



# SERIES 18

RAISING THE BAR  
MP - COUNT ON IT

Reliable on land or sea

UL & ABYC

Ignition-Protected

High Interrupt Capacity



## SUPERIOR CIRCUIT PROTECTION

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

## Series 18 Overview

### Clearly Specified Protection.

Available in 17 standard ratings (2-70A), the Series 18 from MP expands the specified performance capabilities of a classic circuit breaker design.

Electrical, mechanical and environmental specifications have all been defined and validated through testing to the requirements of the American Boat and Yacht Council (ABYC), the US Coast Guard (USCG), the Society of Automotive Engineers (SAE), Underwriters Laboratories (UL) and various Military Standards.

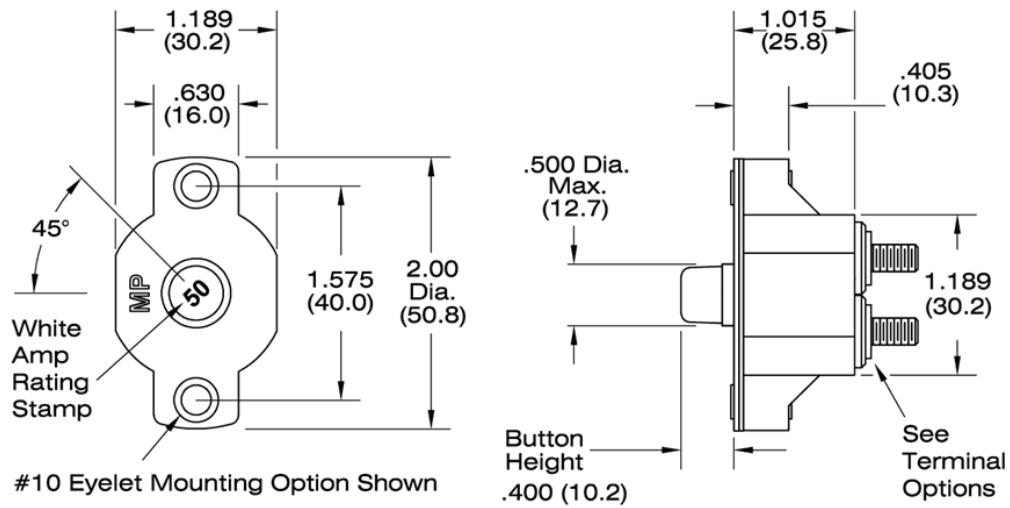
- DC Ratings from 2-70A
- UL 1500 Ignition Protection
- Compliances - MIL-STD-202, SAE J553, ABYC-E11, SAE J1428
- Trip Free
- Made in USA

## Series 18 Specifications

|  |  |
|--|--|
| <b>Standard Amp Ratings</b>                              | 5A, 8A, 10A, 12.5A, 15A, 17.5A, 20A, 25A, 30A, 35A, 40A, 45A, 50A, 60A, and 70A<br>(Below 5A Consult Factory)  |
| <b>Maximum Voltage Ratings</b>                           | 120VAC and 32VDC.  |
| <b>Ultimate Trip</b>                                     | Minimum ultimate trip of 100% of rated current at 25°C/77°F<br>Maximum ultimate trip of 135% of rated current at 25°C/77°F   |
| <b>Dielectric Strength</b>                               | 1,500VAC   |
| <b>Interrupt Capacity<br/>Style 0 &amp; 1 tested per</b> | UL 1077: 3000A (32VDC)<br>SAE J553: COMPLIANT  |
| <b>Resettable Overload Capacity</b>                      | 10x rated value  |
| <b>Inrush Capacity</b>                                   | 35X rated capacity for 1/2 cycle (0.008sec.)   |
| <b>Endurance</b>   | 32VDC @ 100 cycles, 4X rating (Type III)<br>32VDC @ 100 cycles, 4X rating 1/2 hr (Type I)<br>Meets J553 requirements   |
| <b>Voltage Drop</b>                                      | Max voltage drop 0.8V at rated current   |
| <b>Operating Temperature Range</b>                       | -54°C/-65°F to 60°C/140°F  |
| <b>Weight</b>  | 1.375 oz. (39 gm.)   |
| <b>Ignition Protected</b>                                | Conforms to USCG Title 33, CFR, Section 183.410(a) per UL1500 testing  |
| <b>Ingress Protection</b>                                | Conforms to weatherproof requirements of SAE J1428   |
| <b>Corrosion</b>   | Conforms to Mil-STD-202, Method 101, Test Condition A, for 96 hours under a 5% salt spray.   |
| <b>Humidity</b>  | Conforms to Mil-STD-202, Method 106, for 240 hours at 95% RH.  |
| <b>Shock</b>   | Rated to withstand 100g per Mil-STD-202, Method 213, Test Condition A.   |
| <b>Vibration</b>   | Rated to withstand 10g per Mil-STD-204, Test Condition A.  |
| <b>Regulatory Compliance Summary</b>                     | Interrupt Capacity: SAE J553, *UL1077<br>Ignition Protected: UL1500<br>Endurance: SAE J553<br>Dielectric Strength: *UL1077<br>Shock, Vibration, Corrosion, Humidity: Mil-STD-202<br>Weatherproof: SAE J1428<br>CE Marked<br><br>*Tested per UL1077 methods |

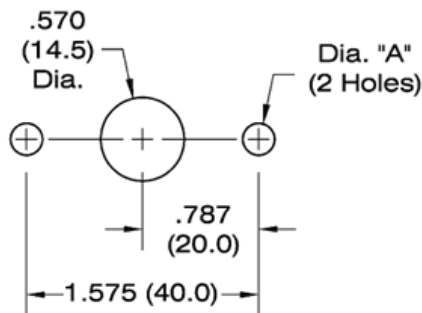


## Series 18 Physical Configuration



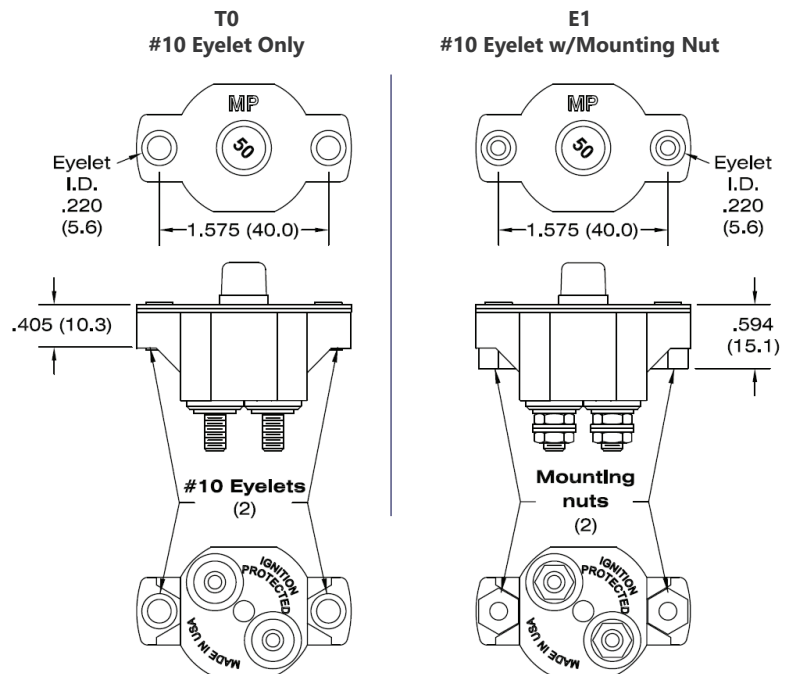
## Series 18 Mounting Options

Panel mounting options include both through-hole inserts for #10-32 threaded clearance and #8-32 threaded mounting inserts

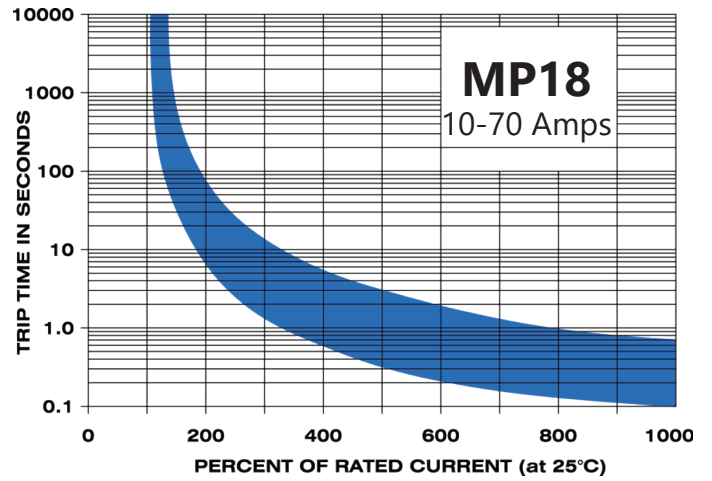
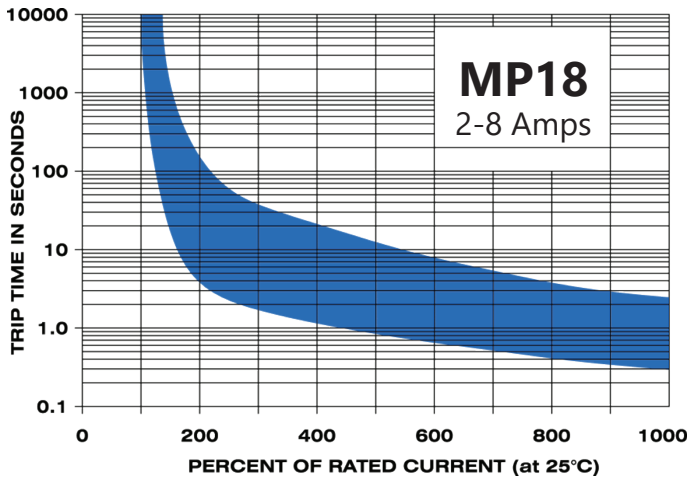


Panel Mounting Options

| Mounting Code | Eyelet Size | Eyelet Dia. | Optional Screw Available* | Clearance Dia. "A" |
|---------------|-------------|-------------|---------------------------|--------------------|
| T0            | #10         | .220 (5.6)  | -                         | For #10 screw      |
| E1            | #10         | .220 (5.6)  | #8-32                     | For #8 screw       |



## Series 18 Trip Curves



### Typical Overload Trip Time Data (in seconds at 25 °C)

| Current Rating | 200%  | 400%   | 1000%   |
|----------------|-------|--------|---------|
| 2 - 8 Amps     | 4-150 | 1.2-20 | 0.3-2.5 |
| 10 - 70 Amps   | 6-70  | 0.6-5  | 0.1-0.7 |



### Typical Ambient Temperature Correction Factor

| Current Rating    | °F | -65  | 0    | 32   | 77   | 100  | 140  |
|-------------------|----|------|------|------|------|------|------|
|                   | °C | -54  | -17  | 0    | 25   | 38   | 60   |
| Style 0 & Style 1 |    | 0.83 | 0.87 | 0.93 | 1.00 | 1.11 | 1.25 |

# Series 18 Part Numbering Guide



**Series Number**

18 = Series Circuit Protector

**Style**

0 = 2 - 40 Amps, Screw Terminals  
 1 = 10 - 70 Amps, Stud Terminals

**Actuation**

0 = Manual Reset - Weatherproof  
 1 = Auto Reset - Weatherproof

**Mounting**

T0 = #10 eyelet hole only  
 E1 = #10 eyelet hole with attached mounting nut

**Color and Marking**

0 = Red button  
 1 = Red button w/ 45° white amp-stamp  
 A = No button (Auto Reset)

**Terminals**

2E = Offset 8-32 screw terminals (2-4A, Style 0 only)  
 2E = In-line 8-32 screw terminals (5-40A, Style 0 only)  
 3T = 10-32 threaded .449" stud (10-70A, Style 1 only)  
 (see Terminal Configurations on page 5)

**Amp Rating**

|              |              |
|--------------|--------------|
| 0050 = 5.0A  | 0300 = 30.0A |
| 0080 = 8.0A  | 0350 = 35.0A |
| 0100 = 10.0A | 0400 = 40.0A |
| 0125 = 12.5A | 0450 = 45.0A |
| 0150 = 15.0A | 0500 = 50.0A |
| 0175 = 17.5A | 0600 = 60.0A |
| 0200 = 20.0A | 0700 = 70.0A |
| 0250 = 25.0A |              |

**Mounting Hardware**

0 = No Mounting Hardware  
 1 = Std. 8-32 screw for "E1" mounting nut (for .020 to .150 panel) (Bulk)  
 3 = "1" above w/ mounting lockwasher

**Terminal Hardware**

0 = No terminal hardware  
 2 = 8-32 screws & lock washers for "2E" terminals  
 3 = 10-32 nuts & lock washers for "3T" studs (Bulk)  
 5 = 10-32 nuts & lock washers for "3T" studs (Assembled)

For 3D CAD:

[www.mechprod.com/3d-models-catalog](http://www.mechprod.com/3d-models-catalog)

To visit the MP website:



1112 N. Garfield St. Lombard, IL 60148 helpme@mechprod.com  
 phone 630 | 953 | 4100 fax 630 | 953 | 4110 www.mechprod.com

**WARNING: Cancer & Reproductive Harm**  
[www.p65warnings.ca.gov/](http://www.p65warnings.ca.gov/)

Specifications subject to change

QC-4008-G

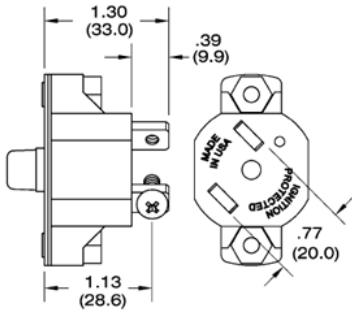
## Series 18 Terminal Options

Two terminal options are available for the Series 18.

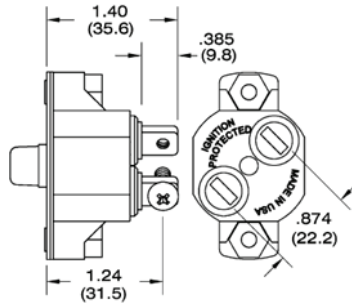
**Style 0:** #8-32 screw terminals (for 2-40 amps)  
**Style 1:** #10-32 stud terminals (for 10-70 Amp)

|             | Ampere Rating |           |    |    |    |
|-------------|---------------|-----------|----|----|----|
|             | 2             | 10        | 25 | 40 | 70 |
| #8-32 screw |               | 2 - 40 A  |    |    |    |
| #10-32 stud |               | 10 - 70 A |    |    |    |

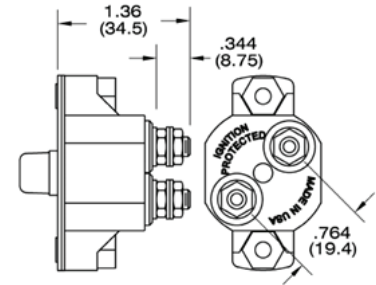
(Optional terminal hardware included as required)



**2E** (offset)  
 2-4 Amps, Style 0 only  
 Offset 8-32 screw terminals



**2E** (in-line)  
 5-40 Amps, Style 0 only  
 In-Line 8-32 screw terminals



**3T**  
 10 - 70 Amps, Style 1 only  
 #10-32 Threaded Stud Terminals

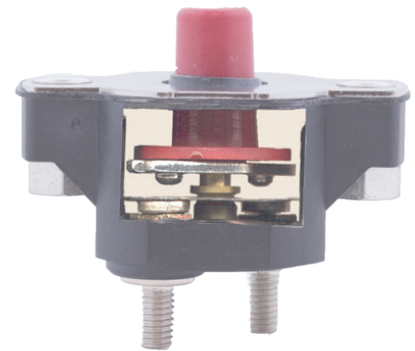
## Series 18 Design Characteristics & Typical Applications

### Robust design for Harsh Environments

The Series 18 was designed for the harshest of environments. The weatherproof and ignition proof characteristics are especially well suited to applications in the Marine, Heavy Equipment, Trucs, Buses and Battery Chargers.

All materials for the Series 18 were carefully chosen for resistance to UV and flammability. Equipment that must perform in the most demanding environmental conditions relies on the Series 18.

The Series 18 uses a double-break design to achieve increased short-circuit interruption capability. The push-to-reset actuator is trip-free, ensuring the Series 18 cannot be forced to continuously maintain a closed circuit if an overload condition exists.



**The Series 18 is designed to be fit and form compatible to previously available devices, while providing enhanced performance.**