LP-DOE, POE, POE-PT & PAE
Data Line Over Voltage Protection

- Tested to RFC2544 extended methods
- Meets Network Equipment Building System (NEBS) Level 3
- Excellent data integrity
- Lowest surge and energy throughput
- Lowest error rate
- Shielded enclosure
- IP67 weatherized version available

The Times-Protect® Data Line protector family utilizes a unique leading edge technology to provide surge protection at a level not previously available for twisted pair Cat 5e and Cat 6 cables. The LP-POE-PT-1G, POE-1G, DOE-1G and PAE-100 have been tested to RFC2544 extended test methods as illustrated in Figure 1. The surge protection performance of this product family surpasses the performance of other available competitive products by a wide margin. The maximum surge rating for these products is only limited by the RJ-45 connector surge voltage and current handling capability.

LP-POE-PT-1G GIGABIT POWER OVER ETHERNET (DC PASS-THROUGH)
- Protection for applications where DC is already present
- Surge Protection per IEEE 802.3at for Gigabit PoE, Modes A & B
- Pins protected to chassis ground: All pins

LP-POE-1G GIGABIT POWER OVER ETHERNET (DC INJECTOR)
- Protection for applications requiring 48-60Vdc injection
- Surge Protection per IEEE 802.3at for Gigabit PoE, Modes A & B
- Pins protected to chassis ground: All pins

LP-DOE-1G 1000 BASE-T ETHERNET DATA
- Protection for Gigabit Data applications
- Surge Protection per IEEE 802.3ab
- Pins Protected to chassis ground: All pins

LP-PAE-100 100 BASE-T POWER Over ETHERNET
- Protection for 10/100 Base-T
- Surge Protection per IEEE 802.3at, Mode B
- Data Pin Pairs (1-2) (3-6) DC Pin Pairs (4-5) (7-8)
### Times-Protect®

#### Data Test Method:
- Extended RFC2544 Test

**Protected pins to chassis:**
- All pins

**Maximum discharge current:**
- 300A, 10/1000uS, Telcordia GR-1089
- 5kA 8/20uS per IEC 61000-4-5

**Repetitive discharge:**
- 100A, 10/1000uS, Telcordia GR-1089
- 3kA 8/20uS per IEC 61000-4-5

- **Impedance:** 100 Ohms nominal

### Mechanical

**Connector Type:**
- RJ45 jack shielded

**Dimensions:**
- 4.68" x 2.22" x 1.25"

**Weight:**
- 3.7 oz.

**Mounting:**
- Chassis or panel

### Environmental

**Operating Temperature:**
- -40º - +65 º C

**Relative humidity:**
- 0 to 90% non-condensing

**RoHS:**
- Compliant

### Performance Specifications

<table>
<thead>
<tr>
<th></th>
<th>LP-POE-PT-1G</th>
<th>LP-POE-1G</th>
<th>LP-DOE-1G</th>
<th>LP-PAE-100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application:</strong></td>
<td>PoE IEEE 802.3at Modes A&amp;B, 1Gb (DC PASS-THROUGH)</td>
<td>PoE IEEE 802.3at Modes A&amp;B, 1Gb (INJECTOR)</td>
<td>Gigabit Ethernet IEEE 802.3ab, 1Gb</td>
<td>10/100 Base-T PoE IEEE 802.3at Mode B</td>
</tr>
<tr>
<td><strong>DC Connector Type:</strong></td>
<td>N/A</td>
<td>OST EDSTLZ 1150/2</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Data Rate:</strong></td>
<td>1000 Mbps</td>
<td>1000 Mbps</td>
<td>1000 Mbps</td>
<td>100 Mbps</td>
</tr>
<tr>
<td><strong>Protected Pin Pairs:</strong></td>
<td>(1-2) (3-6) (4-5) (7-8)</td>
<td>(1-2) (3-6) (4-5) (7-8)</td>
<td>(1-2) (3-6) (4-5) (7-8)</td>
<td>(1-2) (3-6)</td>
</tr>
<tr>
<td><strong>DC Pin Pairs Line:</strong></td>
<td>(1-2) (4-5)</td>
<td>(1-2) (4-5)</td>
<td>N/A</td>
<td>(4-5)</td>
</tr>
<tr>
<td><strong>DC Pin Pairs Return:</strong></td>
<td>(3-6) (7-8)</td>
<td>(3-6) (7-8)</td>
<td>N/A</td>
<td>(7-8)</td>
</tr>
<tr>
<td><strong>DC Voltage:</strong></td>
<td>+/-48VDC nominal +/-60VDC max</td>
<td>+/-48VDC nominal +/-60VDC max</td>
<td>N/A</td>
<td>+/-48VDC nominal +/-60VDC max</td>
</tr>
<tr>
<td><strong>Maximum DC Current</strong></td>
<td>600mA</td>
<td>600mA</td>
<td>N/A</td>
<td>600mA</td>
</tr>
<tr>
<td><strong>Surge Let Through Voltage</strong></td>
<td>150V L-L, 80V L-G</td>
<td>&lt;30V L-L (Data)</td>
<td>&lt;30V L-L</td>
<td>&lt;30V L-L (Data)</td>
</tr>
<tr>
<td><strong>100A 10/1000us Input Current Wave Shape</strong></td>
<td>&lt;15V L-G (Data)</td>
<td>&lt;15V L-G (DC)</td>
<td>&lt;15V L-G (DC)</td>
<td>&lt;100V L-R (Data)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;50V L-G (DC)</td>
<td></td>
<td>&gt;50V L-G (DC)</td>
</tr>
</tbody>
</table>

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LP-POE-PT-1G-W, POE-W, DOE-W & PAE-W
Data Line Over Voltage Protection

- IP67 Weatherized for outdoor use
- Tested to RFC2544 extended methods
- Meets Network Equipment Building System (NEBS) Level 3
- Excellent data integrity
- Lowest surge and energy throughput
- Lowest error rate
- Indoor version available

The Times-Protect® Data Line protector family utilizes a unique leading edge technology to provide surge protection at a level not previously available for twisted pair Cat 5e and Cat 6 cables. The LP-POE-PT-1G-W, POE-1G-W, DOE-1G-W and PAE-100-W have been tested to RFC2544 extended test methods as illustrated in Figure 1. The surge protection performance of this product family surpasses the performance of other available competitive products by a wide margin. The maximum surge rating for these products is only limited by the RJ-45 connector surge voltage and current handling capability.

LP-POE-PT-1G-W GIGABIT POWER OVER ETHERNET (DC PASS-THROUGH)
- Protection for applications where DC is already present
- Surge Protection per IEEE 802.3at for Gigabit PoE, Modes A & B
- Pins protected to chassis ground: All pins

LP-POE-1G-W GIGABIT POWER OVER ETHERNET (DC INJECTOR)
- Protection for applications requiring 48-60Vdc injection
- Surge Protection per IEEE 802.3at for Gigabit PoE, Modes A & B
- Pins protected to chassis ground: All pins

LP-DOE-1G-W 1000 BASE-T ETHERNET DATA
- Protection for Gigabit Data applications
- Surge Protection per IEEE 802.3ab
- Pins Protected to chassis ground: All pins

LP-PAE-100-W 100 BASE-T POWER OVER ETHERNET
- Protection for 10/100 Base-T
- Surge Protection per IEEE 802.3at, Mode B
- Data Pin Pairs (1-2) (3-6) DC Pin Pairs (4-5) (7-8)
### Times-Protect

**Data Test Method:** Extended RFC2544 Test  
Protected pins to chassis: All pins  
Maximum discharge current: 300A, 10/1000uS, Telcordia GR-1089  
5kA 8/20uS per IEC 61000-4-5  
Repetitive discharge: 100A, 10/1000uS, Telcordia GR-1089  
(10 cycles max) 3kA 8/20uS per IEC 61000-4-5  
Impedance: 100 Ohms nominal  
**Mechanical**  
Connector Type: RJ45 jack shielded  
Dimensions With Mounting HDWR: 6.1” x 5.4” x 3.1”  
Weight: 11 oz.  
Mounting: pole or panel  
**Environmental**  
Operating Temperature: -40º - +65 º C  
Relative humidity: 0 to 90% non-condensing  
RoHS: Compliant  
Weatherization: IP-65  
**Application:** PoE IEEE 802.3at Modes A&B, 1G b (DC PASS-THROUGH)  
PoE IEEE 802.3at Modes A&B, 1G b (INJECTOR)  
Gigabit Ethernet IEEE 802.3ab, 1G b  
10/100 Base-T PoE IEEE 802.3at Mode B  
**DC Connector Type:** N/A  
DC Cable Entry  
**Data Rate:** 1000 Mbps  
1000 Mbps  
N/A  
N/A  
**Protected Pin Pairs:** (1-2) (3-6) (4-5) (7-8)  
(1-2) (3-6) (4-5) (7-8)  
(1-2) (3-6) (4-5) (7-8)  
(1-2) (3-6)  
**DC Pin Pairs Line:** (1-2) (4-5)  
(1-2) (4-5)  
N/A  
(4-5)  
**DC Pin Pairs Return:** (3-6) (7-8)  
(3-6) (7-8)  
N/A  
(7-8)  
**DC Voltage:** +/-48VDC nominal +/-60VDC max  
N/A  
N/A  
N/A  
**Maximum DC Current**  
600mA  
600mA  
N/A  
600mA  
**Surge Let Through Voltage**  
100A 10/1000us Input  
150V L-L  
80V L-G  
<30V L-L (Data)  
<15V L-G (Data)  
<100V L-R (DC)  
<50V L-G (DC)  
150V L-L (Data)  
15V L-G (Data)  
<100V L-R (DC)  
<50V L-G (DC)  
150V L-L (Data)  
15V L-G (Data)  
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<50V L-G (DC)  
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