Isolator Barriers

Loop-powered binary output
Ex i field circuit
9276/10-21-60-00s Art. No. 261443

- 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 certificate	IECEx IBE 17.0045X
IECEx gas explosion protection	Ex ec [ia IIB Ga] IIC T4 Gc
IECEx dust certificate	IECEx IBE 17.0045X
IECEx dust explosion protection	[Ex ia Da] IIIC
IECEX firedamp certificate	IECEx IBE 17.0045X
IECEx firedamp protection	[Ex ia Ma] I
ATEX gas certificate	IBExU 17 ATEX 1153 X
ATEX gas certificate	IBExU 17 ATEX 1153 X
ATEX gas explosion protection	Ⓔx II 3 (1) G Ex ec [ia IIB Ga] IIC T4 Gc
ATEX dust certificate	IBExU 17 ATEX 1153 X
ATEX dust explosion protection	Ⓔx II (1) D [Ex ia Da] IIIC
ATEX firedamp certificate	IBExU 17 ATEX 1153 X
ATEX firedamp protection	Ⓔx I (M1) [Ex ia Ma] I
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)

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Safety Data

Max. voltage U_o/V_{oc}	25.1 V
Max. current I_o (Ex ia)	188 mA
Max. power P_o	1180 mW
Max. permissible external capacitance C_o/C_a for IIB	0.83 µF
Max. permissible external inductance L_o/La for IIB	4 mH
Max. permissible external capa.IIA	2.93 µF
Max. permissible external inductance L_o for IIA	7.5 mH
Max. permissible external capacity C_o for IIIC	0.83 µF
Max. permissible external inductance L_o for IIIC	4 mH
Max. permissible external capacity C_o for I	2.93 µF
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 [µF]					
IIB	L_o [mH]	2 mH	1 mH	0.500 mH	0.100 mH	
	C_o [µF]	0.300 µF	0.370 µF	0.460 µF	0.790 µF	
IIA	L_o [mH]	5 mH	1 mH	0.500 mH	0.100 mH	
	C_o [µF]	0.510 µF	0.560 µF	0.660 µF	1 µF	
IIIC	L_o [mH]	2 mH	1 mH	0.500 mH	0.100 mH	
	C_o [µF]	0.300 µF	0.370 µF	0.460 µF	0.790 µF	
I	L_o [mH]	5 mH	1 mH	0.500 mH	0.100 mH	
	C_o [µF]	0.510 µF	0.560 µF	0.660 µF	1 µF	

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

Auxiliary Power

Auxiliary power	without
Max. power dissipation	1.33 W

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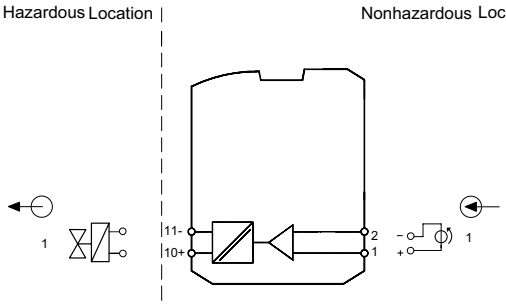
Auxiliary Power	
Polarity reversal protection	Yes
Galvanic Isolation	
Test voltage as per standard	EN IEC 60079-11
Galvanic separation Ex i output to input	375 V AC peak value
Input	
Input voltage for ON	15 – 30 V
Input voltage for OFF	0 – 5 V
Output	
Output open-circuit voltage U_a	21.9 V
Max. output 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 °C	-40 °C ... 60 °C
Ambient temperature °F	-40 °F ... +140 °F
Storage temperature °C	-40 °C ... 80 °C
Storage temperature °F	-40 °F ... +176 °F
Max. relative humidity	10 to 95%
Use at the height of	< 2000 m
Electromagnetic compatibility	EN 61326-1 Use in industrial environment Immunity according to EN 61000-6-2 Interference emission 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	112.5 mm
Width	12.5 mm
Height	114.5 mm
Length in inches	4.43 in
Weight	165 g
Weight	0.36 lb
Mounting / Installation	
Mounting type	DIN rail NS35/15, NS35/7.5
Mounting orientation	Vertical Horizontal

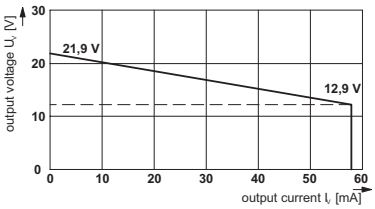
Mounting / Installation

Connection type	Screw terminal
Min. rigid conductor cross section	0.2 mm²
Max. rigid conductor cross section	2.5 mm²
Min. flex conductor cross section	0.2 mm²
Max. flex conductor cross section	2.5 mm²
Connection cross-section AWG	24 ... 14

Technical Drawings – Subject to Alterations

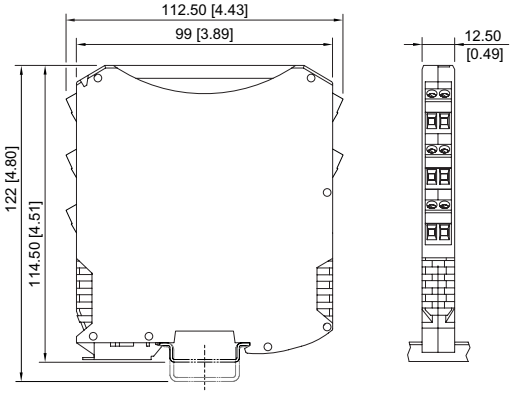


Connection diagram 9276/10



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

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



ISpac Series 9260, 9265, 9270, 9275, 9276, 9282
with screw 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