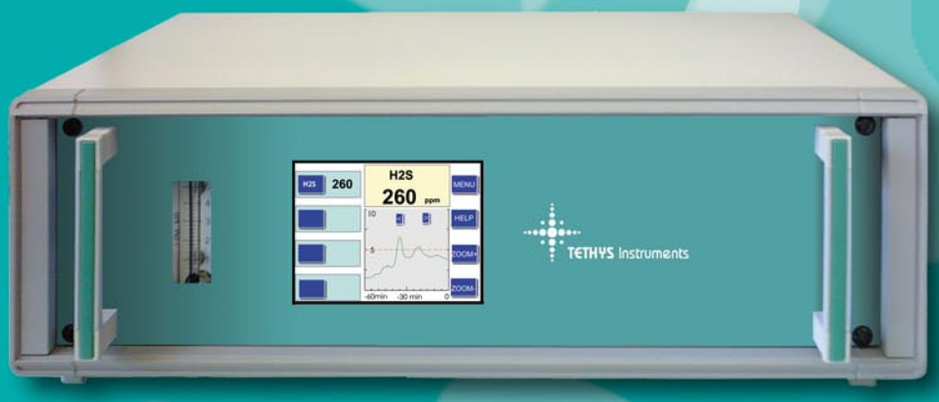
GAS ANALYSER
FTUV

NH3



0h 6h 12h 18h

TETHYS Instruments

GAS ANALYSER FTUV NH3

DESCRIPTION

The Model FTUV-NH3 gas analyser is an ammonia gas monitoring system specifically designed for stack emission, motor exhaust, ambiant air monitoring and gas manufacturer.

The analyser is mounted in a 19" rack.
The front panel incorporates a flow meter to check the circulation of the analysed gas or zero gas as well as a large LCD display touch screen.

This tactile screen displays the analyser results and provides menus and messages allowing the user to easily control the operation of the analyser.

MEASUREMENT PRINCIPLE

The measurement principle is based on the UV absorption spectrum of the ammonia gas (NH3) in the UV range.
The periodic structure of the absorption bands coming from the different levels of rotational energy of the gas molecules is analysed by performing a Fourier Transform on the absorption spectrum with a high speed DSP*.
At the opposite of the FTIR approach where the Fourier Transform is done by optical components, the Fourier transform in the UV range is done by electronic circuits, which constitutes a more economical solution.
The selectivity of the analyser is guaranteed by the typical periodic structure of the analysed gas, different for any other gases.

The optical path length of the analyser is adapted to a range of measurement from ppm to hundreds of ppm.
Times to times, an auto-zero on an external zero air is performed to guaranty accurate measurements.
The sensitivity is determined by the optical path length of the quartz flow cell, which remains perfectly constant and thereby eliminates periodic recalibration of the analyser.
A calibration verification (or recalibration under exceptional circumstances) may have to be conducted but only over a period of several months due to the inherent stability of the measurement system.
*DSP: Digital Signal Processor

SPECIFICATIONS

Sampling gas:	Pressure: min 0 bar (0 PSI), max 0.2 bar (3 PSI) Flow: 1 to 5 litre/min(0.25 to 1.5 GPM) Temperature: min 0 °C (32 °F) max 60 °C (140 °F), heated version at 150 °C (300 °F) Fittings: Swagelok, stainless steel 316 for tube OD ¼"
Zero gas:	Pressure: min 0 bar (0 PSI), max 0.2 bar (3 PSI) Flow: 1 to 5 litre/min(0.25 to 1.5 GPM) Temperature: min 0 °C (32 °F), max 60 °C (140 °F) Fittings: Swagelok, stainless steel 316 for tube OD ¼"
Range:	0 to 100 ppm of NH3, (other ranges on request)
Accuracy:	+/- 0.5 ppm or +/- 2 % of reading, whichever is greater
Measurement rate:	2 seconds to 1 hour
Data storage:	4000 measurements
Communication:	RS485 with MODBUS, RS-232 with Windows Hyperterminal
Outputs:	4-20 mA, isolated, 500 Ohm max, screw terminal 4 alarms or default relay contacts, screw terminal, 2A max
Power supply:	110V to 240V (50-60 Hz) selectable by internal switch, 30 VA
Ambient temperature:	0 °C (32 °F) to 60 °C (140 °F)
Dimensions:	Rack 19" 3U (482.6 mm x 133 mm x 430 mm)
Weight:	< 15 kg

All specifications are subject to change without notice. Some characteristics refer to optional parts

TETHYS Instruments

57 Chemin du Vieux Chêne
F-38240 Meylan ZIRST - France
Tel +(33)47641 8639/Fax +(33)47641 9227
sales@tethys-instruments.com
www.tethys-instruments.com