

## HyperLink Wireless brand Weatherproof Differential Data Line Lightning Surge Protector for Sensors, Control Lines and RS-232

### Applications

- Sensor lines
- Control lines
- RS-232 lines

### Features

- Three stage protection
- Superior to diode or TVS only based designs
- Screw terminal blocks
- Industrial grade weatherproof die cast aluminum enclosure with mounting brackets



**Model ALW-D2-12**

### Description

The ALW-D2-12 is HyperLink's outdoor version of its HGLN-D2-12 protector. This high performance 3-stage lightning protector provides superior protection of differential or balanced digital or analog lines from transients and surges. The units will protect two pairs of differential data or analog signal/control lines.

The first stage is comprised of a differential gas discharge tube. Stage two is a pair of current limiting series resistors and the final stage is a low capacitance diode array. The use of three terminal differential gas discharge tubes provides superior common and differential mode protection against conducted transients versus the use of lower cost two terminal tubes. The second stage series resistance limits the power dissipation of the fast diode clamp array in the third stage. This allows time for the slower but higher power gas tubes to flash over. The diode array clamps the leading edge of fast transients to safe levels until the high power gas tubes turn on. This eliminates the damaging leading edge spike that single stage gas tube protectors let leak through. The diode array's low capacitance assures that the suppressor will not degrade the high-speed signals. The 3-stage design can handle higher-level transients than a protector that uses only diodes.

For more complete surge protection of data lines, the use of two units is recommended, one at each end of the line.

### Industrial Grade Weatherproof Enclosure

This protector features an industrial grade die cast aluminum enclosure with gasketed cover and concealed mounting holes. It includes an aluminum mounting kit and hardware. PG16 cable glands are provided on the enclosure as well as an external ground clamp to provide a tie point for earth ground.



**Specifications**

**Electrical Specifications**

<b>Connectors</b>	(2) Screw Terminal Blocks
<b>Pinout</b>	Line 1: Pins 1 / 2 Line 2: Pins 4 / 5
<b>Stage 1 Clamping Voltage</b>	± 90 volts
<b>Stage 2 Resistance</b>	3.3 Ohms
<b>Stage 3 Clamping Voltage</b>	± 20 volts

**Mechanical Specifications**

<b>Enclosure Material</b>	Die Cast Aluminum
<b>Enclosure Color</b>	Gray
<b>Ground Lug</b>	10 AWG Max.
<b>Operating Temperature</b>	-40 C (-40 F) to +80 C (+176 F)
<b>Weight</b>	1.15 lb. (.52 kg)
<b>Dimensions (WxHxL)</b>	4.91 x 3.14 x 2.30 (inches) 124.8 x 79.7 x 58.4 (mm)
<b>RoHS Compliant</b>	Yes

