Surge Protection Barrier

Features

- 1-channel
- Field mount module
- ½ NPT thread
- Stainless steel housing
- Max. surge current (8/20 µs) 20 kA
- 500 V isolation from earth
- Suitable for hazardous area

Function

This Surge Protection Barrier limits induced transients of different origin (e.g. lightning stroke, switching impulse, etc.). This is achieved by diverting the transient current to ground and limiting the signal line voltage to a safe level for the duration of the surge.

This barrier provides 85 V line-to-line and 500 V line-to-ground clamping voltage for the protected instruments. It also protects instruments that have less than 500 V isolation-to-ground.

It is installed in an available conduit or cable gland opening like those found on most process transmitters.

For additional information, refer to the manual and www.pepperl-fuchs.com.

Note: Surge Protection Barriers must always be connected to a solid and effective ground and be at the same equipotential level as the instrument it is protecting. The ground system must comply with all applicable regulations.

Connection

![Connection Diagram]

Zone 1, 2
Div. 1, 2
## Technical data

### General specifications
- Number of protected signal lines: 1

### Supply
- Rated voltage: \( U_r \) \( \leq 48 \text{ V} \)
- Rated current: \( I_r \) \( \leq 250 \text{ mA} \)
- Leakage current: \( \leq 5 \mu \text{A} \)
- On-state voltage: \( \leq 85 \text{ V} \)
- Ground insulation: \( \geq 500 \text{ V} \) breakdown voltage

### Electrical specifications
- Total discharge current (8/20 µs) \( I_{\text{total}} \): 20 kA

### Conformity
- Degree of protection: IEC 60529:2001

### Ambient conditions
- Ambient temperature: -30 ... 60 °C (-22 ... 140 °F) For usage in hazardous area observe EC-type examination certificate.

### Mechanical specifications
- Housing material: Stainless steel 1.4401 (AISI 316)
- Surface: all over polished
- Degree of protection: IP67
- Cable
  - Length: \( L \) 0.3 m
  - Mass: approx. 200 g
  - Dimensions: AF22 x 77 mm (0.9 x 3 inch)
  - Mounting: NPT1/2 thread

### Data for application in connection with hazardous areas
- EU-Type Examination Certificate: PTB 00 ATEX 2175
- Marking: II 2G Ex ia IIC T6
- Voltage: \( U_i \) 50 V
- Type of protection [Ex ia and Ex ib]
- Maximum leakage current: 10 kA line to ground (common), 5 kA line to line (differential) in accordance to IEC 60-2
- Nominal response time
  - Symmetrical: 1 ns
  - Asymmetric: 100 ns
- Bandwidth: \( \geq 40 \text{ kHz} \)

### Directive conformity

### International approvals
- CSA approval
- Control drawing: 116-0187 (cCSAus)

### General information
- Supplementary information: EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.
Additional information

Installation examples

Terminal box

Transmitter