

ECO PHYSICS PAS 87

Application examples



- Ambient Ammonia monitoring in rural areas – Atmospheric research
- Remote monitoring stations
- Permanent surveillance of clean room requirements
- Verification of filter conditions
- Biomedical and pharmaceutical research

The new PAS 87 analyzer is a sub-ppb Ammonia (NH₃) monitoring system dedicated to atmospheric pollution monitoring and environmental control. This robust ammonia analyzer offers reliable online measurements in remote locations and automatic control of air quality.



Ambient monitoring requires reliable and precise gas analysis.

Environmental applications.

Ammonia has been recognized as an atmospheric pollutant in Europe since the 1979 Convention on Long-Range Transboundary Air Pollution.

In the environment, the presence of acids, ammonia and water leads to the formation of ammonium salts such as Ammonium nitrate (NH₄NO₃) or Diammonium sulfate ((NH₄)₂SO₄), which greatly contribute to the NH_x load and the formation of inorganic secondary aerosols (an important component of fine dust - PM10).



High dynamic measurement of NH₃ is needed for validating the Long Range Transboundary Air Pollution models and could lead to an improvement of the NH_x transportation and deposition models.

Online NH₃ With the growing concern about climatic changes, ultra sensitive and accurate measurement of ammonia from sub-ppb to several ppm in the air has become an increasing need.

User friendliness.

The development of an ECO PHYSICS analyzer keeps always full user comfort in mind. The user can adapt the operation according to his needs and applications by selection of predefined settings. The user-friendly graphical interface for the operation and configuration of the system enables easiest set up and daily routine work.

Long term stability through automatic drift compensation, featuring zero level re-adjustment, and offering sub-ppb accuracy over unlimited period of time.

A fascinating technology.

The analyzer is not only a state-of-the-art product in terms of precision and reliability. Its technological base also sets the trend for others by using quantum cascade laser (QCL).

It has been designed to be integrated as a standalone instrument in field monitoring networks, allowing several months autonomous and remote control operations. The PAS 87 has been qualified and tested through an environmental validation test program, as well as in independent monitoring networks throughout Europe.

- Four freely selectable measurement ranges between 10 ppb and 1000 ppb
- Compact design without any additional space required
- Lowest cross sensitivity
- Operation and control via touch screen

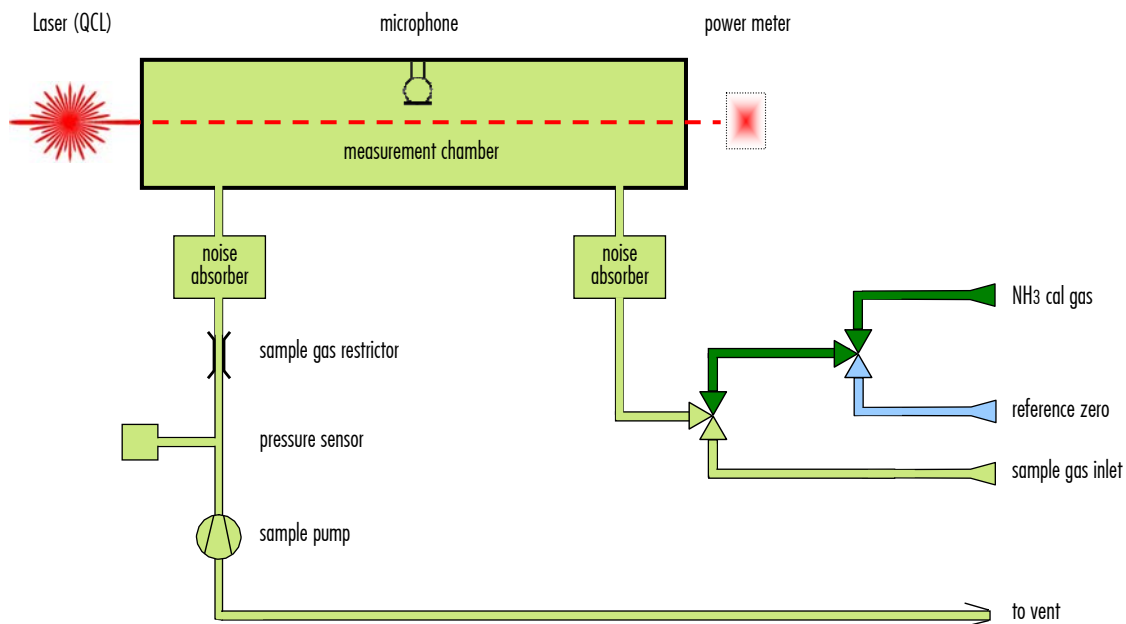


PAS 87

Specifications

Measuring ranges	four freely selectable ranges from 10–1000 ppb	Interface	RS 232, LAN, USB (4x) HDMI video out
Min. detectable concentration	< 0.5 ppb*	Analog output	optional
Noise at zero point (1 σ)	< 0.25 ppb*	Dimensions	height: 178 mm (7") width: 450 mm (19") with moulding: 495 mm depth: 545 mm
Lagtime	< 15 sec	Weight	40 kg
Rise time (0–90%)	< 150 sec	Delivery includes	PAS 87 analyzer, power cable, operator's manual
Temperature range	15–30 °C	Standard	PAS 87
Humidity tolerance	0–95% rel. h (non-condensing, ambient air and sample gas)	Options	Analog I/O output (NH ₃ pending)
Sample flow rate	0.25 l/min	* depending on filter setting	
Input pressure	ambient, to be stabilized within ± 3 mbar	ECO PHYSICS reserves the right to change these specifications without notice.	
Power required	< 250 VA (incl. sample pump)		
Supply voltage	100 - 230 V/50–60 Hz		

Flow Diagram



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