

OXYGEN ANALYZER

MOD. E705



The analyzer is based on an yttria stabilized zirconia cell that guarantees some important operating advantages: the absence of cross sensitivity with other gases due to the oxygen vacancy generated in the zirconia substrate is one of the most important features. Oxygen is therefore the only gas to which the cell is sensitive

Sample flow variations do not affect O₂ measurement thanks to the peculiar design of the analysis chamber.

The analyzer does not require regular calibrations since it is completely temperature compensated.

The measuring principle with no moving parts needed ensures a very long duration without any service.

The measuring range by volume is very wide and diagnostic are transmitted with analogical, serial and digital output. Optionally the Hart protocol is available.

This very tough instrument is ideal to be used in an emission monitoring system. It cannot be used for measuring O₂ in a gas that contains combustibles, since the zirconia cell is warmed up to high temperature.

The instrument includes an alarm for lack of flow, a suction pump and a flow-meter with needle valve for sample and test gases flow regulation.

The analyzer is equipped with a completely automatic electrode regeneration system. The start of the regeneration sequence is activated by a button on the back of the instrument and lasts a few minutes.

TECHNICAL SPECIFICATIONS

Analyzed gas	Oxygen in gas phase
Measuring principle	Stabilized zirconia
Measuring range	1 ppm – 25% O ₂ by volume
Accuracy	+/- 0.5% of theoretical value or 0.1% O ₂ whichever is the greater +/- 0.5% of full range in the ppm range (2000 ppm)
Repeatability	Within 1%
Response time (90%)	< 10 sec with 3 l/min flow
Sample gas flow	0.5 – 3 l/min
Flow adjusting	Needle valve with flow-meter inserted in the instrument front side with alarm contact of lack of flow in pump version. Flow-meter without needle valve adjustment for version without pump
Analog outputs	4 – 20 mA isolated, max load 500 ohm or 0 – 10 V, 10 mA linear on one of the following selectable ranges: 0 – 1999 ppm; 0 – 5%; 0 – 10%; 0 – 21%; 0 – 25%; if the value is not valid the output is switched to 2 mA.
Serial outputs	Mod Bus RTU on RS 485
Options	Hart protocol
Alarms	Potential free for: high O ₂ , low O ₂ , not valid measurement, service, lack of flow. For all: 250 V, 1 A max.
Dumper	Time constant selectable from 0 and 900 sec
Power supply	230 e 115 V AC +/- 10% 50/60 Hz 300 VA max
EMC	According to EN 50081 e 50082
Electrical safety	According to EN 61010 – 1
Temperature limits	0 – 40°C
Humidity	< 90% non-condensing
Storage temperature	-40 / +80°C
Sample gas input and output	mm 6x4 tubing
Test gas input	mm 6x4 tubing
Housing	Rack 19" 3 units IP20
Dimensions	mm 450x132, mm depth 380
Weight	9 Kg approx.
Pump	Diaphragm 3 l/min., max. 100 mm. H ₂ O. Excludable
Certification	QAL 1 according to EN 14181 and EN 14956 from TÜV Rheinland - EN 15267-3 MCERTS. EAC Conformity Declaration according to TR-CU-004 e TR-CU-020 directives. Pattern Approval Certificate (PAC) for Russian custom union.

FER STRUMENTI srl
 Italia - 20831 SEREGNO (MI) - Via Ripamonti, 58
 tel. +39 0362 231203 - Fax +39 0362 476764 - 330349
 www.fer-strumenti.com  ferstrumenti@fer-strumenti.com