

Safety Barriers

Single-channel safety barriers



9001/00-280-085-101 Art. No. 158344



- 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
IECEX gas certificate	IECEX PTB 09.0001X
ATEX gas certificate	PTB 01 ATEX 2088 X
USA FM gas certificate	3011002
USA UL gas certificate	E81680V1S3
CAN CSA gas certificate	1284547
Inmetro gas certificate	UL-BR 12.0353
IECEX dust certificate	IECEX PTB 09.0001X
ATEX dust certificate	PTB 01 ATEX 2088 X
Inmetro dust certificate	UL-BR 12.0353
Certificate EAC	TS RU C-DE.ГБ04.В.00652
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
Gas explosion protection USA FM	Class I, Div. 2, Groups A,B,C,D; Class I, Zone 2, IIC, T4
Gas explosion protection USA UL	Class I Div. 2, Groups A,B,C,D, T4
Gas explosion protection USA UL	Class I, Div. 2, Groups A,B,C,D, T4
Gas explosion protection Canada CSA	Class I, Div. 2, Groups A,B,C,D; Class I, Zone 2, IIC, T4
Gas explosion protection EAC	⊕ 2 Ex nA [ia Ga] IIC T4 Gc X

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Explosion Protection

Intrinsically safe connection USA FM	CL. I,II,III, DIV. 1, GP. A,B,C,D,E,F,G and CL. I, ZONE 0 GP. IIC/IIB, HAZ. LOC. When installed per doc. 90 016 11 31 1
Intrinsically safe connection USA UL	CL. I, GP. A,B,C,D; CL. II, GP. E,F,G; CL. III, per doc. 90 016 11 31 3
Intrinsically safe connection CAN CSA	CL. I, II, III, for application groups per installation doc. 90 016 11 31 2
Dust explosion protection IECEx	[Ex ia Da] IIIC
Dust explosion protection ATEX	⊕ II (1) D [Ex ia Da] IIIC
Dust explosion protection EAC	⊕ [Ex ia Da] IIIC
Certificates	ATEX (PTB), Brazil (ULB), Canada (CSA), EAC (STV), IECEx (PTB), Japan (TIIS), Korea (KGS), USA (FM), USA (UL)
Installation	in Zone 2, Division 2 and in safe area
Further information	see respective 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 capacitance C_o for IIC	0.083 μ F
Max. permissible external capacitance C_o for IIB	0.65 μ F
Max. permissible external inductance L_o for IIC	2.4 mH
Max. permissible external inductance L_o for IIB	16 mH

Electrical Data

Number of channels	1
Rated operational voltage AC	
Rated operational voltage DC	24 V
Maximum resistance R_{max}	375 Ω
Min. resistance R_{min}	340 Ω
Maximum output current I_{max}	64 mA
Potential	Negative potential
Ohmic current limiting using frequency \geq 50 mA	\leq 100 kHz
Ohmic current limiting using frequency \leq 50 mA	\leq 50 kHz
Leakage current I_{leak} for U_N	\leq 2 μ A
Leakage current I_{leak} for $U_N 2$	(Unless specified otherwise)
Frequency range	

Auxiliary Power

Nominal voltage	24 V
Power supply	Controlled, nominal voltage

Ambient Conditions

Ambient temperature	-20 °C ... +60 °C
Ambient temperature	-4 °F ... +140 °F

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Ambient Conditions

Storage temperature	-20 °C ... +75 °C
Storage temperature	-4°F ... +167°F
Relative humidity max.	95% on average, no condensation
Temperature influence	≤ 0,25 %/10K

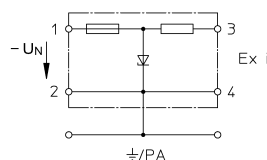
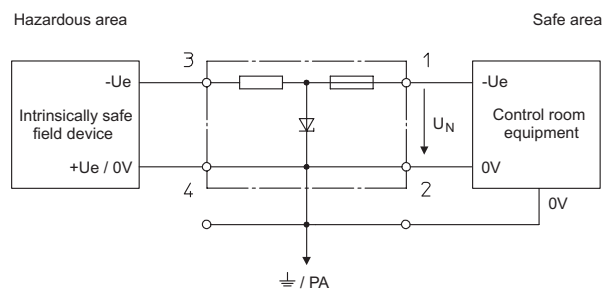
Mechanical Data

Degree of protection (IP)	IP40
Degree of protection note	according to IEC 60529
Terminal degree of protection (IP)	IP20
Enclosure material	Polyamide 6GF
Number of connection terminals	4
Connection cross-section min.	1.5 mm ²
Connection cross section max.	4 mm ²
Connection cross-section AWG	... 12 AWG
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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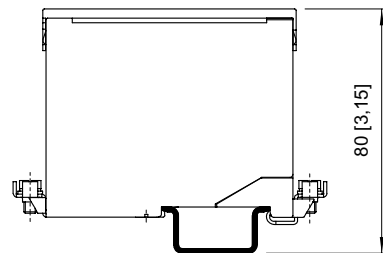
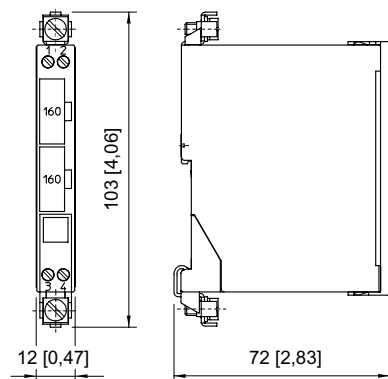
Technical Drawings – Subject to Alterations



Picture A

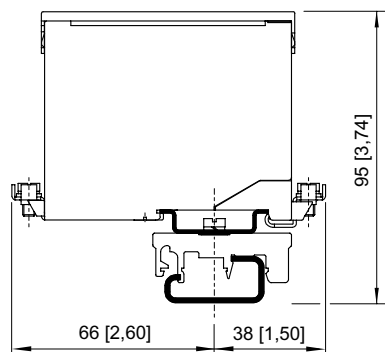
Single-Channel Safety Barriers for Negative Polarity

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

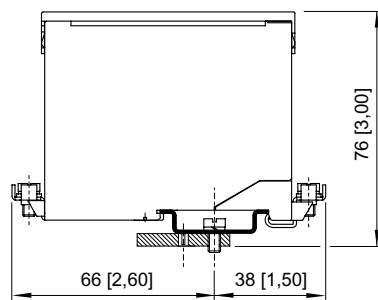


Mounting on DIN rail NS 35/15

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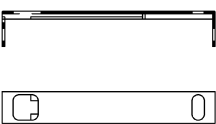
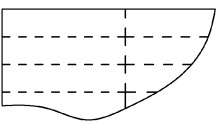
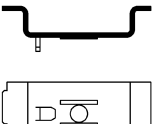
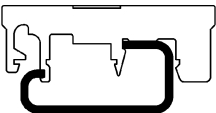
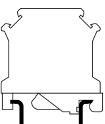


Mounting on DIN rail NS 32 by means of adaptor and mounting attachment, moulded plastic



Mounting on mounting plate by means of adaptor

Accessories and Spare Parts

		Art. No.
Back-up fuse 	For all safety barriers Series 9001, 9002 and 9004 unit: 5 pcs.	158964
Holder for label 	Transparent cover for labelling	158977
Labelling paper 	Perforated, for typing Format: DIN A4 Packaging unit: 80 pieces	158973
Adaptor 	Adaptor allows installation of a safety barrier Series 900x on a mounting plate of a previous series.	158826
Mounting attachment moulded plastic 	Enables mounting of safety barrier on a G-rail.	165283
Earth terminal 	USLKG 5 (wire range 4 mm ²) Terminal enables connection of protective conductors to DIN rail. Colour green-yellow. USLKG 6 N (wire range 6 mm ²) Terminal enables connection of protective / earthing conductors to DIN rail. Colour green-yellow.	112760 112599

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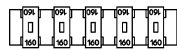
Fuse holder

Art. No.



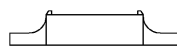
Fuse holder is snapped onto the side of the safety barrier and can be equipped with up to 5 back-up fuses (replacement).

158834



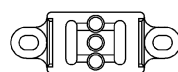
Insulating stand off

Art. No.



Suitable for DIN rail NS35/15, allows electrically insulated mounting of DIN rail from mounting plate.

158828



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