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

WebCode **9170A**

9170 series Ex i switching repeaters can be used for operating contacts, NAMUR proximity sensors or opto-couplers. 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.

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

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

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

Selection Table

Output version (control)		Electronic (35 V / 50 mA)			
Number of channels	Auxiliary power	Output	Product Type	Art. No.	Weight kg
2	24 V DC	1 electronic output	9170/21-14-11s	203152 ▲	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
1	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
2	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
2	24 V DC	2 NO - signal relays	9170/21-11-11s	203145 ▲	0.225

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

▲ Preferred products – in stock or available at short notice
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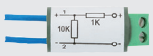
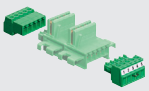
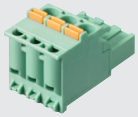
Technical Data

Variant	Electronic (35 V / 50 mA)	Power relay (250 V / 4 A)	Signal relay (125 V / 1 A)
Explosion Protection			
Gas explosion protection IECEx	Ex nA nC [ia Ga] IIC T4 Gc	Ex [Ex ia Ga] IIC	Ex nA nC [ia Ga] IIC T4 Gc
Gas explosion protection ATEX	⟨Ex⟩ II 3 (1) G Ex nA nC [ia Ga] IIC T4 Gc	⟨Ex⟩ II (1) G Ex [Ex ia Ga] IIC	⟨Ex⟩ II 3 (1) G Ex nA nC [ia Ga] IIC T4 Gc
Gas explosion protection EAC	[Ex] 2Ex nA nC [ia Ga] IIC T4 Gc X	[Ex] [Ex ia Ga] IIC X	[Ex] 2Ex nA nC [ia Ga] IIC T4 Gc X
Dust explosion protection IECEx	[Ex ia Da] IIIC	[Ex ia Da] IIIC	[Ex ia Da] IIIC
Dust explosion protection ATEX	⟨Ex⟩ II (1) D [Ex ia Da] IIIC	⟨Ex⟩ II (1) D [Ex ia Da] IIIC	⟨Ex⟩ II (1) D [Ex ia Da] IIIC
Dust explosion protection EAC	[Ex] [Ex ia Da] IIIC	[Ex] [Ex ia Da] IIIC	[Ex] [Ex ia Da] IIIC
Certificates	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (STV), IECEx (BVS), India (PESO), Korea (KGS), SIL (exida), USA (FM)	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (STV), IECEx (BVS), India (PESO), Korea (KGS), SIL (exida), USA (FM)	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (STV), IECEx (BVS), India (PESO), Korea (KGS), SIL (exida), USA (FM)
Ship approval	CCS, DNVGL	CCS, DNVGL	CCS, DNVGL
Installation	in Zone 2, Division 2 and in the safe area	in safe area	in Zone 2, Division 2 and in the safe area
Notes	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 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

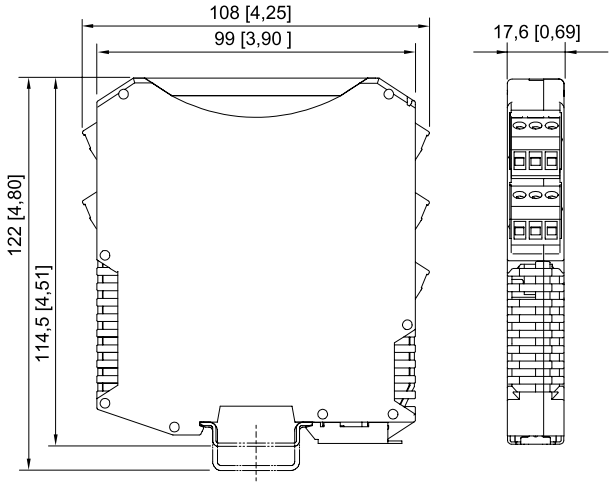
Accessories

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
Front cover			
	yellow, transparent. Clear marking of the device for SIL applications. (Packaging unit: 10 pieces)	200914	0.020
Terminal set for pac-Bus			
	For the supply of 24 V DC auxiliary power via terminals (alternative to using the supply module 9193/21-11-11), with jumper for error message chain for ISpac module 91xx	160730 ▲	0.008

Spare Parts

Figure	Description	Art. No.	Weight kg
Screw terminal			
	3-pole plug, screw connector thread: M3 stripping length: 7 mm colour: green	112817	0.005
	3-pole plug, screw connector thread: M3 stripping length: 7 mm colour: black	112816	0.004
	3-pole plug, screw connector thread: M3 stripping length: 7 mm colour: blue	112818	0.005
Spring clamp terminal			
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm colour: green	112825	0.005
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm colour: black	112824	0.005
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm colour: blue	112826	0.005

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 with screw terminal