



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

07 b

MY R. STAHL 9176A



9176 series binary outputs issue binary signals for the intrinsically safe operation of Ex i solenoid valves, indicator lamps or 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.

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

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

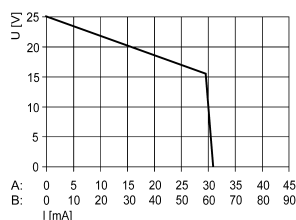
Selection Table							
Number of channels	1						
Output open-circuit voltage U_o	Max. output current $I_{o\ max}$	Internal Resistance R_i	Connection type	Product Type	Art. No.	Weight lb	
25 V	35 mA	250 Ω	Screw terminal	9176/10-16-00s	222182	0.37 lb	
		250 Ω	Spring clamp terminal	9176/10-16-00k	222183	0.4 lb	
Number of channels	2						
Output open-circuit voltage U_o	Max. output current $I_{o\ max}$	Internal Resistance R_i	Connection type	Product Type	Art. No.	Weight lb	
25 V	29 mA / 58 mA*	320 Ω /parallel: 160 Ω *	Screw terminal	9176/20-15-00s	222180	0.41 lb	
		320 Ω /parallel: 160 Ω *	Spring clamp terminal	9176/20-15-00k	222181	0.4 lb	
	35 mA / 70 mA*	250 Ω /parallel: 125 Ω *	Screw terminal	9176/20-16-00s	222184	0.41 lb	
		250 Ω /parallel: 125 Ω *	Spring clamp terminal	9176/20-16-00k	222185	0.4 lb	
	43 mA / 86 mA*	460 Ω / 230 Ω *	Screw terminal	9176/20-17-00s	222188	0.41 lb	
		460 Ω / 230 Ω *	Spring clamp terminal	9176/20-17-00k	222189	0.4 lb	

* Parallel connection of the outputs possible; thus, doubling the output current and halves the internal resistance.

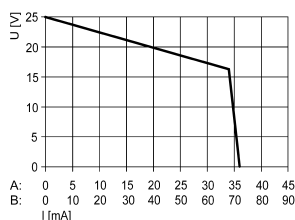
Technical Data			
Variant	9176/0-15-00s	9176/0-16-00s	9176/0-17-00s
Explosion Protection			
FMus certificate	FM16US0122X	FM16US0122X	FM16US0122X
cFM certificate	FM16CA0067X	FM16CA0067X	FM16CA0067X
cFM certificate	FM16CA0067X	FM16CA0067X	FM16CA0067X

Technical Data			
Variant	9176/0-15-00s	9176/0-16-00s	9176/0-17-00s
Explosion Protection			
Marking cFMus	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, [AEx/Ex ia] IIC T4 Mounting vert. at Ta = 70°C , or horizontal Ta = 60°C See Doc. 91 766 01 31 1	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, [AEx/Ex ia] IIC T4 Mounting vert. at Ta = 70°C , or horizontal Ta = 60°C See Doc. 91 766 01 31 1	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, [AEx/Ex ia] IIC T4 Mounting vert. at Ta = 70°C , or horizontal Ta = 60°C See Doc. 91 766 01 31 1
IECEX gas explosion protection	Ex nA [ia Ga] IIC T4 Gc	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	[Ex ia Da] IIIC
Certificates	ATEX (BVS), Brazil (ULB), Canada (FM), China (NEPSI), IECEX (BVS), Korea (KTL), SIL (exida), USA (FM)	ATEX (BVS), Brazil (ULB), Canada (FM), China (NEPSI), IECEX (BVS), Korea (KTL), SIL (exida), USA (FM)	ATEX (BVS), Brazil (ULB), Canada (FM), IECEX (BVS), Korea (KTL), SIL (exida), USA (FM)
Ship approval	CCS, EU RO MR (DNV)	CCS, EU RO MR (DNV)	CCS, EU RO MR (DNV)
Declaration of conformity	ATEX (EUK), China (CCC)	ATEX (EUK), China (CCC)	ATEX (EUK), China (CCC)
Safety Data			
Max. voltage U_0/V_{oc}	27.6 V	27.6 V	27.6 V
Max. current I_0 (Ex ia)	86.5 mA	110 mA	60 mA
Max. current I_0 (Ex ib)	44 mA	50 mA	
Max. power P_0	596 mW	760 mW	415 mW
Safety-related max. voltage	253 V	253 V	253 V
Auxiliary Power			
Auxiliary power	without	without	without
Input			
Input voltage for ON	18 – 31.2 V	18 – 31.2 V	18 – 31.2 V
Input voltage for OFF	0 – 5 V	0 – 5 V	0 – 5 V
Output			
Output open-circuit voltage U_0	25 V	25 V	25 V
Output residual ripple	< 100 mV	< 100 mV	< 100 mV
Output switching frequency	≤ 10 Hz	≤ 10 Hz	≤ 10 Hz
Switching delay ON/OFF	≤ 50 ms	≤ 50 ms	≤ 50 ms
Notes	* Parallel connection of the outputs possible; thus, doubling the output current and halves the internal resistance.		
Ambient Conditions			
Ambient temperature °F	-4 °F ... +158 °F (Single device) -4 °F ... +140 °F (Group assembly)	-4 °F ... +158 °F (Single device) -4 °F ... +140 °F (Group assembly)	-4 °F ... +158 °F (Single device) -4 °F ... +140 °F (Group assembly)
Ambient temperature °C	-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 °F	-40 °F ... +176 °F	-40 °F ... +176 °F	-40 °F ... +176 °F
Storage temperature °C	-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

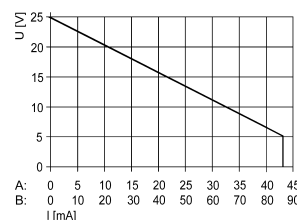
Technical Drawings – Subject to Alterations



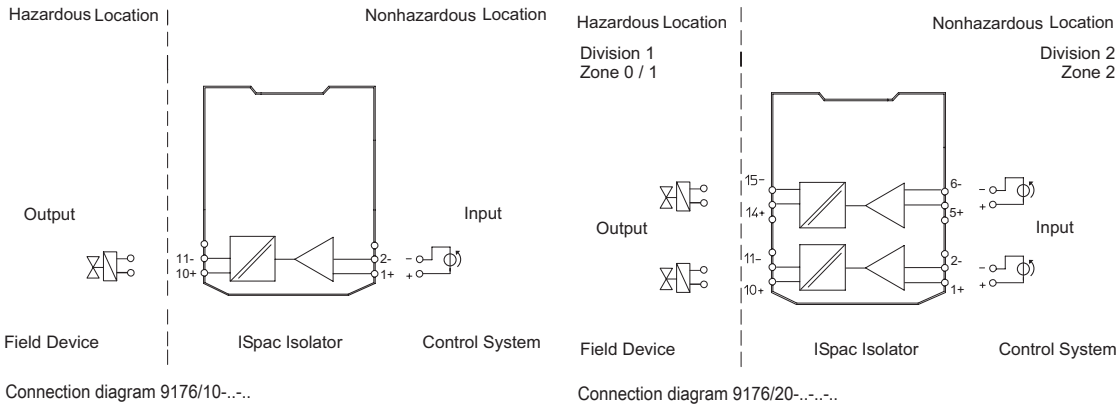
9176/0-15-00 output characteristic



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



9176/0-17-00 output characteristic



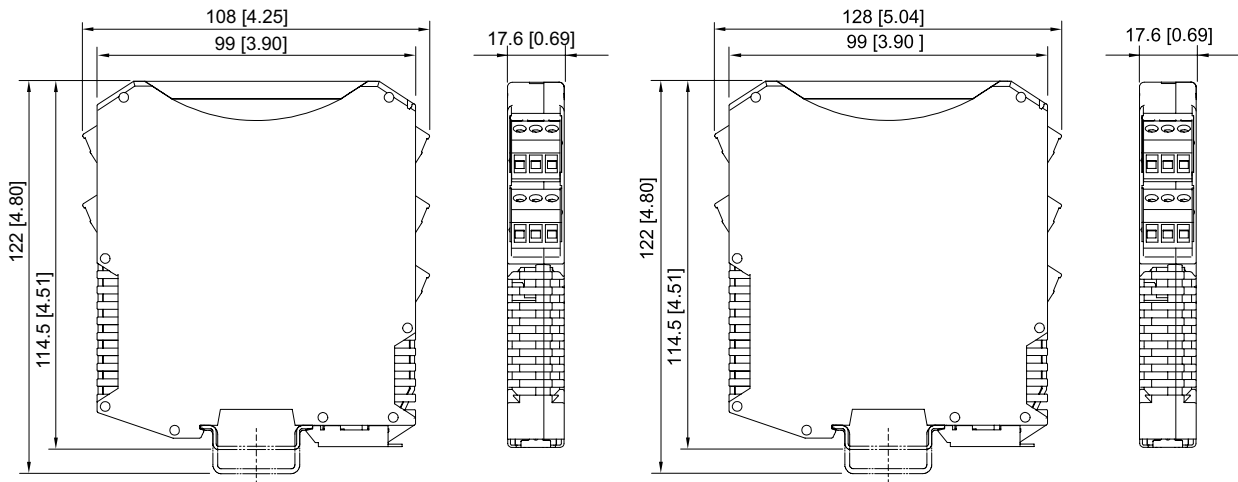
Accessories				
Figure	Description	Product Type	Art. No.	Weight lb
Transparent cover				
	For 91xx ISpac modules Yellow, transparent Clear identification of the device for SIL applications. (Packaging unit: 10 pieces)	cover 17,6 yellow transparent	200914	0.04

Spare Parts				
Figure	Description	Product Type	Art. No.	Weight lb
Screw terminal				
	3-pole plug, screw connector thread: M3 stripping length: 7 mm color: green	Terminal block 3-pole green	112817	0.01
	3-pole plug, screw connector thread: M3 stripping length: 7 mm color: black	Terminal block 3-pole black	112816	0.01
	3-pole plug, screw connector thread: M3 stripping length: 7 mm color: blue	Terminal block 3-pole blue	112818	0.01
Screw terminal with test tap				
	3-pole plug with test tap, screw connector thread: M3 stripping length: 7 mm colour: black	Terminal block 3-pole black Screwable co	113005	0.01
	3-pole plug with test tap, screw connector thread: M3 stripping length: 7 mm colour: blue	Terminal block 3-pole blue Screwable con	113004	0.01

Spare Parts

Figure	Description	Product Type	Art. No.	Weight lb
Spring clamp terminal				
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm color: green	terminal block 3-pole green spring force	112825	0.01
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm color: black	terminal block 3-pole black spring force	112824	0.01
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm color: blue	terminal block 3-pole blue spring force	112826	0.01

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, Fieldbus Power Supply Series 9412 with spring clamp terminal