Isolator Barriers
Temperature transmitter
Ex i field circuit ISpac
9282/12-51-16k Art. No. 261455

- Ex i temperature transmitter, can be used for thermocouples
- Slim design saves space – just 12.5 mm wide

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	Ⓔx II 3 (1) G Ex ec ic [ia Ga] IIC T4 Gc
ATEX dust certificate	IBExU 19 ATEX 1091 X
ATEX dust explosion protection	Ⓔx II (1) D [Ex ia Da] IIIC
ATEX firedamp certificate	IBExU 19 ATEX 1091 X
ATEX firedamp protection	Ⓔx I (M1) [Ex ia Ma] I
Certificates	ATEX (IBE), Canada (UL), IECEx (IBE), India (PESO), 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
Max. permissible external capacitance C_o/C_a for IIC	40 µF
Max. permissible external inductance L_o/La for IIC	100 mH
Max. permissible external capacitance C_o/C_a for IIB	40 µF

Safety Data		
Max. permissible external inductance L_o/La for IIB		100 mH
Max. permissible external capa.IIA		40 µF
Max. permissible external inductance L_o for IIA		100 mH
Max. permissible external capacity C_o for IIIC		40 µF
Max. permissible external inductance L_o for IIIC		100 mH
Max. permissible external capacity C_o for I		40 µF
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]	100 mH
	C_o [µF]	0.600 µF
IIB	L_o [mH]	100 mH
	C_o [µF]	1 µF
IIA	L_o [mH]	100 mH
	C_o [µF]	1 µF
IIIC	L_o [mH]	100 mH
	C_o [µF]	1 µF
I	L_o [mH]	100 mH
	C_o [µF]	1 µF
Electrical Data		
Signal types		Thermocouple, mV source
Number of channels		1
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}

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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)
Load resistance R_L	0 ... 600 Ω
Response time output	≤ 1 s
Behaviour of the output at line fault	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 kΩ / 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	≤ 0,25 %/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
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
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

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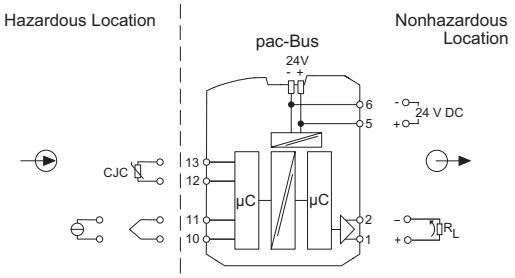
Mounting / Installation

Mounting orientation	Horizontal Vertical
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
Connection cross-section AWG	24 ... 16

Technical Drawings – Subject to Alterations



Connection diagram 9282/12-51-16

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

Accessories

9282 Parameterisation		Art. No.
	Parameterisation ex works optionally available for all variants.	299646

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

Resistive coupling element		Art. No.
	Replacement for blue screw terminal (Ex i field circuit) Application: Use of the device for non-Ex i field circuits.	247644

Parameterization adapter		Art. No.
	Used for parameterization and diagnostics on 9282 series ISpac isolators. Interface to PC: USB Scope of delivery: Adapter and cable (software is available to download online at r-stahl.com, WebCode: 9282A)	261507

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