



# NITRIC DIOXIDE GAS DETECTOR GE-NO2

## TECHNICAL INFORMATION

### Features

- high measuring stability and precision
- quick response and repeatability of values
- automatic reset when gas disappears
- good chemical resistance and optimal selectivity
- superior quality electrochemical cell
- breathing element with sintered inox filter
- easy substitution of the electrochemical cell (max 10 min)

### Applications

- road and rail tunnels monitoring
- industrial pollution monitoring
- environment monitoring
- combustion emissions control
- process control



The GE-NO<sub>2</sub> gas detector has been designed to be used in industrial environments and in all the places where a leakage or an abnormal concentration of **Nitric Dioxide (NO<sub>2</sub>)** gas can be dangerous for people and things.

The sensible element used by this detectors is a precision **Electrochemical Cell Sensor**.

The main advantages of this type of sensor are its stability, values repeatability and optimum selectivity to the NO<sub>2</sub> gas.

The sensor is based on the fuel cell technology and uses a patented capillary diffusion barrier. The detector is made of a IP66 protection index aluminum alloy enclosure containing the detachable electrochemical cell with gold terminals and the related electronics.

The breathing element of the detector is made of a special AISI 316 Inox Steel sintered filter with a microporosity of 30 micron, that gives an high protection from the outside pollution to both the electrochemical cell and the electronics.

This filter's usage plus the capillary diffusion barrier of the electrochemical cell and the

suitable electronics for supply, amplification and signal processing, permit to have a long life of the device.

However the sensing element should be substituted every 2 years (average life). Depending on working condition the electrochemical cell can last less or more than 2 years.

The sensor is very reliable and its performance is excellent. Moreover it is very resistant to corrosion and it's not influenced by temperature or humidity variations.

So the detector has a optimal response quality and a good signal stability for long periods of time.

Other interesting features of the detector:

- TEST possibility directly on the field using disposable gas cylinders certificated by an external laboratory
- response time when NO<sub>2</sub> gas is present shorter than 20 seconds
- easy and quick maintenance that can be performed by any operator



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- possibility to easily substitute the electrochemical cell when its life ends. Operator should only disconnect the old cell from its connector and insert the new one.

The GE-NO2 detector is equipped with 0-5V and 4-20mA outputs.

### TECHNICAL DATA

- power supply : 12 – 30Vdc (+/-15%)
- power consumption : 1W max
- measuring range : 0 – 20 ppm of NO2
- **analog outputs : 0 – 5V and 4-20mA**
- resolution : 0,1 ppm ( at 20°C)
- temperature : -25 +55 °C
- humidity : 15 – 95% RH
- pressure limit : 900 – 1100 mBar
- repeatability : 1%
- linearity : constant until +/-5% of the full scale (20ppm)• response time : <20 sec.
- stabilization time : > 20 sec
- average sensor life : 2 years
- enclosure : Aluminium alloy – Optional : Stainless steel AISI 304/316
- protection index: IP66
- designed according to the standards : EN50054 – EN50057
- sensor certificated to the standards: BS5750Pt3 – ISO9002 – EN29002