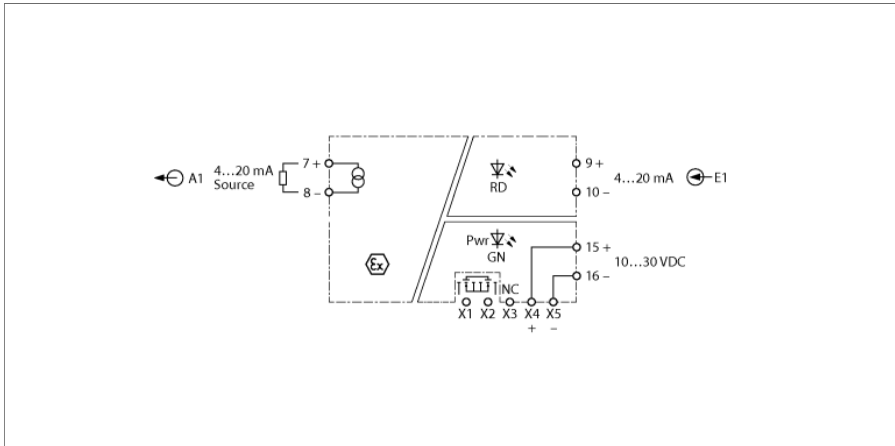


**Analog Signal Isolator
1-channel
IMX12-AO01-1I-1I-HPR /24VDC**



The 1-channel IMX12-AO01-1I-1I-HPR/24VDC signal isolator is designed to transmit the normalized current signal galvanically isolated 1:1 from the non-Ex area to the Ex-area. In addition to the analog signal also digital HART® communication signals can be transmitted bidirectionally. Typical applications are for example, the control of I/P converters or indicators in the Ex area.

The Pwr LED lights green to indicate operational readiness. The device can detect a wire break or short circuit on the field side, the input then switches to a high impedance state and the common alarm output switches to conductive. A fault in the input circuit leads to a flashing red LED according to NE44.

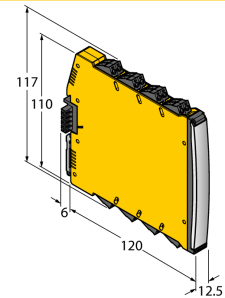
The device can be used in safety circuits up to SIL2 (high and low demand according to IEC 61508) and meets the requirements of the NE21. It is equipped with removable screw terminals. The device can be powered from a power bridge that also transmits a collective fault signal.

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

**Analog Signal Isolator
1-channel
IMX12-AO01-1I-1I-HPR /24VDC**

Type designation	IMX12-AO01-1I-1I-HPR /24VDC
Ident no.	7580400
Nominal voltage	24 VDC
Operating voltage range	10...30 VDC
Power consumption	≤ 1.5 W
Input current	4...20 mA
Reference temperature	23 °C
Output circuits	
Output current	4...20 mA
Load resistance, current output	≤ 0.8 kΩ
Short-circuit	at a load resistance of < 30 Ω the input current is < 500 μA
Wire break	at a load resistance of > 30 kΩ the input current is < 500 μA
Rise time (10...90 %)	≤ 10 ms
Fall time (90...10 %)	≤ 10 ms
Measuring accuracy (including linearity, hysteresis and repeatability)	≤ 0.05 % of full scale
Reference temperature	23 °C
Temperature drift	≤ 0.002 % of final value /K
Galvanic isolation	
Test voltage	2.5 kV
Input 1 to output 1	375 V peak value acc. to EN 60079-11
Input 1 to supply	150 V RMS acc. to EN 50178 and EN 61010-1
Output 1 to supply	375 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 153600 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 [ja 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

Dimensions



**Analog Signal Isolator
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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 117 mm																																																																																
Weight	148 g																																																																																
Mounting instructions	DIN rail (NS35)																																																																																
Housing material	Polycarbonate/ABS																																																																																
Electrical connection	Removable screw terminals, 2-pin																																																																																
Terminal cross-section	0.2...2.5 mm ² (24 ... 13 AWG)																																																																																
Tightening torque	0.5 Nm																																																																																
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Environmental conditions	<table border="1"> <tr> <td>Operating altitude</td> <td>Up to 2000 m above sea level</td> </tr> <tr> <td>Pollution degree</td> <td>II</td> </tr> <tr> <td>Surge category</td> <td>II (EN 61010-1)</td> </tr> <tr> <td>Standards used</td> <td></td> </tr> <tr> <td>Voltage resistance and insulation</td> <td></td> </tr> <tr> <td></td> <td>EN 50178</td> </tr> <tr> <td></td> <td>EN 61010-1</td> </tr> <tr> <td></td> <td>EN 50155</td> </tr> <tr> <td></td> <td>GL VI-7-2</td> </tr> <tr> <td>Shock</td> <td></td> </tr> <tr> <td></td> <td>EN 61373 class B</td> </tr> <tr> <td></td> <td>EN 50155</td> </tr> <tr> <td></td> <td>GL VI-7-2</td> </tr> <tr> <td></td> <td>EN 60068-2-6</td> </tr> <tr> <td></td> <td>EN 60068-2-27</td> </tr> <tr> <td>Temperature</td> <td></td> </tr> <tr> <td></td> <td>EN 60068-2-1 Ad</td> </tr> <tr> <td></td> <td>EN 50155</td> </tr> <tr> <td></td> <td>GL VI-7-2</td> </tr> <tr> <td></td> <td>EN 60068-2-2 Bd</td> </tr> <tr> <td></td> <td>EN 60068-2-1</td> </tr> <tr> <td>Humidity</td> <td></td> </tr> <tr> <td></td> <td>EN 60068-2-38</td> </tr> <tr> <td>EMC</td> <td></td> </tr> <tr> <td></td> <td>EN 50155</td> </tr> <tr> <td></td> <td>GL VI-7-2</td> </tr> <tr> <td></td> <td>NE21</td> </tr> <tr> <td></td> <td>EN 61326-1</td> </tr> <tr> <td></td> <td>EN 61326-3-1</td> </tr> <tr> <td></td> <td>EN 61000-4-2</td> </tr> <tr> <td></td> <td>EN 61000-4-3</td> </tr> <tr> <td></td> <td>EN 61000-4-4</td> </tr> <tr> <td></td> <td>EN 61000-4-5</td> </tr> <tr> <td></td> <td>EN 61000-4-6</td> </tr> <tr> <td></td> <td>EN 61000-4-11</td> </tr> <tr> <td></td> <td>EN 61000-4-29</td> </tr> <tr> <td></td> <td>EN 55011</td> </tr> <tr> <td></td> <td>EN 55016</td> </tr> <tr> <td></td> <td>EN 50121-3-2</td> </tr> <tr> <td></td> <td>EN 61000-6-2</td> </tr> </table>	Operating altitude	Up to 2000 m above sea level	Pollution degree	II	Surge category	II (EN 61010-1)	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		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.	Description	
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	