

## PCF ELETTRONICA Srl

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VOC MONITORING

### MOD. 2005, H.T. FID, TCOV PORTABLE MONITOR

PORTABLE MONITOR OF TOTAL HYDROCARBONS (TCOV) AT HIGH TEMPERATURES  
MADE ACCORDING TO THE UNI EN 12619: 2013 STANDARD

Topics:

- FID Flame ionization detector, heated to 180 ° C.
- Built according to an industrial concept.
- Easy to use and maintain.
- High response speed, from 0 to 90% of the scale in 1 second.

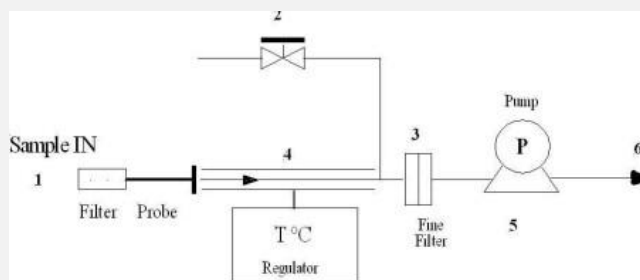
#### FID DETECTOR

The FID detector is a 'carbon atom counter'. The sample is sent to a micro flame fed with hydrogen and air. The organic carbon contained in the measurement gas is split into carbon ions and hydrogen ions.

The H ions bind to the oxygen in the air generating water, while the C ions that are formed as a result of the oxidation  $C_x = CO$ , are proportional to the concentration of hydrocarbons present; moving in an electrostatic field (anode and cathode) they are attracted to one of the polarities, triggering an ionic current proportional to the concentration of the sample.



Operator with Portable Monitor



Schema del campionamento a caldo

#### WORKING PRINCIPLE

The sample is taken, by means of a hot head pump (180-200 C °) in the analyzer, through a variable length probe equipped with a ceramic filter placed on top and a heated PTFE tube at a temperature of 150 - 200 ° C.

A second heated filter is placed to protect the analytical circuit for introducing the sample to the detector. This analyzer requires only hydrogen gas for its operation as the comburent FID air is generated directly by the analyzer itself. It is equipped with an internal Data Logger with color display that displays the traces of the analytical diagrams, the working temperatures, the status of the analyzer and the diagnostic alarms. The outputs can be connected to peripherals via serial port or USB port. The acquired data, which can be exported in Excel format, are stored on compact flash memory and then processed and processed for historical archives, average trends, etc.

## TECHNICAL SPECIFICATIONS

The specified characteristics were obtained experimentally.

- Detector	: F.I.D. Flame Ionization Detector at High Temperature (180°C).
- Measuring range	: 0 – 10.000 mg/m <sup>3</sup> .
- Measuring scales	: 0-100/1000/10000 mg/m <sup>3</sup> . others possible, e.g. 0- 20/200/2000 mg/m <sup>3</sup> .
- Back Ground Noise	: ± 0,2 % of f.s.d.
- LDL (Lower Detectable Limit	: ± 0,4 % of f.s.d.
- Precision	: ± 1 % of f.s.d.
- ZERO Signal Variation (24 h)	: ± 1 % of f.s.d.
- SPAN Signal Variation (24 h.)	: ± 1 % of f.s.d.
- Response Time	: 1 sec from 0 to 90 % of f.s.d.
- Sample Flow Rate	: 1,000 ml/min.
- Circuit Sample Temperature	: 180 – 200 °C
- Working Temperature	: 5 – 40 ° C
- Display	: Colour 5,5" TFT-LCD (320x200 pixels).
- Allarmi	: 2 sets position in the selected range
- Servizi	: Hydrogen (H <sub>2</sub> ) IP, 28 cc/min : Oure Air UPP, 280 cc/min, from internal generator.
- Analogue Outputs	: optional : 0 – 10 Volt and 4-20 mA
- Digital Outputs	: RS-232, optional RS 485, USB
- Power Supply	: 230V 50Hz (possible 110 Vac 60Hz).
- Dimensions	: 19" Rack Module 390x290x 230 mm (15,4"11,5"x 9,1" WxHxD).
- Weight	: 12-15 Kg.

It is the smallest of the 2000 series and finds wide applications both in the control of chimneys, process efficiency and environmental analysis for medium-high concentrations.

The instrument is designed to be easy to use, to require easy and rare maintenance. All component parts are industrial type and readily available.



Mod. 2005 complete to work:  
- S.S. Sampling Probe  
- Heated line  
- Mod. 2005



Open instrument



Heated Line and Disassembled Sampling Probe

## CODICE

XXX - XXXX  
Option Hydride Source  
041 - 5011

042 - 1001  
042 - 1002  
XXX - XXXX  
XXX - XXXX

## DESCRIZIONE

Mod. 2005, COV/THC Portable Hot FID monitor  
In built Hydrogen Generator  
10 l Calibration Gas Cylinder with Precision Pressure Reducer  
Electrically Heated Sampling Line  
Electrically Heated Line Temperature Controller  
Mod.2005 Consumables Kit  
Mod.2005 Spare Parts Kit