

# Delta™ Series Protector

## Hybrid Protector Module

CPE/Premise Wiring

Utility/Municipality

Wireless



The Delta™ Protector provides premium, high-speed protection for sensitive communications and data equipment. The module of choice in high lightning areas, the Delta offers superior protection from overvoltages and overcurrents preventing costly damages to equipment.

The Delta™ Protector coordinates very high speed diodes with a powerful, three-element gas tube and heat coils. When exposed to high voltage conditions, the diode, with a response time of less than 5 nanoseconds, reacts to clamp the voltage until the gas tube ionizes and shunts the energy to ground. The 75V module is particularly effective in protecting non-digital switching systems.

### KEY PRODUCT BENEFITS

- ▶ Available in 75V, 230V, or 350V
- ▶ Available in single or five-pin configurations
- ▶ Five-pin configuration compatible with other manufacturers' equipment
- ▶ Quality components: high-speed diode, superior 3-element gas tube, and dependable sneak fuse or heat coil
- ▶ Reduces service calls and repair costs

### INDUSTRY STANDARDS

- ▶ Listed to UL497



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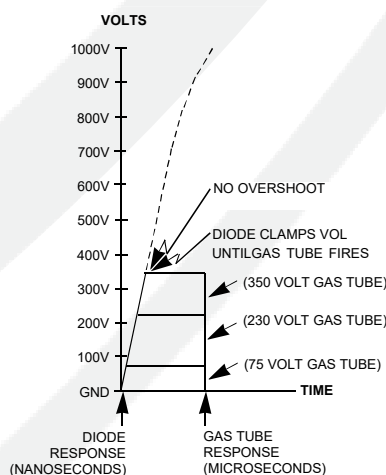
Phone: 631.789.5000

Fax: 631.789.5063

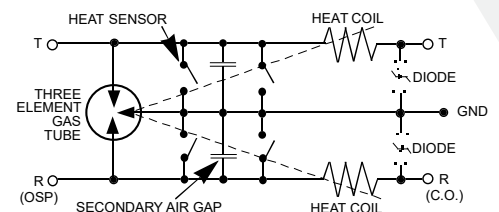
Toll Free: 888.844.4720

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Protection Input & Output Waveform



EQUIVALENT CIRCUIT



MODEL95BCDXN DELTA™ PROTECTOR 3-ELEMENT GAS TUBE/HEAT COIL SECONDARY AIR GAP/BIPOLAR DIODES AND TEST POINTS

## ELECTRICAL SPECIFICATIONS

|  | 75 Volt  | 230 Volt   | 350 Volt   | Test Parameters*                      |
|--|--|--|--|---------------------------------------|
| <b>DC Breakdown</b>                                  | 63-95V   | 200-270V   | 300-370V   | 2000V/Sec max                         |
| <b>Clamping Voltage</b>                              | 144V Max @ 10A   | 375V Max @ 4A  | 500V Max @ 3A  | IEEE P465.4/D5                        |
| <b>Clamping Time</b>                                 | <10 nSec   | <10 nSec   | <10 nSec   | IEEE P465.4/D5                        |
| <b>Standoff Voltage</b>                              | 81V  | 260V   | 375V   | IEEE P465.4/D5                        |
| <b>Capacitance</b>                                   | <100 pF  | <100 pF  | <100 pF  | GTS 8345                              |
| <b>Rated Peak Pulse Power (1 Millisecond)</b>        | 1500 W   | 1500 W   | 1500 W   | IEEE P465.4/D5 (Reference Definition) |
| <b>Reverse Leakage Current (At Standoff Voltage)</b> | <5μ A  | <5μ A  | <5μ A  |                                       |
| <b>AC Discharge</b>                                  | 180 A RMS**  | 90 A RMS   | 90 A RMS   | 11 Cycles of 60 Hz Waveform           |
| <b>Fail-safe Operation</b>                           | 100 Sec @ 0.5A<br>50 Sec @ 1.0A<br>15 Sec @ 5.0A<br>10 Sec @ 20.0A | 100 Sec @ 0.5A<br>50 Sec @ 1.0A<br>15 Sec @ 5.0A<br>10 Sec @ 20.0A | 100 Sec @ 0.5A<br>50 Sec @ 1.0A<br>15 Sec @ 5.0A<br>10 Sec @ 20.0A |                                       |
| <b>Line Series Resistance***</b>                     | 4 ohms max.  | 4 ohms max.  | 4 ohms max.  | Line in/Line out                      |
| <b>Insulation Resistance (Minimum)</b>               | 100 M Ω  | NA   | NA   | 50 VDC                                |
| <b>DC Holdover</b>                                   | 52V<br>260mA   | 52V, 260 mA<br>135V, 200 mA<br>150V, 140 mA                        | 52V, 260 mA<br>135V, 200mA<br>150V, 140mA                          | 150 mSec max. to extinguish           |

Operating Temperature: - 13°F to + 149°F (- 25°C to + 65°C)

Heat Coil Specifications:

The device will conduct up to 360 mA.

The device will short/open in less than 210 Sec. when subjected to 540 mA.

The device will short/open in less than 10 Sec. when subjected to 1A or more.

\* *Tested per specification REA PE-80*

\*\* *9 cycles of 50 Hz Waveform*

\*\*\* *High resistance heat coil available upon request*

## ORDERING INFORMATION

| CONFIG.           | 75 VOLT                        | 230 VOLT                        | 350 VOLT                        | OVER CURRENT    | BODY COLOR | APPLICATION      | REPLACEMENT FOR          |
|-------------------|--------------------------------|---------------------------------|---------------------------------|-----------------|------------|------------------|--------------------------|
| <b>FIVE-PIN</b>   | <b>195BCDXN-75<sup>†</sup></b> | <b>195BCDXN-230<sup>†</sup></b> | <b>195BCDXN-350<sup>†</sup></b> | 4 Ohm Heat Coil | Black      | Standard Circuit | 195BCSDXN-75, -230, -350 |
| <b>SINGLE-PIN</b> | <b>95BCDXN-75<sup>†</sup></b>  | <b>95BCDXN-230<sup>†</sup></b>  | <b>95BCDXN-350<sup>†</sup></b>  | 4 Ohm Heat Coil | Black      | Standard Circuit | 95BCSDXN-75, -230, -350  |

<sup>†</sup> *Stock Item.*

*Call for pricing & availability for other configurations.*