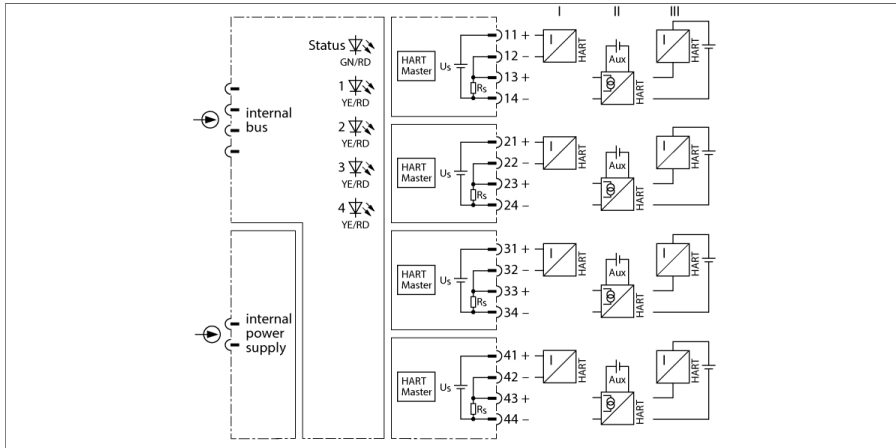


# excom I/O System

## Input Module, Analog, HART, 4-channel

### AIH401EX



The input module AIH401Ex is used for connection of active and/or passive 2-wire measuring transducer.

The module is functionally compatible with the input modules AIH40Ex and AIH41Ex. In addition, the inputs are galvanically isolated. For initial configurations, configuration and parameterization should be carried out via entry AIH40.. in the configuration file (e.g. GSD). For existing systems, entry AIH41.. can also be used.

The analog value of 0...21 mA is digitized as a number between 0 and 21,000 and transferred to the host system. This corresponds to 1  $\mu$ A per digit.

HART-compatible field devices that communicate directly with the relevant HART controller can be connected to the module. HART multiplexing is thus no longer necessary and a higher data throughput is achieved.

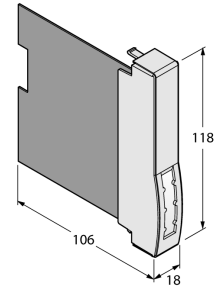
Up to 8 HART variables (max. 4 per channel) can be transmitted via the cyclic user data to the host system. Acyclic data exchange provides advanced communication options such as the diagnostics and parameterization of HART field devices.

The setting of parameters is initiated solely by the host system. The following parameters can be set for each channel:

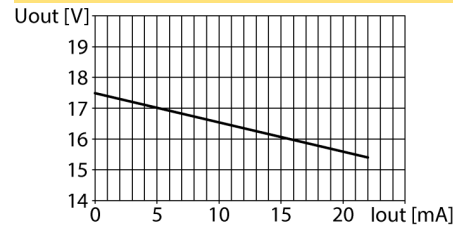
- Short circuit monitoring
- Wire-break monitoring
- Substitute value strategy
- HART status/measuring range
- HART variables

- Input module for the connection of passive transmitters (active inputs) or active transmitters (passive inputs).
- Transmission of HART data
- One HART controller per channel for faster access to HART data
- Complete galvanic isolation

## Dimensions



## Output Curve



Type	AIH401EX
ID	6884266
Supply voltage	Via module rack, central power supply module
Power consumption	≤ 3 W
Power dissipation	≤ 1.5 W
Galvanic isolation	Complete galvanic isolation
Number of channels	4

Input circuits	Intrinsically safe acc. to EN 60079-11 0/4...20 mA
Supply voltage	15.5 VDC at 21 mA
HART impedance	> 240 Ω
Overload capability	> 21 mA
Low level control	< 3.6 mA
Short-circuit	< 25 mA (only with "live zero")
Wire-break	< 2 mA (only with "live zero")

Reference temperature	25 °C
Resolution	1 μA / digit
Measuring accuracy (including linearity, hysteresis and repeatability)	≤ 0.06 % of full scale
Temperature drift	≤ 0.0025 % of full scale/K
Rise time/fall time	≤ 40 ms (10...90 %)
Max. measurement tolerance under EMC influence	≤ 0.06 % of full scale with shielded signal cable ≤ 1 % of full scale with unshielded signal cable

Ex approval acc. to conformity certificate	IECEx PTB 18.0034
Ex approval acc. to conformity certificate	PTB 18 ATEX 2003
Device designation	Ⓢ II 2(1) G Ex ib [ia Ga] IIC T4 Gb
Device marking	Ⓢ II (1) D [Ex ia Da] IIIC

Displays/Operating elements	
Operational readiness	1 × green/red
State/ Fault	4 × red/yellow

Housing material	Plastic
Connection mode	module, plugged on rack
Protection class	IP20
Ambient temperature	-20...+70 °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	33 years acc. to SN 29500 (Ed. 99) 40 °C
Dimensions	18 x 118 x 106 mm

Approvals	ATEX cFMus cFM IECEX CCC INMETRO KOSHA EAC Ex CMI UKCA CE
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**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.	