

## HyperLink Brand Weatherproof Lightning and Surge Protector for RS-422/485 Control plus AC/DC Power Lines - Model: ALS-D25P Series

### Applications

- RS-422/485 lines with AC or DC supply voltage
- Analog or IP video surveillance cameras
- Pool/spa and industrial controllers and keyboards
- Door/gate access control with RS-485 and power
- Pan-Tilt-Zoom (PTZ) camera controllers

### Features

- Individual protection circuits for RS-422/485 control and power lines
- 3-Stage protection provided for all lines
- Will work with Full or Half Duplex RS-422/485 lines
- Available in AC or DC versions
- NEMA rated enclosure with gasketed cover and concealed mounting holes



### Description

The HyperLink ALS-D25P series are designed to provide superior lightning and surge protection for RS-422/485 control and AC/DC power lines. These protectors incorporate individual protection circuits for the RS-422/485 control lines and AC/DC power lines. All housed in one NEMA rated weatherproof enclosure.

#### RS-422/485 Control Lines

A high power 3-stage design is used to provide protection for the RS-422/485 control line. The 3-stage design can handle higher-level transients than a protector that uses only diodes. 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 protector will not degrade the high-speed signals. The RS-422/485 control line is connected to the protector via its screw terminal blocks. The terminal blocks are removable to ease wiring. The ALS-D25P series is designed to work with either 1 full duplex or 2 half duplex RS-422/485 lines.

## AC and DC Power Lines

The AC and DC power lines are also protected using a 3-stage design. This provides superior protection from transients and surges. The first stage is comprised of a differential gas discharge tube. Stage two is a pair of suppression coils and the final stage is a 5000 Watt uni-polar Transient Voltage Suppression (TVS) Diode used on the ALS-D25P DC models. For AL-D25P AC models, a Metal Oxide Varistor (MOV) is used. Power lines are connected to the protector via high current rated screw terminals.

## Weatherproof Design

These units feature a weatherproof ABS enclosure with gasketed cover and concealed mounting holes. Water tight cable glands provide entry and exit points for cables. A ground clamp on the enclosure's exterior provides a tie point for earth ground.



**Shown with cover attached**

## Standard Models

Models	Application
ALS-D25P12DW	RS-422/485 Control + 12VDC Power Lines
ALS-D25P15DW	RS-422/485 Control + 15VDC Power Lines
ALS-D25P24DW	RS-422/485 Control + 24VDC Power Lines
ALS-D25P1228AW	RS-422/485 Control + 12-28VAC Power Lines

## Specifications

### Electrical Specifications – RS-422/485

<b>Connectors</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

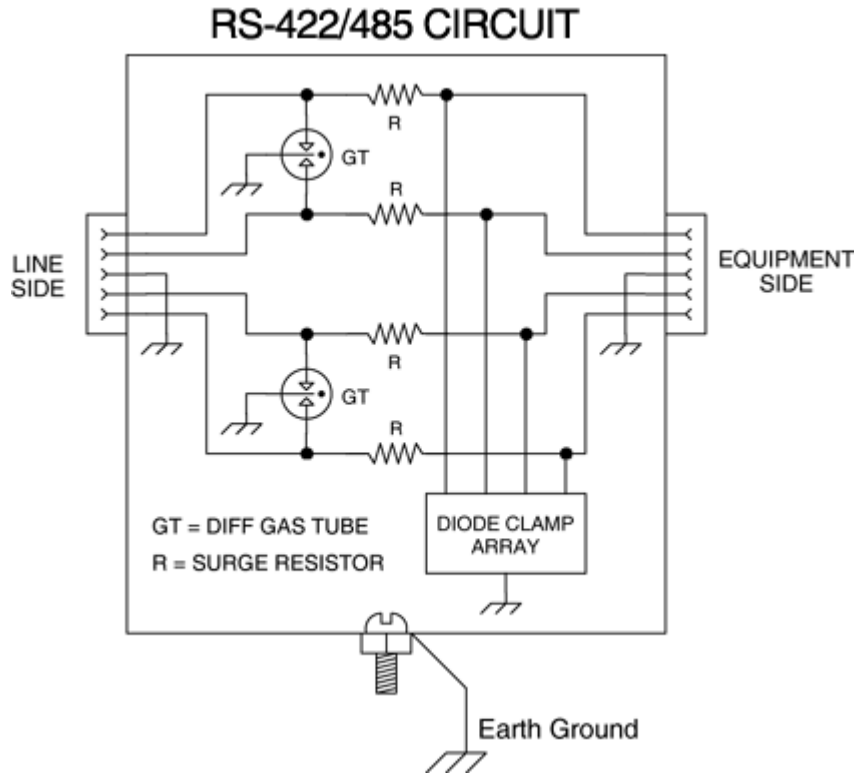
### Electrical Specifications – DC Power

Models:	ALS-D25P12DW	ALS-D25P15DW	ALS-D25P24DW
<b>Connectors</b>	(2) Screw Terminal Blocks		
<b>Stage 1 Clamping Voltage</b>	± 90 Volts		
<b>Stage 2 Current Rating</b>	4 Amps		
<b>Stage 3</b>	15 Volt TVS Diode	18 Volt TVS Diode	30 Volt TVS Diode

### Electrical Specifications – AC Power

<b>Models:</b>	ALS-D25P1228AW
<b>Connectors</b>	(2) Screw Terminal Blocks
<b>Stage 1 Clamping Voltage</b>	± 90 Volts
<b>Stage 2 Current Rating</b>	4 Amps
<b>Stage 3</b>	47 Volt Varistor

**Simplified Circuit Schematic – RS-422/485**



**Simplified Circuit Schematic – Power**

