

BB-485HESP BB-422HESP BB-232HESP

3-stage Surge Protectors for RS-232, RS-422/485



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

Introduction

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 No.	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	
BB-485HESP	
Connectors, line	3-position terminal blocks
Connectors, equipment	3-position terminal blocks
BB-232HESP / BB-422HESP	
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	Models BB-422HESP, BB-485HESP: 6.45 Vdc, minimum 7.14 Vdc, maximum Model BB-232HESP: 14.3 Vdc, minimum 15.8 Vdc, maximum
Clamping Time	Less than 5×10^{-9} seconds
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

Mechanical	
Installation	Panel
Dimensions	11.4 x 8.4 x 4.6 cm (4.5 X 3.3 x 1.8 in)
Weight	0.19 kg (6.7 oz)
Meantime Between Failures (MTBF)	
MTBF	BB-232HESP: 986473 BB-422HESP: 897656 BB-485HESP: 968410
Calculation Method	Parts Count Reliability Prediction
Regulatory – Approvals / Standards / Directives	
FCC, UKCA	
CE - Directives	2014/30/EU - Electro-magnetic Compatibility Directive (EMC) 2011/65/EU - amended by (EU) 2015/863 Reduction of Hazardous Substance Directive (RoHS) 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



BB-485HESP
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 BB-232HESP

Mechanical Diagram – BB-232HESP & BB-422HESP

