

POTTER & BRUMFIELD W54 SERIES

PUSH TO RESET ONLY P&B THERMAL CIRCUIT BREAKER

FEATURES

- 5 to 40 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.

M54—XB1A4A10—20 cAlis 20A 250WC CHINA 20A 250WC CHINA TOO4

APPROVALS

- UL/cUL: Recognized with UL 1077 (Supplementary Protectors for Use in Electrical Equipment), File E69543 (excludes models rated >35A).
- VDE: Approved to DIN EN IEC 60934/VDE 0642 (Circuit Breaker for Equipment), Certificate No. 40059799 and 40007877 (for AC loads only).
- CCC: Approved to GB/T 17701, Certificate No. 2024010307738240 and 2004010307123217 (for AC loads only).

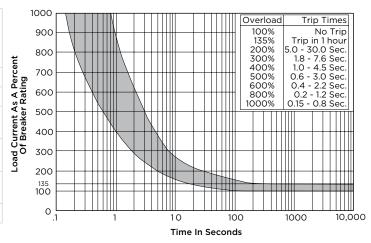






ELECTRICAL DATA @ 25°C

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	50VDC; 250VAC		
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.

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	.250in (6.35mm) quick connects or #8-32 screws		
Mounting Various options.	See Ordering Information and drawings		
Approximate Weight	0.9 oz. (25.0g)		

AMBIENT COMPENSATION TABLE

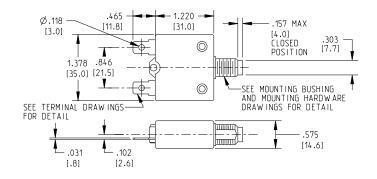
Ambient	Rating Correction Factor			
Temperature in °C	5-8A Models	9-30A Models		
10	.90	.80		
20	.98	.90		
25	1.00	1.00		
30	1.10	1.05		
40	1.25	1.15		
50	1.61	1.31		
60	2.00	1.55		

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.

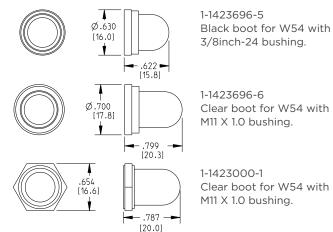
Do not use these devices outside their specified operating temperature ranges.

OUTLINE DIMENSIONS

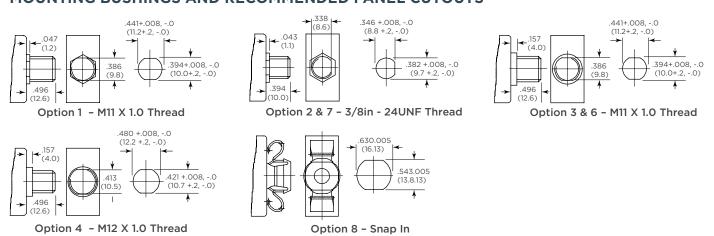


OPTIONAL PROTECTIVE BOOT

Silicone rubber boot is bonded to integral metal nut.



MOUNTING BUSHINGS AND RECOMMENDED PANEL CUTOUTS



TERMINATION OPTIONS



Option A Standard .250 QC

Straight



Option B .250 QC 90°



Option C #8-32 Screw 90°



Option D Special .250 QC 45°



Option E .250 QC/ PCB 270°



Option F #8-32 Screw 45°

MOUNTING HARDWARE OPTIONS

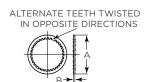


Knurled Nut





Integrated Knurled Nut with Small Holes



Lockwasher

NAMEPLATES







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

MOUNTING HARDWARE DIMENSIONS

Hex Nut

Dimension Code	Bushing Diameter	Plastic Knurled Nut	Integrated Plastic Knurled Nut w/ Holes	Metal Knurled Nut	Metal Hex Nut	Lockwasher
А	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)
В	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
Metal	1 (M11)	-	-	6-1423730-3	6-1423730-7	1-1423696-2
	2 (3/8in)	-	-	6-1423730-4	6-1423730-6	1-1423696-1
	4 (M12)	-	-	6-1423730-5	6-1423730-8	1-1423696-3
Plastic	6 (M11)	1423696-8	2-1423696-2	_	_	_
	8 (3/8in)	1423696-2	-	_	_	_

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 54 -X B 1 A 4 A 1 O -5 Designator Specify Amp Rating W Circuit breaker 5 10 25[†] 6 12 30⁺ Series Number 15 35† 7 54 Single pole, push-to-reset, thermal model 8 20 40[†] †not UL/cUL Nameplate **Circuit Function & Contact Material** 0 Series trip, silver-cadmium oxide contacts Embossed aluminum (VDE covers up to 20A, CCC covers up to 30A) 2 Silver color printing on black F Series trip, silver-tin oxide contacts 3 Black printing on silver color **Number of NC contact configurations Maximum Operating Voltage** White, plain, no rate marking Α 250VAC / 50VDC* В White with rate marking (vertical) 125VAC / 50VDC* D Black, plain, no rate marking *DC rating apply to UL only Black with rate marking (horizontal) E **Mounting Hardware Packaging** White with rate marking (horizontal) F Black with rate marking (vertical) н Assembled to bushing Α Red, plain, no rate marking Bulk unassembled C No mounting hardware **Mounting Bushing Mounting Hardware** Metal Metal 9.8mm (double D) x 12.6mm long, M11x1 1 4 Knurled nut/hex nut threads, hex base 3/8in (single D) x 10mm long, 3/8inx24 6 Hex nut 2 threads, hex base Knurled nut 12 9.8mm (double D) x 12.6mm long, M11x1 15 Two hex nuts and one lockwasher 3 threads, round base One hex nut and one lockwasher 18 10.5mm (double D) x 12.6mm long, M12x1 Plastic 4 threads, round base Knurled nut 7 **Plastic** 8 Knurled nut with small hole 9.8mm (double D) x 12.6mm long, M11x1 22 Knurled nut, metal lockwasher 6 threads, round base 99 3/8in (single D) x 10mm long, 3/8inx24 7 threads, hex base **Terminals** 8 Snap-in type A Quick connect .250in (6.35mm), straight Quick connect .250in (6.35mm), bent Codes 1, 3 and 5 are similar in size to 7/16in bushings (not exact В equivalent). С #8-32 screw, bent 90° (screws installed)

Code 4 is similar in size to a 15/32in bushing (not exact equivalent)

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07/25

Quick connect .250in (6.35mm), bent

Quick connect .250in (6.35mm), bent

F #8-32 screw, bent 45° (screws installed)

D

90° opposite