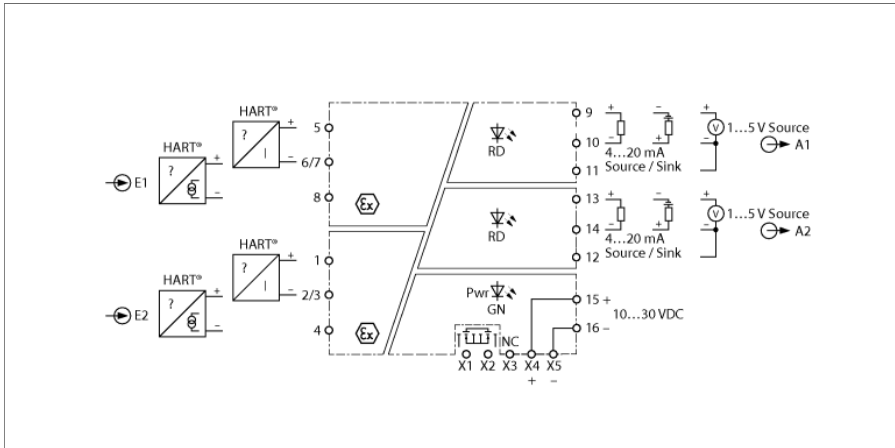


**Isolating transducer  
2-channel  
IMX12-AI01-2I-2IU- HPR/24VDC**



The 2-channel IMX12-AI01-2I-2IU- HPR/24VDC 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. Furthermore, active and passive 2-wire HART® transmitters can be operated. The device can be powered from a power bridge that also transmits a collective fault signal.

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.

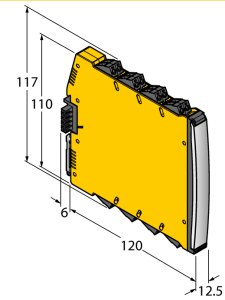
The device can be used in safety circuits up to SIL2 (high and low demand according to IEC 61508) and meets the requirements of the NE21. It is equipped with removable screw terminals.

- Input circuits monitored for wire-break and short-circuit
- Complete galvanic isolation
- HART transparent
- Removable screw terminals
- Power bridge (connector incl. in delivery)
- ATEX, IECEx, cFM, cUL, NEPSI, INMETRO, Kosha, TR CU EAC CMI, TIIS, Russia Pattern Approval
- Installation in zone 2
- SIL 2

**Isolating transducer**  
**2-channel**  
**IMX12-AI01-2I-2IU- HPR/24VDC**

<b>Type designation</b>	IMX12-AI01-2I-2IU- HPR/24VDC
Ident-No.	7580304
<b>Nominal voltage</b>	24 VDC
Operating voltage range	10...30 VDC
Power consumption	≤ 3.8 W
Power dissipation, typ.	≤ 1.9 W
<b>Transmitter connection</b>	
Supply voltage	≥ 17 V / 20 mA
Input current	2 x 4...20 mA
Temperature drift supply voltage	≤ 0.03 %/K
Reference temperature	23 °C
<b>Output circuits</b>	
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
Power-Bridge common alarm output	MOSFET, U <sub>max</sub> = 30 V, I <sub>max</sub> = 100 mA
<b>Rise time (10...90 %)</b>	≤ 5 ms
Fall time (90...10 %)	≤ 5 ms
Measuring accuracy (including linearity, hysteresis and repeatability)	≤ 0.05 % of full scale
Reference temperature	23 °C
Temperature drift	≤ 0.002 % of full scale/K
<b>Galvanic isolation</b>	
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
<b>Important note</b>	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 ec [ia Ga] IIC T4 Gc
<b>Important note</b>	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
<b>Indication</b>	
Operational readiness	green
Error indication	red

**Dimensions**

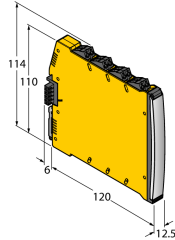
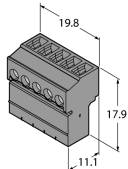
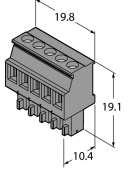
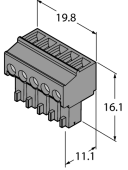
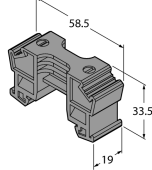


**Isolating transducer**  
**2-channel**  
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<b>Protection class</b>	IP20																																																																																
Flammability class acc. to UL 94	V-0																																																																																
Ambient temperature	-25...+70 °C																																																																																
Storage temperature	-40...+80 °C																																																																																
Relative humidity	≤ 95 %																																																																																
Dimensions	120 x 12.5 x 117 mm																																																																																
Weight	188 g																																																																																
Mounting instructions	DIN rail (NS35)																																																																																
Housing material	Polycarbonate/ABS																																																																																
Electrical connection	Removable screw clamp terminals, 2-pin																																																																																
Connection variant	Power bridge with collective fault signal																																																																																
Terminal cross-section	0.2...2.5 mm <sup>2</sup> (24 ... 13 AWG)																																																																																
Tightening torque	0.5 Nm																																																																																
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**Accessories**

Type code	Ident-No.	Description	Dimension drawing
IMX12-PS02-UI-UIR-PR /24VDC	7580610	Power supply module power bridge; Collective fault signal via relay; Single and redundant power supply via terminals; Removable screw terminals	
IMC 1.5/ 5-ST-3.81 BK	7580954	Power Bridge Connection Terminal	
MCVR 1.5/ 5-ST-3.81 BK	7580955	Power Bridge Connection Terminal	
MC 1.5/ 5-ST-3.81 BK	7580956	Power Bridge Connection Terminal	
E/ME TBUS NS35 BK	7580957	Power Bridge Connection Terminal	
IMX12-SC-2X-4BK	7580940	Screw terminals for IM(X)12 modules; included in delivery: 4 pcs. of 2-pin black terminals	
IMX12-SC-2X-4BU	7580941	Screw terminals for IM(X) 12 modules; included in delivery: 4 pcs. of 2-pin blue terminals	
IMX12-CC-2X-4BK	7580942	Spring terminals for IM(X)12 modules; included in delivery: 4 pcs. black terminals, 2-pin	
IMX12-CC-2X-4BU	7580943	Spring terminals for IM(X)12 modules; included in delivery: 4 pcs. blue terminals, 2-pin	