

Safety Barriers

Single-channel safety barriers



9001/51-280-091-141 Art. No. 158524



- 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

9001/51-280-091-141 Art. No. 158524

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), 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	91 mA
Max. power P_o	637 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	2.2 mH
Max. permissible external inductance L_o for IIB	14 mH

Electrical Data

Number of channels	1
Rated operational voltage AC	
Potential	For transmitter
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	20 ... 35 V
Power supply	Uncontrolled, 20 – 35 V DC

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
Relative humidity max.	95% on average, no condensation
Temperature influence	\leq 0,25 %/10K

9001/51-280-091-141 Art. No. 158524

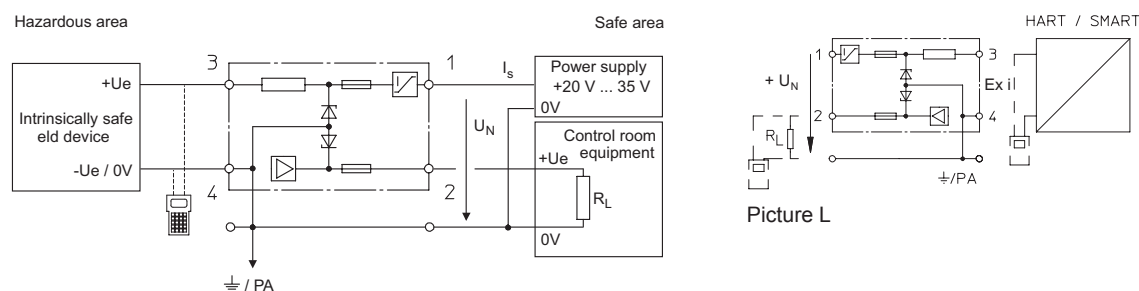
Mechanical Data

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	Solid Finely stranded
Width	103 mm
Length	12 mm
Mounting depth	72 mm
Weight	0.11 kg

Mounting / Installation

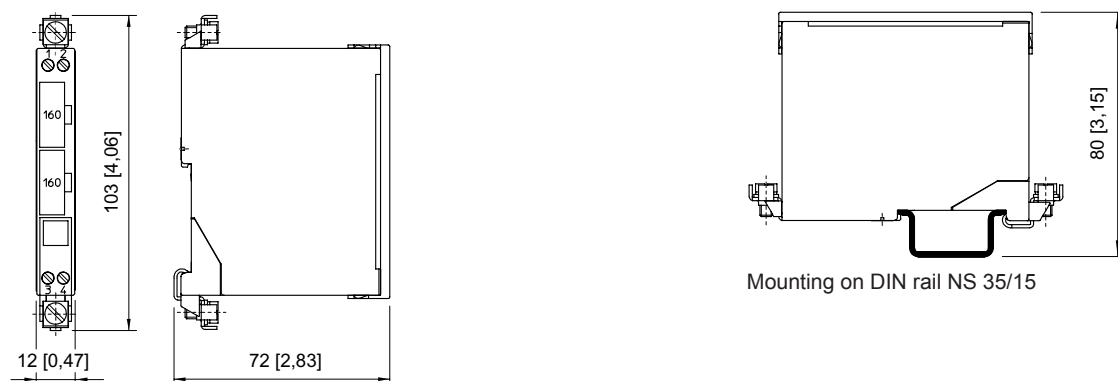
Connection type	2 PA
-----------------	------

Technical Drawings – Subject to Alterations

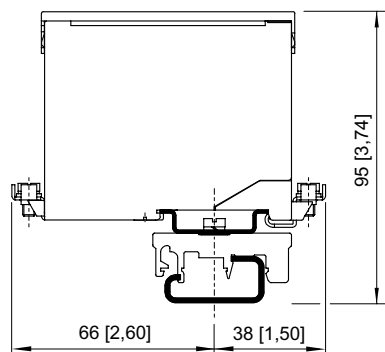


Single-Channel Safety Barriers for Transmitters

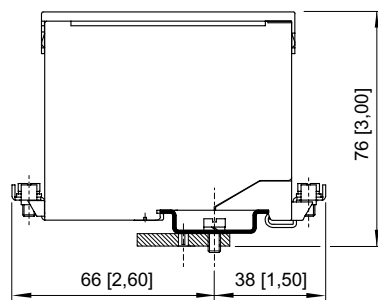
Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



9001/51-280-091-141 Art. No. 158524


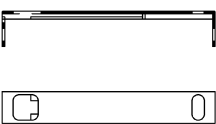
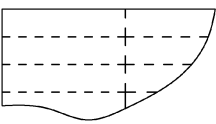
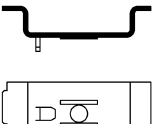
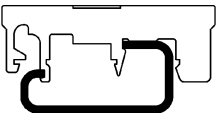
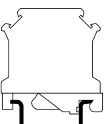


Mounting on DIN rail NS 32 by means of adaptor and mounting attachment, moulded plastic



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

Safety Barriers

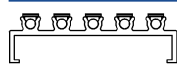
Single-channel safety barriers



9001/51-280-091-141 Art. No. 158524

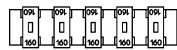
Fuse holder

Art. No.



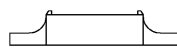
Fuse holder is snapped onto the side of the safety barrier and can be equipped with up to 5 back-up fuses (replacement).

158834



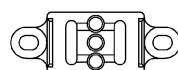
Insulating stand off

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.