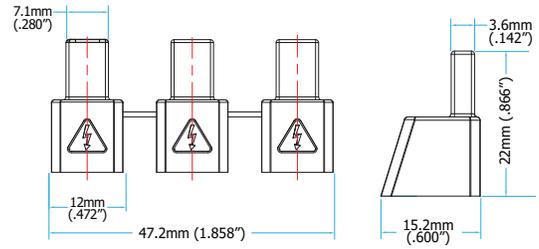
**BUS BARS - 115A, 6 PINS**

1100-B2M061, B2M062 & B2M063



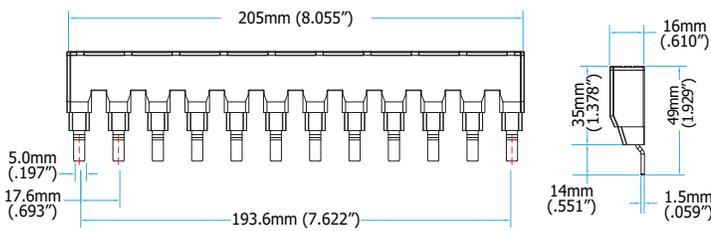
**PROTECTIVE SHROUD**

1100-B2MPS



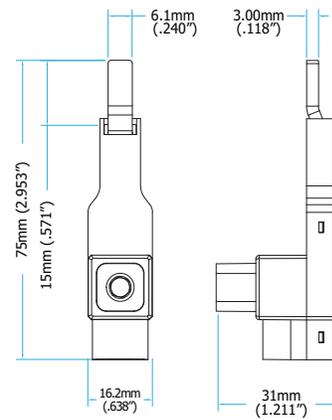
**BUS BARS - 115A, 12 PINS**

1100-B2M121, B2M122 & B2M123



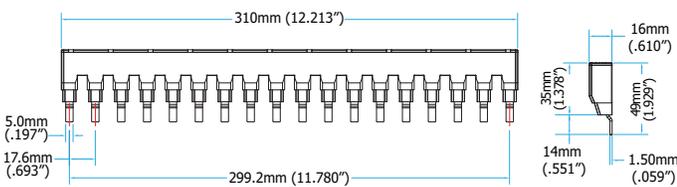
**TERMINAL POWER FEED**

1100-B2MTF



**BUS BARS - 115A, 18 PINS**

1100-B2M181, B2M182 & B2M183



**DEDICATED POWER FEED**

1100-B2MDF

