

# Three-stage RS-232, RS-422/485 Surge Protectors

Models BB-485HESP, BB-422HESP, BB-232HESP

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## 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 protect against lightning strikes and other types of voltage disturbances with three stages of protection for each line: a gas discharge tube followed by a series resistor and finally a Transient Voltage Suppressor (TVS).

The 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. Two terminal posts and two metal mounting brackets provide a good ground connection.

## ORDERING INFORMATION

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

## SPECIFICATIONS

SERIAL TECHNOLOGY	
<b>BB-485HESP</b>	
Connectors, line	3-position terminal blocks
Connectors, equipment	3-position terminal blocks
<b>BB-232HESP / BB-422HESP</b>	
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	<b>Models BB-422HESP, BB-485HESP:</b> 6.45 VDC, minimum 7.14 VDC, maximum <b>Model BB-232HESP:</b> 14.3 VDC, minimum 15.8 VDC, maximum
Clamping Time	Less than $5 \times 10^{-9}$ 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	
FCC	
CE - Directives	2014/30/EU - Electromagnetic Compatibility Directive 2011/65/EU - amended by (EU) 2015/863 Reduction of Hazardous Substance Directive (RoHS2) 2012/19/EU - Waste Electrical and Electronic Equipment (WEEE)
CE - Standards	EN 55032 - Class B Electromagnetic compatibility of multimedia equipment – Emission requirements EN 55024 - Information Technology Equipment – Immunity Characteristics – Limits and methods of measurement

All product specifications are subject to change without notice.  
BB-485HESP\_BB-422HESP\_BB-232HESP\_1720ds

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## MECHANICAL DRAWING - BB-232HESP & BB-422HESP

