

**One wire
4 to 20mA CURRENT LOOP
SURGE PROTECTOR**

Type: TSP-WG4-20MA-xxxV-01 (Unipolar)

Type: TSP-WG4-20MA-xxxV-03 (Bipolar)

Where: xxx = Compliance Voltage

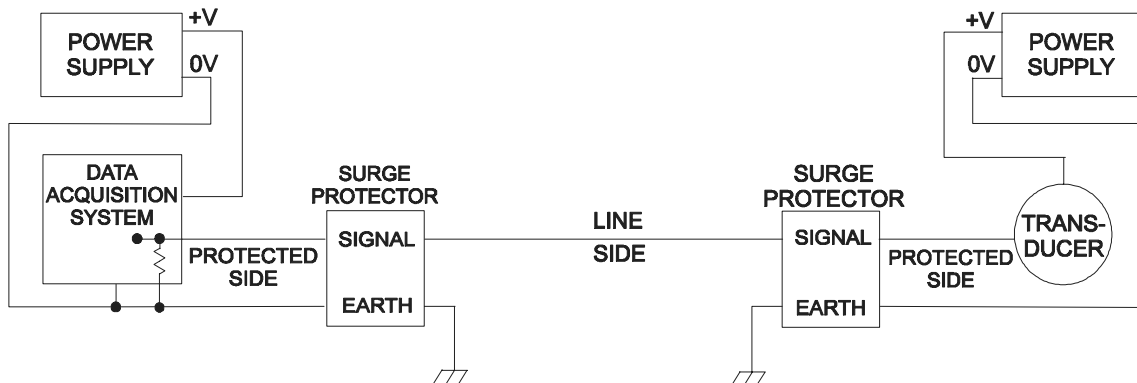


Features:

- Handles large current surges and voltage spikes without wear and tear to the circuitry of the protector
- Protection against closer (stronger) lightning strikes
- Hybrid design features reflection of surge energy as well as TRANZORB and MOV suppression
- 100% redundancy
- Compact WEG 4 pin DIN rail mount

Application: Transient surge protectors provide common and differential mode protection for toll booths, drawbridges, street light controllers and railroad crossing gates/signals. Electronic equipment is extremely susceptible to transient voltages and surge currents due to its relatively fragile semiconductor construction. A surge protector is a cost effective method of ensuring that equipment will have maximum life.

Function: The module has a PROTECTED side which is connected to the transducer output or to the data acquisition system input and a LINE side which is connected to the transmission wire. The EARTH connection of the modules must be terminated to earth by low impedance heavy gauge wire.



Description: The transient surge protector features a three stage protection mechanism which provides over-voltage and surge current protection for 1 wire +/- 4-20mA current loops. Internally, the module has 100% redundancy to safeguard the system and prevent nuisance failures. This series of modules is for systems using a separate power supply for the transducer and the data acquisition system.

Technical Specifications: All specifications typical at nominal input voltage and 25 degrees C unless otherwise specified.

Operating Voltage: **Unipolar = +VDC Bipolar = +/-VDC or AC RMS**
+(+/-)15V +(+/-)30V +(+/-)60V +(+/-)200V

LINE Side Max. Input Voltage	17.1VDC	33.3VDC	70.1VDC	256VDC
Over-Voltage Level PROTECTED Side Suppression Begins:				
Stage Two TRANZORB	19VDC	37.1VDC	77.9VDC	285VDC
Stage Three MOV	20VRMS	42VRMS	89VRMS	330VRMS
Maximum Clamp Volts For Maximum Transients on Line:				
Stage Two TRANZORB	27.7VDC	53.9VDC	113VDC	414VDC
Stage Three MOV	43VRMS	93VRMS	165VRMS	595VRMS
Surge Current:				
8/20 μ Sec Pulse	4000A	4000A	13000A	8000A
2mSec Pulse	24 Joules	52 Joules	66 Joules	130 Joules
Series Resistance	15 Ohms	15 Ohms	15 Ohms	15 Ohms
Resistance to Earth:				
Max Over-Voltage	0.01 Ohm	0.01 Ohm	0.01 Ohm	0.01 Ohm
Operating Voltage	>1 MOhm	>1 Mohm	>1 MOhm	>1 MOhm
Suppression Threshold Voltage Derating (mV/EC)	19.0	36.0	86.0	315.0

Packaging / Dimensions: WEG 4 terminal modular housing, #12 to #22 AWG terminals
 Size: 60.6 mm x 90.5 mm x 16.5 mm (2.39" x 3.56" x 0.65")
 (W x H x D excluding DIN Rail)

Operating Conditions: -40 to +85°C (-40 to 185°F), 0 to 93% Relative Humidity

Ordering Part Number: +15V TSP-WG4-20MA-15V-01 (Unipolar)
 +30V TSP-WG4-20MA-30V-01
 +60V TSP-WG4-20MA-60V-01
 +200V TSP-WG4-20MA-200V-01
 +/-15V TSP-WG4-20MA-15V-03 (Bipolar)
 +/-30V TSP-WG4-20MA-30V-03
 +/-60V TSP-WG4-20MA-60V-03
 +/-200V TSP-WG4-20MA-200V-03
 Variations are available by special order.

Specifications are subject to change without notice.

Form: TD0102AX-7/20/98