

HyperLink Wireless brand Differential Data Line RS-422/485 and T1/E1/J1 Lightning Surge Protector - Model: AL-D2W-05

Applications and Features

Applications: ■ Protection of RS-422/485, RTDs and T1/E1/J1 Lines

Features: • Three-Stage Protection

- Superior to diode or TVS only based designs
- Impact and weather resistant enclosure with locking hinged cover
- Screw Terminal Blocks





Description

The AL-D2W-05 is HyperLink's outdoor version of its HGLN-D2-05 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.



Outdoor Use

The compact weather resistant housing features a lockable hinged cover and mounting holes are provided on the rear of the enclosure for mounting. The two cable grommets may be adjusted to cable size and are removable.

Application Note:

Not for use with T1 line with Ring or DC Power.



Specifications

Mechanical Specifications

Enclosure Material	Polycarbonate
Enclosure Color	Gray
Grounding Lug	(2) 12 AWG Max.
Operating Temperature	-40 C (-40 F) to +80 C (+176 F)
Weight	.40 lb. (.18 kg)
Dimensions	4.75 x 4.06 x 2.81 (inches) 120.6 x 103.1 x 71.3 (mm)
RoHS Compliant	Yes

Electrical Specifications

Connectors	(2) Screw Terminal Blocks
Pinout	Line 1: Pins 1 / 2 Line 2: Pins 4 / 5
Stage 1 Clamping Voltage	± 90 volts
Stage 2 Resistance	3.3 Ohms
Stage 3 Clamping Voltage	± 7.5 volts

AL-D2W-05

GT = DIFF GAS TUBE R = SURGE RESISTOR | Control | Contr

Guaranteed Quality

This product is backed by L-com's Limited Warranty.

Earth Ground