

## Total Hydrocarbons FID Analyzer

AIR QUALITY MONITORING SYSTEMS

Using a proven flame ionisation detector (FID), the analyzer model HC51M measures ambient air hydrocarbons (THC, CH<sub>4</sub>, nmHC) in the ranges of 0-1000ppm.



### SPECIFIC FEATURES:

- Available in 2 versions for the simultaneous and continuous measurement of of:
  - THC (Total Hydrocarbons)
  - THC / CH<sub>4</sub> / nmHC (Total Hydrocarbons, methane and non-methane)
- Measurements in the range of 0-1,000 ppm
- Graphic Liquid Crystal Display (LCD)
- Interactive menu driven software
- Auto-ranging
- User programmable ranges and time averages
- Built-in storage of 1 year average data
- Full remote emulation of the analyzer
- Field proven technology and design
- Option: internal zero air / external hydrogen generator, internal nmHC convertor / fluid drain
- High sensitivity, stable, linear FID detector
- LCD display with synoptic flow diagram display, real time calibration graph
- Built-in serial interface (RS232/RS422)



Example of turnkey mobile air quality monitoring station manufactured by ENVEA

### MAIN APPLICATIONS:

- > Continuous indoor and outdoor air quality monitoring
- > Stationary and mobile AQMS laboratories
- > Industrial fence-line and field monitoring
- > Measurement of impurities in industrial gases (O<sub>2</sub> or CO<sub>2</sub>)
- > Continuous emissions monitoring (CEM) by dilution
- > Measurement Campaigns and Monitoring Studies...

# Methane, total hydrocarbons & non methanic hydrocarbon FID Analyzer **HC51M**

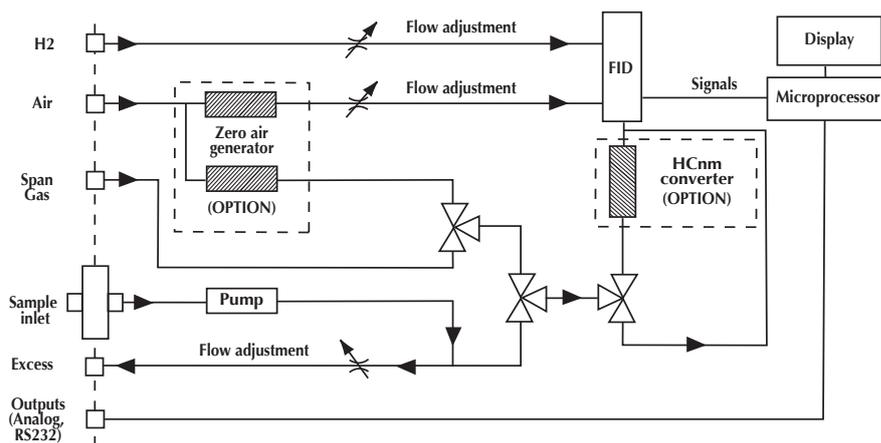
## PRINCIPLE OF OPERATION:

The **HC51M** 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 converter is used to oxidise 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 features a built-in zero/span solenoid valves to perform manual, automatic and remote zero/span checks.

Real time calibration graphs can be displayed during span check operation. 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 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.



## TECHNICAL SPECIFICATIONS

Measurement Range	0-10 ppm / 0-1000 ppm (user selectable & programmable)
Repeatability	± 1 % of the full scale (F.S)
Detection limit (2σ)	0.05 ppm (50 ppb)
Noise	0.025 ppm (25 ppb)
Response time	automatic or programmable
Zéro drift	< 0.025 ppm / 24 h
Span drift	< 0.025 ppm / 24 h
Linearity	± 1 % of F.S
FID sample flow rate	80 cc/min (4,8 L/h)
Total sample flow rate	1300 cc/min (80 L/h)
Average data	programmable from 1 to 9999 min
Outputs	3 programmable analog outputs 0-1 V or 4-20 mA
Data storage	last 1,500 average data
Serial link	RS232 / RS422
Housing	Rack 19 " - 4U
Dimensions (WxDxH)	483 x 581 x 177 mm
Weight	27 kg
Power supply	230 V, 50/60 Hz or 115 V, 60 Hz
Consumption	450 VA
Operating temperature	+10°C to +35°C

## MAIN OPTIONS:

- Internal zero air purifier module
- External air compressor
- Internal converter for measurement of methane and non methane hydrocarbon
- Special version for measurements in pure oxygen or in pure CO<sub>2</sub>
- External H<sub>2</sub> generator

## UTILITIES:

- Hydrogen : 0.04 L/min (2 bars)
- Combustive air: 0.5 L/min (2.5 bars)

