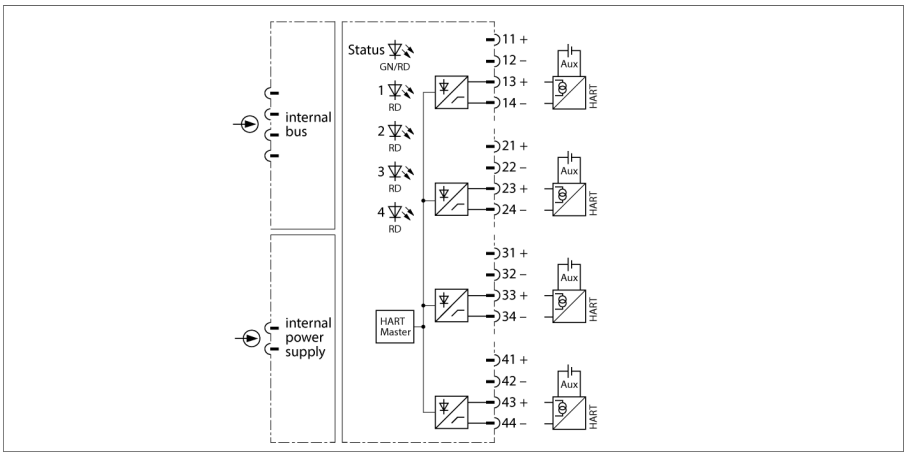
excom I/O System
Input Module, Analog, Passive, HART, 4-channel
AIH41EX



The input module AIH41Ex is used for the connection of 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 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 HART controller.

The resolution is 1 µA per digit, 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 4-wire transmitters
- Transmission of HART data

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Type	AIH41EX
ID	6884005
Supply voltage	Via module rack, central power supply module
Power consumption	≤ 1.5 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
HART impedance	> 240 Ω
Overload capability	> 21 mA
Low level control	< 3.6 mA
Short-circuit	< 5 V (only with "live zero")
Wire-break	< 2 mA (only in live zero mode)

Reference temperature	25 °C
Resolution	1 µA / digit
Linearity deviation	≤ 0.1 % full scale
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

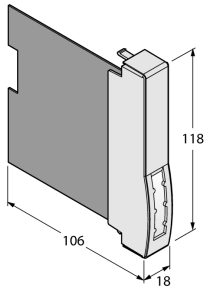
Ex approval acc. to conformity certificate	IECEx PTB 12.0018X
Ex approval acc. to conformity certificate	PTB 00 ATEX 2059 X
Device designation	Ⓔx II 2 (1) G Ex ib [ia Ga] IIC T4 Gb
Device marking	Ⓔx II (1) D [Ex ia IIIC Da]

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	93 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

Dimensions



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