

TRACE-GAS NO_x analyzer

(CLD - Chemiluminescence detector)



The TRACE-GAS NO_x analyzer combines reliability, fast response and easy handling in one instrument.

+ direct measurement

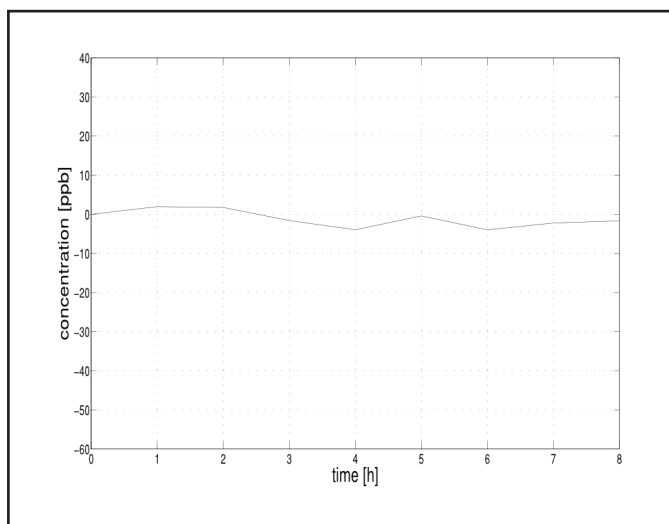
+ high dynamic range

+ fast response time

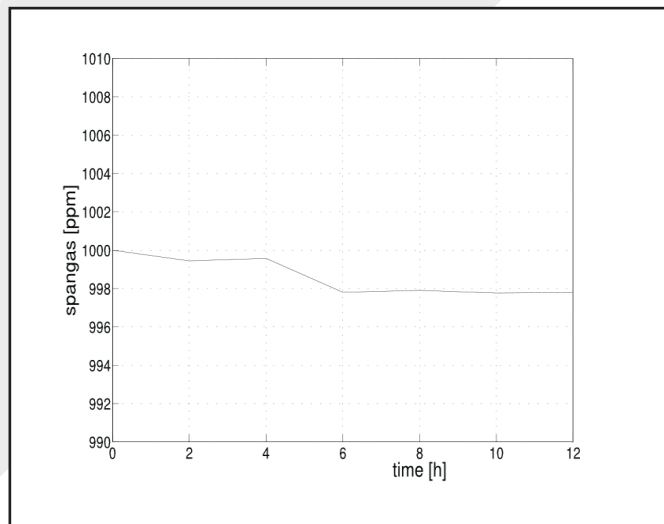
- direct measuring method
- extremely stable measurement values
- high dynamic range
- fast response time
- very good signal-to-noise ratio (SNR)
- 7" touch screen
- intuitive user interface
- extremely low maintenance
- high life span
- modular design

TRACE-GAS
www.trace-gas.com

Performance of the CLD (NO_x):



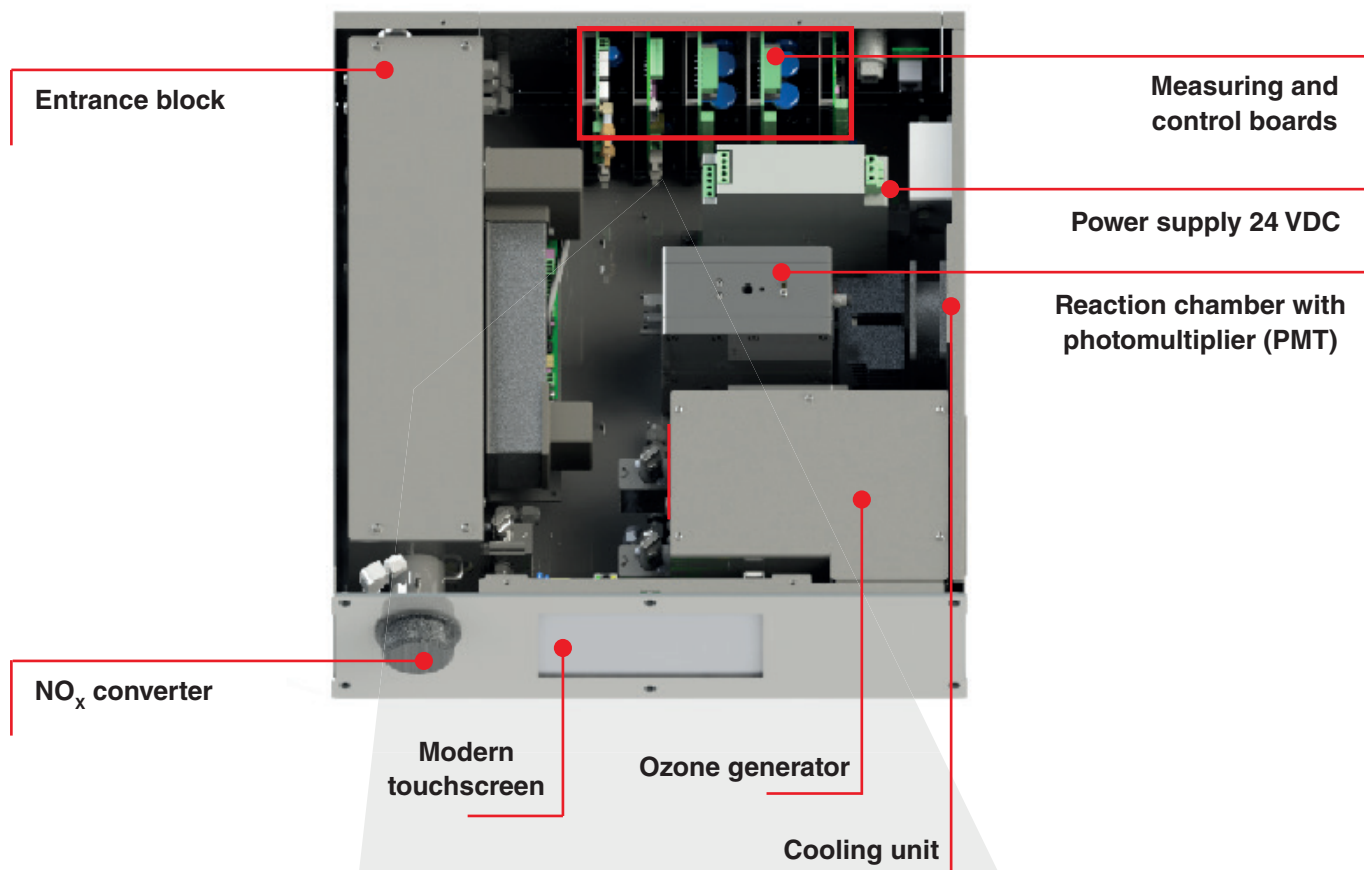
Zero drift



Span drift

Modular design with:

- Heated entrance block
- Stainless steel piping
- Analog output
- NO_x converter (with front access)
- Ozone generator
- Reaction chamber



CLD_{mono}

sequential measurement of NO and NO_x

The CLD_{mono} is a **mono-channel** detector for the precise detection of nitrogen oxides. The use of a converter and a change-over at the reaction chamber can be used alternately to measure nitrogen monoxide (NO) as well as high-quality nitrogen oxides (NO_x). In addition, the CLD can be used for a pure NO or NO_x measurement.

	measurement range in ppm:	limit of detection (LOD) in ppb:
NO / NO _x	0 ... 100 - 0 ... 3,000	< 40

CLD_{dual}

simultaneous measurement of NO und NO_x

The CLD_{dual} is a **dual-channel** detector for the precise detection of nitrogen oxides. The parallel reaction chambers enable the simultaneous measurement of NO and NO_x. The CLD_{dual} is heatable up to 190 °C and ideally suited for high as well as low concentrations.

	measurement range in ppm:	limit of detection (LOD) in ppb:
NO / NO _x	0 ... 100 - 0 ... 3,000	< 20

Possible Applications:

- Automotive industry
- Biomedical (development)
- Chemical and high-tech industry
- Exhaust gases combustion
- DeNOx plants (development)
- Development of burners and boilers
- Petrochemistry
- Pharmaceutical (development)
- Quality control in production
- Water analysis (TNb)

Technical data

Ambient temperature	15...35 °C (non condensing)
Inlet pressure	800...1,100 mbar
Gas flow	30 - 200 ml/min/channel
Communication	Modbus TCP/IP + Analog output 4...20 mA
Dimensions (L x W x H)	19" 3 HU (543 x 485 x 143 mm)
Weight	approx. 23 kg
Supply voltage	230 V AC / 50 - 60 Hz
Heatable	70...190 °C (dual)
User interface	7" Touch screen

Specifications

Measuring range (FS) min.	0...100 ppm	0...100 ppm
max.	0...3,000 ppm	0...3,000 ppm
Limit of detection (LOD) ¹ @ $t_{10}-t_{90} \leq 10$ s	≤ 40 ppb (3σ , 100s)	≤ 20 ppb (3σ , 100s)
Linearity (greater of)	$\leq \pm 0.5$ ppm or $\leq \pm 1\%$ MV ² (FS: 100 ppm) $\leq \pm 5$ ppm or $\leq \pm 1\%$ MV (FS: 3000 ppm)	
Zero drift	$\leq \pm 1$ ppm in 10 h	
Span drift	$\leq \pm 1\%$ FS in 10 h	

¹specified for constant ambient temperature, flow and inlet pressure²measured value

We are developing and producing custom electronic and mechatronic solutions for more than 30 years. Our cost-efficient solutions in the field of trace-gas analysis (from CLD, TDLAS, PAS, NDIR to FIDs) convince with precision and quality. Join a first-class partnership with us and profit from our innovative team. We invent solutions.

KNESTEL

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