

MINIATURE CIRCUIT BREAKERS

series
1100

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.



Section 3

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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#: E496119
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 to download product certifications.

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

| | | |
|--|---|---|
| ✓ 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. |    |
| ✓ 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 front and side of the device for easy identification. | |
| ✓ Compact | Control panel sizes can be reduced because the small size, 17.5mm width per pole, allows for smaller control panels. | |
| ✓ Added Safety | Line and load side IP20 guarded finger-safe terminals prevent accidental contact with live parts. | |
| ✓ Limited Lifetime Warranty* | Every product is backed by our limited 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

“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



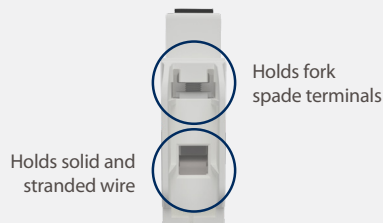
10kA @ 480Y/277V short circuit current rating on all constructions.

TRIP-FREE DESIGN



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

WIRING MADE EASY



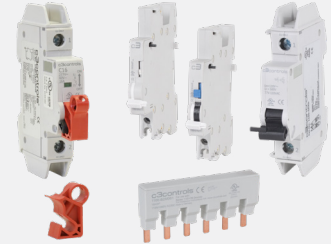
Captive screws make it virtually impossible to lose screws when wiring and our box lug design terminals will accept a wide-range of copper wire sizes. Line/load wiring is reversible for ease of use.

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

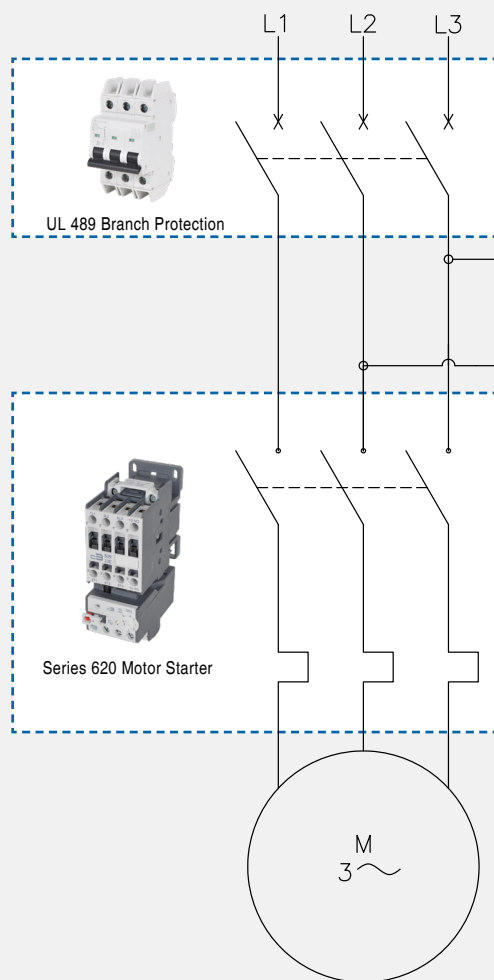
www.c3controls.com

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

Power Circuit

UL 489 Branch Circuit Breakers

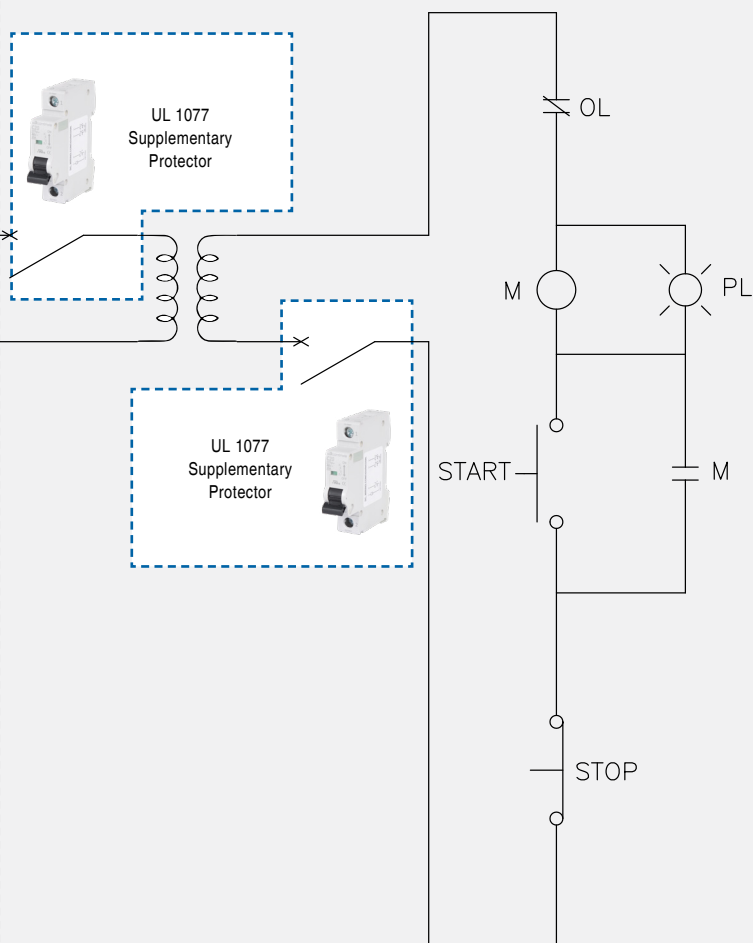
UL 489 Branch Circuit Breakers are designed to serve as the primary overcurrent and short-circuit upstream circuit protection of an electrical panel. In addition to downstream equipment and systems, branch protectors guard the connected wires and cables against improper pole spacings. UL 489 miniature 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 I II III IV 2 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 |

DISCOUNT
SCHEDULE **F**

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 |

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-LO1 | Lock-Off Attachment | \$ 9.80 |

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



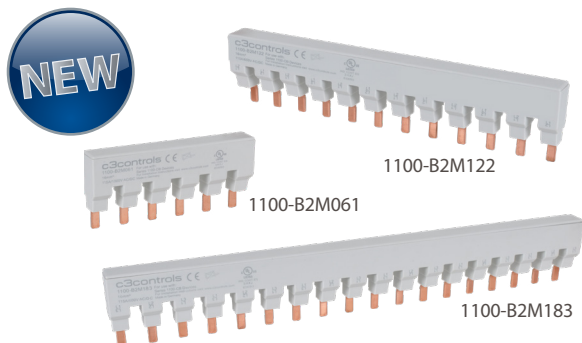
This accessory provides remote indication when a circuit breaker or supplementary protector is tripped. The trip can be a result of an overload, short-circuit, or operation of shunt-trip module. Features IP20 guarded terminals to protect against accidental contact with live parts and snaps-on and installs 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 |

DISCOUNT
SCHEDULE **F**

115A BUS BARS FOR USE WITH UL 489 DEVICES



| CODE | NO. OF PINS | NO. OF BREAKERS | PHASE | LIST |
|------------------------------------|-------------|-----------------|-------|----------|
| FOR USE WITH 1 POLE DEVICES | | | | |
| 1100-B2M061 | 6 | 6 | 1 | \$ 30.70 |
| 1100-B2M121 | 12 | 12 | 1 | \$ 53.70 |
| 1100-B2M181 | 18 | 18 | 1 | \$ 82.80 |
| FOR USE WITH 2 POLE DEVICES | | | | |
| 1100-B2M062 | 6 | 3 | 2 | \$ 33.80 |
| 1100-B2M122 | 12 | 6 | 2 | \$ 65.90 |
| 1100-B2M182 | 18 | 9 | 2 | \$ 98.10 |
| FOR USE WITH 3 POLE DEVICES | | | | |
| 1100-B2M063 | 6 | 2 | 3 | \$ 35.30 |
| 1100-B2M123 | 12 | 4 | 3 | \$ 69.00 |
| 1100-B2M183 | 18 | 6 | 3 | \$104.20 |

DISCOUNT
SCHEDULE **F**

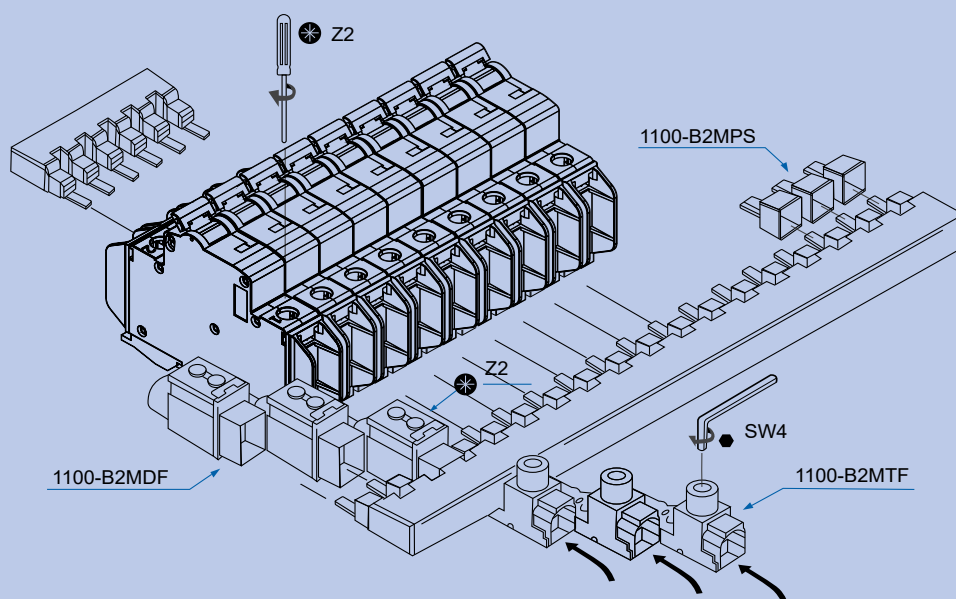
ACCESSORIES FOR USE WITH BUS BARS FOR UL 489 DEVICES



| CODE | DESCRIPTION | LIST |
|------------|---|----------|
| 1100-B2MPS | Protective Shroud (for 3 unused pins) | \$ 6.00 |
| 1100-B2MTF | Terminal Power Feed, 35mm ² | \$ 38.40 |
| 1100-B2MDF | Dedicated Power Feed, 50mm ² | \$ 38.40 |

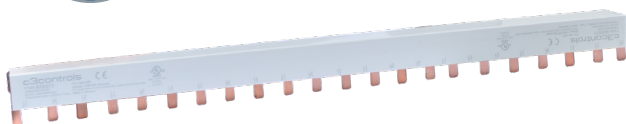
DISCOUNT
SCHEDULE **F**

BUS BAR SYSTEM FOR SERIES 1100-CB UL 489 DEVICES



**100A BUS BARS FOR USE WITH
UL 1077 DEVICES**

NEW



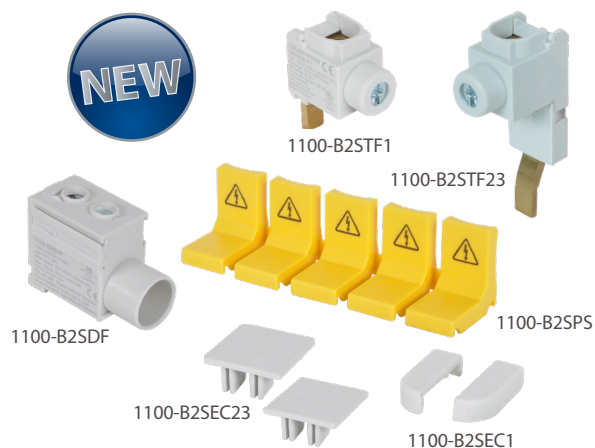
| CODE | NO. OF PINS | NO. OF BREAKERS | PHASE | LIST |
|-------------|-------------|-----------------|-------|----------|
| 1100-B2S571 | 57 | 57 | 1 | \$ 86.30 |
| 1100-B2S562 | 56 | 28 | 2 | \$161.60 |
| 1100-B2S573 | 57 | 19 | 3 | \$242.50 |

Note: Bus bars may be cut to appropriate size.

DISCOUNT
SCHEDULE **F**

**ACCESSORIES FOR USE WITH
BUS BARS FOR UL 1077 DEVICES**

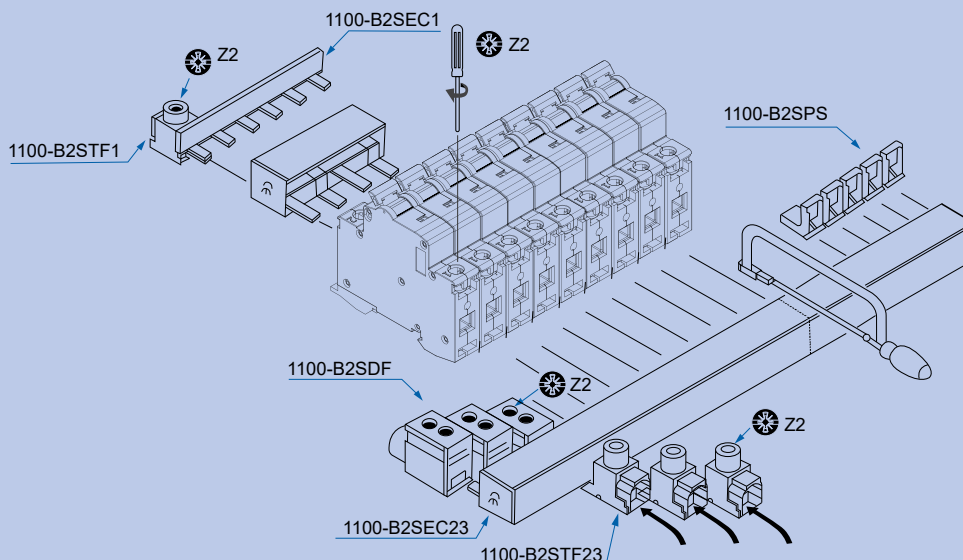
NEW



| CODE | DESCRIPTION | QTY./PKG. | LIST |
|--------------|--|-----------|---------|
| 1100-B2SPS | Protective Shroud (for 5 unused pins) | 1 | \$ 6.80 |
| 1100-B2STF1 | Terminal Power Feed, 35mm ² (for 1 pole supplementary protectors) | 1 | \$36.20 |
| 1100-B2STF23 | Terminal Power Feed, 35mm ² (for 2 & 3 pole supplementary protectors) | 1 | \$36.20 |
| 1100-B2SDF | Dedicated Power Feed, 50mm ² | 1 | \$36.20 |
| 1100-B2SEC1 | End Caps (for 1 pole supplementary protectors) | 1 pair | \$ 6.00 |
| 1100-B2SEC23 | End Caps (for 2 & 3 pole supplementary protectors) | 1 | \$ 3.00 |

DISCOUNT
SCHEDULE **F**

BUS BAR SYSTEM FOR SERIES 1100-SP UL 1077 DEVICES



SPECIFICATIONS:

UL 489 BRANCH CIRCUIT BREAKERS ELECTRICAL SPECIFICATIONS

| | | 1 POLE | 1 + N POLE | 2 POLE | 3 POLE | 3 + N POLE |
|---|--------------|--------------------------------|------------|--------------------------|--------|------------|
| ELECTRICAL GENERAL | | | | | | |
| | UNITS | | | | | |
| Rated Operating Current | A | 0.5 - 63 | | | | |
| Operating Frequency | Hz | 50/60 | | | | |
| Electrical Life | Ops. | 6,000 | | | | |
| Line/Load Wiring | | Suitable for reverse feed | | | | |
| ELECTRICAL UL/CSA APPLICATIONS | | | | | | |
| 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) | — | — |
| MAXIMUM SHORT CIRCUIT RATING | | | | | | |
| @ 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 | — | — |
| ELECTRICAL IEC APPLICATIONS | | | | | | |
| Conformity to Standards | | IEC 60947-2, IEC 60898 | | | | |
| ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (I_{co}) | | | | | | |
| @ 240 VAC | kA | 10 | | | | |
| @ 415 VAC | kA | 10 | | | | |
| RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (I_{cs}) | | | | | | |
| @ 240 VAC | kA | 10 | | | | |
| @ 415 VAC | kA | 10 | | | | |

UL 489 BRANCH CIRCUIT BREAKERS MECHANICAL, ENVIRONMENTAL & CONSTRUCTION SPECIFICATIONS

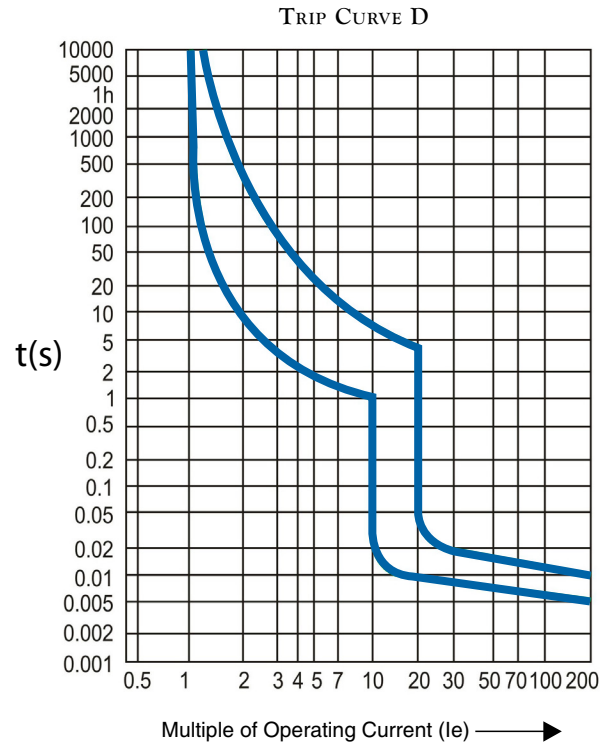
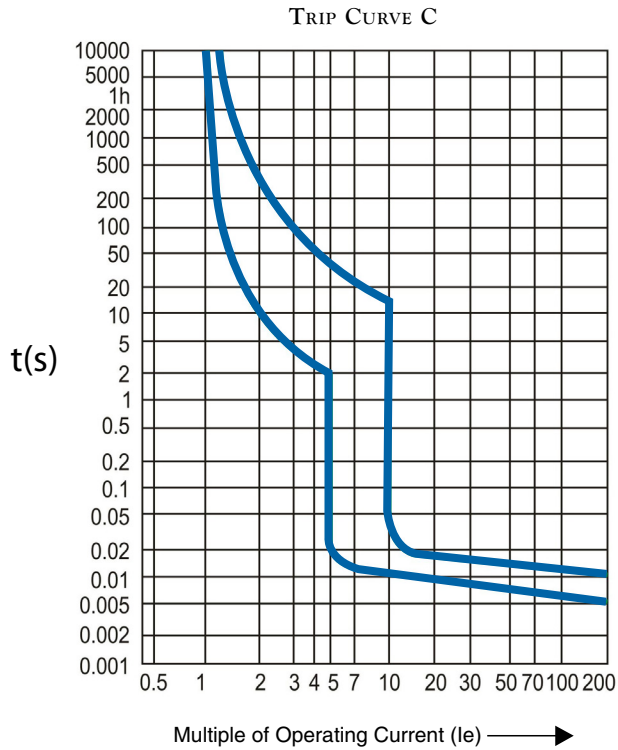
| | | 1 POLE | 1 + N POLE | 2 POLE | 3 POLE | 3 + N POLE |
|--------------------------------|------------|---|------------|--------|--------|------------|
| MECHANICAL | | | | | | |
| | UNITS | | | | | |
| Mechanical Endurance | Ops. | 20,000 | | | | |
| ENVIRONMENTAL | | | | | | |
| Ambient Operating 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 | | | | |
| CONSTRUCTION | | | | | | |
| INGRESS PROTECTION | | | | | | |
| Line & Load Terminations | IP | 20 | | | | |
| WEIGHT | kg | 0.125 | 0.25 | 0.25 | 0.37 | 0.50 |
| | lbs | 0.275 | 0.55 | 0.55 | 0.825 | 1.10 |
| CONDUCTOR SIZE | | | | | | |
| UL/CSA | AWG | 1 x #18 ~ #3, 2 x #18 ~ #10 | | | | |
| Solid, Stranded, Fine Stranded | mm² | 1 x 0.8 ~ 26.7 | | | | |
| TERMINAL WIRING CONNECTION | | | | | | |
| Wire Type | | Copper wire only, 60/75° C | | | | |
| TERMINAL TORQUE | | | | | | |
| | Nm/lb.-in. | 2.5 / 22.2 | | | | |
| ROHS COMPLIANCE | | For RoHS compliance documentation by product, refer to www.c3controls.com | | | | |

SPECIFICATIONS:

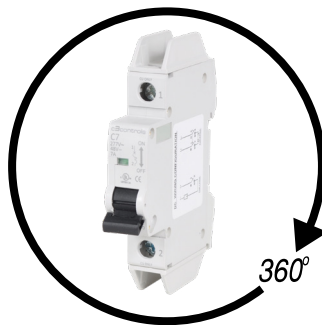
| UL 1077 SUPPLEMENTARY PROTECTORS ELECTRICAL SPECIFICATIONS | | | | | | |
|---|--------------|-----------------------------------|------------|--------------------------|--------|------------|
| | | 1 POLE | 1 + N POLE | 2 POLE | 3 POLE | 3 + N POLE |
| ELECTRICAL GENERAL | | | | | | |
| | UNITS | | | | | |
| Rated Operating Current | A | 0.5 ~ 63 | | | | |
| Operating Frequency | Hz | 50/60 | | | | |
| Electrical Life | Ops. | 6,000 | | | | |
| Line/Load Wiring | | Suitable for reverse feed | | | | |
| ELECTRICAL UL/CSA APPLICATIONS | | | | | | |
| 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) | — | — |
| MAXIMUM SHORT CIRCUIT RATING | | | | | | |
| @ 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 | — | — |
| ELECTRICAL IEC APPLICATIONS | | | | | | |
| Conformity to Standards | | IEC 60947-2, IEC 60898 | | | | |
| ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (I_{cs}) | | | | | | |
| @ 240 VAC | kA | 10 | | | | |
| @ 415 VAC | kA | 10 | | | | |
| RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (I_{cs}) | | | | | | |
| @ 240 VAC | kA | 10 | | | | |
| @ 415 VAC | kA | 10 | | | | |

| UL 1077 SUPPLEMENTARY PROTECTORS MECHANICAL, ENVIRONMENTAL & CONSTRUCTION SPECIFICATIONS | | | | | | |
|--|-----------------|---|------------|--------|--------|------------|
| | | 1 POLE | 1 + N POLE | 2 POLE | 3 POLE | 3 + N POLE |
| MECHANICAL | | | | | | |
| | UNITS | | | | | |
| Mechanical Endurance | Ops. | 20,000 | | | | |
| ENVIRONMENTAL | | | | | | |
| 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 | | | | |
| CONSTRUCTION | | | | | | |
| INGRESS PROTECTION | | | | | | |
| Line & Load Terminations | IP | 20 | | | | |
| WEIGHT | | | | | | |
| | kg | 0.12 | 0.24 | 0.24 | 0.36 | 0.48 |
| | lbs | 0.265 | 0.53 | 0.53 | 0.795 | 1.06 |
| CONDUCTOR SIZE | | | | | | |
| UL/CSA | AWG | 1 x #18 ~ #3, 2 x #18 ~ #10 | | | | |
| Solid, Stranded, Fine Stranded | mm ² | 1 x 0.8 ~ 26.7 | | | | |
| TERMINAL WIRING CONNECTION | | | | | | |
| Wire Type | | Copper wire only, 60/75° C | | | | |
| TERMINAL TORQUE | | | | | | |
| | Nm/lb-in. | 2.5 / 22.2 | | | | |
| ROHS COMPLIANCE | | For RoHS compliance documentation by product, refer to www.c3controls.com | | | | |

UL 489 BRANCH CIRCUIT BREAKER TRIP CHARACTERISTICS

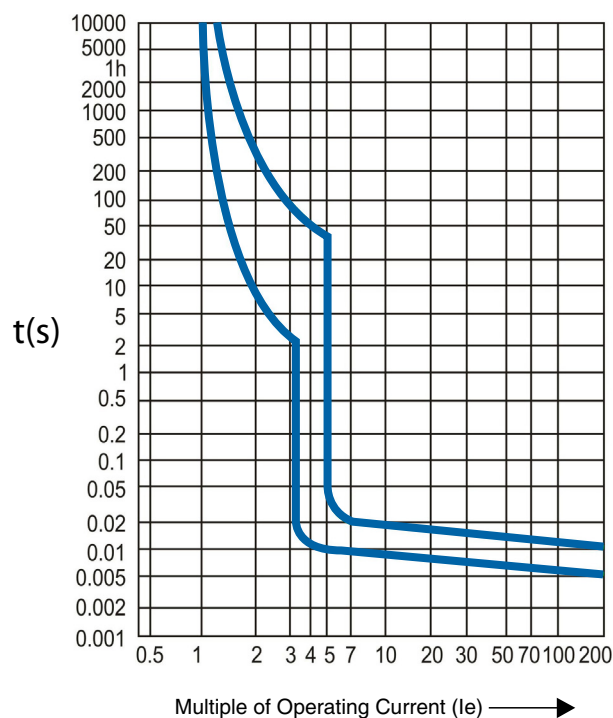


UL 489 BRANCH CIRCUIT BREAKER OPERATING POSITION

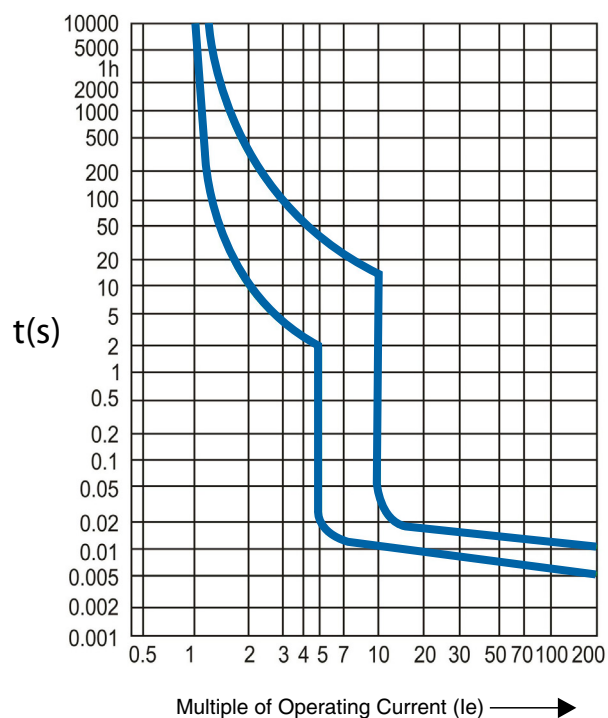


**UL 1077 SUPPLEMENTARY PROTECTOR
TRIP CHARACTERISTICS**

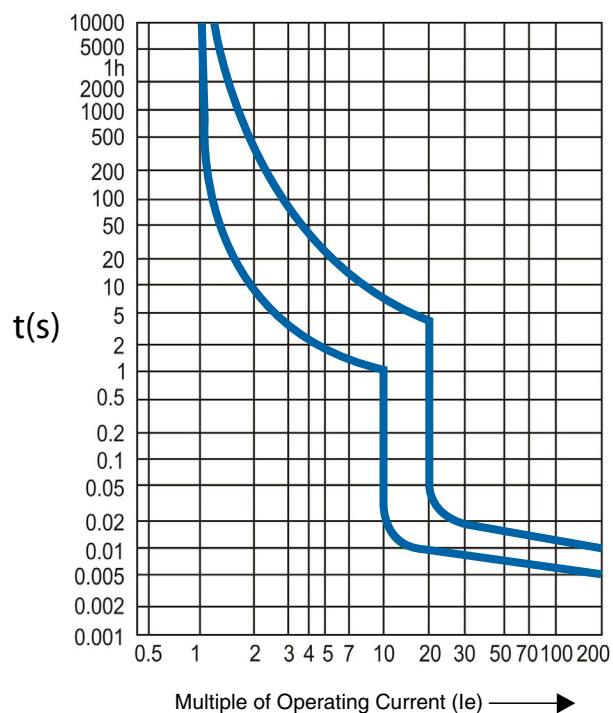
TRIP CURVE B



TRIP CURVE C



TRIP CURVE D

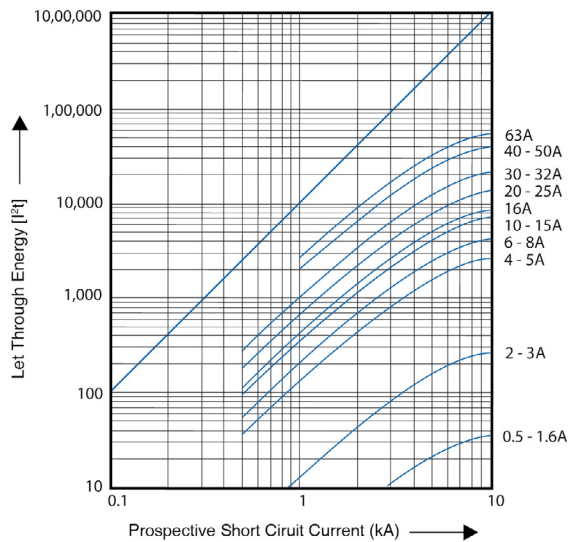


**UL 1077 SUPPLEMENTARY
PROTECTOR OPERATING
POSITION**



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

THREE POLE BREAKER WITH TRIP CURVE C

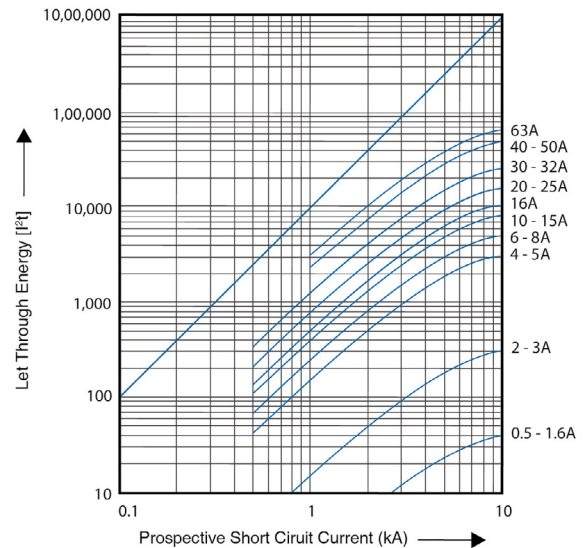


Multipliers for other poles

1 Pole Curve Values = 0.77×3 Pole Curve Values

2 Pole Curve Values = 0.66×3 Pole Curve Values

THREE POLE BREAKER WITH TRIP CURVE D



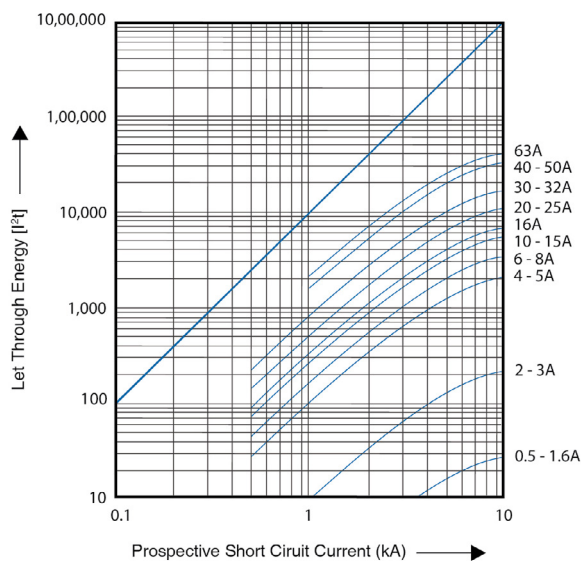
Multipliers for other poles

1 Pole Curve Values = 0.92×3 Pole Curve Values

2 Pole Curve Values = 0.81×3 Pole Curve Values

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

THREE POLE BREAKER WITH TRIP CURVE B

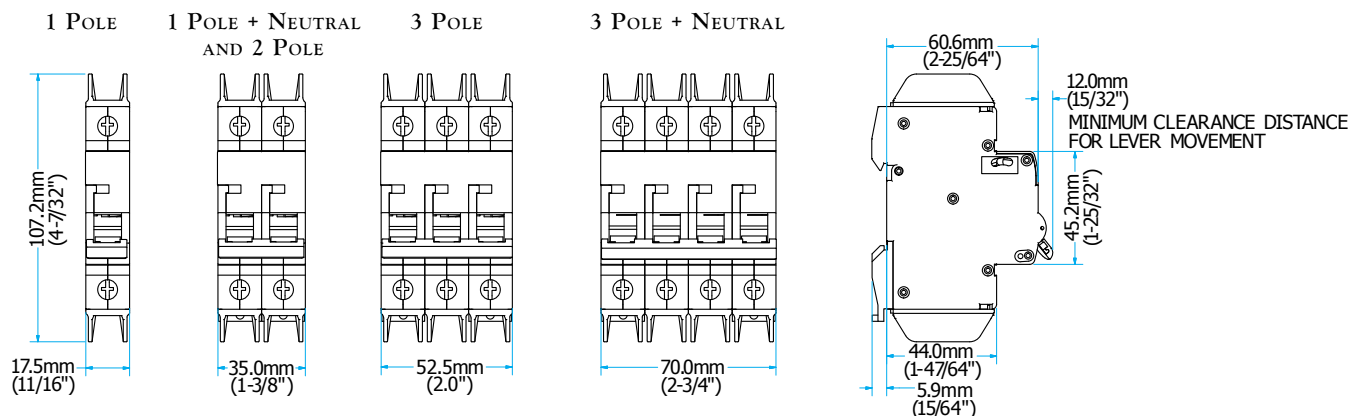


Multipliers for other poles

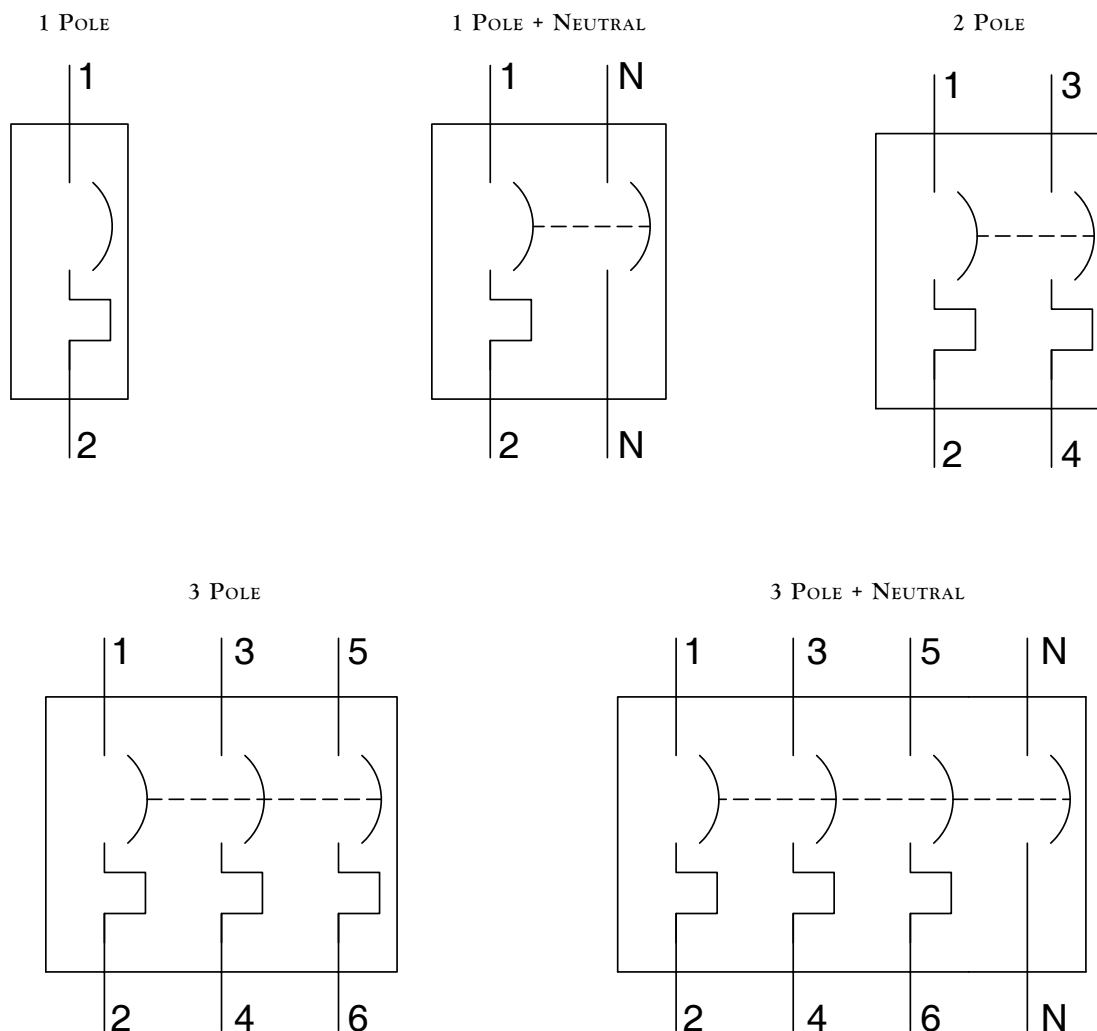
1 Pole Curve Values = 0.68×3 Pole Curve Values

2 Pole Curve Values = 0.63×3 Pole Curve Values

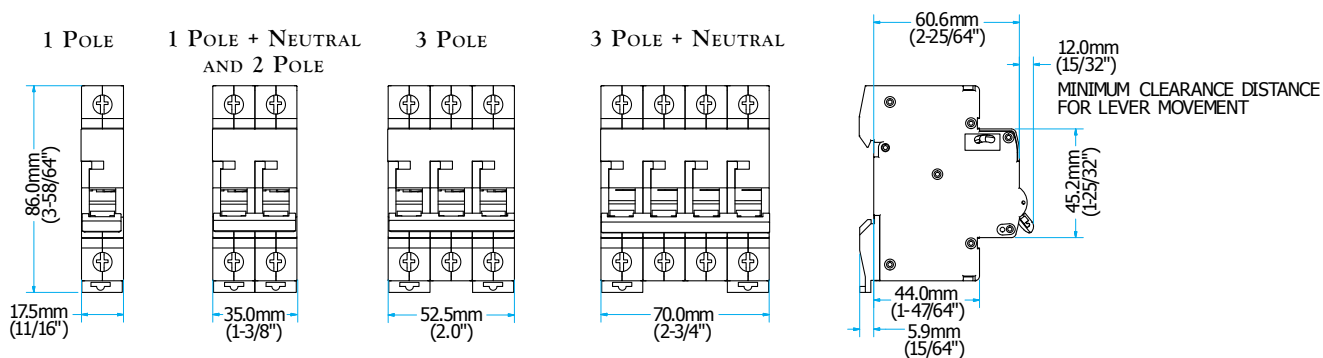
UL 489 BRANCH CIRCUIT BREAKER DIMENSIONS



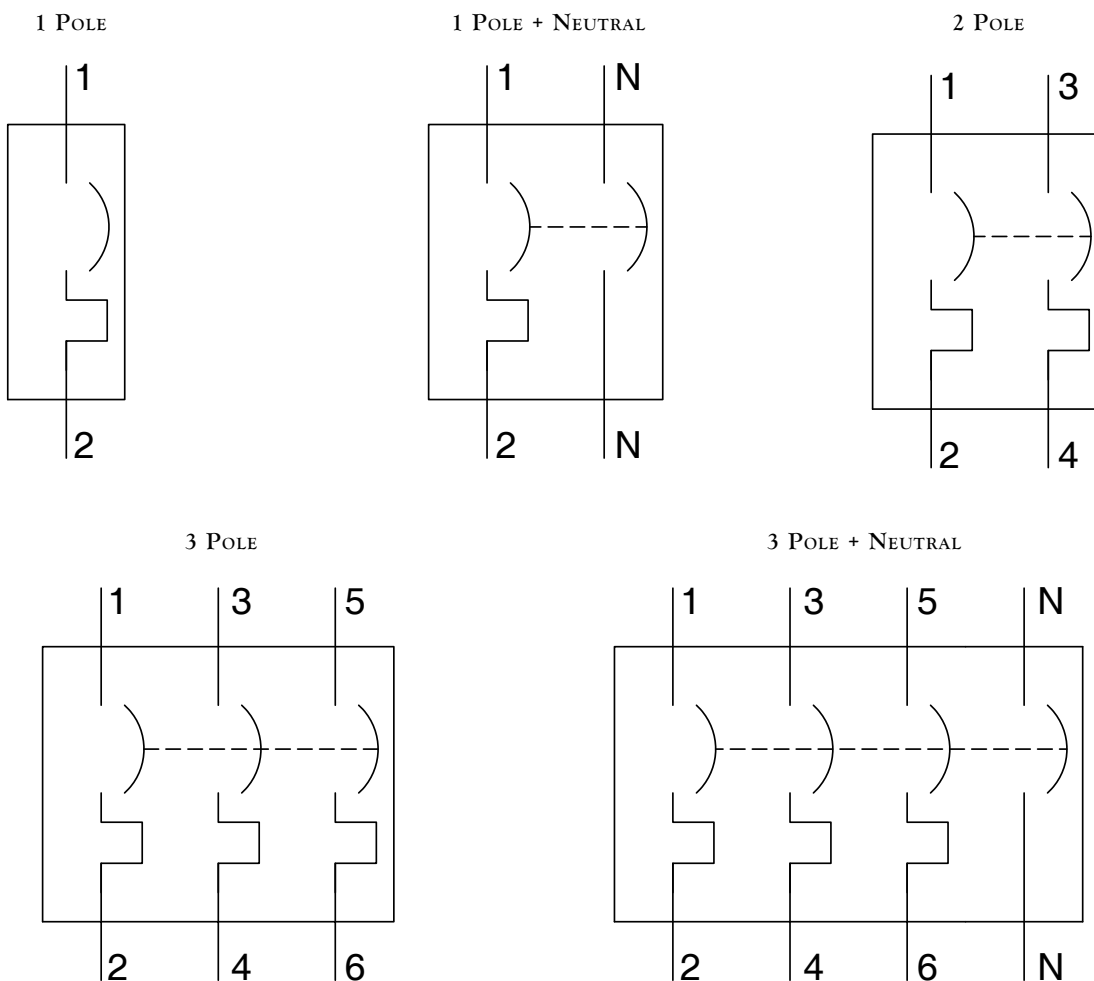
UL 489 BRANCH CIRCUIT BREAKER CIRCUIT DIAGRAMS



**UL 1077 SUPPLEMENTARY PROTECTOR
DIMENSIONS**

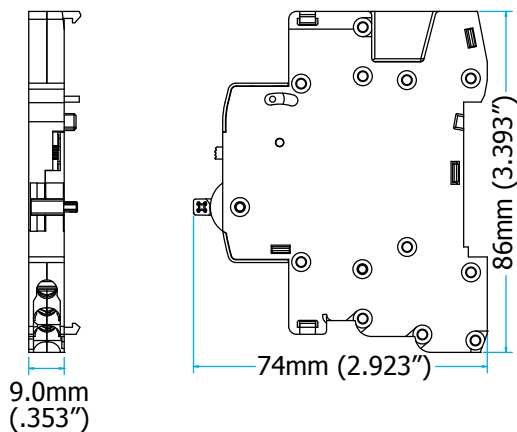


**UL 1077 SUPPLEMENTARY PROTECTOR
CIRCUIT DIAGRAMS**



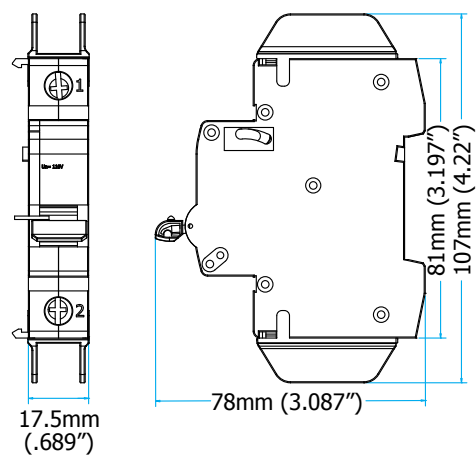
***SIDE MOUNTED
AUXILIARY CONTACT***

1100-SA211



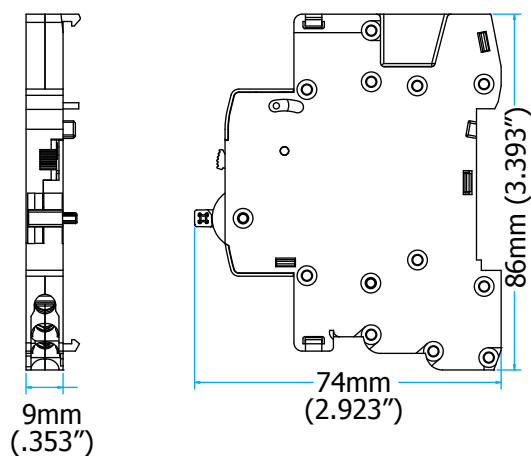
***SIDE MOUNTED
SHUNT-TRIP MODULES***

1100-SRXD & 1100-SRXF



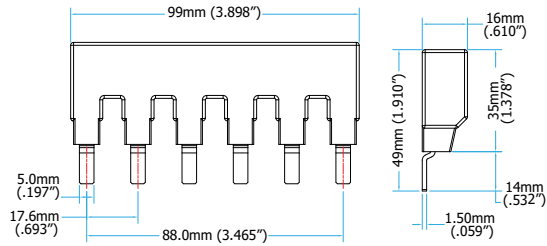
***SIDE MOUNTED AUXILIARY
CONTACT WITH ALARM***

1100-STA211



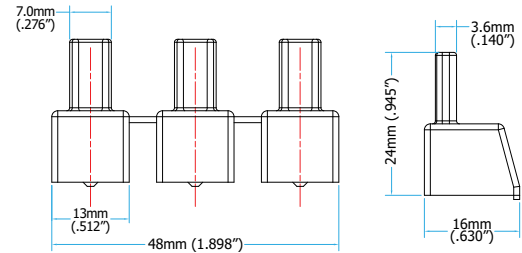
BUS BARS - 115A, 6 PINS
(1100-B2M061, B2M062 & B2M063)

FOR USE WITH UL 489 DEVICES



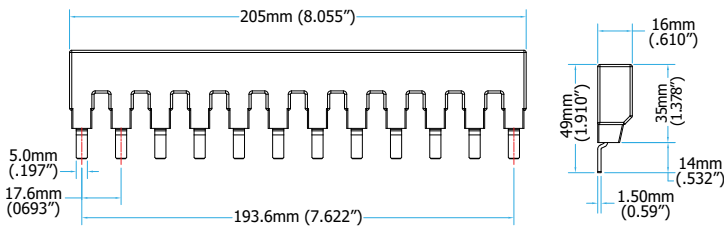
PROTECTIVE SHROUD

1100-B2MPS



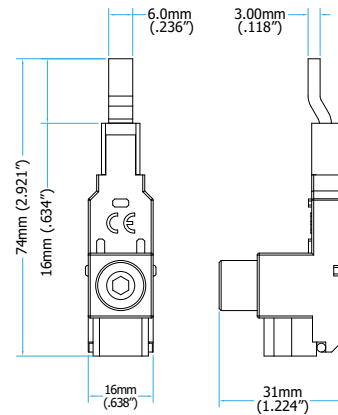
BUS BARS - 115A, 12 PINS
(1100-B2M121, B2M122 & B2M123)

FOR USE WITH UL 489 DEVICES



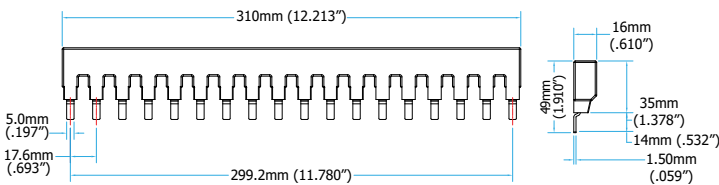
TERMINAL POWER FEED

1100-B2MTF



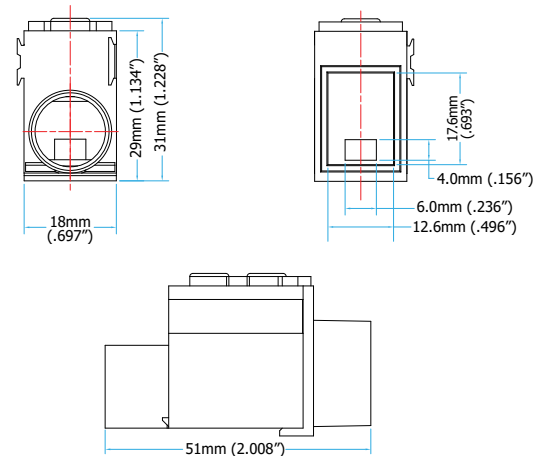
BUS BARS - 115A, 18 PINS
(1100-B2M181, B2M182 & B2M183)

FOR USE WITH UL 489 DEVICES



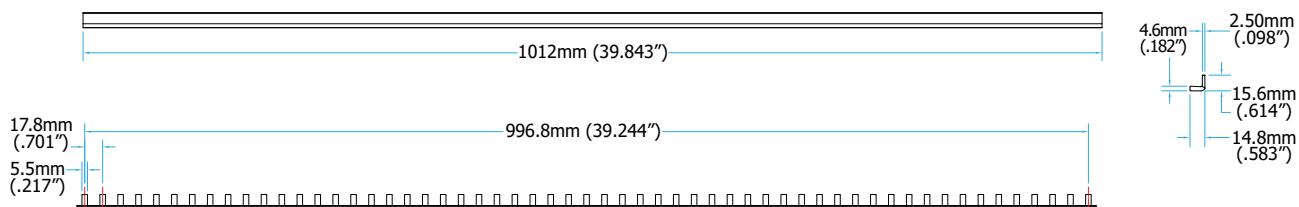
DEDICATED POWER FEED

1100-B2MDF

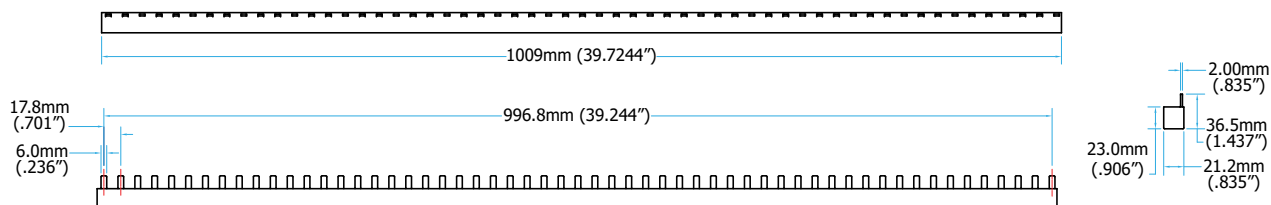


BUS BARS - 100A, 57 PINS

1100-B2S571 (FOR USE WITH UL 1077 1-POLE DEVICES)

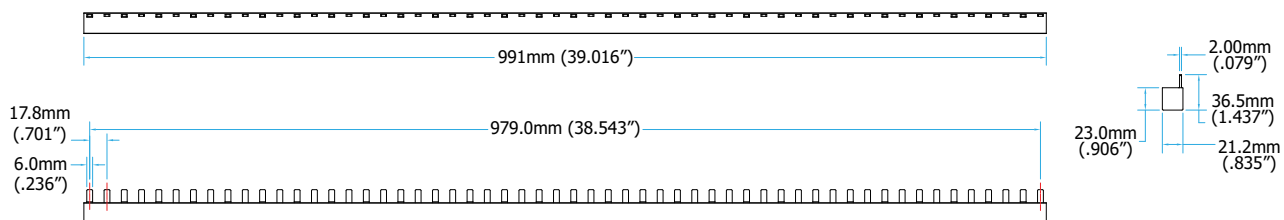


1100-B2S573 (FOR USE WITH UL 1077 3-POLE DEVICES)



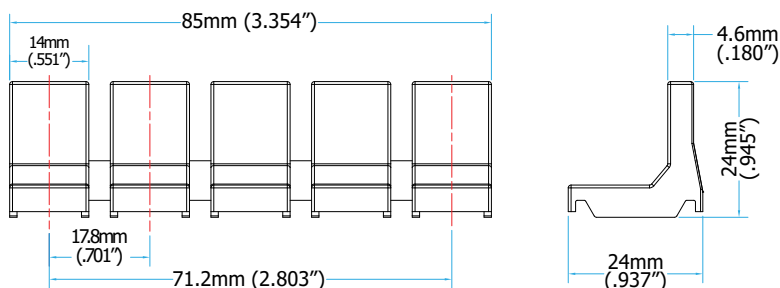
BUS BARS - 100A, 56 PINS

1100-B2S562 (FOR USE WITH UL 1077 2-POLE DEVICES)



PROTECTIVE SHROUD

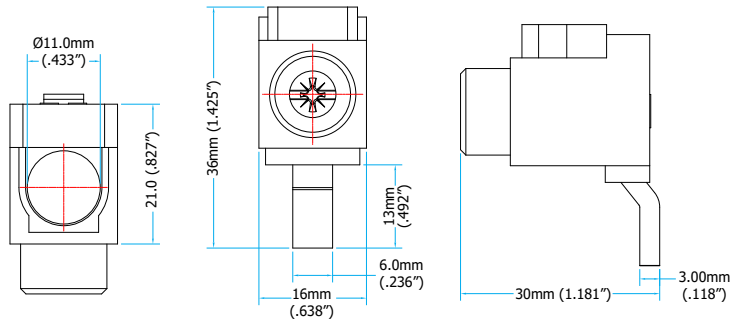
1100-B2SPS



TERMINAL POWER FEED

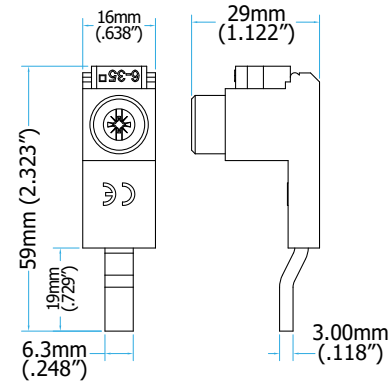
1100-B2STF1

(FOR USE WITH BUS BARS FOR 1-POLE DEVICES)



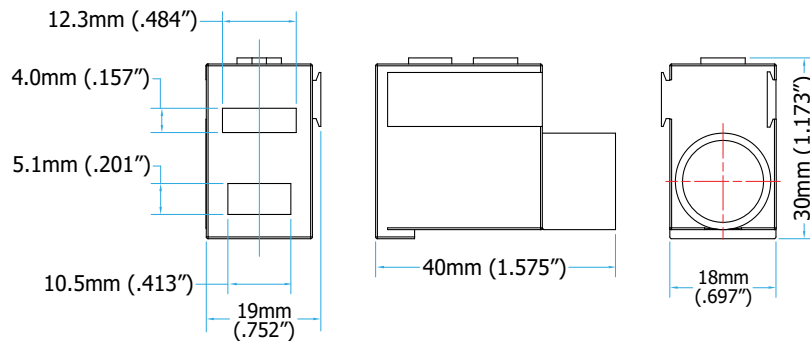
1100-B2STF23

(FOR USE WITH BUS BARS FOR 2 & 3-POLE DEVICES)



DEDICATED POWER FEED

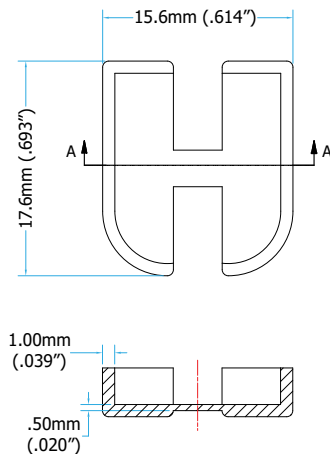
1100-B2SDF



END CAPS

1100-B2SEC1

(FOR USE WITH BUS BARS FOR 1-POLE DEVICES)



1100-B2SEC23

(FOR USE WITH BUS BARS FOR 2 & 3-POLE DEVICES)

