



- 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)
- For interface solenoid valves and LEDs

07 b

## MY R. STAHL 9175A



9175 series binary outputs issue binary signals via one or two channels for the intrinsically safe operation of Ex i solenoid valves, indicator lamps or horns. The devices feature three-way galvanic separation. A wire-breakage and short-circuit monitoring system, which can be disconnected, directly monitors the state of the field circuit.

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

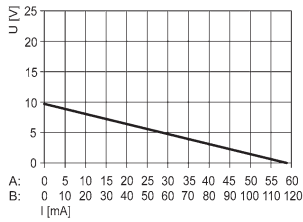
Selection Table						
Number of channels		1				
Nominal current		80 mA				
Output open-circuit voltage $U_o$	Max. output current $I_{s,max}$	Internal Resistance $R_i$	Connection type	Product Type	Art. No.	Weight
25 V	35 mA	250 $\Omega$	Screw terminal	9175/10-16-11s	160416	175 g
	35 mA	250 $\Omega$	Spring clamp terminal	9175/10-16-11k	160417	180 g
Number of channels		2				
Nominal current		140 mA				
Output open-circuit voltage $U_o$	Max. output current $I_{s,max}$	Internal Resistance $R_i$	Connection type	Product Type	Art. No.	Weight
10 V	60 mA / Parallel channels: 120 mA*	150 $\Omega$ /parallel: 75 $\Omega$ *	Screw terminal	9175/20-12-11s	160404 ▲	190 g
	90 mA*		Screw terminal	9175/20-14-11s	160413 ▲	190 g
17.5 V	45 mA / Parallel channels: 90 mA*	130 $\Omega$ /parallel: 65 $\Omega$ *	Screw terminal	9175/20-14-11s	160413 ▲	190 g
	45 mA / Parallel channels: 90 mA*		Spring clamp terminal	9175/20-14-11k	160414	111 g
25 V	35 mA / Parallel channels: 70 mA*	250 $\Omega$ /parallel: 125 $\Omega$ *	Screw terminal	9175/20-16-11s	160419 ▲	190 g
	35 mA / Parallel channels: 70 mA*		Spring clamp terminal	9175/20-16-11k	160420	111 g

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

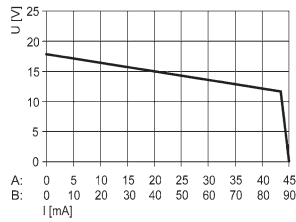
Technical Data			
Variant	Type 9175/20-12-11.	Type 9175/20-14-11.	Type 9175/0-16-11.
<b>Explosion Protection</b>			
FMus certificate	FM16US0122X	FM16US0122X	FM16US0122X
cFM certificate	FM16CA0067X	FM16CA0067X	FM16CA0067X
cULus certificate	E81680V1S7	E81680V1S7	E81680V1S7
Marking cFMus	Class I, Div. 2, 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 ia]/[Ex ia] IIC T4 Mounting vert. at Ta = 70°C , or horizontal Ta = 60°C See Doc. 91 756 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 ia]/[Ex ia] IIC T4 Mounting vert. at Ta = 70°C , or horizontal Ta = 60°C See Doc. 91 756 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 ia]/[Ex ia] IIC T4 Mounting vert. at Ta = 70°C , or horizontal Ta = 60°C See Doc. 91 756 01 31 1
Marking cULus	prov. intr. safe circ. f.u.in Class I,II,III, Groups A,B,C,D,E,F,G; See Doc. 91 756 01 31 3	prov. intr. safe circ. f.u.in Class I,II,III, Groups A,B,C,D,E,F,G; See Doc. 91 756 01 31 3	prov. intr. safe circ. f.u.in Class I,II,III, Groups A,B,C,D,E,F,G; See Doc. 91 756 01 31 3
IECEX gas explosion protection	Ex nA nC [ia Ga] IIC T4 Gc	Ex nA nC [ia Ga] IIC T4 Gc	Ex nA nC [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), USA (UL)	ATEX (BVS), Brazil (ULB), Canada (FM), China (NEPSI), IECEX (BVS), Korea (KTL), SIL (exida), USA (FM), USA (UL)	ATEX (BVS), Brazil (ULB), Canada (FM), China (NEPSI), IECEX (BVS), Korea (KTL), SIL (exida), USA (FM), USA (UL)
Ship approval	CCS, EU RO MR (DNV)	CCS, EU RO MR (DNV)	CCS, EU RO MR (DNV)
<b>Safety Data</b>			
Max. voltage $U_{j/V_{oc}}$	11.3 V	19.6 V	27.6 V
Max. current $I_0$ (Ex ia)	75 mA	150 mA	110 mA
Max. current $I_0$ (Ex ib)		60 mA	50 mA
Max. power $P_0$	210 mW	732 mW	760 mW
Safety-related max. voltage	253 V	253 V	253 V
<b>Functional Safety</b>			
SIL	3	3	3
<b>Auxiliary Power</b>			
Auxiliary power	24 V DC	24 V DC	24 V DC
<b>Input</b>			
Input voltage for ON	15 – 31.2 V	15 – 31.2 V	15 – 31.2 V
Input voltage for OFF	0 – 5 V	0 – 5 V	0 – 5 V
<b>Output</b>			
Output open-circuit voltage $U_o$	10 V	17.5 V	25 V
Max. output current $I_{o_{max}}$	60 mA / Parallel channels: 120 mA*	45 mA / Parallel channels: 90 mA*	35 mA / Parallel channels: 70 mA*
Internal Resistance $R_i$	150 $\Omega$ /parallel: 75 $\Omega$ *	130 $\Omega$ /parallel: 65 $\Omega$ *	250 $\Omega$ /parallel: 125 $\Omega$ *
Output residual ripple	< 50 mV	< 50 mV	< 50 mV
Output switching frequency	$\leq$ 200 Hz	$\leq$ 200 Hz	$\leq$ 200 Hz
Switching delay ON/OFF	$\leq$ 1 ms	$\leq$ 1 ms	$\leq$ 1 ms
Line fault and loss of power signalization	Contact (30 V / 100 mA) closed to ground in case of fault pac-Bus, floating contact (30 V / 100 mA)	Contact (30 V / 100 mA) closed to ground in case of fault pac-Bus, floating contact (30 V / 100 mA)	Contact (30 V / 100 mA) closed to ground in case of fault pac-Bus, floating contact (30 V / 100 mA)
Notes	* Parallel connection of the outputs possible; thus, doubling the output current. Output characteristics, see technical drawings		
<b>Ambient Conditions</b>			
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
<b>Mounting / Installation</b>			
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

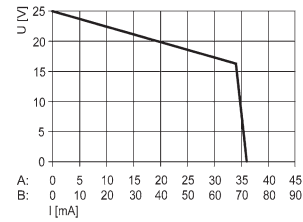
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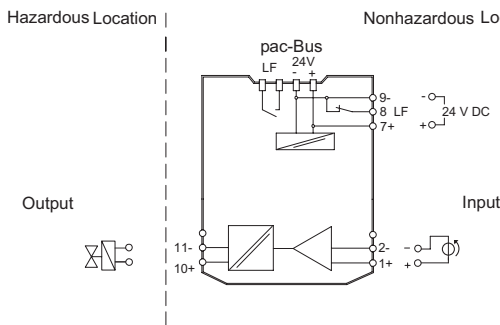
9175/0-12-11, 9176/0-12-00 output characteristic



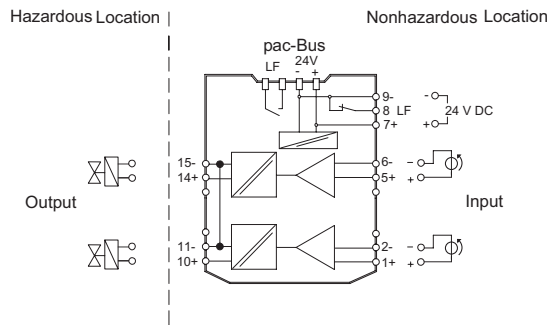
Output characteristic 9175/0-14-11, 9176/0-14-00



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



Connection diagram 9175/10-1x-11



Connection Diagram 9175/20-1x-11

Accessories

Figure	Description	Product Type	Art. No.	Weight
<b>Transparent cover</b>				
	For 91xx ISpac modules Yellow, transparent Clear identification of the device for SIL applications. (Packaging unit: 10 pieces)	-	200914	20 g
<b>Terminal set for pac-Bus</b>				
	For the supply of 24 V DC auxiliary power via terminals (alternative to using the supply module 9193/ 9194/50-01 21-11-11), with jumper for error message chain for ISpac module 91xx		160730 ▲	8 g

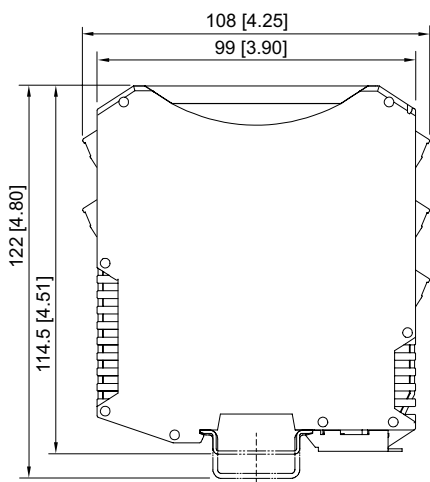
Spare Parts

Figure	Description	Art. No.	Weight
<b>Screw terminal</b>			
	3-pole plug, screw connector thread: M3 stripping length: 7 mm color: green	112817	5 g
	3-pole plug, screw connector thread: M3 stripping length: 7 mm color: black	112816	4 g
	3-pole plug, screw connector thread: M3 stripping length: 7 mm color: blue	112818	5 g

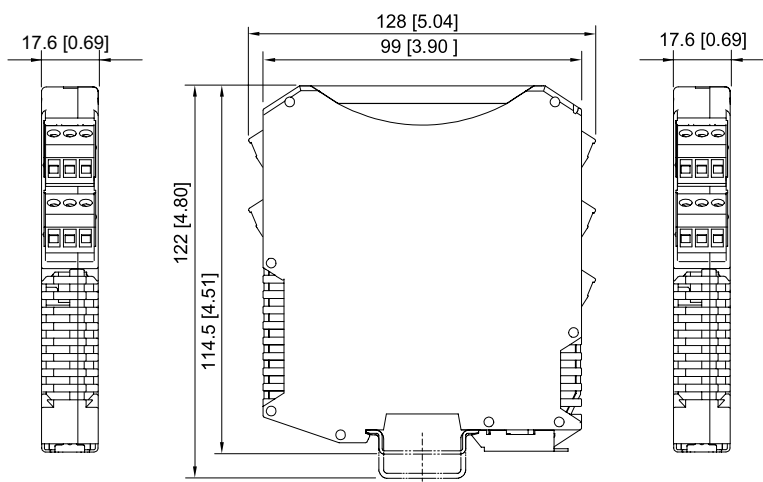
## Spare Parts

Figure	Description	Art. No.	Weight
<b>Screw terminal with test tap</b>			
	3-pole plug with test tap, screw connector thread: M3 stripping length: 7 mm colour: black	113005	1 g
	3-pole plug with test tap, screw connector thread: M3 stripping length: 7 mm colour: blue	113004	1 g
<b>Spring clamp terminal</b>			
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm color: green	112825	5 g
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm color: black	112824	5 g
	3-pole plug with test tap, spring clamp connection stripping length: 10 mm color: 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, Fieldbus Power Supply Series 9412 with spring clamp terminal