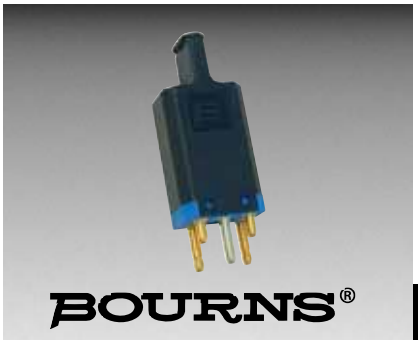


## Features

- Superior protection at a low price
- Balanced TRIGARD® protection
- 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

This series is obsolete and not recommended for new designs.

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

The Bourns® 3-type Model 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 listed for use without a back-up device. Air back-up devices can become contaminated; the circuitry of the 2420 eliminates the air back-up gap and thus the possibility of its contamination. 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® Model 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 [1] | |
| 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[2] |
| 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[2] |
| 120 A rms, 0.1 second | 1 operation |
| High Current Capability and Thermal Operation (Tip and Ring to Ground) | >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-1547.

**Notes:**

[1] Network applied

[2] 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

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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## Features (Continued)

- Meets test requirements of Telcordia GR 974, GR1361, SBC SR 5165 and RUS PE-80
- Telcordia Analysis report DA-1547
- c UL us Listed per UL 497 (File: 53117)
- Solid brass, gold-plated pins
- Test point access option
- Sealed option for harsh environments

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

BOURNS®

## How To Order

**2420 - X XX - G - 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  7 = Violet/Standard
3 = Red/Special  9 = Orange/Standard Service (non-Bridgelifter)
6 = Blue/Standard  10 = Yellow/Standard

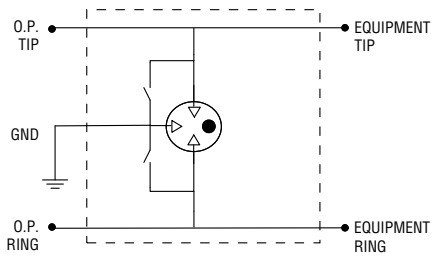
**Pin Plating**
G = Gold Plated

**Special Options**
S = Sealed Case  ST = Sealed Case and Test Points*
T = Test Points*

*T and ST options are not available on 2420-7x short module.

*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)*

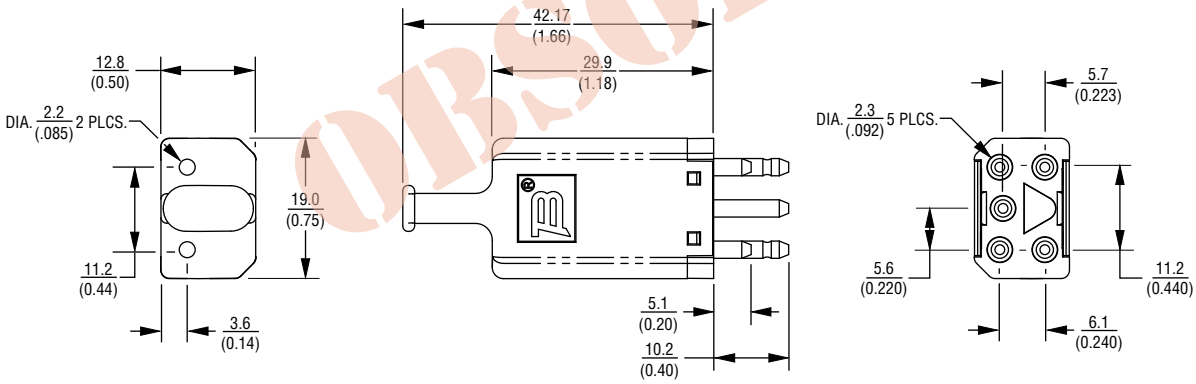
## Schematic




OBSOLETE

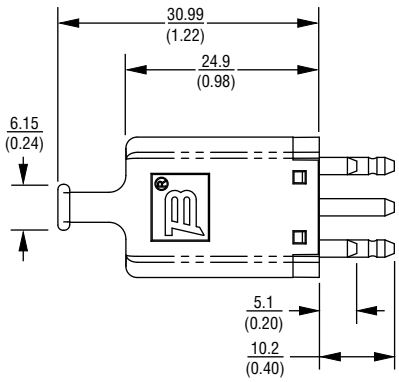
## Product Dimensions

### 2420-3 MODULE




### 2420-7 MODULE

DIMENSIONS: MM (INCHES)




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