



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

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.

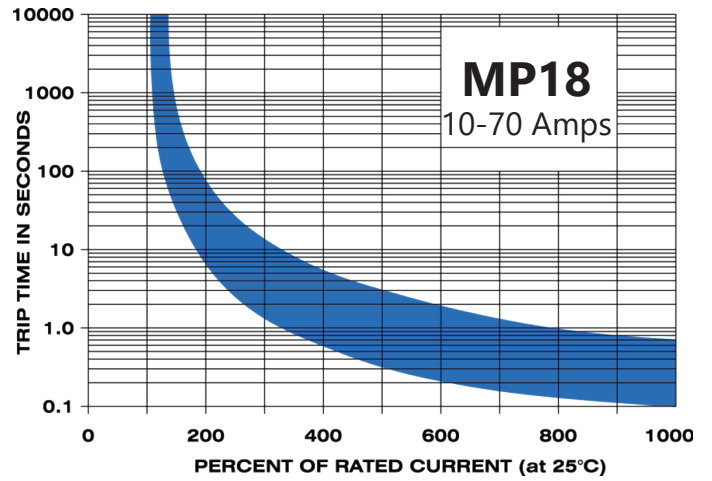
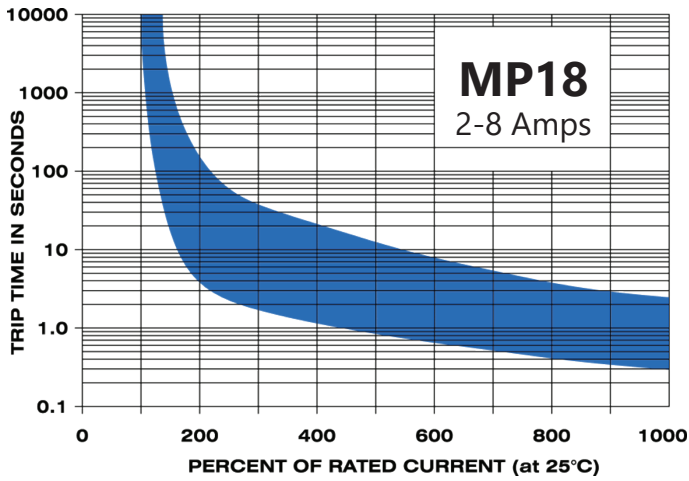
- DC Ratings from 2-70A
- UL 1500 Ignition Protection
- Compliances - MIL-STD-202, SAE J553, ABYC-E11, SAE J1428
- Trip Free
- Made in USA

Series 18 Specifications

Standard Amp Ratings	2A, 3A, 5A, 8A, 10A, 12.5A, 15A, 17.5A, 20A, 25A, 30A, 35A, 40A, 45A, 50A, 60A, and 70A
Maximum Voltage Ratings	120VAC and 32VDC.
Ultimate Trip	Minimum ultimate trip of 100% of rated current at 25°C/77°F Maximum ultimate trip of 135% of rated current at 25°C/77°F
Dielectric Strength	1,500VAC
Interrupt Capacity Style 0 & 1 tested per	UL 1077: 3000A (32VDC) SAE J553: COMPLIANT
Resettable Overload Capacity	10x rated value
Inrush Capacity	35X rated capacity for 1/2 cycle (0.008sec.)
Endurance	32VDC @ 100 cycles, 4X rating (Type III) 32VDC @ 100 cycles, 4X rating 1/2 hr (Type I) Meets J553 requirements
Voltage Drop	Max voltage drop 0.8V at rated current
Operating Temperature Range	-54°C/-65°F to 60°C/140°F
Weight	1.375 oz. (39 gm.)
Ignition Protected	Conforms to USCG Title 33, CFR, Section 183.410(a) per UL1500 testing
Ingress Protection	Conforms to weatherproof requirements of SAE J1428
Corrosion	Conforms to Mil-STD-202, Method 101, Test Condition A, for 96 hours under a 5% salt spray.
Humidity	Conforms to Mil-STD-202, Method 106, for 240 hours at 95% RH.
Shock	Rated to withstand 100g per Mil-STD-202, Method 213, Test Condition A.
Vibration	Rated to withstand 10g per Mil-STD-204, Test Condition A.
Regulatory Compliance Summary	Interrupt Capacity: SAE J553, *UL1077 Ignition Protected: UL1500 Endurance: SAE J553 Dielectric Strength: *UL1077 Shock, Vibration, Corrosion, Humidity: Mil-STD-202 Weatherproof: SAE J1428 CE Marked *Tested per UL1077 methods



Series 18 Trip Curves



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

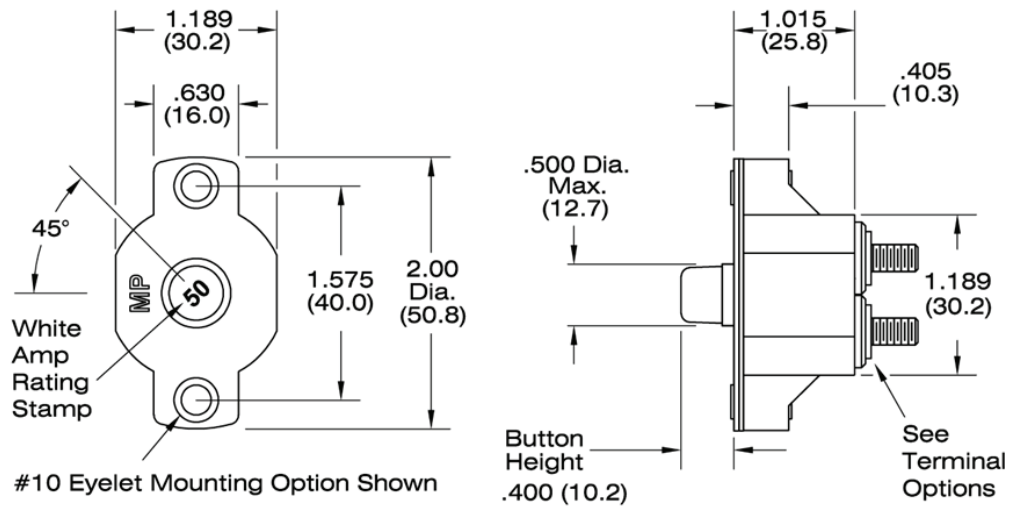
Current Rating	200%	400%	1000%
2 - 8 Amps	4-150	1.2-20	0.3-2.5
10 - 70 Amps	6-70	0.6-5	0.1-0.7



Typical Ambient Temperature Correction Factor

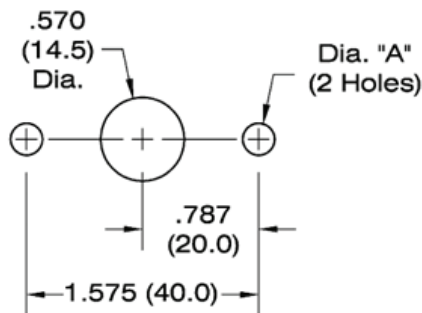
Current Rating	°F	-65	0	32	77	100	140
	°C	-54	17	0	25	38	60
Style 0 & Style 1		0.83	0.87	0.93	1.00	1.11	1.25

Series 18 Physical Configuration



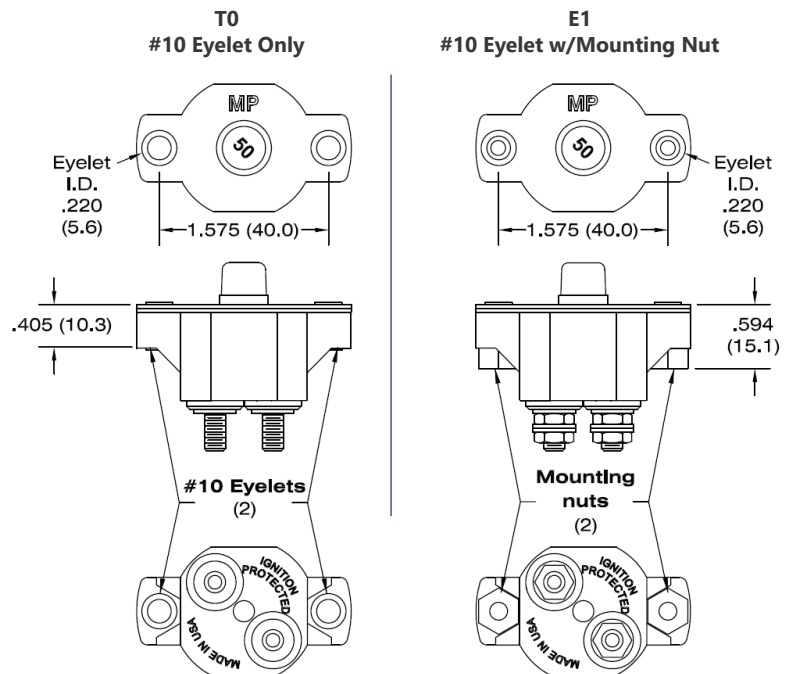
Series 18 Mounting Options

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



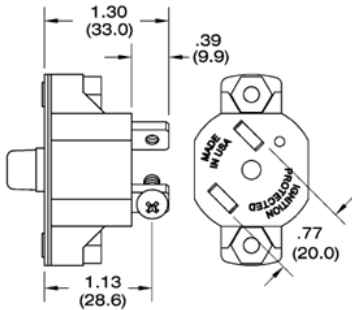
Series 18 Terminal Options

Two terminal options are available for the Series 18.

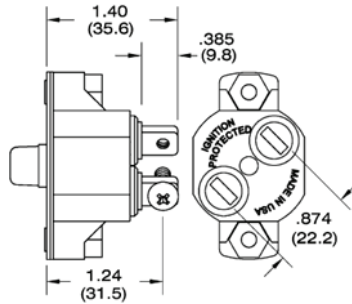
Style 0: #8-32 screw terminals (for 2-40 amps)
Style 1: #10-32 stud terminals (for 10-70 Amp)

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

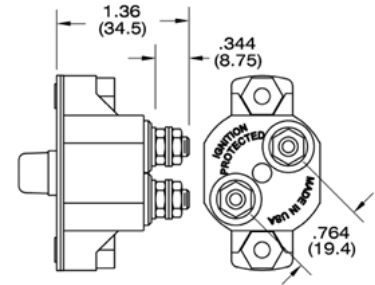
(Optional terminal hardware included as required)



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

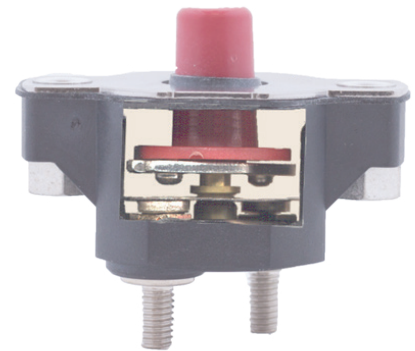
Series 18 Design Characteristics & Typical Applications

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.

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
 2 = 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

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

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

To visit the MP website:

