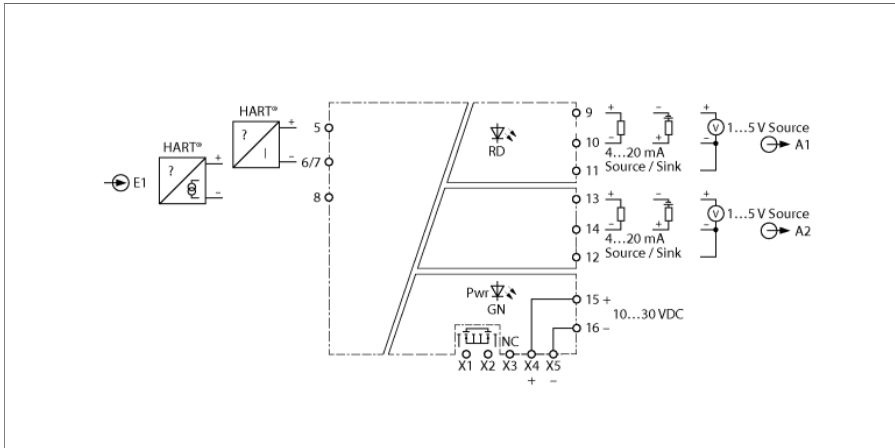


Isolating transducer 1-channel IM12-AI01-1I-2IU-HPR/24VDC/CC



The isolating transducers IM12-AI01-1I-2IU-HPR/24VDC/CC transmit analog measured signals galvanically isolated. The devices are suitable for operation in zone 2.

The 1-channel device has one input for the operation of HART® 2-wire transducers as well as active and passive HART® 2-wire transmitters. Connection is via removable spring type terminals. 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 circuit and two 4...20 mA output circuits (either as source or sink) or 1...5 V (source). The input signal at input [I1] is transmitted 1:1 to outputs [O1] and [O2] within a range of 3.8 mA...20.5 mA without interference (splitter operation). In addition, digital signals can also be transmitted bidirectionally in accordance with the HART® protocol. Digital HART® signals are only transmitted to output [O1].

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.

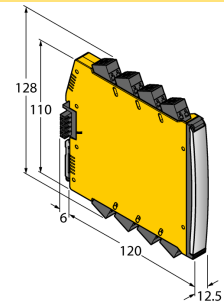
The devices have a green power LED (Pwr). For each input circuit there is a red status LED. An error in the input circuit causes the red LED to flash according to NE44.

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.

The device is equipped with removable spring-type terminals.

- Splitter function
- Input circuits monitored for wire break and short circuit
- Complete galvanic isolation
- HART transparent
- Removable spring type terminals
- Power bridge (connector incl. in delivery)
- ATEX use in Zone 2, cUL
- SIL 2

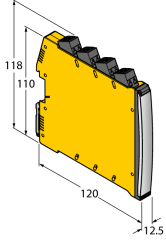
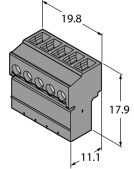
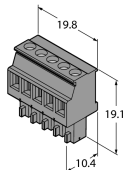
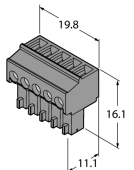
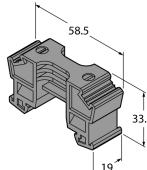
Dimensions



Type	IM12-AI01-11-2IU-HPR/24VDC/CC
ID	7580322
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	4...20 mA
Output circuits	
Output current	2 × source/sink (15...28 V) 4...20 mA
Output voltage	2 × 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 _{max} = 30 V, I _{max} = 100 mA
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
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 1 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
Important note	
	For Ex-applications the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply.
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	173 g																																																																														
Mounting instructions	DIN rail (NS35)																																																																														
Housing material	Polycarbonate/ABS																																																																														
Electrical connection	Removable spring-type terminals, 2-pin																																																																														
Connection variant	Power bridge with collective fault signal																																																																														
Terminal cross-section	0.2...2.5 mm ² (AWG: 24...14)																																																																														
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Accessories

Type code	Ident no.		Dimension drawing
IMX12-PS02-UI-UIR-PR/24VDC/CC	7580611	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-CC-2X-4BK	7580942	Spring terminals for IM(X)12 modules; included in delivery: 4 pcs. black terminals, 2-pin	