

Safety barriers

Single-channel safety barriers



9001/51-280-091-141 Art. No. 158524



- 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 9001A



The series 9001 INTRINSPAK single-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 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 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 explosion protection	II 3 (1) G Ex ec [ia Ga] IIC T4 Gc
ATEX dust certificate	PTB 01 ATEX 2088 X
ATEX dust explosion protection	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
Inmetro gas certificate	UL-BR 12.0353
Inmetro dust certificate	UL-BR 12.0353
Certificates	ATEX (PTB), Brazil (ULB), Canada (FM), China (NEPSI), IECEEx (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

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Safety Data

Max. voltage U _o		28 V		
Max. current I _o		91 mA		
Max. power P _o		637 mW		
Max. permissible external capacity C _o for IIC		0.083 μF		
Max. permissible external inductance L _o for IIC		2.2 mH		
Max. permissible external capacity C _o for IIB		0.65 μF		
Max. permissible external inductance L _o for IIB		14 mH		
Intrinsically safe limiting values Inductance L _o /capacitance C _o		Jointly connectable inductance L _o /capacitance C _o		
IIC	L _o [mH]		1 mH	0.200 mH
	C _o [μF]		0.052 μF	0.083 μF
IIB	L _o [mH]	10 mH	1 mH	0.100 mH
	C _o [μF]	0.250 μF	0.35 μF	0.65 μF

Electrical Data

Number of channels	1	
Type of voltage	DC	
Potential	positive/for transmitter	
Transmission frequency channel 1	≤ 100 kHz	
I _{leak} leakage current for U _n	≤ 2 μA	
Max. open-circuit output volt.	14 V	
Auxiliary voltage drop	9.5	
Maximum supply current I _s	50 mA	
Load resist. RL UN ≤ 23.5 V	≤ 350 Ω	
Operating voltage of the transmitter	U _{min} (I _N = 20 mA)	U _N
	U _N - 9,5 V	≤ 23,5 V
	14 V	> 23,5 V

Auxiliary Power

Nominal voltage	20 – 35 V
Power supply	Uncontrolled

Output

Temperature influence	$\leq 0,1$ %/10K
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Ambient Conditions

Ambient temperature	-20 °C ... +50 °C
Ambient temperature	-4°F ... +122°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 note	according to IEC 60529
Degree of protection (IP) terminals	IP20
Enclosure material	Polyamide 6GF

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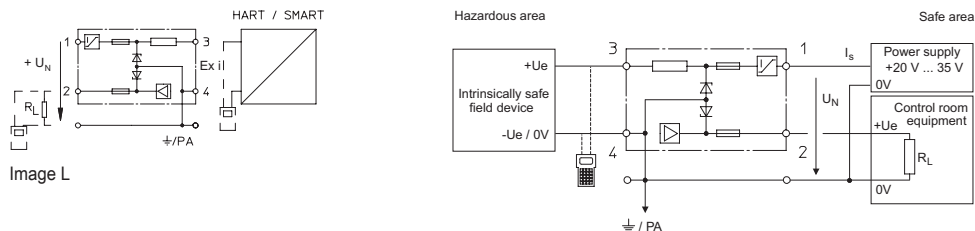
Mechanical Data

Number of connection terminals	4
Connection cross-section max.	1.5 mm ²
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 in inches	0.48 in
Mounting depth	72 mm
Mounting depth in inches	2.76 in
Weight	110 g
Weight	0.24 lb

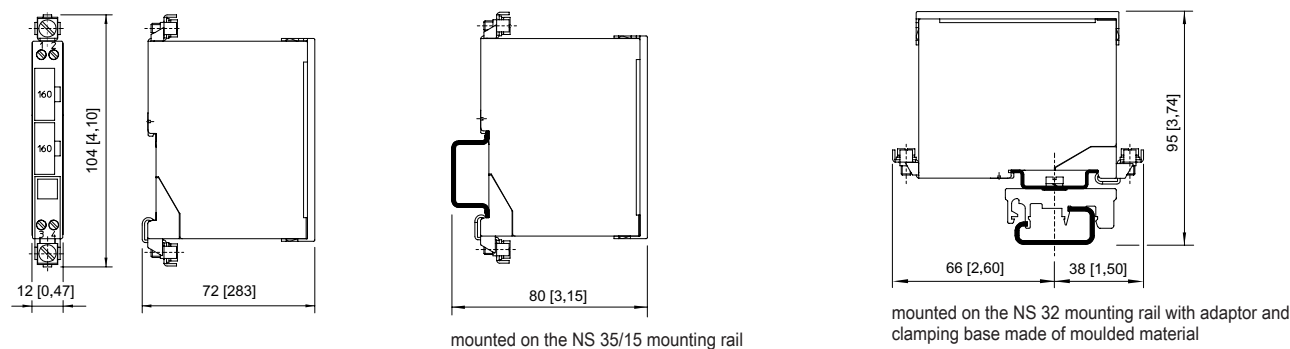
Mounting / Installation

Earthing connection cross-section	4 mm ²
Earthing conductor cross-section AWG	12 AWG
Connection type	2 PA
Min. torque, Nm	0.5 N · m
Min. torque, lb/in	4.43 lb/in
Max. torque, Nm	0.6 N · m
Max. torque, lb/in	5.31 lb/in

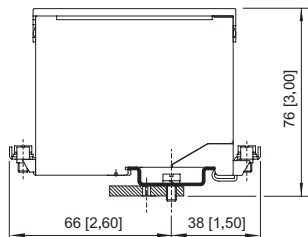
Technical Drawings – Subject to Alterations



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



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installed on mounting plate with adaptor

Accessories

Terminal block

Art. No.



Phoenix Contact terminal block UT 4-PE

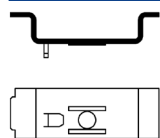
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Phoenix Contact terminal block UT 6-PE

113058

Adaptor

Art. No.

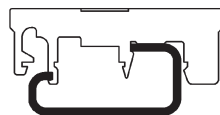


The adaptor enables a safety barrier to be installed on a clamping base (Art. No. 165283) or mounting plate from a previous series.

158826

Clamping base, moulded material

Art. No.

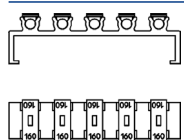


Enables the safety barrier to be mounted on a G-rail. The safety barrier is mounted using the adaptor (Art. No. 158826).

165283

Fuse holder

Art. No.



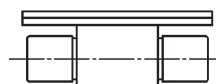
The fuse holder is snapped onto the side of a safety barrier and can be equipped with up to five back-up fuses (replacement).

158834

Spare Parts

Back-up fuse

Art. No.

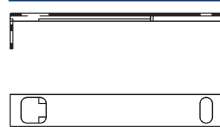


For all series 9001, 9002 and 9004 safety barriers
Packaging unit: 5 pieces

158964

Label carrier

Art. No.



Transparent cover for the label

158977

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