



## Features

- Non-destructive testing of all standard telecom protectors
- User-friendly operation with automatic power-on, test initiation and rest
- Long-life lithium batteries
- Lightweight, hand-held unit for C.O. or O.S.P. use
- Optional A.C. or C.O. battery power adapters
- Optional C.O. rack mounting kit
- Heavy duty, spring loaded 5-pin sockets rated for 1,000,000 operations

## 4020-01 - Surge Protector Test Set for Telecom

### Description

Bourns 4020-01 Surge Protector Test Set is a hand-held, battery-operated tester designed to test industry standard 5-pin modules and station protectors. 5-pin modules may be tested for breakdown, insulation leakage, heat coil resistance and bridge-lifter operation. Station protectors can be tested for breakdown and insulation resistance. The 4020-01 will test standard carbon, gas tube and solid-state protectors as well as silicon avalanche diode and metal oxide varistor devices.

### Operation

Inserting a 5-pin module into one of the blue-coded sockets automatically tests the module for breakdown voltage, insulation leakage and 4-style heat coil resistance. Test values are maintained on integral LCD meters until the module is removed. Separate blue-coded sockets are provided for testing tip and ring.

Inserting a 5-pin module into one of the orange-coded sockets automatically tests for proper operation of the special bridge-lifter circuitry found in standard orange protector modules. Green and red LEDs indicating pass or fail remain lit until the module is removed. Separate orange-coded sockets are provided for testing tip and ring.

Banana jacks and test leads are provided for testing station protectors. Pushing the test button automatically performs the breakdown voltage and insulation leakage tests. The test values are maintained until the test button is released.

### Specifications

#### GENERAL

Power Source .....	3 NEMA 5024 lithium batteries or external 18 VDC
Battery Life .....	>10,000 tests
Accuracy .....	1% $\pm$ 1 count
Operating Temperature .....	0 to +50 °C
Shipping Weight .....	3 lbs.

#### DCBD TEST (See notes 1 & 2)

Voltage Rate of Rise .....	2000 V/s or 200 V/ms internally selected
Test Current .....	1 mA $\pm$ 10 %
Voltage Range .....	90 to 900 volts

#### LEAKAGE TEST (See note 2)

Voltage Rate of Rise .....	90 to 900 volts
Test Current .....	20 $\mu$ A
Voltage Range .....	2000 V/s

#### HEAT COIL RESISTANCE TEST

Resistance Range .....	0 to 199.9 ohms
Storage Temperature .....	-10° to +60°C

#### BRIDGE LIFTER TEST

Test for ON State .....	20 mA and 15 volts
Test for OFF State .....	1 mA and 5 volts

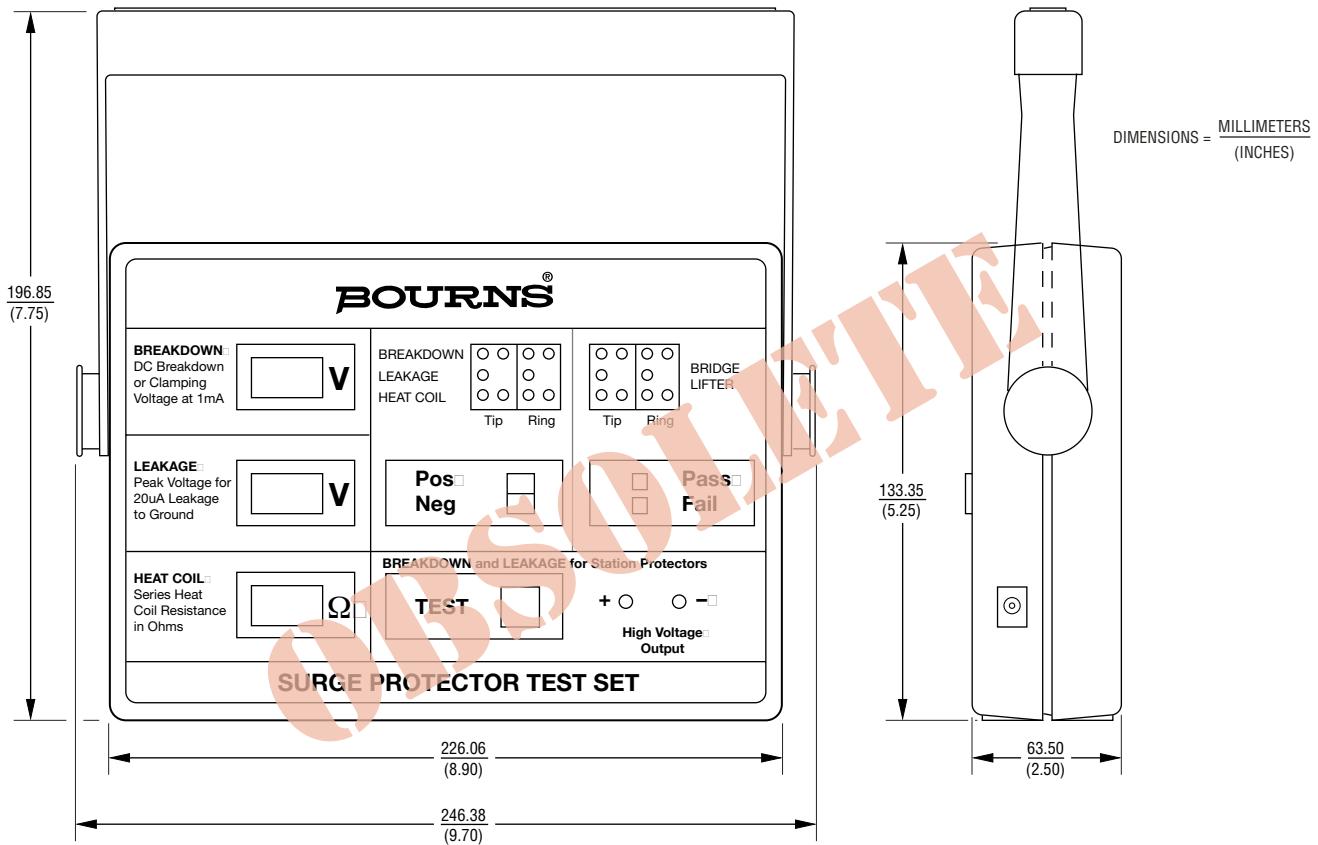
#### Notes:

1. 3-mil carbon blocks - and to a lesser extent, closely spaced gas discharge tubes, can occasionally develop a filament between the electrodes. On these protectors, a separate burn-out operation is recommended to clear the protector when low breakdown voltage and/or leakage voltage are indicated.
2. For P-type solid-state protectors, breakdown voltage  $V_{BO}$  occurs at the device zener voltage  $V_Z$ . Therefore the tester will measure actual  $V_{BO}$ . For N-type solid state protectors,  $V_{BO}$  is higher than  $V_Z$  and in these cases, the tester will measure  $V_Z$ .

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**BOURNS®**

## Product Dimensions



## How To Order

**Part No.**      **Description**  
 4020-01 ..... Test Set with Red & Black Test Leads

### Available Separately:

4020-00-A ..... A.C. Power Adapter  
 4020-00-B ..... C.O. Battery Adapter  
 4020-00-C ..... Rack Mount Kit for C.O.  
 4020-00-D ..... Attache case  
 4020-00-E ..... Spare Leads



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