

# Type CBW58

## Thermal Circuit Breaker

### Push to Reset – Standard Profile



www.optifuse.com (619) 593-5050

#### Specifications:

Push to Reset – Standard Profile  
 Amperage Range: 3A - 50A  
 Input Voltage: 125 / 250 VAC, 32 / 50 VDC  
 Frequency: 50-60 Hz  
 Dielectric Strength: 1500 VAC / 1 Minute  
 Interrupting Rating: 3-50A 1000A @ 125/250VAC  
 3-30A 400A @ 125/250 VAC  
 3-50A 300A @ 50 VDC

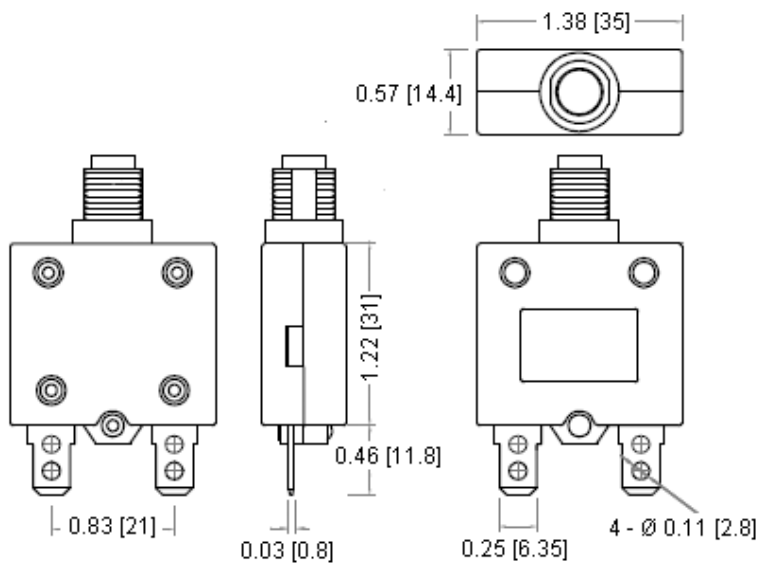
Marine **Ignition Protected** to SAE J1171 and UL1500  
 Insulation Resistance: > 100M Ω (500 VDC)  
 Contact Endurance: 125 VAC @ 150% of Rated Current-500 Cycles.  
 Reset Time: 60 seconds  
 Body – Black  
 Terminal Finish – Tin Plated  
 Operating Ambient Temperature: -10°C to +60°C

#### Time-Current Characteristics (at 25°C)

100%	150%	200%	300%
No trip	Trip within 1hr	5-30 sec trip	1.5-5 sec trip

Torque Rating - plastic nut on plastic thread: 6KGfcm  
 metal nut on metal thread: 10KGfcm  
 metal nut on plastic thread: 6KGfcm

#### Mechanical Dimensions: Inches [mm]



#### Agency Standards and Listings:



RoHS  
Compliant

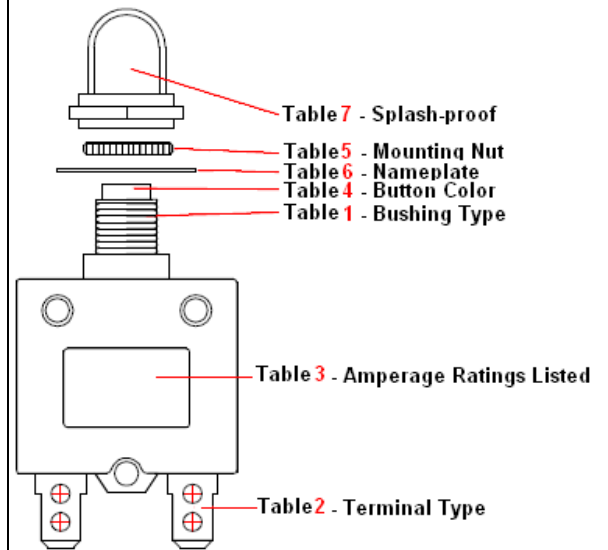
UR: 3A-50A, 125/250 VAC

CCC: 3A-30A, 125/250 VAC

TUV: 3A-30A, 125/250 VAC, 32 VDC

VDE: 3A-16A, 125/250 VAC

#### Part / Accessories Descriptions:



Note: All specifications subject to change without notice.

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Part Number Information									
<b>CBW58-</b>	<b>X</b>	<b>Y</b>	<b>-</b>	<b>ZZ</b>	<b>-</b>	<b>B</b>	<b>N</b>	<b>P</b>	<b>S</b>
	<b>Table 1</b>	<b>Table 2</b>		<b>Table 3</b>		<b>Table 4</b>	<b>Table 5</b>	<b>Table 6</b>	<b>Table 7</b>

## Mechanical Dimensions: Inches [mm]

**Table 1 - Where X is Bushing Style**

<b>H</b>	<b>Metal</b> M11 – 10.8 mm diameter - 9.8 mm pinch point – 12.6 mm high
<b>B</b>	<b>Metal</b> M11 – 10.8 mm diameter - 9.8 mm pinch point – 12.6 mm high
<b>V</b>	<b>Metal</b> M12 - 11.8 mm diameter – 10.7 mm pinch point – 12.6 mm high
<b>G</b>	<b>Metal</b> 3/8” 27 Thread – 9.5 mm diameter – 8.5 mm pinch point – 12.6 mm high
<b>P</b>	Plastic M11 – 10.8 mm diameter - 9.8 mm pinch point – 12.6 mm high
<b>Q</b>	Plastic M12 – 11.8 mm diameter – 10.7 mm pinch point – 12.6 mm high
<b>E</b>	Plastic 3/8” 27 Thread – 9.5 mm diameter – 8.5 mm pinch point – 12.6 mm high
<b>A</b>	Automatic Reset – No Bushing

<b>H - Metal</b> M11XP1.0	<b>B - Metal</b> M11XP1.0	<b>V - Metal</b> M12XP1.0	<b>G - Metal</b> 3/8"-27T	<b>Measurements</b>
A 0.43 [10.8]	B 0.53 [13.5]	C 0.39 [9.8]	D 0.50 [12.6]	
E 0.46 [11.8]	F 0.42 [10.7]	G 0.62 [15.8]	H 0.54 [13.8]	
J 0.33 [8.5]	K 0.37 [9.5]	L 0.43 [11.0]	M 0.05 [1.2]	
X 0.16 [4.0]	Y 0.06 [1.5]	Z 0.06 [1.6]		

Bushing Type vs. Panel Hole	H, B, P	V or Q	G or E

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**Mechanical Dimensions: Inches [mm]**

**Table 2 - Where Y is Terminal Configuration**

<b>S</b> Straight 0.46 [11.8]	<b>B</b> 90° Bend	<b>R</b> 90° Reverse Bend	<b>4</b> 90° Bend Load Pin	<b>5</b> 90° Bend Line Pin	<b>6</b> Straight 0.31 [8]	<b>7</b> 90° Bend Reverse Bend
<b>8</b> 45° Bend	<b>9</b> 45° Reverse Bend	<b>X</b> Straight 0.13 [3.2]	<b>F</b> Screw #8-32	<b>L</b> Screw #8-32 90° Bend	<b>J</b> Screw #8-32 90° Reverse Bend	<b>L4</b> Screw #8-32 90° Bend Line Pin

**Table 3 - Where ZZ is Amperage**

**3-50A** (03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 15, 16, 18, 20, 22, 25, 30, 35, 40, 45, 50)

See comments on first page for approvals information.

The above represents only standard current rates. Please contact factory for additional ratings.

**Table 4 - Where B is Button Color**

<b>Blank</b>	Black Button	
<b>W</b>	White Button	
<b>R</b>	Red Button	
<b>1</b>	Black Button w/ Amperage in White	
<b>5</b>	White Button w/ Amperage in Black	
<b>6</b>	Red Button w/ Amperage in White	

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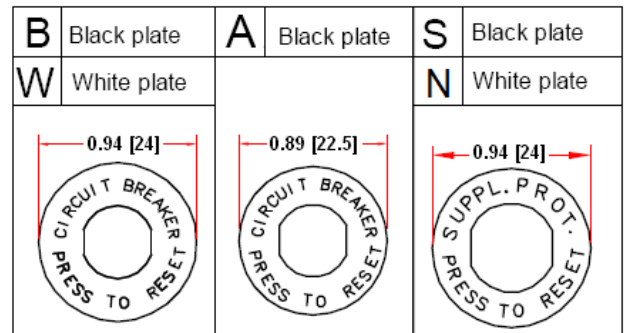
## Mechanical Dimensions: Inches [mm]

**Table 5 - Where N is Nut Type**

Blank	H	C	P	Q	X
<b>Metal Knurlnut</b> 	<b>Metal Hexnut</b> (M11xP1.0) H=0.55[14] (M12xP1.0) H=0.59[15] 	<b>Metal Knurlnut</b> 	<b>Plastic Integrated Knurlnut</b> 	<b>Plastic Knurlnut</b> 	<b>Plastic Integrated Knurlnut</b> 
<b>For Bushings:</b> H, B, V, P, Q Not available for G or E	<b>For Bushings:</b> H, B, V, G, P, Q, E	<b>For Bushings:</b> H, B, V, P, Q Not available for G or E	<b>For Bushings:</b> H, B, V, G, P, Q, E	<b>For Bushings:</b> H, B, V, G, P, Q, E Default for G and E	<b>For Bushings:</b> H, B, V, G, P, Q, E

**Table 6 - Where P is Nameplate**

<b>Blank = None</b>	
<b>B</b> Black nameplate	Circuit Breaker Press to Reset
<b>W</b> White nameplate	Circuit Breaker Press to Reset
<b>A</b> Black nameplate	Circuit Breaker Press to Reset
<b>S</b> Black nameplate	Suppl. Prot. Press to Reset
<b>N</b> White nameplate	Suppl. Prot. Press to Reset



**Table 7 - Where S is Splash-proof**

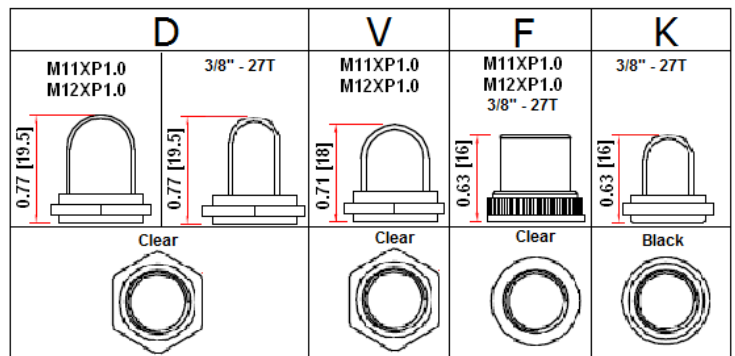
**Blank** – None

**D** - For H, V, B, G, P, Q, E Bushing Styles only

**V** - For H, B, V, P, Q Bushing Styles only

**F** - For H, V, B, G, P, Q, E Bushing Styles only

**K** - For G, E Bushing Styles only



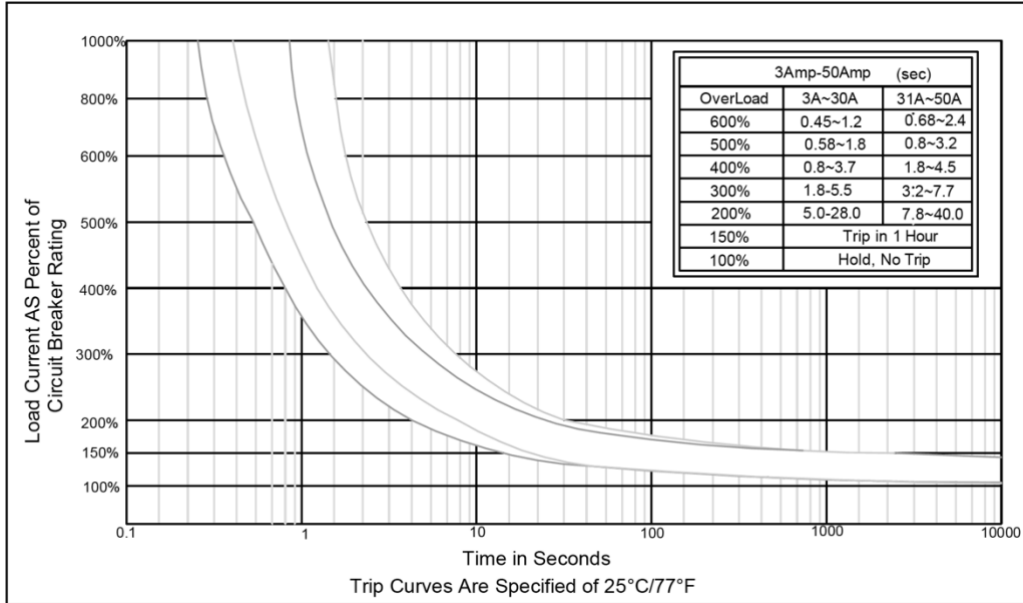
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**Trip Time Curve at 25°C**



Maximum Internal Resistance	
Current Rating	Maximum Resistance
3A-5A	< 0.225 Ω
6A-8A	< 0.175 Ω
9A-11A	< 0.125 Ω
12A-13A	< 0.050 Ω
14A-17A	< 0.040 Ω
18A-24A	< 0.030 Ω
25A-35A	< 0.020 Ω
36A-50A	< 0.010 Ω

**Ambient Temperature Correction Factor:**

Ambient Temperature	-10°C	0°C	10°C	25°C	35°C	40°C	50°C	60°C
Division Factor	1.30	1.20	1.10	1.00	0.94	0.85	0.73	0.68

The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping, please divide the current breaker current ratings by the derating factor shown above.

<p><b>Warning:</b></p>	<p>-Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.</p> <p>-Devices are intended for occasional overcurrent protection. Applications for repeated overcurrent condition and/or prolonged trip are not anticipated.</p> <p>-Avoid contact of device with chemical solvent. Prolonged contact may damage the device performance.</p>
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