

## HyperLink Wireless Brand Indoor DIN 3 Rail Mount Differential Data Line Lightning Surge Protector - Model: HGLND-D2-05

### Applications

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- RS-422/485 communication lines
- RTD applications
- Industrial and building automation
- AISG control lines
- T1/E1/J1 lines

### Features

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- DIN 3 rail mountable
- 3-Stage surge protection
- Superior to diode or TVS only based designs
- Failsafe mode of operation
- Die Cast aluminum construction



### Description

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The HGLND-D2-05 high performance 3-stage lightning protector provides superior protection of differential or balanced digital or analog lines from transients and surges. The unit will protect two pairs of differential data or analog/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.

The HGLND-D2-05 is designed to convert into a failsafe mode in the rare case of a catastrophic surge or lightning event. For this mode, the resistors in the second stage will fuse and portions of the diode array will short. This effectively disconnects the line from sensitive equipment thus limiting damage. The units are factory repairable.

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

This unit can be mounted to a DIN 3 rail using the DIN mounting clip located on the rear of the unit.



**Application Note:**

Not for used with T1 lines with Ring or DC Power.

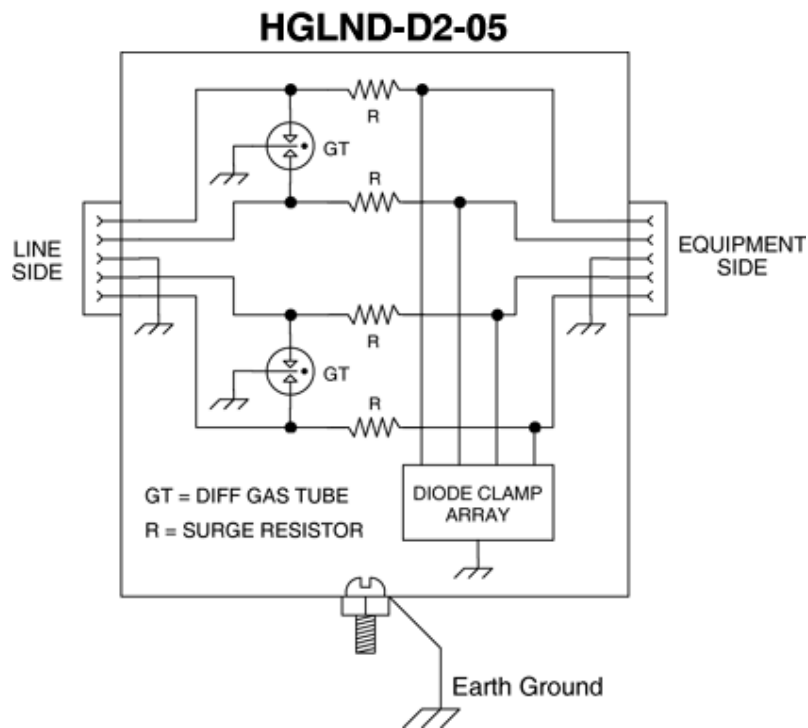
**Specifications**

**Electrical Specifications**

<b>Connections</b>	(2) Screw Terminal Blocks
<b>Stage 1 Clamping Voltage</b>	± 90 volts
<b>Stage 2 Resistance</b>	3.3 ohms
<b>Stage 3 Clamping Voltage</b>	± 7.5 volts

**Mechanical Specifications**

<b>Enclosure Material</b>	Cast Aluminum
<b>DIN Mounting Clip</b>	DIN 3 Rail
<b>Ground Lug</b>	10 AWG Max.
<b>Operating Temperature</b>	-40 C (-40 F) to +80 C (+176 F)
<b>Weight</b>	.38 lbs. (.17 kg)
<b>Dimensions (WxHxL)</b>	4.5 x 2.5 x 1.5 (inches) 114.2 x 63.5 x 38.1 (mm)
<b>RoHS Compliant</b>	Yes



**Custom Requirements**

The HGLND-D2-05 can be optionally configured to protect differential or single ended data or control lines of other voltage levels.