

HyperLink Brand Data Line Lightning Surge Protector Model: HGLN-D1-05

Applications

- RS-485 serial communication lines
- Modbus, Profibus and DMX applications
- 5 Volt differential or single ended data or control lines
- Industrial and building automation

Features

- 3-Stage surge protection
- Superior to diode or TVS only based designs
- Failsafe mode of operation
- Die Cast aluminum construction
- Integral mounting feet



Description

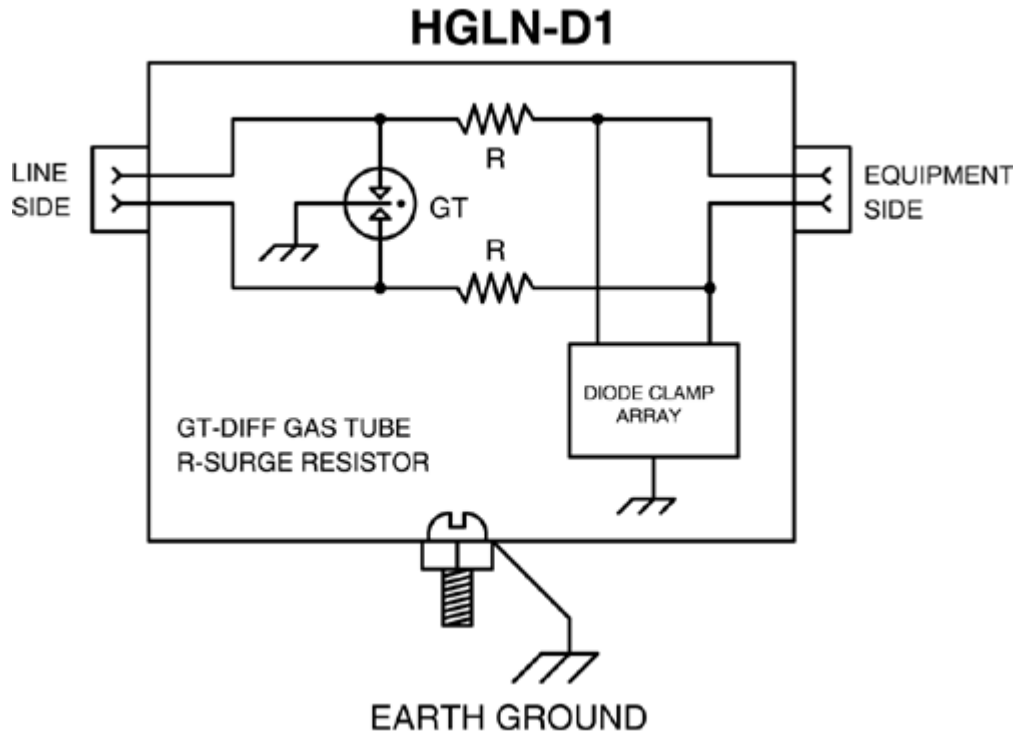
The HGLN-D1-05 high performance 3-stage lightning protector provides superior protection of differential or balanced digital or analog lines from transients and surges. The unit will also protect two single ended data, analog or control lines.

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.

Failsafe Feature

The HGLN-D1-05 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.



Mechanical Specifications

Stage 1 Withstand Voltage	± 90 volts
Stage 2 Resistance	3.3 ohms
Stage 3 Clamping Voltage	± 7.5 volts
Enclosure Material	Die Cast Aluminum
Ground Lug	10 AWG Max
Operating Temperature	-40 C (-40 F) to +80 C (+176 F)
Weight	.28 lb. (.13 kg)
Dimensions	3.6 x 1.5 x 1.2 (inches) 91.4 x 38.1 x 30.5 (mm)

Custom Requirements

The HGLN-D1-05 can be optionally configured to protect differential or single ended data or control lines of other voltage levels. It can also be configure for analog Telephone, DSL and T1/E1 communications lines. For sufficient volumes, an OEM version of the PCB assembly is available for integration into a users product. Contact our sales department with your specific requirements or pricing for a volume purchase.