



## Features

- Rugged 3-electrode BUG-less GDT
- Balanced TRIGARD®
- Self-resetting low resistance sneak current protection with Bourns® PPTC resistors
- Patented Switch-Grade Fail-Short device
- Quick response and high energy handling
- UL Listed per UL497
- Sealed option for harsh environments



This series is currently available but not recommended for new designs.

## 2440 Series 5-Pin Surge Protector

Bourns® 5-Pin Model 2440 series is a new generation of Bourns® telecommunications protectors for superior performance and long life. The 2440 Series protector provides highly reliable overvoltage and self-resetting sneak current protection for copper pair voice-band and high speed data circuits. Bourns' high-efficiency balanced Gas Discharge Tube (GDT) is UL approved for use without a Back-Up Gap (BUG). Its Switch-Grade Fail-Short mechanism ensures superior thermal protection with fast acting, highly reliable response to thermal overload conditions. This combined technology provides lower capacitance, higher reliability and long life. Bourns® PPTC Resistors are used for sneak current protection, providing reliable and self-resetting performance with less than four ohms of resistance.

Bourns® 2440 protectors can be used universally for broadband voice and data circuits including ADSL, ADSL2+, VDSL, VDSL2 and high-speed ethernet. The 2440 Series is an innovative, reliable and effective choice for 5-pin protection of copper pair circuits.

### Characteristics

Tested per UL 497, CSA C22.2, Telcordia GR 974, 1361 and SBC SR 5165.

DC Breakdown .....	280-420 V
AC Breakdown @ 60 Hz .....	280-420 V
Impulse Breakdown	
100 V/μs.....	625 V
1000 V/μs.....	875 V
Insulation Resistance @ 100 Vdc .....	> 1 GΩ
Insertion Loss @ 100 MHz .....	Exceeds CAT5 1
Return Loss @ 100 MHz .....	Exceeds CAT5 1
Capacitance Tip to Ring @ 1 MHz .....	< 1.25 pF typical
Capacitance Tip or Ring to Ground @ 1 MHz .....	< 2.50 pF typical
Impulse Reset <sup>2</sup>	
52 V, 260 mA .....	< 10 ms
135 V, 200 mA.....	< 10 ms
150 V, 200 mA.....	< 150 ms
Impulse Life Characteristics (Tip and Ring to Ground Simultaneously)	
10 A, 10/1000 μs.....	> 3000 operations
100 A, 10/1000 μs.....	> 300 operations
300 A, 10/1000 μs.....	> 100 operations
500 A, 10/1000 μs.....	> 400 operations <sup>3</sup>
2,000 A, 10/250 μs .....	> 25 operations
5,000 A, 20/100 μs.....	> 2 operations
20,000 A, 8/20 μs .....	> 1 operation
AC Life Characteristics (Tip and Ring to Ground Simultaneously)	
0.5 A rms continuous.....	> 30 seconds
1 A rms, 1 second, 600 ft. cable.....	> 60 operations
1 A rms, 1 second, 1 mile cable .....	> 60 operations
10 A rms, 1 second .....	> 5 operations
65 A rms, 11 cycles .....	> 1 operation <sup>3</sup>
120 A rms, 0.1 second .....	1 operation
High Current Capability and Thermal Operation (T/R to Ground) .....	> 30 Arms, simultaneously
Storage and Operating Temperature .....	-55 to +85 °C
Sneak Current Characteristics	
Resistance (No Heat Coil Inductance).....	< 4 ohms
Transition Current @ -40 °C (800 mA), +20 °C (540 mA), +65 °C (300 mA) .....	< 210 seconds
Rated Current @ -40 °C (100 mA), +20 °C (100 mA), +65 °C (100 mA) .....	> 3 hours
Impulse Life 10 x 1000 μs @ -40 °C, +20 °C, +65 °C .....	25 A ELTGS

Telcordia analyzed for controlled (non-sealed) and uncontrolled high exposure (sealed) environments per GR 974 and SBC SR 5165. Please refer to Telcordia Analysis Report DA-1547 Volumes 1 and 2.

#### Notes:

<sup>1</sup> Tested according to Category 5 requirements.

<sup>2</sup> Network applied.

<sup>3</sup> Per Rus PE 80.

Line to Line voltage is approximately 1.8 to 2 times the stated Line to Ground breakdown voltage.



**WARNING**  
**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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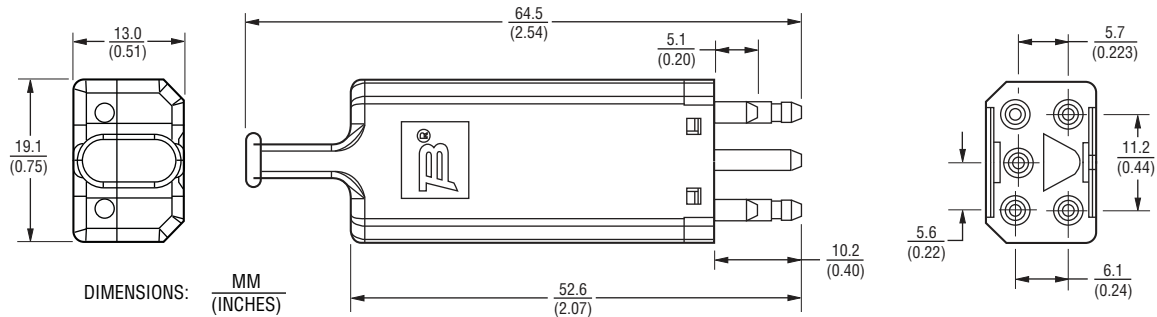
## Features (Continued)

- Meets test requirements of GR 974, GR 1361, SBC SR 5165 and RUS PE-80
- Telcordia Analysis report DA-1547
- Test point access option
- Ideal for high-speed networks in high-exposure environments
- Solid brass, gold-plated pins

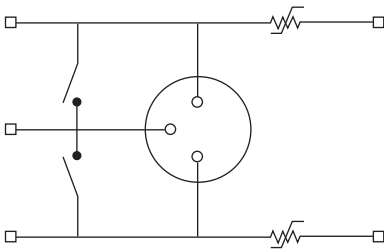
## 2440 Series 5-Pin Surge Protector

**BOURNS®**

### Product Dimensions



### Schematic



### How To Order

**2440 - 4 x - x - xx**

**Model Number Designator** \_\_\_\_\_

**Overcurrent Protection** \_\_\_\_\_

**Housing Color** \_\_\_\_\_

1 = Black  
3 = Red  
6 = Blue  
7 = Violet  
9 = Orange  
10 = Yellow

**Pin Plating** \_\_\_\_\_

G = Gold Plated  
N = Tin Plated (Ground pin is tin plated on all models)

**Housing Options** \_\_\_\_\_

S = Sealed  
T = Test Points  
ST = Sealed and Test Points

**Examples:**

- 2440-41-G-T = Black housing, 4 ohm self-resetting, gold-plated pins, test points
- 2440-43-N = Red housing, 4 ohm self-resetting, tin-plated pins, no test points

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