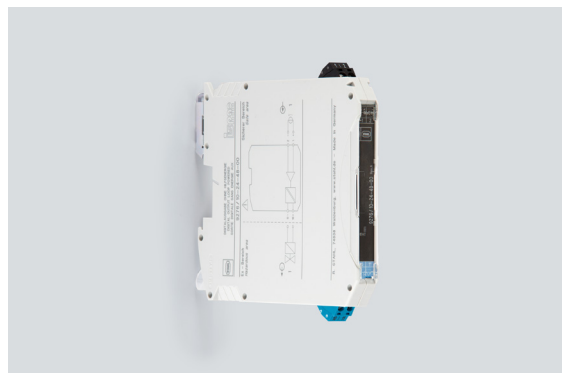


Isolator Barriers

Loop-powered binary output

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 ec [ia 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 explosion protection | ⊕ II 3 (1) G Ex ec [ia Ga] IIC T4 Gc |
| ATEX dust certificate | IBEXU 17 ATEX 1153 X |
| ATEX dust explosion protection | ⊕ II (1) D [Ex ia Da] IIIC |
| ATEX firedamp certificate | IBEXU 17 ATEX 1153 X |
| ATEX firedamp protection | ⊕ I (M1) [Ex ia Ma] I |
| cULus certificate | E81680 |
| Marking cULus | Class I, Div. 2, Groups A,B,C,D; Class I, Zone 2, Group IIC AIS Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 0, 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_0/V_{oc} | 25.1 V |
| Max. current I_0 (Ex ia) | 87 mA |

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Safety Data

| | | | | | | |
|--|---|---------------|---------------|---------------|---------------|---------------|
| Max. power P_o | 550 mW | | | | | |
| Max. permissible external capacitance C_o/C_a for IIC | 0.108 μ F | | | | | |
| Max. permissible external inductance L_o/L_a for IIC | 5 mH | | | | | |
| Max. permissible external capacitance C_o/C_a for IIB | 0.83 μ F | | | | | |
| Max. permissible external inductance L_o/L_a for IIB | 20 mH | | | | | |
| Max. permissible external capa.IIA | 2.93 μ F | | | | | |
| Max. permissible external inductance L_o for IIA | 45 mH | | | | | |
| Max. perm. ext. capacit. IIIC | 0.83 μ F | | | | | |
| Max. permis. ext. induct. IIIC | 20 mH | | | | | |
| Max. permissible ext. capac. I | 2.93 μ F | | | | | |
| Max. permissible external inductance L_o for I | 45 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 |
|--------------------|---|

Auxiliary Power

| | |
|------------------------------|---------|
| Auxiliary power | without |
| Max. power dissipation | 1.06 W |
| Polarity reversal protection | Yes |

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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 $I_{a,max}$ | 40 mA |
| Output internal resistance R_i | 287 Ω |
| Switching delay ON/OFF | ≤ 20 ms |
| Switching delay OFF/ON | ≤ 20 ms |
| Response time output | 20 ms |
| Switching state indication | Yellow "STAT" 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 |
| Min. rigid conductor cross section | 0.2 mm ² |
| Max. rigid conductor cross section | 1.5 mm ² |
| Min. flexible conductor cross section | 0.2 mm ² |
| Max. flexible conductor cross section | 1.5 mm ² |
| Width | 12.5 mm |
| Width | 12.5 mm |
| Width, inches | 0.49 in |
| Height | 114.5 mm |
| 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 |
| Grid dimension | 12.5 mm |

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Ex i field circuit

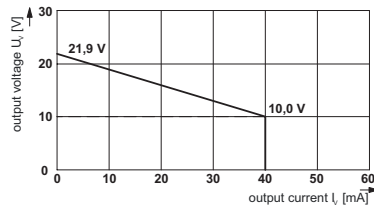
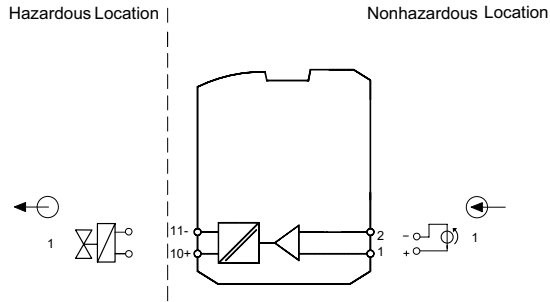
9276/10-21-40-00k Art. No. 261445



Mounting / Installation

| | |
|------------------------------|------------------------|
| Mounting orientation | Vertical Horizontal |
| Connection type | Spring clamp terminal |
| Connection cross-section AWG | 24 ... 16 |

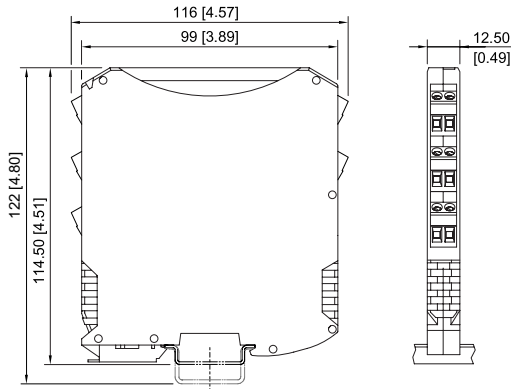
Technical Drawings – Subject to Alterations



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

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.