

## Total Hydrocarbon Analyzer

The NUCON TOTAL HYDROCARBON ANALYSER monitors on - line or in sampling mode the Hydrocarbon content of atmosphere or a gas stream in Laboratory or in Plant using proven Flame Ionization Detector. The Instrument can be adapted to both Panel Mounting and Bench Top uses. A user preset HI Alarm is provided.



### Principle of Operation

The Flame Ionization Detector (FID) has a small hydrogen flame in which hydrocarbons ionize during combustion, producing a current proportional to concentration. The signal is measured by an Electrometer Amplifier and read by a digital meter, recorder or a computerised Data Acquisition system.

A stable flow system is designed with Stainless Steel diaphragm regulators to achieve low level detection in the sub - ppm range. The detector is heated to avoid condensation of sample.

### Applications

- EPA Method Compliance Monitoring
- Ambient Atmosphere Monitoring
- Air Pollution Analysis
- Leak Detection Systems
- Carbon Bed Breakthrough Detection
- Industrial Hygiene Monitoring
- Solvent Recovery System Control
- Combustion Engine Studies.



# TOTAL HYDROCARBON ANALYSER MODELS 4810 and 4820

Series 4800 has an inbuilt provision to set Zero and Span/Cal functions. Three Gas Streams ZERO GAS, CALIBRATION GAS and SAMPLE GAS are connected and one of these is selected by a Panel Mounted Valve, for measurement.

A standard HI ALARM user preset over entire selected range is provided with an indicating LED and 1P2W Relay. Other Alarm functions are available on request.

Model 4810 is the Basic version. It accepts sample from a pressurised source or an external pump and displays Total Hydrocarbon content.

## SPECIFICATIONS

Range	: 0-100.0 ppm, 0-1000 ppm and 0-1.000%
Display	: Digital LED
Alarm O/p	: Standard HI Alarm provided
Recorder Output	: 0-1 V DC or 4-20 mADC
Power	: 220/230 V AC
Fuel Gas	: Hydrogen at between 2 and 4 kg/cm <sup>2</sup>
Air	: Zero Air at Between 2 and 4 kg/cm <sup>2</sup>
Gas Controls	: Precision Pressure Regulators and Pressure Gauges.
Mounting	: 19 inch rack cum table top
Dimensions (mm)	: Model 4810 442Lx208Hx254D Model 4820 442Lx308Hx427D

Model 4820 is a special adaptation version where additional accessories are added to enhance the utility of the system and thereby cover diverse application requirements. Each function to be incorporated is specified in the package e.g. METHANIZER which gives it the ability to measure CO and CO<sub>2</sub> at trace to percentage levels. These gases get converted to methane in a heated catalyst chamber and then flow on to FID. Another possibility is the measurement of METHANE and TOTAL HYDROCARBONS—the former by separation on a heated GC Column and latter by pulse injection. This Analysis is carried out automatically by an auto inject gas sampling valve operating under control of a user preset Timer. The signal produced is available as an output and is analysed and reported by an external Data Station also available as an optional Accessory from Nucon. Specialised reports can be generated. Option also includes an INBUILT PUMP for samples from non-pressurised source like atmosphere or experimental set-ups, process vessels etc.

Manufactured By:

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