

Isolator Barriers

Transmitter supply unit

Ex i field circuit

9260/19-11-10s Art. No. 261385

STAHL



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

MY R. STAHL 9260A



Series 9260 Ex i transmitter supply units can be used for the intrinsically safe operation of transmitters or intrinsically safe mA sources such as 4-wire transmitters. The device allows HART signals to be transmitted in both directions. The portfolio includes one- and two-channel devices and 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 17.0081X
IECEx gas explosion protection	Ex ec [ia Ga] IIC T4 Gc
IECEx dust certificate	IECEx BVS 17.0081X
IECEx dust explosion protection	[Ex ia Da] IIIC
IECEX firedamp certificate	IECEx BVS 17.0081X
IECEx firedamp protection	[Ex ia Ma] I
ATEX gas certificate	BVS 17 ATEX E 089 X
ATEX gas explosion protection	II 3 (1) G Ex ec [ia Ga] IIC T4 Gc
ATEX dust certificate	BVS 17 ATEX E 089 X
ATEX dust explosion protection	II (1) D [Ex ia Da] IIIC
ATEX firedamp certificate	BVS 17 ATEX E 089 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. 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_0/V_{oc}	25.2 V
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Safety Data

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 μF						
Max. permissible external inductance L _o /L _a for IIC	3 mH						
Max. permissible external capacitance C _o /C _a for IIB	0.82 μF						
Max. permissible external inductance L _o /L _a for IIB	14 mH						
Max. permissible external capa.IIA	2.9 μF						
Max. permissible external inductance L _o for IIA	26 mH						
Max. perm. ext. capacit. IIIC	820 μF						
Max. permis. ext. induct. IIIC	14 mH						
Max. permissible ext. capac. I	4.8 μF						
Max. permissible external inductance L _o for I	40 mH						
Internal capacitance isolation amplifier	Negligible						
Internal inductance L _i isolation amplifier	Negligible						
Max. voltage U _i	30 V						
Max. current I _i	150 mA						
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]	2.200 mH	2 mH	1 mH	0.500 mH	0.200 mH	
	C _o [μF]	0.047 μF	0.049 μF	0.063 μF	0.080 μF	0.107 μF	
IIB	L _o [mH]	16 mH	1 mH	0.500 mH	0.200 mH	0.10 mH	
	C _o [μF]	0.370 μF	0.430 μF	0.510 μF	0.660 μF	0.820 μF	
IIA	L _o [mH]	26 mH	20 mH	1 mH	0.500 mH	0.100 mH	5.00 μH
	C _o [μF]	0.470 μF	0.570 μF	0.630 μF	0.720 μF	1.100 μF	2.90 μF
IIIC	L _o [mH]	16 mH	1 mH	0.500 mH	0.200 mH	0.10 mH	
	C _o [μF]	0.370 μF	0.430 μF	0.510 μF	0.660 μF	0.820 μF	
I	L _o [mH]	37 mH	0.200 mH	0.010 mH	0.001 mH		
	C _o [μF]	0.540 μF	1.100 μF	2.800 μF	4.150 μF		

Functional Safety

SIL	2
HFT	0
SFF	81,90%
PFD _{avg} at T _{proof} 1 year	3,66E-04
PFD _{avg} at T _{proof} 2 years	7,33E-04
PFD _{avg} at T _{proof} 3 years	1,10E-04
PFD _{avg} at T _{proof} 4 years	1,47E-03
PFD _{avg} at T _{proof} 5 years	1,83E-03

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Functional Safety

PFD _{avg} at T _{proof} 6 years	2,20E-03
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PFD _{avg} at T _{proof} 7 years	2,57E-03
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Electrical Data

Number of channels	1
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Transmitter feed operation	Yes
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Isolation amplifier operation	Yes
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LFD relay	No
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Communication signal	HART
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Auxiliary Power

Auxiliary power	24 V DC
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Auxiliary power nominal voltage	24 V DC
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Auxiliary power voltage range	19.2 ... 30 V
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Auxiliary pwr nom. voltage DC	24 V
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Nominal current	75 mA
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Max. power dissipation	1.45 W
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Power consumption	1.8 W
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Polarity reversal protection	Yes
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Operation indication	Green "PWR" LED
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Galvanic Isolation

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

Input function	Isolation amplifier Transmitter power unit
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Input	0/4 ... 20 mA with HART
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Input signal	0/4 to 20 mA with HART
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Function range input	0 ... 24 mA
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Short-circuit current	≥ 22.5 mA
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Supply voltage for transmitter	≥ 16 V at 20 mA
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Isolation amplifier voltage drop	< 3,5 V
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Output

Output	0/4 ... 20mA with/without HART
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Output signal	0/4 to 20 mA active
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Function range output	0 – 24 mA
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Output A	0/4 to 20 mA
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Output B	0/4 to 20 mA (without HART)
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Behaviour of the output	= input signal
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Output current at I _e =0	0 mA
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Output residual ripple	< 20 mV _{eff}
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Load resistance R _L	0 ... 450 Ω
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Settling time 10-90%	< 200 μs
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Output

Settling time note	Isolating repeater: < 600 µs
Deviations / error note	Information in % of the measuring range (20 mA) at U _N , 23 °C
Deviation	≤ 0,1 %
Typical deviation	0.05 %
Temperature influence error limits	< 0.1% / 10 K
Behaviour of the output	= input signal

Device Specific Data

LED operating conditions	LED "PWR", green
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Ambient Conditions

Ambient temperature °C	-40 °C ... +70 °C (Single device) -40 °C ... 60 °C (Group assembly)
Ambient temperature °F	-40 °F ... +158 °F (Single device) -40 °F ... +140 °F (Group assembly)
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

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
Height in inches	4.51 in
Length	112.5 mm
Length in inches	4.43 in
Weight	195 g
Weight	0.43 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

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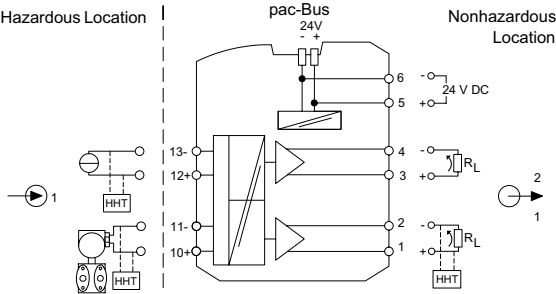


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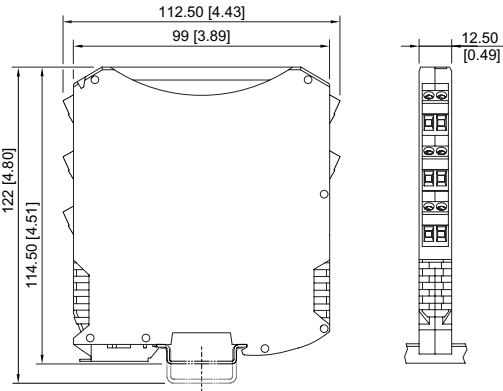
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Technical Drawings – Subject to Alterations



Connection diagram 9260/19-11-10

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

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