HC51M

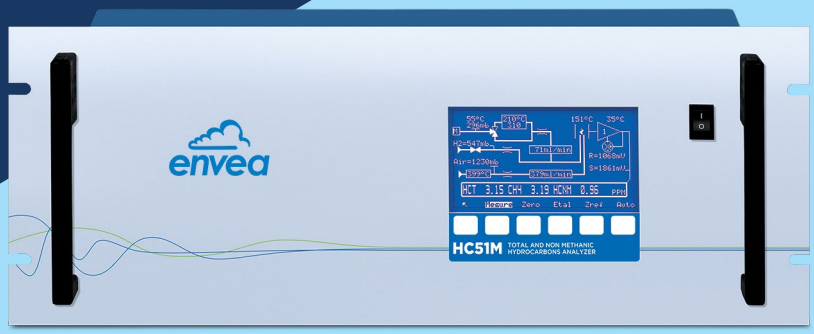
TOTAL HYDROCARBONS **FID ANALYZER**

envea
Elevating standards. For life.

Using a proven flame ionisation detector (FID), the analyzer model HC51M measures ambient air hydrocarbons (THC, CH_4, nmHC) in the ranges of 0-1000ppm

FEATURES AND BENEFITS

- Available in 2 versions for the simultaneous and continuous measurement of:
  - THC (Total Hydrocarbons)
  - THC / CH_4 / 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)



HC51M

TOTAL HYDROCARBONS **FID ANALYZER**

TECHNICAL **SPECIFICATIONS**

Measurement Range	0-10 ppm / 0-1000 ppm (user selectable & programmable)
Repeatability	± 1 % of F.S
Detection limit (2σ)	0.05 ppm (50 ppb)
Zero 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	1000 cc/min (60 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 DC, 50/60 Hz or 115 V DC, 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_2
- External H_2 generator

UTILITIES

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

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.

ENVEA
111 Bd Robespierre,
78304 Poissy, France
+33(0)1 39 22 38 00

09.03.2026 **EN-009496-DS-2**
HC51M Datasheet
HC51M Total hydrocarbons FID analyzer
Specifications subject to change without notice.

ISO 45001:2018
ISO 14001:2015
ISO 9001:2015
CERTIFICATION