PCF ELETTRONICA Srl

PCF YOUR PARTNER IN

VOC MONITORING

MOD. 529/NR/T

TOTAL VOC MONITORING ANALYSER

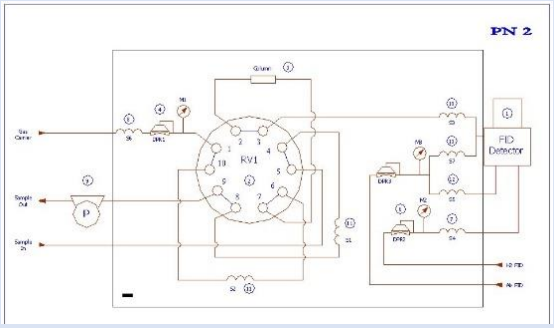
- FID Flame Ionization Detector.
- Analysis progress shown on the display.
- Integrated auto diagnostic system.

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.

Mod. 529/NR/T Front Panel

Video Display (details)



WORKING PRINCIPLE

The automatic PCF Elettronica analyzer Mod. 529 /NR/T performs the continuous analysis of the total VOC BY fid DETECTOR. A pump downstream of the analyzer fills a capillary with a known volume of 0.6 cc. which is brought to atmospheric pressure to obtain repeatable sampled volumes and which is introduced by pressure into the FID detector, to measure the quantity of total hydrocarbons (THC = TVOC).
An INTEL industrial microprocessor oversees the management of all the analyzer functions and the processing of the analysis data, including:

- Control of operational parameters and alarms.
- Check that the instrument is fully operational.
- Automatic ignition of the flame.
- Activation of alarms in case of flame extinction or pressure drop in the H_2 circuit.

TECHNICAL SPECIFICATIONS

All the technical specifications outlined were experimentally obtained.

- Measuring range:	0 – 10.000 ppmV TVOC.
- Programmable measuring scales:	6 scales possible as from 0-5 ppmV TVOC. E.g. 0-5/10/50/100/500/1,000 ppmV (or mg/m^3).
- Measuring units :	
- Background noise	
R(0)	: 0,01 ppmV.
R (80% f.s.d.)	: 0,01 ppmV.
- Lower Detectable Limit (LDL)	: 0,02 ppmV.
- Zero signal variation VZ12 (12 hours)	: ± 0,01 ppmV.
- Zero signal variation VZ24 (24 hours)	: ± 0,02 ppmV.
- Measuring signal variation VM20	: ± 0,01 ppmV.
- Measuring signal variation M80	: ± 0,02 ppmV.
- P20 Precision	: ± 0,02 ppmV.
- P80 Precision	: ± 0,03 ppmV.
- Measuring cycle	: 30 s (shorter if needed).
- Linearity	: > 1 % (f.s.d.).
- Sample flow rate	: 500 ml/min.
- Working temperature	: 0 – 40 °C.
- Display	: 640 x 200 pixel LCD color graphic display; touch screen with analysis seen in real time.
- Analog outputs	: 0-10 Vdc/4-20 mA .
- Serial output	: RS 232 (9 pin connector)
- ZERO drift	: Automatically compensated
- Zero/Span check	: From front panel (or remote contact)
- Services	
Hydrogen	: 30 ml/min.
FID Air	: 300 ml/min.
Service	: 4.5 Bar (63 psi) to be supplied locally.
- Suggested calibration gas cylinder	: 3 ppmV CH4 + 1 ppmV C3H8, in AIR..
- Dimensions	: 480x190x560 mm (19"x7.6"x22"), WxHxD.
- Weight	: 15 Kg.
- Power Supply (specify in order)	: 230/110 Vac, 50/60 Hz.
- Consumption	: max 300 VA.

CODICE DESCRIZIONE,

41-019XX	**Mod. 529/NR/T** Total TCOV (THC) Analyser.
052-1001	Hydrogen Generator.
048-0001	Mod. 9588 UPP Air Generator.
041-1023	Calibration Gas Cylinder.
041-1101	Mod. 529/NR/T consumables kit.
041-1111	Mod. 529/NR/T Spare Parts kit.

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