



**Carling Technologies®**

Innovative Designs. Powerful Solutions.

# THERMAL CIRCUIT PROTECTION



CATALOG

# FOUNDED IN 1920



Since its founding, Carling Technologies has continually forged a tradition of leadership in quality and product innovation.

There are few products that Carling Technologies hasn't turned "ON" and fewer industries that haven't turned to Carling for solutions. With ISO and TS registered manufacturing facilities and technical sales offices worldwide, Carling ranks among the world's largest manufacturers of circuit breakers, switches, power distribution units, digital switching systems and electronic controls.



## SWITCHES & CONTROLS

- Rocker
- Toggle
- Pushbutton
- Rotary

## CIRCUIT PROTECTION

- Hydraulic-Magnetic
- Thermal
- GFCI / ELCI

## CUSTOM SOLUTIONS

- PDU's
- Keypads
- Control Modules

## MULTIPLEXED POWER SYSTEMS

- HMI Devices & I/O Modules
- Programmable Displays
- Data Communication Interfaces
- Electrical Systems Monitoring

## STRATEGIC MARKETS SERVED:



On/Off Highway



Marine



Telecom/Datacom



Military



Renewable Energy

## GLOBAL LOCATIONS:

Carling Technologies  
World Headquarters  
Plainville, CT, USA  
ISO9001:2015  
IATF16949:2016

Maretron  
Phoenix, AZ, USA

Carling Technologies  
Brownsville, TX, USA  
ISO14001:2015  
ISO9001:2015  
IATF16949:2016

Carling Technologies  
Matehuala, Mexico  
ISO14001:2015  
ISO9001:2015  
IATF16949:2016

Carling Technologies  
Jupiter, FL, USA

Carling Technologies  
European Headquarters  
Exeter, UK  
ISO9001:2015  
IATF 16949:2016

Carling Technologies  
Kowloon, Hong Kong  
ISO9001:2015  
IATF16949:2016

Carling Technologies  
Zhongshan, China  
ISO14001:2015  
ISO9001:2015  
IATF16949:2016

## OTHER SERVED INDUSTRIES:



Medical



Industrial Control



Audio / Visual



Commercial Food



HVAC



Floor Care



Generators



Small Appliances



Security Systems



Test & Measurement

## WORLDWIDE NUMBERS:



**2400+**  
EMPLOYEES



**150+**  
ENGINEERS

## COMPETITIVE ADVANTAGES<sup>+</sup>



Innovative &  
Eco-Friendly Products



Excellent Quality &  
Customer Service



Reliable &  
On-Time Delivery



Vertical  
Integration



**70+**  
DISTRIBUTORS



**50+**  
REP FIRMS

## TABLE OF CONTENTS

|                                  |           |
|----------------------------------|-----------|
| Selector Guide .....             | 2         |
| <b>C1005B-SERIES</b> .....       | <b>3</b>  |
| Ordering Scheme.....             | 4         |
| Dimensional Specifications ..... | 4         |
| Time Delay.....                  | 4         |
| <b>CLB-SERIES</b> .....          | <b>5</b>  |
| Ordering Scheme.....             | 6         |
| Dimensional Specifications ..... | 7         |
| Time Delay.....                  | 7         |
| <b>CMB-SERIES</b> .....          | <b>8</b>  |
| Ordering Scheme.....             | 9         |
| Dimensional Specifications ..... | 10        |
| Time Delay.....                  | 10        |
| <b>CTB-SERIES</b> .....          | <b>11</b> |
| Ordering Scheme.....             | 12        |
| Dimensional Specifications ..... | 12        |
| Time Delay.....                  | 12        |

**HELPFUL TIP**

Click on a product to go directly to that page number!

### Thermal Circuit Protectors

This catalog features Carling Technologies' current line of thermal circuit protectors, from 3 to 60 amps, which offer reliable, cost effective circuit protection. Thermal circuit protectors utilize a bimetallic strip electrically in series with the circuit. The heat generated by the current during an overload deforms the bimetallic strip and trips the breaker. Thermal protectors have a significant advantage over fuses in that they can be reset after tripping. They can also be used as the main ON/OFF switch for the equipment being protected.

### Typical Applications Include:

- Household Appliances
- Transportation
- Marine
- Power Strips
- Medical Equipment
- Audio Visual Equipment
- Power Supplies
- Exercise Equipment

# SELECTOR GUIDE

|                                                                                   |                                                                                           |                                                                                           |                                                                                    |                                              |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------|
|  |          |          |  |                                              |
| <b>C1005B-Series</b>                                                              | <b>CLB-Series</b>                                                                         | <b>CMB-Series</b>                                                                         | <b>CTB-Series</b>                                                                  |                                              |
| 1                                                                                 | 1                                                                                         | 1                                                                                         | 1                                                                                  | <b>Poles</b>                                 |
| rocker,<br>lighted rocker                                                         | pushbutton                                                                                | pushbutton                                                                                | rocker                                                                             | <b>Actuator Style</b>                        |
| 7 to 16A,<br>125-250VAC,<br>32VDC                                                 | 3 to 60A,<br>125-250VAC,<br>32 VDC                                                        | 3 to 20A,<br>125-250VAC,<br>32 VDC                                                        | 3 to 16A,<br>125-250VAC,<br>50VDC                                                  | <b>Max Current &amp;<br/>Voltage Ratings</b> |
| 1000A                                                                             | 2500A@32VDC                                                                               | 2500A@32VDC                                                                               | 1000A                                                                              | <b>Max Interrupting<br/>Capacity</b>         |
| series trip<br>manual reset                                                       | series trip<br>manual reset                                                               | series trip<br>manual reset                                                               | series trip<br>manual reset                                                        | <b>Available Circuits</b>                    |
| .250" tab,<br>solder lug                                                          | .250" tab,<br>.250" tab with 90° bend,<br>screw terminal,<br>screw terminal with 90° bend | .250" tab,<br>.250" tab with 90° bend,<br>screw terminal,<br>screw terminal with 90° bend | .250" tab                                                                          | <b>Termination</b>                           |
| front panel snap-in                                                               | threaded bushing,<br>front panel snap-in                                                  | threaded bushing,<br>front panel snap-in                                                  | front panel snap-in                                                                | <b>Mounting Method</b>                       |
| -10°C to 65°C                                                                     | -10°C to 60°C                                                                             | -10°C to 60°C                                                                             | -10°C to 60°C                                                                      | <b>Operating<br/>Temperature</b>             |
| UL, cUL, TUV                                                                      | UL, cUL, CSA, TUV, CE,<br>UL 1500 / ISO 8846 for<br>ignition protection / marine          | UL, cUL, CSA, TUV, CE,<br>UL 1500 / ISO 8846 for<br>ignition protection / marine          | UL, cUL, VDE, CE                                                                   | <b>Agency Approvals</b>                      |

\*Options and approvals shown may apply to specific construction combinations only, consult factory for clarification.  
 Manufacturer reserves the right to change product specifications without prior notice.

# C1005B-Series

## THERMAL CIRCUIT PROTECTORS

The C1005B-Series offers the functionality of a switch and circuit breaker in a single compact package, which fits an industry standard .550 x 1.125 mounting hole. This combo device eliminates the need for both a switch and thermal circuit protector on customer panels. By using only this multipurpose product, wiring and assembly costs are greatly reduced, while at the same time, valuable panel real estate is saved.

The C1005B-Series is available lighted or unlighted, in a variety of colors, with solder lug or .250 tabs. Current ratings range from 7-16 amps at 125 and 250 VAC and up to 32 VDC.



### Resources:

[Configure a Complete Part](#)

[\*\*Download CAD & Sales Drawing >\*\*](#)

### Product Highlights

- .550 x 1.125 mounting hole (14mm x 28.6mm)
- Ratings from 7-16A
- Standard Reset/Off Legend
- .250 Tabs or Solder Lug Terminations
- 65°C Max Operating Temperature
- 1000 AIC Interrupting Capacity
- 1500 VAC Dielectric Strength
- 100M ohms @500VDC Insulation Resistance
- UL1077, UL1363, IEC 60934

### Typical Applications:

- Household and Commercial Appliances
- On/Off-Highway
- Marine
- Telecom
- Power Strips and Supplies
- Audio-Visual Equipment
- Medical
- Generators

**C1005B - 3 B 15 1 B R 3**

1  
Series

2  
Illumination

3

4  
Current  
Rating

5  
Contact  
Material

6  
Bezel  
Legend

7  
Rocker  
Color

8  
Lamp  
Voltage

#### 1 SERIES C1005B

#### 2 ILLUMINATION

- 2 Non-Lighted  
3 Lighted

#### 3 TERMINATION

- A Solder Lug  
B .250 Tab

#### 4 CURRENT RATING (AMPERES)

|    |         |    |         |
|----|---------|----|---------|
| 07 | 7 amps  | 12 | 12 amps |
| 08 | 8 amps  | 13 | 13 amps |
| 09 | 9 amps  | 14 | 14 amps |
| 10 | 10 amps | 15 | 15 amps |
| 11 | 11 amps | 16 | 16 amps |

#### 5 CONTACT MATERIAL 1

- 1 Silver Cad Oxide (switch), Silver plated copper (breaker)

#### 6 BEZEL LEGEND IMPRINT

- B Black Bezel with white legend  
W White Bezel with black legend  
C Gray Bezel with black legend

#### 7 ROCKER COLOR

- R Red  
G Green  
U Blue  
T Clear

Note: RESET OFF Legend is standard.

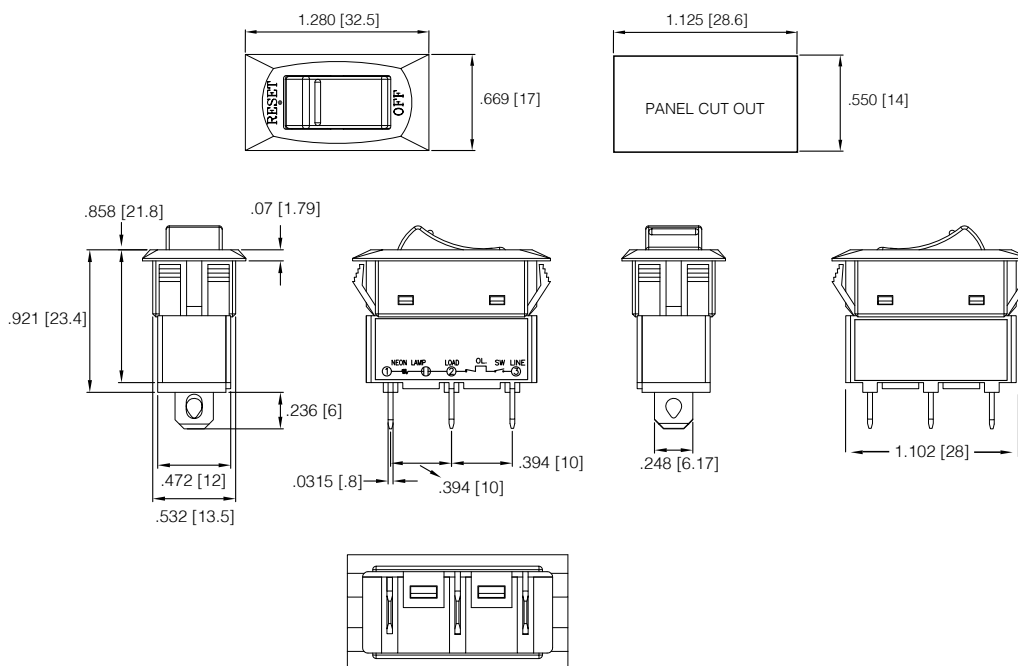
#### 8 LAMP VOLTAGE

- 3 Neon Lamp 125/250 VAC  
9 Non-lighted

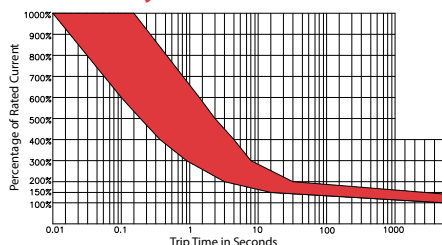
#### Notes:

1. Silver cad oxide switch and breaker contacts are available as a special order.  
Specify 3 for selection 5

## Dimensional Specifications: in. [mm]



## Time Delay



| Overload | Trip Time       |
|----------|-----------------|
| 100%     | No Trip         |
| 150%     | Trip in 1 hr    |
| 200%     | 4.0 ~ 40 sec.   |
| 300%     | 0.9 ~ 8.0 sec.  |
| 400%     | 0.42 ~ 5.0 sec. |
| 500%     | 0.25 ~ 3.0 sec. |
| 600%     | 0.01 ~ 1.8 sec. |

| Time Trip Factor 1 |        |
|--------------------|--------|
| -10 °C             | x 1.70 |
| -5 °C              | x 1.60 |
| 0 °C               | x 1.50 |
| 5 °C               | x 1.40 |
| 10 °C              | x 1.30 |
| 15 °C              | x 1.20 |
| 20 °C              | x 1.10 |
| 25 °C              | x 1.00 |

| Time Trip Factor 1 |        |
|--------------------|--------|
| 30 °C              | x 0.90 |
| 35 °C              | x 0.85 |
| 40 °C              | x 0.80 |
| 45 °C              | x 0.75 |
| 50 °C              | x 0.70 |
| 55 °C              | x 0.65 |
| 60 °C              | x 0.60 |

#### Notes:

1. Trip Time factor is a guideline that indicates ambient temperature effect on trip times at various overload values.

\*Manufacturer reserves the right to change product specification without prior notice.

# CLB-Series

## THERMAL CIRCUIT PROTECTORS

The CLB-Series is a compact, single pole, push-to-reset family of thermal circuit breakers designed to protect equipment. Utilizing simple, precision design with few moving parts, these breakers offer cost effective, extremely reliable circuit protection with high resistance against shock and vibration.



### Resources:

[Configure a Complete Part](#)

[Download CAD & Sales Drawing >](#)

### Product Highlights:

- Ratings from 3-60A, 125, 250VAC, 32VDC
- 2500 VAC/1 minute
- 60°C Max Operating Temperature
- 2500A @ 32VDC Interrupting Capacity
- 100M ohms Insulation Resistance
- Voltage drop <0.25 V
- UL, cUL, CSA, TUV, CE
- UL1500/ISO8846 for ignition protection/marine

### Applications:

- Household Appliances
- On/Off-Highway
- Marine
- Power Strips
- Medical Equipment
- Audio Visual Equipment
- Power Supplies
- ROHS Complaint



# CLB - 10 3 - 12 C 3 B - B - A / 10

1 Series      2 Rating      3 Voltage      4 Mounting Hole      5 Bushing Type      6 Mounting Nut      7 Indicator Plate      8 Button      9 Terminal      10 Button Marking

## 1 SERIES

### CLB

## 3 VOLTAGE

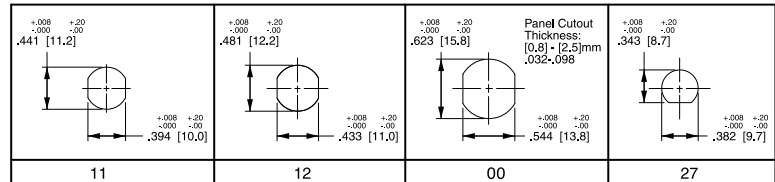
3 125-250VAC/ 32 VDC

## 2 RATING

|    |         |                  |         |
|----|---------|------------------|---------|
| 03 | 3 amps  | 15               | 15 amps |
| 04 | 4 amps  | 18               | 18 amps |
| 05 | 5 amps  | 20               | 20 amps |
| 06 | 6 amps  | 25               | 25 amps |
| 07 | 7 amps  | 30               | 30 amps |
| 08 | 8 amps  | 35               | 35 amps |
| 10 | 10 amps | 40               | 40 amps |
| 12 | 12 amps | 50 <sup>12</sup> | 50 amps |
| 13 | 13 amps | 60 <sup>12</sup> | 60 amps |

## 4 MOUNTING HOLE

11 1 M11  
12 2 M12  
00 3 Snap In Style  
27 4 3/8" 27 UNS



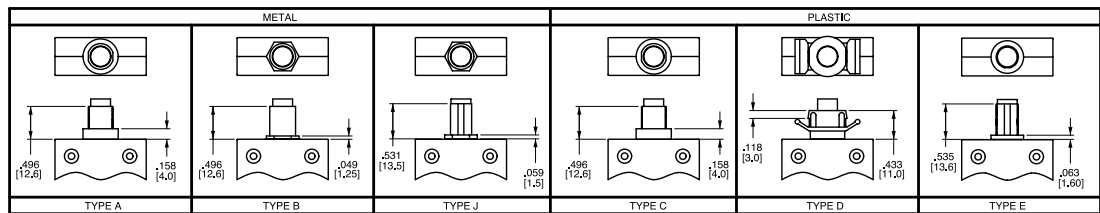
## 5 BUSHING

### METAL

A<sup>6</sup> Type A  
B<sup>16</sup> Type B  
J<sup>8</sup> Type J

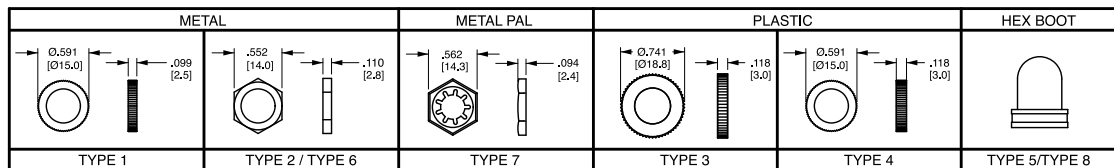
### PLASTIC

C<sup>5</sup> Type C  
D<sup>7</sup> Type D  
E<sup>8</sup> Type E



## 6 MOUNTING NUT 9

N None  
1 Type 1  
2 Type 2  
3<sup>17</sup> Type 3  
4 Type 4  
5 Type 5  
6<sup>4, 14</sup> Type 6  
7<sup>4</sup> Type 7  
8<sup>4</sup> Type 8

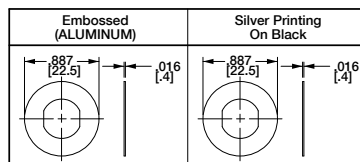


NOTE: Type 5 is clear hex boot. Type 8 is black hex boot (available for bushings E & J only); Type 3 nut includes molded in "PRESS TO RESET" marking.

## 7 INDICATOR PLATE 9

N None  
A Embossed  
B Silver Printing on Black

All indicator plates are marked "Suppl. Prot. press to reset".



Notes: All dimensions are in [mm]. Tolerance  $\pm 0.05$  [1.27] unless otherwise specified.

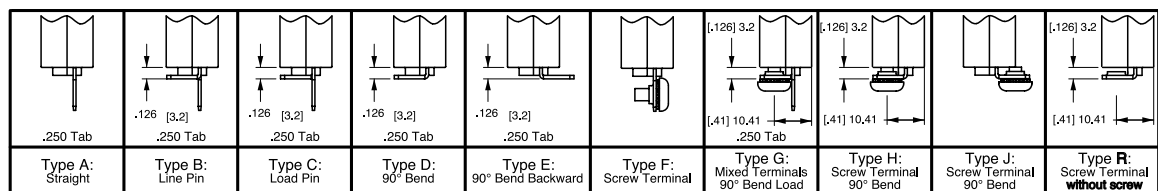
- Used with bushing A or B only.
- Used with bushing A or C only.
- Used with bushing D only.
- Used with bushing E & J only.
- Used with M12 mounting hole only.
- Used with M11 and M12 mounting hole only.
- Used with mounting hole 00 only.
- Used with 27 mounting hole only.
- All hardware available separately.
- Greater than 35 amp rating must use solder joint to connect wire to non-screw type terminals.
- Terminals are .040 [1.0] thickness for ratings greater than 35 amps. Terminals are .315 [0.8] thickness is for ratings less than 35 amps.
- Available only with 10-24 unc. screw terms. (select type F, G, H, J only.) UL, CUL only.
- Amp rating must match button marking (ex: "20" will be marked on the button of the breaker)
- Thickness is 3.0 mm, .118 in.
- Screw terminals are 8-32 UNC
- Used with M11 mounting hole only.
- Includes molded in "PRESS TO RESET" marking.

## 8 BUTTON

B Black      R Red      W White

## 9 TERMINAL 10,11,15

A Type A  
B Type B  
C Type C  
D Type D  
E Type E  
F Type F  
G Type G  
H Type H  
J Type J  
R Type R



## 10 BUTTON MARKING (IF BLANK, NO MARKING)<sup>13</sup>

Button Marking Orientation:

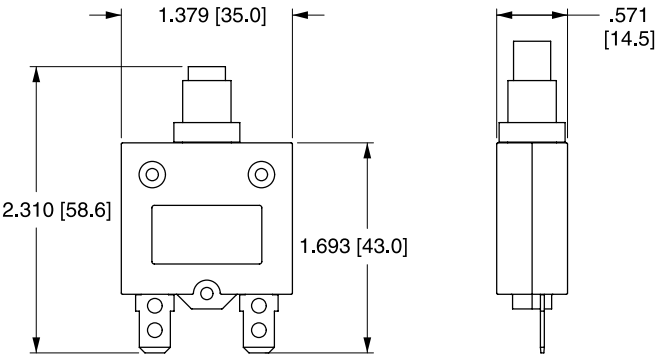
line (20) load

|    |       |    |       |    |        |    |        |    |        |    |        |
|----|-------|----|-------|----|--------|----|--------|----|--------|----|--------|
| 03 | 3 amp | 06 | 6 amp | 10 | 10 amp | 15 | 15 amp | 25 | 25 amp | 40 | 40 amp |
| 04 | 4 amp | 07 | 7 amp | 12 | 12 amp | 18 | 18 amp | 30 | 30 amp | 50 | 50 amp |
| 05 | 5 amp | 08 | 8 amp | 13 | 13 amp | 20 | 20 amp | 35 | 35 amp | 60 | 60 amp |

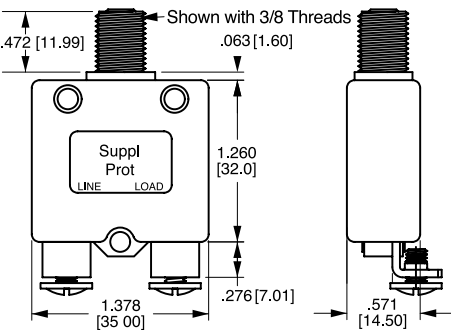


Dimensional Specifications: in. [mm]

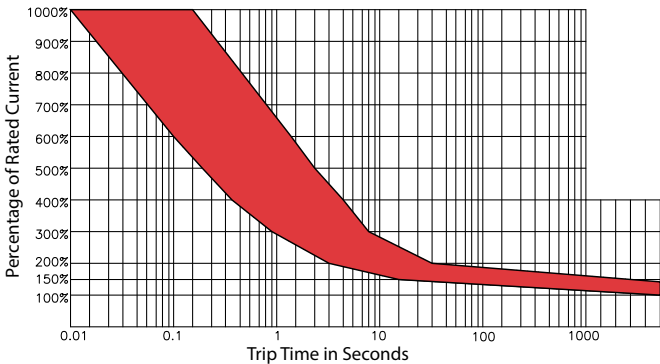
3-40A Construction



50 & 60A Construction



Time Delay



| Overload | Trip Time       |
|----------|-----------------|
| 100%     | No Trip         |
| 150%     | Trip in 1 hr    |
| 200%     | 4.0 ~ 40 sec.   |
| 300%     | 0.9 ~ 8.0 sec.  |
| 400%     | 0.42 ~ 5.0 sec. |
| 500%     | 0.25 ~ 3.0 sec. |
| 600%     | 0.01 ~ 1.8 sec. |

| Time Trip Factor <sup>1</sup> |        |
|-------------------------------|--------|
| -10 °C                        | x 1.70 |
| -5 °C                         | x 1.60 |
| 0 °C                          | x 1.50 |
| 5 °C                          | x 1.40 |
| 10 °C                         | x 1.30 |
| 15 °C                         | x 1.20 |
| 20 °C                         | x 1.10 |
| 25 °C                         | x 1.00 |

| Time Trip Factor <sup>1</sup> |        |
|-------------------------------|--------|
| 30 °C                         | x 0.90 |
| 35 °C                         | x 0.85 |
| 40 °C                         | x 0.80 |
| 45 °C                         | x 0.75 |
| 50 °C                         | x 0.70 |
| 55 °C                         | x 0.65 |
| 60 °C                         | x 0.60 |

Notes:  
1. Trip Time factor is a guideline that indicates ambient temperature effect on trip times at various overload values.

# CMB-Series

## THERMAL CIRCUIT PROTECTORS

The CMB-Series is a compact, single pole, push-to-reset family of thermal circuit breakers designed to protect equipment. Utilizing simple, precision design with few moving parts, these breakers offer cost effective, extremely reliable circuit protection with high resistance against shock and vibration.



### Resources:

[Configure a Complete Part](#)

[Download CAD & Sales Drawing >](#)

### Product Highlights:

- Ratings from 3-20A, 125, 250VAC, 32VDC
- 2500 VAC/1 minute
- 60°C Max Operating Temperature
- 2500A @ 32VDC Interrupting Capacity
- 100M ohms Insulation Resistance
- Voltage drop <0.25 V
- UL, cUL, CSA, TUV, CE
- UL1500/ISO8846 for ignition protection/marine

### Applications:

- Household Appliances
- On/Off-Highway
- Marine
- Power Strips
- Medical Equipment
- Audio Visual Equipment
- Power Supplies
- ROHS Complaint

**CMB - 10 3 - 11 C 3 N - B - A /10**

1  
Series

2  
Rating

3  
Voltage

4  
Mounting  
Hole

5  
Bushing  
Type

6  
Mounting  
Nut

7  
Indicator  
Plate

8  
Button

9  
Terminal

10  
Button Marking

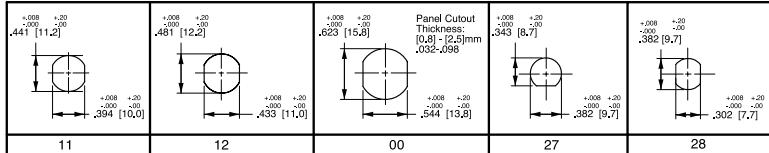
### 1 SERIES CMB

### 3 VOLTAGE 3 125-250VAC/ 32 VDC

|                 |        |           |         |
|-----------------|--------|-----------|---------|
| <b>2 RATING</b> |        | <b>10</b> | 10 amps |
| <b>03</b>       | 3 amps | <b>12</b> | 12 amps |
| <b>04</b>       | 4 amps | <b>13</b> | 13 amps |
| <b>05</b>       | 5 amps | <b>14</b> | 14 amps |
| <b>06</b>       | 6 amps | <b>15</b> | 15 amps |
| <b>07</b>       | 7 amps | <b>16</b> | 16 amps |
| <b>08</b>       | 8 amps | <b>20</b> | 20 amps |

### 4 MOUNTING HOLE

|    |    |                                 |
|----|----|---------------------------------|
| 11 | 1  | M11                             |
| 12 | 2  | M12                             |
| 00 | 3  | Snap In Style                   |
| 27 | 15 | 3/8" 27 UNS                     |
| 28 | 12 | 3/8" 27 UNS<br>(double flatted) |



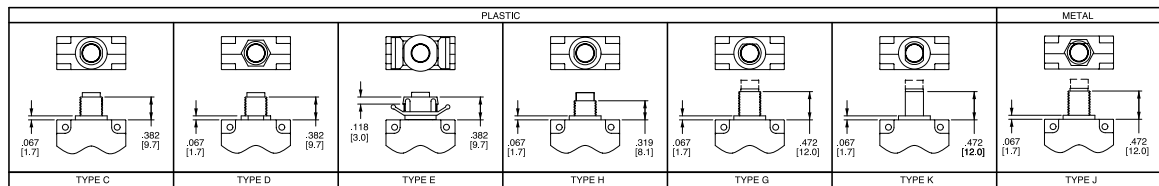
### 5 BUSHING

#### PLASTIC

|   |    |        |
|---|----|--------|
| C | 4  | Type C |
| D | 4  | Type D |
| E | 5  | Type E |
| G | 8  | Type G |
| H | 6  | Type H |
| K | 13 | Type K |

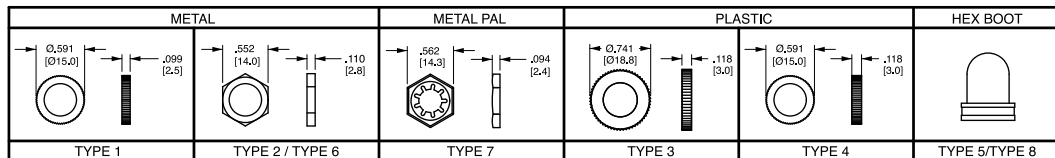
#### METAL

|   |   |        |
|---|---|--------|
| J | 8 | Type J |
|---|---|--------|



### 6 MOUNTING NUT 7

|   |        |
|---|--------|
| N | None   |
| 1 | Type 1 |
| 2 | Type 2 |
| 3 | Type 3 |
| 4 | Type 4 |
| 5 | Type 5 |
| 6 | Type 6 |
| 7 | Type 7 |
| 8 | Type 8 |

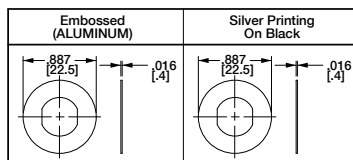


NOTE: Type 5 is clear hex boot. Type 8 is black hex boot (available for bushings G, J & K only); Type 3 nut includes molded in "PRESS TO RESET" marking.

### 7 INDICATOR PLATE 7

|   |                             |
|---|-----------------------------|
| N | None                        |
| A | Embossed Legend             |
| B | Silver Printing<br>on Black |

All indicator plates are marked  
"Suppl. Prot. press to reset".



Notes: All dimensions are in [mm]. Tolerance  $\pm 0.05$  [1.27] unless otherwise specified.

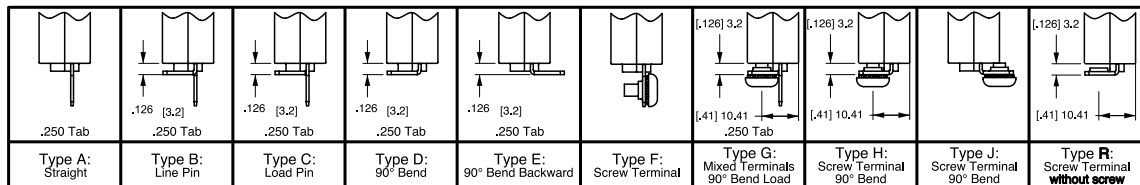
- |                                                          |                                                                                                             |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1 Used with bushing C or D only.                         | 10 Amp rating must match button marking<br>(ex: 20 will be marked on the button of<br>CMB-203-27G3N-W-A/20) |
| 2 Used with H bushing only.                              | 11 Includes molded in "PRESS TO RESET"<br>marking.                                                          |
| 3 Used with bushing E only.                              | 12 Available with K bushing only.                                                                           |
| 4 Used with M11 mounting hole only.                      | 13 Available with mounting hole 28 only.                                                                    |
| 5 Used with mounting hole 00 only.                       | 14 Thickness is 3.0 mm, .118 in.                                                                            |
| 6 Used with M12 mounting hole only.                      | 15 Available with G or J bushing only.                                                                      |
| 7 All hardware available separately.<br>Consult factory. |                                                                                                             |
| 8 Available with mounting hole 27 only.                  |                                                                                                             |
| 9 Available with G, J or K bushing only.                 |                                                                                                             |

### 8 BUTTON

|   |       |   |     |   |       |
|---|-------|---|-----|---|-------|
| B | Black | R | Red | W | White |
|---|-------|---|-----|---|-------|

### 9 TERMINAL

|   |        |
|---|--------|
| A | Type A |
| B | Type B |
| C | Type C |
| D | Type D |
| E | Type E |
| F | Type F |
| G | Type G |
| H | Type H |
| J | Type J |
| R | Type R |



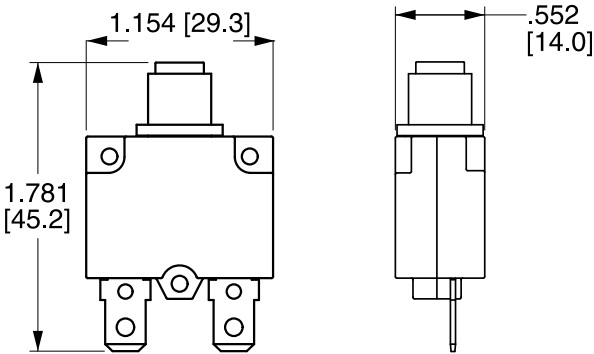
F,G,H,J TERMINALS ARE 8-32 UNC

### 10 BUTTON MARKING (IF BLANK, NO MARKING)<sup>10</sup> Button Marking Orientation: line load

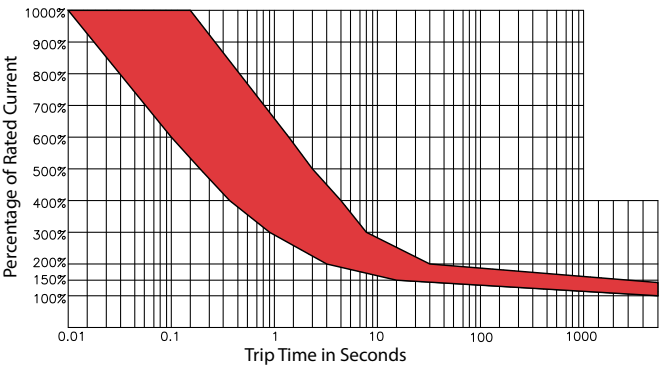
|    |       |    |       |    |       |    |        |    |        |    |        |    |        |
|----|-------|----|-------|----|-------|----|--------|----|--------|----|--------|----|--------|
| 03 | 3 amp | 05 | 5 amp | 07 | 7 amp | 10 | 10 amp | 13 | 13 amp | 15 | 15 amp | 20 | 20 amp |
| 04 | 4 amp | 06 | 6 amp | 08 | 8 amp | 12 | 12 amp | 14 | 14 amp | 16 | 16 amp |    |        |

\*Manufacturer reserves the right to change product specification without prior notice.

Dimensional Specifications: in. [mm]



Time Delay



| Overload | Trip Time       |
|----------|-----------------|
| 100%     | No Trip         |
| 150%     | Trip in 1 hr    |
| 200%     | 4.0 ~ 40 sec.   |
| 300%     | 0.9 ~ 8.0 sec.  |
| 400%     | 0.42 ~ 5.0 sec. |
| 500%     | 0.25 ~ 3.0 sec. |
| 600%     | 0.01 ~ 1.8 sec. |

| Time Trip Factor <sup>1</sup> |        |
|-------------------------------|--------|
| -10 °C                        | x 1.70 |
| -5 °C                         | x 1.60 |
| 0 °C                          | x 1.50 |
| 5 °C                          | x 1.40 |
| 10 °C                         | x 1.30 |
| 15 °C                         | x 1.20 |
| 20 °C                         | x 1.10 |
| 25 °C                         | x 1.00 |

| Time Trip Factor <sup>1</sup> |        |
|-------------------------------|--------|
| 30 °C                         | x 0.90 |
| 35 °C                         | x 0.85 |
| 40 °C                         | x 0.80 |
| 45 °C                         | x 0.75 |
| 50 °C                         | x 0.70 |
| 55 °C                         | x 0.65 |
| 60 °C                         | x 0.60 |

Notes:  
1. Trip Time factor is a guideline that indicates ambient temperature effect on trip times at various overload values.

# CTB-Series

## THERMAL CIRCUIT PROTECTORS

The CTB-Series is a compact, single pole, rocker actuated family of thermal circuit breakers designed to protect equipment. Utilizing simple, precision design with few moving parts, these breakers offer cost effective, extremely reliable circuit protection with high resistance against shock and vibration. Electrical ratings range from 3 to 16 amps at 125VAC, 250VAC, 125/250VAC or 50VDC. This breaker resets with the push of a finger and features a snap in mounting style, utilizing a 16mm dia. round Double D mounting hole.



### Resources:

[Configure a Complete Part](#)

[\*\*Download CAD & Sales Drawing >\*\*](#)

### Product Highlights:

- Ratings from 3-16A, 125VAC, 250VAC, 125/250VAC, 50VDC
- .250 Tabs
- 60°C Max Operating Temperature
- 1000 AIC Interrupting Capacity
- 100M ohms Insulation Resistance
- UL, cUL, VDE, CE

### Applications:

- Household Appliances
- On/Off Highway
- Marine
- Power Strips and Supplies
- Medical Equipment
- Audio Visual Equipment
- Exercise Equipment
- ROHS Complaint

**CTB** - **B** - **B** - **05** - **B**

1 Series      2 Bezel Color      3 Rocker Color      4 Rating      5 Panel Thickness

#### 1 SERIES

CTB

#### 2 BEZEL COLOR <sup>1</sup>

B Black

#### 3 ROCKER COLOR <sup>1</sup>

B Black

#### 4 RATING

|    |        |    |         |    |         |
|----|--------|----|---------|----|---------|
| 03 | 3 amps | 08 | 8 amps  | 14 | 14 amps |
| 04 | 4 amps | 09 | 9 amps  | 15 | 15 amps |
| 05 | 5 amps | 10 | 10 amps | 16 | 16 amps |
| 06 | 6 amps | 12 | 12 amps |    |         |
| 07 | 7 amps | 13 | 13 amps |    |         |

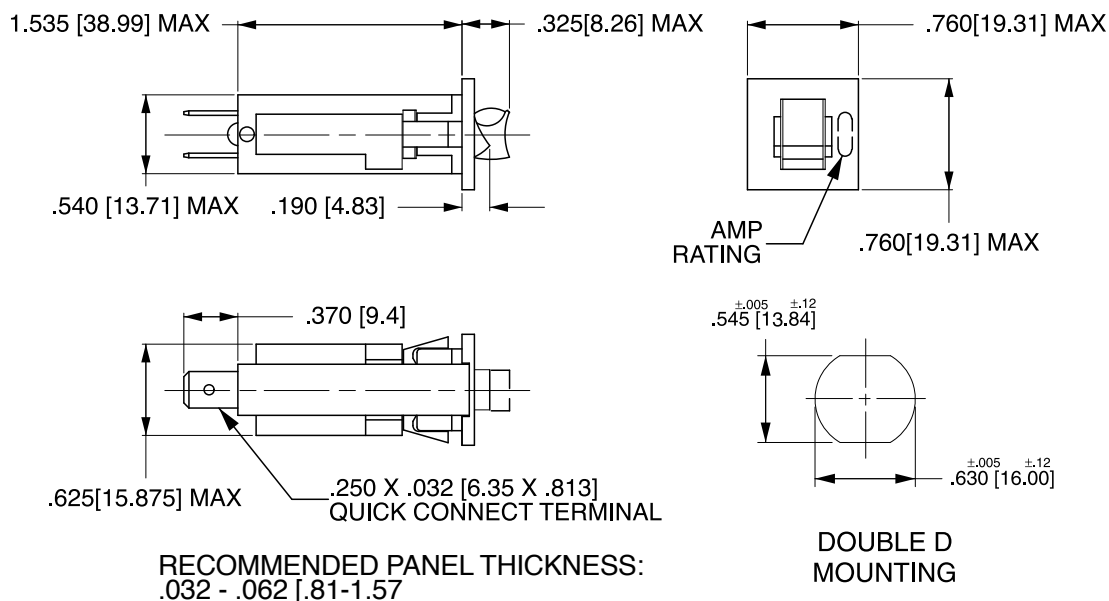
#### 5 PANEL THICKNESS

**blank** fits standard thickness of .032 - .062  
**B** fits .070 - .110 panel thickness

Notes:

1. Additional colors available. Consult factory.

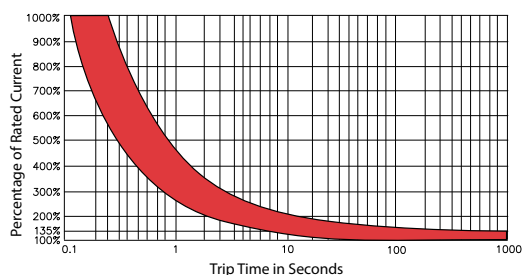
## Dimensional Specifications: in. [mm]



Notes:

All dimensions are in inches [millimeters]. Tolerance  $\pm 0.005$  [0.127] unless otherwise specified. Breaker must hold 100% of rated current and must trip at 150% and above, within the time limits shown in curve. Trip times specified at 25° ambient with no preloading.

## Time Delay



| Overload | Trip Time        |
|----------|------------------|
| 100%     | No Trip          |
| 135%     | Trip in 1 hr     |
| 200%     | 2.2 ~ 15 sec.    |
| 300%     | 0.9 ~ 3.4 sec.   |
| 400%     | 0.57 ~ 1.6 sec.  |
| 500%     | 0.38 ~ 0.94 sec. |
| 600%     | 0.27 ~ 0.76 sec. |

| Correction Factor <sup>1</sup> |         |
|--------------------------------|---------|
| 0 °C                           | x 0.85  |
| 10 °C                          | x 0.90  |
| 15 °C                          | x 0.925 |
| 18 °C                          | x 0.952 |
| 25 °C                          | x 1.00  |
| 32 °C                          | x 1.05  |
| 40 °C                          | x 1.15  |
| 50 °C                          | x 1.39  |
| 60 °C                          | x 1.49  |

Notes:

1. To adjust the breaker rating for ambient temperature, multiply the breaker rating by the factor. ex: 5A rating x .850 = 4.25A. Select 4A rating.

\*Manufacturer reserves the right to change product specification without prior notice.

Below is a list of useful product catalogs.

Please scan the QR codes below or visit **[carlingtech.com/onthego](http://carlingtech.com/onthego)** for complete details.

## WEBSITE

Product Selector, Resources, Configurit, Find Rep, Product Materials and Videos.



*carlingtech.com*



*/onthego*

## SWITCHES AND CONTROLS

Rocker, toggle, pushbutton, rotary, battery disconnects and controls.



*catalog*

## MINI & SUB-MINI SWITCHES

Sealed and non-sealed rocker, toggle, pushbutton and slide options.



*catalog*

## HYDRAULIC-MAGNETIC CIRCUIT PROTECTION

1-6 poles from .02 to 700A with CSA, VDE, TUV, UL489, UL489A, UL1500 approvals.



*catalog*

## THERMAL CIRCUIT PROTECTION

1 pole from 3 to 60A with UL, cUL, CE, UL1500/ISO 8846 approvals.



*catalog*

## GFCI/ELCI CIRCUIT PROTECTION

1-3 poles from 0.10 to 50A with CSA, UL489, UL1077, UL1053, UL1500 approvals.



*catalog*



Below is a list of useful market specific catalogs and brochures.  
Please scan the QR codes below or visit [carlingtech.com/onthego](https://carlingtech.com/onthego) for complete details.

### ON-OFF HIGHWAY

Switches, Controls and Custom Solutions



*brochure*

### MARINE

Circuit Protection and Switches



*brochure*

### RENEWABLE ENERGY

Circuit Breakers and Disconnect products



*brochure*

### MILITARY

COTS Switches and Circuits Breakers



*brochure*

### TELECOM/DATACOM

Hydraulic-Magnetic Circuit Breakers



*brochure*

### INDUSTRIAL AUTOMATION

Switches and Circuit Breakers



*brochure*

## Authorized Sales Representatives and Distributors

Click on a region of the map below to find your local representatives and distributors or visit [www.carlingtech.com/findarep](http://www.carlingtech.com/findarep).



## About Carling

Founded in 1920, Carling Technologies is a leading manufacturer of electrical and electronic switches and assemblies, circuit breakers, electronic controls, power distribution units, and multiplexed power distribution systems. With four ISO registered manufacturing facilities and technical sales offices worldwide, Carling Technologies Sales, Service and Engineering teams do much more than manufacture electrical components, they engineer powerful solutions! To learn more about Carling please visit [www.carlingtech.com/company-profile](http://www.carlingtech.com/company-profile).

To view all of Carling's environmental, quality, health & safety certifications please visit [www.carlingtech.com/environmental-certifications](http://www.carlingtech.com/environmental-certifications)





### European Headquarters

Carling Technologies LTD

4 Airport Business Park, Exeter Airport,  
Clyst Honiton, Exeter, Devon, EX5 2UL, UK

Phone: Int + 44 1392.364422

Email: [ltl.sales@carlingtech.com](mailto:ltl.sales@carlingtech.com)

#### Sales Offices:

Germany:

[gmbh@carlingtech.com](mailto:gmbh@carlingtech.com)

France:

[sas@carlingtech.com](mailto:sas@carlingtech.com)

### Worldwide Headquarters

Carling Technologies Inc.

60 Johnson Avenue,  
Plainville, CT 06062 USA

Phone: 860.793.9281

Email: [sales@carlingtech.com](mailto:sales@carlingtech.com)

#### Sales Offices:

Northern Region: [nrsm@carlingtech.com](mailto:nrsm@carlingtech.com)

Southeast Region: [sersm@carlingtech.com](mailto:sersm@carlingtech.com)

Midwest Region: [mrsm@carlingtech.com](mailto:mrsm@carlingtech.com)

West Region: [wrrsm@carlingtech.com](mailto:wrrsm@carlingtech.com)

Latin America: [larsm@carlingtech.com](mailto:larsm@carlingtech.com)

### Asia-Pacific Headquarters

Carling Technologies, Asia-Pacific LTD.,

Suite 1607, 16/F Tower 2, The Gateway, Harbour City, 25  
Canton Road, Tsimshatsui, Kowloon, Hong Kong

Phone: Int + 852-2737-2277

Email: [sales@carlingtech.com.hk](mailto:sales@carlingtech.com.hk)

#### Sales Offices:

Shenzhen, China: [shenzhen@carlingtech.com](mailto:shenzhen@carlingtech.com)

Shanghai, China: [shanghai@carlingtech.com](mailto:shanghai@carlingtech.com)

Pune, India: [india@carlingtech.com](mailto:india@carlingtech.com)

Kaohsiung, Taiwan: [taiwan@carlingtech.com](mailto:taiwan@carlingtech.com)

Yokohama, Japan: [japan@carlingtech.com](mailto:japan@carlingtech.com)



[WWW.CARLINGTECH.COM](http://WWW.CARLINGTECH.COM)