



## LP-DOE, POE & 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



## Lightning and Surge Protection for The 21st Century™

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-DOE-1-G, LP-POE-1G and LP-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-DOE-1G 1000 BASE-T ETHERNET DATA

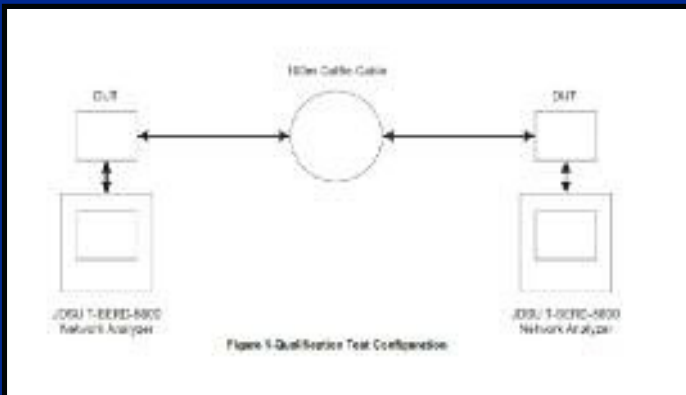
- 1GB performance per RFC2544 test methods at 100m
- Data protection on all pins, common and differential modes
- Surge Let-through voltage on data lines limited to 20V peak @ 3kA 8x20uS surge test current
- Metallic enclosure with chassis to ground
- Designed for indoor telecom and network applications

### LP-POE-1G 1000 BASE-T POWER OVER ETHERNET

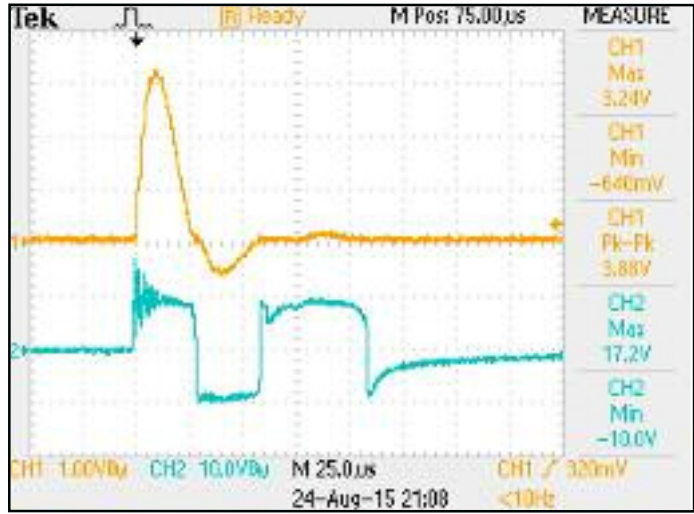
- 1GB performance per RFC2544 test methods at 100m
- Data protection on all pins, common and differential modes
- Surge Let-through voltage on data lines limited to 20V peak @ 3kA 8x20uS surge test current
- 60VDC protection on DC pins
- Metallic enclosure with chassis to ground

### LP-PAE-100 100 BASE-T POWER AND ETHERNET

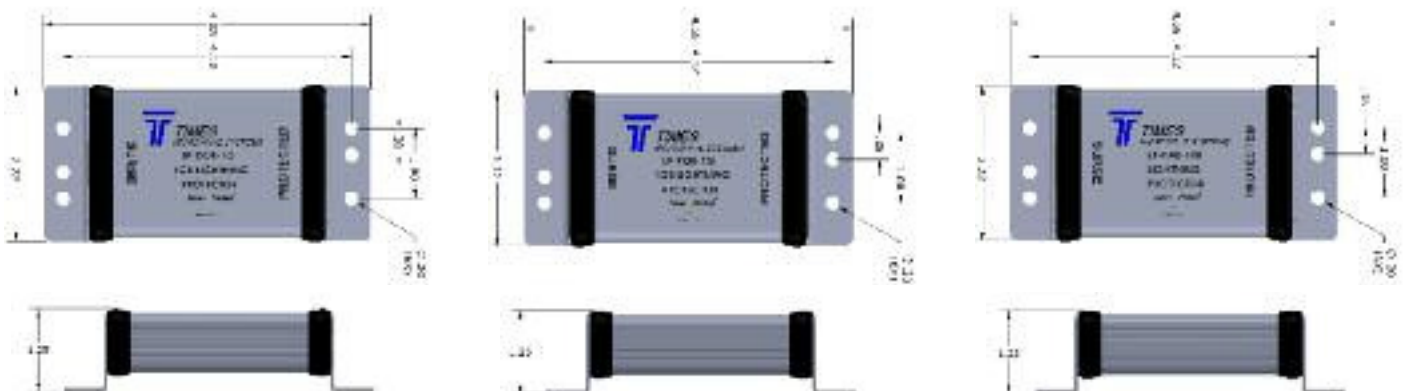
- 10/100 Base-T performance per RFC2544 test methods at 100m
- Data protection on all pins, common and differential modes
- Surge Let-through voltage on data lines limited to 20V peak @ 3kA 8x20uS surge test current
- 60VDC protection on DC pins
- Metallic enclosure with chassis to ground



<b>Data Test Method:</b> Extended RFC2544 Test	
Protected pins to chassis:	All pins
Maximum discharge current:	300A, 10/1000uS. per Bellcore 1089 5kA 8 10uS per IEC 61000-4-5
Repetitive discharge: (10 cycles max)	100A, 10/1000uS, per Bellcore 1089 3kA 8/uS per IEC 61000-4-5
Impedance:	100 Ohms nominal
<b>Mechanical</b>	
Dimensions:	4.68" x 2.22" x 1.25"
Weight:	3.7 oz.
Mounting:	Chassis or panel
<b>Environmental</b>	
Operating Temperature:	-40° - +65° C
Relative humidity:	0 to 90% non-condensing



**Surge Performance Data for the LP-DOE-1G**  
 • Channel 1 (yellow trace); Test input surge current 3.24kA 8x20uS wave shape  
 • Channel 2 (blue trace); Let through voltage 17.2Vpk



## LP-DOE-1G

**Application:**  
1000 BASE-T, panel mount, indoor

**Electrical:**  
**Connector:** RJ45 jack, shielded  
**Data Rate:** 1000 Mbps, 1000 BASE-T per IEEE 802.3ab  
**Data Test Method:** Extended RFC2544 tests  
**Protected Pin Pairs:** (1-2), (3-6), (4-5), (7-8)  
**Surge Let Through Voltage:** 20V peak @300A, 10/1000uS, 20V peak @ 5kA, 8/20uS

## LP-POE-1G

**Application:**  
1000 BASE-T, panel mount, indoor

**Electrical:**  
**Connector:** RJ45 jack, shielded  
**DC:** OST EDSTLZ1550/2  
**Data Rate:** 1000 Mbps, 1000 BASE-T per IEEE 802.3ab  
**Protected Pin Pairs:** (1-2), (3-6), (4-5), (7-8)  
**DC Pin Pairs:** (1-2), (3-6), (4-5), (7-8)  
**DC Line Voltage:** +48VDC nominal, +60VDC max  
**DC Line Current:** 250mA operating per line-rtn pair  
500mA nominal fault per line-rtn pair  
**Surge Let Through Voltage:**  
Data: 20V peak @300A, 10/1000uS  
20V peak @ 5kA, 8/20uS  
**DC:** 90V peak @ 300A, 10/1000uS, 90V peak @5kA, 8/20uS

## LP-PAE-100

**Application:**  
100 BASE-T, panel mount, indoor

**Electrical:**  
**Connector:** RJ45 jack, shielded  
**Data Rate:** 100 Mbps, 100 BASE-T per IEEE 802.3ab  
**Protected Pin Pairs:** (1-2), (3-6), (4-5), (7-8)  
**Data Pin Pairs:** (1-2), (3-6)  
**DC Pin Pairs:** Line (4-5), RTN (7-8)  
**DC Line Voltage:** +48VDC nominal, +60VDC max  
**DC Line Current:** 500mA operating per line-rtn pair  
1100mA nominal fault  
**Surge Let Through Voltage:**  
**Data:** 20V peak @300A, 10/1000uS  
20V peak @ 5kA, 8/20uS  
**DC:** 90V peak @ 300A, 10/1000uS, 90V peak @5kA, 8/20uS



World Headquarters: 358 Hall Avenue, Wallingford, CT 06492 • Tel: 203-949-8400, 1-800-867-2629 • Fax: 203-949-8423  
 International Sales: +1 203-949-8503 • +1 800-867-2629  
 China Sales: No. 318 Yuan Shan Road, Shanghai 201108 China • Tel: 86-21-51761234 • Fax: 86-21-64424098  
[www.timesmicrowave.com](http://www.timesmicrowave.com)