



Thermal Circuit Protectors



***The NEW CLB and CMB-Series
provide reliable, cost effective
Circuit Protection for a variety
of applications.***

Carling Technologies is pleased to introduce our new CLB and CMB-Series Thermal Circuit Protectors.

The CLB and CMB-Series offer a reliable, cost effective solution to your circuit protection needs. This newest addition to the Carling family of circuit protection products is ideal for:

- general household appliances
- commercial appliances
- transportation
- marine
- telecommunications
- power strips
- audio-visual equipment
- medical equipment
- power supplies

Specifications:

- AC/DC ratings to 40 amps
- choice of snap-in or threaded mount
- 6 termination options
- 3 actuator/button color choices
- choice of metal or plastic bushing construction
- various hardware and indicator plate options
- UL, CUL and TUV certified

Product Availability:

- Samples available.
- Standard lead times for production quantities

Product Announcement TCP2/02 February 1, 2002

For additional information on our Thermal Circuit Protectors, please contact a Carling Technologies Technical Customer Service Rep:

Phone	(860) 793-9281
Fax	(860) 793-9231
email	sales@carlingtech.com
internet	www.carlingtech.com
mail	Carling Technologies, Inc. 60 Johnson Avenue Plainville, CT 06062-1177



Carling Technologies™

Innovative Designs. Powerful Solutions.

Ordering Schemes

CMB	-	10	3	-	12	C	3	B	-	B	-	A
1 Series		2 Rating	3 Voltage		4 Mounting Hole	5 Bushing Type	6 Mounting Nut	7 Indicator Plate		8 Button		9 Terminal



General Specifications:
Rating: 3 to 20A, 125-250VAC (48VDC - April 2002)
Approvals: UL/CUL
Dielectric Strength: 1500 VAC/ 1 minute
Interrupting capacity: 1000 amps
Resettable overload capacity: 10 x rated current
Insulation Resistance: 100M ohms
Operating Temperature: -10°C to 60°C
Voltage drop: < 0.25 V

1 SERIES CMB	4 MOUNTING HOLE 11 ³ M11 12 ⁴ M12 00 ¹ Snap In Style	7 INDICATOR PLATE ⁷ N None A Embossed B Silver Printing on Black
2 RATING 03 3 amp 04 4 amp 05 5 amp 07 7 amp 10 10 amp 12 12 amp 13 13 amp 14 14 amp 15 15 amp 16 16 amp 20 20 amp	5 BUSHING TYPE C ⁵ Type C (plastic) D ⁵ Type D (plastic) E ² Type E (plastic) H ⁶ Type H (plastic)	8 BUTTON B Black R Red W White
3 VOLTAGE ¹² 3 125-250VAC/48 VDC	6 MOUNTING NUT ⁷ N None 3 Type 3 4 Type 4	9 TERMINAL A Type A B Type B C Type C D Type D E Type E

CLB	-	10	3	-	12	C	3	B	-	B	-	A
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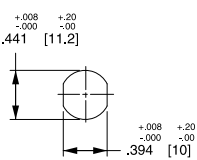
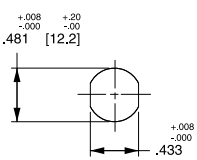
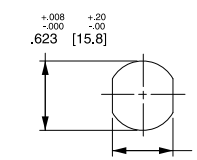
General Specifications:
Rating: 3 to 40A, 125-250VAC (48VDC - April 2002)
Approvals: UL/CUL
Dielectric Strength: 1500 VAC/ 1 minute
Interrupting capacity: 1000 amps
Resettable overload capacity: 10 x rated current
Insulation Resistance: 100M ohms
Operating Temperature: -10°C to 60°C
Voltage drop: < 0.25 V

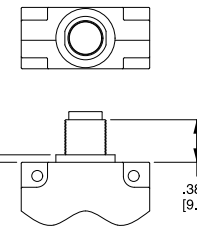
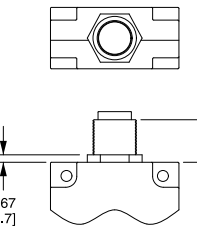
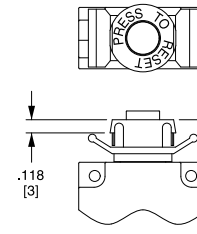
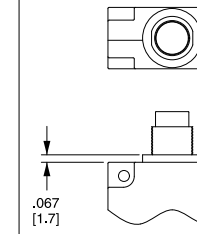
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3 VOLTAGE ¹² 3 125-250VAC/48 VDC	6 MOUNTING NUT ^{7, 11} N None 1 Type 1 2 Type 2 3 Type 3 4 Type 4 5 Type 5	9 TERMINAL A Type A B Type B C Type C D Type D E Type E F Type F

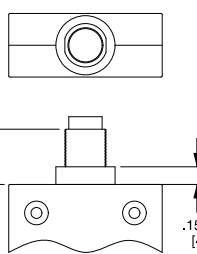
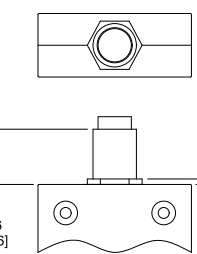
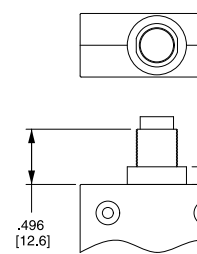
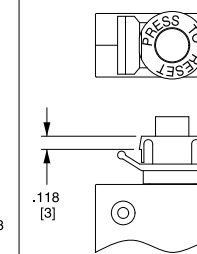
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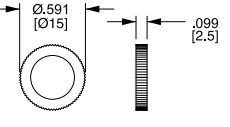
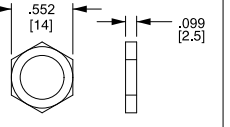
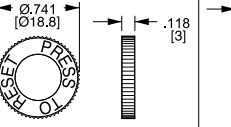
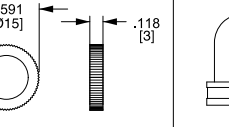
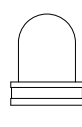
- 1 Used with bushing E only.
- 2 Used with mounting hole 00 only.
- 3 Used with bushing C or D only.
- 4 Used with H bushing only.
- 5 Used with M11 mounting hole only.
- 6 Used with M12 mounting hole only.
- 7 All hardware is available separately. Consult factory.
- 8 Used with bushing A or B only.
- 9 Used with bushing D only.
- 10 Used with bushing C only.
- 11 M12 mounting hole with C bushing available with metal nuts only.
- 12 UL/CUL approval at 48VDC expected April 2002.

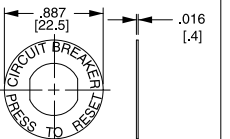
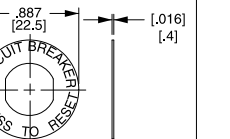
Dimensional Specifications

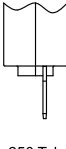
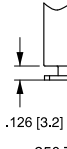
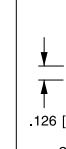
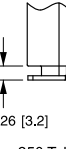
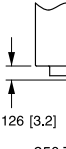
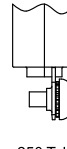
Mounting Hole	 M 11	 M12	 Snap-in Style
	Panel Cutout Thickness: [0.8] - [2.5]mm .032-.098		

CMB SERIES				
PLASTIC				
Bushing Type	 TYPE C	 TYPE D	 TYPE E	 TYPE H

CLB SERIES				
METAL		PLASTIC		
Bushing Type	 TYPE A	 TYPE B	 TYPE C	 TYPE D

Mounting Nut	METAL		PLASTIC		HEX BOOT
	 TYPE 1	 TYPE 2	 TYPE 3	 TYPE 4	 TYPE 5

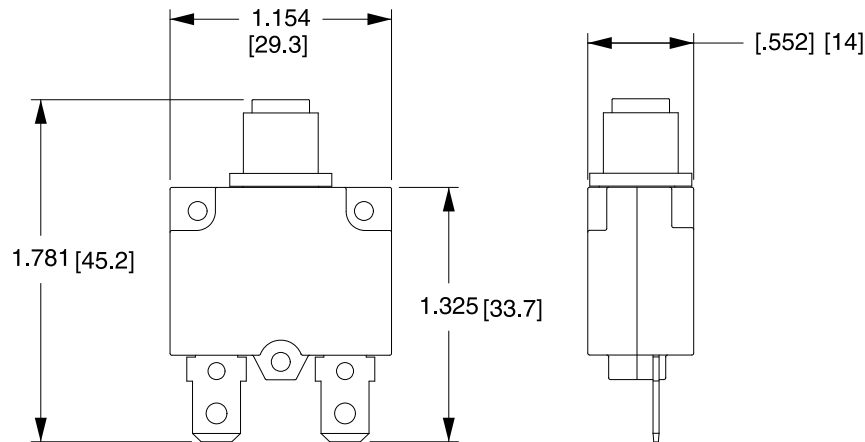
Indicator Plate	Embossed (ALUMINUM)	Silver Printing On Black
	 CIRCUIT BREAKER PRESS TO RESET	 CIRCUIT BREAKER PRESS TO RESET

Terminal Type	 .250 Tab	 .126 [3.2] .250 Tab	 .126 [3.2] .250 Tab	 .126 [3.2] .250 Tab	 .126 [3.2] .250 Tab	 .250 Tab
	Type A: Straight	Type B: Line Pin	Type C: Load Pin	Type D: 90° Bend	Type E: 90° Bend Backward	Type F: Screw Terminal

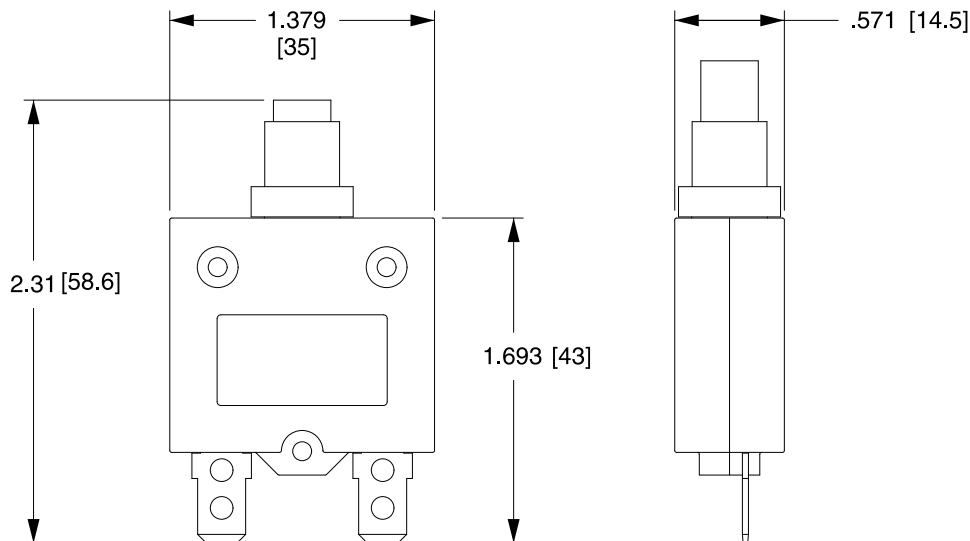
NOTES:

- All dimensions are in inches [millimeters].
- Tolerance ± 0.005 [.127] unless otherwise specified.

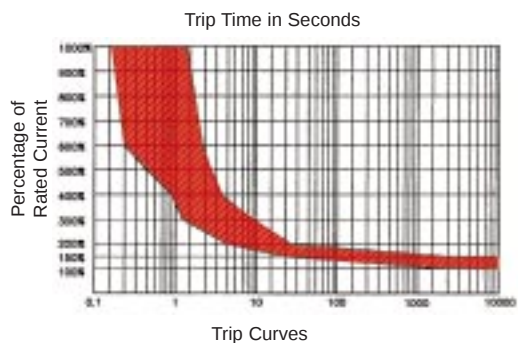
CMB-Series Dimensional Specifications



CLB-Series Dimensional Specifications



Time Delay Values



CORRECTION FACTOR ¹	
0°C	x .67
10°C	x .72
15°C	x .83
18°C	x .87
25°C	x 1.00
32°C	x 1.05
40°C	x 1.18
50°C	x 1.33
60°C	x 1.67

CMB SERIES ONLY	
OVERLOAD	TRIP TIME
100%	NO TRIP
150%	TRIP IN 1 HR
200%	4 - 40 SEC.
300%	1.2-12 SEC.
400%	0.5 - 5.5 SEC.
500%	0.4 - 3.5 SEC.
600%	0.3 - 2.5 SEC.

CLB SERIES ONLY	
OVERLOAD	TRIP TIME
100%	NO TRIP
150%	TRIP IN 1 HR
200%	5 - 35 SEC.
300%	1.5-9 SEC.
400%	0.9 - 5.5 SEC.
500%	0.5 - 3.5 SEC.
600%	0.3 - 2.8 SEC.

NOTES:

All dimensions are in inches [millimeters].

Tolerance $\pm .005$ [.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.

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