

# Type CBW57

## Thermal Circuit Breaker

### Push to Reset – Low Profile



www.optifuse.com (619) 593-5050

#### Specifications:

Push to Reset - Low Profile  
 Amperage Range: 3A - 30A  
 Input Voltage: 125 / 250 VAC, 32 / 50 VDC  
 Frequency: 50-60 Hz  
 Dielectric Strength: >1500 VAC / Minute  
 Interrupt Rating: 3-30A 1000A @ 125/250 VAC  
                           3-20A 400A @ 125/250 VAC  
                           3-30A 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: within 60 seconds  
 Body – Black  
 Terminal Finish - Tin Plated  
 Operating Ambient Temperature: -10°C to + 60°C  
 Torque Rating - plastic nut on plastic thread: 6KGfcm  
                           metal nut on metal thread: 10KGfcm  
                           metal nut on plastic thread: 6KGfcm

#### Agency Standards and Listings:



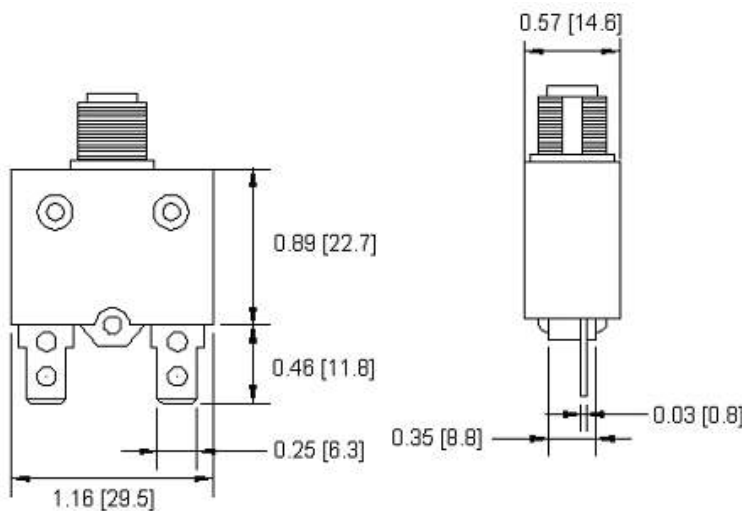
RoHS  
Compliant

**UR:** 3A-30A, 125/250 VAC, 50 VDC  
**CCC:** 3A-20A, 125/250 VAC  
**TUV:** 3A-20A, 125/250 VAC, 32 VDC  
**VDE:** 3A-16A, 125/250 VAC

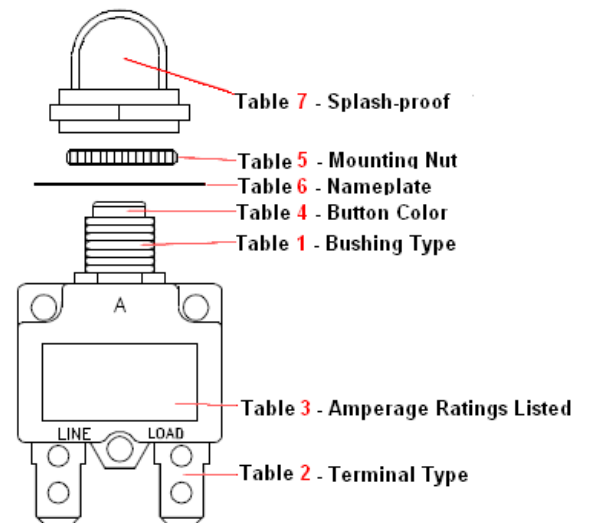
#### Time-Current Characteristics (at 25°C)

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

#### Mechanical Dimensions: Inches [mm]



#### Part / Accessories Descriptions:



#### Warning:



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

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## Mechanical Dimensions: Inches [mm]

Part Number Information									
CBW57-	<b>X</b>	<b>Y</b>	-	<b>ZZ</b>	-	<b>B</b>	<b>N</b>	<b>P</b>	<b>S</b>
	Table 1	Table 2		Table 3		Table 4	Table 5	Table 6	Table 7

## 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 – 9.6 mm high																													
<b>B</b>	<b>Metal</b> M11 – 10.8 mm diameter - 9.8 mm pinch point – 9.6 mm high																													
<b>G</b>	<b>Metal</b> 3/8” 27 Thread – 9.5 mm diameter – 8.5 mm pinch point – 12.5 mm high																													
<b>P</b>	Plastic M11 – 10.8 mm diameter - 9.8 mm pinch point – 9.6 mm high																													
<b>Q</b>	Plastic M12 – 11.8 mm diameter – 10.8 mm pinch point – 8.2 mm high																													
<b>E</b>	Plastic 3/8” 27 Thread – 9.5 mm diameter – 8.5 mm pinch point – 12.5 mm high																													
<b>S</b>	Plastic – Panel – 8 mm high																													
<b>C</b>	Plastic – Snap-in – 9.8 mm high																													
<b>A</b>	Automatic Reset – No Bushing																													
<b>H - Metal</b> M11XP1.0	<b>B - Metal</b> M11XP1.0	<b>G - Metal</b> 3/8"-27T	<b>P - Plastic</b> M11XP1.0	<b>Measurements</b> <table border="1"> <tbody> <tr><td>A</td><td>0.43 [10.8]</td></tr> <tr><td>B</td><td>0.53 [13.5]</td></tr> <tr><td>C</td><td>0.39 [9.8]</td></tr> <tr><td>D</td><td>0.38 [9.6]</td></tr> <tr><td>E</td><td>0.49 [12.5]</td></tr> <tr><td>F</td><td>0.32 [8.2]</td></tr> <tr><td>G</td><td>0.62 [15.8]</td></tr> <tr><td>H</td><td>0.54 [13.8]</td></tr> <tr><td>J</td><td>0.33 [8.5]</td></tr> <tr><td>K</td><td>0.37 [9.5]</td></tr> <tr><td>L</td><td>0.51 [13.0]</td></tr> <tr><td>M</td><td>0.32 [8.2]</td></tr> <tr><td>N</td><td>0.46 [11.8]</td></tr> </tbody> </table>	A	0.43 [10.8]	B	0.53 [13.5]	C	0.39 [9.8]	D	0.38 [9.6]	E	0.49 [12.5]	F	0.32 [8.2]	G	0.62 [15.8]	H	0.54 [13.8]	J	0.33 [8.5]	K	0.37 [9.5]	L	0.51 [13.0]	M	0.32 [8.2]	N	0.46 [11.8]
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<b>A - Automatic, No Bushing</b> 																														

Note: All specifications subject to change without notice.

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**Mechanical Dimensions: Inches [mm]**

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

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

**Table 3 - Where ZZ is Amperage**

**03A to 20A** (03, 3.5, 04, 05, 06, 07, 7.5, 08, 10, 11, 12, 13, 15, 16, 17, 18, 20, 22, 25, 30)

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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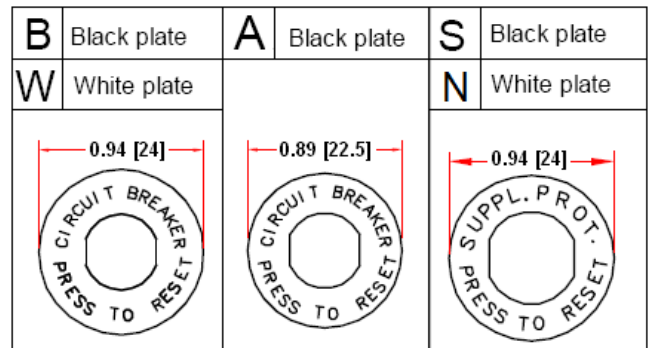
## Mechanical Dimensions: Inches [mm]

**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, P, Q Not available for G or E	<b>For Bushings:</b> H, B, G, P, Q, E	<b>For Bushings:</b> H, B, P, Q Not available for G or E	<b>For Bushings:</b> H, B, G, P, Q, E	<b>For Bushings:</b> H, B, G, P, Q, E Default for G and E	<b>For Bushings:</b> H, B, G, P, Q, E

**Table 6 - Where P is Nameplate**

<b>Blank</b> = None		
<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

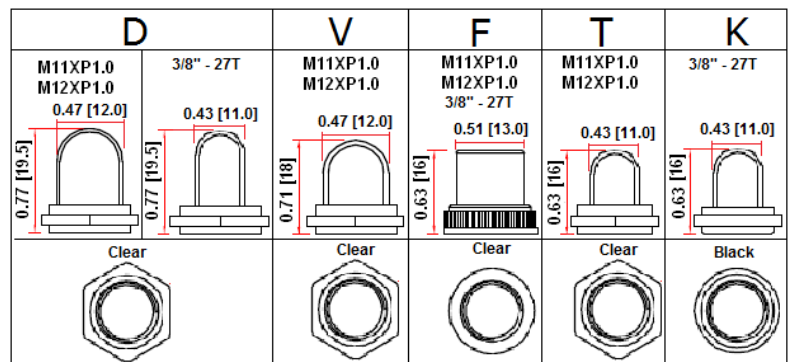
**D** – For H, B, G, P, Q, E Bushing Styles only

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

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

**T** – For H, B, P, Q Bushing Styles only

**K** – For G, E Bushing Styles only



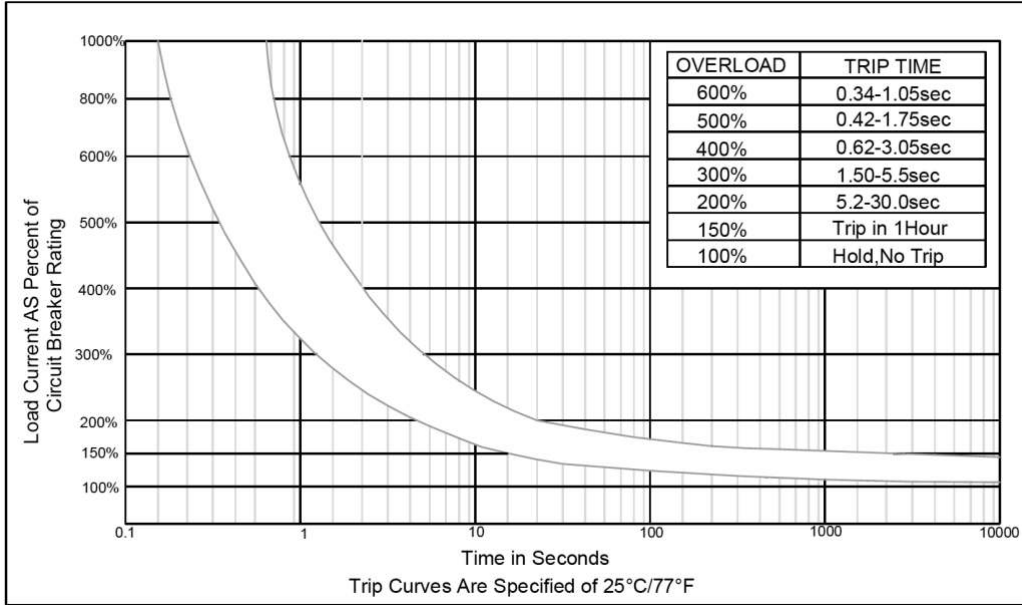
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**Trip Time Curve at 25°C**



Maximum Internal Resistance	
Current Rating	Maximum Resistance
3A-5A	< 0.225Ω
6A-8A	< 0.175Ω
9A-12A	< 0.125Ω
13A-16A	< 0.050Ω
17A-20A	< 0.040Ω
21A-25A	< 0.030Ω
26A-30A	< 0.020Ω

**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.