

# LaserCEM®

Multigas analyzer



## Features

- Continuous multigas measurement
- High resolution IR laser technology
- Patented OFCEAS TDL technology
- No optical moving parts
- Certified measuring ranges for CO, NO, SO<sub>2</sub>, HCl, NH<sub>3</sub>, H<sub>2</sub>O, O<sub>2</sub> fulfil IED requirements for WI + LCP
- Smallest certified measuring range for NO 0–78 mg/Nm<sup>3</sup>
- Direct measurement without modifying the sample
- Patented low pressure sampling system
- Low instrument air consumption

## Benefits

- Multigas measurement without interferences regardless of the matrix
- Self-calibrating system
- Measurement in very wet conditions (up to 80% vol H<sub>2</sub>O)
- Zero information contained in the signal (no zero gas required)
- Suitable for NO<sub>x</sub> ELV below 35 mg/Nm<sup>3</sup> (WI)/50 mg/Nm<sup>3</sup> (LCP)
- Very fast response time
- Reduced operational costs (low compressed air + low power consumption due to self heated line @ 80 °C)
- High availability of the system

## Technical data

Gas	Certified range*	Typical max range
CO (mg/Nm <sup>3</sup> )	0–75; 0–1249	0–3000
CO <sub>2</sub> (mg/Nm <sup>3</sup> )		0–20
NO (mg/Nm <sup>3</sup> )	0–78; 0–150 0–2008	0–3000
NO <sub>2</sub> (mg/Nm <sup>3</sup> )		0–2000
N <sub>2</sub> O (mg/Nm <sup>3</sup> )		0–500
HF (mg/Nm <sup>3</sup> )		0–100
SO <sub>2</sub> (mg/Nm <sup>3</sup> )	0–75; 0–2858	0–5000
HCl (mg/Nm <sup>3</sup> )	0–15	0–150
NH <sub>3</sub> (mg/Nm <sup>3</sup> )	0–15; 0–45 0–76	0–500
CH <sub>4</sub> (mg/Nm <sup>3</sup> )		0–500
O <sub>2</sub> (%vol)	0–21	0–25
H <sub>2</sub> O (%vol)	0–30; 0–40	0–60
Linearity	<2% range	
Repeatability	<1% range	
Response time	<100s (all gases) except NH <sub>3</sub> , HCl, HF (<400s)	
Drift zero/span	Negligible	

\*Certification according to EN 15267-3, QAL1 TÜV + MCert

Analyzer	
Power supply	110 ... 230 VAC, 50 ... 60 Hz, 750 VA (consumption)
Instrument air supply	Dust free, oil free, dry, at ambient temperature 3 bar gauge pressure at max. 5.5 l/min flow Fail-safe for at least 15 min. after power outage, Connected with ¼" stainless steel Swagelok connector
Ambient conditions:	– Temperature +5 ... +40 °C – Humidity 10 ... 90% relative humidity, non-condensing
IP protection class	Up to IP54, according to IEC 60529
Probe with sampling box	
Mechanical connections	Sample gas line with 42 mm diameter
Power supply	110 ... 230 VAC, 50 ... 60 Hz, 600 VA (consumption)
IP protection class	IP65, according to IEC 60529

Application data	
Sample gas:	
Type	Air, flue gas, non-combustible process gas
Temperature	+5 ... +600 °C
Absolute humidity	0 ... 80 Vol-%
Stack:	
– Flow velocity	0 ... 30 m/s
– Inner stack pressure	–30 ... +30 kPa, relative to ambient pressure
– Minimum hole diameter	75 mm