STAHL Intrinsically Safe Isolators Configuration Set



ISpac Wizard Software and Configuration Set

The 9199-20-02 configuration set allows serial communication between a PC and an isolator via the included USB-to-Serial Converter.

This set-up allows for quick programming. The software is provided on an included USB drive or as a free download. The software allows the user to save configuration files easily so that the same configuration can be duplicated on multiple cards. Windows operating system is required



- 9182 series Temperature Converter Isolator (for thermocouple applications)
- 9146 series Frequency Transmitter Isolator



Configuration Set Selection Guide		
Part Number	Price	Description
9199-20-02	\$324.00	STAHL configuration set, for use with STAHL 9146 and 9182 isolators.

STAHL Intrinsically Safe Isolators Temperature Converter

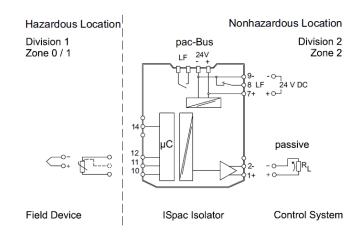


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STAHL Intrinsically Safe Isolators			
Temp	erature Converte	r Specifications	
		Thermal Input	
		9182-10-51-11S	
Isolator Type		Temperature transmitter	
	Installation Location (per NEC 500)	Class I, Division 2	
Explosion Protection	Ex Interface (for intrinsically safe interface) (per NEC 500)	Class I, II, III Division 1 or 2	
	Agency Approvals	ATEX (BVS), Brazil (ULB), Canada (FM), EAC (ENDCE), IECEx (BVS), India (PESO), Korea (KTL), Russia (Meteorological certificate), USA (FM), USA (UL)	
	Max Voltage (U ₀)	6.5 V	
Safety Data	Max Current (I _O)	19.7 mA	
	Max Power (P ₀)	32mW	
Functional Safety	Safety Integrity Level (SIL)	-	
	Number of Channels	1 in / 1 out	
	Line Fault Detection Relay	Yes	
	Auxiliary Power Range	18 to 31.2 VDC	
	Nominal Current	70mA	
	Power Consumption	1.9 W	
	Max Power Dissipation	1.9 W	
	Operation Indication	Green LED "PWR" Red LED "LF"	
	Input Function	2 wire circuits, 3 wire circuits, or 4 wire circuits	
Electrical Data	Thermocouple Input Type	B, E, J, K, N, R, T (Part <u>9191-VS-05</u> is required)	
	Resistance Temperature Detector (RTD) Input Type	PT 100	
	HART Compatible	No	
	Supply Voltage for Transmitter	Sensor current potentiometer < 0.25 mA	
	Output	0 to 20 mA or 4 to 20 mA (active)	
	Output Load Resistance Max (R _L)	750Ω	
Ambient	Operating Temperature (Group Assembly)	-20°C to 60°C [-4°F to 140°F]	
Ambient Conditions	Operating Temperature (Single Device Installation)	-20°C to 70°C [-4°F to 158°F]	
	Storage Temperature	-40°C to 80°C [-40°F to 176°F]	
	Degree of Protection	IP20	
	Width	17.6 mm [0.69 in] (standard)	
Mechanical Data	Mounting Type	DIN rail	
mechanicai Dala	Wire Gauge Range	16 - 12 AWG	
	Mounting Position	Vertical or horizontal	
	Weight	0.28 lb [126 g]	



Connection Diagram

9182-10-51-11S



STAHL Temperature Converter Isolators Accessories Selection Guide			
Part Number	Price	Description	Weight
9191-VS-05	\$120.00	External reference junction (cold junction compensation [CJC]) is required for thermocouple applications	0.19 oz [5 g]



External reference junction (CJC) is required for thermocouple applications with 9182-10-51-11S

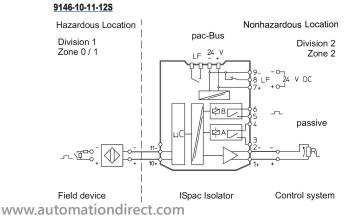
STAHL Intrinsically Safe Isolators Frequency Converter

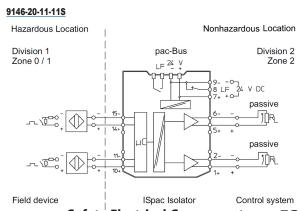


	STAHL Intrinsically Safe	Isolators Frequency Converter	Specifications*	
		9146-10-11-12S	<u>9146-20-11-118</u>	
Isolator Type		Frequency converter (1 channel)	Frequency converter (2 channel)	
	Installation Location (per NEC 500)	Class I, Division 2	Class I, Division 2	
Explosion Protection	Ex Interface (for intrinsically safe interface) (per NEC 500)	Class I, II, III Division 1 or 2	Class I, II, III Division 1 or 2	
	Agency Approvals	ATEX (BVS), Canada (FM), EAC (ENDCE), IECEx (BVS), India (PESO), USA (FM)	ATEX (BVS), Canada (FM), EAC (ENDCE), IECEx (BVS), India (PESO), USA (FM)	
	Max Voltage (U _o)	10.5 V	10.5 V	
Safety Data	Max Current (I _o)	23.4 mA	23.4 mA	
	Max Power (P _O)	61.4 mW	61.4 mW	
Functional Safety	Safety Integrity Level (SIL)	_	_	
	Number of Channels	1 in / 1 out with two configurable dry contacts	2 in / 2 out	
	Line Fault Detection Relay	Yes	Yes	
	Auxiliary Power Range	18 to 31.2 VDC	18 to 31.2 VDC	
	Nominal Current	55mA	75mA	
	Power Consumption	1.32 W	1.8 W	
	Max Power Dissipation	1.1 W	1.5 W	
	Operation Indication	Green LED "PWR" Red LED "LF" Yellow LED "STAT"	Green LED "PWR" (2) Red LED "LF" (2) Yellow LED "STAT"	
Electrical Data	Input Function	Galvanic isolated frequency converter	Galvanic isolated frequency converter	
	Input Type	NAMUR sensor or voltage pulses (not to be used with magnetic pickup sensors)	NAMUR sensor or voltage pulses (not to be used with magnetic pickup sensors	
	Frequency Range	0.001 Hz to 20kHz	0.001 Hz to 20kHz	
	HART Compatible	No	No	
	Output (Channel A)	0-20 mA or 4-20 mA (active) with two configurable dry contacts	0-20 mA or 4-20 mA (active)	
	Output Load Resistance Max (R _I)	600Ω	600Ω	
	Output (Channel B)	-	0-20 mA or 4-20 mA (active)	
	Operating Temperature (Group Assembly)	-40°C to 60°C [-40°F to 140°F]	-40°C to 60°C [-40°F to 140°F]	
Ambient Conditions	Operating Temperature (Single Device Installation)	-40°C to 70°C [-40°F to 158°F]	-40°C to 70°C [-40°F to 158°F]	
	Storage Temperature	-40°C to 80°C [-40°F to 176°F]	-40°C to 80°C [-40°F to 176°F]	
	Degree of Protection	IP20	IP20	
	Width	17.6 mm [0.69 in] (standard)	17.6 mm [0.69 in] (standard)	
ManhaniadDef	Mounting Type	DIN rail	DIN rail	
Mechanical Data	Wire Gauge Range	24 - 14 AWG	24 - 14 AWG	
	Mounting Position	Vertical or horizontal	Vertical or horizontal	
	Weight	0.28 lb [125g]	0.3 lb [135g]	

^{*} The 9146 series frequency converter requires configuration using the 9199-20-02 cable and software.

Connection Diagrams



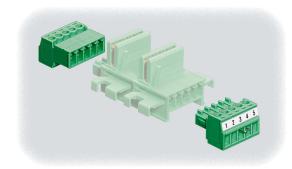


Safety Electrical Components

tESC-450

STAHL Intrinsically Safe Isolators Accessories – pac-Bus System





Benefits of Using the pac-Bus System

- · Quick, easy wiring
- Can be installed on standard DIN rail without tools by simply snapping into place
- Can be expanded at any time with additional pac-Bus units
- Suitable for industrial environments subject to vibration
- Optional power supply module 9193 enables refused redundant 24VDC supply and fault signalization

STAHL Intrinsically Safe Isolators Accessories (pac-Bus System) Selection Guide				
Part Number	Price	Description	Weight	Drawing
9194-50-01	\$23.50	End terminal set for pac-Bus system	0.29 oz [8 g]	<u>PDF</u>
9294-31-12	\$30.50	pac-Bus terminal for 92xx (12.5 mm [0.49 in] width) isolators	0.16 oz [5 g]	<u>PDF</u>
9194-31-17	\$23.50	pac-Bus terminal for 91xx (17.6 mm [0.69 in] width) isolators	0.16 oz [5 g]	<u>PDF</u>
9193/21-11-11S	\$269.00	pac-Bus supply module	0.4 lb [180g]	<u>PDF</u>
<u>111412</u>	\$40.00	Qty 10 spare fuses for use with pac-Bus supply module	0.07 lb [2g]	<u>PDF</u>





9294-31-12



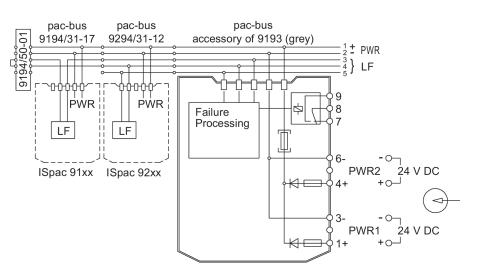
9194-31-17





9193/21-11-11S

Connection Diagram





Refer to installation instructions for details

STAHL Intrinsically Safe Isolators Accessories – pac-Bus System



STAHL pac-Bus Supply Module Specifications			
		<u>9193/21-11-118</u>	
Explosion Protection	Installation Location (per NEC 500)	Class I, Division 2	
	Ex Interface (for intrinsically safe interface) (per NEC 500)	Class I, II, III Division 1 or 2	
	Agency Approvals	ATEX (BVS), Canada (FM), China (NEPSI), IECEx (BVS), India (PESO), USA (FM)	
	Power Supply	24VDC 4A, primary and redundant	
Electrical Data	AuxiliaryPower Voltage Range	18.0 to 31.2 VDC	
	Max Power Dissipation	2.5 W	
Ambient Conditions	Operating Temperature	-40°C to 55°C [-40°F to 131°F]	
	Storage Temperature	-40°C to 80°C [-40°F to 176°F]	
Mechanical Data	Degree of Protection	IP20	
	Mounting Type	DIN rail	
	Wire Gauge Range	16AWG for terminals 12AWG for ground connections	

Safety Products



Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors' products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.

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