

Isolator Barriers

Digital output loop powered

Ex i field circuit

9276/10-21-40-00k Art. No. 261445



- A comprehensive portfolio for a wide range of solenoid valves
- Space savings due to a slim design – 12.5 mm wide
- Can be used for functional safety levels up to SIL 3 (IEC/EN 61508)

MY R. STAHL 9276A



Series 9276 digital outputs issue signals for the intrinsically safe operation of Ex i solenoid valves, indicator lamps or 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 explosion protection	Ex nA [ia 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 explosion protection	⊕ II 3 (1) G Ex nA [ia 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/V_{oc}	25.1 V
Max. current I_o (Ex ia)	87 mA
Max. power P_o	550 mW
Max. permissible external capacity C_o for I	2.93 μ F
Max. permissible external inductance L_o for I	45 mH

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Safety Data

Max. permissible external capacitance C_o/C_a for IIC	0.108 μ F					
Max. permissible external capacitance C_o/C_a for IIB	0.83 μ F					
Max. permissible external capa.IIA	2.93 μ F					
Max. permissible external inductance L_o/L_a for IIC	5 mH					
Max. permissible external inductance L_o/L_a for IIB	20 mH					
Max. permissible external inductance L_o for IIA	45 mH					
Max. permissible external capacity C_o for IIIC	0.83 μ F					
Max. permissible external inductance L_o for IIIC	20 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]	2 mH	1 mH	0.500 mH	0.200 mH	0.100 mH
	C_o [μ F]	0.052 μ F	0.065 μ F	0.082 μ F	0.108 μ F	0.108 μ F
IIB	L_o [mH]	10 mH	5 mH	1 mH	0.100 mH	
	C_o [μ F]	0.380 μ F	0.380 μ F	0.440 μ F	0.820 μ F	
IIA	L_o [mH]	20 mH	5 mH	1 mH	0.100 mH	
	C_o [μ F]	0.600 μ F	0.610 μ F	0.640 μ F	1 μ F	
IIIC	L_o [mH]	10 mH	5 mH	1 mH	0.100 mH	
	C_o [μ F]	0.380 μ F	0.380 μ F	0.440 μ F	0.820 μ F	
I	L_o [mH]	20 mH	5 mH	1 mH	0.100 mH	
	C_o [μ F]	0.600 μ F	0.610 μ F	0.640 μ F	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	1.06 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
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Input

Input voltage for ON	15 – 30 V
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Input voltage for OFF	0 – 5 V
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Output

Output open-circuit voltage U_a	21.9 V
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Max. output current $I_{a_{max}}$	40 mA
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Output internal resistance R_i	287 Ω
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Switching delay ON/OFF	≤ 20 ms
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Switching delay OFF/ON	≤ 20 ms
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Response time output	20 ms
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Switching state indication	Yellow "STAT" LED
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Ambient Conditions

Ambient temperature $^{\circ}\text{C}$	-40 $^{\circ}\text{C}$... +60 $^{\circ}\text{C}$
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Ambient temperature $^{\circ}\text{F}$	-4 $^{\circ}\text{F}$... +140 $^{\circ}\text{F}$
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Storage temperature $^{\circ}\text{C}$	-40 $^{\circ}\text{C}$... +80 $^{\circ}\text{C}$
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Storage temperature $^{\circ}\text{F}$	-40 $^{\circ}\text{F}$... +176 $^{\circ}\text{F}$
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Max. relative humidity	10 to 95%
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Use at the height of	< 2000 m
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Electromagnetic compatibility	EN 61326-1 Use in industrial environment Immunity according to EN 61000-6-2 Interference emission to EN 61000-6-4
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Mechanical Data

Degree of protection (IP)	IP30
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Degree of protection (IP) terminals	IP20
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Fire resistance (UL 94)	V0
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Enclosure material	Polyamide
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Grid dimension	12.5 mm
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Width	12.5 mm
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Width, inches	0.49 in
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Height	114.5 mm
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Height, inches	4.51 in
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Length	116 mm
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Length, inches	4.57 in
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Weight	165 g
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Weight	0.36 lb
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Mounting / Installation

Mounting type	DIN rail NS35/15, NS35/7.5
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Mounting orientation	Vertical Horizontal
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Connection type	Spring clamp terminal
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Min. rigid conductor cross section	0.2 mm ²
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Max. rigid conductor cross section	1.5 mm ²
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Min. flex conductor cross section	0.2 mm ²
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Max. flex conductor cross section	1.5 mm ²
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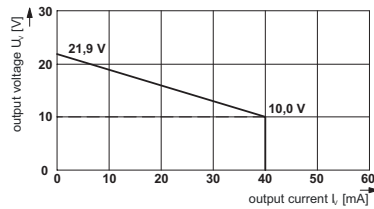
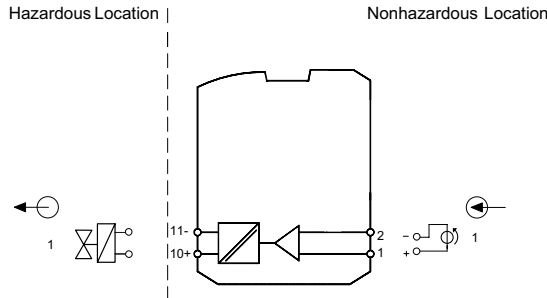


Mounting / Installation

Connection cross-section AWG

24 ... 16

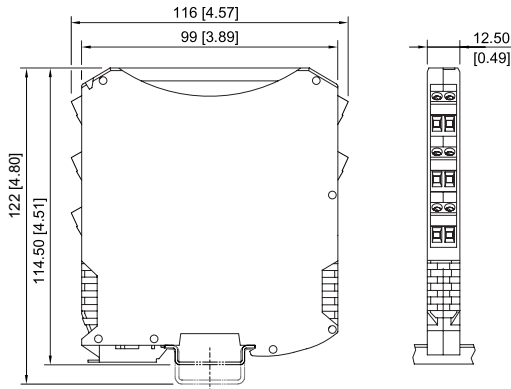
Technical Drawings – Subject to Alterations



Output characteristic curve 9276/10-21-40-00

Connection diagram 9276/10


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




ISpac Series 9260, 9270, 9275, 9276 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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