

# Isolator Barriers

Transmitter supply unit

Ex i field circuit

9260/23-11-10k Art. No. 261389



- Universal use for transmitters and mA sources (4-wire transmitter)
- Slim design – 12.5 mm wide – for one- and two-channel versions
- Can be used for safety levels up to SIL 2 (IEC/EN 61508)

MY R. STAHL 9260A



Series 9260 Ex i transmitter supply units are used for the intrinsically safe operation of transmitters. The device transmits HART signals in both directions. The range includes one- and two-channel devices, as well as a variant for signal duplication.

## Technical Data

### Explosion Protection

Application range (zones)	2
Ex interface zone	0, 1, 2, 20, 21, 22
IECEX gas certificate	IECEX BVS 17.0082X
IECEX gas explosion protection	Ex nA [ia Ga] IIC T4 Gc
IECEX dust certificate	IECEX BVS 17.0082X
IECEX dust explosion protection	[Ex ia Da] IIIC
ATEX gas certificate	BVS 17 ATEX E 090 X
ATEX gas explosion protection	⊕ II 3 (1) G Ex nA [ia Ga] IIC T4 Gc
ATEX dust certificate	BVS 17 ATEX E 090 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, [Ex ia] IIC T4 any mounting pos. Ta = 60°C See Doc. 9260 6 031 001 3
Certificates	ATEX (BVS), Canada (UL), China (CQM), IECEX (BVS), India (PESO), Korea (KTL), SIL (BVS), USA (UL)
Ship approval	DNV
Declaration of Conformity	ATEX (EUK), China (CCC)

### Safety Data

Max. voltage $U_o/V_{oc}$	25.2 V
Max. current $I_o/I_{sc}$	93 mA
Max. power $P_o$	587 mW
Max. permissible external capacitance $C_o/C_a$ for IIC	0.107 $\mu$ F
Max. permissible external capacitance $C_o/C_a$ for IIB	0.82 $\mu$ F

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## Safety Data

Max. permissible external inductance $L_o/L_a$ for IIC	2 mH					
Max. permissible external inductance $L_o/L_a$ for IIB	4 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	
	$C_o$ [ $\mu$ F]	0.049 $\mu$ F	0.063 $\mu$ F	0.080 $\mu$ F	0.107 $\mu$ F	
IIB	$L_o$ [mH]	4 mH	1 mH	0.500 mH	0.200 mH	0.10 mH
	$C_o$ [ $\mu$ F]	0.370 $\mu$ F	0.430 $\mu$ F	0.510 $\mu$ F	0.660 $\mu$ F	0.820 $\mu$ F
IIIC	$L_o$ [mH]					
	$C_o$ [ $\mu$ F]					

## Functional Safety

SIL	3
HFT	0
SFF	92,27%
Lambda SU	316 FIT
Lambda DD	345 FIT
Lambda DU	55 FIT
Lambda, total	718 FIT
PFD <sub>avg</sub> at T <sub>proof</sub> 1 year	2,52E-04
PFD <sub>avg</sub> at T <sub>proof</sub> 2 years	4,94E-04
PFD <sub>avg</sub> at T <sub>proof</sub> 3 years	7,37E-04
PFD <sub>avg</sub> at T <sub>proof</sub> 4 years	9,79E-04
PFD <sub>avg</sub> at T <sub>proof</sub> 5 years	1,22E-03
PFD <sub>avg</sub> at T <sub>proof</sub> 7 years	1,71E-03
PFDavg at Tproof 10 years	2,43E-03

## Electrical Data

Number of channels	2
Measuring transformer feed operation	Yes
Isolation amplifier operation	No
LFD relay	No
Communication signal	HART

## Auxiliary Power

Auxiliary power	24 V DC
Auxiliary power nominal voltage	24 V DC
Auxiliary power voltage range	19.2 to 30 V
Nominal current	100 mA
Auxiliary power max. power dissipation	1.45 W
Power consumption	2.4 W
Polarity reversal protection	Yes
Operation indication	Green "PWR" LED

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## Galvanic Isolation

Test voltage as per standard	IEC EN 60079-11
Ex i input to output	375 V peak value
Ex i input to auxiliary power	375 V peak value
Ex i input to Ex i input	60 V
Test voltage as per standard	EN 61010/EN 50178
Output to auxiliary power	300 V <sub>eff</sub>
Output to output	300 V <sub>eff</sub>

## Input

Input function	Transmitter power unit
Input	4 to 20 mA with HART
Input signal	4 to 20 mA with HART
Function range input	0 ... 24 mA
Short-circuit current	≥ 22.5 mA
Supply voltage for transmitter	≥ 16 V at 20 mA

## Output

Output	4 to 20 mA with HART
Output signal	4 to 20 mA active
Function range output	0.0-24 mA
Output A	4 to 20 mA
Output B	4 to 20 mA
Behaviour of the output	= input signal
Output current at I <sub>e</sub> =0	0 mA
Load resistance R <sub>L</sub>	0 ... 450 Ω
Output residual ripple	< 20 mV <sub>eff</sub>
Settling time 10-90%	< 200 μs
Temperature influence error limits	< 0.1% / 10 K
Deviations / error note	Information in % of the measuring range (20 mA) at U <sub>N</sub> , 23 °C
Deviation	≤ 0,1 %
Typical deviation	0.05 %
Behaviour of the output	= input signal

## Device Specific Data

Operating conditions LED designation	PWR
Operating conditions LED colour	green

## Ambient Conditions

Ambient temperature °C	-20 °C ... 60 °C
Ambient temperature °F	-4 °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
Max. operating altitude	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

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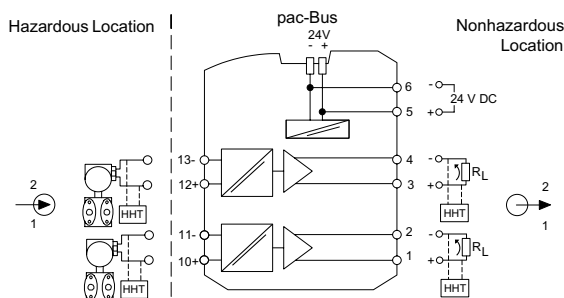
## Mechanical Data

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, inches	4.51 in
Length	112.5 mm
Length, inches	4.43 in
Weight	195 g
Weight	0.43 lb

## Mounting / Installation

Mounting type	DIN rail NS35/15, NS35/7.5
Mounting orientation	Horizontal Vertical
Connection type	Spring clamp terminal
Min. rigid conductor cross section	0.2 mm <sup>2</sup>
Max. rigid conductor cross section	1.5 mm <sup>2</sup>
Min. flex conductor cross section	0.2 mm <sup>2</sup>
Max. flex conductor cross section	1.5 mm <sup>2</sup>
Connection cross-section AWG	24 ... 16

## Technical Drawings – Subject to Alterations




Connection diagram 9260/23-11-10

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

## 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

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## pac-Bus

## Art. No.



Wiring auxiliary power and collective error message

262928

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