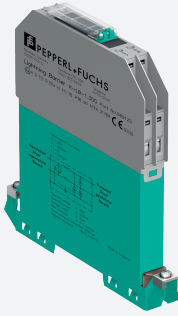


Surge Protection Barrier

K-LB-1.30



- 1-channel
- Mounting on DIN mounting rail
- For intrinsically safe or non-intrinsically safe 30 V applications
- Protects field or control circuit inputs
- Max. surge current (8/20 μ s) 20 kA
- Uninterruptable operation (auto reset)
- Up to SIL 3 acc. to IEC/EN 61508



Function

The device limits induced transients of different causes, e. g. lightning or switching operations. The limitation is achieved by diverting the current to earth and limiting the signal loop voltage during the duration of the overvoltage pulse.

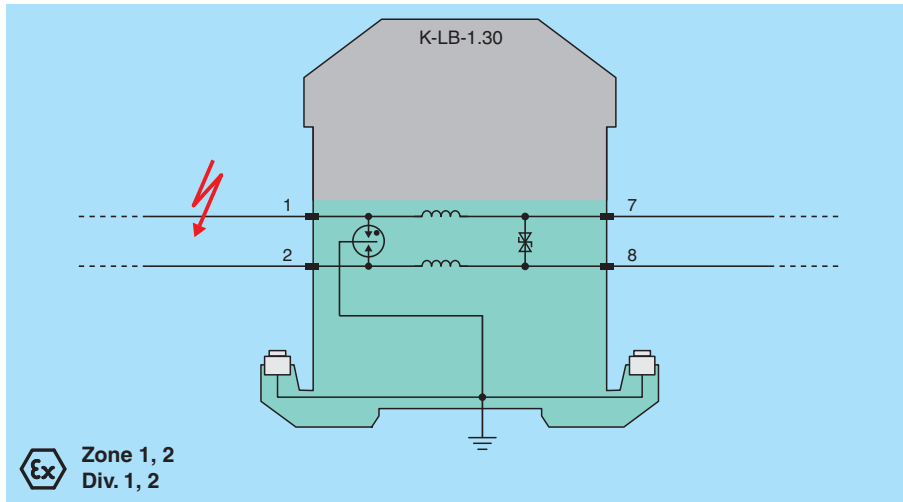
The device is HART transparent.

The device is mounted on a 35 mm DIN mounting rail according to EN 60715.

Note:

Always connect the device to high-quality ground connections. The device must have the same potential as the devices it protects. Install the ground system in accordance with the applicable regulations.

Connection



Technical Data

| General specifications | |
|--------------------------------------|--|
| Number of protected signal lines | 2 |
| Topology | non-grounded |
| Functional safety related parameters | |
| Safety Integrity Level (SIL) | SIL 3 |
| Electrical specifications | |
| Connection | protected area: terminals 7, 8 unprotected area: terminals 1, 2 |
| Rated current | I_r 250 mA |
| Leakage current | < 5 μ A at 24 V and 25 °C (77 °F) , line-line |

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

| | | |
|--|-------------|---|
| Nominal voltage | | 24 V DC |
| Maximum continuous operating voltage | U_c | 30 V DC |
| Series resistance | | < 0.5 Ω per line |
| Impulse rating | | 10 kV/5 kA (category C2) 2 kV/2 kA (category D1) |
| Impulse discharge current (10/350 μ s) | I_{imp} | 2 kA per line (2x) |
| Nominal discharge current (8/20 μ s) | I_n | 5 kA per line (10x) |
| Rated surge current (8/20 μ s) | I_{SM} | 10 kA per line (1x) |
| Total discharge current (8/20 μ s) | I_{total} | 20 kA (1x) |
| Voltage protection level | U_p | max. 75 V line-line for nominal discharge current I_n max. 1.2 kV line-earth for nominal discharge current I_n |
| Impulse reset time | | < 30 ms |
| Insertion loss | | \leq 0.05 dB, at 0 ... 4 kHz, in 600 Ω -System \leq 3 dB, at 0 ... 174 kHz, in 100 Ω -System |
| Indicators/settings | | |
| Labeling | | space for labeling at the front |
| Conformity | | |
| Degree of protection | | IEC 60529:2013 |
| Surge protective devices for low voltage | | EN 61643-21:2001+A1:2009+A2:2013 IEC 61643-21:2001+A1:2008+A2:2012 |
| Operating conditions | | |
| Installation conditions | | |
| Mounting location | | indoor |
| Ambient conditions | | |
| Ambient temperature | | -30 ... 80 $^{\circ}$ C (-22 ... 176 $^{\circ}$ F) For usage in hazardous area observe EC-type examination certificate. |
| Relative humidity | | 5 ... 95 % |
| Mechanical specifications | | |
| Degree of protection | | IP20 |
| Connection | | screw terminals |
| Core cross section | | 2 x 2.5 mm ² |
| Mass | | approx. 100 g |
| Dimensions | | 12.5 x 115 x 116 mm (0.5 x 4.5 x 4.6 inch) (W x H x D) |
| Mounting | | on 35 mm DIN mounting rail acc. to EN 60715:2001 |
| Data for application in connection with hazardous areas | | |
| EU-type examination certificate | | PTB 00 ATEX 2176 X |
| Marking | | Ⓜ II 2(1)G Ex ia IIC T6/T5/T4 |
| Temperature class | | T6 for ambient temperature \leq 50 $^{\circ}$ C T5 for ambient temperature \leq 70 $^{\circ}$ C T4 for ambient temperature \leq 80 $^{\circ}$ C |
| Voltage | U_i | 30 V |
| Current | I_i | 250 mA |
| Internal capacitance | C_i | negligible |
| Internal inductance | L_i | 200 μ H |
| Certificate | | PF 16 CERT 4065 X |
| Marking | | Ⓜ II (3)D [Ex ic Dc] IIIC |
| Directive conformity | | |
| Directive 2014/34/EU | | EN 60079-0:2012+A11:2013 , EN 60079-11:2012 |
| International approvals | | |
| CSA approval | | |
| Control drawing | | 116-0187 (cCSAus) |
| IECEx approval | | |
| IECEx certificate | | IECEx BAS 14.0010X |
| General information | | |
| Supplementary information | | Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com . |

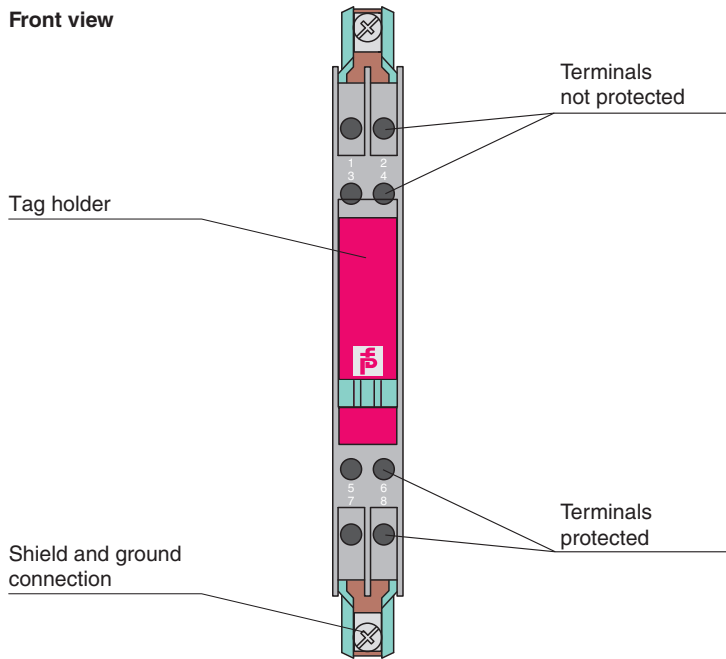
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 PEPPERL+FUCHS

Assembly

Front view



Matching System Components

| | |
|---------------|--|
| USLKG5 | Terminal block for equipotential bonding |
|---------------|--|

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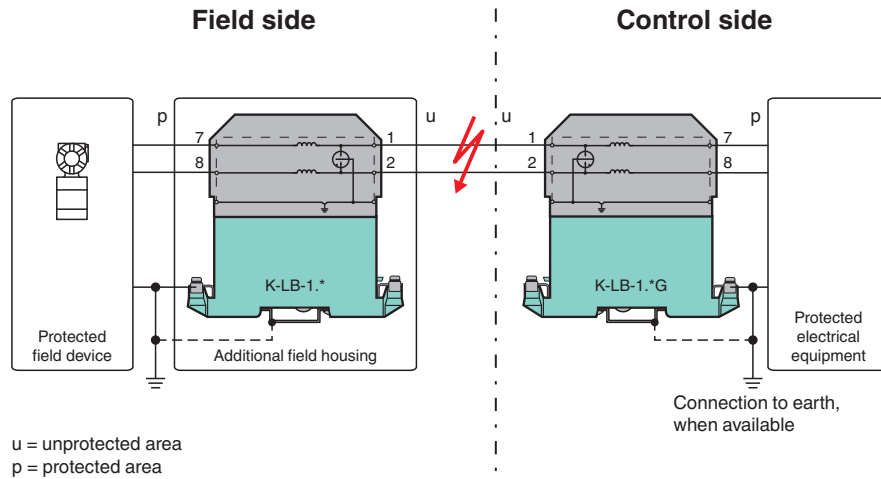
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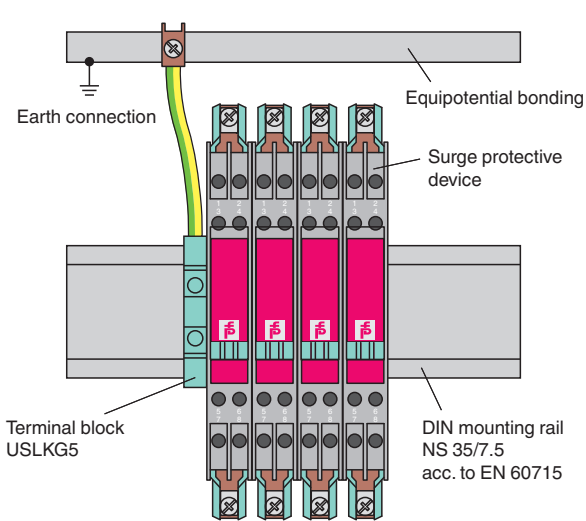
Connection

Topology

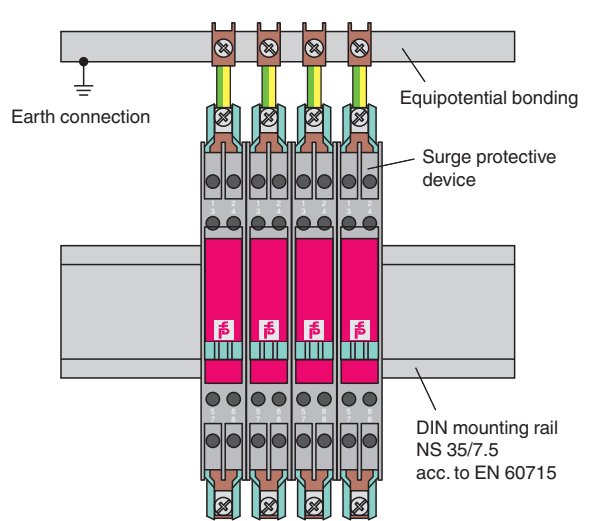


Installation

Installation examples



Insulated mounting (group grounding)



Insulated mounting (individual grounding)

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