

The input module AI40Ex is designed to connect 2-wire transducers (active input = source mode / transducer passive) or 4-wire transducers (passive input = sink mode / transducer active).

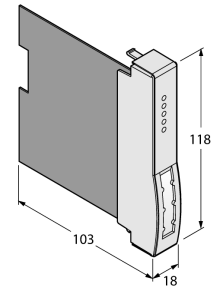
The module features protection class Ex ib IIC and can be mounted in zone 1 in combination with the **excom®** system. The inputs feature protection class Ex ia IIC.

Galvanically separated inputs.

The resolution is 14 bit, i.e. the analogue value between 0...21 mA is represented as a number between 0 and 16383. For clear reading, the digitized value is spread to 0 ... 21000 and transmitted to the host system.

- Input module for the connection of analog measuring transducers
- Connection of 2/4-wire measuring transducers
- Complete galvanic separation

Dimensions



Type code	AI40EX									
Ident no.	6884009									
Supply voltage	via the backplanes, central power supply									
Power consumption	≤ 3.5 W									
Galvanic separation	all-round galvanic separation acc. to EN 60079-11									
Number of channels	4-channel									
Input circuits	intrinsically safe acc. to EN 60079-11									
Supply voltage	0/4...20 mA									
Overload capability	15 VDC at 22 mA									
Low level control	> 22 mA									
Short circuit	< 3.6 mA									
Wire-break	< 5 V (only with „live zero“)									
	< 2 mA (only with „live zero“)									
Resolution	14 Bit									
max. Messabweichung	≤ max. Messabweichung max. Messabweichung									
	ichung %									
	0.1									
Linearitätsabweichung	≤ 0.1% 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	⊕ II 2 (1) G Ex ib [ia] IIC T4 ⊕ 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	≤ 800 mW									
Characteristic	trapezoidal									
Internal inductance/capacitance L _i /C _i	L _i negligibly small C _i ≤ 24.2 nF									
External inductance/capacitance L _e /C _e	<table border="1"> <thead> <tr> <th></th> <th>IIC</th> <th>IIB</th> </tr> </thead> <tbody> <tr> <td>L_e [mH]</td> <td>0.2</td> <td>1.0</td> </tr> <tr> <td>C_e [μF]</td> <td>125</td> <td>870</td> </tr> </tbody> </table>		IIC	IIB	L _e [mH]	0.2	1.0	C _e [μF]	125	870
	IIC	IIB								
L _e [mH]	0.2	1.0								
C _e [μF]	125	870								
Max. values:	Terminal connection 3+4									
Max. output voltage U _o	≤ 6 V									
Max. output current I _o	≤ 45 mA									
Max. output power P _o	≤ 68 mW									
Characteristic	linear									
Internal inductance/capacitance L _i /C _i	L _i negligibly small C _i ≤ 24.2 nF									
External inductance/capacitance L _e /C _e	<table border="1"> <thead> <tr> <th></th> <th>IIC</th> <th>IIB</th> </tr> </thead> <tbody> <tr> <td>L_e [mH]</td> <td>10</td> <td>20</td> </tr> <tr> <td>C_e [μF]</td> <td>1400</td> <td>7300</td> </tr> </tbody> </table>		IIC	IIB	L _e [mH]	10	20	C _e [μF]	1400	7300
	IIC	IIB								
L _e [mH]	10	20								
C _e [μF]	1400	7300								
Indication										
Operational readiness	1 x green / red									
State/ Fault	4 x red									
Housing material	Plastic									
Connection mode	module, plugged on rack									
Protection class	IP20									
Ambient temperature	-20...+60 °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	133 g									