- Suitable for solenoid valves and signalling devices
- Two-channel variants reduce the amount of space required
- No need for a separate auxiliary power supply

MY R. STAHL **9176A**

The Series 9176 binary outputs transmit binary signals for the intrinsically safe operation of Ex i solenoid valves, indicator lamps and horns. The devices do not require a separate auxiliary power supply as they are powered by the control circuit. The intrinsically safe outputs are galvanically separated from the inputs. The two-channel variants are characterised by galvanically separated channels.

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

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

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

Selection Table

Number of channels	1					
Output open-circuit voltage U_a	Max. output current $I_{a\ max}$	Internal Resistance R_i	Connection type	Product Type	Art. No.	Weight
25 V	35 mA	250 Ω	Screw terminal	9176/10-16-00s	222182	170 g
Number of channels	2					
Output open-circuit voltage U_a	Max. output current $I_{a\ max}$	Internal Resistance R_i	Connection type	Product Type	Art. No.	Weight
25 V	29 mA /58 mA*	320 Ω/parallel: 160 Ω*	Screw terminal	9176/20-15-00s	222180	185 g
	35 mA /70 mA*	250 Ω/parallel: 125 Ω*	Screw terminal	9176/20-16-00s	222184	185 g
		250 Ω/parallel: 125 Ω*	Spring clamp terminal	9176/20-16-00k	222185	180 g

* Outputs can be connected in parallel, therefore doubling the output current.

Technical Data

Variant	9176/.0-15-00s	9176/.0-16-00s
Explosion Protection		
IECEx gas explosion protection	Ex nA [ia Ga] IIC T4 Gc	Ex nA [ia Ga] IIC T4 Gc
IECEx dust explosion protection	[Ex ia Da] IIIC	[Ex ia Da] IIIC
ATEX gas explosion protection	Ⓔx II 3 (1) G Ex nA [ia Ga] IIC T4 Gc	Ⓔx II 3 (1) G Ex nA [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
Certificates	ATEX (BVS), Brazil (ULB), Canada (FM), IECEx (BVS), SIL (exida), USA (FM)	ATEX (BVS), Brazil (ULB), Canada (FM), IECEx (BVS), SIL (exida), USA (FM)
Ship approval	CCS, EU RO MR (DNV)	CCS, EU RO MR (DNV)

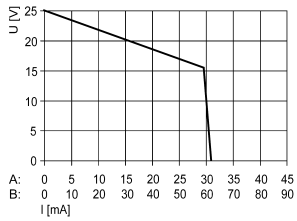
Loop-powered binary output
Series 9176

A3

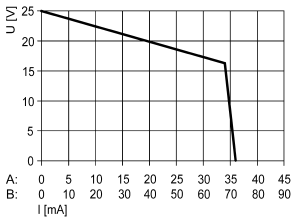
Technical Data

Variant	9176/.0-15-00s	9176/.0-16-00s
Explosion Protection		
Declaration of conformity	ATEX (EUK), China (CCC)	ATEX (EUK), China (CCC)
Safety Data		
Max. voltage U_o	27.6 V	27.6 V
Max. current I_o (Ex ia)	86.5 mA	110 mA
Max. current I_o (Ex ib)	44 mA	50 mA
Max. power P_o	596 mW	760 mW
Safety-related max. voltage	253 V	253 V
Auxiliary Power		
Auxiliary power	without	without
Input		
Input voltage for ON	18 – 31.2 V	18 – 31.2 V
Input voltage for OFF	0 – 5 V	0 – 5 V
Output		
Output residual ripple	< 100 mV	< 100 mV
Output switching frequency	≤ 10 Hz	≤ 10 Hz
Switching delay ON/OFF	≤ 50 ms	≤ 50 ms
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)
Storage temperature	-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

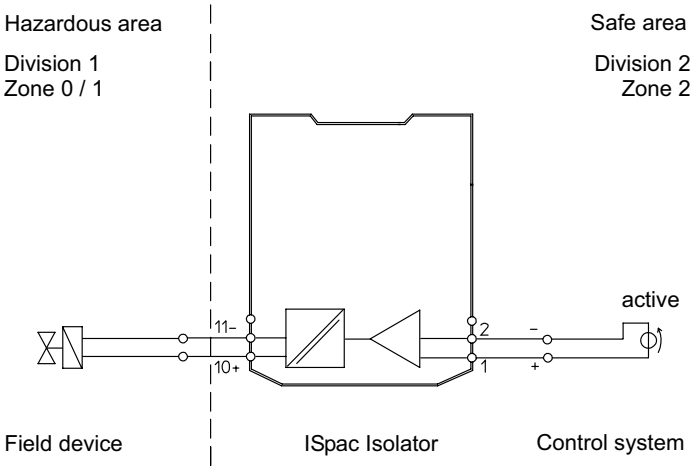
Technical Drawings – Subject to Alterations



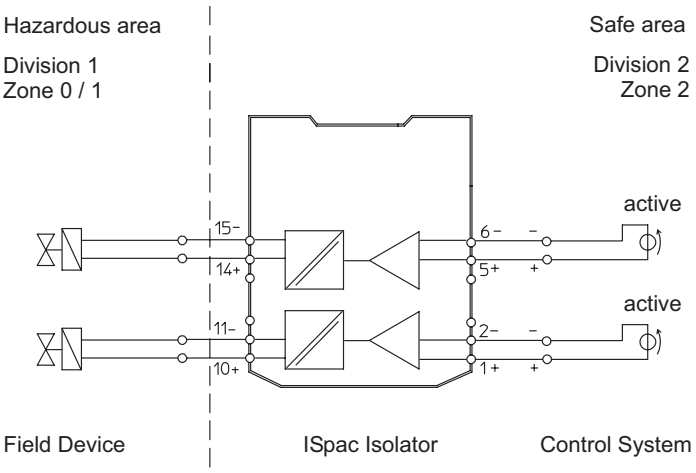
9176/.0-15-00 output characteristic



9175/.0-16-11; 9176/.0-16-00 output characteristic



Connection Diagram Type 9176/10-..-..-..



Connection Diagram Type 9176/20-..-..-..

Accessories

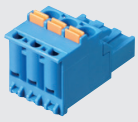
Figure	Description	Art. No.	Weight
Ex i/Ex e relay module for Zone 1			
	The Ex i/Ex e relay module is used for the galvanically isolated switching of intrinsically safe (Ex i) and non-Ex i (Ex e) electrical circuits. Coil circuit: Ex i or non-Ex i (Ex e) Contact circuit: Ex i or non-Ex i (Ex e) Thanks to the integrated safeguarding for the contact and coil circuit, additional safeguarding is not necessary. Usable with the following ISpac isolators: 9175/10-16-11, 9175/20-16-11, 9176/20-15-00, 9176/10-16-00, 9176/20-16-00, 9275/10-24-48-11, 9276/10-21-60-00, 9276/10-24-48-00 Usable with the following IS1+ modules: 9475/32-04-22, 9475/32-08-62, 9475/33-08-60	273000	110 g

Spare Parts

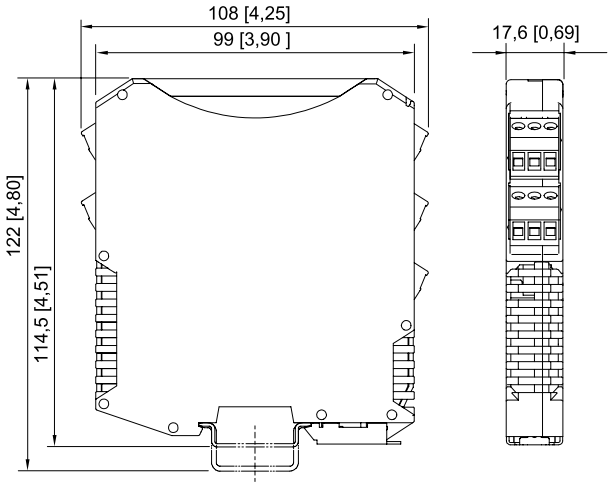
Figure	Description	Art. No.	Weight
Screw terminal			
	3-pole plug, screw connector thread: M3 stripping length: 7 mm colour: green	112817	5 g
	3-pole plug, screw connector thread: M3 stripping length: 7 mm colour: black	112816	5 g
	3-pole plug, screw connector thread: M3 stripping length: 7 mm colour: blue	112818	5 g
Spring clamp terminal			
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm colour: green	112825	5 g
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm colour: black	112824	5 g

A3

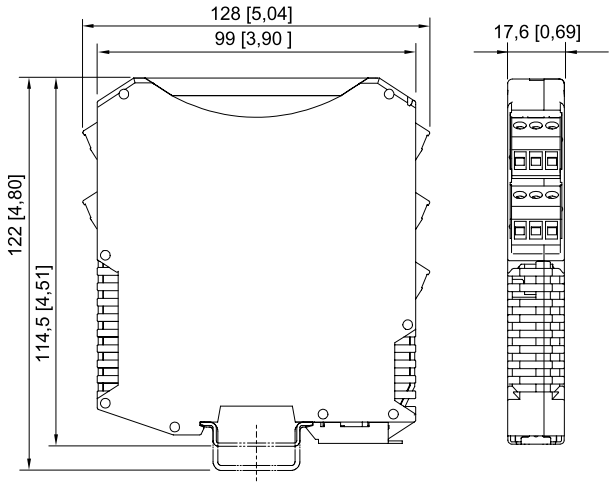
Spare Parts

Figure	Description	Art. No.	Weight
Spring clamp terminal			
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm colour: blue	112826	5 g

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



ISpac Series 9143, 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