



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

## Features

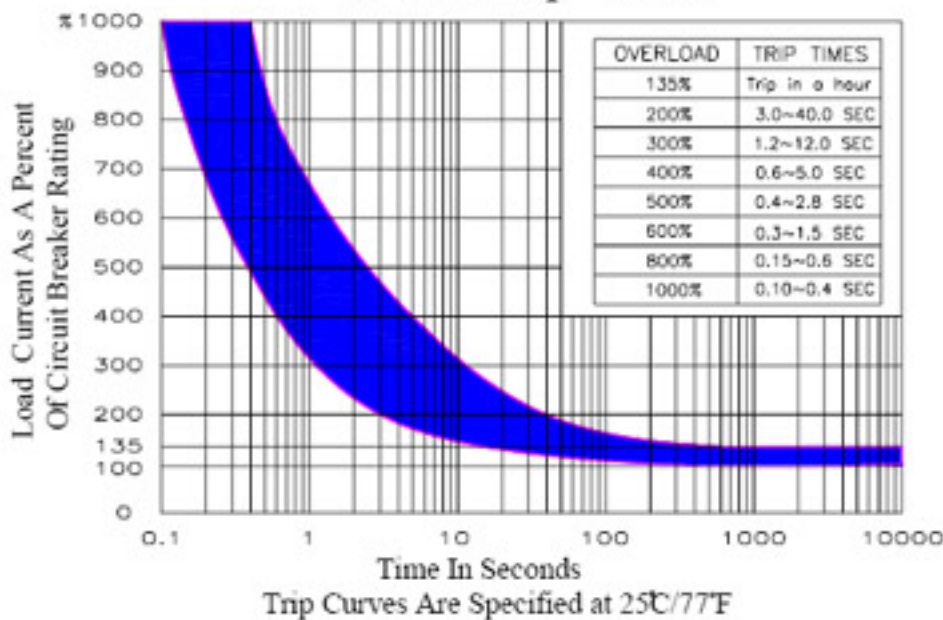
- Compact, trip-free, rocker-actuated design.
- 5 to 20 amp ratings.
- Provides circuit protection and power switching in a single unit.
- Available with optional indicator lamp.
- Snaps into the same cutout as many common power switches.
- Various color, marking and termination options.

## 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        | ≥ 100 MΩ, 500VDC                           |
| Resettable Overload Capacity | Ten times rated current                    |
| Switch Endurance Cycling     | Over 6,000 operations<br>at rating current |
| Weight:                      | Approx 10.5g                               |

## Time vs. Current Trip Curve@+25°C

### 5~20A Trip Curves



## Ambient Compensation Table

| Ambient Temperature<br>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                      |                        |                            |

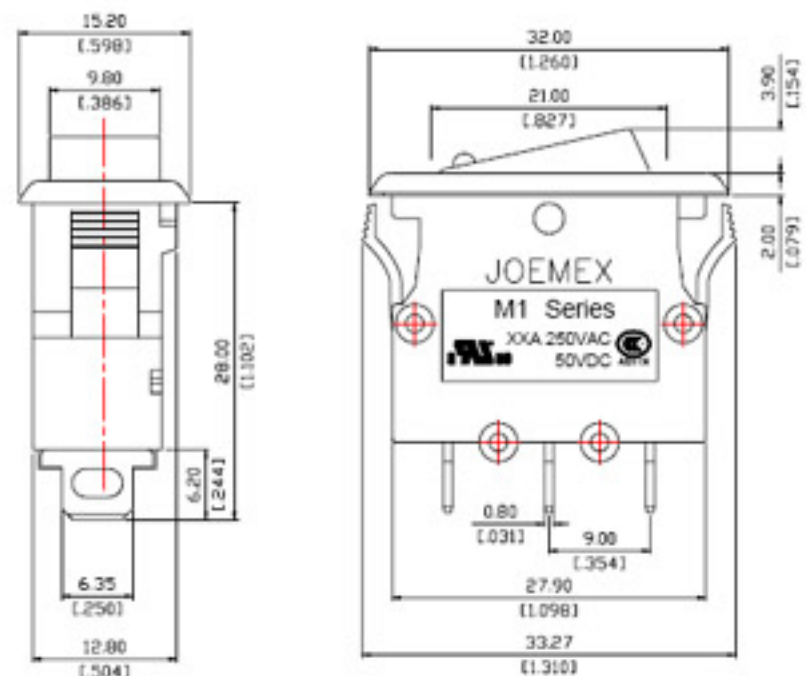
## Mechanical/Environmental Data

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

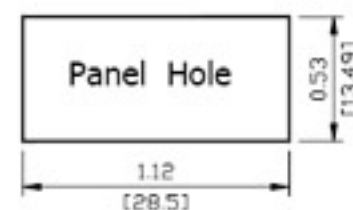
Termination: 250"(6.35 mm) quick connects, solder terminals

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

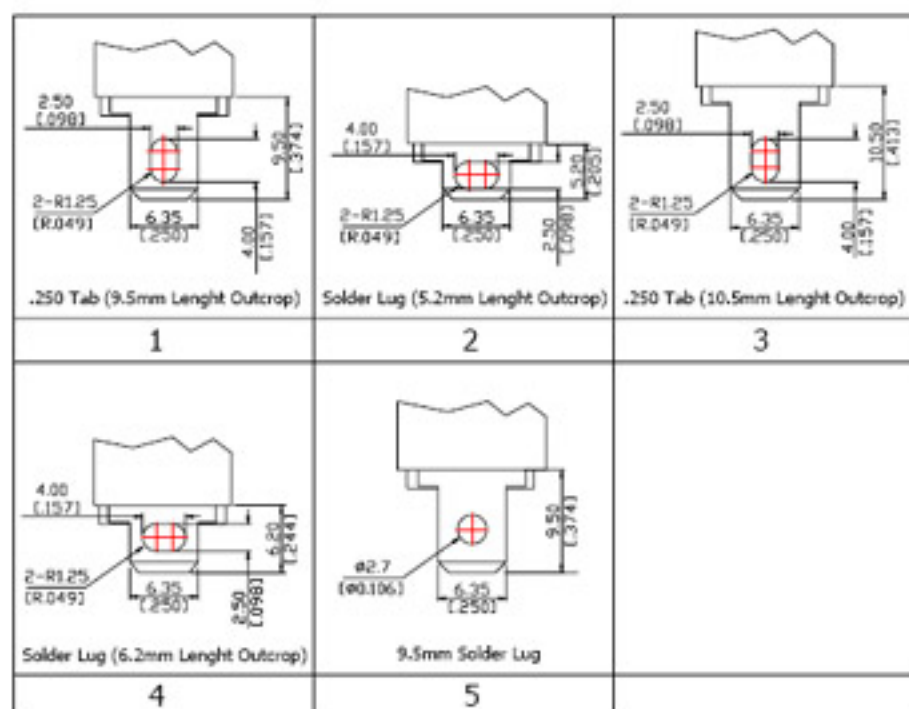
### 7. Marking option:

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:



## Marking Options:

