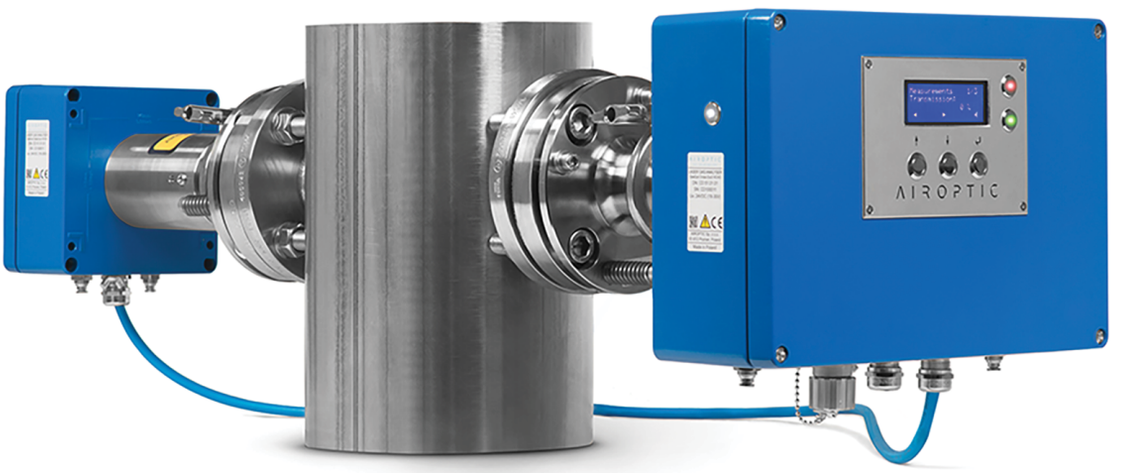
GasEye Cross Duct NH3/HCl - *in-situ* ammonia and hydrogen chloride analyzer



GasEye NH3/HCl is a high performance *in-situ* ammonia and hydrogen chloride analyzer . Suitable for safety monitoring and process control. 24/7 continuous operation. No sample preparation. No zero drift. No field calibration. Low cost of ownership.

Features

- NH3 ranges: **0 – 5 ppmv / 0 – 50 ppmv / 0 – 1000 ppmv / 0 – 1%vol / 0 – 100%vol**
- HCl ranges: **0 – 1 ppmv / 0 – 10 ppmv / 0 – 100 ppmv / 0 – 1000 ppmv / 0 – 1% vol / 0 – 10%vol**
- Process temperature **0-550°C**
- **Real time sensing** – response time below 0.1 second
- **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

- Safety monitoring
- Emission
- Combustion control

Example Industries

- Power industry
- Chemical industry
- Steel industry

AIROPTIC™
REAL TIME GAS ANALYZERS

NH3/HCl ANALYZER

TECHNICAL SPECIFICATION

Application type: NH3/HCl+H2O CD 32.41.01_15-AAA

Analytical performance

NH3/HCl/H2O measurement range: 0-100 ppmv / 0-100 ppmv / 0 – 40 %vol
Detection limit (LOD): 0.1 ppmv*m / 0.1 ppmv*m / 0.1 %vol*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

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, NH3 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), 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: DN50

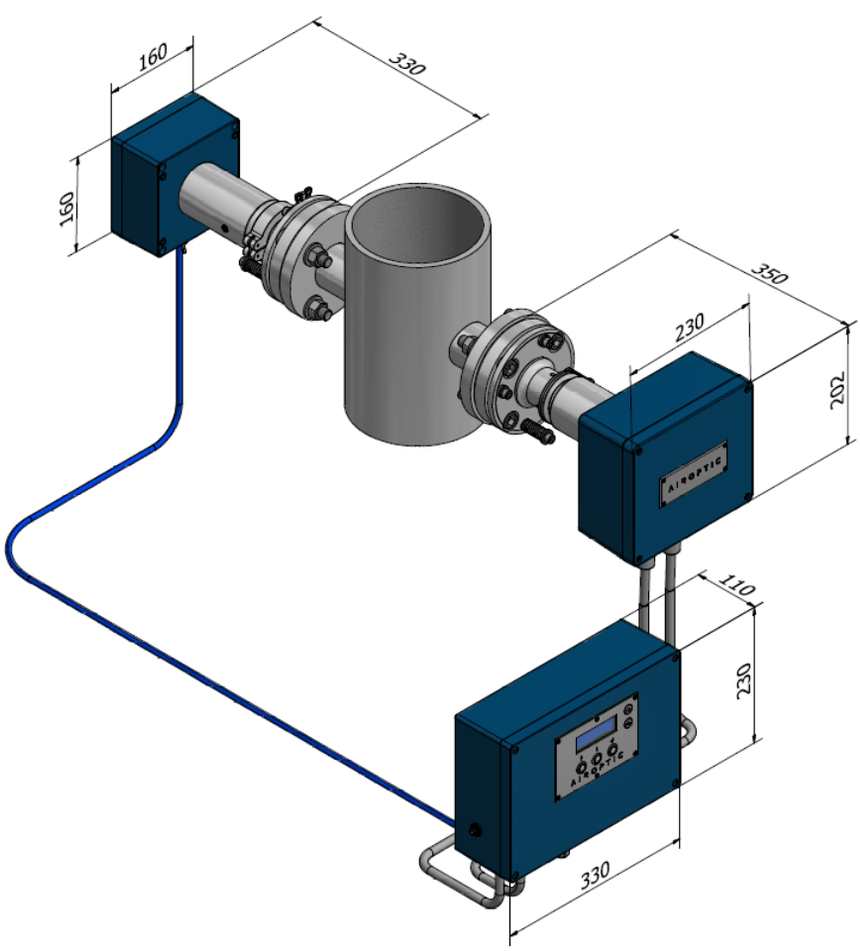
Process windows: Fused silica window, Helium leak tested and certified in accordance to EN1779:1999 norm.

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
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



TECHNICAL SPECIFICATION

AIROPTIC™
REAL TIME GAS ANALYZERS

NH3/HCl ANALYZER

Climatic conditions

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

Measurement conditions

Sample gas pressure:	ambient
Sample gas temperature:	150ºC to 220ºC

Process Purging (if necessary)

Purging gas flow rate:	5 – 50 l/min

Safety

Low Voltage Directive (LVD) 2014/35/EU

CE

- **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

Direct Sales Office:
Airoptic Sp. z o.o.
Ul. Rubiez 46 B, 61-612 Poznan, Poland
sales@airoptic.pl
www.airoptic.pl
tel. +48 61 6272 128

AIROPTIC™
REAL TIME GAS ANALYZERS