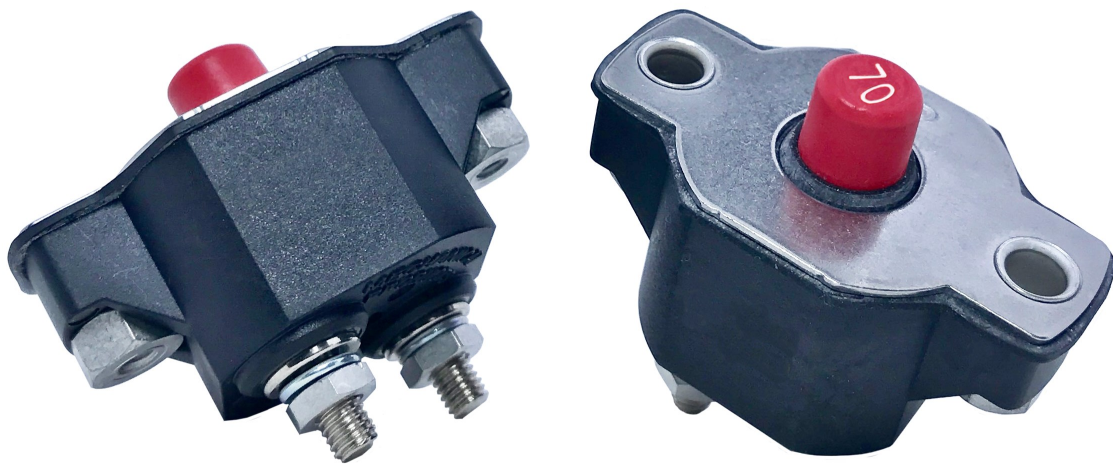


**Reliable on land or sea.**

**UL 1500 Ignition proof.**

**ABYC compliant.**

**High interrupt capacity.**



**Series 18**

**Raising the Bar**

**MP—Count on it**



**Mechanical Products Company**

## Series 18 Overview

### Clearly Specified Protection.

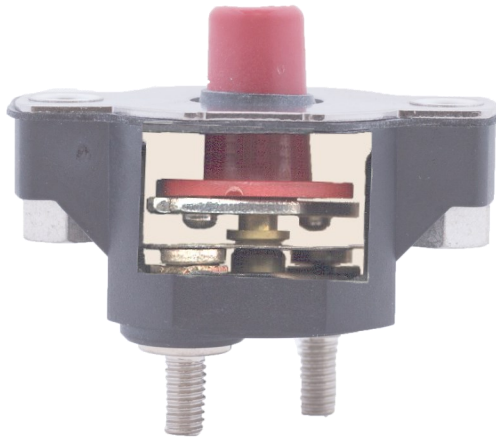
Available in 17 standard ratings (2-70A), the Series 18 from MP expands the specified performance capabilities of a classic circuit breaker design.

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.

### Series 18 offers:

- DC ratings from 2 - 70A
- UL 1500 Ignition Protection
- Compliances - MIL-STD-202, SAEJ553, ABYC-E11, SAEJ1428
- Trip Free
- Made in USA

## Series 18 Design Characteristics



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.

### 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 Marine, Heavy Equipment, Trucks, 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 is designed to be fit and form compatible to previously available devices, while providing enhanced performance.**



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QC-4008-E

## Series 18 Specifications

### Standard Amp Rating

Series 18 can be specified in current ratings of 2A, 3A, 5A, 8A, 10A, 12.5A, 15A, 17.5A, 20A, 25A, 30A, 35A, 40A, 45A, 50A, 60A, and 70A

### Termination Options

	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.)

### Mounting Options

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

### Interrupt Capacity

Series 18 Style 0 & 1 tested per:

ABYC E11: 3000A (32VDC and 120VAC).

UL 1077: 3000A (32VDC and 120VAC).

SAE J553 compliant.

Series 18 Style 1 also tested per:

ABYC E11: 5000A (32VDC).

UL 1077: 5000A (32VDC).

### Resettable Overload Capacity

The Series 18 may be reset at a minimum of ten times rated value.

### Inrush Capacity

The Series 18 will not trip at 35X rated capacity for ½ cycle (0.008 sec.).

### Endurance

At 32VDC the Series 18 meets the SAE J553 Type III endurance requirements of 100 cycles at 4X rated value and the Type I requirements of 1/2 hr. at 4X rated value

### Dielectric Strength

All Series 18 models have a dielectric strength rating of 1500VAC.

### Voltage Ratings

The Series 18 is rated at 120VAC and 32VDC.

### Vibration

The Series 18 is rated at 10g per MIL-STD-202, Method 204, Test Condition A.

### Shock

The Series 18 is rated at 100g per MIL-STD-202, Method 213, Test Condition A.

### Corrosion (Salt Spray)

The Series 18 conforms to MIL-STD-202, Method 101, Test Condition A for 96 hours at 5% salt spray.

### Ignition Proof

The Series 18 conforms to USCG Title 33, CFR, Section 183.410(a) per UL1500 testing.

### Weatherproof

The Series 18 conforms to the weatherproof requirements of SAE J1428.

### Humidity

The Series 18 conforms to MIL-STD-202, Method 106, for 240 hours at 95% relative humidity.

### Weight

Approximately 39 grams

### Regulatory Compliance Summary

Interrupt Capacity tested per: ABYC E11, UL 1077 & SAE J553.

Endurance per: SAE J553.

Dielectric Strength per: UL 1077

Vibration per: MIL-STD-202.

Shock per: MIL-STD-202.

Corrosion per: MIL-STD-202.

Ignition Proof per: UL 1500.

Weatherproof per: SAE J1428.

Humidity per: MIL-STD-202.

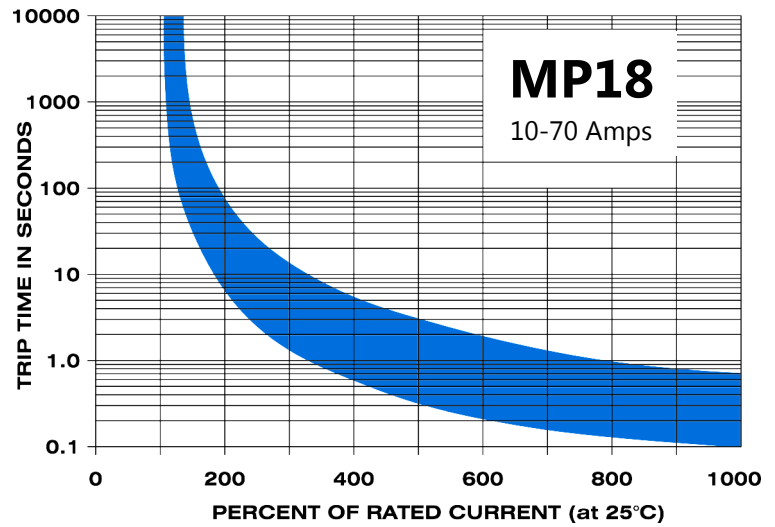
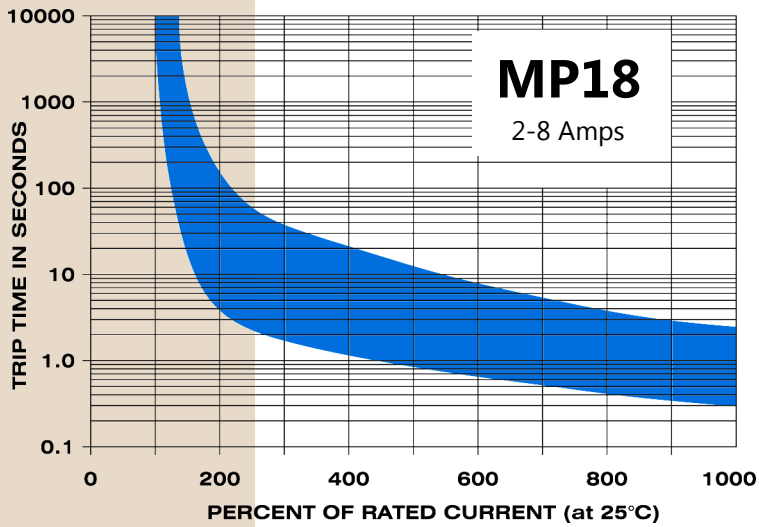


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Specifications subject to change

## Series 18 Typical Trip Curves



## Series 18 Operating Characteristics

### Minimum Ultimate Trip

The Series 18 offers a minimum ultimate trip of 100% of rated current at 25°C / 77°F.

### Maximum Ultimate Trip

The Series 18 offers a maximum ultimate trip of 135% of rated current at 25°C / 77°F.

### Overload Trip Time Data (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

### Voltage Drop

The Series 18 Style 0 and Style 1 have a maximum voltage drop of 0.8V at rated current.

### Typical Ambient Temperature Correction Factor\*

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

\*Typical – consult factory for further information



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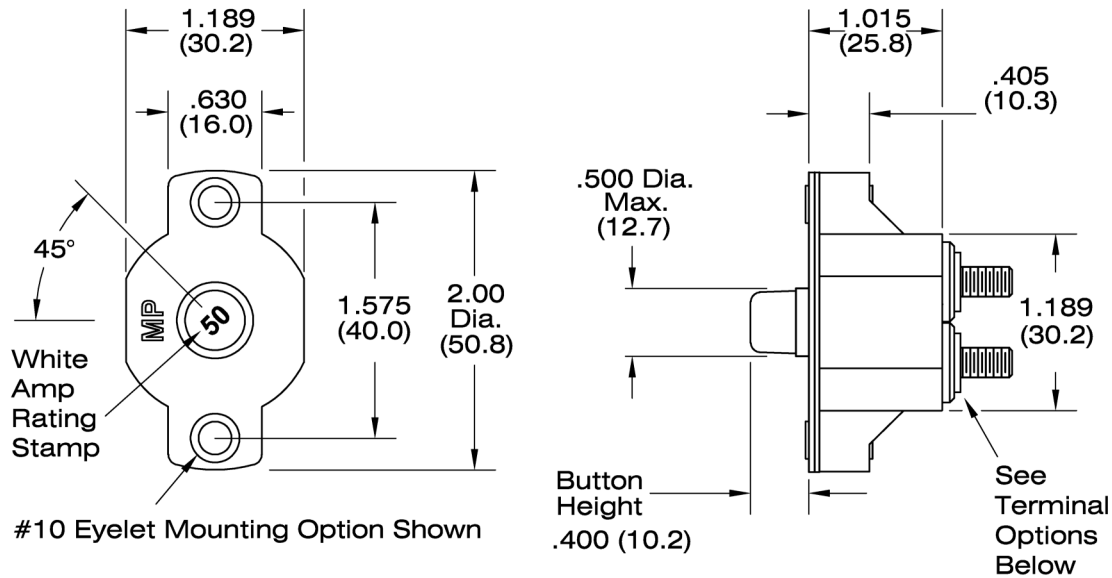
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QC-4008-E

## Series 18 Physical Configuration

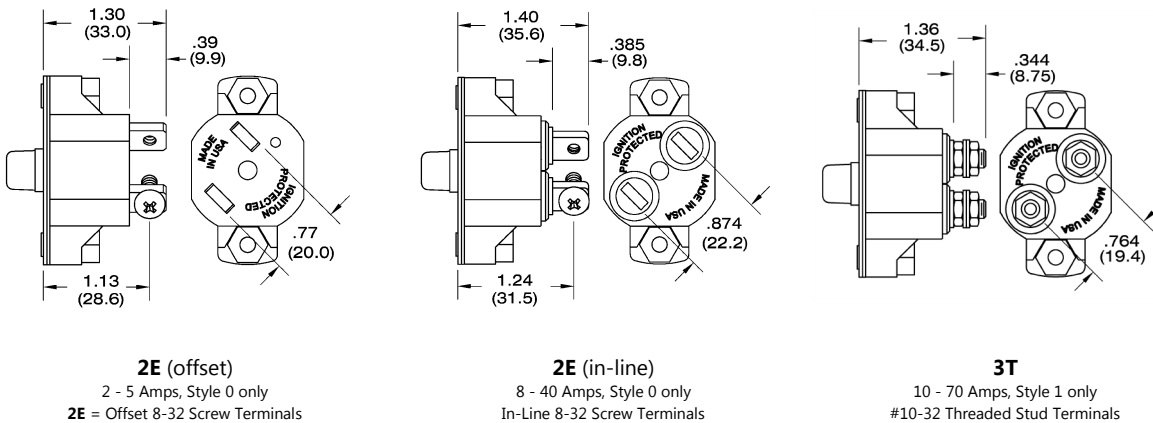


## Series 18 Terminal Options

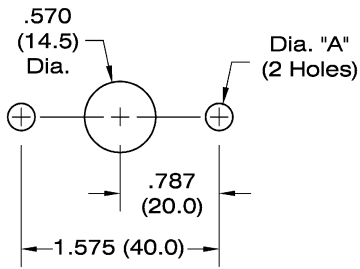
Two terminal options are available for the Series 18.

**Style 0:** #8-32 screw terminals  
(for 2-40 amps)

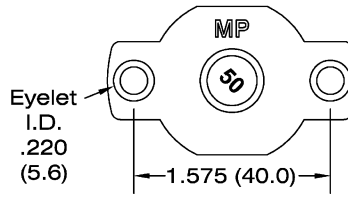
**Style 1:** #10-32 stud terminals  
(for 10-70 amps)



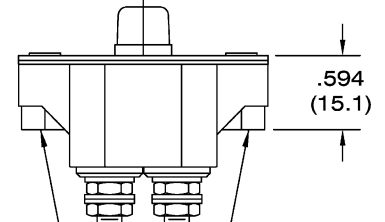
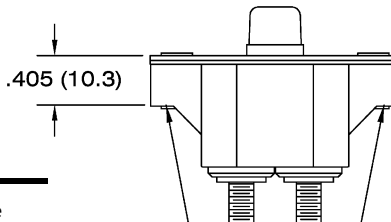
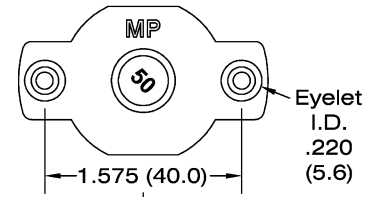
# Series 18 Mounting Considerations



#10 Eyelet only  
**T0**



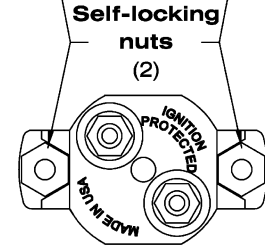
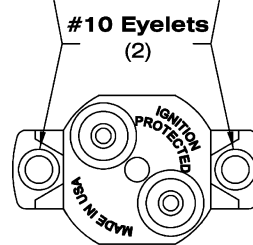
#10 Eyelet w/Locking Nut  
**E1**



### Panel Mounting Options

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

\*for .020 to .150 panel thickness



# Series 18 Part Numbering Guide

### Color and Marking

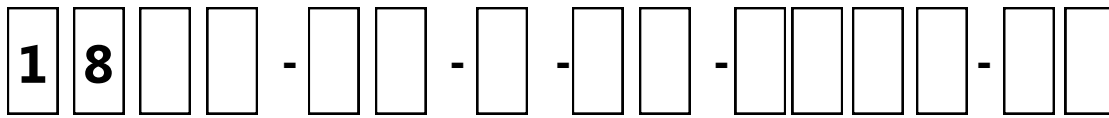
- 0 = Red button
- 1 = Red button w/45° white amp-stamp
- A = No button (Auto Reset)

### Amp Rating

0020 = 2.0A	0150 = 15.0A	0400 = 40.0A
0030 = 3.0A	0175 = 17.5A	0450 = 45.0A
0050 = 5.0A	0200 = 20.0A	0500 = 50.0A
0080 = 8.0A	0250 = 25.0A	0600 = 60.0A
0100 = 10.0A	0300 = 30.0A	0700 = 70.0A
0125 = 12.5A	0350 = 35.0A	

(Consult factory for additional ratings)

**P/N:**



### Series Number

18 = Series 18 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 self-locking nut

### Terminals

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

### Mounting Hardware

- 0 = No mounting hardware
- 1 = Std. 8-32 screw for "E1" lock-nut (for .020 to .150 panel)

### Terminal Hardware (bulk packed)

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

**WARNING: CANCER & REPRODUCTIVE HARM** – [www.P65Warnings.Ca.Gov/](http://www.P65Warnings.Ca.Gov/)  
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