

# Gas analyzer for ammonia $\text{NH}_3$

## Type

Tunable Laser Diode Spectroscopy TDLS  
Laser Gas Detector LGD

## EU7

compact device for  $\text{NH}_3$  measurement for EURO 7

## All in one

integrated heated sampling system

## Plug and Play

quick setup, simple operation

## Calibration

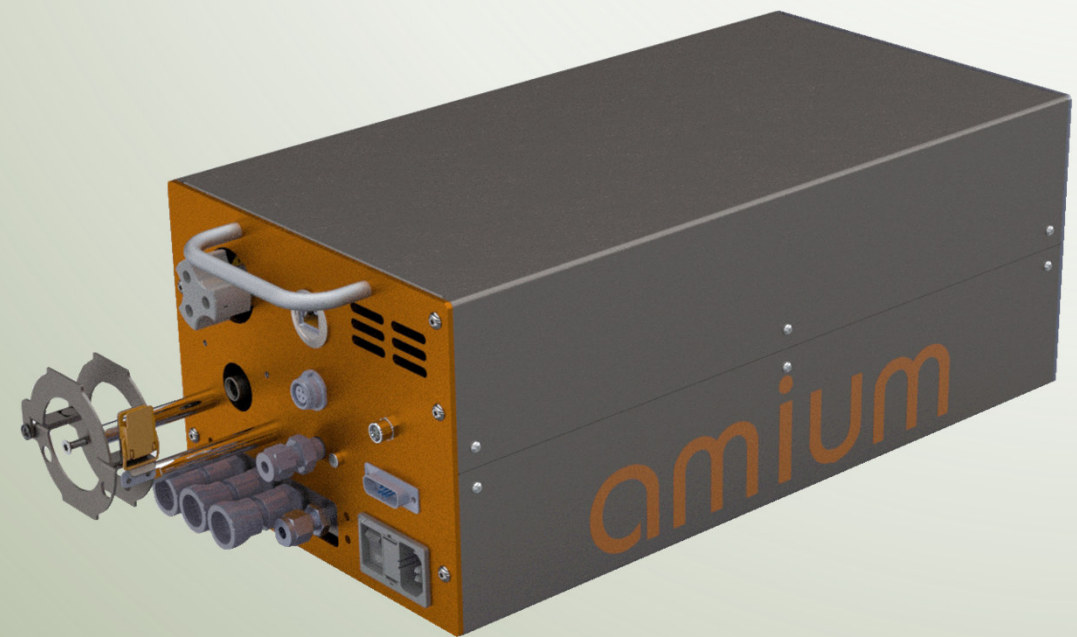
automatic quality checks according EU7  
with automatic generated protocol  
 $\text{NH}_3$  loss detection, T90, Hang-up, ANR...

## Flexible usage

stationary (Test bed) and mobile (PEMS)  
Standard interfaces: LAN (**AK**), CAN (**dbc**)

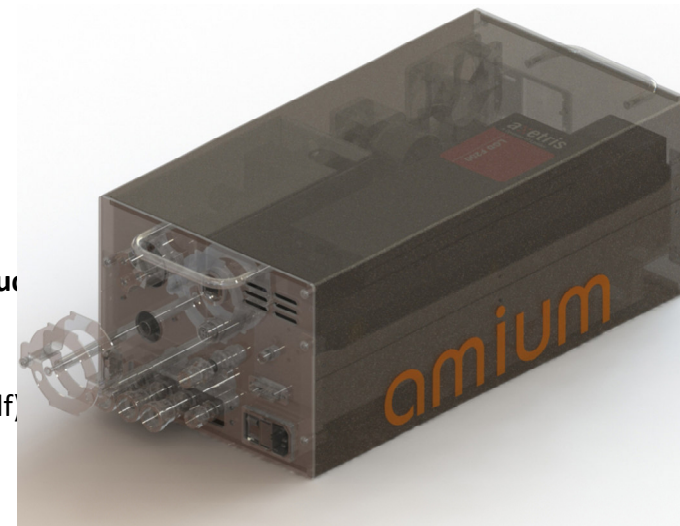
## Benefits

Low Hang-up-effects



## Features / description

- compact solution for ammonia measuring with filter and pump **for EU7**
- **stand alone operation** or integration in **automation system** (LAN/AK or CAN/dbc)
- measuring component ammonia gas with customized **ranges** up to 3000 ppm
- continuous heated sampling system up to 190 °C
- heated **filtration** with glass fiber surface
- all parts with contact to the sample gas are made of passivated stainless steel, PFA and FPM to **reduce**
- integrated zero gas and span gas switching module for automatic adjustment
- purge of gas cell with N<sub>2</sub> or ambient air at standby, flow <0.5 l/min
- comprehensive **quality checks** in touch with XCU (External Check Unit) with automatic **protocol** (pdf)
  - accuracy, noise, repeatability (ANR)
  - NH<sub>3</sub> Loss Detection
  - drift
  - leakage
  - response time
  - linearity
- integrated **temperature controller** for internal oven and one or two heated lines (24 V)
- cross-sensitivity to H<sub>2</sub>O included, no other cross-sensitivities
- measured values long-term stable
- manifold applications: test bench (230 VAC), mobile operation on the street (24 VDC)
- combinable with existing PEMS
- T20 OLED Display with touch key integrated



## Layouts

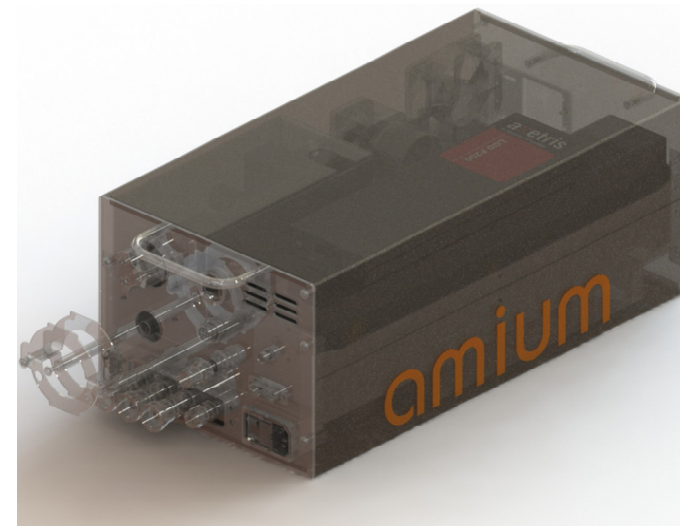
- A5235: with self-priming **membrane pump**, no compressed air necessary, flow range 2..3 l/min
- A5269: with additional integrated pressure regulator (6764-00847) for high inlet pressure up to 3 bar, pressure autonomous measuring inlet
- A5291: with **ejector** pump for quick response time, flow up to 8 l/min, pressure air necessary

## Technical data

- measure component NH<sub>3</sub> / H<sub>2</sub>O
- sampling rate 1 Hz or special edition 10 Hz
- lower detection limit 0.5 ppm, corresponding to EURO 7
- cross-sensitivity <2 % at measuring point to H<sub>2</sub>O, no other cross-sensitivities
- accuracy NH<sub>3</sub> <2 % rel. deviation at measuring point
- lower detection limit 0.5 ppm, corresponding to **EURO 7**
- repeatability <0.35 % at measuring point
- drift <1,5 % of range per 24 hours (range 100 ppm or higher)
- linearity <2 % at measuring point
- response time T90 1..2 sec dependent on flow
- volume measure cell 15 ml (1 Hz @ 0,9 l/min)
- laser path length 400 mm
- interfaces LAN (**AK**) and CAN (**dbc**, INCA, CANalyzer, Vector)
- internal valve switching for test gas and zero gas with Quick Connect plugs
- quality checks in touch with XCU (External Check Unit)
- T20 OLED Display with touch key integrated
- power supply 22..28 VDC or 115 / 230 VAC, 50 / 60 Hz, uninterruptible change between DC and AC
- power consumption typical 120 VA, max. 300 VA while heat-up
- compact dimensions W 241 (half 19") x D 400 x H 178 mm (4 RU), weight 8.4 kg

## Accessories

- **XCU** External Check Unit for quality checks
- **qbook** software for visualization, control and quality checks
- **XERO** software for visualization and control
- **VEX:gui display** with control buttons and graphic
- **analog out** for measuring values
- MGL heated sample tube, 24 V, PFA, length 1 m / 1,5 m / 2 m
- special passivated NH<sub>3</sub> sample probe



## Service, maintenance and repair

- directly from the manufacturer Amium
- service done by qualified service technicians and engineers from Amium
- fast troubleshooting and support from the product developers and programmers

## Key aspect of Amium service

- free telephone support during normal business hours
  
- free online remote access
  - fast error diagnosis and if possible troubleshooting
  - software support and updates
  
- short response times from our headquarter in Walchsee, Austria and from the branch office in Besigheim, Germany
  - fault diagnosis
  - repairs
  - fast device replacement to minimize downtimes
  
- weekly service presence on site
  - highly motivated and flexible team
  - planned maintenance by qualified employees
  - short-term repairs and troubleshooting with a maximum response time of two working days
  
- resident service
  - if needed resident service on site
  - flexibly or daily, depending on requirements

## maintenance contracts and framework agreements

- definition of maintenance scopes
- defined maintenance plans for regular maintenance
- prices and conditions for work and spare parts could be defined in framework agreements for easy commissioning