

[Ex ia Ga] IIC

9000Ex-1 9000Ex-2 Signal Isolator

Intrinsically Safe Transmitter Power Supply/
Isolated Barrier



Stable



PESCO Certified



Accurate



HART Protocol
Supported



Masibus 9000Ex-1/9000Ex-2 Repeater power supply/ Signal Isolator is compact and rugged for Isolation of field signals from Hazardous area. It provides a fully floating dc supply for energising a conventional 2-wire/3-Wire 4-20mA transmitter or smart transmitter, which is located in Hazardous area. It repeats the current in another floating circuit to drive a safe-area load.

9000Ex-1/9000Ex-2 is a DIN-Rail mount Repeater power supply/ signal isolator with width of 17.6mm. 9000Ex-1 is a one channel and 9000Ex-2 is a two channel Repeater power supply/ Signal Isolator.

9000Ex-1/9000Ex-2 is highly accurate, have low Temperature drift and fast response time. It allows bidirectional signal communication between the hazardous and safe area by the connection of HART communicator. Polarised plugs and sockets are provided for hazardous area terminals.

The transmitter or other field device must be suitable for the process and have been assessed and verified for use in safety applications.

Features

- Intrinsically safe Associated Device
- Compact DIN-Rail mount design of 17.6mm width
- 2W transmitter input with HART Pass
- High KV 3 port isolation of each channel
- High Accuracy, low drift, low temperature effect
- Input and Output well protected
- Fast response suits all applications
- Low power dissipation

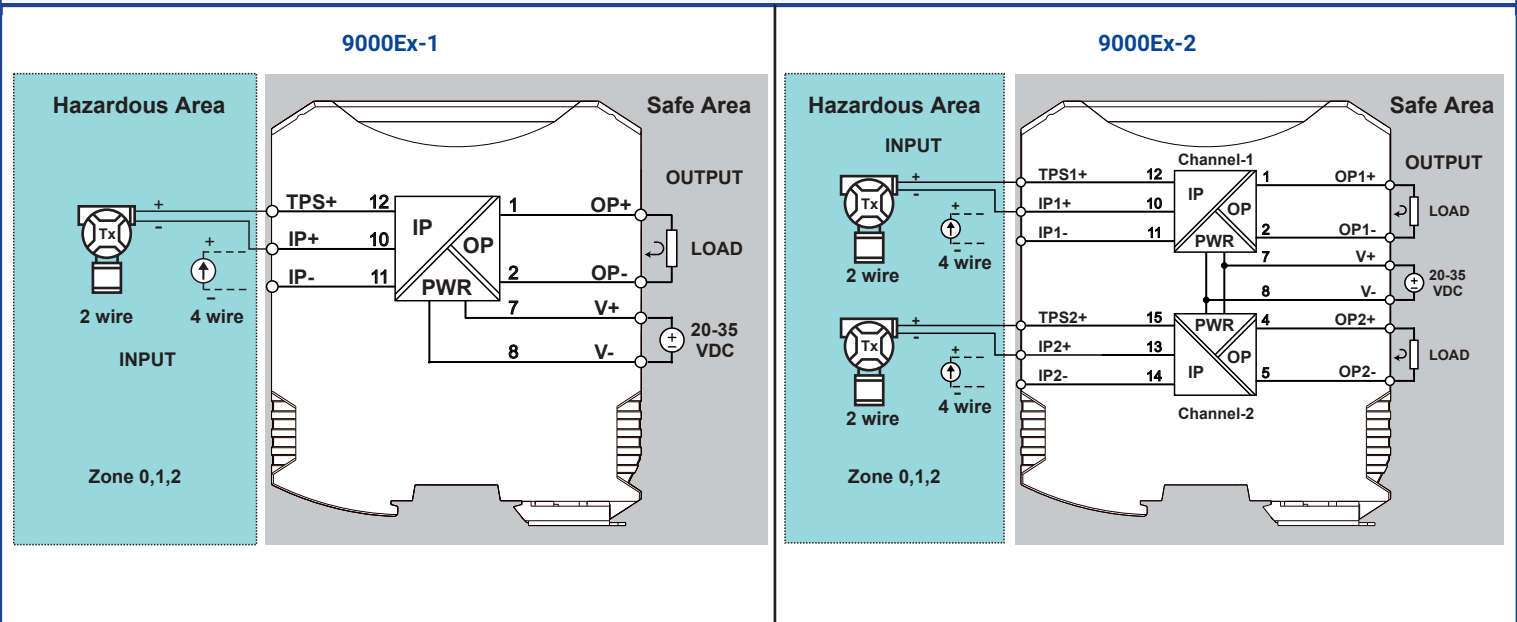
Applications

- Energising 2-Wire Transmitter located in Hazardous Area
- Safety barrier for analog current signals
- Isolation of process field signals
- Distribution of signals in Automation Panels
- Impedance matching of transmitters and receiver instruments

TECHNICAL SPECIFICATIONS

Hazardous-area Input		Physical	
Input type	Current	Mounting Type	DIN Rail (35 mm)
Input Range	4 to 20mA	Terminal Block	UL, CSA standard
Input Impedance	≤ 30Ω	Terminal Cable Size	2.5mm ²
Temperature Coefficient	≤ 50 ppm/°C	Enclosure Material	PA66
CMRR	≥ 100 dB	IP Rating	IP20
NMRR	≥ 70 dB	Dimension (in mm)	17.6(W)x99(H)x114(D) mm
No. of IO channels	9000Ex-1: One 9000Ex-2: Two	Weight	≤ 150 g
Location of Transmitter	Zone 0, IIC, T4–6 hazardous area if suitably certified Div. 1, Group A hazardous location	Environmental	
Transmitter Power Supply	Open circuit voltage: ≥24VDC Available voltage: ≥ 23VDC @ 4mA, ≥ 16VDC @ 20mA	Operating Temperature	-20 to 60 °C
Communications Supported	HART pass supported in both channels*	Storage Temperature	-20° to 70 °C
*HART Pass supported with 2W transmitter only		Relative Humidity	30 to 95% RH (Non-Condensing)
		Protection	Conformal Coating on PCB
Safe-area Output		Safety Description (Each Channel)	
Output Type	Current	Terminals TPS to IP+ / IP-	U _o =28V I _o =93mA P _o =651mW U _m = 253V rms or dc
Output Range	4 to 20mA	Terminals IP+ to IP-	Simple apparatus ≤1.5V, ≤0.1A and ≤25mW; can be connected without further certification into any IS loop with an open-circuit voltage <28V
Response Time	≤ 50μS	Certificate Report No.	KLPL/Ex/23-78X, Issue No.00
Accuracy	± 0.1% of FS	PESO Approval No.	A/P/HQ/GA/104/5522
Output Load Resistance	≤ 450Ω@20mA	Ex Standards Complied	IS/IEC 60079-0:2017 IS/IEC 60079-11:2011
Power Supply		For Details, Please refer Operational Manual	
Voltage	20 to 35 VDC	Dimensions	
Power Consumption (20mA Signal)	9000Ex-1: ≤1.3W @ 24VDC 9000Ex-2: ≤2.5W @ 24VDC		
Power Dissipation (20mA Signal)	9000Ex-1: ≤0.8W @ 24VDC 9000Ex-2: ≤1.5W @ 24VDC		
Power ON status LED	Red		
Isolation (Withstanding voltage)			
Between Power to Inputs and Outputs	Galvanic Isolation of 2KVAC for 1 minute		
Between Inputs to Outputs	Galvanic Isolation of 2KVAC for 1 minute		
Between Input to Input	Galvanic Isolation of 2KVAC for 1 minute		
Between Output to Output	Galvanic Isolation of 2KVAC for 1 minute		
Insulation resistance: >200MΩ@1000V DC between All Ports.			

Connection Diagram



Ordering Code

Model	No. of Channels
9000Ex-1	One
9000Ex-2	Two