



### **⚠ DANGER**

#### Hazardous Voltage

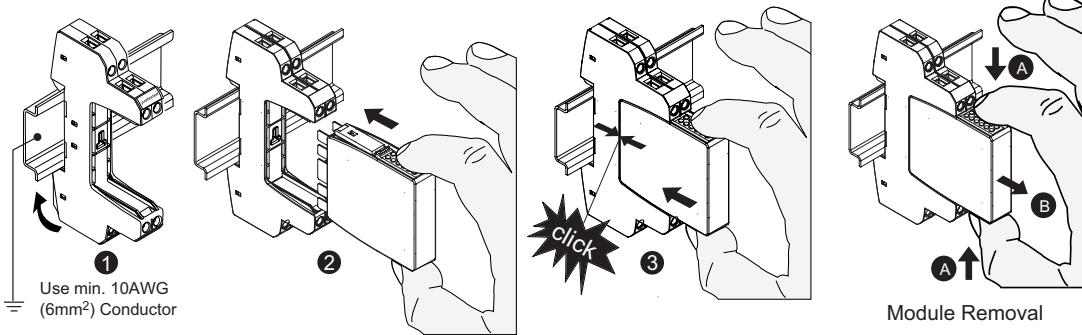
Will cause severe injury or death.

Working on or near energized circuits poses a serious risk of electrical shock. De-energize all circuits before installing or servicing this equipment and follow all prescribed safety procedures.

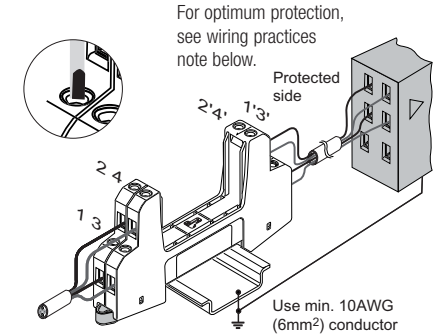
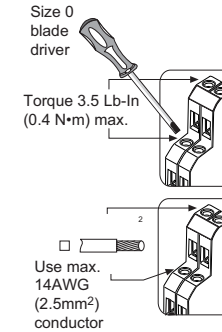
Technical Data	
Catalog number	BSPD0180DINL
Nominal voltage ( $U_n$ )	0-180V
Nominal current at 80°C ( $I_n$ )	<100mA
Operating temperature range	-40°C to +80°C
Degree of protection	IP20
Agency information	UL
VPL line-line at 1kV/ $\mu$ s ( $U_p$ )	See VPL graph, line C <sub>3</sub>
VPL line-line for $I_n$ C <sub>2</sub> ( $U_p$ )	See VPL graph, line C <sub>2</sub>

## Installation Instructions

### Mounting



### Wire Connections



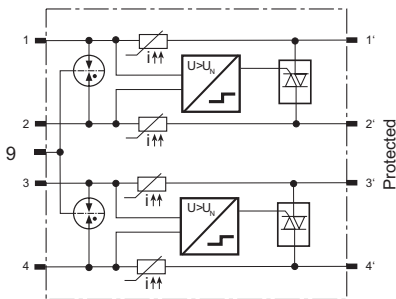
**NOTE:** When wiring the DIN-Rail base, observe the terminal assignment of the surge arrester module according to the circuit diagram.

### Wiring Practices

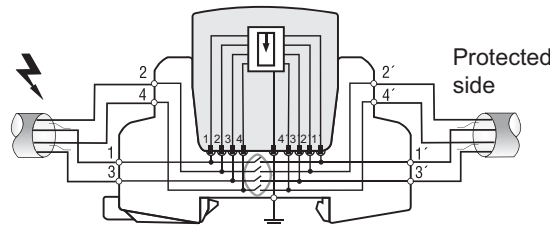
For optimum protection please observe the following good wiring practices:

- Avoid routing signal wires parallel to power wiring or cables.
- Cross power and other cables at a right angle to minimize inductance or capacitance coupling.
- Keep length of protected signal wires as short as possible.
- Use shielded wires whenever possible.
- Connect wire shields to equipotential bonding/ground on both sides of the SPD and protected equipment.

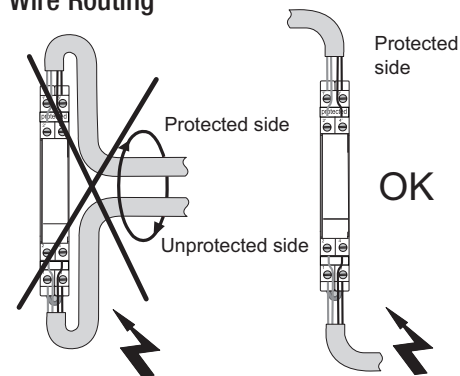
### Circuit Diagram



### Module / Base "Make-Before-Break" Schematic



### Wire Routing



### Warranty

See document 3A1502 at [www.cooperbussmann.com/surge](http://www.cooperbussmann.com/surge) for details of limited warranty.



## UL Requirements

1. This Surge Protective Device (SPD) is intended for ordinary indoor use on communication loop circuits that are isolated from the Public Switched Telephone Network.
2. The SPD module shall be secured to the compatible base before applying power to the communication loop.
3. The base shall be secured to a compatible DIN-Rail ground bar using the methods described in this instruction.
4. Proper grounding continuity shall be determined.
5. Please install the protector module in accordance with the applicable requirements of the National Electrical Code®, Article 800 or other applicable local codes.
6. Screw terminal ratings with the applicable wire gauge sizes shall be noted.
7. The maximum circuit current for UL 497 B application is limited to 100mA.

**Tabulation Strike voltage in accordance with UL 497  
(Protectors for Data Communication and Fire Alarm Circuits)**

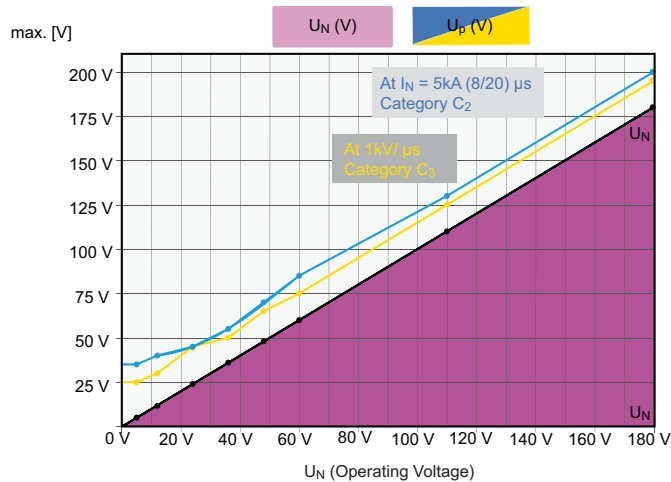
Catalog Number	Strike Voltage 100V / sec		Strike Voltage 100V / $\mu$ sec	
	Line-to-Ground	Line-to-Line	Line-to-Ground	Line-to-Line
BSPD0180DINL	182Vmin. 278Vmax.	182Vmin. 240Vmax.	182Vmin. 550Vmax.	6Vmin. 25Vmax.

## Application and Mode of Operation

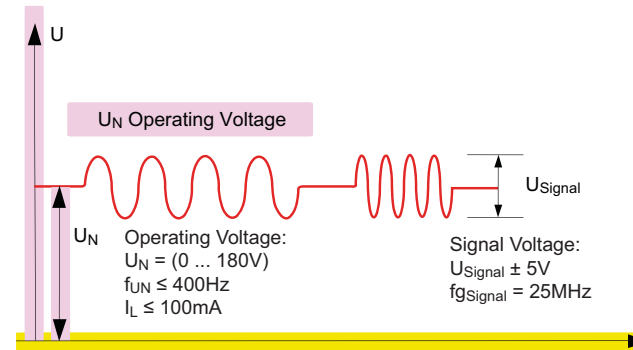
The BSPD0180DINL surge protective device automatically adjusts to the operating voltage (from 0 to 180 volts) of the protected device.

When an overvoltage event occurs, the SPD voltage protection level adjusts itself based upon the output terminal operating voltage of the base (see Diagram 1 and Oscillogram 1).

**Diagram 1: Voltage protection level Up (V) (line - line)**



**Oscillogram 1**



Limit short-circuit currents to 100mA in the vicinity of the installation.

## Safety Instructions

This Surge Protective Device (SPD) for coaxial connection may only be installed by qualified electrical personnel. All applicable national and local electrical standards and safety regulations must be observed. The SPD must be checked for external damage prior to installation. If any damage or other defects are detected, do not install the device.

The installation and application of this SPD is only permitted within the limits shown and stated in these installation instructions. The SPD and the equipment connected to it can be destroyed by loads exceeding the stated values.

Opening, modifying or otherwise tampering with the SPD invalidates the warranty.