FID Total Hydrocarbon And total VOC Analyzer Model HC51M

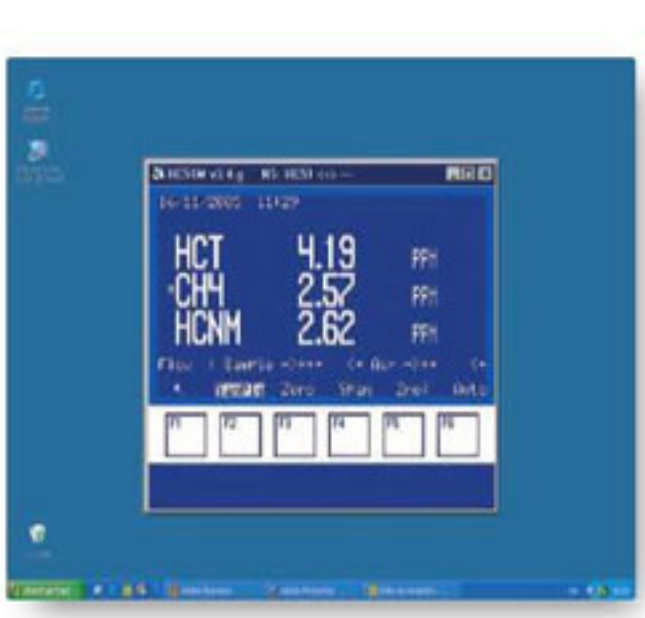
Low level monitoring of Total VOC's from ppb level to 1000 ppm

Two versions available :

- THC : Total hydrocarbon
- THC / CH_4 /nMHC : Total hydrocarbons, methane and non-methane

Reduced maintenance

- Easy access to all components
- Traceability of parts and consumables
- Remote maintenance and troubleshooting



Remote Control

Applications :

- Ambient air monitoring
- Monitoring around industrial sources emitting VOCs
- Continuous emissions monitoring (CEM) by dilution extraction
- Measurement of impurities in industrial gases

Main features :

- High sensitivity, stable, linear FID detector (drift-free operation)
- Temperature controlled pneumatics
- Graphic Liquid Crystal Display (LCD)
- Interactive menu driven software
- Synoptic flow diagram display
- Remote troubleshooting diagnostics
- Auto-ranging
- Automatic response time
- Real time calibration graph
- User programmable ranges and average times
- Built-in serial interface (RS232/RS422)
- Built-in storage of the last 1500 average data
- Full remote emulation of the analyzer
- Field proven technology and design

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Specifications :

- Ranges : 0-10 / 50 / 100 / 500 / 1000 ppm or customrange selectable.
- Autoranging between two-user specified ranges.
- Noise : 0.025 ppm.
- Lower detectable limit : 0.05 ppm
- Response time : automatic and programmable
- Zero drift : 0.1 ppm/ week.
- Span drift : less than ± 1 %/ week
- Linearity : ±1 % of F.S.
- Total sample flow rate : 80 l/h
- Analysiz sample flow rate : 4.8l/h
- Averaging time : programmable from 1 to 9999 min
- Data storage : last 1500 average values
- 3 selectable independent outputs : 0-20 mA / 4-20 mA / 0-1 V / 0-10 V
- Digital output : RS232C / RS422
- Built-in sample pump
- Chassis : 19" rack mountable, 4U
- Dimensions : 581 mmx 483 mm x 177 mm (L x Wx H) 22.9" x 19" x 7"
- Weight : 27 kg (59.4 lbs)
- Power : 115 V, 60 Hz or 230 V, 50/ 60 Hz, 450 VA
- Operating temperature : 10-35° C
- Required utilities :
  - Hydrogen : 0.04 lpm @30 psig (2 bars)
  - Fuel air : 0.4 lpm @30 psig (2 bars)

Options :

- Built-in zero air generator : to supply hydrocarbon-free air for fuel air needs and zero checks (requires an external air compressor)
- External air compressor : to be used with the zero air generator
- Built-in nMHC converter module : used to selectively oxidize all hydrocarbons except methane
- N55 hydrogen gas cylinder or generator
- Automatic fluid circuit purge for high humidity conditions
- Special version for use in pure O2 or CO2 sample

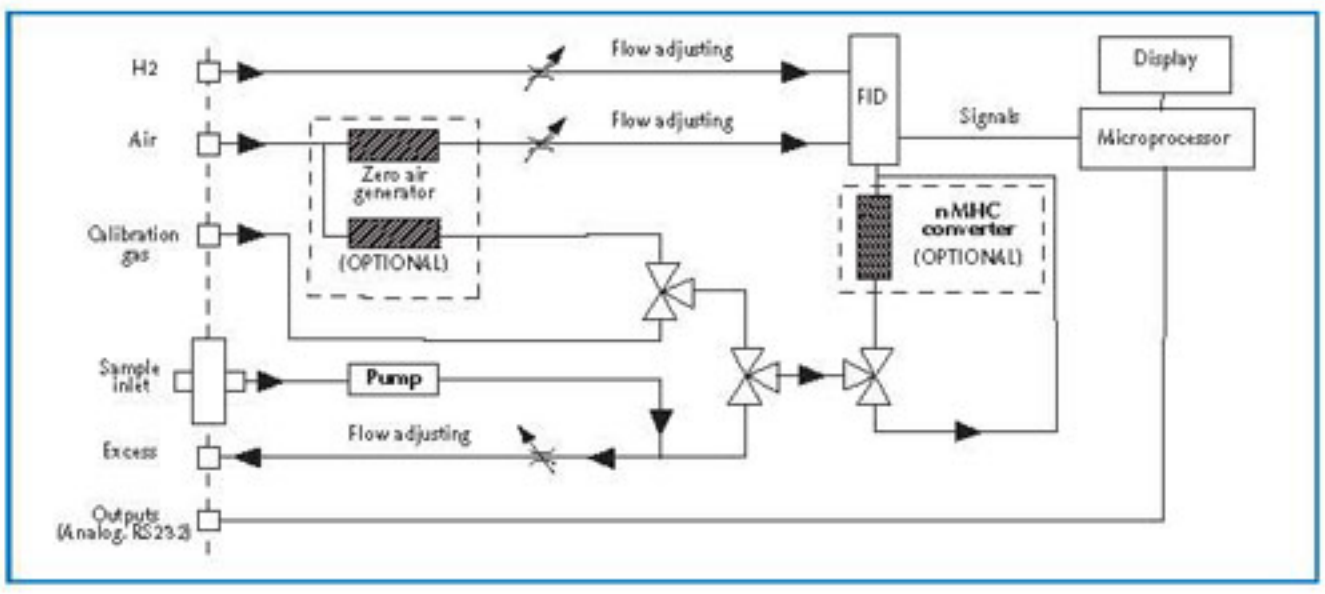
Principle of operation :

The analyzer uses the principle of flame ionization detection (FID) to measure the concentration of hydrocarbons in air.
The ionization mechanism of organic substances in the flame is carried out in two phases :

- Cracking of organic compounds in the center zone of the flame and forming of CH^1, CH_2^1, CH_3^1 radicals.
- Chemical ionization in contact with oxygen according to reaction : $CH^1 + O \rightarrow CHO^+ + e^-$.

The analyzer's electrometer measures the current generated by the ionization of the carbon atoms in the flame fueled by a hydrogen/air mixture.
To distinguish between "total" and "non-methane" hydrocarbons, an optional selective converter oven is used to oxidize all the non-methane hydrocarbons.
The temperature controlled pneumatics prevents condensation.
The flow is automatically adjusted and the instrument is provided with automatic ignition of the flame in case of flame out or power failure.

The HC51M is delivered with built-in zero/span solenoïd valves to be connected to an external source of gas. Zero/span checks can be performed manually, automatically (programmable cycles) or via remote control (dry contact, RS232). Real time calibrationgraphs can be displayed during span check operation.
Multi-tasking software, combined with the LCD graphic display, gives the user easy and fast access to the instrument set-up, status and maintenance parameters.
Real-time synoptic, auto-diagnostic and maintenance data screens can be displayed while the instrument is operating.
The automatic response time function determines the measurement integration time best suited for the measurement of hydrocarbons concentrations.
The HC51M includes data collection and logging features and stores the average values.
The built-in RS232 interface and digital communication protocol allow full PC instrument emulation for remote control and troubleshooting as well as a common serial link, thus achieving a fully digital air pollution monitoring station.



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