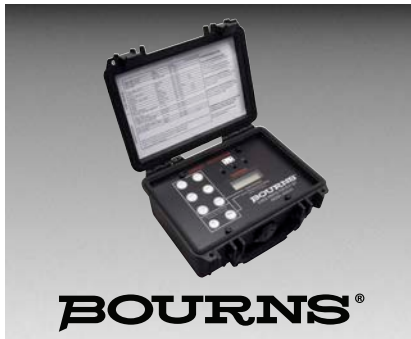




Features

- 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.

Additional Information

Click these links for more information:



[PRODUCT](#)



[TECHNICAL
LIBRARY](#)



[INVENTORY](#)



[SAMPLES](#)



[CONTACT](#)

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 $\pm$ 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

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

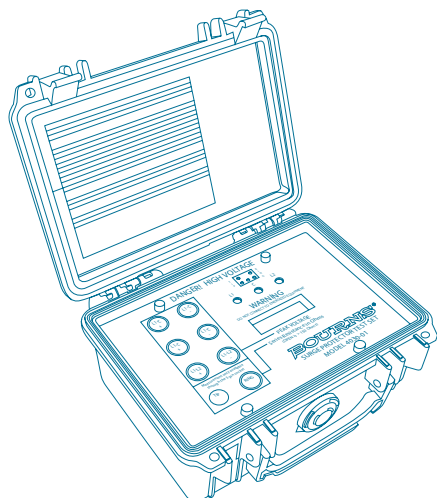
Additional Features

- 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

4030-0x - Surge Protector Test Set

BOURNS®

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 50504-01
	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
50504-01	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

REV. C 09/21

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

This legal disclaimer applies to purchasers and users of Bourns® products manufactured by or on behalf of Bourns, Inc. and its affiliates (collectively, "Bourns").

Unless otherwise expressly indicated in writing, Bourns® products and data sheets relating thereto are subject to change without notice. Users should check for and obtain the latest relevant information and verify that such information is current and complete before placing orders for Bourns® products.

The characteristics and parameters of a Bourns® product set forth in its data sheet are based on laboratory conditions, and statements regarding the suitability of products for certain "typical" applications are based on Bourns' knowledge of typical requirements in generic applications. Bourns assumes that "typical" applications include failsafe/backup features to address critical risks to users and are designed to allow rework of Bourns® product to avoid scrap of a device solely due to malfunctioning Bourns® product. The characteristics and parameters of a Bourns® product in a user application may vary from the data sheet characteristics and parameters due to (i) the combination of the Bourns® product with other components in the user's application, or (ii) the environment of the user application itself. The characteristics and parameters of a Bourns® product also can and do vary in different applications and actual performance may vary over time. Thus, users should always verify the actual performance of the Bourns® product in their specific devices and applications and make their own independent judgments regarding the suitability of Bourns® product and the amount of additional test margin to design into their device or application to compensate for differences between laboratory and real-world conditions.

Unless Bourns has explicitly designated an individual Bourns® product as meeting the requirements of a particular industry standard (e.g., IATF 16949) or a particular qualification (e.g., UL listed or recognized), Bourns is not responsible for any failure of an individual Bourns® product to meet the requirements of such industry standard or particular qualification even if such industry standard or qualification is a "state of art". Users of Bourns® products are responsible for ensuring compliance with safety-related requirements and standards applicable to their devices or applications.

Bourns® products are not recommended, authorized or intended for use in applications where failure or malfunction may result in personal injury, death, or severe property or environmental damage, such as without limitation nuclear, life-critical medical and certain automotive and aviation applications. Except as set forth in the bullet points below or unless expressly and specifically approved in writing on a case-by-case basis by an authorized Bourns' representative, use of any Bourns® products in such unauthorized high-risk applications is at the user's sole risk.

- Bourns considers implantable/invasive devices and devices/procedures designed as life-supporting or life-sustaining by the U.S. Food and Drug Administration or equivalent organizations outside of the United States as "life-critical" medical applications. Bourns expressly identifies those Bourns® standard products that are suitable for use in typical medical applications that are not life-critical in its publication entitled "Bourns Medical Grade Component Guide."
- Bourns expressly identifies those Bourns® standard products that are suitable for use in typical automotive applications associated with any Automate Safety Integrity Level (ASIL) in its publication entitled "Bourns Automotive Grade Component Guide." Bourns' designation of Bourns® product as compliant with the AEC-Q standard does not by itself mean that Bourns has approved such product for use in an automotive application.
- Bourns expressly identifies Bourns® standard products that are suitable for use in the typical aviation applications/systems requiring System Design Assurance Level (RTCA DO-254 DAL) of C, D or E in its publication entitled "Bourns Civilian Aerospace/Aviation Grade Component Guide." Bourns does not test its products for compliance with United States Federal Aviation Administration standards or any other generally equivalent governmental organization standard applicable to products designed or manufactured for use in aviation applications. Use of Bourns® standard components in aviation applications associated with RTCA DO-254 DAL A or B without proper approval noted above shall be at the user's sole risk.
- Bourns will review and authorize on a case-by-case basis the use of Bourns® standard products which are at least AEC-Q compliant in space-related civil applications (rockets, satellites) with a negotiated cross-waiver and indemnity agreement.

The use and level of testing applicable to Bourns® custom products shall be negotiated on a case-by-case basis by Bourns and the user for which such Bourns® custom products are specially designed. Absent a written agreement between Bourns and the user regarding the use and level of such testing, the above provisions applicable to Bourns® standard products shall also apply to such Bourns® custom products.

Use of Bourns® products or Bourns' technology in military/defense applications must be reviewed with Bourns for compliance with applicable export control laws and embargoes. Users shall not sell, transfer, export or re-export (which includes transfers within a country) any Bourns® products or technology or technical data for use in activities which involve the design, development, production, use or stockpiling of nuclear, chemical or biological weapons or missiles, nor shall they use Bourns® products or technology or technical data in any facility which engages in activities relating to such devices. Further, Bourns® products and Bourns' technology and technical data may not under any circumstance be exported or re-exported to countries subject to international sanctions or embargoes. Bourns® products and technology may not, without prior authorization from Bourns and/or the Government of a country where such product/technology is designed and/or manufactured, be resold, transferred, or re-exported (including within the same country) to any party not eligible to receive commodities, software, and technical data originating in such country.

To the maximum extent permitted by applicable law, Bourns disclaims (i) any and all liability for special, punitive, consequential, incidental or indirect damages or lost revenues or lost profits, and (ii) any and all implied warranties (those not based on parameters specified in Bourns' data sheets and/or specifications), including implied warranties of fitness for particular purpose, non-infringement and merchantability.

For your convenience, copies of this Legal Disclaimer Notice with German, Spanish, Japanese, Traditional Chinese and Simplified Chinese bilingual versions are available at:

Web Page: <https://www.bourns.com/legal/disclaimers-terms-and-policies>

PDF: <https://www.bourns.com/docs/Legal/disclaimer.pdf>