



## SURGE PROTECTION MODULES

### 5 PIN - SOLID STATE MODULE SERIES

## 3B1FS-240 & 4B1FS-240

5 PIN - Solid State - Surge Protection Module



### Product Specifications

#### UL 497 Primary Protector for Communication Circuits

The 3B1FS-240 is a premium series 5 PIN solid state protector module that is designed to provide superior transient and power fault protection for most standard telephone line applications.

These solid state modules are suited to applications that require the protection of sensitive telephone equipment due to their nanosecond reaction time.

The characteristics of the solid state protector are far superior to gas tube technology in speed and are virtually immune to overshoot, aging and failure due to repeated tripping.

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.

Nanosecond Response Time

Internal Failsafe Mechanism that Permanently  
Grounds the Module Under Sustained High Current  
Conditions

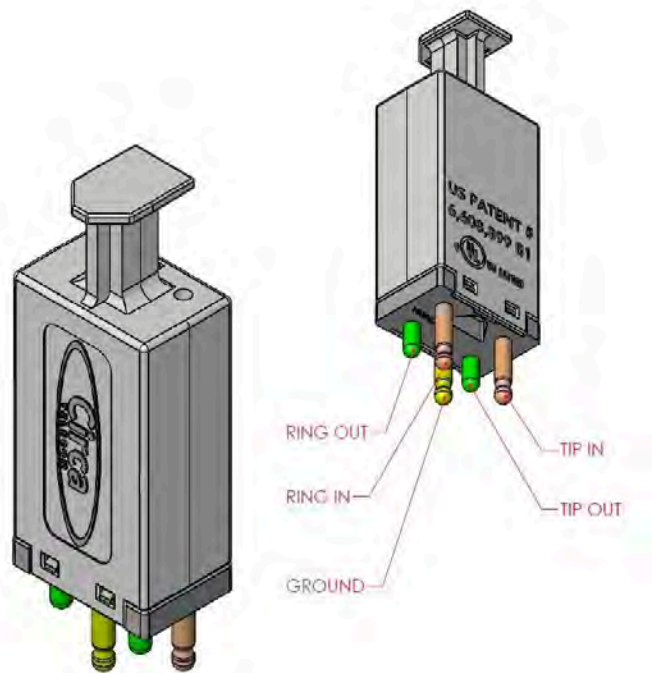
Balanced Operation

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
3B1FS-240	770121	Equipment Protection for Analog or Digital Lines	Black	240V
4B1FS-240	770125	Equipment Protection for Analog or Digital Lines (4 Series has PTC)	Black	240V

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

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#### Module

DC Break Over - @ 100V/ $\mu$ S

Peak Pulse Current <sup>(1)</sup>

@ 8 x 20  $\mu$ S

@ 10 x 160  $\mu$ S

@ 10 x 1000  $\mu$ S

Response Time

Holding Current

Surge Life <sup>(2)</sup>

@ 10A @ 10 x 1000/ $\mu$ S

@ 100A @ 10 x 1000/ $\mu$ S

@ 65A rms, 11 cycles, 130A

@ 10A rms, 1 sec, 20A

Capacitance

1V rms @ 1KHz, 50V DC

Insulation Resistance

@ 50V DC

Fail-Safe Operation

@ 1.0A rms

@ 5.0A rms

@ 20A rms

@ 60A rms

Current Limiters (4 Series with PTC)

Hold Current @ 20° C

Line Series Resistance

#### 3B1FS-240

240V

250A

150A

100A

< 5 nanoseconds

200 mA

Unlimited Operations

> 300 Operations

> 60 Operation

> 20 Operations

< 45 pF

100M  $\Omega$

< 50 Seconds

< 15 Seconds

< 10 Seconds

< 3 Seconds

N/A

N/A

#### 4B1FS-240

240V

250A

150A

100A

< 5 nanoseconds

200 mA

Unlimited Operations

> 300 Operations

> 60 Operation

> 20 Operations

< 45 pF

100M  $\Omega$

< 50 Seconds

< 15 Seconds

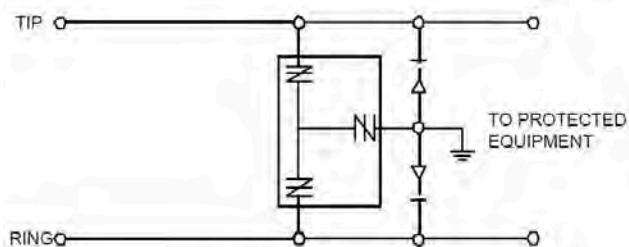
< 10 Seconds

< 3 Seconds

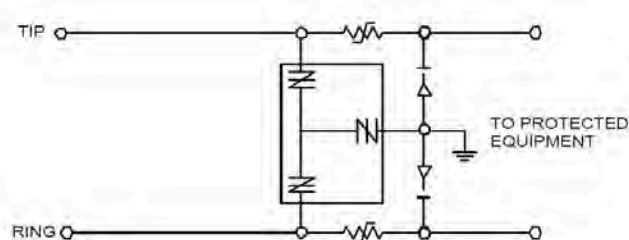
145 mA

4 - 6  $\Omega$

3B1FS-240 - Symmetrical



4B1FS-240 - Symmetrical





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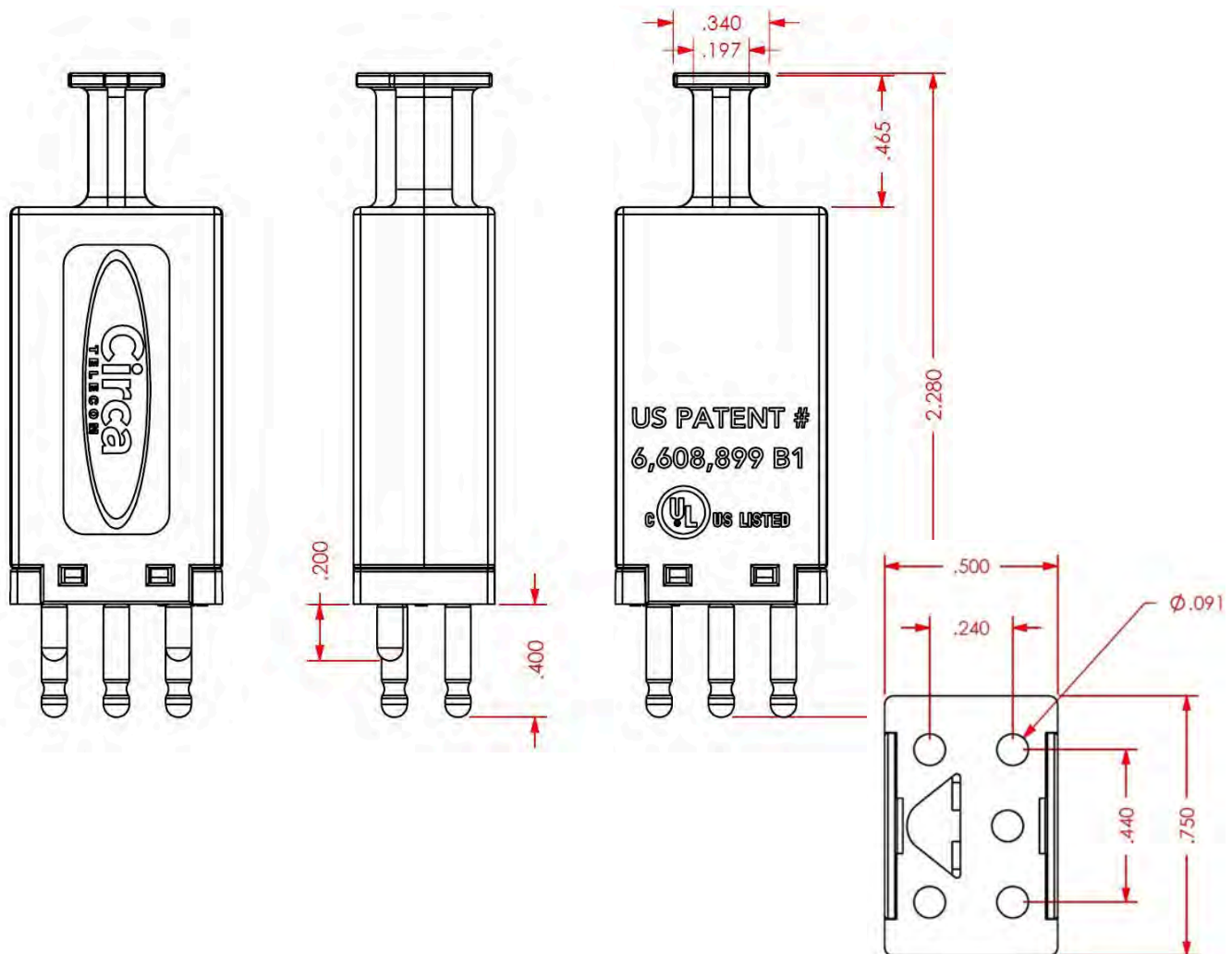
## 3B1FS-240 & 4B1FS-240

5 PIN - Solid State - Surge Protection Module



### Physical Dimensions

#### UL 497 Primary Protector for Communication Circuits



### Notes

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

<sup>(2)</sup> 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: C3B1FS, CT3B1FS, CT3B1FS-BAL, CT3B1FS/HD CT4B1FS-PTC/BAL

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