



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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

Models 485HESP, 422HESP, 232HESP

**B+B SMARTWORX**

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**ADVANTECH**

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



## 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, power surges, 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.

## Learn More About Surge Suppression & Isolation

These informative articles are available at [www.advantech-bb.com](http://www.advantech-bb.com):

- "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	
<b>485HESP</b>	
Connectors, line	3-position terminal blocks
Connectors, equipment	3-position terminal blocks
<b>232HESP/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 422HESP, 485HESP:</b> 6.45 VDC, minimum 7.14 VDC, maximum <b>Model 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 - 485HESP	
2011/65/EU - Reduction of Hazardous Substance Directive	
2012/19/EU - Waste Electrical and Electronic Equipment (WEEE)	

All product specifications are subject to change without notice.  
485HESP, 422HESP, 232HESP\_3117ds