PCF ELETTRONICA Srl

PCF YOUR PARTNER IN

COV MONITORING

MOD. 110 E, (M./H. T.) TVOC ANALYSER

TOTAL HYDROCARBON ANALYZER (TCOV) AT MEDIUM / HIGH TEMPERATURES

Topics:

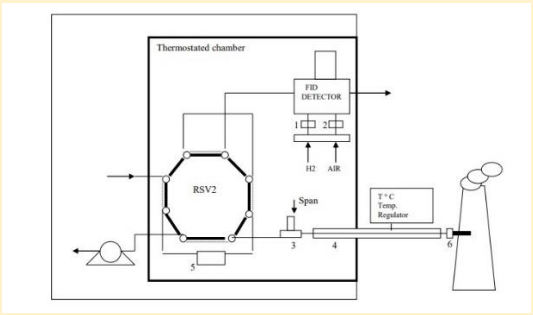
- FID Flame ionization detector, heated to 180 ° c.
- Programming interview from the display
- Integrated self-diagnosis system.
- Discrete sampling reduces maintenance, corrosion and the possibility of condensation.

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 Cx = 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.

Pannello frontale del Mod. 110 E

Display frontale



Installation scheme of Mod. 110 E

WORKING PRINCIPLE

The PCF analyzer Mod. 110 E was designed and built for the continuous determination of organic compounds (SOV-COV-TOC),
for samples at room temperature or medium-high-temperatures and ensure low maintenance.

A pump (preferably an ejector) passes the sample and fills a loop which at each cycle (<30 s) is transferred to the FID (Flame Ionization Detector). The sampling from the chimney takes place through a probe complete with a ceramic filter with a porosity of 3µm and a hot transport tube (temperature 150 - 200 ° C). A second sintered steel filter, placed upstream of the pump, provides for a further safeguard of the analytical circuit.
The analyzer is equipped with a touch screen display for dialogue with the operator, continuously providing operating data, statuses, alarms, as well as storing the collected data.
The acquired data can be downloaded via the RS 232 output and / or USB flash memory.
Analog outputs are also available.
An automatic device interrupts the flow of hydrogen in the event of the flame extinguishing.

TECHNICAL SPECIFICATIONS

The specified characteristics were obtained experimentally.

- Detector	: FID (Flame Ionisation Detector) at high temperature (180°C).
- Measuring range	: 0 – 10.000 mg/m^3.
- Measuring scales	: 0-100/1000/10000 mg/m^3. other possible, e. g. 0 - 20/200/2000 mg/m^3.
- Backgroud noise	: ± 0,25 % of f.s.d.
- LDL (Lower Detectable Limit	: ± 0,5 % of f.s.d.
- Precision	: ± 1 % of f.s.d.
- ZERO Signal Variation (24 h)	: ± 0,5 % of f.s.d.
- SPAN Signal Variation (24 h.)	: ± 1 % of f.s.d.
- Response time	: < 30 s, according to its loop sampling.
- Sample Flow Rate	: 500 ml/min.
- Sampling Circuit Temperature	: < 100 – 120 °C
- Working Temperature	: 5 – 40 °C
- Display	: 2 lines x 40 characters.
- Alarms	: High Concentration : Flame OFF Automatic interception of H_2, when flame OFF.
- Services	: Hydrogen (H_2) IP, 30 cc/min : Pure Air UPP, 300 cc/min : Service Air: > 5 Bar (>72,5 Psi)
- Analogue Outputs :	: 0 – 2 Volt e 4-20 mA
- Digital Output	: RS-232 USB
- Power Supply	: 230V 50Hz (possible 110 Vac 60Hz).
- Dimensions	: 19” Rack Module 483x 185 x 450 mm (19”x7.3”x17.7” WxHxD) .
- Weight	: 15 Kg.

Due to its injection system, a loop, the instrument requires little maintenance and Avoid any possible formation of condensation.

The low quantity of treated sample reduces corrosion and increases the Response Factor value.

CODICE	**DESCRIZIONE**
085 - 000X	Mod. 110 E, COV/THC Hot FID monitor.
052 - 1001	Hydrogen Generator.
048 - 0001	Mod. 9588 UPP Air Generator.
041 - 5011	10 l Calibration Gas Cylinder with High Precision Pressure Reducer
042 - 1001	Electrically Heated Sampling Line
042 - 1002	Electrically Heated Sampling Line Temperature Controller
085 – 010X	Mod.110 E Consumables Kit
085 – 010X	Mod.110 E Spare Parts Kit

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