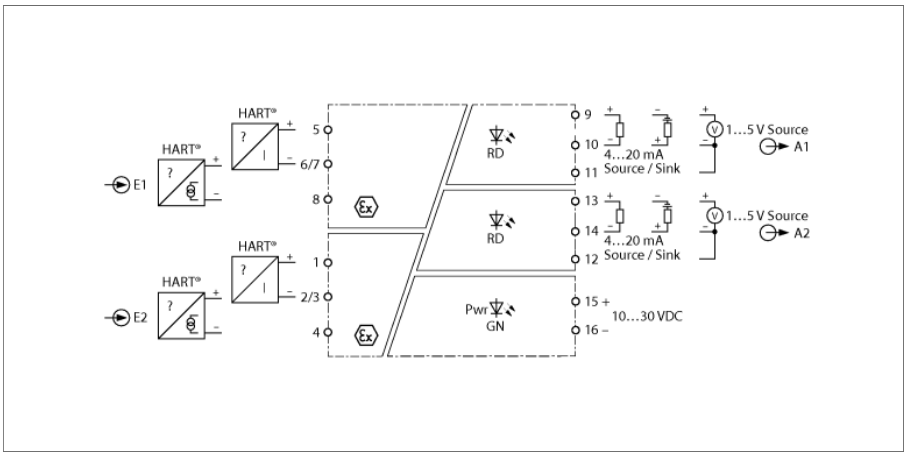
interface modul

Isolating transducer
2-channel
IMX12-AI01-2I-2IU-H0/24VDC/CC



The 2-channel IMX12-AI01-2I-2IU-H0/24VDC/CC HART® isolating transducer is designed to operate intrinsically safe HART® 2-wire transducers in the Ex area and to transmit the measured signals to the non-Ex area. In addition to the analog signal also digital HART® communication signals can be transmitted bidirectionally. Alternatively, active 2-wire HART® transmitters and passive 3-wire HART® transmitters can be operated.

The device is equipped with a 4 … 20 mA input and output circuit (either as source or sink) or 1…5 V (source). The input signals are transmitted in the range of 3.8…20.5 mA without interference 1:1 and made available at the outputs in the non-Ex area. Wire-break (< 3.5 mA) and short-circuit (> 22 mA) in the transducer circuit are output as current < 3.5 mA or voltage < 0.875 V.

A green LED indicates operational readiness. An error in the input circuit leads to a flashing red LED according to NE44.

The device can be used in safety circuits up to SIL2 (high and low demand according to IEC 61508) and meets the requirements of the NE21. It is equipped with removable cage clamp terminals.

- **ATEX, IECEx, NEPSI, INMETRO, Kosha, TR CU**
- **Installation in zone 2**
- **SIL 2**
- **Input circuits monitored for wire-break and short-circuit**
- **Complete galvanic isolation**
- **HART transparent**
- **Removable cage clamp terminals**

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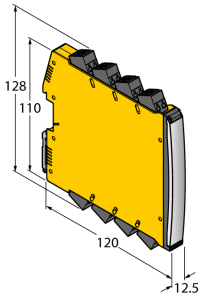
Isolating transducer
2-channel
IMX12-AI01-2I-2IU-H0/24VDC/CC

Dimensions



Type designation	IMX12-AI01-2I-2IU-H0/24VDC/CC
Ident no.	7580307
Nominal voltage	24 VDC
Operating voltage range	10…30 VDC
Power consumption	≤ 3.8 W
Transmitter connection	
Supply voltage	≥ 17 V / 20 mA
Input current	2 x 4…20 mA
Temperature drift supply voltage	≤ 0.03 %/K
Reference temperature	23 °C
Output circuits	
Output current	2 x Source/Sink (15…28V) 4…20 mA
Output voltage	2 x 1...5 V
Load resistance, current output	≤ 0.8 kΩ
Short-circuit	Output < 3.5 mA, if in the input circuit a current > 22 mA flows
Wire break	Output < 3.5 mA, if in the input circuit a current < 3.5 mA flows
Rise time (10…90 %)	≤ 5 ms
Fall time (90…10 %)	≤ 5 ms
Measuring accuracy	≤ 0.05 % of full scale
Reference temperature	23 °C
Temperature drift	≤ 0.002 % / K
Galvanic isolation	
Test voltage	2.5 kV
Input 1 to output 1	375 V peak value acc. to EN 60079-11
Input 2 to output 2	375 V peak value acc. to EN 60079-11
Input 1 to supply	375 V peak value acc. to EN 60079-11
Input 2 to supply	375 V peak value acc. to EN 60079-11
Output 1 to supply	50 V RMS acc. to EN 50178 and EN 61010-1
Output 2 to supply	50 V RMS acc. to EN 50178 and EN 61010-1
Output 1 to output 2	50 V RMS acc. to EN 50178 and EN 61010-1
Input 1 to input 2	60 V peak value acc. to EN 60079-11
Important note	For Ex-applications the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply.
Ex approval acc. to conformity certificate	TÜV 15 ATEX 158337 X
Application area	II (1) G, II (1) D
ignition protection category	[Ex ia Ga] IIC; [Ex ia Da] IIIC
Application area	II 3 (1) G
Ignition protection type	Ex nA [ia Ga] IIC T4 Gc
Important note	If the device is used in applications to achieve functional safety according to IEC 61508, the safety manual must be used. Information in the data sheet are not valid for functional safety.
Use in SIL safety circuits	SIL 2 acc. to IEC 61508
Indication	
Operational readiness	green
Error indication	red

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Isolating transducer
2-channel
IMX12-AI01-2I-2IU-H0/24VDC/CC

Protection class	IP20
Flammability class acc. to UL 94	V-0
Ambient temperature	-25…+70 °C
Storage temperature	-40…+80 °C
Relative humidity	≤ 95 %
Dimensions	120 x 12.5 x 128 mm
Weight	0 g
Mounting instructions	DIN rail (NS35)
Housing material	Polycarbonate/ABS
Electrical connection	Removable cage clamp terminals, 2-pin
Terminal cross-section	0.2…2.5 mm² (24 … 13 AWG)
Environmental conditions	

Operating altitude	Up to 2000 m above sea level
Pollution degree	II
Standards used	
Voltage resistance and insulation	
	EN 50178
	EN 61010-1
	EN 50155
	GL VI-7-2
Shock	
	EN 61373 class B
	EN 50155
	GL VI-7-2
	EN 60068-2-6
	EN 60068-2-27
Temperature	
	EN 60068-2-1 Ad
	EN 50155
	GL VI-7-2
	EN 60068-2-2 Bd
	EN 60068-2-1
Humidity	
	EN 60068-2-38
EMC	
	EN 50155
	GL VI-7-2
	NE21
	In the event of a conducted interference in the range of 150 kHz, the measuring error changes to ±700 µA
	EN 61326-1
	EN 61326-3-1
	EN 61000-4-2
	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
	EN 61000-4-6
	EN 61000-4-11
	EN 61000-4-29
	EN 55011
	EN 55016
	EN 50121-3-2
	EN 61000-6-2

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