

9002/00-280-186-001 Art. No. 158845



- 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
IECEX gas certificate	IECEX PTB 08.0057X
ATEX gas certificate	PTB 01 ATEX 2053 X
USA UL gas certificate	E81680V1S3
IECEX dust certificate	IECEX PTB 08.0057X
ATEX dust certificate	PTB 01 ATEX 2053 X
Certificate EAC	TS RU C-DE.ГБ04.В.00651
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 UL	Class I Div. 2, Groups C,D, T4
Gas explosion protection EAC	⊕ 2 Ex nA [ia Ga] IIC T4 Gc X
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), China (CQST), EAC (STV), IECEX (PTB), India (PESO), Korea (KGS), USA (FM), USA (UL)
Inmetro gas certificate	UL-BR 12.0354
Inmetro dust certificate	UL-BR 12.0354
Installation	in Zone 2, Division 2 and in safe area
Further information	see respective certificate and operating instructions

Safety Barriers

Dual-channel safety barrier



9002/00-280-186-001 Art. No. 158845

Safety Data

Max. voltage U_o	28 V 28 V 28 V
Max. voltage U_o	28 V
Max. current I_o	93 mA
Max. power P_o	650 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 mH
Max. permissible external inductance L_o for IIB	13 mH

Electrical Data

Number of channels	2
Channel	1 2 1 + 2
Nominal voltage U_N	25 V 25 V
Min. resistance R_{min}	321 Ω 321 Ω
Max. resistance R_{max}	358 Ω 358 Ω
Max. current I_o	93 mA 93 mA 186 mA
Max. power P_o	650 mW 650 mW 1300 mW
Rated operational voltage DC	25 V
Maximum resistance R_{max}	358 Ω
Min. resistance R_{min}	321 Ω
Maximum output current I_{max}	69 mA
Maximum output current I_{max}	69 mA
Potential	Negative potential
Potential Ch 1	Negative potential
Potential Ch 2	Negative potential
Ohmic current limiting using frequency ≥ 50 mA	≤ 100 kHz
Ohmic current limiting using frequency ≤ 50 mA	≤ 50 kHz

9002/00-280-186-001 Art. No. 158845

Electrical Data

Leakage current I_{leak} for U_N		$\leq 2 \mu A$				
Leakage current I_{leak} for $U_N 2$		(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	25.00 V	321.00 Ω	358.00 Ω	28.00 V	93.0 mA	650.000 mW
2	25.00 V	321.00 Ω	358.00 Ω	28.00 V	93.0 mA	650.000 mW
1 + 2				28.00 V	186.0 mA	1300.000 mW

Auxiliary Power

Nominal voltage	25 V
Power supply	Controlled, nominal voltage

Ambient Conditions

Ambient temperature °F	-4 – 140 °F
Ambient temperature	-20 °C ... +60 °C
Ambient temperature	-20 °C ... +60 °C / -4°F ... +140°F
Ambient temperature min. F	-4°F
Storage temperature	-20 °C ... +75 °C
Storage temperature	-20 °C ... +75 °C / -4°F ... +167°F
Relative humidity max.	95% on average, no condensation
Temperature influence	$\leq 0,25 \%/10K$

Mechanical Data

Degree of protection (IP)	IP40
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
Conductor cross-section AWG min.	16 AWG
Conductor cross-section AWG max.	12 AWG
Connection cross-section	1.5 mm ² ... 4 mm ² / 16 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
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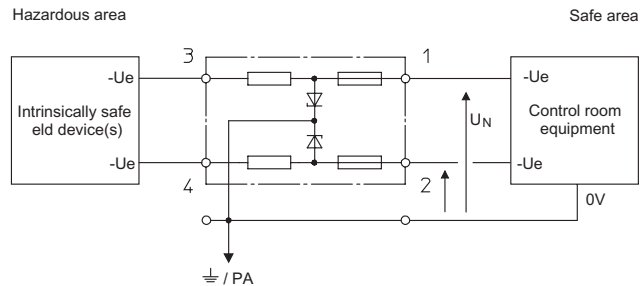
Safety Barriers

Dual-channel safety barrier



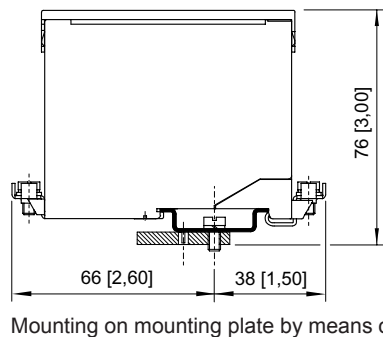
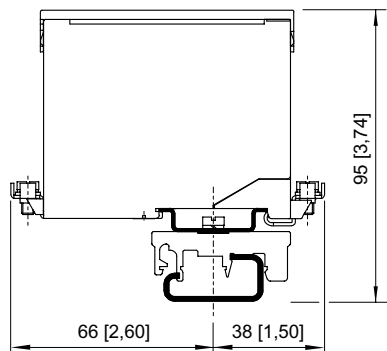
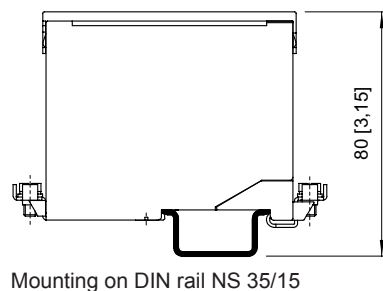
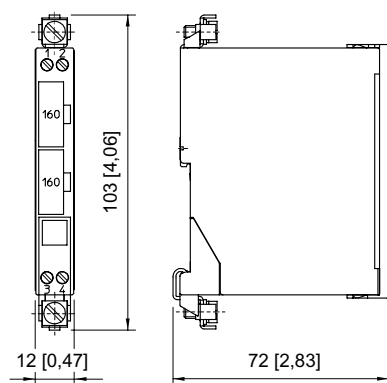
9002/00-280-186-001 Art. No. 158845

Technical Drawings



Two-channel safety barriers, potential: - / -

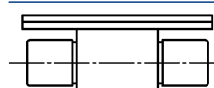
Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



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

Accessories and Spare Parts

Back-up fuse

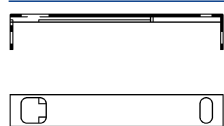


For all safety barriers Series 9001, 9002 and 9004
unit: 5 pcs.

Art. No.

158964

Holder for label



Transparent cover for labelling

Art. No.

158977

9002/00-280-186-001 Art. No. 158845

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
Earth terminal		Art. No.
	USLKG 5 (wire range 4 mm ²) Terminal enables connection of protective conductors to DIN rail. Colour green-yellow.	112760
	USLKG 6 N (wire range 6 mm ²) 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.