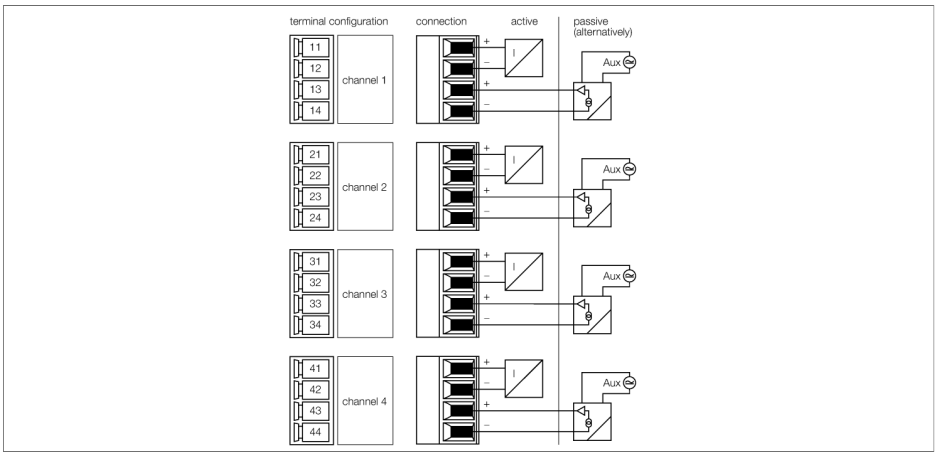
Remote I/O system *excom*®
input module, analog, 4-channel
AI401Ex



The input module AI401Ex is designed to connect 2-wire transducers (active input = source mode / transducer passive) and 4-wire transducers (passive input = sink mode / transducer active).

The module features protection class Ex ib IIC and can be mounted in zone 1 in combination with the *excom*® system. The field circuits feature protection class Ex ia IIC resp. Ex iaD.

The field circuits are galvanically separated.

HART® capable transducers can be connected to the module. The field device can thus be parameterized directly at the terminals on the DIN rail with a licensed modem. Additional impedance at the circuit is unnecessary.

The measuring range is digitized in the scope of 0…21 mA. For clear reading, the digitized value is spread to 0 … 21000 (independent of the parametrized measuring range) and transmitted to the host system.

- **Input module for the connection of passive transmitters (active inputs) or active transmitters (passive inputs).**
- **Complete galvanic separation**

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Hans Turck GmbH & Co.KG ● D-45472 Mülheim an der Ruhr ● Witzlebenstraße 7 ● Tel. 0208 4952-0 ● Fax 0208 4952-264 ● more@turck.com ● www.turck.com

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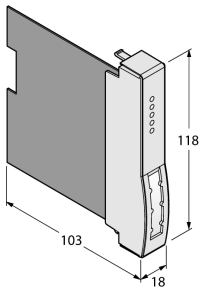
Dimensions



Type code	AI401Ex
Ident no.	6884204
Supply voltage	via the backplanes, central power supply
Power consumption	≤ 2.2 W
Galvanic separation	Complete galvanic isolation acc. to EN 60079-11
Number of channels	4-channel
Input circuits	intrinsically safe acc. to EN 60079-11
	0/4…20 mA
Supply voltage	15 VDC at 20 mA
Overload capability	> 21 mA
Low level control	< 3.6 mA
Short circuit	> 24 mA (only with live zero)
Wire-break	< 2 mA (only with live zero)
Resolution	14 Bit
max. Messabweichung	≤ **max. Messabweichung %** — **max. Messabweichung**
	0.1
Linearitätsabweichung	≤ 0.05% of full scale vom Endwert
Temperature drift	≤ 0.005 % / K
Rise time/fall time	≤ 50 ms (10 … 90 %)
Ex approval acc. to conformity certificate	PTB 03 ATEX 2217
Device designation	⟨Ex⟩ II 2 (1) G Ex ib [ia] IIC T4
	⟨Ex⟩ II (1) D [Ex iaD]
Max. values:	terminal connection 1+2
Max.output voltage U_o	≤ 19.1 V
Max. output current I_o	≤ 90 mA
Max. output power P_o	≤ 615 mW
Internal resistance R_i	304 Ω
Characteristic	trapezoidal
Internal inductance/capacitance L_i/C_i	L_i negligibly small
	C_i negligibly small

External inductance/capacitance L_o/C_o

	IIC	IIB
L_o [mH]	0.20	1.0
C_o [nF]	170	960

Max. values:	Terminal connection 3+4
Max.output voltage U_o	≤ 6 V
Max. output current I_o	≤ 2.5 mA
Max. output power P_o	≤ 4 mW
Characteristic	linear
Internal inductance/capacitance L_i/C_i	L_i negligibly small
	C_i negligibly small

External inductance/capacitance L_o/C_o

	IIC	IIB
L_o [mH]	10	20
C_o [nF]	1900	8600

Indication	
Operational readiness	1 x green / red
State/ Fault	4 x red
Housing material	Plastic
Connection mode	module, plugged on rack

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Protection class	IP20
Ambient temperature	-20…+70 °C
Relative humidity	≤ 95% at 55 °C acc. to EN 60068-2
Vibration test	acc. to IEC 60068-2-6
Shock test	acc. to IEC 60068-2-27
EMC	acc. to EN 61326-1 (2006)
	acc. to Namur NE21 (2007)
MTTF	77 years acc. to SN 29500 (Ed. 99) 40 °C
Dimensions	18x 118x 103 mm
Weight	75 g

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