

GasEye Cross Duct O2 - *in-situ* oxygen analyzer



GasEye O2 is a high performance *in-situ* oxygen analyzer. Suitable for safety applications and process control. 24/7 continuous operation. No sample preparation. No zero drift. No field calibration. Low cost of ownership.

Features

- O2 ranges from **0-1% to 0-100%**
- Process temperatures **0-1200°C**
- Process pressures **0-10 bar**
- **Real time sensing** – response time below 0.1 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 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**
- **Safety monitoring**
- **Process control**

Example Industries

- Power industry
- Steel industry
- Chemical industry

Application type: Oxygen CD 11.01.01-AAA

Analytical performance

Oxygen min measurement range: 0 – 1% **Detection limit:** 100 ppm*m
@STP and 3 sec response time

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

Accuracy: 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/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

Dynamic performance

Warm-up time: approx. 5 minutes

Minimum response time (T90): 100 milliseconds

Electric inputs and outputs

In the standard Cross Duct instrument we provide the following electric I/O

Inputs:

2 x analog input, (4-20 mA, process temperature and pressure)

4 x digital input (24 VDC, 10 mA)

Outputs:

4 x analog output (4-20 mA, concentration and transmission)

4 x digital output (30 VDC, 0.5 A, NO/NC, relay)

Modbus RTU (optional)

Customer interface

User communication with the instrument is established by the following means:

1. Optional :
Local user interface (LUI) – LCD backlight display located on the transmitter housing lid.
2. Optional (Ethernet based):
 - WebServer application – web interface for real time data acquisition
 - Windows based program – GasEye logger for real time data acquisition

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:

Width x height: 330 mm x 230 mm
Length: 350 mm

Receiver:

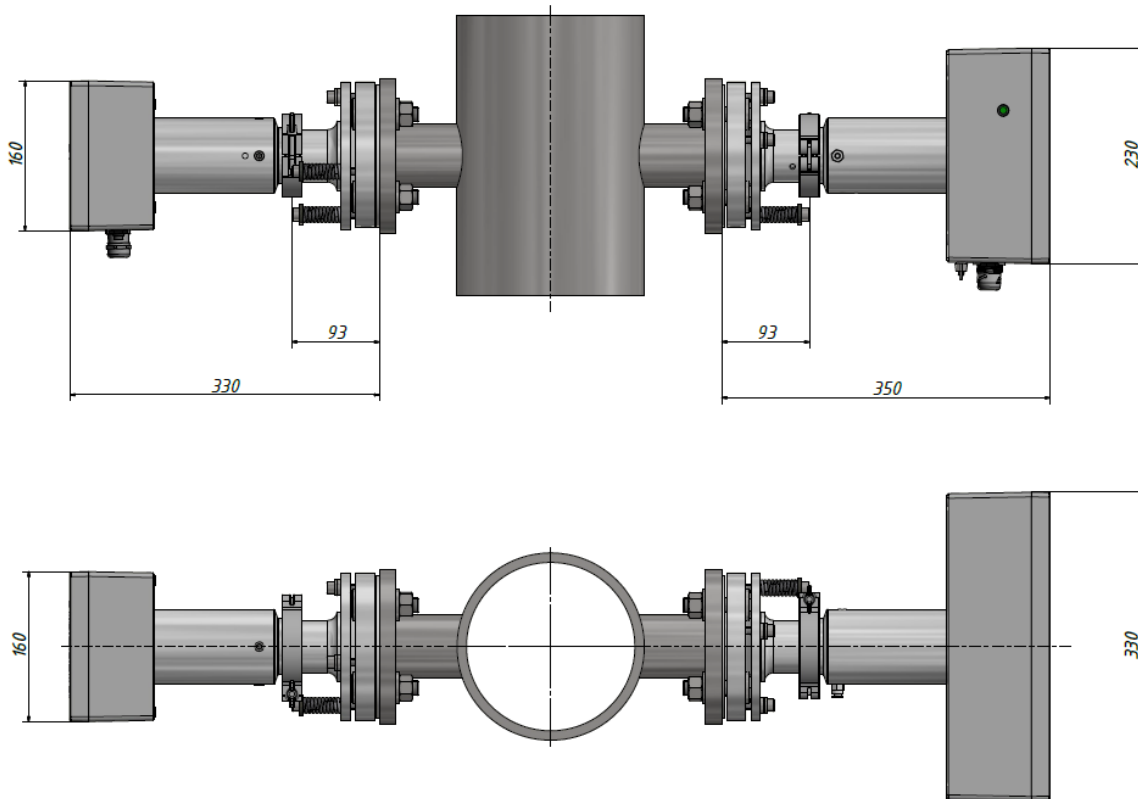
Width x height: 160 mm x 160 mm
Length: 330 mm

Weight:

Receiver unit: 13 kg
Transmitter unit: 15 kg

Materials:

Housing: aluminium
Coating: RAL 5017
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 atm
Sample gas temperature:	0°C to 650°C

Sensor and Process Purging (Nitrogen)

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

- 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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