

The input module AIH41Ex is designed to connect 4-wire transducers (active 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.

The inputs are not galvanically isolated. When connecting the fieldbus devices, care has to be taken that all inputs are connected to the same supply potential.

HART® compatible sensors may be connected to the module which can communicate with the HART® controller.

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.

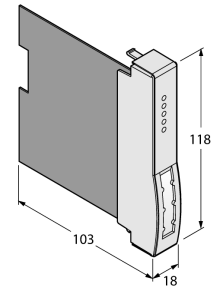
Up to 8 HART® variables (max. 4 for each channel) can be read via the cyclic PROFIBUS data transmission. The bidirectional variable exchange between host system and HART® transmitter is implemented via PROFIBUS-DPV1.

Parameters like wire-break or short-circuit monitoring, measuring range, HART® communication etc. can be adjusted for each channel separately and are initialized by the PROFIBUS master only.



- Input module for connection of 4-wire transmitters
- Transmission of HART® data

Dimensions



Type code	AIH41EX										
Ident no.	6884005										
Supply voltage	via the backplanes, central power supply										
Power consumption	≤ 1 W										
Galvanic separation	to int. bus and supply circuit										
Number of channels	4-channel										
Input circuits	intrinsically safe acc. to EN 60079-11										
	0/4...20 mA										
HART [®] Impedance	> 240 Ω										
Overload capability	> 22 mA										
Low level control	< 3.6 mA										
Short circuit	< 5 V (only with „live zero“)										
Wire-break	< 2 mA (only with „live zero“)										
Resolution	14 Bit										
max. Messabweichung	≤ max. Messabweichung %	max. Messabweichung									
	0.1	bei geschirmtem Signalkabel									
	1	bei ungeschirmtem Signalkabel									
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 00 ATEX 2059 X										
Device designation	⊕ II 2 (1) G Ex ib [ia] IIC T4 ⊕ II (1) D [Ex ia IIIC]										
Max. values:	terminal connection 3+4										
Max. output voltage U _o	≤ 7.2 V										
Max. output current I _o	≤ 16 mA										
Max. output power P _o	≤ 29 mW										
Characteristic	linear										
Internal inductance/capacitance L _i /C _i	L _i	≤ 0.11 mH									
	C _i	≤ 1.1 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>0.39</td> <td>1.89</td> </tr> <tr> <td>C_e [nF]</td> <td>63.9</td> <td>268</td> </tr> </tbody> </table>			IIC	IIB	L _e [mH]	0.39	1.89	C _e [nF]	63.9	268
	IIC	IIB									
L _e [mH]	0.39	1.89									
C _e [nF]	63.9	268									
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	93 years acc. to SN 29500 (Ed. 99) 40 °C										
Dimensions	18x 118x 103 mm										
Weight	125 g										