

# GasEye Cross Duct H2O - *in-situ* water vapor analyzer



GasEye H2O is a high performance *in-situ* water vapor analyzer. Suitable for emission monitoring and process control. 24/7 continuous operation. One flange pair. No sample preparation. No span and zero drift. No field calibration. Low cost of ownership.

## Features

- H2O ranges: **0 – 1 ppmv / 0 – 100%vol**
- Process temperatures **0-1350°C**
- Process pressures **0.7-2 barA**
- **Real time sensing** – response time below 0.1 second
- **High sensitivity** – detection limit below 0.05 ppm per meter
- **High selectivity** – automatic compensation for interference effect from other constituents in the gas sample
- ***In-situ* monitoring** – direct in the process, no sample preparation
- **Maintenance free** – equipped with a self-calibrating feature, no field calibration necessary
- **Robustness** – IP65 enclosure, suitable for outdoor and indoor installations and harsh environments
- **Insensitive to dust and smoke in the measured process** – up to 50 g/m<sup>3</sup>
- **ATEX** version available

## Example Applications

- **Combustion control**
- **Emission monitoring**
- **Process control**

## Example Industries

- **Power industry**
- **Steel industry**
- **Chemical industry**

**Application type: H2O CD 15.01.01-AAA****Analytical performance****H2O measurement range:** 0-30 vol%**LOD:** H2O: 0.1 vol% @180°C and 3 sec response time**Precision:** H2O: 0.1 vol% or 1% of the measured value, whichever is larger @180 °C and 3 sec response time**Accuracy:** H2O: 0.1 vol% or 2% of the measured value, whichever is larger @180 °C and 3 sec response time**Process dust load:** up to 50 g/Nm<sup>3</sup> depending on the process**Calibration:** Certified span gas**Zero drift and span drift:** negligible**Electric characteristics****Power input:** 24 VDC nominal (19.5 - 30 VDC)**Power consumption:** < 20VA**Dynamic performance****Warm-up time:** approx. 5 minutes**Minimum response time (T90):** 200 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, H2O concentration, process transmission, 2 x AUX, ) 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

IP65 **Process flange:** DN50PN16

**Process windows:** F.Silica window, Helium leak tested and certified in accordance to EN1779:1999 norm.

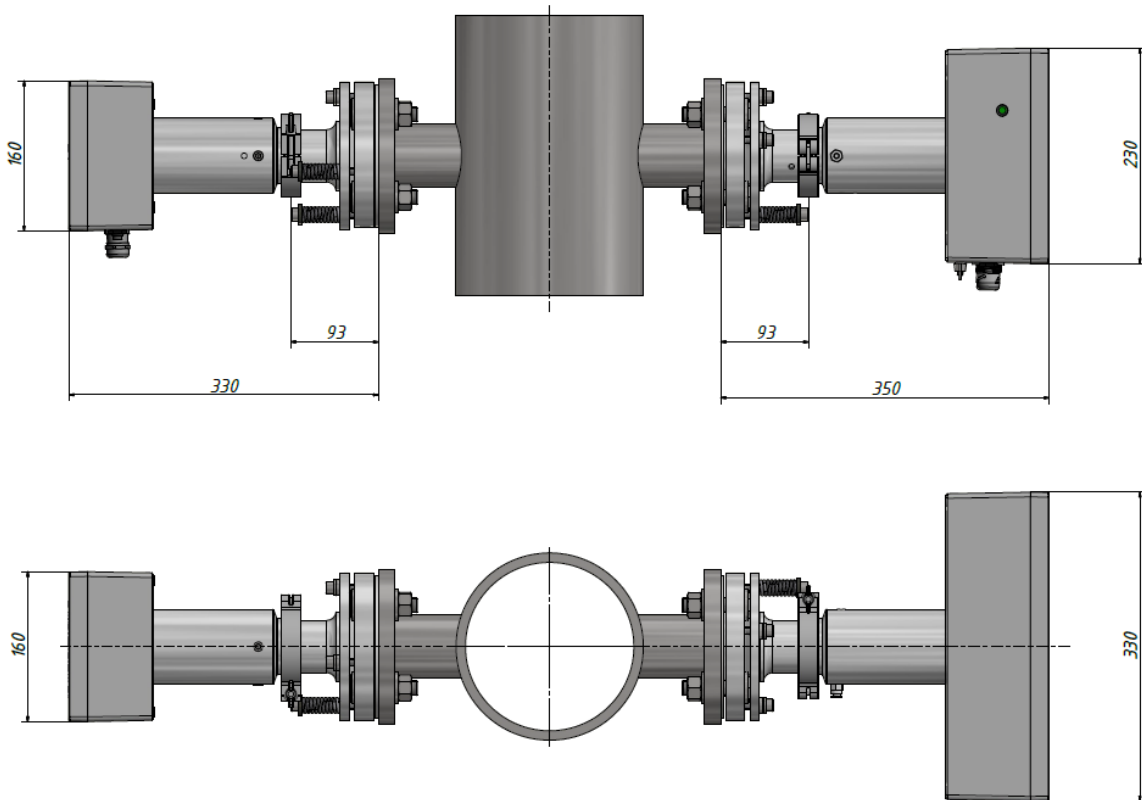
### Instrument dimensions:

**Transmitter:** W x H x L: 330 mm x 230 mm x 350 mm

**Receiver:** W x H x L: 160 mm x 160 mm x 330 mm

**Weight:** Receiver unit (including flange): 13 kg  
Transmitter unit (including flange): 15 kg

**Materials:** Housing: aluminium  
Coating: RAL5010  
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:	0.5 - 2 atm
Sample gas temperature:	0°C to 500°C

## Sensor and Process Purging (Nitrogen)

Purging gas flow rate:	5 – 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

- Explosion protection (standard version):
  - ATEX II 3G [Ex op is IIC T6 Gc]
  - ATEX II 3D [Ex op is IIIC T85°C Dc]
- Explosion protection (optional version):
  - ATEX II 3G Ex pz op is IIC T6 Gc
  - ATEX II 3D Ex pz op is IIIC T85°C Dc

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