

# MINIATURE CIRCUIT BREAKERS

## PRODUCT PROFILE

ATC Diversified 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 UL489 & UL 1077 Miniature Circuit Breakers below!



### DELIVERING SUPERIOR PRODUCT QUALITY AND MANUFACTURING EXCELLENCE

|                           |   |  |
|---------------------------|---|--|
| ✓ <b>Proven</b>           | Our Miniature Circuit Breakers are UL Listed and Recognized, and CE marked to meet global standards requirements 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, and UL & IEC short circuit ratings 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.                           |  |

### UNIQUE FEATURES

#### Full Range Circuit Protection

- Available in single pole, two pole, and three pole 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 multi-pole 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 wide-range 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.

| MCB   |    |   |   | 1 |
|---|----|---|---|---|
| <b>Operating Current</b>                    |    |   |   |   |
| 2.0 Amp                                     | 2  |   |   |   |
| 3.0 Amp                                     | 3  |   |   |   |
| 5.0 Amp                                     | 5  |   |   |   |
| 10 Amp                                      | 10 |   |   |   |
| 15 Amp                                      | 15 |   |   |   |
| 20 Amp                                      | 20 |   |   |   |
| <b>Device Type</b>                          |    |   |   |   |
| UL 489 Miniature Circuit Breaker            | CB |   |   |   |
| UL 1077 Miniature Supplementary Protector * | SP |   |   |   |
| <b>Number of Poles</b>                      |    |   |   |   |
| Single Pole                                 |    | 1 |   |   |
| Two Pole **                                 |    | 2 |   |   |
| Three Pole **                               |    | 3 |   |   |
| <b>Trip Characteristics</b>                 |    |   |   |   |
| Trip Curve C ***                            |    |   | C |   |
| Trip Curve D ****                           |    |   | D |   |
| <b>Frame Size</b>                           |    |   |   |   |
| 17.5mm Frame per Pole                       |    |   |   | 1 |

\* 3 Amp [3], 5 Amp [5], and 10 Amp [10] only

\*\* 10 Amp [10], 15 Amp [15], 20 Amp [20], and UL 489 Miniature Circuit Breaker [CB] only

\*\*\* 2 Amp [2], 3 Amp [3], 5 Amp [5], 10 Amp [10], and Single Pole [1] only

\*\*\*\* 10 Amp [10], 15 Amp [15], 20 Amp [20], and UL 489 Miniature Circuit Breaker [CB] only

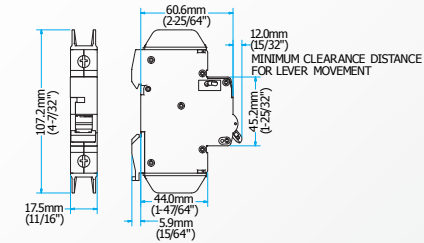
# MINIATURE CIRCUIT BREAKERS

## SPECIFICATIONS

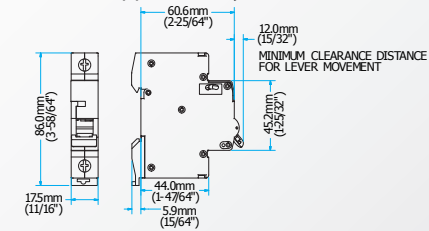
| UL 489 BRANCH CIRCUIT BREAKERS                             |                 |                                   |                 |          |
|--|-----------------|-----------------------------------|-----------------|----------|
|  | UNITS           | 1 POLE                            | 2 POLE          | 3 POLE   |
| <b>ELECTRICAL GENERAL</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 (wired in series)               | V               | 48                                | 96              | —        |
| <b>MAXIMUM SHORT CIRCUIT RATING</b>                        |                 |                                   |                 |          |
| @ 120 VAC  | kA              |                                   | 10              |          |
| @ 240 VAC  | kA              |                                   | 10              |          |
| @ 277 VAC  | kA              |                                   | 10              |          |
| @ 480Y/277 VAC   | kA              |                                   | 10              |          |
| @ 48 VDC   | kA              | 10                                | 10              | —        |
| @ 96 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 (Icu)</b>      |                 |                                   |                 |          |
| @ 240 VAC  | kA              |                                   | 10              |          |
| @ 415 VAC  | kA              |                                   | 10              |          |
| <b>RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics)</b> |                 |                                   |                 |          |
| @ 240 VAC  | kA              |                                   | 10              |          |
| @ 415 VAC  | kA              |                                   | 10              |          |
| <b>CONSTRUCTION - CONDUCTOR SIZE</b>                       |                 |                                   |                 |          |
| UL/CSA   | AWG             |                                   | 1 x #14 ~ #3    |          |
| Solid, Stranded, Fine Stranded                             | mm <sup>2</sup> |                                   | 1 x 2.08 ~ 26.7 |          |
| <b>ROHS COMPLIANCE</b>                                     |                 |                                   |                 |          |
| UL 1077 SUPPLEMENTARY PROTECTORS                           |                 |                                   |                 |          |
|  | UNITS           | 1 POLE                            | 2 POLE          | 3 POLE   |
| <b>ELECTRICAL GENERAL</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 (wired in series)               | V               | 48                                | 96              | —        |
| <b>MAXIMUM SHORT CIRCUIT RATING</b>                        |                 |                                   |                 |          |
| @ 120 VAC  | kA              |                                   | 10              |          |
| @ 240 VAC  | kA              |                                   | 10              |          |
| @ 277 VAC  | kA              |                                   | 10              |          |
| @ 480Y/277 VAC   | kA              |                                   | 10              |          |
| @ 48 VDC   | kA              | 10                                | 10              | —        |
| @ 96 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 (Icu)</b>      |                 |                                   |                 |          |
| @ 240 VAC  | kA              |                                   | 10              |          |
| @ 415 VAC  | kA              |                                   | 10              |          |
| <b>RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics)</b> |                 |                                   |                 |          |
| @ 240 VAC  | kA              |                                   | 10              |          |
| @ 415 VAC  | kA              |                                   | 10              |          |
| <b>CONSTRUCTION - CONDUCTOR SIZE</b>                       |                 |                                   |                 |          |
| UL/CSA   | AWG             |                                   | 1 x #14 ~ #3    |          |
| Solid, Stranded, Fine Stranded                             | mm <sup>2</sup> |                                   | 1 x 2.08 ~ 26.7 |          |
| <b>ROHS COMPLIANCE</b>                                     |                 |                                   |                 |          |

## DIMENSIONS

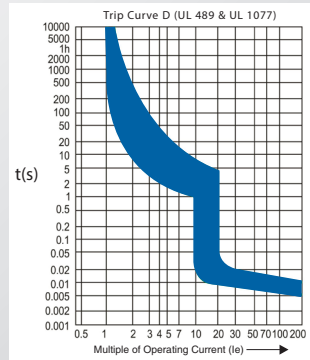
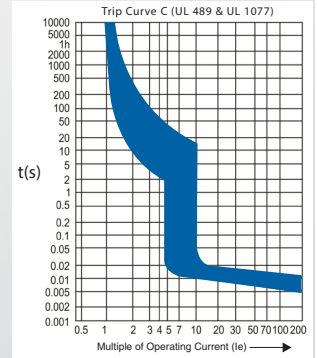
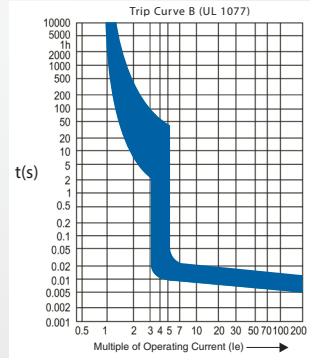
UL 489 Branch Circuit Breaker - 1 Pole



UL 1077 Supplementary Protector - 1 Pole



## TRIP CURVES



## CERTIFICATIONS

**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#: E508090  
CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

