

M1 Series Rocker-Actuated, Trip-Free Thermal Circuit Breaker/ Power Switch With Option Indicator Lamp Multiple Patent

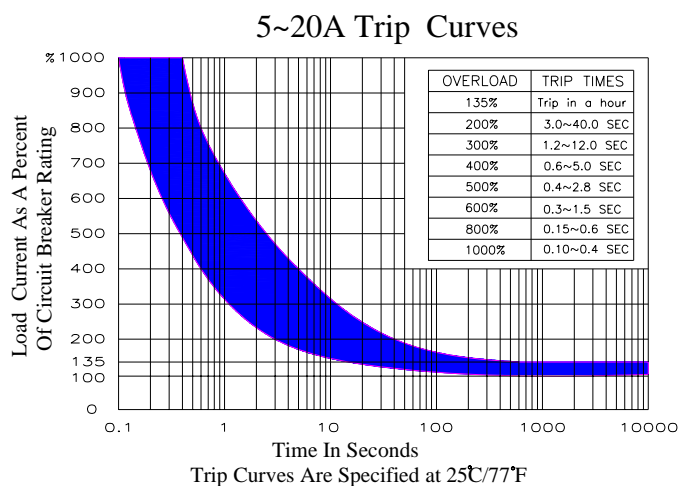
Features

- Compact, trip-free, rocker-actuated design.
- 5 to 20 amp ratings.
- Provides circuit protection and power switching in a single unit.
- Available with optional indicator lamp.
- Snaps into the same cutout as many common power switches.
- Various color, marking and termination options.

Technical data

Rated voltage	AC 125/250V DC 50V
Rated current	5-20 A
Interrupt Capacity	1000A 250V (UL1077)
Dielectric strength	AC 1500V (1min)
Insulation resistance	$\geq 100 \text{ M}\Omega$, 500VDC
Resettable Overload Capacity	Ten times rated current
Switch Endurance Cycling	Over 6,000 operations
	at rating current
Weight:	Approx 10.5g

Time vs. Current Trip Curve@ +25°C



Ambient Compensation Table

Ambient Temperature In °C	Rating Correction Factor	
	5-6A Models	7-20A Models
10	.80	.80
20	.90	.90
25	1.00	1.00
30	1.10	1.05
40	1.25	1.15
50	1.61	1.25
60	2.15	1.40

The unit is calibrated for an ambient temperature of +25°C. To determine the rated current for a lower or higher ambient temperature, use a correction factor to the left.

Approval

Approval & File No.	Rated current range	Rated voltage
UL E95802	5-20 A	125/250VAC 50VDC
CCC 2003010307097858	5-20 A	125/250VAC
VDE 40015302	5-20 A	250VAC

Typical Resistance vs. Current Rating @ +25°C

Current Rating in Amps	Typical Resistance in Ohms	Current Rating in Amps	Typical Resistance in Ohms
5.0	0.05	13.0	0.020
7.0	0.036	15.0	0.017
10.0	0.025	20.0	0.0125
12.0	0.022		

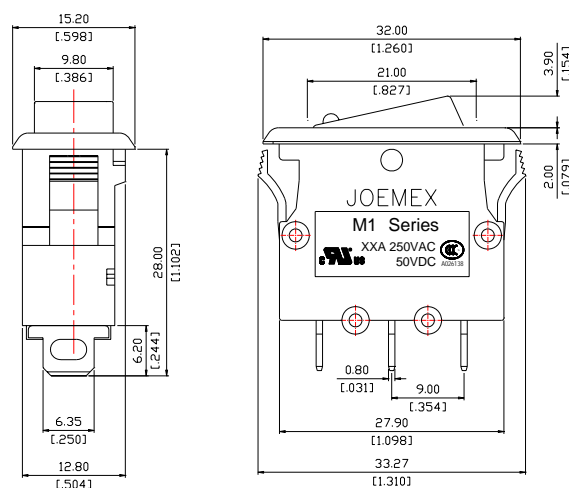
Mechanical/Environmental Data

Operating Temperature Range: -10 °C to +60 °C.

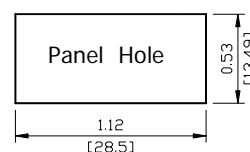
Termination: 250"(6.35 mm) quick connects, solder terminals

Mounting: Snaps into 1.122" x. 531" (28.5 X 13.5) panel cutout .

Outline Dimensions



Recommended Panel Cutout



Panel thickness

M1 series circuit breakers accommodate panel thickness from 0.03 in. to 0.118 in. (0.75mm-3.0mm)

Ordering Information

Typical Part No. ►		M 1	15-	A	1	1	2	0
1.Model No.:		M1=M1 Non Illuminated M1L=Illuminated						
2.Rating:		05=5A 06=6A 16=16A 20=20A						
3. Voltage:		A=125AVC/50VDC B=250VAC/50VDC C=24VDC						
4.Terminals:		1=.250 Tab (9.5mm Length Outcrop) 2=Solder Lug (5.2mm Length Outcrop) 3=.250 Tab (10.5mm Length Outcrop) 4= Solder Lug (6.2mm Length Outcrop) 5=9.5mm Solder Lug						
5. Base Color:		1=Black 2=White 3=Gray 4=Ivory						
6.Rocker Color:		6.1 Clear color 1=Amber 2=Red 3=Green 6.2 Opaque color 4=White 5=Black 6=Red 7=Gray						
7.Marking option:		0=No marking 1=RESET/OFF with point printed 2=RESET/OFF printed 3=RESET/OFF molded						

Ordering Note:

Some option illustrated below are not listed in the "Ordering Information" chart above. Options denoted by "Special Order" in their descriptions are only offered on a special order basis. Other base and button colors and intermediate amp ratings are also available on a special order basis. Due to ongoing technological advances, consult factory for certification specifics.

Terminal Types:

<p>.250 Tab (9.5mm Length Outcrop)</p>	<p>Solder Lug (5.2mm Length Outcrop)</p>	<p>.250 Tab (10.5mm Length Outcrop)</p>
1	2	3
<p>Solder Lug (6.2mm Length Outcrop)</p>	<p>9.5mm Solder Lug</p>	
4	5	

Marking Options:

<p>No Marking</p>	<p>RESET/OFF with point printed</p>
0	1
<p>RESET/OFF printed</p>	<p>RESET/OFF molded</p>
2	3