



- 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			19.9 V		
Max. current I _o			222 mA		
Max. power P _o			1100 mW		
Max. permissible external capacity C _o for IIC			0.223 µF		
Max. permissible external inductance L _o for IIC			0.39 mH		
Max. permissible external capacity C _o for IIB			1.42 µF		
Max. permissible external inductance L _o for IIB			3.18 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]	0.2 mH		0.100 mH
		C _o [µF]	1.4000 µF		1.8000 µF
	IIB	L _o [mH]	1 mH		0.1 mH
		C _o [µF]	0.79 µF		1.20 µF
Channel 2	IIC	L _o [mH]	10 mH	1 mH	0.1 mH
		C _o [µF]	0.170 µF	0.170 µF	0.220 µF
	IIB	L _o [mH]	10 mH	1 mH	0.1 mH
		C _o [µF]	0.83 µF	0.99 µF	1.30 µF
Channels 1 + 2	IIC	L _o [mH]	0.2 mH		0.10 mH
		C _o [µF]	0.140 µF		0.180 µF
	IIB	L _o [mH]	2 mH	1 mH	0.1 mH
		C _o [µF]	0.790 µF	0.79 µF	1.200 µF

Electrical Data	
Number of channels	2
Maximum resistance R_{max}	109 Ω
Minimum resistance R_{min}	96 Ω
Maximum output current I_{max}	148 mA
Potential channel 1	Positive
Potential channel 2	Positive with diode
Transmission frequency channel 1	$\leq$ 100 kHz
Channel 2 auxiliary voltage drop	2 V
Type of voltage	DC
I_{leak} leakage current for U_n	$\leq$ 2 μ A
Channel 2 I_{leak} leakage current for	$\leq$ 10 μ A

Chan- nel	Nominal volt- age U_N	Maximum output current I_{max}	Minimum resist- ance R_{min}	Maximum resist- ance R_{max}	Maximum voltage U_o	Maximum current I_o	Maximum power P_o
1	16.00 V DC	148 mA	96 Ω	109 Ω	19.90 V	222 mA	1100 mW

Safety barriers
Dual-channel safety barrier



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2	16 V				19.90 V	3 mA	15 mW
1 + 2					19.90 V	225 mA	1120 mW

Auxiliary Power

Power supply	Controlled
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Output

Temperature influence	≤ 0,25 %/10K
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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

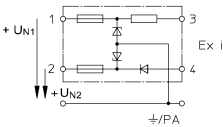
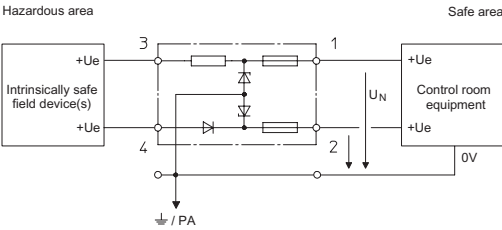
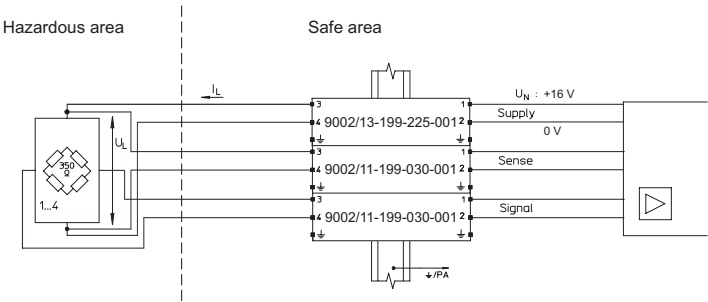


Image F



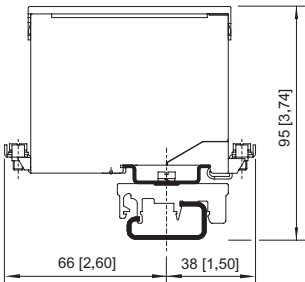
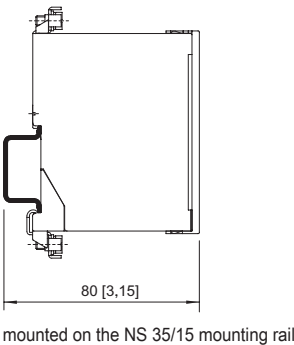
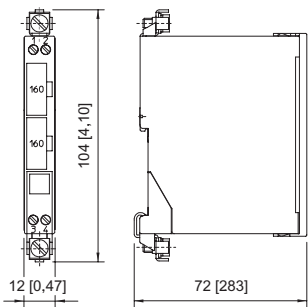
Dual-channel safety barriers, safety barrier potential:
+ / evaluation barrier potential: +

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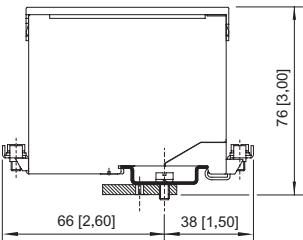


Application: Load cell (DMS) 350 Ω or 700 Ω
6-wire + 16 V field circuit unearthed

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

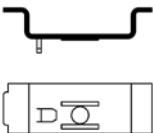
Terminal block



- Phoenix Contact terminal block UT 4-PE
Phoenix Contact terminal block UT 6-PE

Art. No.
113057
113058

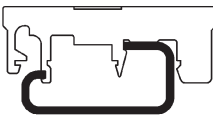
Adaptor



The adaptor enables a series 900x safety barrier to be installed on a mounting plate from a previous series.

Art. No.
158826

Clamping base, moulded material



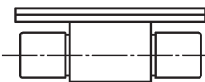
Enables the safety barrier to be mounted on a G-rail.

Art. No.
165283

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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.