

# POTTER & BRUMFIELD W57 SERIES

## COMPACT, PUSH TO RESET ONLY P&B THERMAL CIRCUIT BREAKER

### FEATURES

- New, compact design.
- 3 to 20 amp ratings.
- Push button to reset breaker. Cannot be manually tripped.
- Button extends for visual trip indication.
- Numerous mounting and termination options.
- Optional bottom marking of amperage rating.



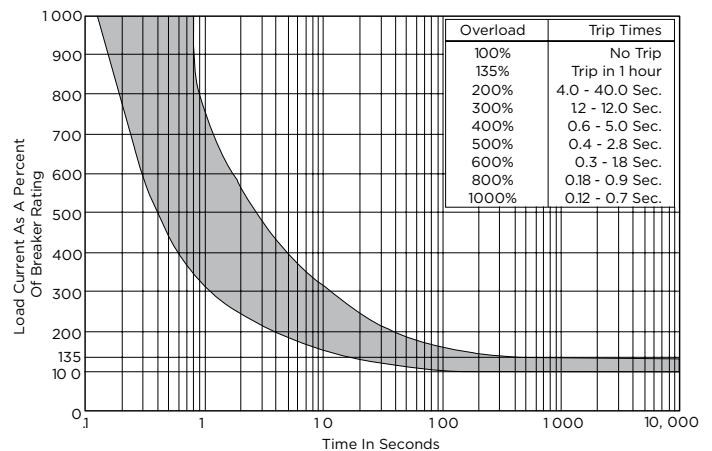
### APPROVALS

- UL/cUL: Recognized with UL 1077 (Supplementary Protectors for Use in Electrical Equipment), File E69543.
- VDE: Approved to DIN EN IEC 60934/VDE 0642 (Circuit Breaker for Equipment), Certificate No. 40059503 and 40007874 (for AC loads only).
- CCC: Approved to GB/T 17701, Certificate No. 2024010307737424 and 2004010307123217 (for AC loads only)



### ELECTRICAL DATA @ 25°C

Calibration	Will continuously carry 100% of rating. May trip between 101% and 134%, but must trip at 135% of rating within one hour at +25°C.
Dielectric Strength	1,500VAC (60 seconds)
Insulation Resistance	100 megohms
Maximum Operating Voltages	250VAC, 50/60Hz; 50VDC (UL Only)
Interrupt Capacity	1,000 amps in accordance with UL standard 1077
Resettable Overload Capacity	Ten times rated current
Reset Time	60 seconds



**Note:** Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to confirm the product meets the requirements for a given application.

# POTTER & BRUMFIELD W57 SERIES

## Thermal Circuit Breaker

### TYPICAL RESISTANCE VS. CURRENT RATING @+25°C

Current Rating In Amps	Typical Resistance In Ohms	Current Rating In Amps	Typical Resistance In Ohms
3.0	0.083	8.0	0.031
4.0	0.062	10.0	0.025
5.0	0.050	12.0	0.021
6.0	0.042	15.0	0.017
7.0	0.036	20.0	0.012

### AMBIENT COMPENSATION TABLE

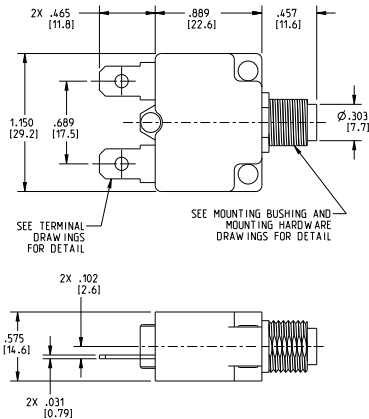
Ambient Temperature In °C	Rating Correction Factor	
	3-4A Models	5-20A Models
-10	.70	.77
0	.75	.85
10	.82	.90
20	.90	.95
25	1.00	1.00
30	1.10	1.05
40	1.25	1.15
50	1.61	1.25
60	2.15	1.40

### MECHANICAL/ENVIRONMENTAL DATA

Operating Temperature Range	0°C to +60°C
Termination	.250in (6.35mm) quick connects
Mounting Various options.	See Ordering Information and drawings
Approximate Weight	0.5 oz. (14.3g).

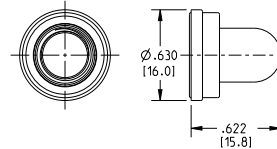
To use this chart: Divide the breaker rating by the correction factor to determine the compensated rating. Calculate the overloads in terms of the compensated rating to use the published trip curve. Do not use these devices outside their specified operating temperature ranges.

### OUTLINE DIMENSIONS

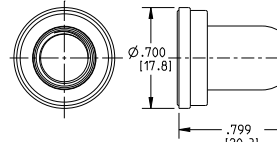


### OPTIONAL PROTECTIVE BOOT

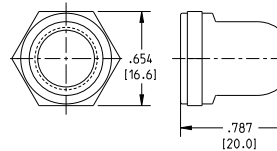
Silicone rubber boot is bonded to integral metal nut.



1-1423696-5  
Black boot for W57 with 3/8inch-24 bushing.

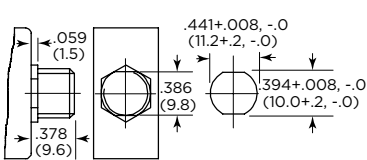


1-1423696-6  
Clear boot for W57 with M11 X 1.0 bushing.

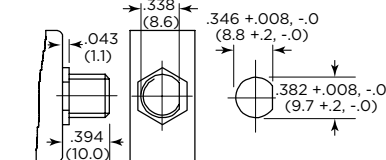


1-1423000-1  
Clear boot for W57 with M11 X 1.0 bushing.

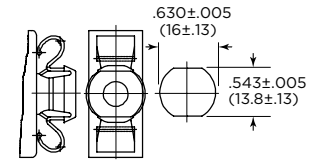
### MOUNTING BUSHINGS AND RECOMMENDED PANEL CUTOUTS



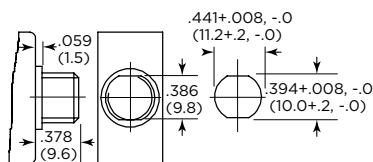
Option 1 - M11 X 1.0 Thread



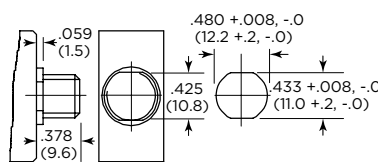
Option 2 & 6 - 3/8in - 24UNF Thread



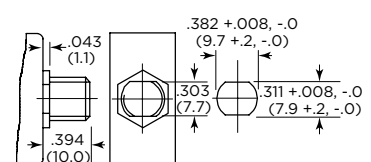
Option 4 - Snap In Option



Option 5 - M11 X 1.0 Thread



Option 7 - M12 X 1.0 Thread

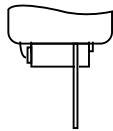


Option 8 - 3/8in - 24UNF Thread

# POTTER & BRUMFIELD W57 SERIES

Thermal Circuit Breaker

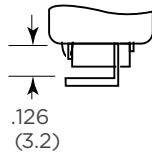
## TERMINATION OPTIONS



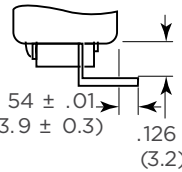
**Option A**  
.250 QC  
Straight



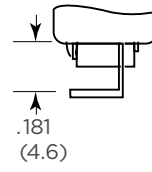
**Option C**  
.250 QC  
45°



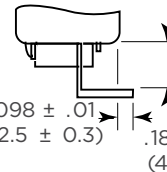
**Option D**  
.250 QC  
90°



**Option E**  
.250 QC/PCB  
270°

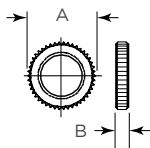


**Option B**  
.250 QC  
90°

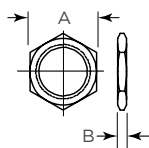


**Option F or I**  
.250 QC/PCB  
270°

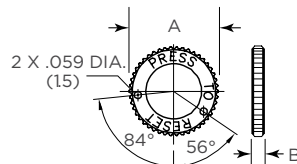
## MOUNTING HARDWARE OPTIONS



**Knurled Nut**

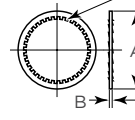


**Hex Nut**



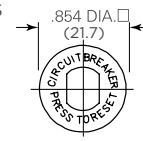
**Integrated Knurled Nut with Small Holes**

ALTERNATE TEETH TWISTED IN OPPOSITE DIRECTIONS

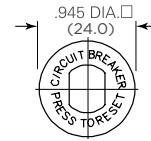


**Lockwasher**

## NAMEPLATES



**Embossed Aluminum**



**Imprinted Aluminum**  
(Either Silver on Black or Black on Silver)

## MOUNTING HARDWARE DIMENSIONS

Dimension Code	Bushing Diameter	Plastic Knurled Nut	Integrated Plastic Knurled Nut w/ Holes	Metal Knurled Nut	Metal Hex Nut	Lockwasher
A	3/8in	.74 (18.8)	-	.56 (14.2)	.55 (14.0)	.49 (12.5)
	M11	.74 (18.8)	.74 (18.8)	.59 (15.0)	.55 (14.0)	.587 (14.9)
	M12	-	-	.59 (15.0)	.55 (14.0)	.626 (15.9)
B	3/8in	.126 (3.2)	-	.079 (2.0)	.079 (2.0)	.02 (.5)
	M11	.126 (3.2)	.13 (3.3)	.102 (2.6)	.118 (3.0)	.02 (.5)
	M12	-	-	.102 (2.6)	.079 (2.0)	.02 (.5)

## MOUNTING HARDWARE ORDERING INFORMATION

Dimension Code	Bushing Diameter	Plastic Knurled Nut	Integrated Plastic Knurled Nut w/ Holes	Metal Knurled Nut	Metal Hex Nut	Lockwasher
Plastic	1 (M11)	1423696-8	2-1423696-2	1423696-8	-	-
	2 (3/8in)	1423696-2	-	-	-	-
Metal	5 (M11)	-	-	1423696-4	1423696-6	1-1423696-2
	6 (3/8in)	-	-	1-1423696-0	1423696-3	1-1423696-1
	7 (M12)	-	-	1423696-5	1423696-7	1-1423696-3

### ORDERING NOTE:

Mounting hardware can be ordered separately. Some options are subject to extended leadtimes and significant minimum order quantities.

# PRODUCT CODE STRUCTURE

**Typical product code**  
**W 57 -X B 1 A 4 A 1 0 -4**

**Designator**

<b>W</b>	Circuit breaker
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**Series Number**

<b>57</b>	Compact, Single Pole, Push-to-Reset, Thermal Model
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**Circuit Function & Contact Material**

<b>X</b>	Series trip
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**Button Color & Rate Marking:**

<b>A</b>	White, plain, no rate marking
<b>B</b>	White, red rate marking (vertical)
<b>C</b>	White, black rate marking (vertical)
<b>D</b>	Black, plain, no rate marking
<b>E</b>	Black, white rate marking (horizontal)
<b>F</b>	White, red rate marking (horizontal)
<b>G</b>	White, black rate marking (horizontal)
<b>H</b>	Black, white rate marking (vertical)
<b>I</b>	Red, plain, no rate marking
<b>J</b>	Black, no rate marking on button, white rate marking on bottom case between terminals.

**Mounting Bushing**

Plastic	
<b>1</b>	9.8mm (double D) X 9.6mm long, M11x1 threads, hex base
<b>2</b>	3/8in (single D) x 10.5mm long, 3/8inx24 threads, hex base
<b>4</b>	Snap-in type
Metal	
<b>5</b>	9.8mm (double D) X 9.6mm long, M11x1 threads, round base
<b>6</b>	3/8in (single D) x 10.5mm long, 3/8inx24 threads, hex base
<b>7</b>	10.8mm (double D) x 9.6mm long, M12x1 threads, round base
<b>8</b>	3/8in (double D) x 10.0mm long, 3/8inx24 threads, hex base

Codes 1 and 5 similar in size to 7/16in bushings (not exact equivalent).  
Code 7 is similar in size to a 15/32in bushing (not exact equivalent)

**Specify Amp Rating**

<b>3</b>	<b>6</b>	<b>10</b>	<b>20</b>
<b>4</b>	<b>7</b>	<b>12</b>	
<b>5</b>	<b>8</b>	<b>15</b>	

**Nameplate**

<b>0</b>	None
<b>1</b>	Embossed aluminum
<b>2</b>	Silver color printing on black
<b>3</b>	Black printing on silver color

**Maximum Operating Voltage**

<b>1</b>	250VAC/50VDC*
<b>2</b>	125VAC/50VDC*

\*DC rating apply to UL only

**Mounting Hardware Packaging**

<b>A</b>	Assembled to bushing
<b>B</b>	Bulk unassembled
<b>C</b>	No mounting hardware

**Mounting Hardware**

Metal	
<b>4</b>	Knurled nut/hex nut
<b>6</b>	Hex nut
<b>12</b>	Knurled nut
<b>15</b>	2 metal hex nuts, metal lockwasher
<b>18</b>	Hex nut, metal lockwasher
Plastic	
<b>7</b>	Knurled nut
<b>8</b>	Knurled nut with small hole
<b>22</b>	Knurled nut, metal lockwasher
<b>99</b>	None

**Terminals**

<b>A</b>	Quick connect .250in (6.35mm) straight
<b>B</b>	Quick connect .250in (6.35mm), bent 90°
<b>C</b>	Quick connect .250in (6.35mm), bent 45°
<b>D</b>	Quick connect .250in (6.35mm), bent 90°
<b>E</b>	Quick connect .250in (6.35mm), bent 90°, PCB compatible
<b>F</b>	Quick connect .250in (6.35mm), bent 90°, PCB compatible
<b>I</b>	Same as F above, but amperage marking reversed.

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