

POTTER & BRUMFIELD W52 SERIES

Rocker-Actuated Thermal Circuit Breaker/Power Switch with Optional Indicator Lamp

INTRODUCTION

TE Connectivity (TE)'s Potter & Brumfield W52 is a compact trip free cycling rocker type circuit breaker rated up to 20A rocker type. It is a slightly enhanced version of our existing [W51 circuit breaker](#).

Available in different configurations, this circuit breaker can be used in a wide variety of applications.

FEATURES

- Compact, trip free cycling, rocker-actuated design.
- 5 amp to 20 amp ratings.
- Provides circuit protection and power switching in a single unit.
- Available with optional indicator lamp.
- Snaps into the same cutout as many common power switches.
- Various color, marking and termination options.



APPROVALS

- UL/cUL: Recognized with UL 1077 (Supplementary Protectors for Use in Electrical Equipment), File E69543.
- VDE: Approved to DIN EN IEC 60934/VDE 0642 (Circuit Breaker for Equipment), Certificate No. 40059126 (for AC loads only).
- CCC: Approved to GB/T 17701, Certificate No. 2024010307720538 (for AC loads only).



ELECTRICAL DATA @ 25°C

Characteristics	Standards
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. * 150 % for 5-8 A models
Dielectric strength	1,500 VAC (60 seconds)
Insulation resistance	100 MΩ
Maximum operating voltages	50 VDC; 125 or 250 VAC, 50/60 Hz. (model dependent).
Interrupt capacity	1,000 amps in accordance with UL standard 1077
Resettable overload capacity	Ten times rated current
Switch endurance cycling	Typically 6,000 operations at 100% of rating
Reset time	60 seconds

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.

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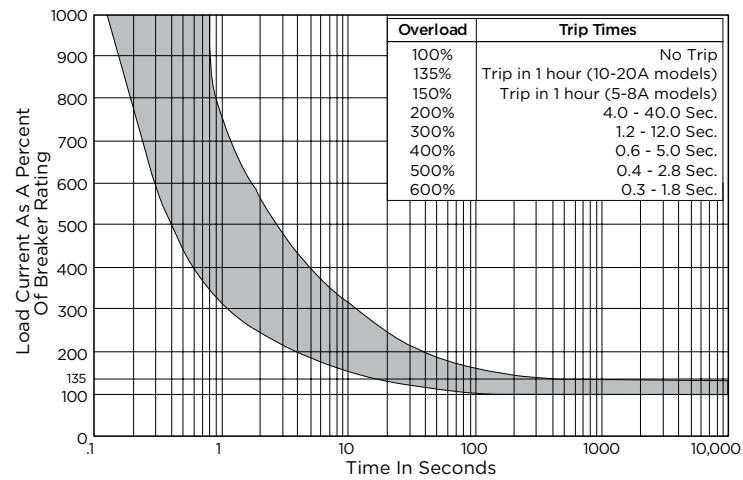
TYPICAL RESISTANCE vs. CURRENT RATING @ +25°C

Current rating (Amps)	Typical resistance (Ω)
5.0	0.050
6.0	0.042
7.0	0.036
8.0	0.031
10.0	0.025
15.0	0.017
20.0	0.0125

MECHANICAL/ENVIRONMENTAL DATA

Characteristics	Standards
Operating temperature range	0 °C to +60 °C for 10 A-20 A models 0 °C to +50 °C for 5 A-8 A models
Termination	.250" (6.35 mm) quick connects, solder terminals or right angle PC terminals
Mounting	Snaps into 1.122 x .531 (28.5 x 13.5) panel cutout
Approximate weight	0.25 oz. (7.0 g)

TIME VS. CURRENT TRIP CURVE @ +25°C



AMBIENT COMPENSATION TABLE

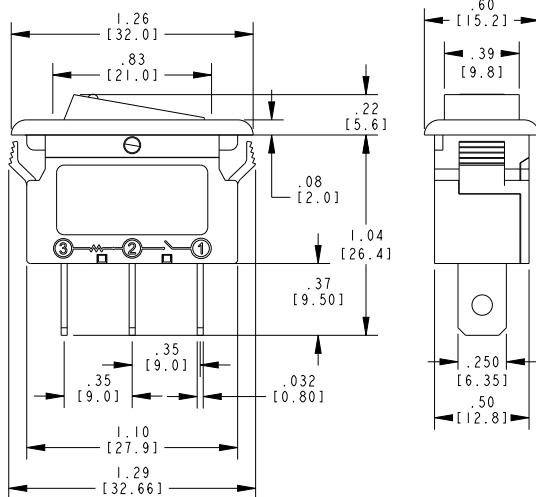
Ambient temperature (°C)	Rating Correction Factor	
	5-8A Models	10-20A Models
10	.80	.80
20	.90	.90
25	1.00	1.00
30	1.10	1.05
40	1.25	1.15
50	1.61	1.25
60	-	1.40

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.

DIMENSIONS (Unit: Inch[mm])

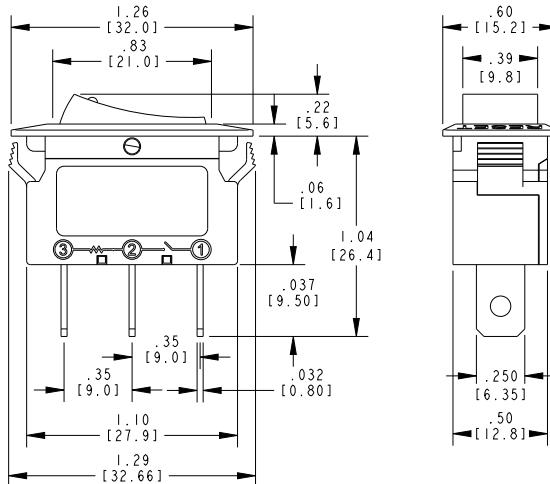
Angular Button Design

Terminal 3 is not present on non-illuminated models



Contoured Button Design

Terminal 3 is not present on non-illuminated models



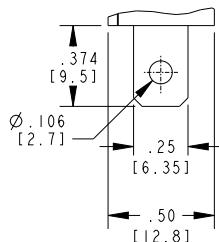
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Rocker-Actuated Thermal Circuit Breaker/Power Switch With Optional Indicator Lamp

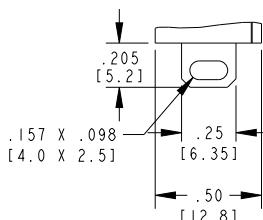
TERMINAL TYPES (Unit: Inch[mm])

Terminal thickness for all types is .032 [0.80]

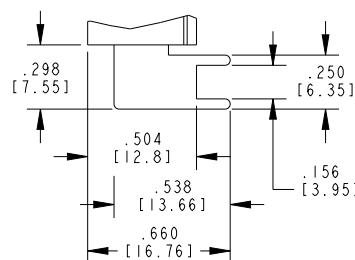
Standard - .250 Quick Connect Terminal



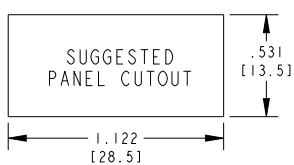
Standard - Solder Terminal



Special order - Right Angle PC Terminal



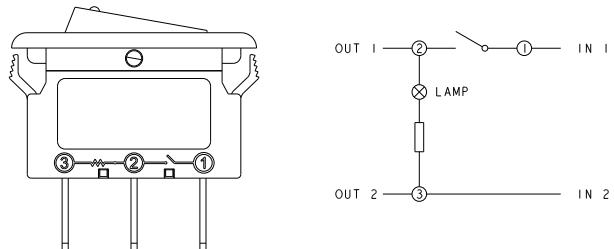
PANEL CUTOUT (Unit: Inch[mm])



W52 Series circuit breakers accomodate panel thickness is 0.030 in ~ 0.118 in (0.75 mm ~ 3.00 mm)

WIRING DIAGRAM

Illuminated Version only

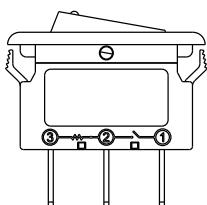


Note:

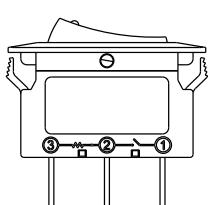
1. Lamp will not illuminate at less than 65VAC.
2. Not applicable for DC loads

CASE STYLE

Angular Button Design

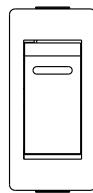


Contoured Button Design

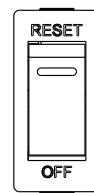


MARKING OPTIONS

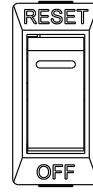
Angular Button Design



Standard -
No marking



Standard -
RESET/OFF
molded into bezel

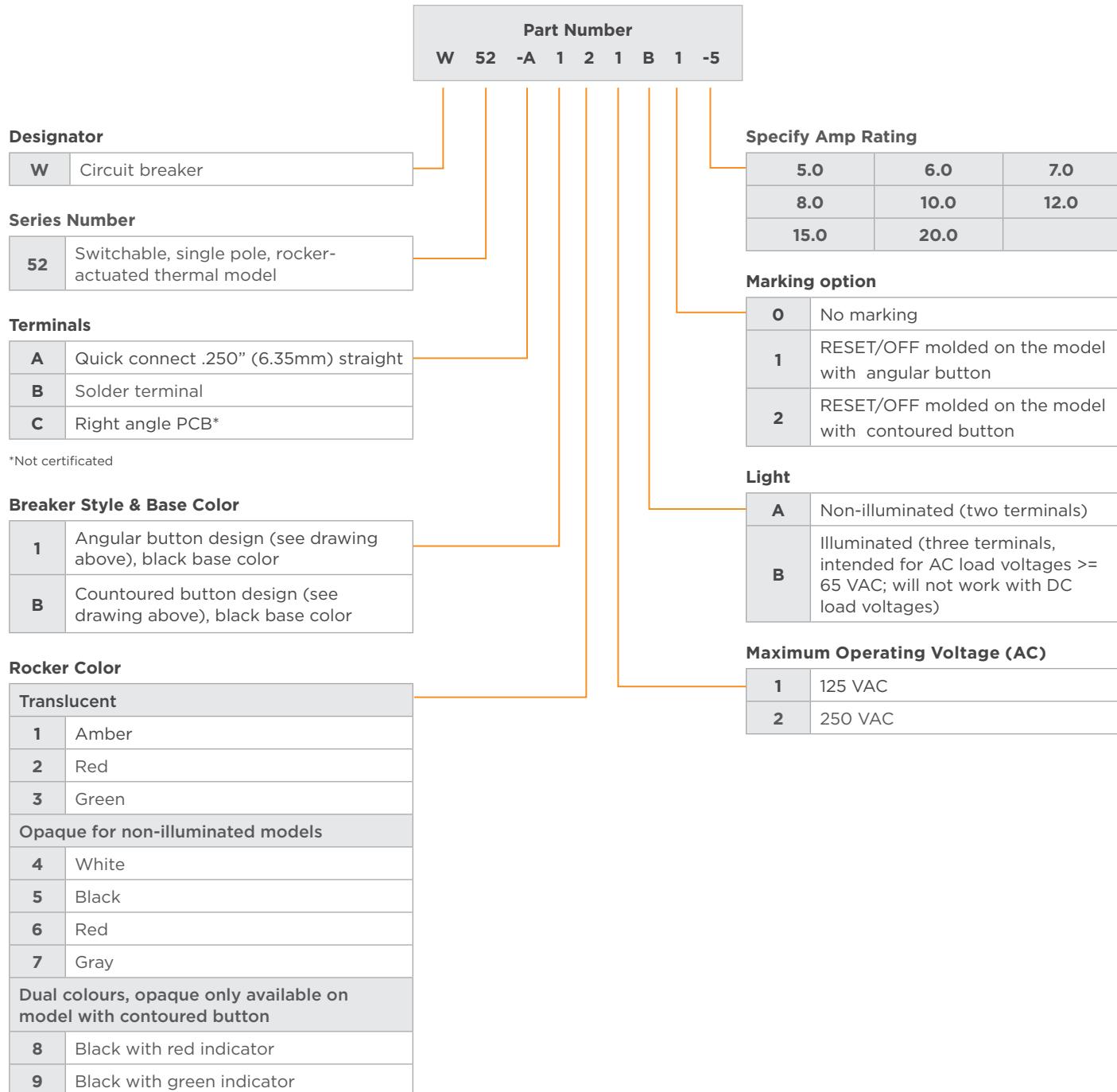


Standard -
RESET/OFF
molded into bezel

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PRODUCT CODE STRUCTURE



OUR AUTHORIZED DISTRIBUTORS ARE MORE LIKELY TO STOCK THE FOLLOWING ITEMS FOR IMMEDIATE DELIVERY.

W52-A121B1-5 W52-A121B1-10 W52-A121B1-15 W52-A121B1-20 W52-A122B1-5 W52-A122B1-10

W52-A122B1-15 W52-A122B1-20 W52-A152A1-5 W52-A152A1-10 W52-A152A1-15 W52-A152A1-20

ORDERING NOTE:

Some options illustrated below 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. Other base and button colors and intermediate amp ratings are also available on a special order basis. All special order items are subject to extended leadtimes and significant minimum order quantities. Your TE sales engineer must consult with the factory before providing price and availability information regarding items with these options.

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1/24 ED

Mouser Electronics

Authorized Distributor

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[3-2486200-8](#) [4-2486200-0](#) [1-2486200-1](#) [1-2486200-3](#) [2486200-5](#) [3-2486200-3](#) [4-2486200-2](#) [3-2486200-6](#) [3-2486200-7](#) [1-2486200-5](#) [3-2486200-5](#) [2-2486200-8](#) [3-2486200-9](#) [1-2486200-8](#) [2-2486200-5](#) [4-2486200-1](#) [2-2486200-3](#) [2486200-7](#) [2486200-6](#) [3-2486200-2](#) [2-2486200-1](#) [3-2486200-0](#) [1-2486200-2](#) [1-2486200-4](#) [2-2486200-9](#) [2-2486200-2](#) [1-2486200-6](#) [2-2486200-7](#) [2486200-1](#) [2-2486200-2](#) [2486200-8](#) [2486200-3](#) [1-2486200-7](#) [2-2486200-4](#) [1-2486200-0](#) [3-2486200-4](#) [2-2486200-0](#) [2486200-9](#) [1-2486200-9](#) [2-2486200-6](#) [2486200-4](#) [3-2486200-1](#) [W52-A122B1-6](#) [W52-AB21B2-12](#) [W52-A151A1-5](#) [W52-A121B1-8](#) [W52-B162A1-6](#) [W52-A171A1-15](#) [W52-B162A1-10](#) [W52-A152A1-15](#) [W52-A122B1-15](#) [W52-A121B1-15](#) [W52-A151A1-15](#) [W52-A121B1-6](#) [W52-C161A1-15](#) [W52-A122B1-7](#) [W52-A122B1-8](#) [W52-A152A1-10](#) [W52-A121B1-20](#) [W52-A122B1-20](#) [W52-B152A1-15](#) [W52-A152A1-5](#) [W52-A121B1-10](#) [W52-AB22B2-10](#) [W52-AB22B2-7](#) [W52-A121B1-5](#) [W52-A152A0-10](#) [W52-A152A1-20](#) [W52-A152A0-5](#) [W52-A161A1-10](#) [W52-A151A1-20](#) [W52-A181A1-20](#) [W52-A122B1-10](#) [W52-A162A1-8](#) [W52-AB52A2-10](#) [W52-A161A1-15](#) [W52-B121B1-5](#) [W52-A122B1-9](#) [W52-A151A1-10](#) [W52-A181A1-5](#) [W52-A122B0-5](#) [W52-B162A1-20](#) [W52-A122B1-5](#) [W52-A151A1-7](#)