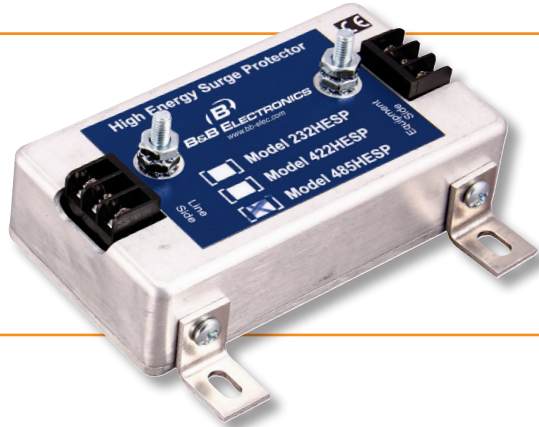


# Three-stage RS-422/485 Surge Protectors

485HESP, 422HESP, 232HESP



## PRODUCT FEATURES

- Three stages of protection on every data line
  - 1) Gas discharge tube
  - 2) Series resistor
  - 3) Transient voltage suppressor
- Protected signal ground connection
- Rugged terminal block connections
- Dedicated chassis ground lug

These three-stage surge protectors meet IEEE 1000-4-5: 1995 and IEEE C62.41-1991 recognized standards for premium surge protectors. It protects against lightning strikes, power surges, and other types of voltage disturbances with three stages of protection for each supported line: a gas discharge tube followed by a series resistor and finally a Transient Voltage Suppressor (TVS). Three RS-422/485 signals on terminal blocks are supported with a clamping voltage of approximately 6.8 Volts.

These surge protectors housed in a tough metal, panel mount case with a protected signal ground connection and dedicated chassis ground lug. In order to work properly, it is important to have a good connection between the #10 screws and a solid earth ground. The 485HESP provides two terminal posts and two metal mounting brackets to provide a good ground connection.

## Surge Protection Standards

IEC 1000-4-5: 1995 "Surge Immunity Test" and IEEE C62.41-1991 "IEEE Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits" are the recognized standards for surge protection. B&B Electronics' heavy duty surge protectors have been tested at 6 kV to meet these two specifications.

### Learn more about surge suppression & isolation

[www.bb-elec.com/TechLibrary](http://www.bb-elec.com/TechLibrary)

- "Isolation: Your Best Investment for Reliability"
- "Dataline Isolation Theory"
- "Dataline Surge Protection"

## ORDERING INFORMATION

MODEL NUMBER	INTERFACE	LINES PROTECTED	MOUNTING
485HESP	RS-422/485	(3) RS-422/485	Panel Mount
422HESP	RS-422/485	(5) RS-422/485	Panel Mount
232HESP	RS-232	(5) RS-232	Panel Mount

## ACCESSORIES

CU15B - Copper Grounding Strap

## SPECIFICATIONS

### SERIAL TECHNOLOGY

#### 485HESP

Connectors, line 3 position terminal blocks  
 Connectors, equipment 3 position terminal blocks

#### 422HESP/232HESP

Connectors, line 5 position terminal blocks  
 Connectors, equipment 5 position terminal blocks

### SURGE SUPPRESSION

Clamping Voltage - stage 1 72 VDC, minimum  
 108 VDC, maximum  
 Series Resistance - stage 2 2.7 Ohms  
 Clamping Voltage - stage 3 6.45 VDC, minimum  
 7.14 VDC, maximum  
 Clamping Time Less than 5 x 10<sup>-9</sup> seconds  
 Dimensions 11.4 x 8.4 x 4.6 cm (4.5 X 3.3 x 1.8 in)  
 Installation In-line  
 Weight 0.19 kg (6.7 oz)

### ENVIRONMENTAL

Operating Temperature 0 to +70 °C (+32 to +185 °F)  
 Storage Temperature -40 to +85 °C (-40 to +185 °F)  
 Operating Humidity 0 to 95% Non-Condensing

### APPROVALS / CERTIFICATIONS - 485HESP

FCC Part 15, CISPR, EN 55022: 2010 + AC:2011 Class A Emissions  
 CE  
 EN 61000-6-1: 2007 Generic Standards for Residential, Commercial and Light-Industrial Environments  
 EN 61000-4-5: 2006 Electrical Surges  
 Download complete Declaration of Conformity at [www.bb-elec.com](http://www.bb-elec.com)