- Can be used up to SIL 2 (IEC/EN 61508)
- Wire-breakage and short-circuit monitoring signalization, which can be disabled
- Optional line fault transparency version available: The device notifies the control system directly of any field-side line faults via the signal output.

WebCode 9170A

9170 series switching repeaters can be used for intrinsically safe operation of contacts, NAMUR proximity sensors or optocouplers. Models are available with one or two channels. The intrinsically safe digital input is always galvanically separated from the output and auxiliary power. The channels in the two-channel devices are galvanically separated. The devices transmit frequencies of up to 10 kHz, and the output signal can be inverted.

	IECEx / ATEX					
Zone	0	1	2	20	21	22
Ex interface	•	•	•	•	•	•
Installation in			•			

	NEC 500 CEC Appendix J					
	Class I		Class II		Class III	
Division	1	2	1	2	1	2
Ex interface	•	•	•	•	•	•
Installation in		•				

	CEC Section 18					
	NEC® 505 Class I			NEC® 506		
Zone	0	1	2	20	21	22
Ex interface	•	•	•			
Installation in			•			

Selection Table

Number of channels	Auxiliary power	Output	Product Type	Art. No.	Weight kg
Output version (control)		Electronic (35 V / 50 mA)			
2	24 V DC	1 electronic output	9170/21-14-11s	203152	0.180
Output version (control)		Electronic (35 V / 50 mA) with LFT (line fault transparency)			
Number of channels	Auxiliary power	Output	Product Type	Art. No.	Weight kg
2	24 V DC	1 LFT electronic output	9170/21-14-12s	203153	0.180
Output version (control)		Power relay (250 V / 4 A)			
Number of channels	Auxiliary power	Output	Product Type	Art. No.	Weight kg
1	24 V DC	1 change-over contact - power relay	9170/11-12-11s	203285	0.180
	110 – 230 V AC	2 change-over contacts - power relay	9170/11-13-21s	203294 ▲	0.180
2	24 V DC	1 change-over contact - power relay	9170/21-12-11s	203147 ▲	0.225
	110 – 230 V AC	1 change-over contact - power relay	9170/21-12-21s	203281 ▲	0.225
Output version (control)		Signal relay (125 V / 1 A)			
Number of channels	Auxiliary power	Output	Product Type	Art. No.	Weight kg
1	24 V DC	2 change-over contacts - signal relay	9170/11-11-11s	203283 ▲	0.180
2	24 V DC	1 change-over contact - signal relay	9170/21-10-11s	203143 ▲	0.225
	24 V DC	2 NO - signal relays	9170/21-11-11s	203145 ▲	0.225

▲ Preferred products – in stock or available at short notice

Switching Repeater
Series 9170

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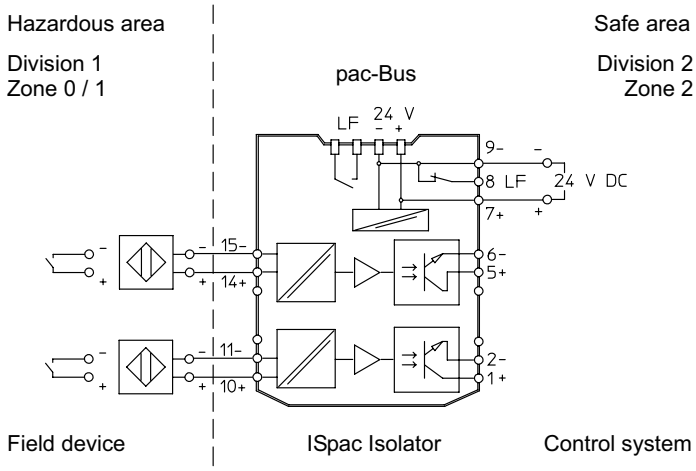
The order numbers listed in the table are for devices equipped with screw terminals.
Further versions on the Internet r-stahl.com.

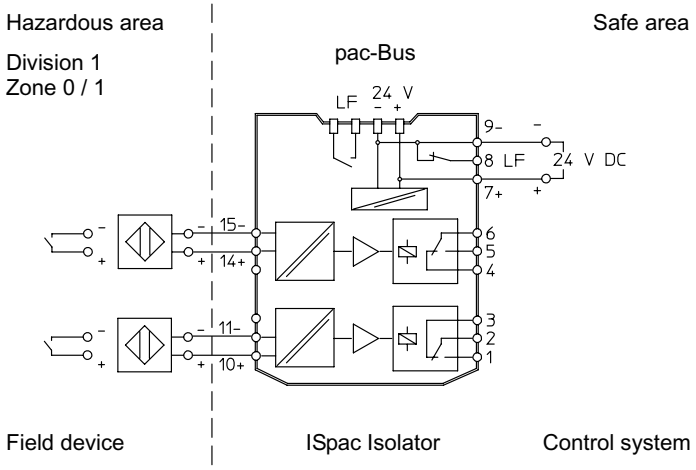
LFT - line fault transparency
Device signals line fault on field side to the control directly via the signal output.

Technical Data

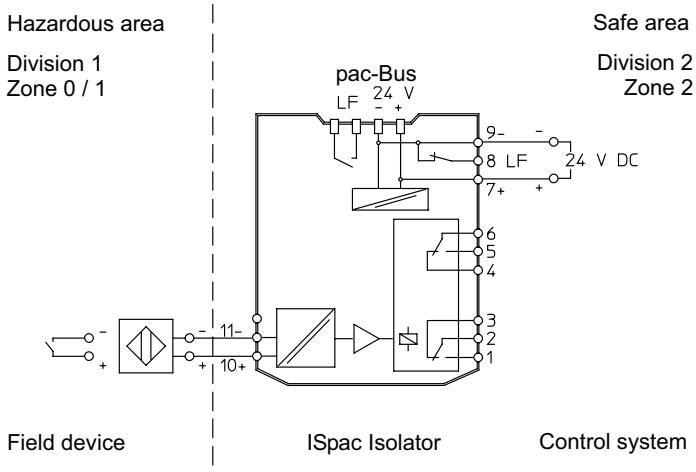
Variant	Electronic (35 V / 50 mA)	Power relay (250 V / 4 A)	Signal relay (125 V / 1 A)
Explosion Protection			
IECEx gas explosion protection	Ex nA nC [ia Ga] IIC T4 Gc	Ex [Ex ia Ga] IIC	Ex nA nC [ia Ga] IIC T4 Gc
IECEx dust explosion protection	[Ex ia Da] IIIC	[Ex ia Da] IIIC	[Ex ia Da] IIIC
ATEX gas explosion protection	Ⓔx II 3 (1) G Ex nA nC [ia Ga] IIC T4 Gc	Ⓔx II (1) G Ex [Ex ia Ga] IIC	Ⓔx II 3 (1) G Ex nA nC [ia Ga] IIC T4 Gc
ATEX dust explosion protection	Ⓔx II (1) D [Ex ia Da] IIIC	Ⓔx II (1) D [Ex ia Da] IIIC	Ⓔx II (1) D [Ex ia Da] IIIC
EAC gas explosion protection	Ex 2 Ex nA nC [ia Ga] IIC T4 Gc X	Ex [Ex ia Ga] IIC X	Ex 2 Ex nA nC [ia Ga] IIC T4 Gc X
EAC dust explosion protection	Ex [Ex ia Da] IIIC X	Ex [Ex ia Da] IIIC X	Ex [Ex ia Da] IIIC X
Certificates	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (ENDCE), IECEx (BVS), India (PESO), Korea (KGS), SIL (exida), USA (FM)	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (ENDCE), IECEx (BVS), India (PESO), Korea (KGS), SIL (exida), USA (FM)	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (ENDCE), IECEx (BVS), India (PESO), Korea (KGS), SIL (exida), USA (FM)
Ship approval	CCS, EU RO MR	CCS, EU RO MR	CCS, EU RO MR
Installation	in Zone 2, Division 2 and in the safe area	in safe area	in Zone 2, Division 2 and in the safe area
Further information	see respective certificate and operating instructions	see respective certificate and operating instructions	see respective certificate and operating instructions
Notes	see respective certificate and operating instructions		
Safety Data			
Maximum voltage U_o	9.6 V	9.6 V	9.6 V
Maximum current I_o	10 mA	10 mA	10 mA
Maximum power P_o	24 mW	24 mW	24 mW
Safety-related maximum voltage	253 V	253 V	253 V
Functional Safety			
SIL	2	2	2
Input			
Input signal	In accordance with EN 60947-5-6 (NAMUR)	In accordance with EN 60947-5-6 (NAMUR)	In accordance with EN 60947-5-6 (NAMUR)
Output			
Output switching frequency	10 kHz	6 Hz	15 Hz
Ambient Conditions			
Ambient temperature	-20 °C ... +70 °C (Single device) -20 °C ... +60 °C (Group assembly)	-20 °C ... +70 °C (Single device) -20 °C ... +60 °C (Group assembly)	-20 °C ... +70 °C (Single device) -20 °C ... +60 °C (Group assembly)
Storage temperature	-40 °C ... +80 °C	-40 °C ... +80 °C	-40 °C ... +80 °C
Mounting / Installation			
Mounting type	NS35/15, NS35/7.5 DIN rail	NS35/15, NS35/7.5 DIN rail	NS35/15, NS35/7.5 DIN rail



Connection diagram 9170/21-14-11



Connection diagram 9170/21-12-11



Connection diagram 9170/11-11-11

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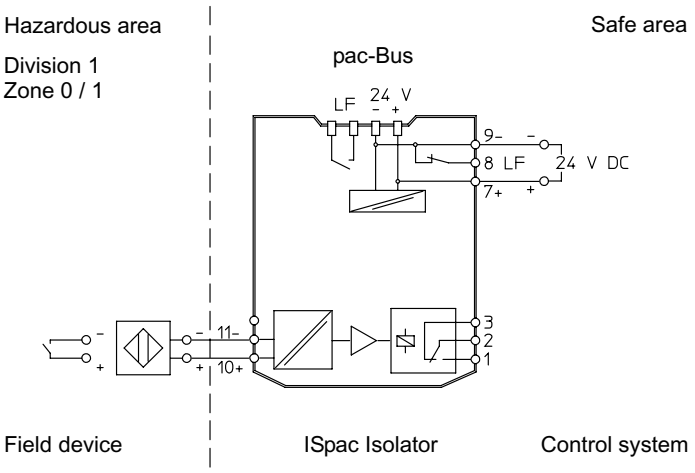
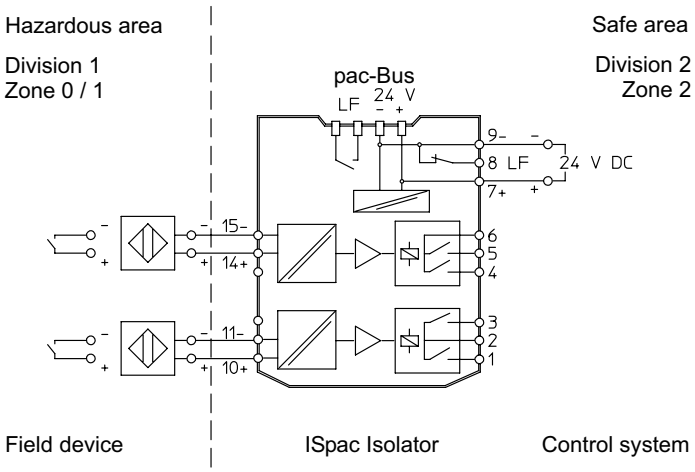
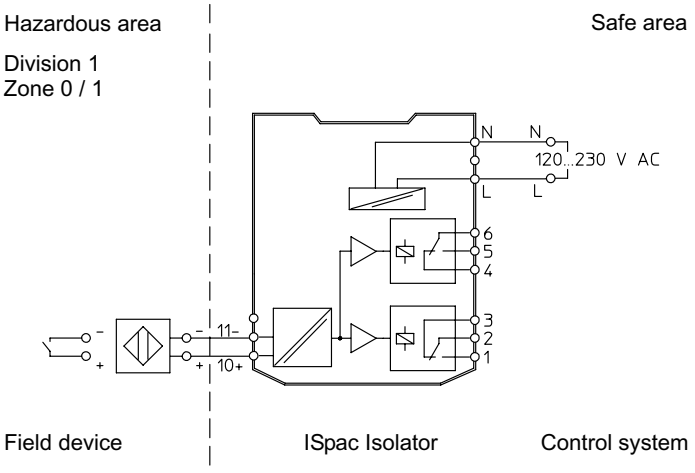


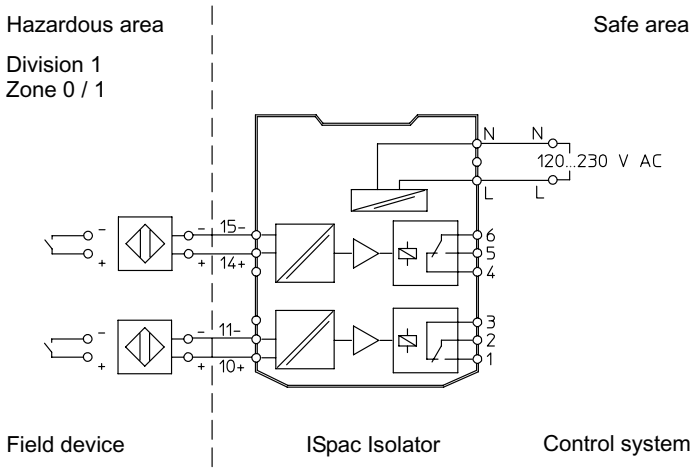
Connection diagram 9170/11-12-11



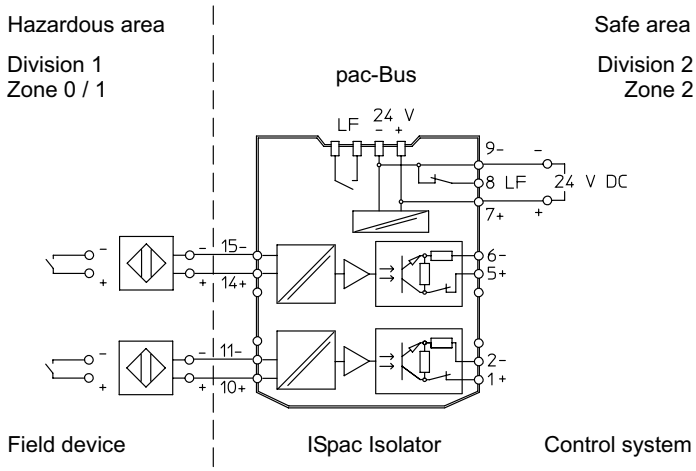
Connection diagram 9170/21-11-11



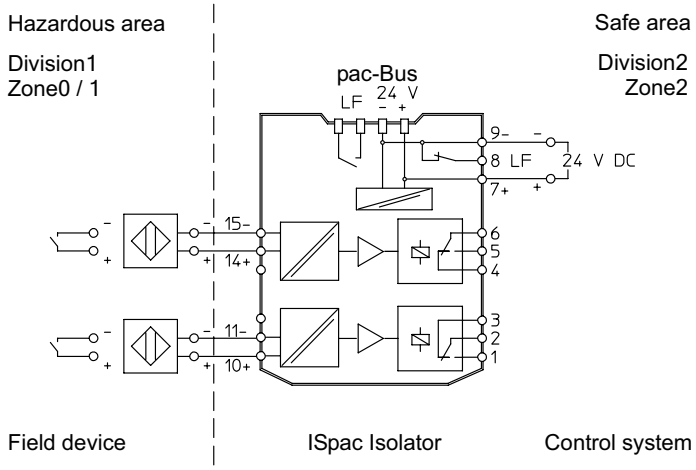
Connection diagram 9170/11-13-21



Connection diagram 9170/21-12-21



Connection diagram 9170/21-14-12



Connection diagram 9170/21-10-11

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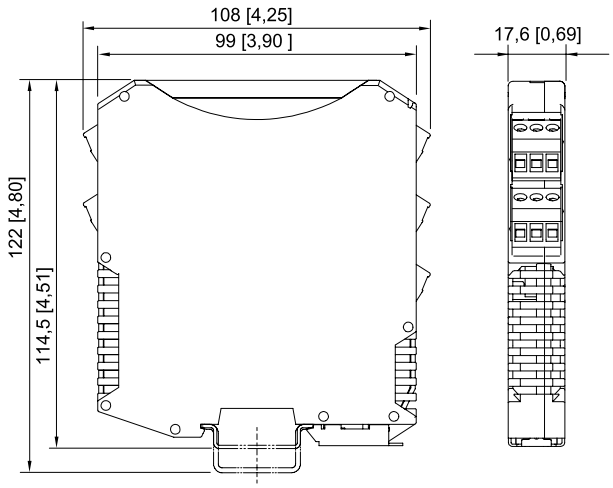
Accessories

Figure	Description	Art. No.	Weight kg
Resistance coupling element			
	Connection of additional contacts in the Ex area as well, in order to enable short circuit and open circuit detection.	105944	0.010

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



ISpac Series 9146, 9147, 9160, 9162, 9163, 9165, 9167, 9170, 9172, 9175, 9176, 9180, 9182, 9193,
ISbus Series 9412 with screw terminal