

## GasEye Cross Duct CO/O2 - *in-situ* CO+O2 analyzer



GasEye CO/O2 is a high performance *in-situ* combined carbon monoxide and oxygen 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

- O2 ranges from **0-1% to 0-100%**
- CO ranges **0-10 ppmv to 0-10%**
- Process temperatures **0-1200°C**
- Process pressures **0.5-2 bar**
- Possible to include methane as a third component
- **Real time sensing** – response time below 0.2 second
- **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 cali-
- Robustness – IP65 enclosure
- Insensitive to dust and smoke in the measured process (up to 50 g/m3)
- ATEX version available

### Example Applications

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

### Example Industries

- Power industry
- Steel industry
- Chemical industry

**Application type: CO+O2 CD 211.01.01-AAA****Analytical performance**

**CO/O2 minimum measurement range:** 0-10 ppm/0 – 1%

**LOD:** CO/O2: 0.2 ppm\*m/100 ppm\*m @STP and 3 sec response time

**Precision:** CO/O2: 0.2 ppm\*m/100 ppm\*m or 1% of the measured value, whichever is larger @STP and 3 sec response time

**Accuracy:** CO/O2: 0.2 ppm\*m/100 ppm\*m or 2% of the measured value, whichever is larger @STP 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 - 30

**Power consumption:** VDC) < 25VA

**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, CO concentration, O2 concentration, process transmission, 1 x AUX, e.g. methane) 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:** Sapphire window, Helium leak tested and certified in accordance to EN1779:1999 norm.

### Instrument dimensions:

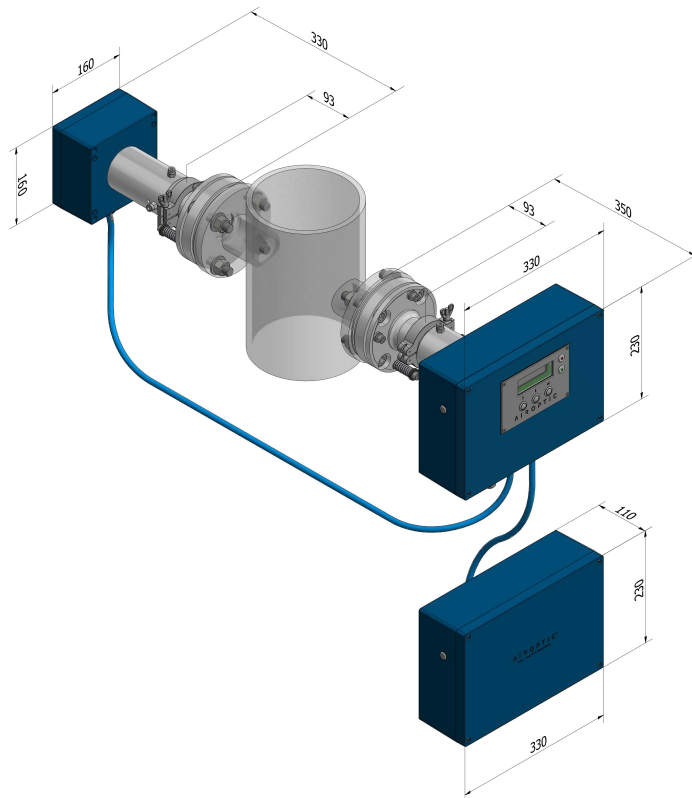
**Transmitter** W x H x L: 330 mm x 230 mm x 350 mm

**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): 15 kg  
 Central unit: 5 kg

**Materials:** Housing: aluminium  
 Coating: RAL5017  
 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 1200°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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