NMHC Flame Ionisation Detector

Flame Ionisation Detector for continous monitoring of non-methane hydrocarbons, total hydrocarbon content and Methane

APPLICATION

The FID 22 NMHC Analyser (19" rack) measures with its built in NMHC cutter the Methane concentration and parallel in a second channel also the total hydrocarbon content (THC).

The NMHC analyser is designed for stack gas emission monitoring, ambient air monitoring, thermal reactor and combustor emissions monitoring as well as for monitoring of vehicle exhaust gases.

It is designed for stationary and continous monitoring with high accuracy, sensitivity and stability.

All components which come in contact with sample are fully heated at 190 °C.

FID 22 NMHC analyser is used for stack gas measurement in:

- natural gas industry
- petrochemical industry
- pharmaceutical industry
- incineration plants
- plants for landfill and sewage gas recovery

YOUR BENEFITS AT A GLANCE

- complies with EN 12619 and EN 13526 standards for emission monitoring
- real dual chamber
- standard heating temperature about 190 °C, optional up to 300 °C
- Oxygen cross-sensitivity < 2 %
- Hydrogen consumption (fuel) about 70 ml/min
- combustion air via internal catalytic converter
- automatic combustion air switch-off
- user-friendly 7" touch display and software
- graphic display of THC, CH_4 and NMHC concentration at once
- flow measurement and pressure compensation function integrated
- single range - no switch between ranges
- internal datalogging and USB drive flash
- TCP/IP interface for easy datatransfer
- remote control function via Virtual Network Comtuting (software: FID 22 Master)

BACKSIDE OF FID 22 NMHC ANALYSER

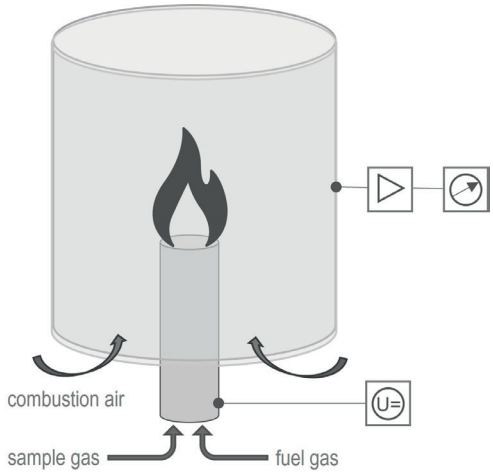
OPTIONAL EQUIPMENT

- tablet for remote control, consisting of: internal router, Samsung tablet 10“ with high-resolution touch display
- FID 22 line (heated sample gas line)
- FID 22 filter (heated pre-filter)
- FID 22 measuring gas probe

PERFORMANCE

Measuring range:	0 ... 10,000 mg C/m³
Repeatability:	+/- 1 % of range
Zero drift:	+/- 1 % in 24 h
Response time:	about 2 sec. ($T_{90;}$ at sample gas inlet)
Warm-up time:	15 minutes

MEASURING PRINCIPLE



OPERATION PRINCIPLE

The sample gas is extracted from the gas channel by means of a gas sampling probe via a heated pre-filter and fed to the analysis system via a heated sample gas line.

The FID 22 NMHC uses a flame ionization detector (FID) to measure the total hydrocarbons content (THC).

A second sample stream is fed with sample gas via a catalyst and the Methane concentration is measured (CH_4).

The NMHC value is calculated from these two concentration values.

TECHNICAL DATA

Protection class	IP40
Dimension; weight:	133 x 482 x 420 mm (w x h x d); 15 kg
Heating temperature:	Detector 190 °C (374 °F) External heating (optional) 60...250 °C (140 ... 480 °F) (adjustable)
Gas requirements (consumption):	Fuel gas H_2 5.0 or He / H_2 (70 ml/min H_2, 400 ml/min He/H_2) Zero and span gas synthetic air and C_3H_8 about 1 l/min Combustion air conditioning using integrated catalytic converter (standard), external combustion air generator (option)
Ambient conditions:	Ambient temperature 5°C … +45°C Relative air humidity max. 95 % (without condensate formation)
Pressure compensation:	-150...+500 mbar
Display:	7” TFT - Touch
Remote control:	VNC / FID 22 Master
Outputs:	Analogue 0...20 mA, 0...10V (2 x ; with living zero point at 4mA, burden 300 Ω) Digital Ethernet - RS232
Power supply:	100…240 V, 50…60 Hz, 350 W

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