

Isolators

Loop-powered binary output

Ex i field circuit

9276/10-21-60-00k Art. No. 261447



- An extensive portfolio for a wide variety of solenoid valves
- Slim design saves space – just 12.5 mm wide
- For use up to SIL 3 (IEC/EN 61508)

MY R. STAHL 9276A



The Series 9276 binary outputs transmit signals for the intrinsically safe operation of Ex i solenoid valves, indicator lamps and horns. The devices do not require a separate auxiliary power supply as they are powered by the control circuit. The intrinsically safe outputs are galvanically separated from the inputs.

Technical Data

Explosion Protection	
Application range (zones)	2
Ex interface zone	0, 1, 2, 20, 21, 22
IECEX gas certificate	IECEX IBE 17.0045X
IECEX gas certificate	IECEX IBE 17.0045X
IECEX gas explosion protection	Ex nA [ia IIB Ga] IIC T4 Gc
IECEX dust certificate	IECEX IBE 17.0045X
IECEX dust explosion protection	[Ex ia Da] IIIC
ATEX gas certificate	IBExU 17 ATEX 1153 X
ATEX gas certificate	IBExU 17 ATEX 1153 X
ATEX gas explosion protection	⊕ II 3 (1) G Ex nA [ia IIB Ga] IIC T4 Gc
ATEX dust certificate	IBExU 17 ATEX 1153 X
ATEX dust explosion protection	⊕ II (1) D [Ex ia Da] IIIC
cULus certificate	E81680
Marking cULus	Class I, Div. 2, Groups A,B,C,D; Class I, Zone 2, AEx/Ex nA Group IIC AIS Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 0, [AEx ia]/[Ex ia] IIC T4 any mounting pos. Ta = 60°C See Doc. 9276 6 031 001 3
Certificates	ATEX (IBE), Canada (UL), China (CQM), IECEX (IBE), SIL (exida), USA (UL)
Ship approval	DNV
Declaration of Conformity	ATEX (EUK), China (CCC)
Safety Data	
Max. voltage U_o	25.1 V
Max. current I_o (Ex ia)	188 mA
Max. power P_o	1180 mW

Safety Data

Max. permissible external capacity C_o for IIB	0.83 μ F					
Max. permissible external inductance L_o for IIB	4 mH					
Max. permissible external capa.IIA	2.93 μ F					
Max. permissible external inductance L_o for IIA	7.5 mH					
Max. permissible external capacity C_o for IIIC	0.83 μ F					
Max. permissible external inductance L_o for IIIC	4 mH					
Max. permissible external capacity C_o for I	2.93 μ F					
Max. permissible external inductance L_o for I	7.5 mH					
Internal capacitance	Negligible					
Internal inductance	Negligible					
Safety-related max. voltage	253 V AC					
Intrinsically safe limiting values inductance L_o /capacitance C_o	Jointly connectable inductance L_o /capacitance C_o					
IIC	L_o [mH] C_o [μ F]					
IIB	L_o [mH] C_o [μ F]	2 mH 0.300 μ F	1 mH 0.370 μ F	0.500 mH 0.460 μ F	0.100 mH 0.790 μ F	
IIA	L_o [mH] C_o [μ F]	5 mH 0.510 μ F	1 mH 0.560 μ F	0.500 mH 0.660 μ F	0.100 mH 1 μ F	
IIIC	L_o [mH] C_o [μ F]	2 mH 0.300 μ F	1 mH 0.370 μ F	0.500 mH 0.460 μ F	0.100 mH 0.790 μ F	
I	L_o [mH] C_o [μ F]	5 mH 0.510 μ F	1 mH 0.560 μ F	0.500 mH 0.660 μ F	0.100 mH 1 μ F	

Functional Safety

SIL	3
HFT	0
SFF	100%
Lambda SD	0 FIT
Lambda SU	50 FIT
Lambda DD	0 FIT
Lambda DU	0 FIT

Electrical Data

Number of channels	1
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Auxiliary Power

Auxiliary power	without
Max. power dissipation	1.33 W
Polarity reversal protection	Yes

Galvanic Isolation

Test voltage as per standard	IEC EN 60079-11
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Galvanic Isolation

Galvanic separation Ex i output to input 375 V AC peak value

Input

Input voltage for ON 15 – 30 V

Input voltage for OFF 0 – 5 V

Output

Output open-circuit voltage U_a 21.9 V

Max. output current $I_{a\max}$ 58 mA

Output internal resistance R_i 133.4 Ω

Switching delay ON/OFF ≤ 20 ms

Switching delay OFF/ON ≤ 20 ms

Response time output 20 ms

Switching state indication LED

Ambient Conditions

Ambient temperature -40 °C ... +60 °C

Ambient temperature -4 °F ... +140 °F

Storage temperature -40 °C ... +80 °C

Storage temperature -40 °F ... +176 °F

Maximum relative humidity 10 to 95%

Use at the height of < 2000 m

Electromagnetic compatibility EN 61326-1 For use in industrial areas
Immunity according to EN 61000-6-2
Interference radiation according to EN 61000-6-4

Mechanical Data

Degree of protection (IP) IP30

Degree of protection (IP) terminals IP20

Fire resistance (UL 94) V0

Enclosure material Polyamide

Grid dimension 12.5 mm

Width 12.5 mm

Width, inches 0.49 in

Height 114.5 mm

Height in inches 4.51 in

Length 116 mm

Length in inches 4.57 in

Weight 165 g

Weight 0.36 lb

Mounting / Installation

Mounting type DIN rail NS35/15, NS35/7.5

Mounting orientation Vertical
Horizontal

Connection type Spring clamp terminal

Min. rigid conductor cross section 0.2 mm²

Max. rigid conductor cross section 1.5 mm²

Min. flex conductor cross section 0.2 mm²

Max. flex conductor cross section 1.5 mm²

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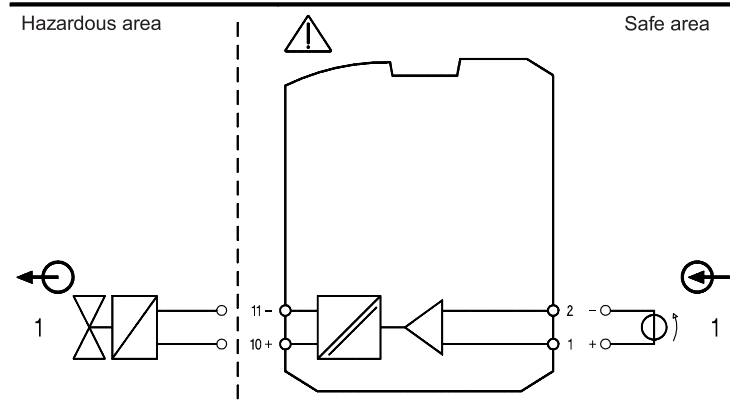


Mounting / Installation

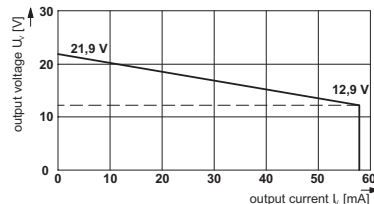
Connection cross-section AWG

24 ... 16

Technical Drawings – Subject to Alterations

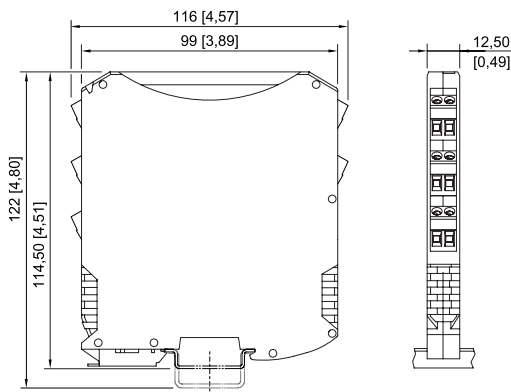


9276/10-21-25-00 connection diagram



Output characteristic curve 9276/10-21-60-00


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




ISpac Series 9260, 9270, 9275, 9276, 9282 with spring clamp terminal

Accessories

Supply module

		Art. No.
	Redundant supply of 24 V DC auxiliary power (with fuse) and reading out the collective error message from Series 92xx ISpac modules which support this function. Screw terminal connection	268183
	Redundant supply of 24 V DC auxiliary power (with fuse) and reading out the collective error message from Series 92xx ISpac modules which support this function. Spring clamp terminal connection	268184

pac-Bus

		Art. No.
	Wiring auxiliary power and collective error message	262928

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