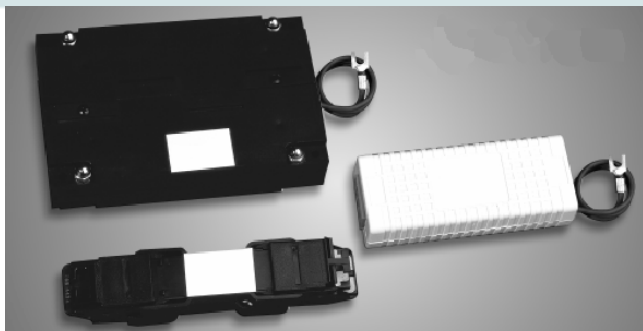




V-Blox Signal and Instrumentation TSP™ Protection Products

Ideal For LAN, Data, Signal and Instrumentation 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 RECEIVE

- 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.

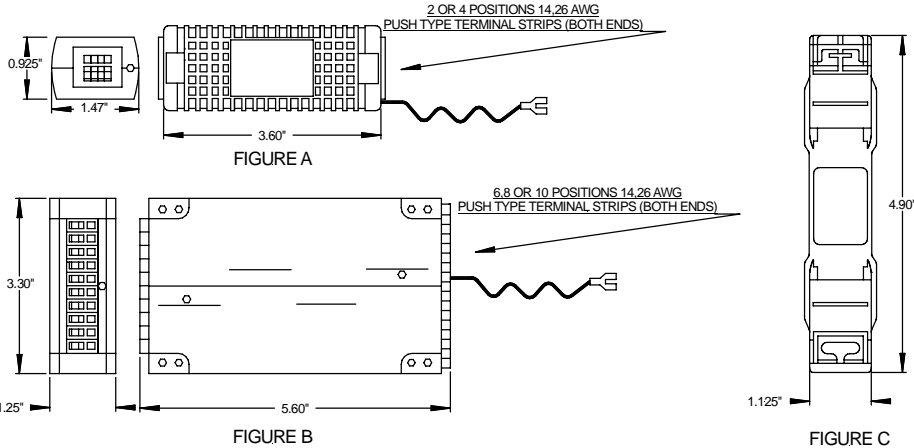
TSPs utilize low capacitance avalanche diode arrays for low loss, high speed protection. These field-proven circuits offer the most dependable protection available for today's highly sensitive electronic systems.

Whether you need to protect a single communication line, or an entire installation, V-Blox protectors are an easy, cost-effective solution to overvoltage problems.

ALL V-BLOX PRODUCTS ARE MADE IN THE USA

V-Blox Corporation is the leader & innovator in the design and manufacture of surge protection products, with twelve series of products and over 4,000 production variations. Through our Custom Products Division (CPD), V-Blox can design surge protection solutions for just about any application or network environment. V-Blox's Three Dimensional Balanced Array Protector earned the industry's highest recognition as the "gold standard" in communication line surge protection. Continued innovations include the use of avalanche diode technology, compact in-line installations for stand-alone applications along with products that address the structured cabling environment, coupled with high-speed, high-energy handling capability. V-Blox's products provide protection for products such as hubs, routers, switches, modems, ISDN, CATV, CCTV, SATV, USB, PCMCIA cards, and POS terminals. Please visit our website at www.vblox.net for more information on our broad range of products.

	ELECTRICAL SPECIFICATIONS (all specifications are subject to change without notice)						
	10BASE T	RS422, RS485	RS232, V.35	TOKEN RING	ARCNET	CSU/DSU	DIAL-UP
	ETHERNET	RS423	or Digital 4-20 mA		or Analog 4-20 mA	T1, DDS, ISDN	MODEM/FAX
			Current loop	Current loop	(fused)	(fused)	
STD. CLAMP VOLTAGE	7.5 VOLTS	7.5 VOLTS	18 VOLTS	18 VOLTS	27 VOLTS	60 VOLTS	240 VOLTS
PEAK PULSE CURRENT	132 Amps	132 AMPS	60 AMPS	60 AMPS	40 AMPS	50 AMPS	75 AMPS
10/1000 us s.c. wave form @ Vcl							
RESPONSE TIME	-----LESS THAN 5 NANoseconds-----						
MAXIMUM SHUNT CAPACITANCE	<40pF	<40pF	<40pF	<40pF	<40pF	<75 pF	<95pF



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

SPECIAL CONFIGURATIONS ARE AVAILABLE, CONTACT YOUR SUPPLIER

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 wire)
2. System application/protocol (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

Ground wire must be grounded directly to the metal chassis of the equipment being protected. The equipment chassis must be connected to earth through a properly grounded AC power receptacle.

V-BLOX CONNECTED EQUIPMENT GUARANTEE

V-Blox Corporation offers our \$25,000 Connected Equipment Guarantee, 15 Year Replacement Program and a Limited Lifetime Warranty. This warranty applies only to serialized low voltage products registered with V-Blox Corporation and is subject to certain disclaimers and limitations. For a complete warranty statement, please contact V-Blox Corporation. All specifications and dimensions are subject to change without notice.