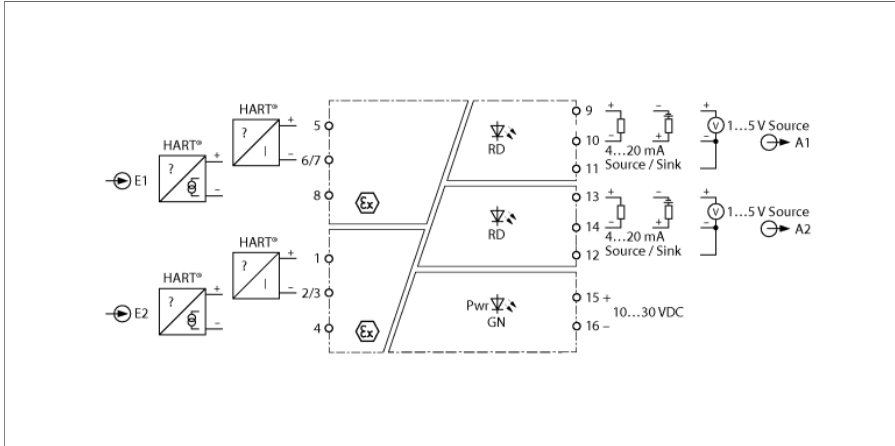


Isolating transducer 2-channel IMX12-AI01-2I-2IU-H0/24VDC/CC



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 signals, digital HART® communication signals can also be transmitted bidirectionally. Furthermore, active and passive 2-wire HART® transmitters can be operated.

The device is equipped with an input circuit of 4...20 mA and an output circuit of 4...20 mA (either as source or sink) or 1...5 V (source). The input signals are transmitted 1:1 without interference in the range of 3.8...20.5 mA 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/voltage < 0.875 V.

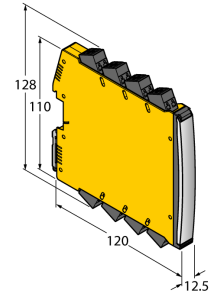
A green LED indicates operational readiness. An error in the input circuit causes the red LED to flash according to NE44.

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

The device is equipped with removable spring-type terminals.

- Input circuits monitored for wire-break and short-circuit
- Complete galvanic isolation
- HART transparent
- Removable spring type terminals
- ATEX, IECEx, cFM, cUL, NEPSI, INMETRO, Kosha, TR CU EAC CMI, TIIS, Russia Pattern Approval
- Installation in zone 2
- SIL 2

Dimensions



Type	IMX12-AI01-2I-2IU-H0/24VDC/CC
ID	7580307
Nominal voltage	24 VDC
Operating voltage	10...30 VDC
Power consumption	≤ 3.8 W
Power dissipation, typical	≤ 1.9 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 × source/sink (15...28 V) 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
Response characteristic	
Rise time (10...90 %)	≤ 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
Galvanic isolation	
Test voltage	2.5 kV RMS
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 according 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 according 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.
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
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
Displays/Operating elements	
Operational readiness	Green
Error indication	red

Mechanical data																																																
Protection class	IP20																																															
Flammability class acc. to UL 94	V-0																																															
Ambient temperature	-25...+70 °C																																															
Storage temperature	-40...+80 °C																																															
Dimensions	120 x 12.5 x 128 mm																																															
Weight	185 g																																															
Mounting instructions	DIN rail (NS35)																																															
Housing material	Polycarbonate/ABS																																															
Electrical connection	Removable spring-type terminals, 2-pin																																															
Terminal cross-section	0.2...2.5 mm ² (AWG: 24...14)																																															
Environmental conditions	<table border="1"> <tbody> <tr> <td>Operating height</td> <td>Up to 2000 m above sea level</td> </tr> <tr> <td>Pollution degree</td> <td>II</td> </tr> <tr> <td>Standards used</td> <td></td> </tr> <tr> <td rowspan="4">Voltage resistance and insulation</td> <td>EN 50178</td> </tr> <tr> <td>EN 61010-1</td> </tr> <tr> <td>EN 50155</td> </tr> <tr> <td>GL VI-7-2</td> </tr> <tr> <td rowspan="6">Shock</td> <td></td> </tr> <tr> <td>EN 61373 class B</td> </tr> <tr> <td>EN 50155</td> </tr> <tr> <td>GL VI-7-2</td> </tr> <tr> <td>EN 60068-2-6</td> </tr> <tr> <td>EN 60068-2-27</td> </tr> <tr> <td rowspan="6">Temperature</td> <td></td> </tr> <tr> <td>EN 60068-2-1 Ad</td> </tr> <tr> <td>EN 50155</td> </tr> <tr> <td>GL VI-7-2</td> </tr> <tr> <td>EN 60068-2-2 Bd</td> </tr> <tr> <td>EN 60068-2-1</td> </tr> <tr> <td rowspan="2">Air humidity</td> <td></td> </tr> <tr> <td>EN 60068-2-38</td> </tr> <tr> <td rowspan="16">EMC</td> <td></td> </tr> <tr> <td>EN 50155</td> </tr> <tr> <td>GL VI-7-2</td> </tr> <tr> <td>NE21</td> </tr> <tr> <td>In the event of a conducted interference in the range of 150 kHz, the measuring error changes to ±700 µA</td> </tr> <tr> <td>EN 61326-1</td> </tr> <tr> <td>EN 61326-3-1</td> </tr> <tr> <td>EN 61000-4-2</td> </tr> <tr> <td>EN 61000-4-3</td> </tr> <tr> <td>EN 61000-4-4</td> </tr> <tr> <td>EN 61000-4-5</td> </tr> <tr> <td>EN 61000-4-6</td> </tr> <tr> <td>EN 61000-4-11</td> </tr> <tr> <td>EN 61000-4-29</td> </tr> <tr> <td>EN 55011</td> </tr> <tr> <td>EN 55016</td> </tr> <tr> <td>EN 50121-3-2</td> </tr> <tr> <td>EN 61000-6-2</td> </tr> </tbody> </table>	Operating height	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	Air 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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Accessories

Type code	Ident no.		Dimension drawing
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	