

9002/22-158-200-001 Art. No. 158952



- 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)
Installation	in Zone 2, Division 2 and in safe areas
Further information	See relevant certificate and operating instructions

Safety Data

Max. voltage U _o			7.9 V		
Max. current I _o			100 mA		
Max. power P _o			198 mW		
Max. permissible external capacity C _o for IIC			8.8 µF		
Max. permissible external inductance L _o for IIC			4 mH		
Max. permissible external capacity C _o for IIB			115 µF		
Max. permissible external inductance L _o for IIB			15 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]	2 mH	1 mH	0.100 mH
		C _o [µF]	1 µF	1.3000 µF	2.5000 µF
	IIB	L _o [mH]	10 mH	1 mH	0.1 mH
		C _o [µF]	3.90 µF	7.60 µF	16 µF
Channel 2	IIC	L _o [mH]	2 mH	1 mH	0.1 mH
		C _o [µF]	1 µF	1.300 µF	2.500 µF
	IIB	L _o [mH]	10 mH	1 mH	0.1 mH
		C _o [µF]	3.90 µF	7.60 µF	16 µF
Channels 1 + 2	IIC	L _o [mH]		0.5 mH	0.10 mH
		C _o [µF]		0.340 µF	0.380 µF
	IIB	L _o [mH]	2 mH	1 mH	0.1 mH
		C _o [µF]	1.400 µF	1.70 µF	2.600 µF

Electrical Data

Number of channels	2
Maximum resistance R_{max}	95 Ω
Minimum resistance R_{min}	84 Ω
Maximum output current I_{max}	57 mA
Potential channel 1	alternating
Potential channel 2	alternating
Transmission frequency channel 1	≤ 100 kHz
Type of voltage	AC/DC
I_{leak} leakage current for U_n	≤ 2 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	5.50 V AC+DC	57 mA	84 Ω	95 Ω	7.90 V	100 mA	198 mW
2	5.50 V	57 mA	84 Ω	95 Ω	7.90 V	100 mA	198 mW

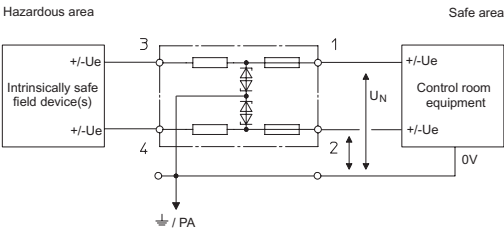
Safety barriers
Dual-channel safety barrier



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1 + 2	11 V				15.80 V	200 mA	395 mW
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		Solid Finely stranded					
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					

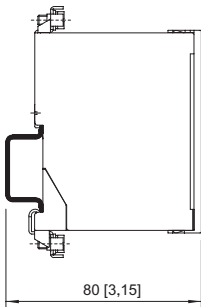
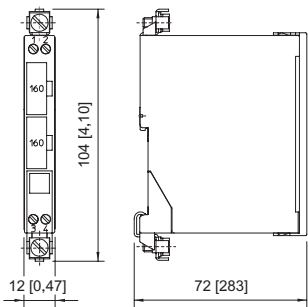
Technical Drawings – Subject to Alterations



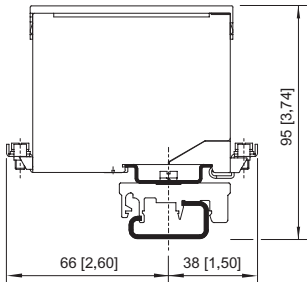
Dual-channel safety barriers, potential: ~ / ~

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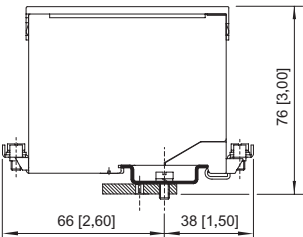
Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



mounted on the NS 35/15 mounting rail

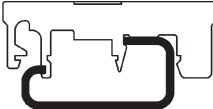


mounted on the NS 32 mounting rail with adaptor and clamping base made of moulded material

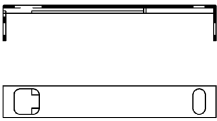


installed on mounting plate with adaptor

Accessories

Terminal block		Art. No.
	Phoenix Contact terminal block UT 4-PE	113057
	Phoenix Contact terminal block UT 6-PE	113058
Adaptor		Art. No.
 	The adaptor enables a series 900x safety barrier to be installed on a mounting plate from a previous series.	158826
Clamping base, moulded material		Art. No.
	Enables the safety barrier to be mounted on a G-rail.	165283
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

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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.