

## W23/W31 series

#### Toggle or Push/Pull Actuator Thermal P&B Circuit Breaker

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#### Features

- 0.5 amp to 50 amp ratings may be used as on/off switch.
- · Cannot be reset against overload.
- W23 has visible trip indicator band.
- Screw termination.
- Trip-free operation.

#### **Agency Approvals**

#### W23 and W31 are UL 1077 Recognized as Supplementary Protectors. File E69543, and 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 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% of rating at 25°C. Must trip at 135% in one hour.

Maximum Operating Voltages: 50VDC or 240VAC (to 400 Hz). Interrupting Capacity:

#### With 4X Max. Series Fuse Protection

0.5-50 amp models — 1000 amps at 240VAC. 30-50 amp models — 1000 amps at 50VDC.

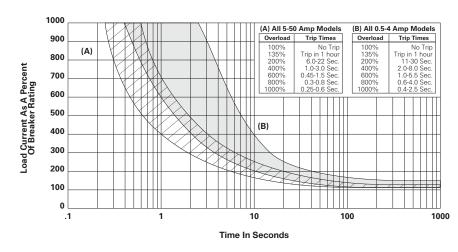
#### Without 4X Max. Series Fuse Protection

0.5-25 amp models - 2000 amps at 50VDC.

10-20 amp models — 2000 amps at 120VAC Resettable Overload Capacity: Ten times rated current.

#### Dielectric Strength: Over 1,500 volts RMS.

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



Current Rating in Amps	Maximum Resistance in Ohms ± 30%
1	.61
5	.03
10	.01
15	.006
20	.004
30	.003
40	.002
50	.002

#### Mechanical/Environmental Data

Endurance Cycling: More than 6,000 cycles at 100% of rating, or 10,000 mechanical cycles.

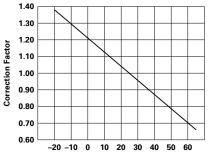
Humidity: Will meet requirements of MIL-STD-202, Method 106 Salt Spray: Will meet requirements of MIL-STD-202, Method 101, Test Condition B

Termination: Two #8-32 screw terminals.

Mounting: W23 — Threaded bushing, 3/8" (9.53mm) diameter. W31 — Threaded bushing, 15/32" (11.91mm) diameter, with or without anti-rotation flats.

Weight: Less than 2 oz. (57g).

#### **Ambient Compensation Chart**



Ambient Temperature In Degrees Centigrade (°C)

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.

# 

Designator: V = Circuit I Series Num 3 = Single	breaker										
	ber:										
5	pole, push/p	ull									
<b>Circuit Fund</b> ( = Series tr											
<b>Button:</b> = Black wi	ith white am	p rate markin	g and white trip band.								
		shing .375" (	9.53mm) long, silver co	olor							
= Screw te	erminals situ	ated 90° to e	ach other with #8-32 s	crews and wash			rs installed	l.			
K = Knurled K = Two hex	nut/hex nut < nuts/lockwa	asher installe	d								
4	15	30	40 50								
	= Series t utton: = Black wi lounting E = 3/8"-24 erminals ( = Screw te = Screw te lounting H = Knurled = Two hes = No mou	= Series trip utton: = Black with white am lounting Bushing: = 3/8"-24 threaded bu erminals (See drawin = Screw terminals situ = Screw terminal	<ul> <li>Series trip</li> <li>utton:</li> <li>Black with white amp rate markin</li> <li>lounting Bushing:</li> <li>3/8"-24 threaded bushing .375" (</li> <li>erminals (See drawings for relative of the second secon</li></ul>	<ul> <li>Series trip</li> <li>utton:</li> <li>Black with white amp rate marking and white trip band.</li> <li>lounting Bushing:</li> <li>3/8"-24 threaded bushing .375" (9.53mm) long, silver common silver experiments (See drawings for relative terminal positions)</li> <li>Screw terminals situated 90° to each other with #8-32 silver experiments situated parallel to each other pointing</li> <li>Screw terminals situated parallel to each other pointing</li> <li>lounting Hardware:</li> <li>Knurled nut/hex nut installed</li> <li>Two hex nuts/lockwasher installed</li> <li>No mounting hardware supplied</li> <li>mp Rating:</li> <li>3 7.5 20 35</li> </ul>	<ul> <li>Series trip</li> <li>utton:</li> <li>Black with white amp rate marking and white trip band.</li> <li>lounting Bushing:</li> <li>3/8"-24 threaded bushing .375" (9.53mm) long, silver color</li> <li>erminals (See drawings for relative terminal positions):</li> <li>Screw terminals situated 90° to each other with #8-32 screws and wash</li> <li>Screw terminals situated parallel to each other pointing upward with #8</li> <li>lounting Hardware:</li> <li>Knurled nut/hex nut installed</li> <li>Two hex nuts/lockwasher installed</li> <li>No mounting hardware supplied</li> <li>mp Rating:</li> <li>3 7.5 20 35</li> </ul>	<ul> <li>Series trip</li> <li>utton:</li> <li>Black with white amp rate marking and white trip band.</li> <li>lounting Bushing:</li> <li>3/8"-24 threaded bushing .375" (9.53mm) long, silver color</li> <li>erminals (See drawings for 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#### **Ordering Information**

W23-X1A1G-20

W23-X1A1G-5

				Typical Part No. 🕨	W	31	-X	2	Μ	1	G	-5
1. Desig W =	<b>jnator:</b> Circuit bre	aker										
	<b>s Numbe</b> Single pol	<b>r:</b> e, toggle ac	tuator									
	<b>it Functio</b> eries trip	on:					1					
1 = 1		hreaded bu		(8.13mm) long, round, s (8.13mm) long, double		or		_				
5. Togg M = 3		r metal togg	gle, round, v	vith amp rate marking o	n end				-			
1 = S	crew term	ninals situate	ed 90° to ea	terminal positions): ach other with #8-32 scr o each other pointing do				hers instal	led.	1		
A = K G = T	wo hex nu	<b>dware:</b> t/hex nut int uts/lockwasł ng hardware	her installed	1							_	
8. Amp 0.5		75	20	25								
	3 4	7.5 10	20 25	35 40								

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

W23-X1A1G-40

W31-X2M1G-10
W31-X2M1G-15
W31-X2M1G-20
W31-X2M1G-25
W31-X2M1G-30

11G-10 11G-15 W31-X2M1G-35 W31-X2M1G-40 11G-20 11G-25 W31-X2M1G-50

## <del>≣</del> <sub>Tyco</sub> Electronics W23 Outline Dimensions

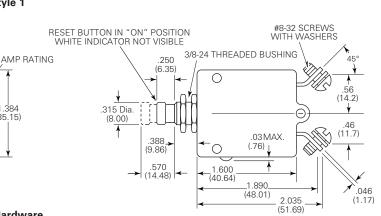
## Catalog 1308242 Issued 3-03 (PDF Rev. 12-08)

## **Terminal Style 1**

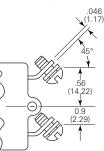
1.384

\_.690 \_\_ (17.53)

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### **Terminal Style 3**



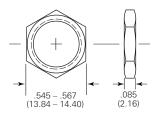
All dimensions are given as inches (mm)

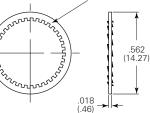
#### **Mounting Hardware**

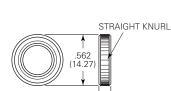
Hex Nut (55-001D - Silver Color)

#### Lockwasher (88-006B - Silver Color)

# ALTERNATE TEETH TWISTED IN OPPOSITE DIRECTIONS







.078 (1.98)

(55-008A - Silver Color)

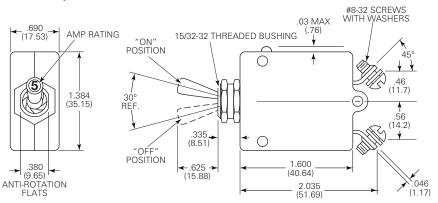
**Knurled Nut** 



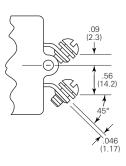
Suggested Mounting Holes

#### W31 Outline Dimensions

#### **Terminal Style 1**



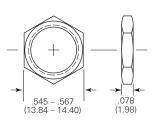
#### **Terminal Style 5**



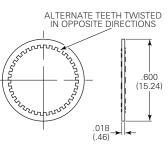
**Suggested Mounting Holes** 

**Mounting Hardware** 

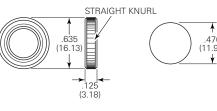
Hex Nut (55-001B - Silver Color)

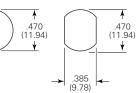


Lockwasher (88-002B - Silver Color)



**Knurled Nut** (55-010B - Silver Color)





Specifications and availability subject to change.