

ETG 6900 P NH3

Portable NH3 Stack gas analyzer Laser based



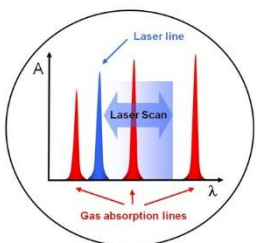
NH3 Stack gas Emission monitoring

Ammonia (NH₃) emissions are an important contributor to fine particulate matter (PM) formation. Consequently, increased attention is being paid to accurate quantification and characterization of NH₃ emissions.

Oxides of nitrogen are gaseous pollutants primarily formed during combustion processes. Selective noncatalytic reduction (SNCR) and SCR are post-combustion control technologies based on the chemical reduction of NO_x. In both SCR and SNCR, a nitrogen-based reducing agent, such as NH₃ or urea [CO(NH₂)₂], is injected into the post-combustion flue gas.

The Technology

ETG use the technology-enhanced TDLS for gas detection, where a 0.1 nm narrow bandwidth diode laser beam is scanned across an absorption band of the target gas, performing a high-resolution near-infrared absorption measurement. Electronic lock-in technology allows separating the gas absorption information from electro-optical system information, leading to a detection method eliminating the need for a physical reference channel and offering continuous sensor status monitoring.



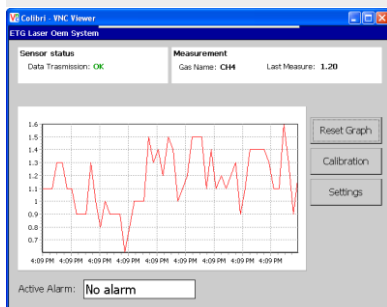
Key Features

- Very fast NH₃ detection
- Tunable Diode Laser based technology
- Sample pump inside
- "Hot" Measurement
- Any sample conditioning
- Portable in robust case
- Zero & Span Calibration
- Long Lifetime Laser (+10 years)
- Low cost-of-ownership
- Complete of heated line & Stack probe
- Type of installation Plug & Play
- Touch Screen monitor
- Ethernet and USB Remoting
- Modbus, Profibus, Ethernet output
- Arm processor based
- Digital Input/output
- Signal analog output 4-20 mA

Portable sample probe and heated line

- Portable probe and heated line as all-in-one
- Built-in, heated filter element
- Stack mounting possible
- Temperature inside the stack max 600°C
- Tool-less filter element change
- Dust load max. 2 g/m³
- PTFE core DN 4/6
- Material Silicone, PTFE, stainless steel, polyamide

ETG 6900 Software



The program will displays graph, in real-time measurement. The origin of the axis time is made to coincide with the beginning of the measurement session. You will see real time data in the upper side of the window (“Last Measure”).

In the same screen of the software indicates the presence of any alarms with a reference code (that’s need to be communicated to ETG for troubleshooting)

Specifications

Parameter	Unit	Value / Range
Gas	-	NH3 (H2O)
Principle of detection	-	Tunable Diode Laser Spectrometry (TDLs)
Measuring range	-	ppm 0-100 NH3 calibration to full scale (FS) range, standard is 100 ppm, (possible up to 500 ppm)
Accuracy	-	± 2% full scale reading depending on integration stability (temperature & pressure)
Precision 2σ	ppm	NH3 0,2 ppm
Measurement type	°C	extractive 190°C
Zero drift over 2 h period	-	within accuracy
Span drift over 8 h period	-	within accuracy
Max. error on temp. comp.	%	of < 0.1 reading/°C
Linearity & Repeatability	-	included in the accuracy
Cross talk/interference	-	Gas matrix and application dependent
Displayed resolution	ppm	0.1 (negative values can also be displayed)
Refresh rate	s	1 (integration time can be selected, max. 120 s) up to 2 s in case no target gas is present
T90 time	s	2 (at gas flow rate of 3 L/min)
Ambient temp. compensat.	°C	-10 ... 65 (as narrow as possible)
Meas. gas max. humidity	%	abs. H2O needs calibration
Probe material	-	Stainless Steel
Electrical supply	Vac	220-230/115 50/60 Hz
Bag Dimensions	cm	50 x 28 x 40 cm
Weight	Kg	7.2
Pneumatic connections	-	Swagelok 6 mm O.D.
Sample pump	-	Internal
Heated hose	-	3 or 5 mt length 180°C thermocontrolled
Heated probe	-	180°C thermocontrolled with internal heated filter