

W57 series

Compact, Push To Reset Only Thermal Circuit Breaker

Features

- New, compact design.
- 4 to 20 amp ratings.
- Cannot be manually tripped.
- Button extends for visual trip indication.
- Push button to reset breaker.
- Numerous mounting and termination options.

Agency Approvals

W57 series is UL 1077 Recognized as Supplementary Protectors, File E69543, for Canada and the United States. Approved to VDE 0642/EN60934 (Circuit Breakers for Equipment) License Number 40007874 (excludes models rated 4A and >15A). CCC mark compliant, certificate 2004010307123217.

Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also sek out the pertinent approvals files of the agencies/laboratories and review them to ensure 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, 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.

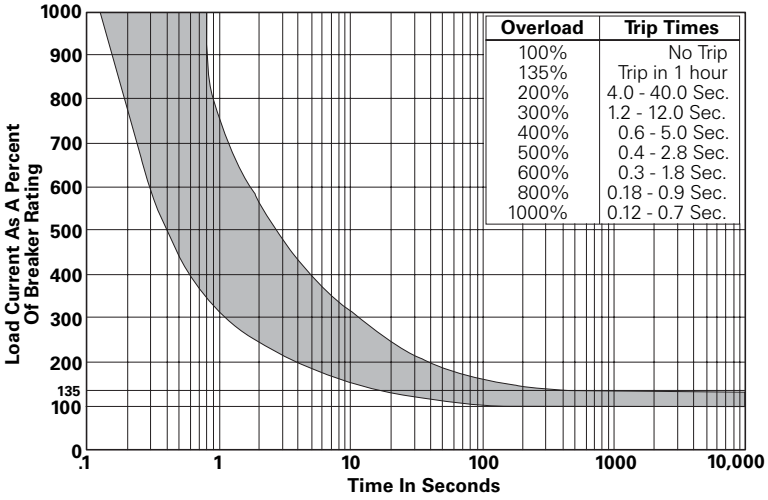
Typical Resistance vs. Current Rating @ +25°C

Current Rating in Amps	Typical Resistance in Ohms	Current Rating in Amps	Typical Resistance in Ohms
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
8.0	0.031		

Mechanical/Environmental Data

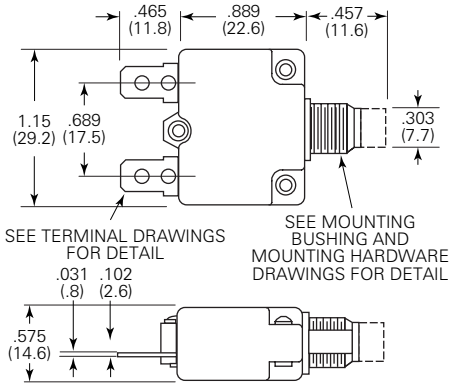
Operating Temperature Range: 0°C to +60°C.
Termination: .250" (6.35mm) quick connects.
Mounting: Various options. See Ordering Information and drawings.
Approximate Weight: 0.5 oz. (14.3g).

Time vs. Current Trip Curve @ +25°C



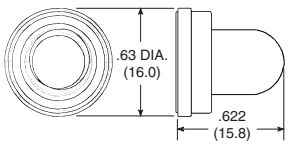
Overload	Trip Times
100%	No Trip
135%	Trip in 1 hour
200%	4.0 - 40.0 Sec.
300%	1.2 - 12.0 Sec.
400%	0.6 - 5.0 Sec.
500%	0.4 - 2.8 Sec.
600%	0.3 - 1.8 Sec.
800%	0.18 - 0.9 Sec.
1000%	0.12 - 0.7 Sec.

Outline Dimensions



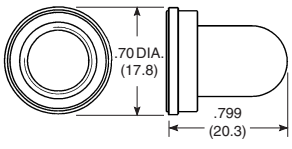
Optional Protective Boot

Silicone rubber boot is bonded to integral alumimum nut.



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

1-1423696-7
Clear boot for W57 with 3/8"-24 bushing.



1-1423696-4
Black boot for W57 with M11 X 1.0 bushing.

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

Ambient Compensation Table

Ambient Temperature in °C	Rating Correction Factor	
	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

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.

Ordering Information

Typical Part No. ▶	W	57	-X	B	1	A	4	A	1	0	-4

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:
A = White, plain, no rate marking
B = White with red rate marking (vertical)
C = White with black rate marking (vertical)

5. Mounting Bushing:
1 = M11 x 9.6mm long, plastic
2 = 3/8" (one side flat) x 10.0mm long, plastic
6 = 3/8" (one side flat) x 10.5mm long, metal
7 = M12 x 9.6mm long, metal

6. Terminals:
A = Quick connect .250" (6.35mm) straight

7. Mounting Hardware:
4 = Metal knurled nut/hex nut
5 = Plastic knurled nut
12 = Metal knurled nut
99 = None

8. Mounting Hardware Packaging:
A = Assembled to bushing
B = Bulk unassembled
C = No mounting hardware.

9. Maximum Operating Voltage (AC):
1 = 250VAC

10. Nameplate:
0 = None

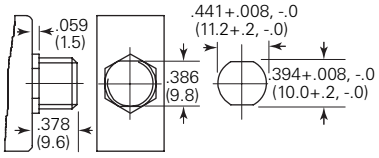
11. Specify Amp Rating:
4† 5 6 7 8 10 12 15 20†
†Not VDE

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

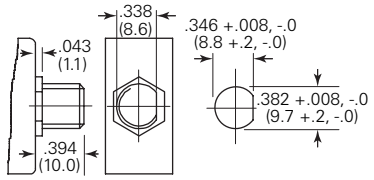
W57-XB1A4A10-5 W57-XB1A4A10-15 W57-XB1A5A10-5 W57-XB1A5A10-15
W57-XB1A4A10-10 W57-XB1A4A10-20 W57-XB1A5A10-10 W57-XB1A5A10-20

ORDERING NOTE: Many options illustrated here are not listed in the "Ordering Information" chart above. Options denoted by "Special" or "Special Order" in their descriptions are only offered on a special order basis. Additionally, mounting hardware can be ordered separately. These options are subject to extended leadtimes and significant minimum order quantities. Your Tyco Electronics sales engineer must consult with the factory before providing price and availability information regarding these options.

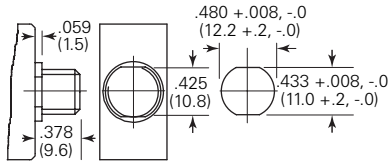
Mounting Bushings and Recommended Panel Cutouts



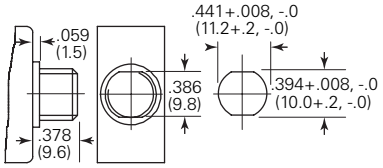
Standard Option 1 – M11 X 1.0 Thread



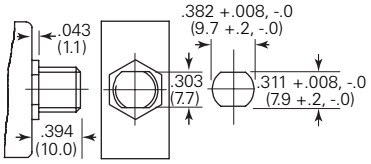
Standard Option 2 & 6 – 3/8" - 24UNF Thread



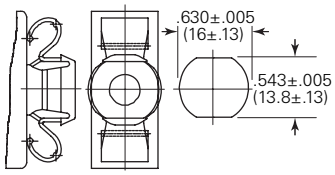
Standard Option 7 – M12 X 1.0 Thread



Special Order – M11 X 1.0 Thread

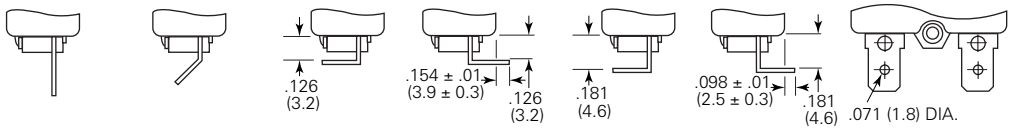


Special Order – 3/8" - 24UNF Thread



Special Order – Snap In Option

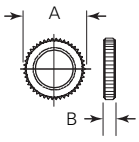
Termination Options



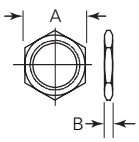
Standard .250 QC Straight
Special .250 QC 45°
Special .250 QC 90°
Special .250 QC/PCB 270°
Special .250 QC 90 °
Special .250 QC/PCB 270 °
Special .250 QC Straight (small hole)

Dimensions are shown for reference purposes only.
Dimensions are in inches over (millimeters) unless otherwise specified.
Specifications and availability subject to change.
www.tycoelectronics.com
Technical support:
Refer to inside back cover.

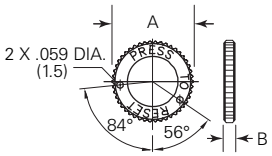
Mounting Hardware Options



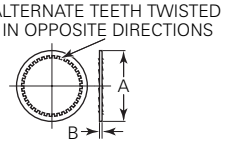
Standard Knurled Nut



Standard Hex Nut



Special Integrated Knurled Nut with Small Holes



Lockwasher

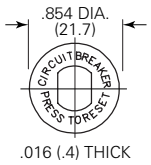
Mounting Hardware Dimensions

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)

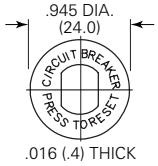
Mounting Hardware Ordering Information

Mounting Bushing Material	Mounting Bushing Code	Plastic Knurled Nut	Integrated Plastic Knurled Nut w/Holes	Metal Knurled Nut	Metal Hex Nut	Lockwasher
Plastic	1 (M11)	–	1423696-8	2-1423696-2	–	–
	2 (3/8″)	–	1423696-2	–	–	–
Metal	5 (M11)	–	–	1423696-4	1423696-6	1-1423696-2
	6 (3/8″)	–	–	1-1423696-0	1423696-3	1-1423696-1
	7 (M12)	–	–	1423696-5	1423696-7	1-1423696-3
	8 (3/8″)	–	–	1-1423696-0	1423696-3	1-1423696-1

Optional Nameplates



Special Embossed Aluminum



Special Silver Printing On Black