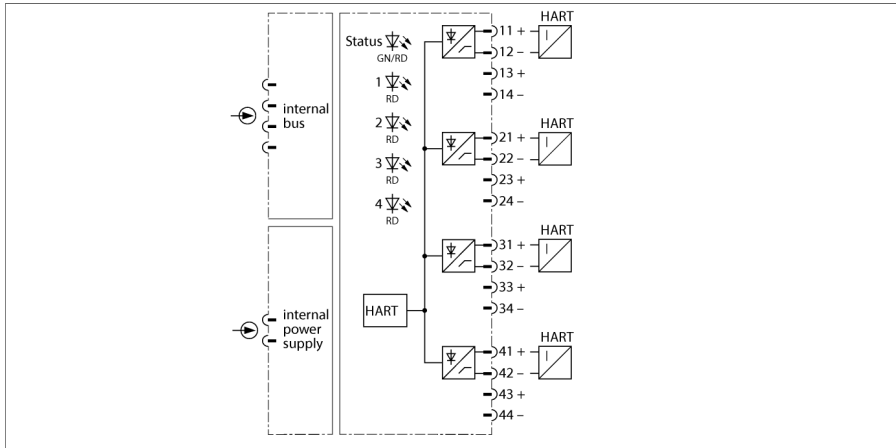


excom I/O System

Input Module, Analog, Active, HART, 4-channel AIH40EX



The input module AIH40Ex is used for the connection of 2-wire transducers (active input = source mode / transducer passive).

The module features protection class Ex ib IIC and can be mounted in zone 1 in combination with excom. The ignition protection type of the inputs is Ex ia IIC.

The inputs are not galvanically isolated from each other. When connecting the field devices, care has to be taken that all outputs are on the same potential.

HART-compatible sensors can be connected to the module; these will communicate with the integrated HART controller.

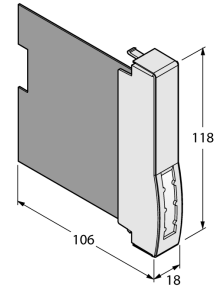
The resolution is 14 bit, i.e. the analog value between 0...21 mA is represented as a number between 0 and 16383. For clear reading, the digitized value is displayed in a range of 0...21000 and transmitted to the host system.

Up to 8 HART variables (max. 4 per channel) can be read via the cyclical PROFIBUS data traffic. The bidirectional exchange of variables between the host system and the HART transmitter is implemented via PROFIBUS-DPV1.

Setting the parameters, such as wire-break/short-circuit monitoring, measuring range, HART communication, etc., can be carried out channel-by-channel and is initiated exclusively by the PROFIBUS master.

- Input module for connection of 2-wire transmitters
- Transmission of HART data

Dimensions



Type	AIH40EX
ID	6884001
Supply voltage	Via module rack, central power supply module
Power consumption	≤ 3 W
Galvanic isolation	to int. bus and supply circuit
Number of channels	4
Input circuits	
	Intrinsically safe acc. to EN 60079-11
	0/4...20 mA
Supply voltage	15 VDC at 22 mA
HART impedance	> 240 Ω
Overload capability	> 21 mA
Low level control	< 3.6 mA
Short-circuit	< 5 V (only in live zero mode)
Wire-break	< 2 mA (only in live zero mode)
Reference temperature	
	25 °C
Resolution	14 Bit
Temperature drift	≤ 0.005 % of full scale/K
Rise time/fall time	≤ 50 ms (10...90 %)
Max. measurement tolerance under EMC influence	≤ 0.1 % with shielded signal cable ≤ 1 % with unshielded signal cable
Ex approval acc. to conformity certificate	
	IECEX PTB 12.0018X
	PTB 00 ATEX 2059 X
Device designation	Ⓔ II 2 (1) G Ex ib [ia Ga] IIC T4 Gb
Device marking	Ⓔ II (1) D [Ex ia IIIC Da]
Displays/Operating elements	
Operational readiness	1 × green/red
State/ Fault	4 × red
Housing material	
	Plastic
Connection mode	module, plugged on rack
Protection class	IP20
Ambient temperature	-20...+60 °C
Relative humidity	≤ 93 % at 40 °C acc. to IEC 60068-2-78
Vibration test	Acc. to IEC 60068-2-6
Shock test	Acc. to IEC 60068-2-27
EMC	Acc. to EN 61326-1 Acc. to Namur NE21
MTTF	61 years acc. to SN 29500 (Ed. 99) 40 °C
Dimensions	18 x 118 x 106 mm
Approvals	
	ATEX
	cFMus
	cFM
	IECEX
	INMETRO
	KOSHA
	EAC Ex
	DNV GL
	BV
	LR
	KR
	CMI
	KCC
	CE

Accessories

Type code	Ident no.		Dimension drawing
excom-RMD1-BU	100020744	The resistor module prevents wire-break detection and short-circuit detection in digital input modules. For analog input modules, overflow and underflow messages are also suppressed.	