



## Model 485HESP RS-422 & RS-485 High-Energy Surge Protector CE

The Model 485HESP is designed to help protect against lightning strikes, power surges, and other types of voltage disturbances. Three RS-422/485 signals on terminal blocks are supported with a clamping voltage of approximately 6.8 volts. The 485HESP offers three stages of protection starting with a gas discharge tube followed by a series resistor and finally a Transient Voltage Suppressor (TVS). In order for a surge protector to work properly it is important to have a good connection to earth ground. The 485HESP offers two terminal posts and two metal mounting brackets which provide a good ground connection for the user. The 485HESP has been tested to two specifications at 6 kilovolts, 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". To ensure the best protection of your equipment some simple connection guidelines should be followed.

### Connections

1. The 485HESP should be located as close as possible to the equipment being protected.
2. A good ground connection must be made between the 485HESP and earth ground. This can be done with the two terminal posts on the top of the unit or the two mounting brackets.
3. The earth ground connection should be kept as short as possible for best performance. As a recommendation a minimum of 10 gauge copper wire at no more than 3 feet should be used. If it is not possible to achieve the short distance a braided cable made specifically for grounding purposes should be used.
4. The chassis ground of the equipment should be connected to the buildings 3 prong plug ground.

### Specifications

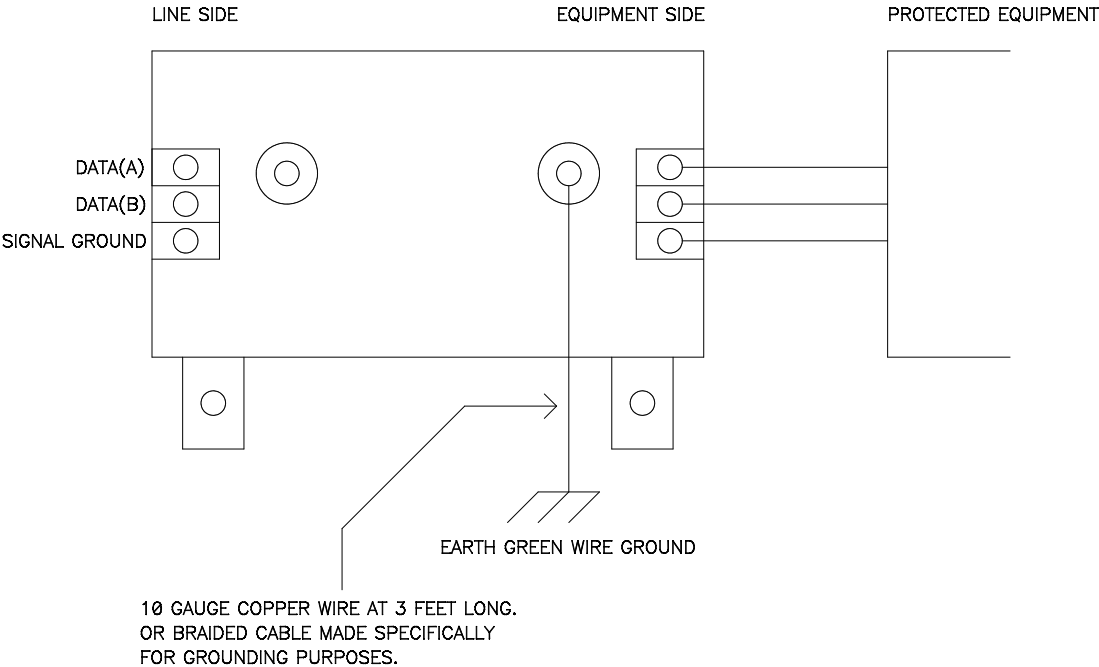
- Clamping Voltage, stage one: Min. 72 VDC, Max. 108 VDC
- Series Resistance, stage two: 2.7 Ohms
- Clamping Voltage, stage three: Min. 6.45V, Max 7.14 V
- Clamping Time: Less than  $5 \times 10^{-9}$  seconds
- Connectors: 3 Position Terminal Blocks
- Dimensions: Approximately 11.4 x 8.4 x 4.6 cm (4.5 X 3.3 X 1.8 in)
- Weight: Approximately .18 kg (6.4 oz)

#### DECLARATION OF CONFORMITY

Manufacturer's Name:	B&B Electronics Manufacturing Company
Manufacturer's Address:	P.O. Box 1040 707 Dayton Road Ottawa, IL 61350 USA
Model Number:	485HESP
Description:	RS-422/485 High Energy Surge Protector
Type:	Light industrial ITE equipment
Application of Council Directive:	89/336/EEC
Standards:	EN 55022 EN 61000-6-1 EN 61000 (-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11)

Robert M. Paratore, Director of Engineering

CE



485HESP

