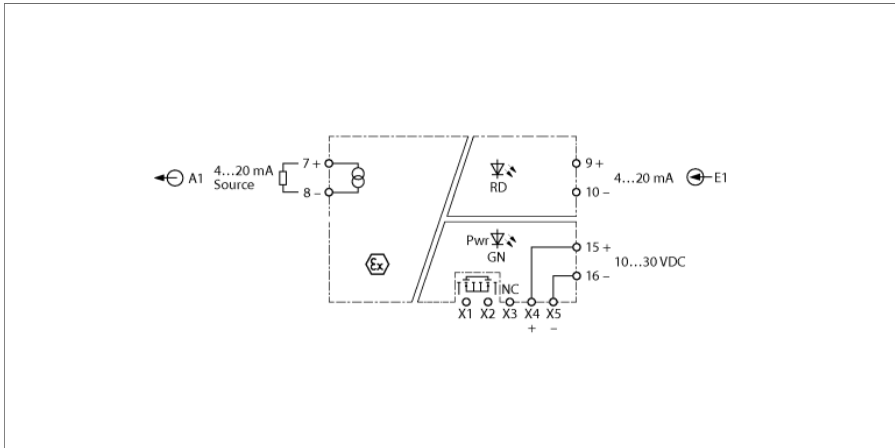


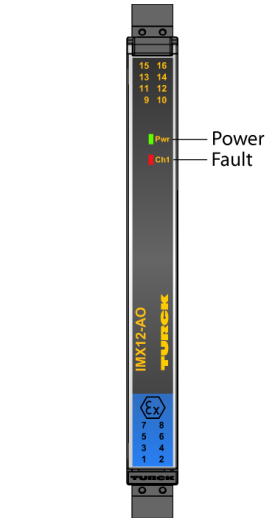
**Analog Signal Isolator
1-channel
IMX12-AO01-1I-1I-HPR/24VDC/CC**



The 1-channel IMX12-AO01-1I-1I-HPR/24VDC/CC 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 cage clamp terminals. The device can be powered from a power rail that also transmits a common alarm.

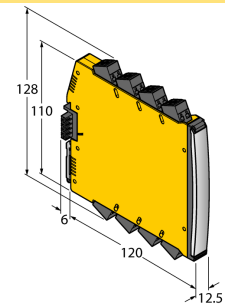


- ATEX, IECEx, INMETRO, NEPSI, Kosha, TIIS, TR CU
- Installation in zone 2
- SIL 2
- Output circuits monitored for wire-break and short-circuit
- Complete galvanic isolation
- HART transparent
- Removable cage clamp terminals
- Power rail (connector incl. in delivery)

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Type designation	IMX12-AO01-1I-1I-HPR/24VDC/CC
Ident no.	7580402
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
Common alarm output powerail	MOSFET, U _{max} = 30 V, I _{max} = 100 mA
Rise time (10...90 %)	≤ 10 ms
Fall time (90...10 %)	≤ 10 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 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



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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 128 mm																																													
Weight	150 g																																													
Mounting instructions	DIN rail (NS35)																																													
Housing material	Polycarbonate/ABS																																													
Electrical connection	Removable cage clamp terminals, 2-pin																																													
Connection variant	Power rail with collective fault signal																																													
Terminal cross-section	0.2...2.5 mm ² (24 ... 13 AWG)																																													
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 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="5">Shock</td> <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="5">Temperature</td> <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">Humidity</td> <td>EN 60068-2-38</td> </tr> <tr> <td></td> </tr> <tr> <td rowspan="15">EMC</td> <td>EN 50155</td> </tr> <tr> <td>GL VI-7-2</td> </tr> <tr> <td>NE21</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> </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/CC	7580611	Power supply module power rail; Collective fault signal via relay; Single and redundant power supply via terminals; Removable cage clamp terminals	