



- 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 and efficient installation as barriers can be simultaneously snapped onto DIN rail and connected to ground (ISA - RPI12.06)
- Convenient maintenance and repair through back-up fuse feature

MY R. STAHL 9001A



The 9001 series INTRINSPAK single-channel zener barriers enable the intrinsically safe operation of virtually all field devices. The comprehensive portfolio and the combination of zener barriers cover a wide variety of signals. The devices are incredibly robust and require little space. The back-up fuse is a convenient feature as it is standardized 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 09.0001X
IECEEx gas certificate	IECEEx PTB 09.0001X
IECEEx gas explosion protection	Ex ec [ia Ga] IIC T4 Gc
IECEEx dust certificate	IECEEx PTB 09.0001X
IECEEx dust explosion protection	[Ex ia Da] IIIC
ATEX gas certificate	PTB 01 ATEX 2088 X
ATEX gas certificate	PTB 01 ATEX 2088 X
ATEX gas explosion protection	Ex II 3 (1) G Ex ec [ia Ga] IIC T4 Gc
ATEX dust certificate	PTB 01 ATEX 2088 X
ATEX dust explosion protection	Ex II (1) D [Ex ia Da] IIIC
FMus certificate	3011002
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. 90 016 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. 90 016 11 31 3
cCSA certificate	1284547
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 12.0353

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Explosion Protection

Inmetro dust certificate	UL-BR 12.0353
Certificates	ATEX (PTB), Brazil (ULB), Canada (CSA), Canada (FM), China (NEPSI), IECEx (PTB), India (PESO), Korea (KGS), USA (FM), USA (UL)
Declaration of Conformity	ATEX (EUK), China (CCC)
Installation	in Zone 2, Class I, Div. 2, and Class I, Zone 2 and in safe area
Further information	see respective certificate and operating instructions

Safety Data

Max. voltage U_o/V_{oc}		19.9 V		
Max. current I_o/I_{sc}		10 mA		
Max. power P_o		50 mW		
Max. permissible external capacitance C_o/C_s for IIC		0.223 μ F		
Max. permissible external inductance L_o/L_a for IIC		330 mH		
Max. permissible external capacitance C_o/C_s for IIB		1.42 μ F		
Max. permissible external inductance L_o/L_a for IIB		1000 mH		
Intrinsically safe limiting values Inductance L_o /capacitance C_o		Jointly connectable inductance L_o /capacitance C_o		
IIC	L_o [mH]	50 mH	1 mH	0.100 mH
	C_o [μ F]	0.160 μ F	0.170 μ F	0.220 μ F
IIB	L_o [mH]	50 mH	1 mH	0.100 mH
	C_o [μ F]	0.800 μ F	0.99 μ F	1.30 μ F

Electrical Data

Number of channels	1
Maximum resistance R_{max}	2320 Ω
Min. resistance R_{min}	2097 Ω
Maximum output current I_{max}	6 mA
Potential	Positive
Transmission frequency channel 1	≤ 50 kHz
I_{leak} leakage current for U_n	≤ 2 μ A

Auxiliary Power

Nominal voltage V_{nom}	16 V DC
Power supply	Controlled

Output

Temperature influence	$\leq 0,25$ %/10K
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Ambient Conditions

Ambient temperature $^{\circ}$ C	-20 $^{\circ}$ C ... 60 $^{\circ}$ C
Ambient temperature $^{\circ}$ F	-4 $^{\circ}$ F ... +140 $^{\circ}$ F
Storage temperature $^{\circ}$ C	-20 $^{\circ}$ C ... 75 $^{\circ}$ C
Storage temperature $^{\circ}$ F	-4 $^{\circ}$ F ... +167 $^{\circ}$ F
Max. relative humidity	95% average, no condensation

Mechanical Data

Degree of protection (IP)	IP40
Degree of protection note	according to IEC 60529

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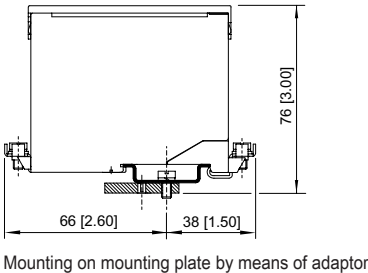
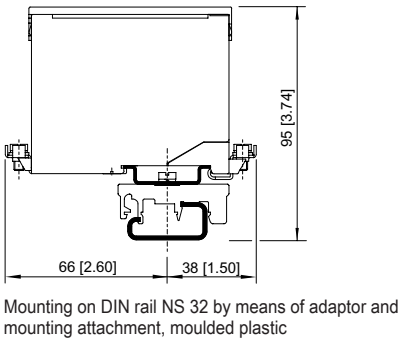
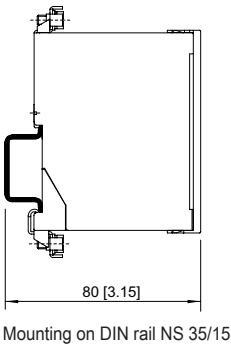
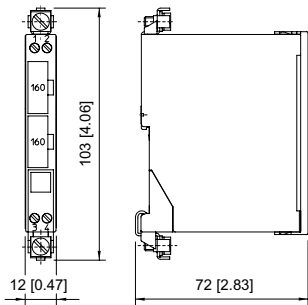
Mechanical Data

Degree of protection (IP) terminals	IP20
Enclosure material	Polyamide 6GF
Number of connection terminals	4
Connection cross section min.	1.5 mm ²
Connection cross-section max.	1.5 mm ²
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 in inches	0.48 in
Depth of cut-out	72 mm
Mounting depth in inches	2.76 in
Weight	110 g
Weight	0.24 lb

Mounting / Installation

Earthing connection cross-section	4 mm ²
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

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



Accessories

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Terminal block

Art. No.



Phoenix Contact terminal block UT 4-PE

113057

Phoenix Contact terminal block UT 6-PE

113058

Adaptor

Art. No.



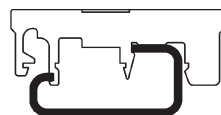
The adaptor enables a zener barrier to be installed on a clamping base (Art. No. 165283) or mounting plate from a previous series.

158826



Clamping base, moulded material

Art. No.



Enables mounting of zener barrier on a G-rail. The safety barrier is mounted using the adaptor (Art. No. 158826).

165283

Fuse holder

Art. No.



Fuse holder is snapped onto the side of the zener barrier and can be equipped with up to 5 back-up fuses (replacement).

158834



Spare Parts

Back-up fuse

Art. No.



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

158964

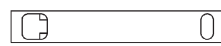
Label carrier

Art. No.



Transparent cover for the label

158977



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