



Model SPD001A

## DIN Rail Dataline Surge Suppressor CE

### Introduction

The Model SPD001A is designed to help protect against lightning strikes, power surges, and other types of voltage disturbances to components on a DIN rail. Five RS-422/485 signals on terminal blocks are supported with a clamping voltage of approximately 6.8 volts. The SPD001A 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 SPD001A has a #10 grounding screw, which provides a solid ground connection for the user. This design 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 SPD001A should be located as close as possible to the equipment being protected.
2. A good ground connection must be made between the SPD001A and earth ground. This can be done with the #10 grounding screw.
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 of 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 building's 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: Two 6-position terminal blocks
- Temperature: -40 to +80°C (-40 to +176°F)
- Humidity: 0-95% non-condensing
- Dimensions: Approximately 35.5 x 78.8 x 105.3 mm (1.4 x 3.1 x 4.2 in)
- Weight: Approximately 0.22 kg (0.5 oz)

Model Number:	SPD001A
Description:	Dataline Surge Suppressor
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)



Black Box Corporation - 1000 Park Drive - Lawrence, PA 15055-1018  
 Tech Support and Ordering: 724-746-5500 - Fax: 724-746-0746  
 To contact us about Black Box products or services: [info@blackbox.com](mailto:info@blackbox.com)

