

9002/77-093-040-001 Art. No. 158905



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

MY R. STAHL 9002A



The series 9002 INTRINSPAK dual-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
Ex interface zone	0, 1, 2, 20, 21, 22
IECEEx gas certificate	IECEEx PTB 08.0057X
IECEEx gas explosion protection	Ex ec [ia Ga] IIC T4 Gc
IECEEx dust certificate	IECEEx PTB 08.0057X
IECEEx dust explosion protection	[Ex ia Da] IIIC
ATEX gas certificate	PTB 01 ATEX 2053 X
ATEX gas explosion protection	II 3 (1) G Ex ec [ia Ga] IIC T4 Gc
ATEX dust certificate	PTB 01 ATEX 2053 X
ATEX dust explosion protection	II (1) D [Ex ia Da] IIIC
FMus certificate	3010778
Marking FMus	NONINCENDIVE FOR, Class I, Div. 2, Groups A,B,C,D; T4; Class I, Zone 2, Group IIC T4 IS connections for Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 0, Groups IIC/IIB Hazardous location when inst. per doc. 90 026 11 31 1
Certificate ULus	E81680V1S3
Marking ULus	For use in Hazardous location, Class I, Div. 2, Groups A,B,C,D; T4 Providing IS circuits for Class I,II,III, GROUPS A,B,C,D,E,F,G; per doc. 90 026 11 31 3
cCSA certificate	1284580
Marking cCSA	Associated equipment [Ex ia], Class I, Div. 2, Groups A,B,C,D; Provides IS circuits for Class I,II,III, Class I, Zone 0, Groups IIC/IIB For applicable grps per inst. doc. 90 016 11 31 2
Inmetro gas certificate	UL-BR 12.0354
Inmetro dust certificate	UL-BR 12.0354

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Explosion Protection

Certificates	ATEX (PTB), Brazil (ULB), Canada (CSA), Canada (FM), China (CQST), IECEx (PTB), India (PESO), Japan (CML), Korea (KGS), USA (FM), USA (UL)
Declaration of Conformity	ATEX (EUK), China (CCC)
Installation	in Zone 2, Division 2 and in safe areas
Further information	See relevant certificate and operating instructions

Safety Data

Max. voltage U _o			9.3 V		
Max. current I _o			20 mA		
Max. power P _o			50 mW		
Max. permissible external capacity C _o for IIC			4.1 μF		
Max. permissible external inductance L _o for IIC			90 mH		
Max. permissible external capacity C _o for IIB			31 μF		
Max. permissible external inductance L _o for IIB			330 mH		
Intrinsically safe limiting values Inductance L _o /capacitance C _o			Jointly connectable inductance L _o /capacitance C _o		
Channel 1	IIC	L _o [mH]	10 mH	1 mH	0.100 mH
		C _o [μF]	0.680 μF	1 μF	1.8000 μF
	IIB	L _o [mH]	10 mH	1 mH	0.1 mH
		C _o [μF]	3.60 μF	5.70 μF	11 μF
Channel 2	IIC	L _o [mH]	10 mH	1 mH	0.1 mH
		C _o [μF]	0.680 μF	1 μF	1.800 μF
	IIB	L _o [mH]	10 mH	1 mH	0.1 mH
		C _o [μF]	3.60 μF	5.70 μF	11 μF
Channels 1 + 2	IIC	L _o [mH]	10 mH	1 mH	0.10 mH
		C _o [μF]	0.590 μF	1 μF	1.800 μF
	IIB	L _o [mH]	10 mH	1 mH	0.1 mH
		C _o [μF]	3.400 μF	5.70 μF	11 μF

Electrical Data

Number of channels			2			
Maximum resistance R _{max}			546 Ω			
Minimum resistance R _{min}			492 Ω			
Potential channel 1			Star barrier (positive)			
Potential channel 2			Star barrier (negative)			
Transmission frequency channel 1			≤ 50 kHz			
Type of voltage			AC/DC			
I _{leak} leakage current for U _n			≤ 2 μA			
Channel	Nominal voltage U _N	Minimum resist- ance R _{min}	Maximum resist- ance R _{max}	Maximum voltage U _o	Maximum current I _o	Maximum power P _o
1	6 V	492 Ω	546 Ω	9.30 V	20 mA	50 mW
2		492 Ω	546 Ω	9.30 V	20 mA	50 mW
1 + 2				9.30 V	40 mA	90 mW

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Auxiliary Power	
Power supply	Controlled
Output	
Temperature influence	≤ 0,25 %/10K
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
Maximum relative humidity	95% average, no condensation
Mechanical Data	
Degree of protection (IP)	IP40
Degree of protection (IP) terminals	IP20
Enclosure material	Polyamide 6GF
Number of connection terminals	4
Connection cross-section max.	1.5 mm²
Connection cross-section AWG	16 AWG
Type of connection cable	Finely stranded Solid
Width	103 mm
Width, inches	4.09 in
Length	12 mm
Length, inches	0.48 in
Depth of cut-out	72 mm
Mounting depth, inches	2.76 in
Weight	110 g
Weight	0.24 lb
Mounting / Installation	
Earthing connection cross-section	4 mm²
Earthing conductor cross-section AWG	12 AWG
Connection type	2 PA
Min. torque, Nm	0.5 Nm
Min. torque, lb/in	4.43 lb/in
Max. torque, Nm	0.6 Nm
Max. torque, lb/in	5.31 lb/in

Technical Drawings – Subject to Alterations

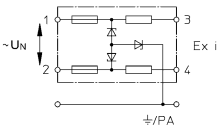
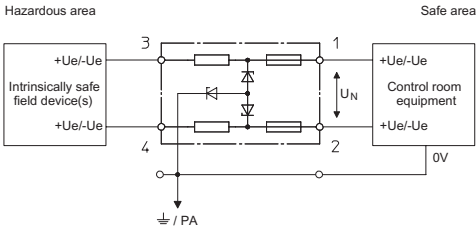
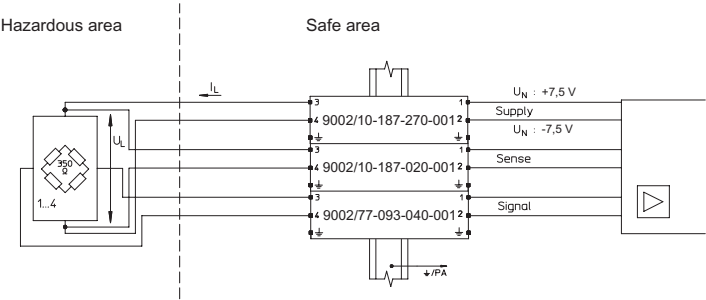


Image K



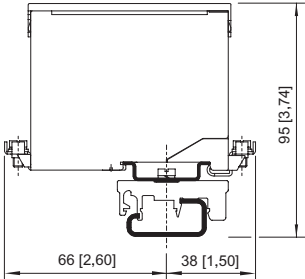
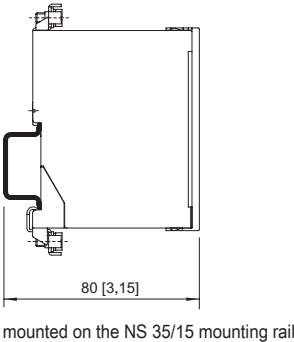
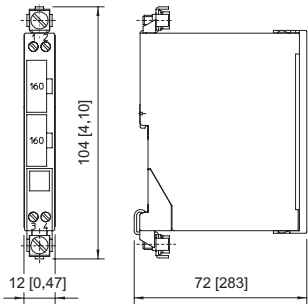
Dual-channel safety barriers, star barrier/star barrier

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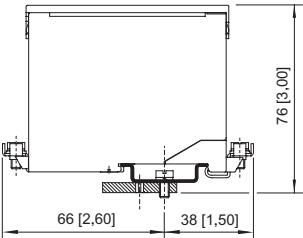


Application: Load cell (DMS) 350 Ω or 700 Ω
6-wire ± 7.5 V (15 V) field circuit unearthed

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



mounted on the NS 32 mounting rail with adaptor and clamping base made of moulded material



installed on mounting plate with adaptor

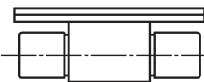
Accessories

Table with 3 columns: Accessory Name, Description, and Art. No. Rows include Terminal block (Phoenix Contact), Adaptor, and Clamping base, moulded material.

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Fuse holder		Art. No.
 	The fuse holder is snapped onto the side of a safety barrier and can be equipped with up to five back-up fuses (replacement).	158834

Spare Parts

Back-up fuse		Art. No.
	For all series 9001, 9002 and 9004 safety barriers Packaging unit: 5 pieces	158964
Label carrier		Art. No.
 	Transparent cover for the label	158977

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.