



## **TSP SERIES**

### **Data Line Surge Protection Ideal for LAN, Data, Signal and Instrumentation Interfaces**

The TSP Series of terminal strip protectors will ensure the reliable operation of networked equipment connected to Token Ring, RS422, RS232, Short Haul Modems, Muxes, DDS, Analog Dial Up, ISDN, T1 and most other communication interfaces.

#### **TSPs OFFER**

- State-of-the-art, avalanche diode technology
- Compact in-line installation
- High speed, high energy handling capability
- Low shunt capacitance to reduce signal loss

#### **YOU BENEFIT WITH**

- Affordable, superior, equipment protection
- Improved reliability and maximized system up-time
- Protection at the I/O interface
- Adaptability to most industry applications

The TSP Series devices will guard sensitive data networks against lightning induced surges, AC power interference, electrostatic discharge, and ground loop energies. Typical applications include: data communications and instrumentation interfaces using Token Ring, RS422, RS232, Short Haul Modems, Muxes, CSU/DSU, T1, PLC's and most other communication interfaces. When installed on the system I/O ports, TSPs prevent equipment damage and system errors which are a common result of transient surge energies induced onto the communications interface and ground plane. TSPs utilize low capacitance avalanche diode arrays for low loss, high speed protection. These field-proven circuits offer the most dependable protection available for today's highly sensitive electronic systems. Whether you need to protect a single communication line, or an entire installation, ALLTEC protectors are an easy, cost-effective solution to overvoltage problems.

#### **ORDERING INFORMATION**

To order a TSP, choose the correct part number by selecting the system application and connector type from the above chart. See figures A, B and C for product physical outlines.

#### **NOTE**

Special units can be supplied for any clamp voltage between 7.5 V and 240 V. The following information

must be specified when ordering special units:

1. Connector type and number of wires  
(ex., barrier strip, 4 wires)
2. System application ex., 4-20 mA current loop)

#### **INSTALLATION**

To install, insert the protector in series between the incoming communication lines and the I/O port of the equipment to be protected. The protector ground wire must be connected to the metal chassis of the equipment being protected. Units should be installed at both ends of the data cable for the most effective protection.

#### **CAUTION!**

If the protector has a ground wire it must be grounded directly to the metal chassis of the equipment being protected. Also, the equipment chassis must be connected to earth through a properly grounded AC power receptacle.

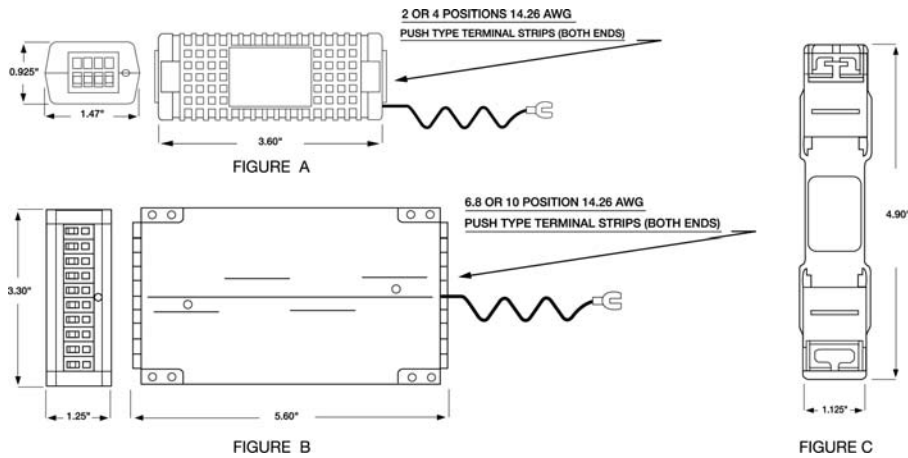
#### **WARRANTY**

- 5 Year Replacement Program
- Limited Lifetime Warranty

This warranty applies only to serialized products registered with ALLTEC Corporation and is subject to certain disclaimers and limitations.

For a complete warranty statement, please contact ALLTEC. All specifications and dimensions are subject to change without notice.

**TSP SERIES DATA LINE PROTECTION**



**ELECTRICAL SPECIFICATIONS (CONTACT ALTEC FOR SPECIAL CONFIGURATIONS)**

	<b>10BASE T ETHERNET</b>	<b>RS422 RS423 RS485</b>	<b>RS232,V.35 or Digital 4-20 mA Current loop</b>	<b>TOKEN RING</b>	<b>ARCNET or Analog 4-20 mA Current loop</b>	<b>CSU/DSU, T1, DDS, ISDN (fused)</b>	<b>DIAL-UP MODEM FAX (fused)</b>
STD. CLAMP VOLTAGE	7.5 VOLTS	7.5 VOLTS	18 VOLTS	18 VOLTS	27 VOLTS	60 VOLTS	240 VOLTS
PEAK PULSE CURRENT 10/1000 us s.c. wave form @Vcl	132 AMPS	132 AMPS	60 AMPS	60 AMPS	40 AMP	50 AMPS	75 AMPS
RESPONSE TIME	----- LESS THAN 5 NANOSECONDS -----						
MAXIMUM SHUNT CAPACITANCE	<40pF	<40pF	40pF	<40pF	<40pF	<75pF	<95pF

**SYSTEM APPLICATION AND MODEL NUMBER**

	<b>10BASE T ETHERNET</b>	<b>RS422 RS423 RS485</b>	<b>RS232,V.35 or Digital 4-20 mA Current loop</b>	<b>TOKEN RING</b>	<b>ARCNET or Analog 4-20 mA Current loop</b>	<b>CSU/DSU, T1, DDS, ISDN (fused)</b>	<b>DIAL-UP MODEM FAX (fused)</b>
2 TERMINAL BARRIER STRIP <i>FIGURE A</i>	TSP-2B-E	TSP-2B-E	TSP-2B-T	TSP-2B-T	TSP-2B-A	TSP-2B-B	TSP-2B-G
4 TERMINAL BARRIER STRIP <i>FIGURE A</i>	TSP-4B-E	TSP-4B-E	TSP-4B-T	TSP-4B-T	TSP-4B-A	TSP-4B-B	TSP-4B-G
6 TERMINAL BARRIER STRIP <i>FIGURE B (WITH 6 TERMINALS)</i>	TSP-6B-E	TSP-6B-E	TSP-6B-T	TSP-6B-T	TSP-6B-A	TSP-6B-B	TSP-6B-G
8 TERMINAL BARRIER STRIP <i>FIGURE B (WITH 8 TERMINALS)</i>	TSP-8B-E	TSP-8B-E	TSP-8B-T	TSP-8B-T	TSP-8B-A	TSP-8B-B	TSP-8B-G
10 TERMINAL BARRIER STRIP <i>FIGURE B</i>	TSP-10B-E	TSP-10B-E	TSP-10B-T	TSP-10B-T	TSP-10B-A	TSP-10B-B	TSP-10B-G
32 TERMINAL BARRIER STRIP <i>NOT SHOWN</i>	TSP-32B-E	TSP-32B-E	TSP-32B-T	TSP-32B-T	TSP-32B-A	TSP-32B-B	TSP-32B-G
TOKEN RING TYPE B DATA CONNECTOR <i>FIGURE C</i>	X	X	X	TSP-TR	X	X	X