


## Features

- Superior protection at a low price
  - Patented Switch-Grade Fail-Short Device
  - Quick response and high energy handling
  - Low capacitance (<2.5 pF) - ideal for high-speed networks in high exposure environments
  - Meets test requirements of Telcordia GR 974, GR1361, SBC SR 5165 and RUS PE-80
  - Solid brass, gold plated pins
  - Test point access option
  - Sealed option for harsh environments
-  LISTED per UL497 (File E53117)

## 2420 Series 5-Pin Gas Discharge Tube (GDT) Protector

The Bourns® 3-type 2420 overvoltage protection modules utilize Bourns' proprietary high-efficiency gas discharge tube with our patented Switch-Grade Fail-Short mechanism to provide robust and reliable surge and thermal overload protection at a very competitive price. The 2420 Series is based on Bourns' three-terminal common chamber GDT. This design provides greatly improved and balanced turn-on characteristics for overvoltage protection. The GDT is UL approved for use without a back-up device. Air back-up devices can become contaminated; the circuitry of the 2420 eliminates this possibility. Our unique Switch-Grade Fail-Short device provides more reliable thermal overload protection compared to commonly used solder pellet or insulation burn-through designs.

Bourns® 2420 Series 5-Pin protectors can be used universally for broadband voice and data circuits including ADSL, ADSL2+, VDSL, VDSL2 and high-speed Ethernet. The 2420 Series is an economical, reliable and low capacitance choice for overvoltage protection of copper pair circuits.

### Characteristics

Test Methods 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 Category 5
Return Loss @ 100 MHz .....	Exceeds Category 5
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>1</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>2</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>2</sup>
120 A rms, 0.1 second .....	1 operation
High Current Capability and Thermal Operation (Tip and Ring to Ground Simultaneously) .....	>30 A rms, 15 min.
Storage and Operating Temperature .....	-55 to +85 °C

Telcordia analyzed for controlled (non-sealed) and uncontrolled, high-exposure (sealed) environments per GR 974 and SBC SR 5165. Telcordia Technical Analysis Report DA-1597.

### Notes:

<sup>1</sup> Network applied

<sup>2</sup> Per RUS PE-80

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

REV. I 04/08

Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

# 2420 Series 5-Pin Gas Discharge Tube (GDT) Protector

**BOURNS®**

## How To Order

2420 - X XX - X - XX

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

Module Length \_\_\_\_\_

3 = Standard: 52.37 mm (2.06 in.)      7 = Special Short: 41.19 mm (1.62 in.)

Housing Color/Circuit Type \_\_\_\_\_

1 = Black/Standard      6 = Blue/Standard      10 = Yellow/Standard  
 3 = Red/Special      9 = Orange/Standard Service (non-Bridgelifter)

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

G = Gold Plated      N = Tin Plated

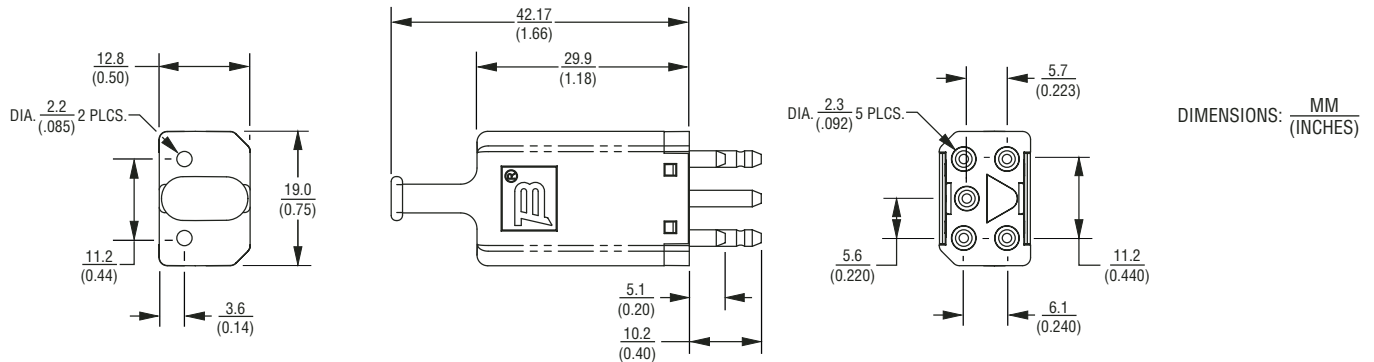
Special Options \_\_\_\_\_

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

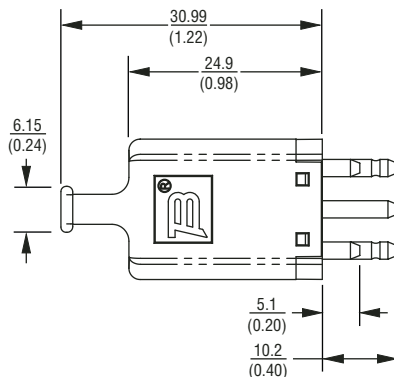
Examples: 3B1E = 2420-31-G (black, no test points)      3C1E = 2420-31-G-T (black, with test points)  
 3B3E = 2420-33-G (red, no test points)      3C3E = 2420-33-G-T (red, with test points)

## Product Dimensions

### 2420-3 MODULE



### 2420-7 MODULE



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