BOURNS®

Features

- Rugged industrial case with handle
- Easy-to-read LCD display, simple operation
- High accuracy peak reading circuit
- Wide 10-1000 V test range
- Precise auto-sensing shutoff
- Built-in 5-pin socket for in-line resistance measurement

Applications

Suitable for testing:

- Gas tubes
- Carbon gaps
- MOVs
- Zener and avalanche diodes
- Thyristor devices
- Finished surge protection products

4030-0x - Surge Protector Test Set

Description

Bourns® Model 4030-0x Surge Protector Test Set is a handheld, battery-operated tester designed to measure the clamping voltage and DC breakdown voltage of most surge protective devices. The Model 4030-0x is suitable for testing gas tubes, carbon gaps, MOVs, Zener and avalanche diodes and thyristor devices, both as components and as complete protectors.

The Model 4030-0x is a true slow-rise tester because it does not use a pulse transformer. It contains unique test circuitry and a precise 1 mA detector. As soon as 1 mA is conducted through clamping type devices such as MOVs and avalanche diodes, the control circuit removes the test voltage from the output terminals and displays the clamping voltage on the meter. A low energy capacitive circuit will discharge through crowbar type protectors such as gas tubes and carbon blocks, and trigger the detector. The breakdown voltage will be displayed and the test voltage removed.

Operation

Internal switches for ramp speed circuit types are accessed by removing the back cover. They are to be set for the intended application: 200 V/s for laboratory tests or QC type approvals; 1000 V/s for high-speed testing or sorting. (Factory default is 1000 V/s.) Pushing the test button applies a linear ramp to the device under test. Sensing circuitry automatically terminates the test when either the DC breakdown or 1 mA clamping voltage is reached. The test value is maintained on the LCD display until the test button is released.

Specifications

Open Circuit Voltage Rate of Rise	200 V/s or 1000 V/s
Maximum Tested Output Voltage	1000 V
Useable Measuring Range	10-1000 V
Test Current for Clamping Devices	1 mA ±10 %
Test Current for Crowbar Devices	>1 A
In-line Resistance Measurement [1]	<150 ohms (Open is >150 ohms)
Operating Temperature	0 to +50 °C
Storage Temperature	-10 to +60 °C
Measurement Accuracy	0.5 %
Power Source	2 alkaline batteries - NEMA type 1604A
Battery Life (Based on usable reading up to 750 V)	
Alkaline	>1,500 tests
Lithium	>3,000 tests
Shipping Weight	3 lbs.
Warranty	2 years

Notes:

- For P-type thyristor protectors, breakdown voltage V_{BO} occurs at the device Zener voltage V_Z. Therefore, the tester will measure actual V_{BO}.
- For N-type thyristor protectors, breakover voltage V_{BO} is higher than the Zener voltage V_Z. For these devices, the tester will measure V_Z.

1 Available only when using the 5-pin socket, TIP_{in} to TIP_{out}, $RING_{in}$ to $RING_{out}$.

WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Additional Features

- Individual buttons for complete testing between all terminals and polarities
- Linear voltage ramp, selectable for 200 V/s or 1000 V/s operation
- Wide range of adapters for standard protector types

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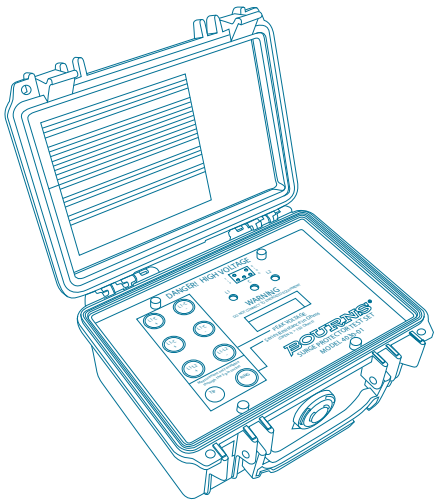
Product Dimensions (Approximate, Rounded up to the Nearest 0.1 Inch)



Width ..... 8.25 ”
Length..... 6.50 ”
Depth..... 3.50 ”
Depth with Lid Open..... 9.25 ”

How To Order

4030 - 0X - Y

Model Number Designator

Tester Configuration
01 = Standard Tester with 800 V (1000 V Max.)
02 = Low Voltage Tester with 200 V (250 V Max.)

Mounting Configuration
(Blank) = Portable
W = Wall Mount / Frame Mount)

NOTE: Uses two 9 V NEMA Type 1604A alkaline batteries. Lithium batteries may be used for longer test life.
Due to shipping regulations, factory may not install lithium batteries. Please see the manual for battery installation instructions.

Part No.	Accessories Included
4030-01/	
4030-02	Portable – 2 each P/N 30503-03 1 each P/N 30503-04
4030-01-W/ 4030-02-W.....	Wall Mount (DIN-Rail type) – 1 each P/N 50502-01 2 each P/N 30503-03 1 each P/N 30503-04

Part No.	Available Separately
30503-01	Test Cable w/Alligator Clip – 48-inch - Red
30503-02	Test Cable w/Alligator Clip – 48-inch -Black
30503-03	Test Cable w/Alligator Clip – 24-inch - Red
30503-04	Test Cable w/Alligator Clip – 24-inch - Black
50502-01	120 Vac to 18 Vdc Adapter
72288.....	Adapter for 2-pole Gas Tubes, Fits 6 and 8 mm diameter Gas Tubes and most Carbon Block Protectors
72289.....	Adapter for 3-pole Gas Tubes with Leads on 4.4, 4.7 and 6.4 mm centers
72292.....	1-pin to 5-pin Adapter
72293.....	4-pin to 5-pin Adapter

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