

Surge Protective Device SPD

Geosense Surge Protective Device (SPD) protects all types of sensors from transient overvoltage



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Overview



Geosense® Surge Protective Device (SPD) protects all types of sensors from transient overvoltage.

Transient overvoltage affecting sensors is typically due to lightning strikes where long, particularly horizontal wiring can be subject to these leading to destructive voltages at sensors.

Transient protection devices attempt to re-direct the energy in these transients by taking advantage of the differences between the transient waveform and the intended signal or power waveform.

It comprises five protected lines allowing for the protection of any four wire sensor including the screen.

Each line benefits from three stages of protection.

Stage 1 is a TVS (Transient Voltage Suppressor) Diode which protects against low level spikes and transients. This triggers and clamps the line to ground if the voltage exceeds 18 volts. The device is extremely fast and has a peak current rating of 56.6 amps.

Stage 2 is if the voltage exceeds 65 volts and protection is provided by a MOV (Metal Oxide Varistor) which, being connected in parallel to the TVS Diode, protects the Diode from excessive transients due to its higher current capacity of 250 amps and a power dissipation of 1.3 joules.

Stage 3 is for significant surges where each line is protected by a Gas Discharge Tube which trigger at a relatively high voltage of 230 volts and have a maximum discharge current of 15Ka.

APPLICATIONS

Protecting sensors and cables from overvoltage protection

FEATURES

Lightweight impact resistant ABS box

Corrosion free

Waterproof to IP67 rated

Robust 5 pole terminal strips

Easy & quick to wire

Conductor sizes from 28-12 AWG

Spring Pressure Connection Technology

Vibration-Proof connections

Maintenance-free connections

Colour-coded glands for IN & OUT

Simple hinged quick-release catch

Up to 10 sensors can be connected

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Specifications

GENERAL

Lines protected	4 + 1 shield
Maximum surge current	15000 amps
Minimum breakdown voltage	17.1 volts
Maximum clamping voltage	32.5 volts
Output clamp voltage	< 5 volts
Series resistance	< 1 ohm
Maximum leakage current	1 micro amp
Hold current	150 mA
Max ac current	40 amps
Max continuous current	2.5 amps

Can be supplied as stand-alone PCB or mounted within an enclosure



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