

GasEye Cross Duct H2 - *in-situ* hydrogen analyzer



GasEye H2 is a high performance *in-situ* hydrogen analyzer. Suitable for safety applications and process control. 24/7 continuous operation. No sample preparation. No zero drift. No field calibration. Low cost of ownership.

Features

- H2 ranges from **0-10 vol% to 0-100 vol%**
- Process temperatures **0-500 °C**
- Process pressures **0-40 bar**
- **Real time sensing** – response time below 0.1 second
- **High sensitivity** – detection limit below 0.1 vol%
- **In-situ monitoring** – direct in the process, no sample preparation
- **Maintenance free** – equipped with auto calibration feature, no field calibration is required
- **Robustness** – IP66 enclosure, suitable for outdoor and indoor installations and harsh environments
- **Insensitive to dust and smoke** in the measured process (up to 50 g/m3)
- **ATEX** version available

Example Applications

- **Safety monitoring**
- **Process control**

Example Industries

- Power industry
- Steel industry
- Chemical industry

HYDROGEN ANALYZER

Application type: Hydrogen CD 14.01.01-AAA

Analytical performance

Hydrogen measurement range: 0 – 10 vol%

Detection limit (LOD): 0.1vol%*m @STP and 3 sec response time

Precision: 1% of the measured value or LOD, whichever is larger @STP and 3 sec response time

Accuracy: 2% of the measured value or LOD, whichever is larger @STP and 3 sec response time

Process dust load: up to 50 g/Nm³ depending on the process

Calibration: Certified span gas

Zero drift and span drift: negligible

Electric characteristics

Power input: 24 VDC nominal (19 - 30 VDC)

Power consumption: < 15VA

Dynamic performance

Warm-up time: approx. 5 minutes

Minimum response time (T90): 100 milliseconds

Electric inputs and outputs

Inputs:

4 x analog input, (4-20 mA, process temperature and pressure, 2 x AUX) - easy user selection via DIP switch between active/passive mode

1 x RTD

8 x Digital input

Outputs:

4 x analog output, (4-20 mA, H₂ concentration, process transmission, 1 x process temperature (optional)) active or passive - easy user selection via DIP switch between active/passive mode

8 x Digital output (NAMUR)

Optional:

PROFINET , Modbus (TCP/IP), Modbus RTU

Local User Interface:

1. Local user interface (LUI) – LCD backlight display located on the transmitter housing lid.
2. Ethernet
 - WebServer application – system configuration and data acquisition via webbrowser
 - Windows based program – GasEye logger for real time data acquisition

Remote access:

Ethernet port for remote service and diagnostics

Mechanical specification

Degree of protection: In accordance with IP66

Process flange: DN50PN16

Process windows: Fused silica window, Helium leak tested and certified in accordance to EN1779:1999 norm.

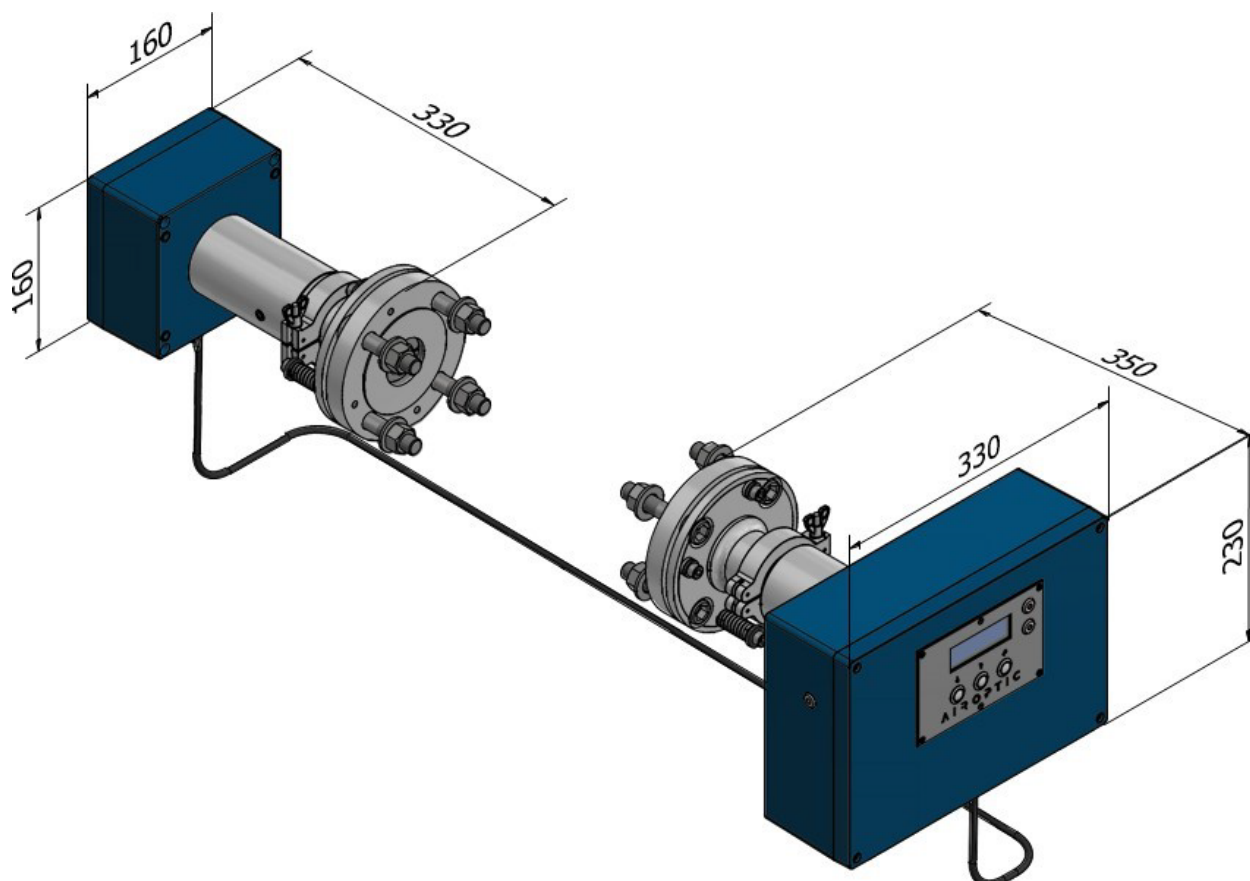
Instrument dimensions:

Transmitter: Width x height: 330 mm x 230 mm
Length: 350 mm

Receiver: Width x height: 160 mm x 160 mm
Length: 330 mm

Weight: Receiver unit: 13 kg
Transmitter unit: 15 kg

Materials: Housing: aluminium
Coating: RAL 5010
Process interface: Stainless steel 316



Climatic conditions

Ambient temperature:	-20°C to +55°C
Ambient pressure:	800 - 1200 hPa
Ambient humidity:	RH < 99%, non-condensing

Measurement conditions

Sample gas pressure:	0.9 - 1.1 bara (optional 0.7 - 40 bara)
Sample gas temperature:	0°C to 500°C

Sensor and Process Purging (Air)

Purging gas flow rate:	Sensor 0.2-2 l/min Process 2 – 50 l/min
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Safety

Low Voltage Directive (LVD) 2014/35/EU



- PN-EN 61010-1:2011
- Laser radiation: Laser Class I product acc. to PN-EN 60825-1:2014-11

EMC Directive 2014/30/EU

- EN 61326-1:2013

RoHS Directive 2011/65/EU

ATEX Directive 2014/34/EU

- EN IEC 60079-0:2018
- EN 60079-2:2014
- EN 60079-26:2015
- EN 60079-28:2015



II (1)/2G Ex pxb [op is Ga] IIC T6 Gb
II (1)/2D Ex pxb [op is Da] IIIC T85°C Db

Certificate No. KDB 20ATEX0003X

IECEx Zone 2/22

- EN IEC 60079-0:2017
- EN 60079-2:2014
- EN 60079-28:2015



Ex op is pzc IIC T6 Gc
Ex op is pzc IIIB T85°C Dc

Certificate No. IECEx KDB 19.0004X

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