

# CLB-Series

## THERMAL CIRCUIT PROTECTORS

**Rating:**

3 to 60A, 125-250VAC, 32VDC

**Approvals:**

UL, CUL, CSA, TUV, CE

UL1500/ISO8846 for ignition protection/marine

**Dielectric Strength:**

2500 VAC/1 minute

**Interrupting capacity:**

2500 amps @ 32 VDC

**Insulation Resistance:**

100M ohms

**Operating Temperature:**

-10°C to 60°C

**Voltage drop:**

< 0.25 V

**Applications:**

Household Appliances

Transportation

Marine

Power Strips

Medical Equipment

Audio Visual Equipment

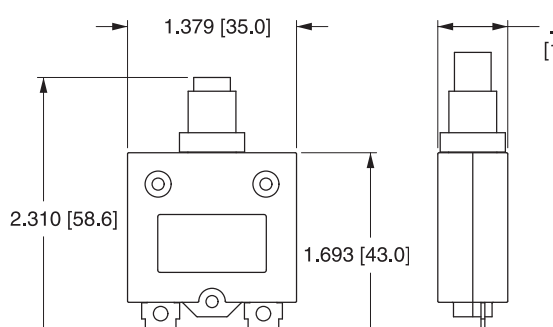
Power Supplies

**ROHS Compliant**

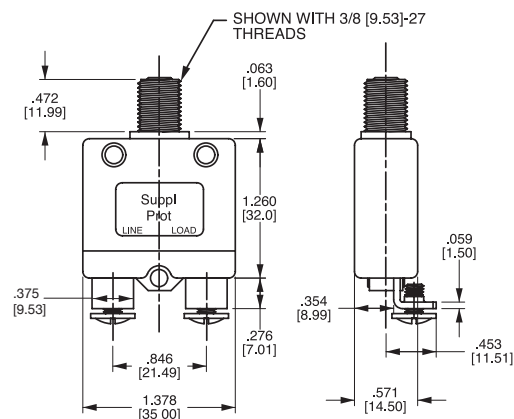
A COMPACT, SINGLE POLE, PUSH-TO-RESET  
FAMILY OF THERMAL CIRCUIT BREAKERS

**Dimensional Specifications:**

3-40A Construction



50 & 60A Construction



**Carling Technologies™**

Innovative Designs. Powerful Solutions.

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CLB - 10 3 - 12 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

CLB

### 3 VOLTAGE

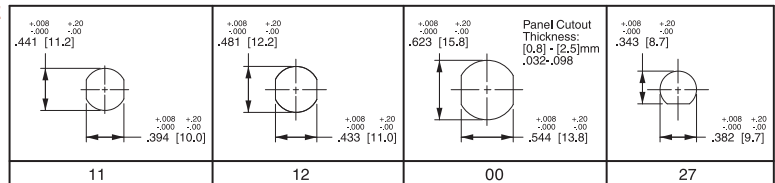
3 125-250VAC/ 32 VDC

### 2 RATING

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

### 4 MOUNTING HOLE

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



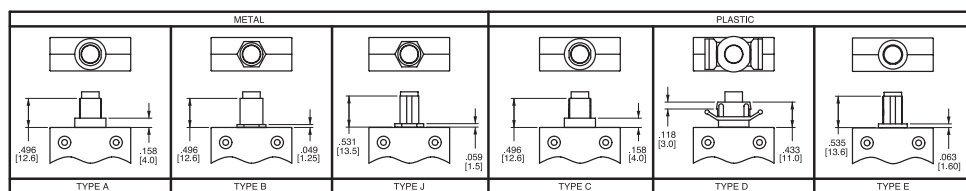
### 5 BUSHING

#### METAL

A<sup>5</sup> Type A  
B<sup>6</sup> Type B  
J<sup>8</sup> Type J

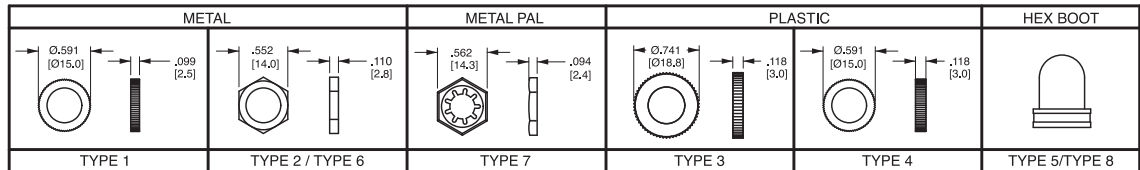
#### PLASTIC

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



### 6 MOUNTING NUT<sup>9</sup>

N None  
1 Type 1  
2 Type 2  
3 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

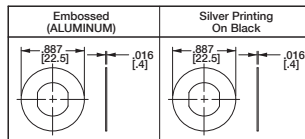


NOTE: Type 5 is clear hex boot. Type 8 is black hex boot (available for bushings E & J only); Type 3 nut includes molded in "PRESS TO RESET" marking.

### 7 INDICATOR PLATE<sup>9</sup>

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 C only.
- Used with bushing D only.
- Used with bushing E & J only.
- Used with M12 mounting hole only.
- Used with M12 mounting hole only.
- Used with mounting hole 00 only.
- Used with 27 mounting hole only.
- All hardware available separately. Consult factory.
- > 35 amp ratings must use solder joint to connect wire to non-screw type terminals.
- Terminals are .040 [1.0] thickness for ratings > 35, & .315 [8] thickness is for ratings < 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

### 8 BUTTON

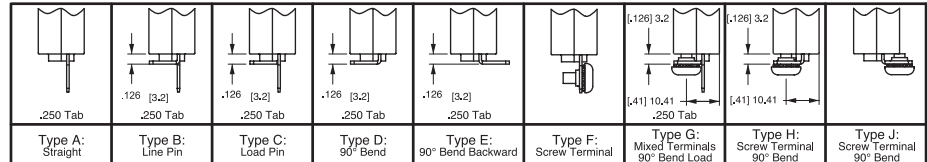
B Black

R Red

W White

### 9 TERMINAL<sup>10,11,15</sup>

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

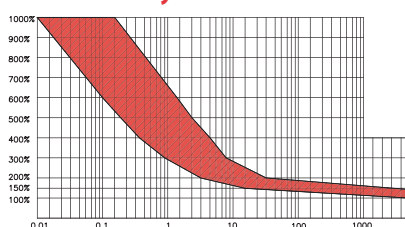


### 10 BUTTON MARKING (IF BLANK, NO MARKING.)<sup>13</sup> Button Marking Orientation:

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 |

### Time Delay



| DERATING FACTOR |       |
|-----------------|-------|
| -10°C           | X1.70 |
| -5°C            | X1.60 |
| 0°C             | X1.50 |
| 5°C             | X1.40 |
| 10°C            | X1.30 |
| 15°C            | X1.20 |
| 20°C            | X1.10 |
| 25°C            | X1.00 |

| DERATING FACTOR |       |
|-----------------|-------|
| 30°C            | X0.90 |
| 35°C            | X0.85 |
| 40°C            | X0.80 |
| 45°C            | X0.75 |
| 50°C            | X0.70 |
| 55°C            | X0.65 |
| 60°C            | X0.60 |

| OVERLOAD |              |
|----------|--------------|
| 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 %    | 0.1~1.8 sec  |

#### Notes:

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.

To adjust the breaker rating for ambient temperature multiply the breaker rating by the factor. (ex: 5 amp rating at 0°C: 5 x .67 = 3.3 amp. Select 3 amp rating.)

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

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