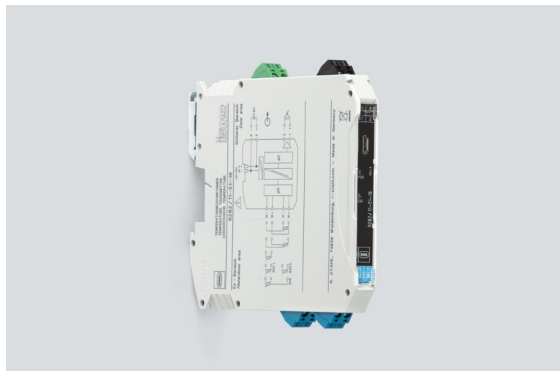


Isolator Barriers

Temperature transmitter

Ex i field circuit ISpac

9282/12-51-16s Art. No. 261453



- Ex i temperature transmitter, can be used for thermocouples
- Slim design saves space – just 12.5 mm wide
- For use up to SIL 2 (IEC/EN 61508)

MY R. STAHL 9282A



9282 series temperature transmitters for Ex i field circuits can be used to connect temperature sensors and potentiometers. The devices are easy to configure for virtually any sensor type by means of software. These sensor types include Pt100 sensors, thermocouples and potentiometers. These devices feature three-way galvanic separation.

Technical Data

Explosion Protection

Application range (zones)	2
Ex interface zone	0, 1, 2, 20, 21, 22
IECEx gas certificate	IECEx IBE 19.0019X
IECEx gas explosion protection	Ex ec ic [ia Ga] IIC T4 Gc
IECEx dust certificate	IECEx IBE 19.0019X
IECEx dust explosion protection	[Ex ia Da] IIIC
IECEx firedamp certificate	IECEx IBE 19.0019X
IECEx firedamp protection	[Ex ia Ma] I
ATEX gas certificate	IBExU 19 ATEX 1091 X
ATEX gas explosion protection	II 3 (1) G Ex ec ic [ia Ga] IIC T4 Gc
ATEX dust certificate	IBExU 19 ATEX 1091 X
ATEX dust explosion protection	II (1) D [Ex ia Da] IIIC
ATEX firedamp certificate	IBExU 19 ATEX 1091 X
ATEX firedamp protection	I (M1) [Ex ia Ma] I
cULus certificate	E81680
Marking cULus	Associat. apparatus for use in, Class I, Div. 2, Groups A,B,C,D; Class I, Zone 2, Group IIC prov. intr. safe circ. f.u.in Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 0, Group IIC See doc. 9282 6 031 001 3
Certificates	ATEX (IBE), Canada (UL), IECEx (IBE), India (PESO), Korea (KTL), SIL (TUN), USA (UL)
Ship approval	DNV

Safety Data

Max. voltage U_o/V_{oc}	6 V
Max. current I_o/I_{sc}	16.8 mA
Max. power P_o	25.2 mW

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Safety Data

Max. permissible external capacitance C_o/C_a for IIC	40 μ F
Max. permissible external inductance L_o/L_a for IIC	100 mH
Max. permissible external capacitance C_o/C_a for IIB	40 μ F
Max. permissible external inductance L_o/L_a for IIB	100 mH
Max. permissible external capa.IIA	40 μ F
Max. permissible external inductance L_o for IIA	100 mH
Max. perm. ext. capacit. IIIC	40 μ F
Max. permis. ext. induct. IIIC	100 mH
Max. permissible ext. capac. I	40 μ F
Max. permissible external inductance L_o for I	100 mH
Internal capacitance	44 nF
Internal inductance	Negligible
Safety-related max. voltage	253 V
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]	100 mH 0.600 μ F
IIB L_o [mH] C_o [μ F]	100 mH 1 μ F
IIA L_o [mH] C_o [μ F]	100 mH 1 μ F
IIIC L_o [mH] C_o [μ F]	100 mH 1 μ F
I L_o [mH] C_o [μ F]	100 mH 1 μ F

Functional Safety

SIL	2
HFT	0
SFF	93,8%
Lambda SD	0,8 FIT
Lambda SU	240,1 FIT
Lambda DD	394,4 FIT
Lambda DU	39,8 FIT
PFD _{avg} at T _{proof} 1 year	1,74E-04
PFD _{avg} at T _{proof} 2 years	3,48E-04
PFD _{avg} at T _{proof} 5 years	8,71E-04

Electrical Data

Signal types	Thermocouple, mV source
Number of channels	1

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Auxiliary Power

Auxiliary power	24 V DC
Nominal voltage V_{nom}	24 V DC
Auxiliary power voltage range	19.2 ... 30 V
Nominal current	40 mA
Power consumption	1 W
Max. power dissipation	0.76 W
Polarity reversal protection	Yes
Operation indication	Green "PWR" LED

Galvanic Isolation

Test voltage as per standard	EN IEC 60079-11
Ex i input to output	375 V AC peak value
Ex i input to auxiliary power	375 V AC peak value
Test voltage as per standard	EN 61010 / EN 50178
Output to auxiliary power	300 V _{eff}

Input

Sensor adjustment	Via software
Input thermocouple	J, K, E, R, S, T, B, N (IEC 584), C, D (ASTM), U, L (DIN 43710), L, A1, A2, A3, M (GOST 8.585)
mV source input	-1000 mV ... 1000 mV
External reference junction	Pt100 2-conductor connection
Input RTD	—

Output

Output	0/4 to 20 mA active/source
Output signal	0/4 to 20 mA (configurable)
Ripple current output	<15 μ ASS <10 μ A _{rms}
Load resistance R_L	0 ... 600 Ω
Response time output	≤ 1.7 s
Behaviour of output during LF	configurable
Line fault indication	Red "ERR" LED
Error control note	To recognise short circuits, the input signal must be configured as a life-zero signal. In mV operating mode, an additional resistor (10 k Ω / 0.6 W) must be connected between terminals 10 and 11.
Deviations / error note	Information in % of the measuring range (20 mA) at U_N , 23 °C
Average measurement fault	< 0,1%
Temperature influence	$\leq 0,1$ %/10K

Ambient Conditions

Ambient temperature °C	-40 °C ... +70 °C
Ambient temperature °F	-40°F ... +158°F
Storage temperature °C	-40 °C ... +80 °C
Storage temperature °F	-40°F ... +176°F
Max. relative humidity	5 to 95%
Max. additional relative humidity	No condensation
Use at the height of	< 2000 m
Degree of pollution	2

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Ambient Conditions

Overvoltage category	II
Electromagnetic compatibility	EN 61326-1 Use in industrial environment Immunity according to EN 61000-6-2 Interference emission to EN 61000-6-4

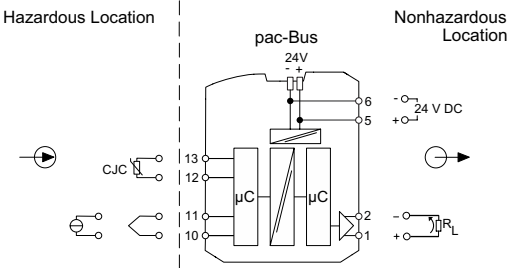
Mechanical Data

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	2.5 mm ²
Min. flexible conductor cross section	0.2 mm ²
Max. flexible conductor cross section	2.5 mm ²
Width	12.5 mm
Width, inches	0.49 in
Height	114.5 mm
Length	116 mm
Length in inches	4.57 in
Mounting depth in inches	4.51 in
Weight	175 g
Weight	0.39 lb

Mounting / Installation

Mounting type	DIN rail NS35/15, NS35/7.5
Grid dimension	12.5 mm
Mounting orientation	Horizontal Vertical
Connection type	Screw terminal
Connection cross-section AWG	24 ... 14

Technical Drawings – Subject to Alterations



Connection diagram 9282/12-51-16

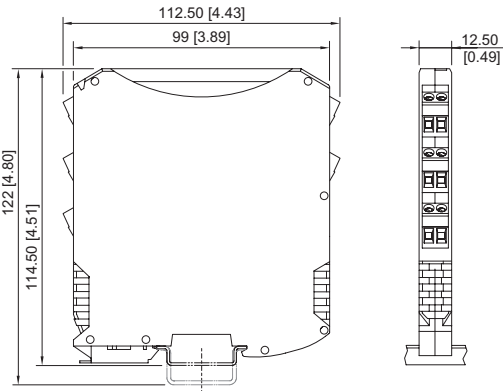
Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations

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

Accessories

External reference junction

Art. No.



External reference junction for 2 x thermocouple (1 x Pt100 for 2-, 3- or 4-wire connection) integrated into the 4-pin terminal block. Mounted on a DIN rail.

160675

Screw terminal

Art. No.



Replacement for blue screw terminal (Ex i field circuit)
Application: Use of the device for non-Ex i field circuits.

272381

Parameterization set Series 9199 for ISpac isolators Series 9146, 9162, 9182 and 9282

Art. No.



Used for parameterization and diagnostics on 9146, 9162, 9182 and 9282 series ISpac isolators.
Interface to PC: USB
Scope of delivery: Adapter and cable (software is available to download online at r-stahl.com, Websites of the specified devices or MY R. STAHL: 9282A)

261507

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.