Surge Protector WSP150

Features

- Superior three-stage, transient surge protection
- Tolerates up to 10 kA surge currents
- Provides additional filtering for blocking the HF-conducted interference
- Robust structure, IP66 housing
- Both differential and common mode protection on each channel
- 2 power and 2 data channels
- Can be used for example with WXT530, WA15, WMT700 (non-heated), WM30, DSC211, and DST111
- Applications: mast installations of weather measurement networks, meteorological stations in wind parks

Vaisala Surge Protector WSP150 is a compact transient overvoltage suppressor designed for outdoor use. It can provide overvoltage protection for 2 power supply lines and RS-422, RS-485, RS-232 serial communication, or two mA loop lines.

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Superior Protection

A lightning strike nearby may induce a high voltage surge, which the integral transient suppressor of the instrument may not tolerate. Additional protection is needed, especially where frequent and severe thunderstorms are common and where cables longer than 30 m (98 ft 5 in) are used. Also use WSP150 if you have unshielded, open-wire lines.

WSP150 offers three-stage protection against surge currents up to 10 kA entering through the power and signal cables.

Powerful Technology

WSP150 has four channels, two of which are dedicated to power lines and two for data lines. Each channel uses a three-stage protection scheme: first there are discharge tubes, then voltage dependent resistors (VDR), and finally transient zener diodes. Between each stage, there are either series inductors or resistors.

Both differential and common mode protection is provided for each channel: across the wire pairs, against the operating voltage ground, and against the earth.

WSP150 also provides an additional filter for blocking the HF-conducted interference.

Applications

Vaisala recommends using WSP150 when wind and weather instruments are installed on top of high buildings or masts and in open grounds, that is, anywhere with an elevated risk of lightning.

Technical Data

Operating Environment

Operating temperature	-52 ... +70 °C (-60 ... +158 °F)
Storage temperature	-52 ... +70 °C (-60 ... +158 °F)
Installation temperature	-40 ... +70 °C (-40 ... +158 °F)
Maintenance work temperature	-40 ... +70 °C (-40 ... +158 °F)

Inputs and Outputs

Input voltage [1)]	Power channels: max. ±43 V Data channels: max. ±13 V
Input common mode voltage	Any line to earth: max. ±72 V
Throughput current	Power lines: max. 1.5 A Data lines: max. 0.16 A
Throughput resistance (per line)	Power lines: max. 0.3 Ω Data lines: max. 15 Ω
Turn-on voltage	Power channels: max. ±60 V Data channels: max. ±16 V
Surge current	To earth: max. 10 kA Differential: max. 5 kA

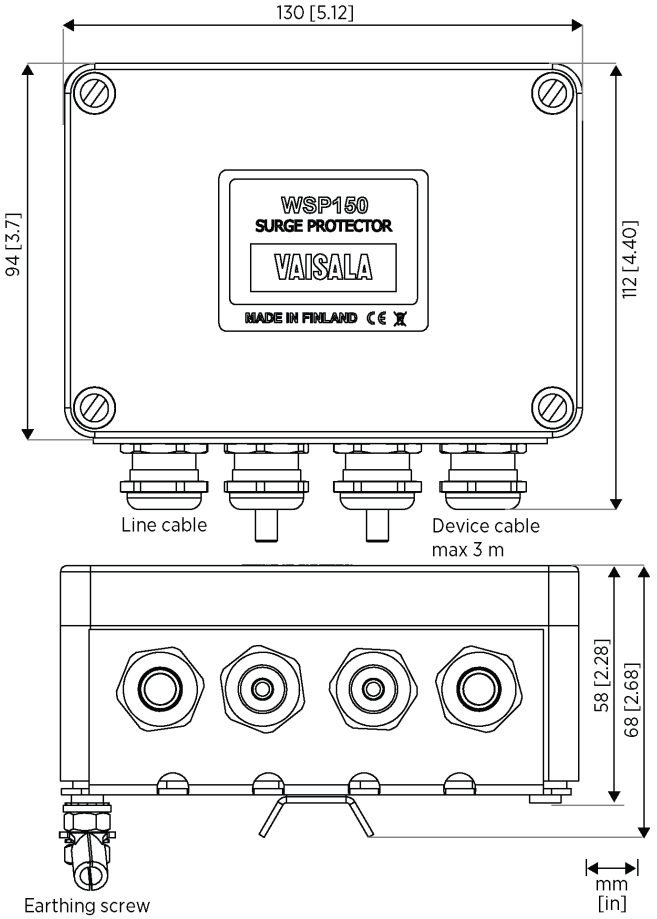
1) Across channel line pair and from line to GND, terminals #3

Mechanical Specifications

Weight	0.65 kg (1.43 lb)
Housing material	Polycarbonate, stainless steel
Housing dimensions (H × W × D)	94 × 130 × 58 mm (3.7 × 5.12 × 2.28 in)
Dimensions with cable glands and mounting assembly (H × W × D)	112 × 130 × 69 mm (4.41 × 5.12 × 2.72 in)
Cables (Ø)	4 ... 8 mm (0.16 ... 0.31 in)
Wires (Ø)	0.4 ... 1.7 mm (0.016 ... 0.067 in) (AWG 26 ... 14)

Compliance

EMC surge tolerance	EN 61000-4-5 (4 kV, 2 kA) IEEE C62.45 (6 kV, 3 kA)
IP rating	IP66 (NEMA 4X)



Dimensions in mm [in]

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