

Safety barriers

Single-channel safety barriers



9001/01-280-085-101 Art. No. 158351



- For the intrinsically safe operation of a wide range of devices, such as HART transmitters, solenoid valves, sensors, potential-free contacts and many more
- Compact and space-saving devices that are easy to install on a DIN rail
- Quick to install as barriers can be simultaneously snapped onto the rail and connected to PE

MY R. STAHL 9001A



The series 9001 INTRINSPAK single-channel safety barriers enable the intrinsically safe operation of virtually all field devices. The comprehensive portfolio and the combination of safety barriers cover a wide variety of signals. The devices are incredibly robust and require little space. The back-up fuse is a convenient feature as it is standardised for all variants.

Technical Data

| Explosion Protection | |
|---------------------------------|---|
| Application range (zones) | 2 |
| Ex interface zone | 0, 1, 2, 20, 21, 22 |
| IECEX gas certificate | IECEX PTB 09.0001X |
| IECEX gas explosion protection | Ex ec [ia Ga] IIC T4 Gc |
| IECEX dust certificate | IECEX PTB 09.0001X |
| IECEX dust explosion protection | [Ex ia Da] IIIC |
| ATEX gas certificate | PTB 01 ATEX 2088 X |
| ATEX gas explosion protection | ⊕ II 3 (1) G Ex ec [ia Ga] IIC T4 Gc |
| ATEX dust certificate | PTB 01 ATEX 2088 X |
| ATEX dust explosion protection | ⊕ II (1) D [Ex ia Da] IIIC |
| FMus certificate | 3011002 |
| Marking FMus | NONINCENDIVE FOR, Class I, Div. 2, Groups A,B,C,D; T4; Class I, Zone 2, Group IIC T4 IS connections for Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 0, Groups IIC/IIB Hazardous location when inst. per doc. 90 016 11 31 1 |
| Certificate ULus | E81680V1S3 |
| Marking ULus | For use in Hazardous location, Class I, Div. 2, Groups A,B,C,D; T4 Providing IS circuits for Class I,II,III, GROUPS A,B,C,D,E,F,G; per doc. 90 016 11 31 3 |
| cCSA certificate | 1284547 |
| Marking cCSA | Associated equipment [Ex ia], Class I, Div. 2, Groups A,B,C,D; Provides IS circuits for Class I,II,III, Class I, Zone 0, Groups IIC/IIB For applicable grps per inst. doc. 90 016 11 31 2 |
| Inmetro gas certificate | UL-BR 12.0353 |
| Inmetro dust certificate | UL-BR 12.0353 |

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Explosion Protection

| | |
|---------------------------|---|
| Certificates | ATEX (PTB), Brazil (ULB), Canada (CSA), Canada (FM), China (NEPSI), IECEx (PTB), India (PESO), Japan (CML), Korea (KGS), USA (FM), USA (UL) |
| Declaration of Conformity | ATEX (EUK), China (CCC) |
| Installation | in Zone 2, Division 2 and in safe areas |
| Further information | See relevant certificate and operating instructions |

Safety Data

| | | | |
|--|---|---------------|---------------|
| Max. voltage U_o | 28 V | | |
| Max. current I_o | 85 mA | | |
| Max. power P_o | 595 mW | | |
| Max. permissible external capacity C_o for IIC | 0.083 μ F | | |
| Max. permissible external inductance L_o for IIC | 2.4 mH | | |
| Max. permissible external capacity C_o for IIB | 0.65 μ F | | |
| Max. permissible external inductance L_o for IIB | 16 mH | | |
| Intrinsically safe limiting values Inductance L_o /capacitance C_o | Jointly connectable inductance L_o /capacitance C_o | | |
| IIC | L_o [mH] | 1 mH | 0.200 mH |
| | C_o [μ F] | 0.053 μ F | 0.083 μ F |
| IIB | L_o [mH] | 10 mH | 0.100 mH |
| | C_o [μ F] | 0.250 μ F | 0.35 μ F |

Electrical Data

| | |
|--------------------------------------|------------------|
| Number of channels | 1 |
| Maximum resistance R_{max} | 375 Ω |
| Minimum resistance R_{min} | 340 Ω |
| Maximum output current I_{max} | 64 mA |
| Potential | Positive |
| Transmission frequency channel 1 | \leq 100 kHz |
| I_{leak} leakage current for U_n | \leq 2 μ A |

Auxiliary Power

| | |
|-----------------|------------|
| Nominal voltage | 24 V DC |
| Power supply | Controlled |

Output

| | |
|-----------------------|-------------------|
| Temperature influence | \leq 0,25 %/10K |
|-----------------------|-------------------|

Ambient Conditions

| | |
|---------------------------|------------------------------|
| Ambient temperature | -20 °C ... 60 °C |
| Ambient temperature | -4°F ... +140°F |
| Storage temperature | -20 °C ... 75 °C |
| Storage temperature | -4°F ... +167°F |
| Maximum relative humidity | 95% average, no condensation |

Mechanical Data

| | |
|-------------------------------------|------------------------|
| Degree of protection (IP) | IP40 |
| Degree of protection note | according to IEC 60529 |
| Degree of protection (IP) terminals | IP20 |

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Mechanical Data

| | |
|--------------------------------|--------------------------|
| Enclosure material | Polyamide 6GF |
| Number of connection terminals | 4 |
| Connection cross section min. | 1.5 mm ² |
| Connection cross-section max. | 1.5 mm ² |
| Connection cross-section AWG | 16 AWG |
| Type of connection cable | Finely stranded Solid |
| Width | 103 mm |
| Width, inches | 4.09 in |
| Length | 12 mm |
| Length in inches | 0.48 in |
| Depth of cut-out | 72 mm |
| Mounting depth in inches | 2.76 in |
| Weight | 110 g |
| Weight | 0.24 lb |

Mounting / Installation

| | |
|--------------------------------------|-------------------|
| Earthing connection cross-section | 4 mm ² |
| Earthing conductor cross-section AWG | 12 AWG |
| Connection type | 2 PA |
| Min. torque, Nm | 0.5 Nm |
| Min. torque, lb/in | 4.43 lb/in |
| Max. torque, Nm | 0.6 Nm |
| Max. torque, lb/in | 5.31 lb/in |

Technical Drawings – Subject to Alterations

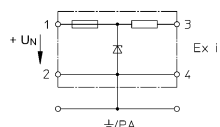
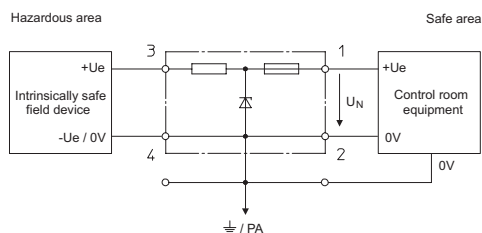
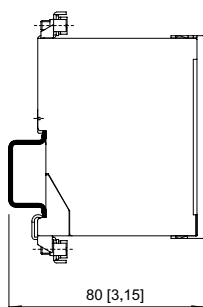
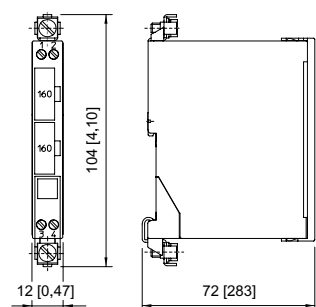


Image B

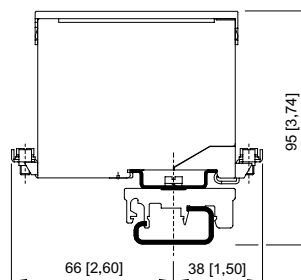


Single-Channel Safety Barriers for Positive Polarity

Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



mounted on the NS 35/15 mounting rail



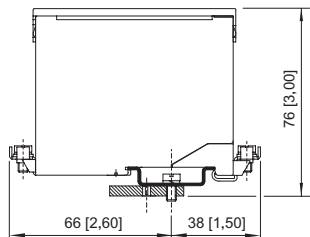
mounted on the NS 32 mounting rail with adaptor and clamping base made of moulded material

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installed on mounting plate with adaptor

Accessories

Terminal block

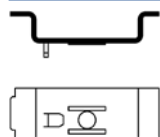


Phoenix Contact terminal block UT 4-PE
Phoenix Contact terminal block UT 6-PE

Art. No.

113057
113058

Adaptor

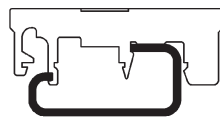


The adaptor enables a series 900x safety barrier to be installed on a mounting plate from a previous series.

Art. No.

158826

Clamping base, moulded material



Enables the safety barrier to be mounted on a G-rail.

Art. No.

165283

Fuse holder



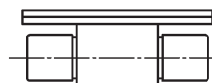
The fuse holder is snapped onto the side of a safety barrier and can be equipped with up to five back-up fuses (replacement).

Art. No.

158834

Spare Parts

Back-up fuse

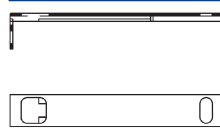


For all series 9001, 9002 and 9004 safety barriers
Packaging unit: 5 pieces

Art. No.

158964

Label carrier



Transparent cover for the label

Art. No.

158977

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.