

GasEye Cross Duct SO₂/HCl/NH₃+H₂O *in-situ* analyzer



GasEye SO₂/HCl/NH₃+H₂O is a high performance *in-situ* combined sulfur dioxide, hydrogen chloride, ammonia and water vapor analyzer. Suitable for safety applications and process control. 24/7 continuous operation. One flange pair. No sample preparation. No zero drift. No field calibration. Low cost of ownership.

Features

- SO₂ ranges: 0 – 200 ppmv / 0 – 50 %vol
- HCl ranges: 0 – 1 ppmv / 0 – 10 ppmv / 0 – 100 ppmv / 0 – 1000 ppmv / 0 – 1%vol / 0 – 10%vol
- NH₃ ranges: 0 – 5 ppmv / 0 – 50 ppmv / 0 – 1000 ppmv / 0 – 1%vol / 0 – 100%vol
- Process temperatures: 0-550°C
- **Real time sensing** – response time below 0.5 sec
- **High selectivity** – no interference from other constituents in the gas sample
- **High sensitivity** – detection limit below 0.1 ppm 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** – IP65 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

- Combustion control
- Process control

Example Industries

- Power industry
- Chemical industry

Application type: SO₂/HCl/NH₃+H₂O CD 61.41.32_15**Analytical performance**

SO₂/HCl/NH₃/H₂O measurement range: 0-1000 mg/Nm³ / 0–2000 mg/Nm³ / 0-100 mg/Nm³ / 0-30 vol%

LOD: <10 mg/Nm³ / <5 mg/Nm³ / <3 mg/Nm³ / <0.1 vol% @STP and 3 sec response time

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

Accuracy: LOD or 2% of the measured value, 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 (19.5 - 30 VDC)

Power consumption: < 35VA

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, SO₂ concentration, HCl concentration, H₂O concentration, process transmission) active or passive - easy user selection via DIP switch between active/passive mode

8 x Digital output (NAMUR)

Optional:

PROFINET , Modbus (TCP/IP)

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: DN50

Process windows: Sapphire window, Helium leak tested and certified in accordance with EN1779:1999 norm

Instrument dimensions:

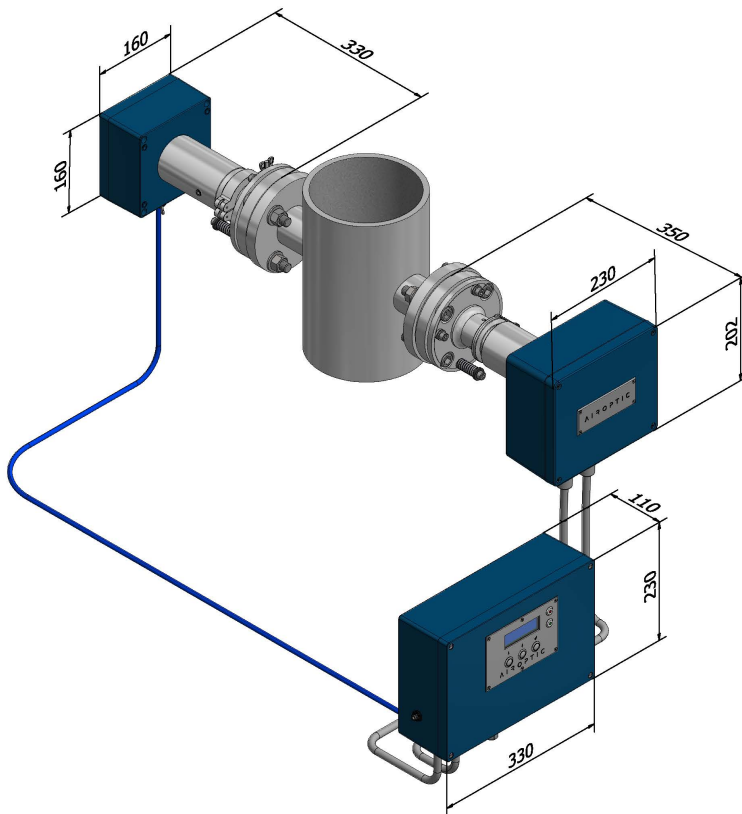
Transmitter W x H x L: 330 mm x 230 mm x 350 mm

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

Central unit W x H x L: 330 mm x 230 mm x 110 mm

Weight: Receiver unit (including flange): 13 kg
 Transmitter unit(including flange): 16 kg
 Central unit: 5 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:	0.9 - 1.1 barA
Sample gas temperature:	100°C to 550°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

- 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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