W57 series
Compact, Push To Reset Only
P&B Thermal Circuit Breaker

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

Agency Approvals
W57 series is UL1077 Recognized as Supplementary Protectors, File E69543, for Canada and the United States. Available models meet Ignition Protection requirements in accordance with UL1500. Approved to VDE 0642/EN60934 (Circuit Breakers for Equipment), License Number 40007874 (excludes models rated 3-4A and >15A). CCC mark compliant, certificate 200401307123217.

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.

Agency Approvals

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).

Time vs. Current Trip Curve @ +25°C

Insulation Resistance: 100 megohms.
Maximum Operating Voltages: 50VDC, 250VAC, 50/60 Hz.
Interrupt Capacity: 1,000 amps in accordance with UL standard 1077.
Resettable Overload Capacity: Ten times rated current.
Reset Time: 60 seconds.

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

Optional Protective Boot
Silicone rubber boot is bonded to integral aluminum nut.

Ambient Compensation Table

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.

<table>
<thead>
<tr>
<th>Ambient Temperature in °C</th>
<th>3-4A Models</th>
<th>5-20A Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>-10</td>
<td>.70</td>
<td>.77</td>
</tr>
<tr>
<td>0</td>
<td>.75</td>
<td>.85</td>
</tr>
<tr>
<td>10</td>
<td>.82</td>
<td>.90</td>
</tr>
<tr>
<td>20</td>
<td>.90</td>
<td>.95</td>
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<tr>
<td>25</td>
<td>1.00</td>
<td>1.00</td>
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<tr>
<td>30</td>
<td>1.10</td>
<td>1.05</td>
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<tr>
<td>40</td>
<td>1.25</td>
<td>1.15</td>
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<tr>
<td>50</td>
<td>1.61</td>
<td>1.25</td>
</tr>
<tr>
<td>60</td>
<td>2.15</td>
<td>1.40</td>
</tr>
</tbody>
</table>

Ambient Compensation Table

Zero Load Current as a Percent Of Breaker Rating

Overload Trip Times

100% No Trip
135% Trip in 1 hour
200% 1.2 - 12.0 Sec.
300% 0.6 - 5.0 Sec.
400% 0.4 - 2.8 Sec.
500% 0.3 - 1.8 Sec.
600% 0.18 - 0.9 Sec.
800% 0.12 - 0.7 Sec.
1000% 0.06 - 0.4 Sec.

Optional Protective Boot
Black boot for W57 with 3/8”-24 bushing.
Clear boot for W57 with M11 X 1.0 bushing.

USA: 1-800-522-6732
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-1106-0803
South America: 55-11-2102-6000
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-8706-08208

Dimensions are shown for reference purposes only. Specifications and availability subject to change.
Ordering Information

<table>
<thead>
<tr>
<th>Typical Part No.</th>
<th>W</th>
<th>57</th>
<th>-X</th>
<th>B</th>
<th>1</th>
<th>A</th>
<th>4</th>
<th>A</th>
<th>1</th>
<th>0</th>
<th>-4</th>
</tr>
</thead>
</table>

1. Designator:
W = Circuit breaker

2. Series Number:
57 = Compact, Single Pole, Push-to-Reset, Thermal Model

3. Circuit Function:
X = Series Trip

4. Button Color & Rate Marking:
A = White, plain, no rate marking
B = White, red rate marking (vertical)
C = White, black rate marking (vertical)
D = Black, plain, no rate marking
E = Black, white rate marking (horizontal)
F = White, red rate marking (horizontal)

5. Mounting Bushing:
1 = Plastic, 9.8mm (double D) X 9.6mm long, M11x1 threads, (similar to 7/16"), hex base
2 = Plastic, 3/8" (single D) X 10.5mm long, 3/8"x24 threads, hex base
3 = Metal, 9.8mm (double D) X 9.6mm long, M12x1 threads, (similar to 15/32"), round base
4 = Metal, 3/8" (single D) X 10.0mm long, 3/8"x24 threads, hex base
5 = Metal, 3/8" (double D) X 10.8mm long, M10x1.5 threads, hex base
6 = Metal, 3/8" (double D) X 10.8mm long, M12x1 threads, (similar to 15/32"), round base
7 = Metal, 3/8" (single D) X 10.5mm long, 3/8"x24 threads, hex base
8 = Metal, 3/8" (double D) X 10.0mm long, 3/8"x24 threads, hex base

5. Mounting Hardware:
4 = Metal knurled nut/hex nut
6 = Metal hex nut
12 = Metal knurled nut
15 = 2 metal hex nuts, metal lockwasher
18 = Metal hex nut, metal lockwasher
7 = Plastic knurled nut
8 = Plastic knurled nut with small hole
22 = Plastic knurled nut, metal lockwasher
99 = None

6. Terminals: (see drawings for detail)
A = Quick connect .250" (6.35mm) straight
B = Quick connect .250" (6.35mm), bent 90°
C = Quick connect .250" (6.35mm), bent 45°
D = Quick connect .250" (6.35mm), bent 90°
E = Quick connect .250" (6.35mm), bent 90°, PCB compatible
F = Quick connect .250" (6.35mm), bent 90°, PCB compatible
G = Quick connect .250" (6.35mm), straight (smaller hole)
H = One quick connect .250" (6.35mm), one #8-32 screw bent 90°
I = Same as F above, but amperage marking reversed.

7. Mounting Bushing and Recommended Panel Cutouts

Option 1 – M11 X 1.0 Thread
Option 2 & 6 – 3/8" - 24UNF Thread
Option 4 – Snap In Option
Option 5 – M11 X 1.0 Thread
Option 7 – M12 X 1.0 Thread
Option 8 – 3/8" - 24UNF Thread

Mounting hardware can be ordered separately. Some options are subject to extended leadtimes and significant minimum order quantities.
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° (small hole)

Option G
.250 QC Straight with #8-32 Load Term. Bent 90°

Option H
.250 QC Straight

Mounting Hardware Options

Knurled Nut

Hex Nut

Integrated Knurled Nut with Small Holes

Lockwasher

ALTERNATE TEETH TWISTED IN OPPOSITE DIRECTIONS

Optional Bottom Marking of Rating

Mounting Hardware Dimensions

<table>
<thead>
<tr>
<th>Dimension Code</th>
<th>Bushing Material</th>
<th>Plate Knurled Nut</th>
<th>Integrated Plastic Knurled Nut w/Holes</th>
<th>Metal Knurled Nut</th>
<th>Metal Hex Nut</th>
<th>Lockwasher</th>
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</thead>
<tbody>
<tr>
<td>A 3/8&quot;</td>
<td>A 5/16 (M11)</td>
<td>.74 (18.8)</td>
<td>–</td>
<td>.56 (14.2)</td>
<td>.55 (14.0)</td>
<td>.49 (12.5)</td>
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<tr>
<td>A 3/8&quot;</td>
<td>A 5/16 (M12)</td>
<td>.74 (18.8)</td>
<td>.74 (18.8)</td>
<td>.59 (15.0)</td>
<td>.55 (14.0)</td>
<td>.587 (14.9)</td>
</tr>
<tr>
<td>B 3/8&quot;</td>
<td>B 5/16 (M11)</td>
<td>.126 (3.2)</td>
<td>–</td>
<td>.079 (2.0)</td>
<td>.079 (2.0)</td>
<td>.02 (5.5)</td>
</tr>
<tr>
<td>B 3/8&quot;</td>
<td>B 5/16 (M12)</td>
<td>.126 (3.2)</td>
<td>.13 (3.3)</td>
<td>.102 (2.6)</td>
<td>.118 (3.0)</td>
<td>.02 (5.5)</td>
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Mounting Hardware Ordering Information

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<tr>
<td>Plastic</td>
<td>M11</td>
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<td>2-1423696-2</td>
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<td>M11</td>
<td>–</td>
<td>1423696-2</td>
<td>–</td>
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<td>–</td>
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<tr>
<td>Metal</td>
<td>M11</td>
<td>–</td>
<td>1423696-4</td>
<td>1423696-6</td>
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<td>1423696-0</td>
<td>1423696-3</td>
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<td>–</td>
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<tr>
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<td>M12</td>
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<td>1423696-5</td>
<td>1423696-7</td>
<td>1-1423696-3</td>
<td>–</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>M12</td>
<td>–</td>
<td>1-1423696-0</td>
<td>1-1423696-3</td>
<td>1-1423696-1</td>
<td>–</td>
</tr>
</tbody>
</table>

Nameplates

- Embossed Aluminum
- Imprinted Aluminum (Either Silver on Black or Black on Silver)