



- 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.

A3

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. Certain variants 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			NEC® 506		
Zone	Class I			20	21	22
Ex interface	•	•	•			
Installation in			•			

Selection Table						
Output version (control)		Electronic (35 V / 50 mA)				
Number of channels	Auxiliary power	Output	Connection type	Product Type	Art. No.	Weight kg
2	24 V DC	1 electronic output	Screw terminal	9170/21-14-11s	203152	0.180
		1 electronic output	Spring clamp terminal	9170/21-14-11k	171469	0.180
Output version (control)		Electronic (35 V / 50 mA) with LFT (line fault transparency)				
Number of channels	Auxiliary power	Output	Connection type	Product Type	Art. No.	Weight kg
2	24 V DC	1 LFT electronic output	Screw terminal	9170/21-14-12s	203153	0.180
Output version (control)		Power relay (250 V / 4 A)				
Number of channels	Auxiliary power	Output	Connection type	Product Type	Art. No.	Weight kg
1	24 V DC	1 change-over contact – power relay	Spring clamp terminal	9170/11-12-11k	203286	0.180
	110 to 230 V AC	2 change-over contacts – power relay	Screw terminal	9170/11-13-21s	203294 ▲	0.180
		2 change-over contacts – power relay	Spring clamp terminal	9170/11-13-21k	203295	0.180

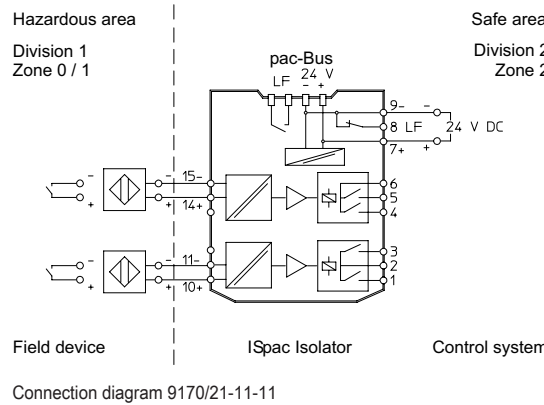
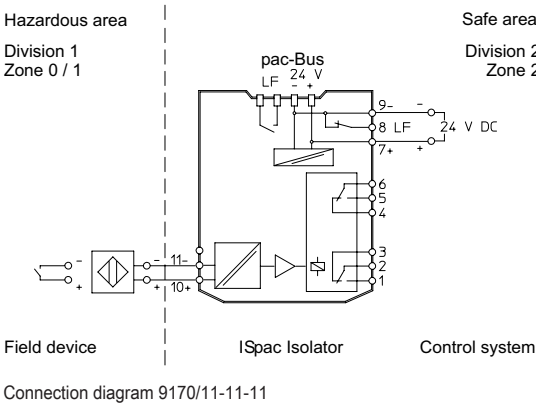
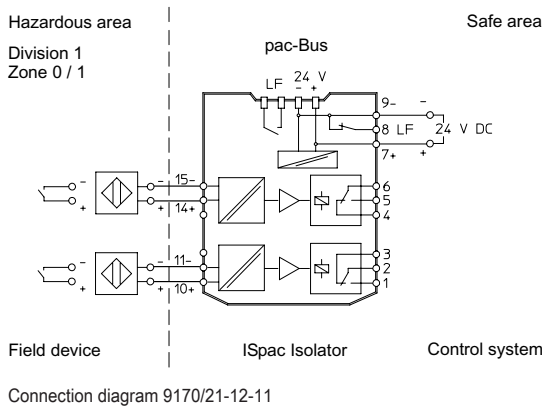
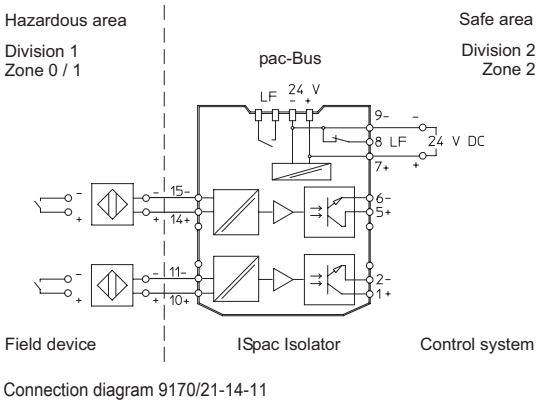
Selection Table						
Output version (control)		Power relay (250 V / 4 A)				
Number of channels	Auxiliary power	Output	Connection type	Product Type	Art. No.	Weight kg
2	24 V DC	1 change-over contact – power relay	Screw terminal	9170/21-12-11s	203147 ▲	0.225
		1 change-over contact – power relay	Spring clamp terminal	9170/21-12-11k	203151	0.225
	110 to 230 V AC	1 change-over contact – power relay	Screw terminal	9170/21-12-21s	203281 ▲	0.225
		1 change-over contact – power relay	Spring clamp terminal	9170/21-12-21k	203282	0.225
Output version (control)		Signal relay (125 V / 1 A)				
Number of channels	Auxiliary power	Output	Connection type	Product Type	Art. No.	Weight kg
1	24 V DC	2 change-over contacts – signal relay	Screw terminal	9170/11-11-11s	203283 ▲	0.180
		2 change-over contacts – signal relay	Spring clamp terminal	9170/11-11-11k	203284	0.180
2	24 V DC	1 change-over contact – signal relay	Screw terminal	9170/21-10-11s	203143 ▲	0.225
		1 change-over contact – signal relay	Spring clamp terminal	9170/21-10-11k	203144	0.225
		2 NO – signal relay	Screw terminal	9170/21-11-11s	203145 ▲	0.225
		2 NO – signal relay	Spring clamp terminal	9170/21-11-11k	203146	0.225

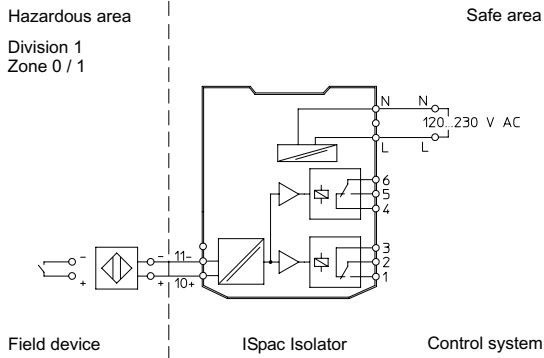
LFT - line fault transparency  
Device signals line fault on field side to the control directly via the signal output.

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	Ⓜ II 3 (1) G Ex nA nC [ia Ga] IIC T4 Gc	Ⓜ II (1) G Ex [Ex ia Ga] IIC	Ⓜ II 3 (1) G Ex nA nC [ia Ga] IIC T4 Gc
ATEX dust explosion protection	Ⓜ II (1) D [Ex ia Da] IIIC	Ⓜ II (1) D [Ex ia Da] IIIC	Ⓜ II (1) D [Ex ia Da] IIIC
EAC gas explosion protection	Ⓜ 2 Ex nA nC [ia Ga] IIC T4 Gc X	Ⓜ [Ex ia Ga] IIC X	Ⓜ 2 Ex nA nC [ia Ga] IIC T4 Gc X
EAC dust explosion protection	Ⓜ [Ex ia Da] IIIC X	Ⓜ [Ex ia Da] IIIC X	Ⓜ [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), Canada (UL), EAC (ENDCE), IECEX (BVS), India (PESO), Korea (KGS), SIL (exida), USA (FM), USA (UL)	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (ENDCE), IECEX (BVS), India (PESO), Korea (KGS), SIL (exida), USA (FM)
Notes	CCC, UKCA certificate available from 2022 onward	CCC, UKCA certificate available from 2022 onward	CCC, UKCA certificate available from 2022 onward
Ship approval	CCS, EU RO MR (DNV GL)	CCS, EU RO MR (DNV GL)	CCS, EU RO MR (DNV GL)
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
Safety Data			
Max. voltage $U_o$	9.6 V	9.6 V	9.6 V
Max. current $I_o$	10 mA	10 mA	10 mA
Max. power $P_o$	24 mW	24 mW	24 mW
Safety-related max. voltage	253 V	253 V	253 V
Functional Safety			
SIL	2	2	2

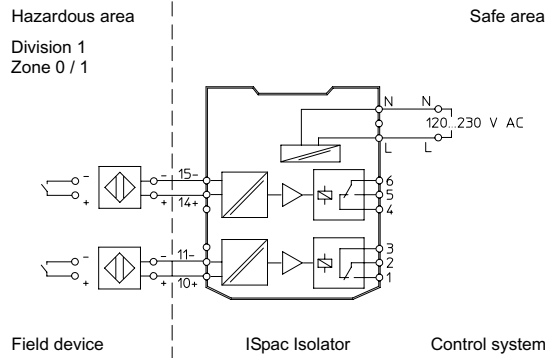
Technical Data			
Variant	Electronic (35 V / 50 mA)	Power relay (250 V / 4 A)	Signal relay (125 V / 1 A)
Input			
Input signal	As per EN 60947-5-6 (NAMUR)	As per EN 60947-5-6 (NAMUR)	As per EN 60947-5-6 (NAMUR)
Output			
Output switching frequency	10 kHz	6 Hz	15 Hz
Ambient Conditions			
Ambient temperature	-20 °C ... +70 °C (Single device) -20 °C ... +60 °C (Group assembly)	-20 °C ... +70 °C (Single device) -20 °C ... +65 °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	DIN rail NS35/15, NS35/7.5	DIN rail NS35/15, NS35/7.5	DIN rail NS35/15, NS35/7.5

### Technical Drawings – Subject to Alterations

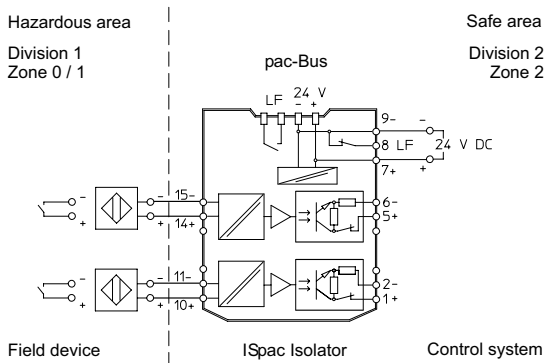




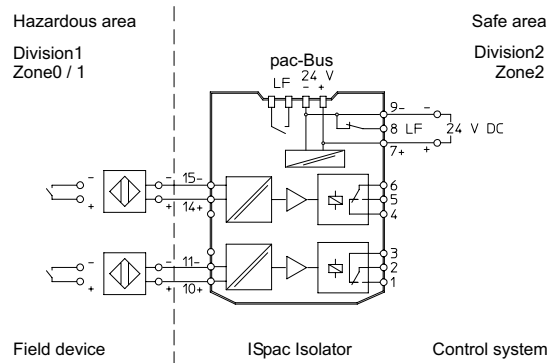
Connection diagram 9170/11-13-21



Connection diagram 9170/21-12-21



Connection diagram 9170/21-14-12



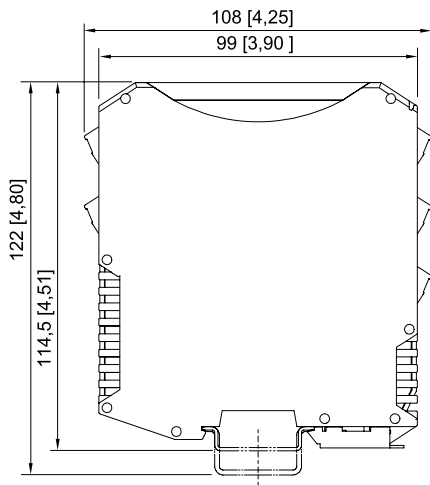
Connection diagram 9170/21-10-11

**Accessories**

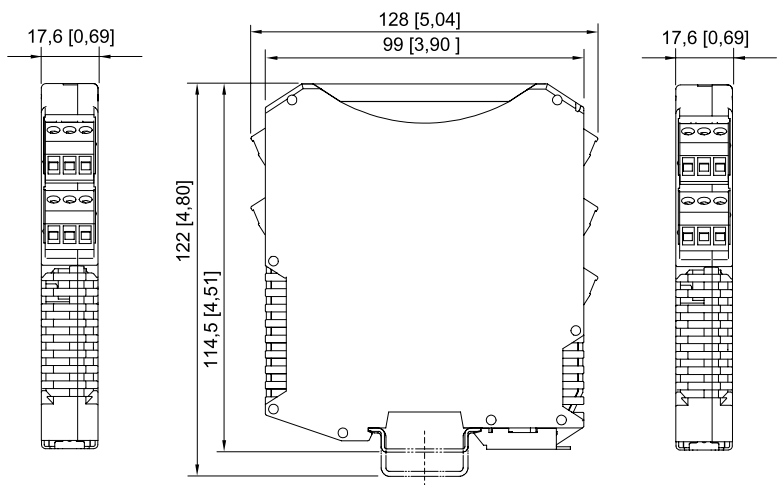
Figure	Description	Art. No.	Weight kg
	Connection of additional contacts in the Ex area as well, in order to enable short circuit and open circuit detection.	105944	0.010

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

A3



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



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