

GasEye Cross Duct HF - *IN-SITU* HYDROGEN FLUORIDE ANALYZER



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

Features

- HF ranges: **0-1ppmv/0-10 ppmv / 0-100 ppmv/ 0-1000 ppmv**
- Process temperature **0-550°C**
- **Real time sensing** – response time below 0.1 second
- Possible to report also **H2O 0-30%vol**
- **High selectivity:** automatic compensation for interference effect from other constituents in the gas sample
- **High sensitivity** – detection limit below 0.01 ppmv per meter
- **In-situ monitoring** – direct in the process, no sample preparation
- **Maintenance free** – equipped with a self-calibrating feature, no field calibration necessary
- **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/IECEX** version available

Example Applications

- Emission monitoring
- Safety

Example Industries

- Power industry
- Aluminum plants
- Chemical industry

Application type: Hydrogen Fluoride CD 45.01.01-AAA

Analytical performance

Hydrogenfluoride concentration measurement range: 0 – 50 ppmv

Detection limit: 0.02 ppmv*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 (< 25VA if IECEx/ATEX)

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) - 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, HF concentration, process transmission, 2 x AUX) - easy user selection via DIP switch between active/passive mode

8 x digital output (NAMUR)

Optional:

PROFINET, PROFIBUS, 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 web browser
 - 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.

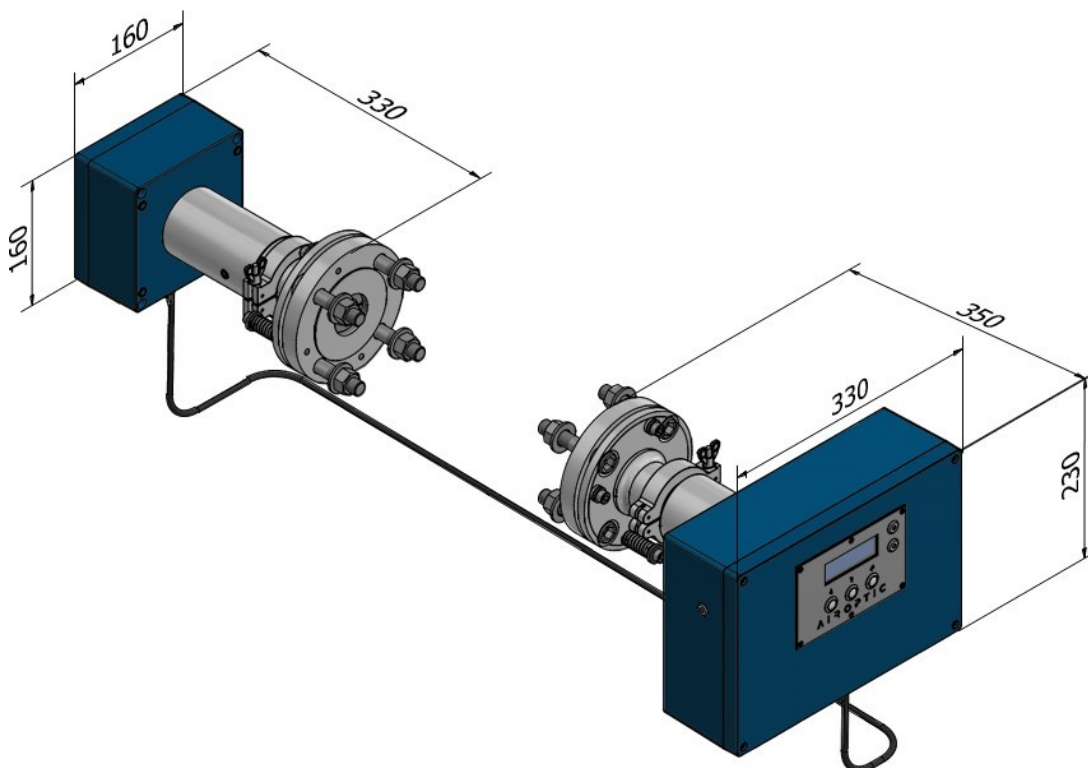
Instrument dimensions:

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:	-30°C to +60°C
Ambient pressure:	800 - 1200 hPa
Ambient humidity:	RH < 99%, non-condensing

Measurement conditions

Sample gas pressure:	0.7 - 2 barA
Sample gas temperature:	0°C to 550°C

Process Purging (if necessary)

Purging gas flow rate:	5 – 10 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 IIC T6 Ga/Gb
II 1/2D Ex pxb op is IIIC T85°C Da/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 IIIC T85°C Dc

Certificate No. IECEx KDB 19.0004X

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