Safety Barriers
Dual-channel safety barrier

9002/13-280-093-001 Art. No. 158852

- 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 **9002A**

The 9002 series INTRINSPAK two-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 very 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 08.0057X
Certificate ATEX Gas	PTB 01 ATEX 2053 X
Certificate IECEX Dust	IECEx PTB 08.0057X
Certificate ATEX Dust	PTB 01 ATEX 2053 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), China (CQST), EAC (STV), IECEx (PTB), Korea (KGS), USA (FM), USA (UL)
EAC certificate	TS RU S-DE.GB04.B.00134
Installation	in Zone 2, Division 2 and in safe area
Safety Data	
Max. voltage U_o	28 V
Max. voltage U_o	28 V 28 V 28 V
Max. current I_o	90 mA
Max. power P_o	630 mW
Max. permissible external capacitance C_o for IIC	0.083 µF

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Safety Data	
Max. permissible external capacitance C_o for IIB	0.65 µF
Max. permissible external inductance L_o for IIC	2.2 mH
Max. permissible external inductance L_o for IIB	14 mH
Further information	see respective certificate and operating instructions
Electrical Data	
Number of channels	2
Channel	1 2 1 + 2
Nominal voltage U_N	24 V 24 V
Min. resistance R_{min}	321 Ω
Max. resistance R_{max}	358 Ω
Max. current I_o	90 mA 3 mA 93 mA
Max. power P_o	630 mW 21 mW 651 mW
DC rated operational voltage	24 V
Power supply	Controlled, nominal voltage
Nominal voltage	24 V
Maximum resistance Rmax	358 Ω
Minimum resistance Rmin	321 Ω
Maximum output current Imax	67 mA
Potential	Pos. poten. w/diode
Potential Ch 1	Positive potential
Potential Ch 2	Evaluation barrier +potential
Ohm.curr.lim.usingfreq.>= 50mA	≤ 100 kHz
Ohm.curr.lim.usingfreq<= 50 mA	≤ 50 kHz
Ileak leakage current for Un	≤ 2 µA
Ileak leakage current for Un 2	(Unless specified otherwise)

Channel	Nominal voltage U_N	Min. resistance R_{min}	Max. resistance R_{max}	Max. voltage U_o	Max. current I_o	Max. power P_o
1 2 1 + 2	24,00 V 24.00 V	321.00 Ω	358.00 Ω	28.00 V 28.00 V 28.00 V	90.0 mA 3.0 mA 93.0 mA	630.000 mW 21.000 mW 651.000 mW

Ambient Conditions	
Min. ambient temperature	-20 °C

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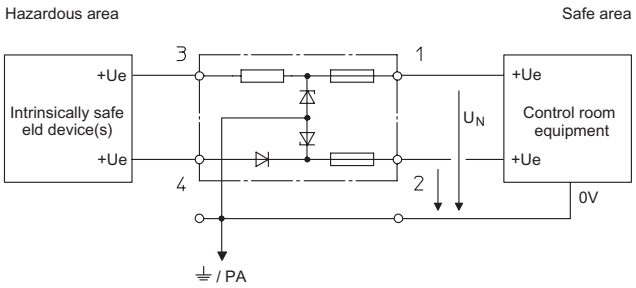
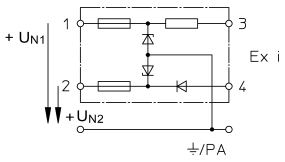
Ambient Conditions	
Max. ambient temperature	+60 °C
Ambient temperature	-20 °C ... +60 °C
Min. storage temperature	-20 °C
Max. storage temperature	+75 °C
Storage temperature	-20 °C ... +75 °C
Maximum relative humidity	95% on av., no condensation
Temperature influence	≤ 0,25 %/10K
Mechanical Data	
Degree of protection (IP)	IP40
Degree of protection (IP) Terminals	IP20
Enclosure material	Polyamide 6GF
Number of connection terminals	4
Max. clamping range	1.5 mm²
Connection cross-section	4 mm²
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

Technical Drawings

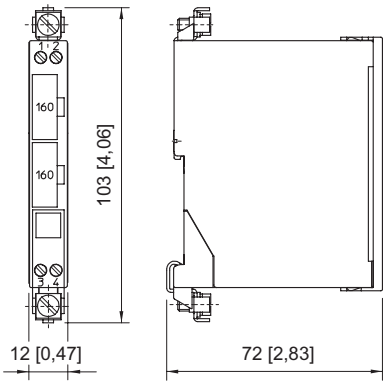


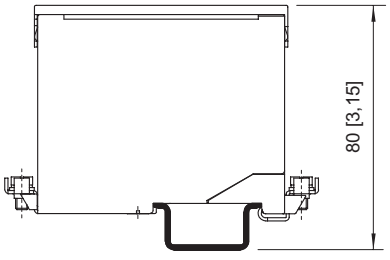
Two-channel safety barriers, safety barrier potential: + / evaluation barrier potential: +



Picture F

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





Mounting on DIN rail NS 35/15

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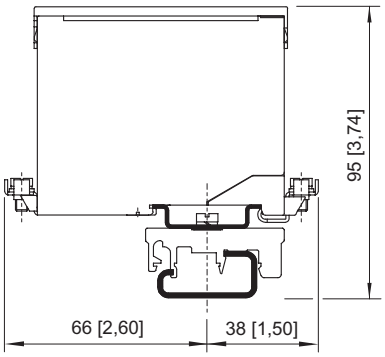
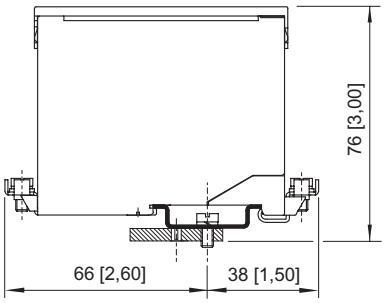
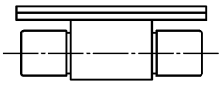
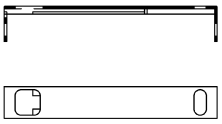
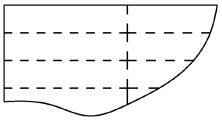
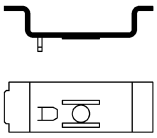
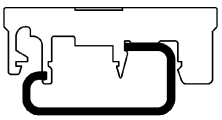
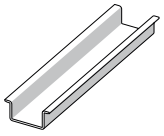


Mounting on DIN rail NS 32 by means of adaptor and mounting attachment, moulded plastic



Mounting on mounting plate by means of adaptor

Accessories and Spare Parts

Back-up fuse		**Art. No.**
	For all safety barriers Series 9001, 9002 and 9004 unit: 5 pcs.	158964
Holder for label		**Art. No.**
	Transparent cover for labelling	158977
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

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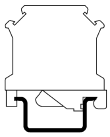
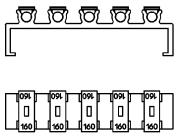
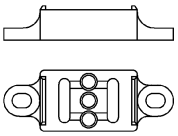
Earth terminal		**Art. No.**
	USLKG 5 (wire range 4 mm²) Terminal enables connection of protective conductors to DIN rail. Colour green-yellow.	112760
	USLKG 6 N (wire range 6 mm²) Terminal enables connection of protective / earthing conductors to DIN rail. Colour green-yellow.	112599

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.

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