

PCF ELETTRONICA Srl

PCF YOUR PARTNER FOR THE COV MONITORING

MOD. 530/NR/FID/BTEX

BTEX, AROMATIC HYDROCARBON ANALYZER (BTEX = Benzene, Toluene, Ethyl-Benzene and Xylenes)

- FID Flame Ionisation Micro Detector.
- The analysis is displayed in real time on the screen.
- Integrated auto diagnostic program.
- Easily integrated in automatic systems.

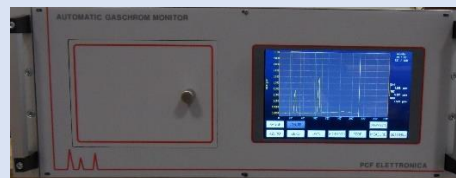
FID DETECTOR

The FID detector is a 'carbon atom counter'.

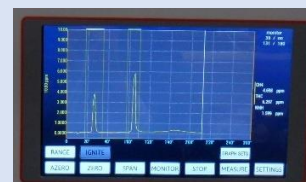
The sample is sent to a micro flame fed with hydrogen and air. The organic carbon contained in the measurement gas is split into carbon ions and hydrogen ions.

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.

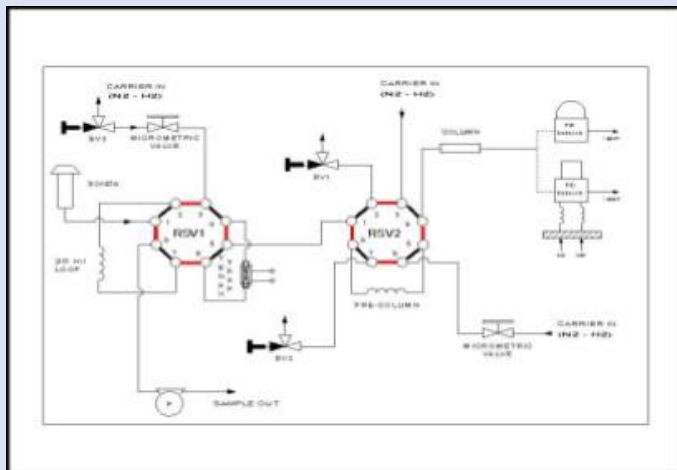
The FID detector, mounted BTEX Mod. 530 /NR/FID, is a fully automatic industrial rack gas chromatograph (19 ") for the measurement of traces of Benzene, Toluene, Ethyl-Benzene and Xylenes (or other compounds of the mononuclear family) in ambient air.



Pannello frontale del Mod. 530/NR/BTEX



Display con analisi in corso



WORKING PRINCIPLE

The analysis includes an entrapment stage (Tenax GR) of the aromatic compounds contained in predetermined quantities of air and subsequently desorbed and separated in a capillary type column (wide bore, 0.5 mm i.d., internally covered inside with DB-WA ID 53 Film).

Specially developed firmware handles sequences, peak integration, concentration calculations and final data management. at the end of each measurement cycle, via RS 232 The data can be transferred to a PC for further processing and reports. The same data is available in analog output for each parameter.

TECHNICAL SPECIFICATIONS

The below indicated technical specifications were experimentally obtained.

- Measuring range	: 0-1.000 ppbV Benzene
- Measuring scales	: 6 possible scales starting from 0-5 ppbV Benzene. For instance: 0-5/10/20/50/100/200.
- Measuring units	: ppmb (or $\mu\text{g}/\text{m}^3$)
- Background noise	: < 0,05 $\mu\text{g}/\text{m}^3$ Benzene.
- Lower Detection Limit (LDL)	: $\pm 0,1 \mu\text{g}/\text{m}^3$ Benzene.
- Zero signal variation VZ12 (12 hours)	: $\pm 0,2 \mu\text{g}/\text{m}^3$ Benzene.
- Zero signal variation VZ24 (24 hours)	: $\pm 0,4 \mu\text{g}/\text{m}^3$ Benzene.
- Measured signal variation VM20	: $\pm 0,2 \mu\text{g}/\text{m}^3$ Benzene.
- Measured signal variation VM80	: $\pm 0,4 \mu\text{g}/\text{m}^3$ Benzene.
- Precision at 20% of the range P20	: $\pm 0,2 \mu\text{g}/\text{m}^3$ Benzene.
- Precision at 80% of the range P80	: $\pm 0,4 \mu\text{g}/\text{m}^3$ Benzene.
- Measuring cycle	: 15 minutes (may be reduced).
- Response time	: 15 minutes (may be reduced).
- Linearity	: better than 1 % of full scale deflection (f.s.d.).
- Sample flow rate	: 500 ml/min.
- Working temperature (suggested)	: 0 – 40 °C.
- Display	: 640 x 200 pixel colour LCD graphic display; touch screen with analysis displayed in real time.
- Analogue Output	
Benzene	: 0-10 Vdc/4-20 mA.
Toluene	: 0-10 Vdc/4-20 mA.
Ethyl-Benzene	: 0-10 Vdc/4-20 mA.
Xylenes	: 0-10 Vdc/4-20 mA.
- Serial Output	: RS 232 (9 pin connector).
- ZERO drift	: Automatically compensated.
- Zero/Span, check/calibration	: From front panel or remote control.
- Services	
Hydrogen (H ₂)	: 30 ml/min.
FID Air	: 300 ml/min.
Nitrogen (N ₂)	: 30 ml/min.
Service Air	: 4.5 Bar (63 psi).
- Suggested calibration gas cylinders	: 60-80% of the selected scale.
- Dimensions	: 480x250x560 mm (19"x10"x22", WxHxD), 5U.
- Weight	: 20 Kg.
- Power Supply (to be specified in order)	: 230/110 Vac 50/60 Hz.
- Consumption	: 500 VA.

CODICE

041-1001
041-1002
048-0001
052-1001
052-1002
041-1011
041-1021
041-1022

DESCRIPTION

Mod. 530/NR/FID 220 Vac 50 Hz BTEX
Mod. 530/NR/FID 110 Vac 50 Hz BTEX
Mod. 9588 ultrapure air generator
Hydrogen generator
Nitrogen generator
Calibration gas cylinder, 10 l with pressure reducer
Expendables kit
Spare parts kit