



- Comprehensive portfolio to cater for all characteristics
- Two-channel variants reduce the amount of space required
- Can be used up to SIL 3 (IEC/EN 61508)

A3

WebCode 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.

	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		•		•		•

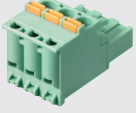


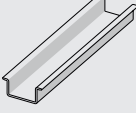
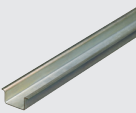

Selection Table						
Number of channels	1					
Out. for open-circuit volt. U _a	Max. output current I _{a max}	Internal Resistance R _i	Product Type	Art. No.	PS	Weight kg
25 V	35 mA	250 Ω	9176/10-16-00s	222182	21	0.170
Number of channels	2					
Out. for open-circuit volt. U _a	Max. output current I _{a max}	Internal Resistance R _i	Product Type	Art. No.	PS	Weight kg
17.5 V	45 mA / 90 mA*	130 ohms / 65 ohms*	9176/20-14-00s	222176	21	0.185
25 V	29 mA / 58 mA*	320 ohms / 160 ohms*	9176/20-15-00s	222180	21	0.185
	35 mA / 70 mA*	250 ohms / 125 ohms*	9176/20-16-00s	222184	21	0.185
	43 mA / 86 mA*	460 ohms / 230 ohms*	9176/20-17-00s	222188	21	0.185

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

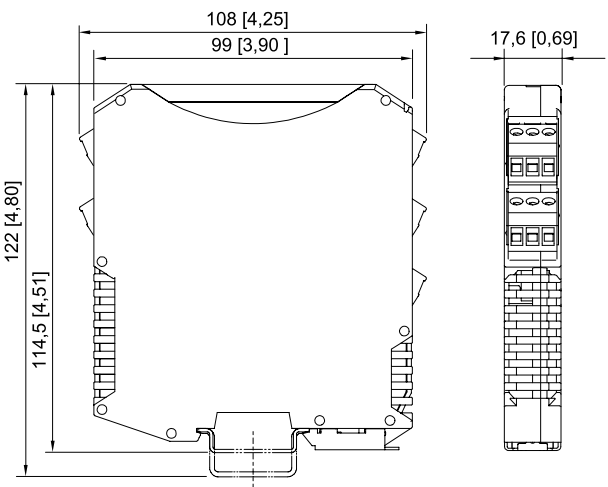
Technical Data				
Variant	9176/20-14-00s	9176/20-15-00s Digital output I.p.	9176/20-16-00s Digital output I.p.	9176/20-17-00s
Explosion Protection				
Gas explosion protection IECEx	Ex nA [ja Ga] IIC T4 Gc	Ex nA [ja Ga] IIC T4 Gc	Ex nA [ja Ga] IIC T4 Gc	Ex nA [ja Ga] IIC T4 Gc
Gas explosion protection ATEX	⊕ II 3 (1) G Ex nA [ja Ga] IIC T4 Gc	⊕ II 3 (1) G Ex nA [ja Ga] IIC T4 Gc	⊕ II 3 (1) G Ex nA [ja Ga] IIC T4 Gc	⊕ II 3 (1) G Ex nA [ja Ga] IIC T4 Gc
Gas explosion protection EAC	2 Ex nA [ja Ga] IIC T4 Gc X	2 Ex nA [ja Ga] IIC T4 Gc X	2 Ex nA [ja Ga] IIC T4 Gc X	2 Ex nA [ja Ga] IIC T4 Gc X

Technical Data				
Variant	9176/20-14-00s	9176/20-15-00s Digital output I.p.	9176/20-16-00s Digital output I.p.	9176/20-17-00s
Explosion Protection				
Dust explosion protection IECEx	[Ex ia Da] IIIC	[Ex ia Da] IIIC	[Ex ia Da] IIIC	[Ex ia Da] IIIC
Dust explosion protection ATEX	Ⓔ II (1) D [Ex ia Da] IIIC	Ⓔ II (1) D [Ex ia Da] IIIC	Ⓔ II (1) D [Ex ia Da] IIIC	Ⓔ II (1) D [Ex ia Da] IIIC
Dust explosion protection EAC	[Ex ia Da] IIIC	[Ex ia Da] IIIC	[Ex ia Da] IIIC	[Ex ia Da] IIIC
Certificates	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (STV), IECEx (BVS), India (PESO), Korea (KTL), SIL (exida), USA (FM)	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (STV), IECEx (BVS), India (PESO), Korea (KTL), SIL (exida), USA (FM)	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (STV), IECEx (BVS), India (PESO), Korea (KTL), SIL (exida), USA (FM)	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (STV), IECEx (BVS), India (PESO), Korea (KTL), SIL (exida), USA (FM)
Ship approval	CCS, DNVGL	CCS, DNVGL	CCS, DNVGL	CCS, DNVGL
Safety Data				
Max. voltage U_o	19.6 V	27.6 V	27.6 V	27.6 V
Max. current I_o (Ex ia)	150 mA	86.5 mA	110 mA	60 mA
Max. current I_o (Ex ib)	60 mA	44 mA	50 mA	
Max. power P_o	732 mW	596 mW	760 mW	415 mW
Safety-related maximum voltage	253 V	253 V	253 V	253 V
Functional Safety				
SIL	3	3	3	3
Auxiliary Power				
Auxiliary power	Without	Without	Without	Without
Input				
Input voltage for ON	18 – 31.2 V	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	0 – 5 V
Output				
Notes	Output characteristics, see data sheet on the Internet r-stahl.com			
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)	-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	-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	NS35/15, NS35/7.5 DIN rail

Accessories and 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	

Accessories and Spare Parts			
Figure	Description	Art. No.	Weight kg
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
DIN rail			
	NS 35 / 15 (available by the metre)	103714 ▲	1.410
DIN rail			
	NS 35 / 7.5 (available by the metre)	103707	0.349
Front cover			
	yellow, transparent. Clear marking of the device for SIL applications. (Packaging unit: 10 pieces)	200914	0.020

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