RSTAHL Isolator Selection Guide

	TYPE OF SIGNALS	SINGLE CHANNEL	DUAL CHANNEL	SIL RATING	DESCRIPTION
ANALOG INPUT	Interfacing to 2-wire HART 4..20mA transmitter, 3-4 and 4- wire standard 4/20mA transmitter and mA source (3-39)	9160/13-11-11s	9160/23-11-11s	SIL2 (special part number for SIL3)	**Sourcing** to PLC. PLC needs NOT to provide power to isolator. DC power.
		9160/13-10-10s	9160/23-10-10s		**Sinking** to PLC. PLC needs to provide power to isolator. DC power. **FM**
		9160/19-11-11s	-		Single input, dual output. Sourcing to PLC. DC power
FREQUENCY CONVERTER	Interfacing with NAMUR type sensors and giving 4..20mA signal (3-34)	9146/10-11-12s	9146/20-11-11s	no SIL	Frequency of 0.001..20kHz. Configuration via Software. Cable accessory required.
DIGITAL INPUT	Interfacing with dry contacts, NAMUR type proximity sensors (p 3 - 60)	9170/10-11-11s	9170/20-11-11s	SIL2	2 relay contacts to PLC for up to 125V, 1 Amp. Switching frequency < 10Hz.
		9170/11-14-11s	9170/21-14-11s	SIL2	1 Electric output (passive transistor) per channel for up to 35V, 50mA. Switching Frequency < 15 KHz. DC powered. **FM**
ANALOG OUTPUT	Interfacing to control valves, I/P converters, loop powered indicators and HART control valves. (P 3-54).	9165/16-11-11s	9165/26-11-11s	SIL2	DC powered.
		9167/13-11-00s	9167/23-11-00s	SIL3	Loop Powered Isolator for 24V
DIGITAL OUTPIT	Interfacing to Solenoid valves and LEDs (p 3-72)	9175/10-14-11s	9175/20-14-11s	SIL3	45mA @ 12V. Requires 24V
		9176/10-14-00s	9176/20-14-00s	SIL3	45mA @ 12V. Loop powered.
ACCES. TEMP.	Interfacing to RTDs and Potentiometers (p -3-80).	9180/10-77-11s	9180/20-77-11s	no SIL	Resistance repeater. For 18Ω - 391Ω. 180Ω to 3910Ω also available upon request. **FM**
	Interfacing to thermocouples, RTDs and Potentiometer and converting to 4..20mA signal(p -3-84)	9182/10-51-11s	9182/20-51-11s	no SIL	Universal temp. convertor. Conf. via dip switches or using PC. Accessories might be required.
ACCESSORIES	Bus Pac	9194/31-17			Required one per isolator.
	End Caps	9194/50-01			Required one set per rail.
	Power Supply for Bus Pac	9193/20-11-11s			Power supply to power the pac bus system. 24V, 4 amps. Redundant power feed.
	Configuration Cable for 9146, 9162, 9182	160907 (or packaged 9199/20-02 Includes a CD)			Cable to configure isolators.It has an RS232 interphase for PC connection
	Cold Junction Compensation terminals	9191/VS-05			Needed when using thermocouples for 9182
	Dummy Module	9191/20-00-00			For connection of cables.

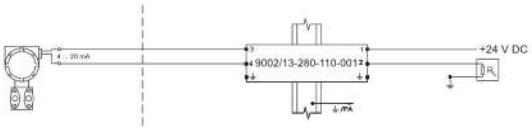
For intrinsically safe loops, all field devices must have an approval certificate from a national recognized test laboratory (FM, CSA, …) or being classified as simple apparatus. An entity parameter calculation shall be carry out to ensure safety interconnection. Installation must be in accordance with control drawings.

Barrier Selection Guide

ANALOG INPUT

9002/13-280-110-001

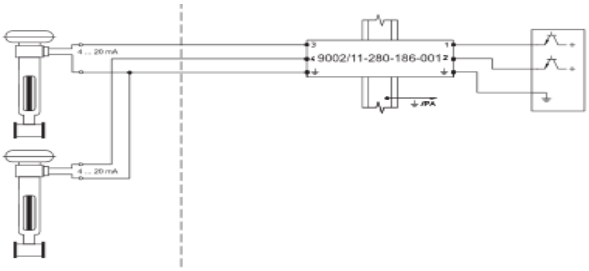
9002/13-280-093-001



ANALOG OUTPUT

9001/01-280-110-101

9002/11-280-186-001

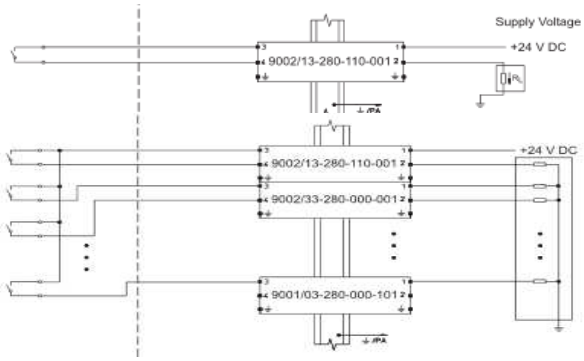


DIGITAL INPUT

9002/13-280-110-001

9002/33-280-000-001

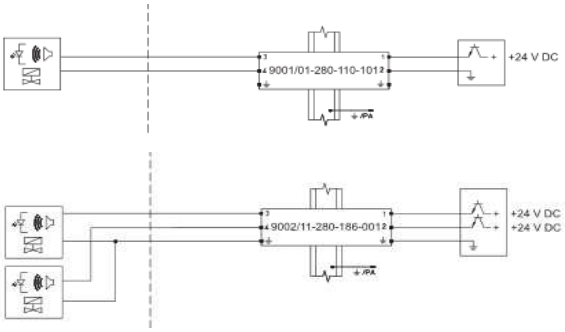
9001/03-280-000-101



DIGITAL OUTPUT

9001/01-280-110-101

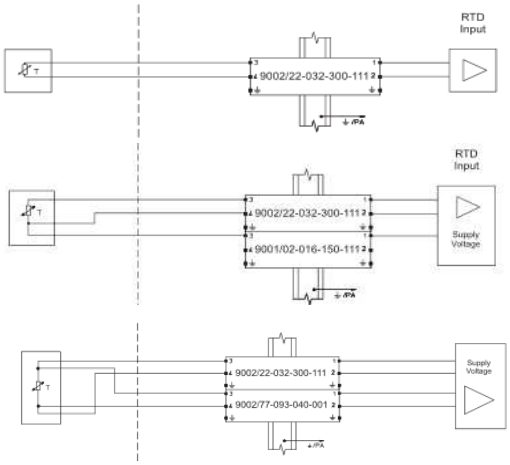
9002/11-280-186-001



RTDs

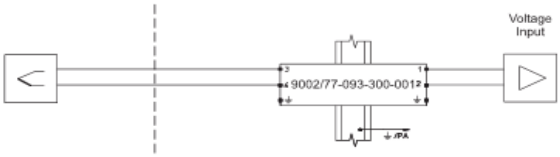
9002/22-032-300-111

9001/02-016-150-111



Thermocouples

9002/77-093-300-001



ACCESORIES

Fuses pack of 5	158964
Fuse holder w/ 5 fuses	S-SFH-001
Insulating standoff	S-SS0-002
Din rail Assemblies w/ stand off	S-NS35-x-RA