

# Safety Barriers

## Single-channel safety barriers



9001/00-280-100-101 Art. No. 158356



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

WebCode 9001A



The 9001 series 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 22
Ex interface zone	0 1 2 20 21 22
Certificate IECEX Gas	IECEX PTB 09.0001X
Certificate ATEX Gas	PTB 01 ATEX 2088 X
Certificate IECEX Dust	IECEX PTB 09.0001X
Certificate ATEX Dust	PTB 01 ATEX 2088 X
Gas explosion protection IECEX	Ex nA [ia Ga] IIC/IIB T4 Gc
Gas explosion protection ATEX	⊕ II 3 (1) G Ex nA [ia Ga] IIC/IIB T4 Gc
Dust explosion protection IECEX	[Ex ia Da] IIIC
Dust explosion protection ATEX	⊕ II (1) D [Ex ia Da] IIIC
Certificates	ATEX (PTB), Brazil (ULB), Canada (CSA), EAC (STV), IECEX (PTB), Korea (KGS), USA (FM), USA (UL)
EAC certificate	TS RU S-DE.GB04.B.00132
Installation	in Zone 2, Division 2 and in safe area

#### Safety Data

Max. voltage $U_o$	28 V
Max. current $I_o$	100 mA
Max. power $P_o$	700 mW
Max. permissible external capacitance $C_o$ for IIC	0.083 $\mu$ F
Max. permissible external capacitance $C_o$ for IIB	0.65 $\mu$ F

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### Safety Data

Max. permissible external inductance $L_o$ for IIC	1.6 mH
Max. permissible external inductance $L_o$ for IIB	11 mH
Further information	see respective certificate and operating instructions

### Electrical Data

Number of channels	1
DC rated operational voltage	24 V
Power supply	Controlled, nominal voltage
Nominal voltage	24 V
Maximum resistance $R_{max}$	320 $\Omega$
Minimum resistance $R_{min}$	287 $\Omega$
Maximum output current $I_{max}$	75 mA
Potential	Negative potential
Ohm.curr.lim.usingfreq.>= 50mA	$\leq 100$ kHz
Ohm.curr.lim.usingfreq<= 50 mA	$\leq 50$ kHz
Ileak leakage current for $U_n$	$\leq 2$ $\mu$ A
Ileak leakage current for $U_n 2$	(Unless specified otherwise)

### Ambient Conditions

Min. ambient temperature	-20 °C
Max. ambient temperature	+60 °C
Ambient temperature	-20 °C ... +60 °C
Min. storage temperature	-20 °C
Max. storage temperature	+75 °C
Storage temperature	-20 °C ... +75 °C
Maximum relative humidity	95% on av., no condensation
Temperature influence	$\leq 0,25$ %/10K

### Mechanical Data

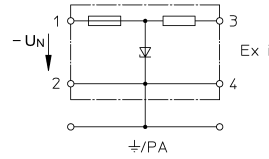
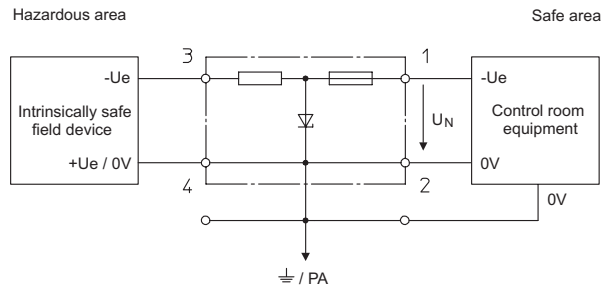
Degree of protection (IP)	IP40
Type of protection note	according to IEC 60529
Degree of protection (IP) Terminals	IP20
Enclosure material	Polyamide 6GF
Number of connection terminals	4
Max. clamping range	1.5 mm <sup>2</sup>
Connection cross-section	4 mm <sup>2</sup>
Type of connection cable	Finely stranded Solid
Width	103 mm
Length	12 mm
Mounting depth	72 mm
Weight	0.11 kg

### Mounting / Installation

Connection type	2 PA
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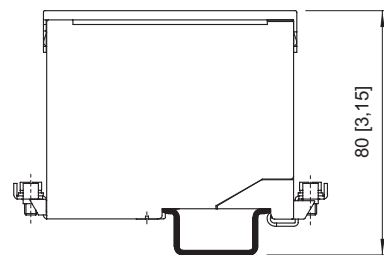
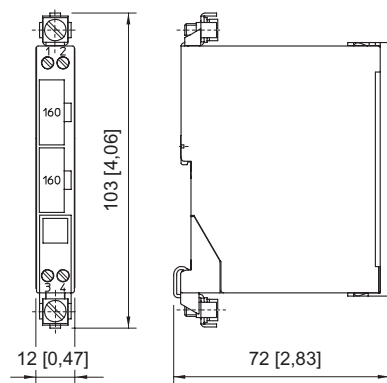
### Technical Drawings



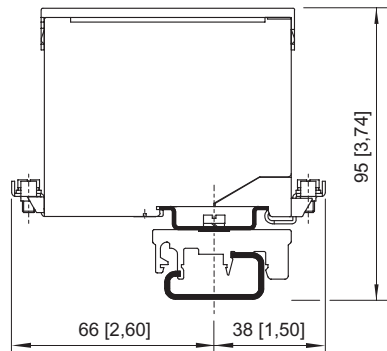
Picture A

Single-Channel Safety Barriers for Negative Polarity

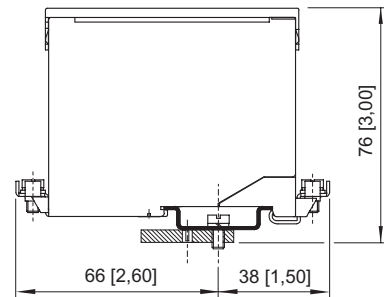
### Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



Mounting on DIN rail NS 35/15



Mounting on DIN rail NS 32 by means of adaptor and mounting attachment, moulded plastic



Mounting on mounting plate by means of adaptor

### Accessories and Spare Parts

#### Back-up fuse

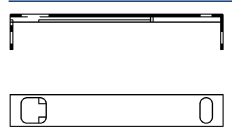


For all safety barriers Series 9001, 9002 and 9004  
unit: 5 pcs.

Art. No.

158964

#### Holder for label



Transparent cover for labelling

Art. No.

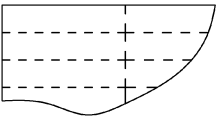
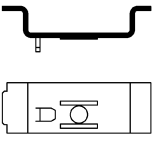
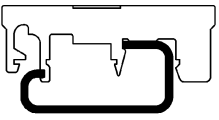
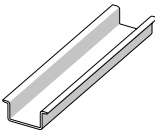
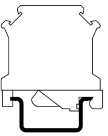
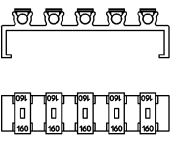
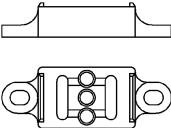
158977

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Labelling paper		Art. No.
	Perforated, for typing Format: DIN A4 Packaging unit: 80 pieces	158973
Adaptor		Art. No.
	Adaptor allows installation of a safety barrier Series 900x on a mounting plate of a previous series.	158826
Mounting attachment moulded plastic		Art. No.
	Enables mounting of safety barrier on a G-rail.	165283
DIN rail		Art. No.
	NS35/15 (meter length)	103714
Earth terminal		Art. No.
	USLKG 5 (wire range 4 mm <sup>2</sup> ) Terminal enables connection of protective conductors to DIN rail. Colour green-yellow.	112760
	USLKG 6 N (wire range 6 mm <sup>2</sup> ) Terminal enables connection of protective / earthing conductors to DIN rail. Colour green-yellow.	112599
Fuse holder		Art. No.
	Fuse holder is snapped onto the side of the safety barrier and can be equipped with up to 5 back-up fuses (replacement).	158834
Insulating stand off		Art. No.
	Suitable for DIN rail NS35/15, allows electrically insulated mounting of DIN rail from mounting plate.	158828

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.