



## W54 series

### Push To Reset Only P&B Thermal Circuit Breaker



#### Features

- 5 to 40 amp ratings.
- Cannot be manually tripped.
- Button extends for visual trip indication.
- Push button to reset breaker.
- Numerous mounting and termination options.
- Choice of silver-cadmium oxide or silver-tin oxide contacts.
- Optional bottom marking of amperage rating.

#### Agency Approvals

W54 series is UL 1077 Recognized as Supplementary Protectors, File E69543, for Canada and the United States. Available models meet Ignition Protection requirements in accordance with UL 1500 (excludes models rated >30A). CSA Accepted as Supplementary Protectors (Appliance Component Protectors), File 240027 (to 125VAC, excludes models rated >30A). Approved to VDE 0642/EN60934 (Circuit Breakers for Equipment) License Number 40007877 (excludes models rated >20A, models with screw terminals, models with silver-tin oxide contacts). CCC mark compliant, certificate 2004010307123217.

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.

#### 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: 50VDC; 250VAC.  
Interrupt Capacity: 1,000 amps in accordance with UL standard 1077.  
Resettable Overload Capacity: Ten times rated current.  
Reset Time: 60 seconds.

#### Typical Resistance vs. Current Rating @25°C

| Current Rating in Amps | Typical Resistance in Ohms | Current Rating in Amps | Typical Resistance in Ohms |
|------------------------|----------------------------|------------------------|----------------------------|
| 5.0                    | 0.050                      | 15.0                   | 0.017                      |
| 6.0                    | 0.042                      | 20.0                   | 0.012                      |
| 7.0                    | 0.036                      | 25.0                   | 0.010                      |
| 8.0                    | 0.031                      | 30.0                   | 0.008                      |
| 10.0                   | 0.025                      | 35.0                   | 0.007                      |
| 12.0                   | 0.021                      | 40.0                   | 0.006                      |

#### Mechanical/Environmental Data

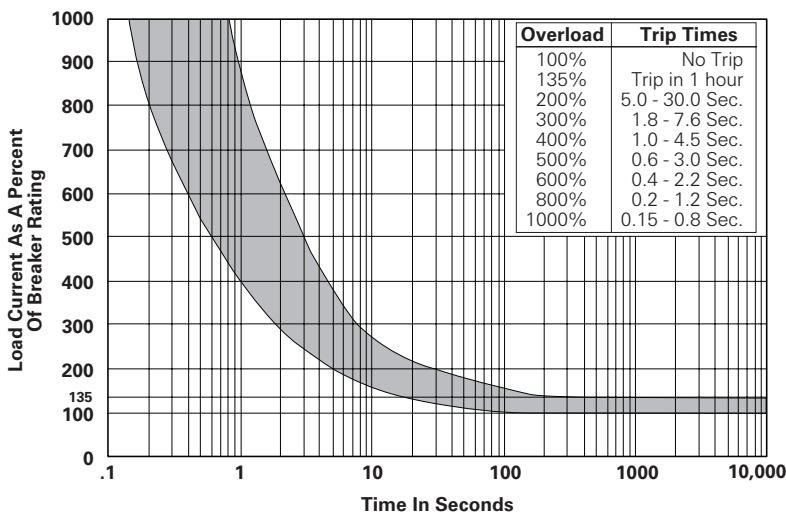
Operating Temperature Range: 0°C to +60°C.

Termination: .250" (6.35mm) quick connects or #8-32 screws.

Mounting: Various options. See Ordering Information and drawings.

Approximate Weight: 0.9 oz. (25.0g).

#### Time vs. Current Trip Curve @ +25°C

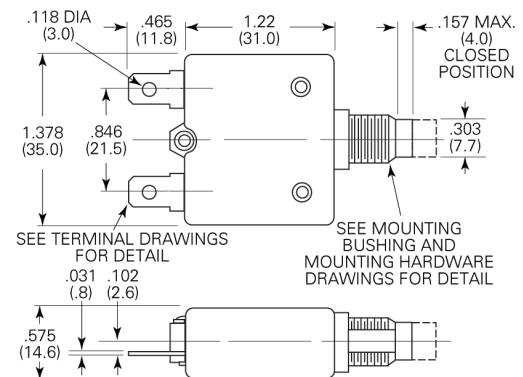


#### Ambient Compensation Table

| Ambient Temperature in °C | Rating Correction Factor |              |
|---------------------------|--------------------------|--------------|
|                           | 5-8A Models              | 9-30A Models |
| 10                        | .90                      | .80          |
| 20                        | .98                      | .90          |
| 25                        | 1.00                     | 1.00         |
| 30                        | 1.10                     | 1.05         |
| 40                        | 1.25                     | 1.15         |
| 50                        | 1.61                     | 1.31         |
| 60                        | 2.00                     | 1.55         |

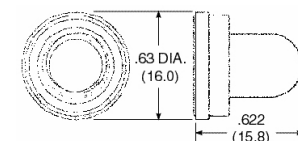
To use this chart: Divide the breaker rating by the correction factor to determine the compensated rating. Calculate the overloads in terms of the compensated rating to use the published trip curve. Do not use these devices outside their specified operating temperature ranges.

#### Outline Dimensions

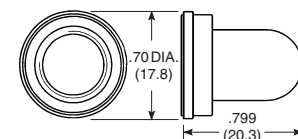


#### Optional Protective Boot

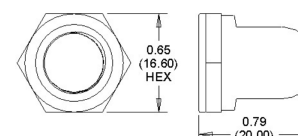
Silicone rubber boot is bonded to integral metal nut.



1-1423696-5  
Black boot for W54 with 3/8" - 24 bushing.



1-1423696-6  
Clear boot for W54 with M11 X 1.0 bushing.



1-1423000-1  
Clear boot for W54 with M11 X 1.0 bushing.

## Ordering Information

| Typical Part No. >                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | W | 54 | -X | B | 1 | A | 4 | A | 1 | 0 | -5 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|----|----|---|---|---|---|---|---|---|----|
| 1. Designator:<br>W = Circuit breaker                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |   |    |    |   |   |   |   |   |   |   |    |
| 2. Series Number:<br>54 = Single pole, push-to-reset, thermal model                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |   |    |    |   |   |   |   |   |   |   |    |
| 3. Circuit Function & Contact Material:<br>X = Series trip, silver-cadmium oxide contacts<br>F = Series trip, silver-tin oxide contacts †                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |   |    |    |   |   |   |   |   |   |   |    |
| 4. Button Color & Rate Marking:<br>A = White, plain, no rate marking<br>B = White with rate marking (vertical)<br>D = Black, plain, no rate marking<br>E = Black with rate marking (horizontal)<br>F = White with rate marking (horizontal)<br>H = Black with rate marking (vertical)<br>I = Red, plain, no rate marking                                                                                                                                                                                                                                                                                                                                                                                                                         |  |   |    |    |   |   |   |   |   |   |   |    |
| 5. Mounting Bushing:<br>1 = Metal, 9.8mm (double D) x 12.6mm long, M11x1 threads, (similar to 7/16"), round base<br>2 = Metal, 3/8" (single D) x 10mm long, 3/8"x24 threads, hex base<br>3 = Metal, 9.8mm (double D) x 12.6mm long, M11x1 threads, (similar to 7/16"), hex base<br>4 = Metal, 10.5mm (double D) x 12.6mm long, M12x1 threads, (similar to 15/32"), round base<br>6 = Plastic, 9.8mm (double D) x 12.6mm long, M11x1 threads, (similar to 7/16"), round base<br>7 = Plastic, 3/8" (single D) x 10mm long, 3/8"x24 threads, hex base<br>8 = Plastic, snap-in type<br>Notes: Codes 1, 3 and 6 are similar in size to 7/16" bushings (not exact equivalent).<br>Code 4 is similar in size to a 15/32" bushing (not exact equivalent) |  |   |    |    |   |   |   |   |   |   |   |    |
| 6. Terminals:<br>A = Quick connect .250" (6.35mm), straight<br>B = Quick connect .250" (6.35mm), bent 90°<br>C = #8-32 screw, bent 90° (screws installed) †<br>D = Quick connect .250" (6.35mm), bent 45°<br>E = Quick connect .250" (6.35mm), bent 90° opposite<br>F = #8-32 screw, bent 45° (screws installed)<br>G = QC .250" (6.35mm) and #8-32 screw, bent 90° (screw installed)                                                                                                                                                                                                                                                                                                                                                            |  |   |    |    |   |   |   |   |   |   |   |    |
| 7. Mounting Hardware:<br>4 = Metal, knurled nut/hex nut<br>6 = Metal, hex nut<br>12 = Metal, knurled nut<br>15 = Metal, two hex nuts and one lockwasher<br>18 = Metal, one hex nut and one lockwasher<br>7 = Plastic, knurled nut<br>8 = Plastic, knurled nut with small hole<br>22 = Plastic knurled nut, metal lockwasher<br>99 = None                                                                                                                                                                                                                                                                                                                                                                                                         |  |   |    |    |   |   |   |   |   |   |   |    |
| 8. Mounting Hardware Packaging:<br>A = Assembled to bushing<br>B = Bulk unassembled<br>C = No mounting hardware                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |   |    |    |   |   |   |   |   |   |   |    |
| 9. Maximum Operating Voltage:<br>1 = 250VAC<br>2 = 125VAC / 50VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |   |    |    |   |   |   |   |   |   |   |    |
| 10. Nameplate:<br>0 = None<br>1 = Embossed aluminum<br>2 = Silver color printing on black<br>3 = Black printing on silver color                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |   |    |    |   |   |   |   |   |   |   |    |
| 11. Specify Amp Rating:<br>5 7 10 15 25† 35*††<br>6 8 12 20 30† 40*††                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |   |    |    |   |   |   |   |   |   |   |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |   |    |    |   |   |   |   |   |   |   |    |
| 12. UL Recognition:<br>Leave Blank = UL1077 recognized breaker<br>M = Model meeting Ignition Protection requirements in accordance with UL 1500, in addition to UL1077 recognition (not available with models >30A rating.)<br>Code M breakers are not VDE approved or CSA certified.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |   |    |    |   |   |   |   |   |   |   |    |

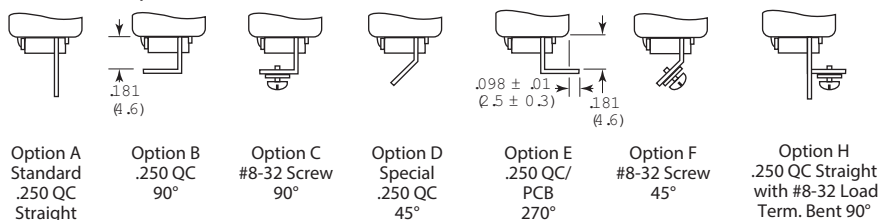
Our authorized distributors are more likely to stock the following items for immediate delivery.

W54-XB1A4A10-5      W54-XB1A4A10-15      W54-XB1A4A10-25  
W54-XB1A4A10-10      W54-XB1A4A10-20      W54-XB1A4A10-30

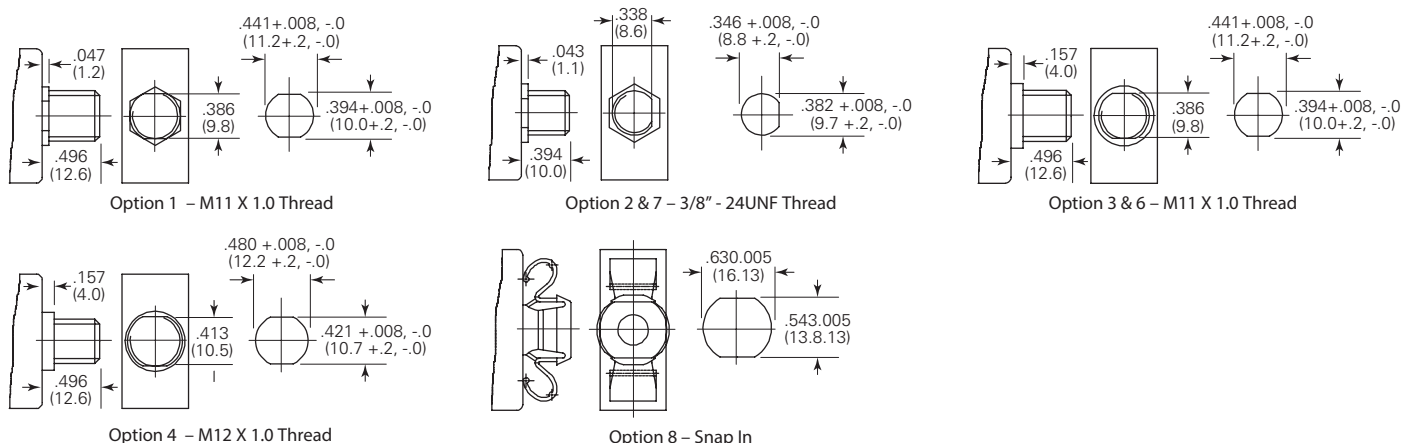
### ORDERING NOTE:

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

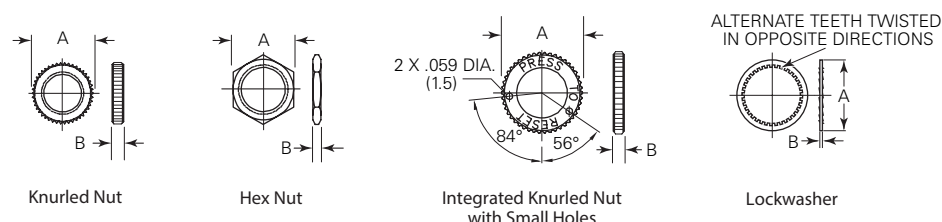
## Termination Options



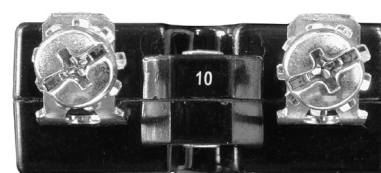
## Mounting Bushings and Recommended Panel Cutouts



## Mounting Hardware Options



## Optional Bottom Marking of Rating



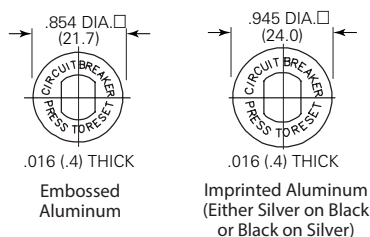
## Mounting Hardware Dimensions

| Dimension Code | Bushing Diameter | Plastic Knurled Nut | Integrated Plastic Knurled Nut w/Holes | Metal Knurled Nut | Metal Hex Nut | Lockwasher  |
|----------------|------------------|---------------------|----------------------------------------|-------------------|---------------|-------------|
| A              | 3/8"             | .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              | 3/8"             | .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

| Mounting Bushing Material | Mounting Bushing Code | Plastic Knurled Nut | Integrated Plastic Knurled Nut w/Holes | Metal Knurled Nut | Metal Hex Nut | Lockwasher  |
|---------------------------|-----------------------|---------------------|----------------------------------------|-------------------|---------------|-------------|
| Metal                     | 1 (M11)               | –                   | –                                      | 6-1423730-3       | 6-1423730-7   | 1-1423696-2 |
|                           | 2 (3/8")              | –                   | –                                      | 6-1423730-4       | 6-1423730-6   | 1-1423696-1 |
|                           | 3 (M11)               | –                   | –                                      | 6-1423730-3       | 6-1423730-7   | 1-1423696-2 |
|                           | 4 (M12)               | –                   | –                                      | 6-1423730-5       | 6-1423730-8   | 1-1423696-3 |
| Plastic                   | 6 (M11)               | 1423696-8           | 2-1423696-2                            | –                 | –             | –           |
|                           | 8 (3/8")              | 1423696-2           | –                                      | –                 | –             | –           |

## Nameplates



## Disclaimer

While TE has made every reasonable effort to ensure the accuracy of the information in this document, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current.

TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose.

The dimensions in this catalog are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.