



TE CONNECTIVITY W58 Series P&B Push To Reset Only Thermal Circuit Breaker Owner's Manual

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TE CONNECTIVITY W58 Series P&B Push To Reset Only Thermal Circuit Breaker



Product Information

The W58 series is a push-to-reset thermal circuit breaker that is designed to provide supplementary protection. It is recognized by UL 1077 and accepted by CSA as an appliance component protector. The circuit breaker meets the ignition protection requirements according to UL 1500. The W58 series is available in various current ratings ranging from 0.5 amps to 30 amps. It has a maximum resistance in ohms that varies depending on the current rating. The dielectric strength of the circuit breaker is over 1,500 volts RMS, and it has maximum operating voltages of 50VDC and 250VAC. The interrupt capacity is 2,000 amps at 50VDC for 0.5 – 30 amp models and 1,000 amps at 250VAC for 0.5 – 30 amp models. The circuit breaker has a resettable overload capacity of ten times the rated current. In terms of mechanical and environmental data, the circuit breaker can withstand shocks up to 10g, endurance cycling of over 1,000 cycles at 200% of rated load, and vibrations up to 10g at 10-55 Hz. It weighs less than 1 1/2 oz (42.5g).

Product Usage Instructions

1. Before selecting a product part number, thoroughly review the technical data provided.
2. Seek out the approvals files of the relevant agencies/laboratories and review them to confirm that the product meets the requirements for your specific application.
3. Choose the appropriate current rating for your application based on the available options: 0.5A, 1A, 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, 10A, 12A, 15A, 20A, 25A, or 30A.
4. Take note of the maximum resistance in ohms corresponding to the chosen current rating.
5. Ensure that the maximum operating voltages of the circuit breaker (50VDC and 250VAC) are compatible with your application.
6. Verify that the interrupt capacity of the circuit breaker meets your requirements: 2,000 amps at 50VDC (0.5 – 30 amp models) and 1,000 amps at 250VAC (0.5 – 30 amp models).
7. Consider the resettable overload capacity of ten times the rated current when determining if the circuit breaker is suitable for your application.
8. Install the circuit breaker in a suitable location within your system.
9. Refer to the ambient compensation chart to determine the compensated rating based on the ambient

temperature and apply it to calculate overloads using the published trip curve.

Features

- 0.5 amp to 30 amp ratings.
- Cannot be manually tripped.
- Button extends for visual trip indication.
- Push button to reset breaker.
- Termination is screw or .250" QC.
- Bottom marked amperage rating optionally available.

Agency Approvals

W58 Series is UL 1077 Recognized as Supplementary Protectors, File E69543 and meets Ignition Protection requirements in accordance with UL 1500. W58 Series is also CSA Accepted as Supplementary Protectors (Appliance Component Protectors), File LR15734.

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: Breaker will continuously carry 100% of rated load. It may trip between 101% and 145% of rated load, but must trip at 145% at 25°C.

Dielectric Strength: Over 1,500 volts RMS.

Maximum Operating Voltages: 50VDC; 250VAC.

Interrupt Capacity: 2,000 amps at 50VDC (0.5 – 30 amp models). 1,000 amps at 250VAC (0.5 – 30 amp models).

Note: 30 amp model not UL or CSA.

Resettable Overload Capacity: Ten times rated current.

Maximum Resistance vs. Current Rating @ +25°C

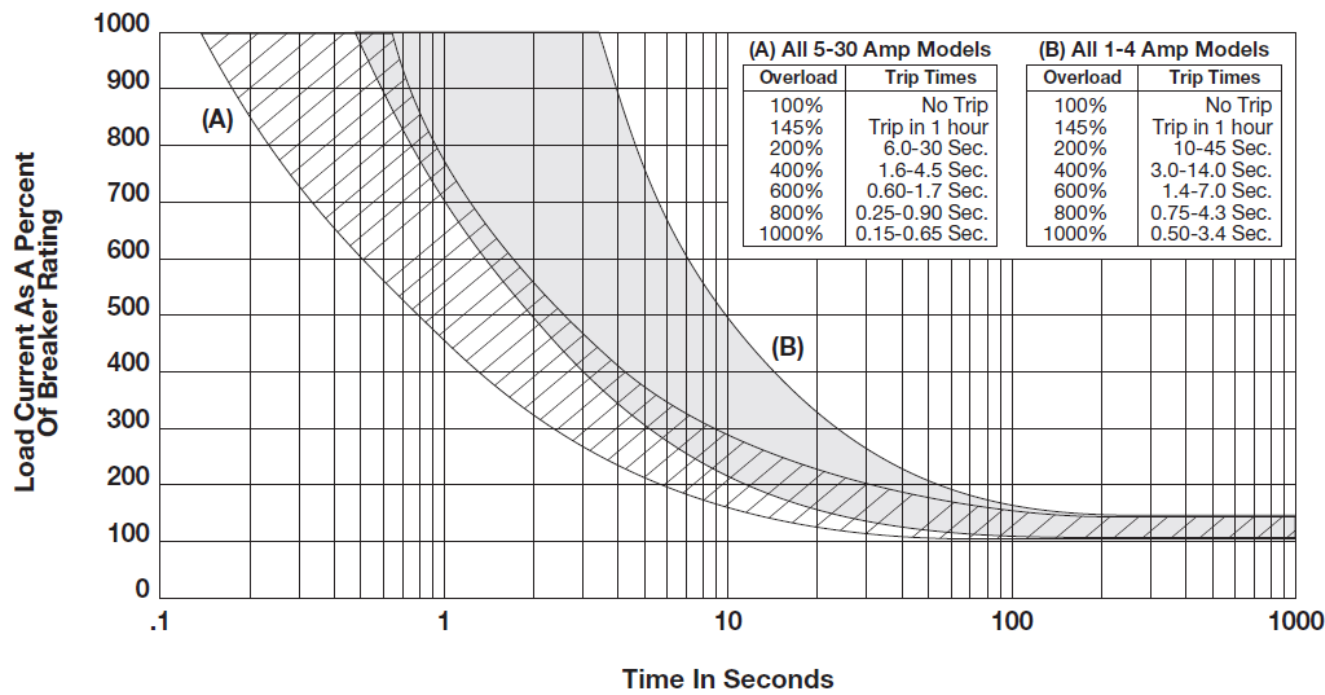
Current Rating in Amps	Maximum Resistance in Ohms	Current Rating in Amps	Maximum Resistance in Ohms
0.5	5.0	8	0.020
1	1.35	9	0.020
2	0.32	10	0.014
3	0.18	12	0.010
4	0.10	15	0.010
5	0.026	20	0.005
6	0.026	25	0.006
7	0.020	30*	0.004

*No UL/CSA

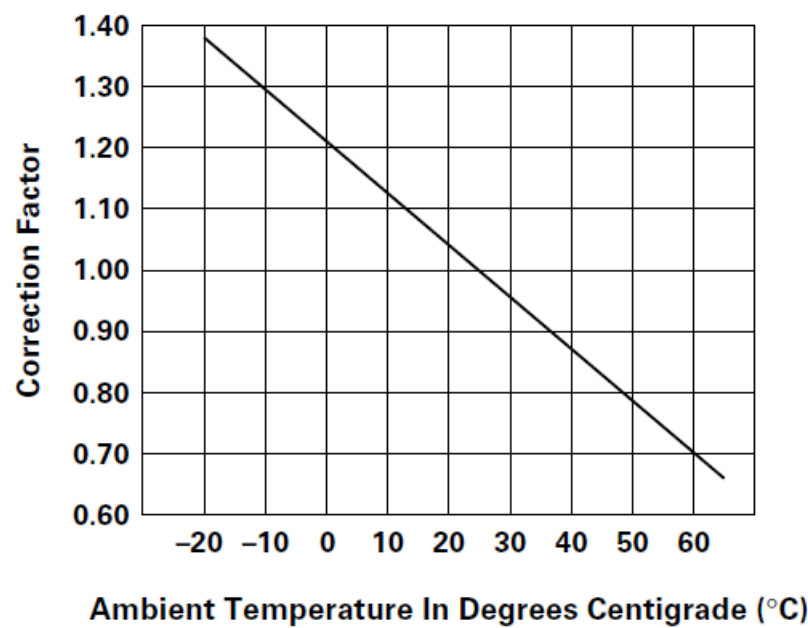
Mechanical/Environmental Data

- Shock:** Withstands to 10g.
- Endurance Cycling:** Over 1,000 cycles at 200% of rated load.
- Vibration:** Withstands to 10g at 10-55 Hz.
- Weight:** Less than 1 1/2 oz. (42.5g).

Time vs. Current Trip Curve @ +25°C



Ambient Compensation Chart



To use this chart: Read up from the ambient temperature to the curve, and across to find a correction factor. Multiply 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.

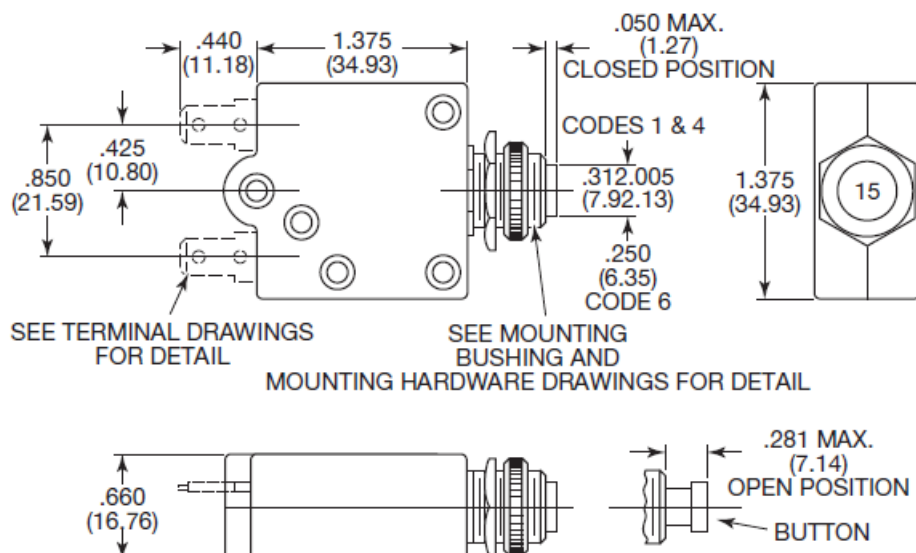
Ordering Information

Typical Part No. >		W	58	-X	B	1	A	4	A	-5
1. Designator: W = Circuit breaker										
2. Series Number: 58 = Single Pole, Push-to-Reset										
3. Circuit Function: X = Series Trip										
4. Button and Rate Marking: A = White, plain, no rate marking, no trip band B = White with red rate marking, red trip band C = White with black rate marking, red trip band E = White with red rate marking no trip band F = White with black rate marking, no trip band K = Black, plain, no rate marking, no trip band Note: Rate marking on the bottom of the case is available on a special order basis. Consult factory for details.										
5. Mounting Bushing: 1 = Metal, 7/16" x .500" (12.70mm) long 4 = Metal, 15/32" x .300" (7.62mm) long, black 6 = Metal, 3/8" x .465" (11.81mm) long, round 7 = Plastic, 3/8" x .465" (11.81mm) long, round										
6. Terminals: A = Quick connect .250" (6.35mm) straight C = 6/32 screw 90° (screws installed) D = 6/32 screw 90° (screws bulk packed)										
7. Mounting Hardware: 4 = Metal, knurled nut/hex nut 6 = Metal, knurled nut/hex nut/lock washer 12 = Metal, knurled nut/lock washer 15 = Metal, two hex nuts/lock washer 18 = Metal, hex nut/lock washer 7 = Plastic, knurled nut 22 = Plastic knurled nut, metal lock washer 99 = No mtg. hardware supplied (Use C, Step #8) Note: For other hardware combinations, order separately. See mounting hardware Ordering Information table.										
8. Mounting Hardware Packaging: A = Assembled to bushing B = Bulk unassembled C = No mounting hardware										
9. Specify Amp Rating: 0.5 3 6 9 15 30* 1 4 7 10 20 2 5 8 12 25 *Not UL or CSA										

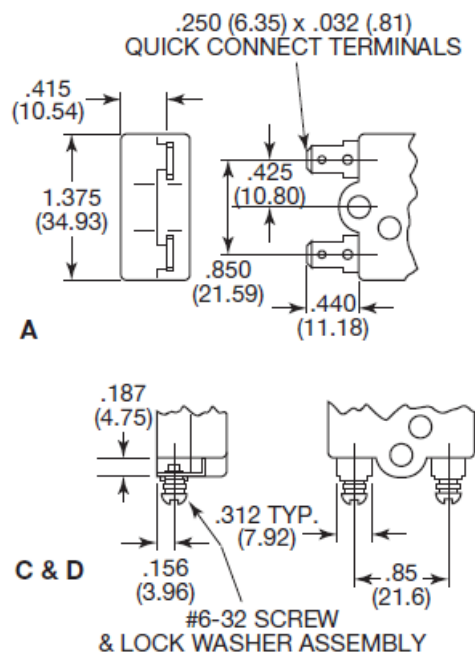
Stock Items – Authorized distributors are more likely to stock the following items.

W58-XB1A4A-1	W58-XB1A4A-6	W58-XB1A4A-15	W58-XC4C12A-2	W58-XC4C12A-15
W58-XB1A4A-2	W58-XB1A4A-7	W58-XB1A4A-20	W58-XC4C12A-3	W58-XC4C12A-20
W58-XB1A4A-3	W58-XB1A4A-8	W58-XB1A4A-25	W58-XC4C12A-5	W58-XC4C12A-25
W58-XB1A4A-4	W58-XB1A4A-10	W58-XB1A4A-30	W58-XC4C12A-7	W58-XC4C12A-30
W58-XB1A4A-5	W58-XB1A4A-12	W58-XC4C12A-1	W58-XC4C12A-10	

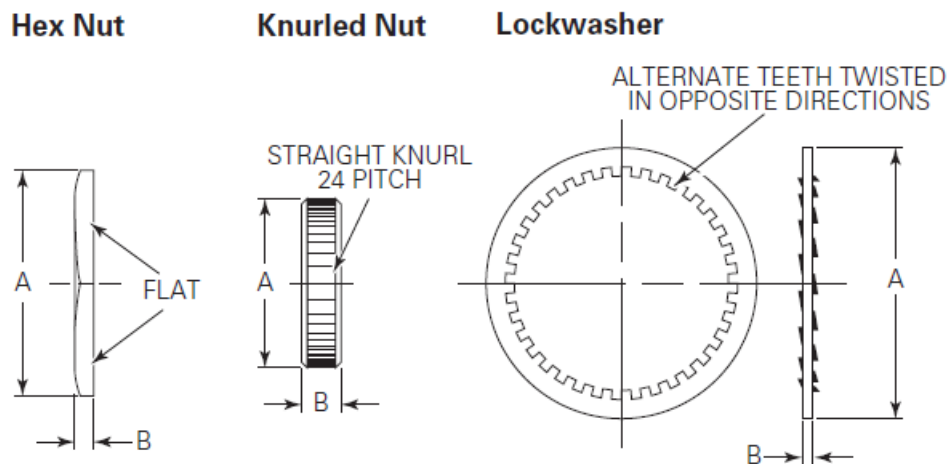
Outline Dimensions



Terminal Options



Mounting Hardware



Mounting Hardware Dimensions

Dimension		Metal Hex Nut	Metal Knurled Nut	Plastic Knurled Nut	Metal Lockwasher
A.	3/8"	.556 (14.12)	.562 (14.27)	.74 (18.8)	.562 (14.27)
	7/16"	.625 (15.88)	.625 (15.88)	—	.540 (13.72)
	15/32"	.556 (14.12)	.625 (15.88)	—	.600 (15.24)
B.	3/8"	.085 (2.16)	.078 (1.98)	.126 (3.2)	.018 (.457)
	7/16"	.111 (2.82)	.125 (3.18)	—	.022 (.559)
	15/32"	.078 (1.98)	.125 (3.18)	—	.018 (.457)

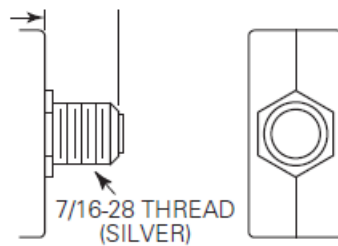
Mounting Hardware Ordering Information

Mounting Bushing Code	Metal Knurled Nut	Plastic Knurled Nut	Metal Hex Nut	Metal Lock Washer
1	55-010A	—	55-011A	88-021B
4	•	—	55-001B	88-002A
6	55-008A	—	55-001D	88-006K
7	55-008A	1423696-2	55-001D	88-006K

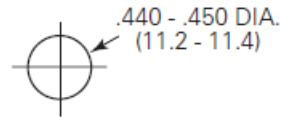
55-010B (silver) 55-010E (black)

Mounting Bushing

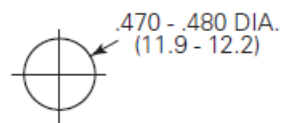
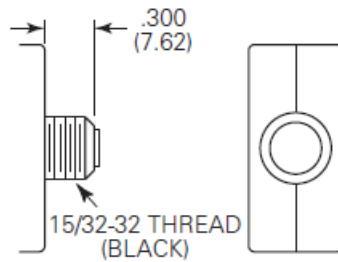
Type 1



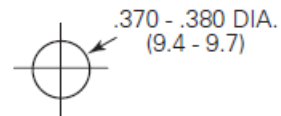
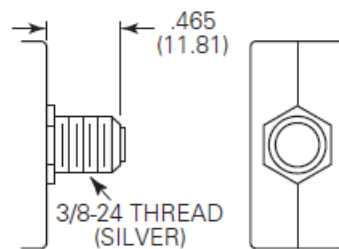
Recommended Cutout



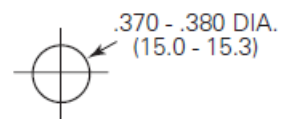
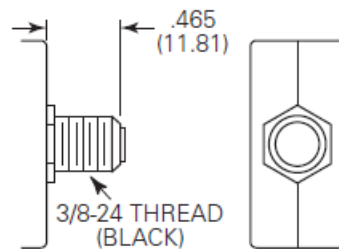
Type 4



Type 6

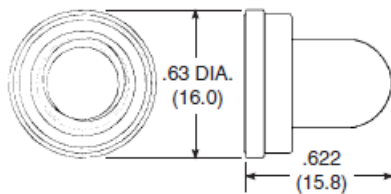


Type 7



Optional Protective Boot

Silicone rubber boot is bonded to integral aluminum nut.



1-1423696-5
Black boot for W58 with 3/8"-24
bushing.

Optional Bottom Marking of Rating

This is available on a special order basis. Consult factory for details.



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Dimensions are in inches over (millimeters) unless otherwise specified.

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

USA: 1-800-522-6752

Canada: 1-905-470-4425

Mexico: 01-800-733-8926 C.

America: 52-55-1106-0803

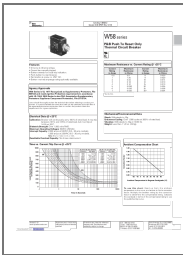
South America: 55-11-2103-6000

Hong Kong: 852-2735-1628

Japan: 81-44-844-8013

UK: 44-8706-080208

Documents / Resources



[TE CONNECTIVITY W58 Series P&B Push To Reset Only Thermal Circuit Breaker](#) [pdf] Owner's Manual
W58 Series P B Push To Reset Only Thermal Circuit Breaker, W58 Series, P B Push To Reset Only Thermal Circuit Breaker, Thermal Circuit Breaker, Circuit Breaker, Breaker