

## Zirconia based oxygen analyser



This analyser has the unique characteristic that enables the use in process with extremely wide limit of temperature. The probe carries on a real O<sub>2</sub> in situ measure with fast response time and there is no flue gas, that circulates inside the probe. The analyser can be used in process with high particulate content and aggressive atmosphere, like combustion and postcombustion chamber of incinerators of domestic and industrial waste.

### Probe mod.4170

Based on a fully stabilized zirconia element, the probe is provided of a special heater of the zirconia cell that enables the use in process with temperature from 100 to 1400 °C.

The heating element is a thick platinum wire which rises the temperature of the cell to 580 °C. A thermocouple measures the temperature of the probe. If the temperature of the probe due to the combustion rises above 580 °C, the electric power is cut off and the electronic unit compensates the O<sub>2</sub> value considering the real temperature of the probe.

The materials used for the construction of the wet parts of the probe are high purity ceramics and platinum.

## Electronic converter mod. B770

Housed in a waterproof metal box with glass door, the electronic converter is composed by two parts:

- the microprocessor based electronic circuit, that supplies digital O<sub>2</sub> reading; 4-20 mA output, alarms, etc.
- the power group with regulation of the power of the electric heater.

The high brightness led display continuously exhibits the measured oxygen (as ppm if the oxygen content is < 0,2% or as percentage if > 0,2%). By pressing a button, the temperature of the probe and the impedance of the cell can be read on the display.

The analyser must be completed with reference and calibration pneumatic box Mod. 60 or 62 (see specific catalogue).

## Technical Specifications

- Measuring range: oxygen 0,0010 ppm ÷ 25% volume
- Precision: ± 3% of the theoretical value or 0,5% O<sub>2</sub> whichever is greater
- Stability: within 1%
- Response time: zirconia cell < 0,1 sec., whole system < 15 sec. 90%
- Temperature of the process: 100 ° - 1400 °C
- Temperature of terminal head: < 150 °C
- Temperature of electronic: - 20 ° / +50 °C
- Analogical output: linear settable on one of the following fields:
  - 10 - 2000 ppm O<sub>2</sub>;
  - 0,0 - 10% O<sub>2</sub>
  - 0,0 - 25% O<sub>2</sub>
- Dumper: via software. Average of the oxygen value in times settable from 0 to 900 sec.
- Alarms: O<sub>2</sub> max. and min. on a field 0-26% with resolution of 0,1 or 10-2000 ppm with resolution of 1 ppm
- Power supply: 230 and 115 V. ± 15%, 50/60 Hz., 500 VA max.
- Pneumatic connections for reference and calibration: compression fittings for 4x6 mm tubing.
- Probe dimensions:
  - Available lengths of the probe 550, 650, 750 mm under flange
  - Diameter of wet part mm 38
  - Connection to the process: flange PN10 DN50
- Converter dimensions: mm 500x400x250 - IP55
- Probe weight : kg 7
- Converter weight: Kg 15

FER STRUMENTI srl

Italia - 20038 SEREGNO (MI) - Via Ripamonti, 58

Tel. +39 0362 231203 - Fax +39 0362 330349

[www.fer-strumenti.com](http://www.fer-strumenti.com) - [ferstrumenti@fer-strumenti.com](mailto:ferstrumenti@fer-strumenti.com)