

3B1E & 4B1E

5 PIN - Heavy Duty Gas Tube - Surge Protection Module



Product Specifications

UL 497 Primary Protector for Communication Circuits

The 3B1E is a premium 5 pin, 3-element gas tube protector module that is designed to provide excellent transient and power fault protection for most standard telephone line applications.

The 3-element gas tube provides superior balanced protection. An overvoltage condition on either side of the circuit will result in the triggering of the gas tube. The ionized gas in the common chamber provides a low impedance path to ground for both sides of the circuit.

The 4 - Series features PTC (positive temperature coefficient) technology. These optional self-resetting current limiters provide effective protection from 'sneak current' faults. The PTC is vastly superior to the heat coil solution, which requires that the module be replaced after each 'sneak current' event.

Heavy Duty Surge Handling Capability

Superior Common Chamber Design

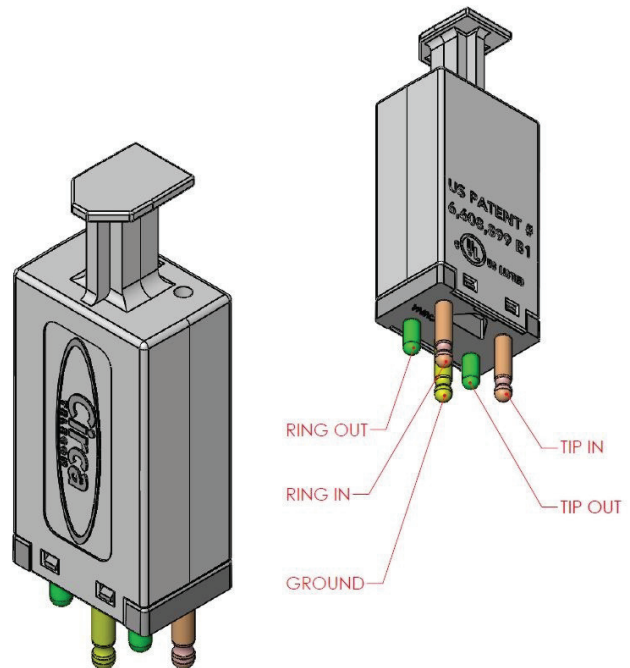
Balanced Operation

UL Listed and RUS Approved

Design to Exceed Telcordia Standards

Integrated Test Points

ISO 9001 Certified Manufacturer



Ordering Information

Model Number	Stock Code	Application	Color	Clamping Voltage
3B1E	770200	Life Safety and Central Office Environments	Black	350V
4B1E	770201	Life Safety and Central Office Environments w/PTC Current Limiter	Black	350V
3B3E	770202	Life Safety and Central Office Environments	Red	350V

RUS Approved Material - 2011 Edition RUS Publication 344-2 - Section 4.1.3 and 4.2.1

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3B1E & 4B1E

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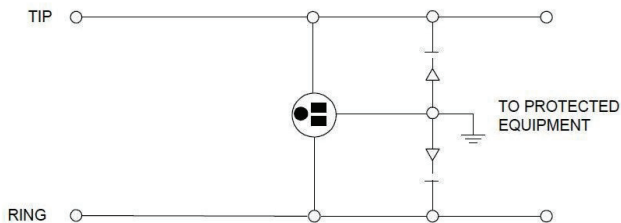


Product Specifications

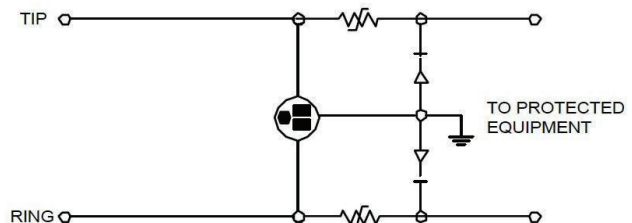
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Module	3B1E	4B1E
DC Break Over - @ 2kVps	350V	350V
Impulse Breakdown Voltage		
@ 100V/μS	750V	750V
@ 1kV/μS	900V	900V
Response Time	4000 - 5000 nsec	4000 - 5000 nsec
DC Holdover Voltage	135V < 150ms	135V < 150ms
Surge Life ^(1, 2)		
@ 10A @ 10 x 1000/μS	> 3000 Operations	> 3000 Operations
@ 100A @ 10 x 1000/μS	> 300 Operations	> 300 Operations
@ 10kA @ 10 x 1000/μS	10 Operations	10 Operations
@ 20kA @ 10 x 1000/μS	1 Operation	1 Operation
@ 65A rms, 11 cycles, 130A	1 Operation	1 Operation
@ 10A rms, 1 sec, 20A	10 Operations	10 Operations
Capacitance		
1V rms @ 1Khz, 50V DC	10 pF max	10 pF max
Insulation Resistance		
@ 50V DC	100M Ω	100M Ω
Fail-Safe Operation		
@ 1.0A rms	< 50 Seconds	< 50 Seconds
@ 5.0A rms	< 15 Seconds	< 15 Seconds
@ 20A rms	< 10 Seconds	< 10 Seconds
@ 60A rms	< 3 Seconds	< 3 Seconds
Current Limiters (4 Series with PTC)		
Hold Current @ 20° C	N/A	145 mA
Line Series Resistance	N/A	4 - 6 Ω

3B1E - Symmetrical



4B1E - Symmetrical



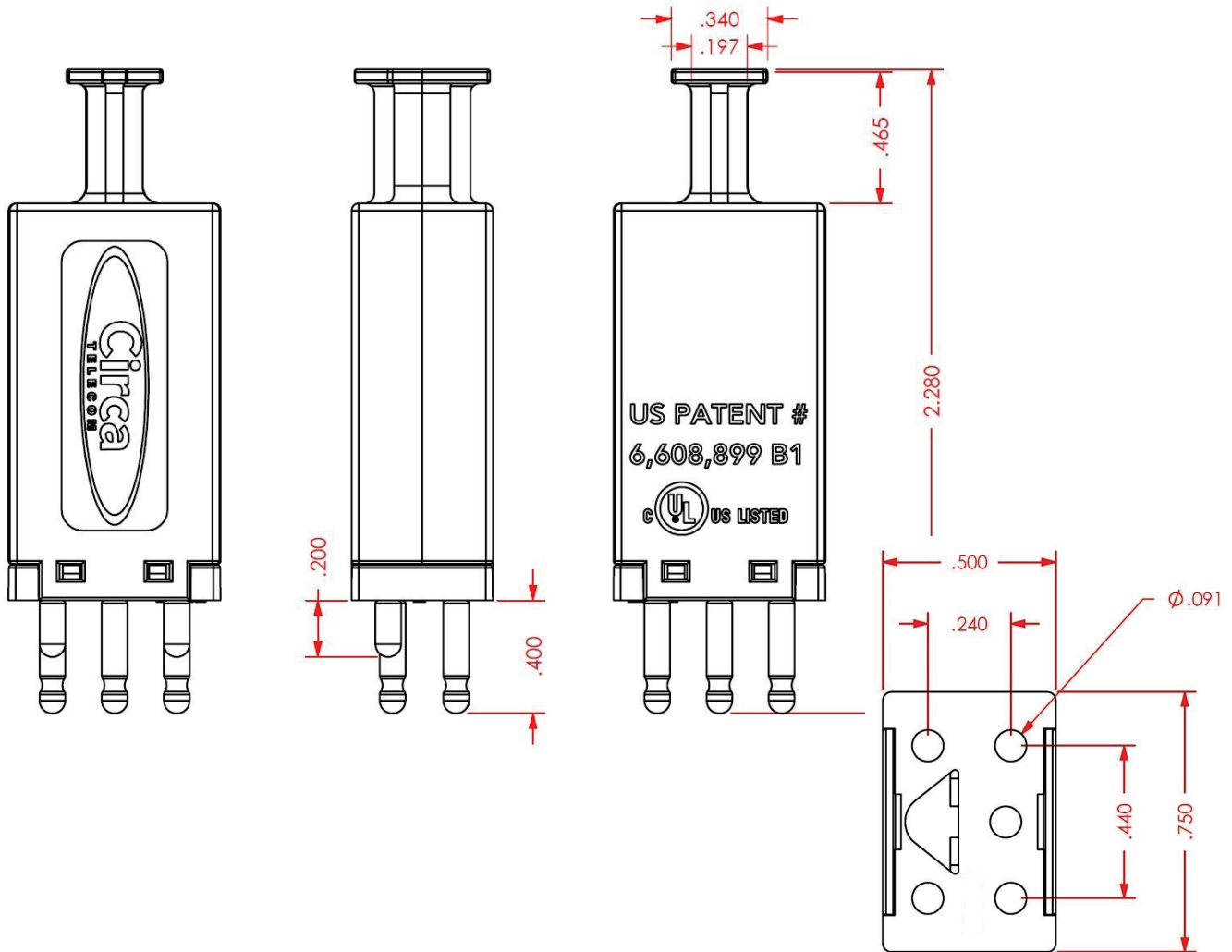
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Physical Dimensions

UL 497 Primary Protector for Communication Circuits



Notes

⁽¹⁾ Total surge rating is 2x listed with respect to ground during simultaneous surge.

⁽²⁾ Meets Bellcore TR-NWT-000974 service life requirements.

Pin alloy refers to tip and ring pins. Unless otherwise noted, all ground pins are tin.

Previous Model Numbers: CT3B1E-BAL, C3B1E, C3B1EW, 3B1EW, 3C1E, 3C1EW

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