

COMET4.0

COMBUSTION CONTROL
SYSTEM - CO-O2-T



Ministerial Decree 152/2006 and subsequent amendments and additions (art. 294) provides, for all fuel systems with a potential greater than 1 MW (maximum thermal input), combustion control (O2-CO-T) and automatic regulation of combustion air.

FER Strumenti has designed for this purpose an analysis system that performs the required measurements and uses the following modules:

- Oxygen measurement with hot zirconium oxide cell (700 °C)
- CO measurement with NDIR infrared analyzer
- Flue gas temperature measurement with type K thermocouple
- Active 4-20 mA outputs

- + New version with infrared sensor with life not dependent on the quantities measured
- + Easy installation
- + Ease of use and long life of the measuring elements
- + Reduced maintenance and management costs
- + Extraction with diaphragm pump without maintenance

Dimensions



400 x 600 x 200 mm depth



Weight 35 kg

Description

The semi-extractive analysis system is composed of:

- Stack fixing flange;
- Integrated sampling probe with flue gas temperature measurement;
- Sample collection with cooling via Peltier effect refrigerator.

For oxygen measurement, a zirconium oxide analyzer is provided, which ensures a fast response time, necessary for the automatic regulation of the combustion air, as prescribed. The automatic regulation of the combustion air can be managed by an external regulator, not included, with a set point that can be set over the entire measurement range: 0–25% oxygen by volume.

For the measurement of Carbon Monoxide (CO), an NDIR infrared sensor is used, designed for combustion control with a high range in order to guarantee a measurement even in cases of transient.

The temperature measurement is carried out by the type K thermocouple installed inside the sampling probe. This solution does not require a second hole and relative stack nozzle. A converter with a programmable measurement range generates the 4-20 mA analog signal

Applications

Any combustion system, respecting maximum temperature and dustiness.

Accessories

- Data logger with HMI and PC software systems for data acquisition and processing
- Vortec® tube cooling system



Certifications and markings



CE according to EN 61010-1 and EMC
according to EN 50081 and EN 50082

Technical specification

Measured quantities	Carbon monoxide (CO), O ₂ , Flue gas temperature
Measuring ranges	CO: 0-30000 ppm O ₂ : 0-10% or 0-25% T: 0-500 °C or other to be agreed
Accuracy	CO: within 3% of full scale O ₂ and T: within 1% of full scale
Repeatability	CO: within 3% of full scale O ₂ : within 1% of full scale
Response time	Within 30" at 90% for step variation
Sample probe length	300 mm - 500 mm - 1000 mm
Process connection	Flange DN80 PN6
Housing	IP54 ventilated watertight cabinet
Power supply	115 or 230 Vac, 200 VA, 50 Hz
Operating ambient temperature	5-45 °C
Operating ambient humidity	0% RH non-condensing
Process conditions	max 700°C, dustiness 10 mg/Nm ³

FER STRUMENTI S.r.l. reserves the right, without any notice, to make any modifications needed for improving the product.