cem solutions
CONTINUOUS EMISSIONS MONITORING

UVA 17 HW

Hot gas UV analyser

Product Information

Wall-mounted hot-wet gas analyser for measurement of pollutants in flue gas with low concentrations and for process control

APPLICATION

The UV analyser UVA 17 HW can be used for monitoring of e.g. NO, NO2, NH3, SO2 and O2 in incineration plants as well as for process measurements in the chemical and pharmaceutical industry.

This analyser is based on a heated spectrometer and measures all UV absorbing gas components. An ejector supplies the sample gas. Due to the heated measuring cell (200 °C) an elaborate gas conditioning is not required. The applied Xenon flash light is characterised by a 2 to 3 times higher lifetime compared to other light sources.

The integrated zirconium dioxide sensor serves the oxygen measurement. A small PC with 7" colour display and an app-based menu allow an intuitive operation on site as well as remotely.

FUNCTION

The function of the UV analyser is based on the measurement of an integrated spectrometer in the spectral range of ultraviolet radiation of 180 to 400 nm. Fundamentally, the device is composed of light source, measuring cell and spectrometer which are interconnected via the optical path. The emitted radiation is absorbed partly by the process gas in the measuring cell and detected by a spectrometer afterwards.

By using a chemometric model the gas component as well as the concentration can be determined. Because of the modular design, there is the possibility for application of different spectrometers for adaptation to variable requirements.

Dr. Födisch
Umweltmesstechnik AG

LOWEST MEASURING RANGES

Component	Analyser with short path cell	Analyser with long path cell
NO:	0...100 mg/m³	0...50 mg/m³
NO2:	0...200 mg/m³	0...100 mg/m³
NH3:	0...30 mg/m³	0...10 mg/m³
SO2:	0...100 mg/m³	0...50 mg/m³
O2:	0...25 vol. %	0...25 vol. %

Other components
(e.g. CH2O, H2S, Cl2, Hg0) and measuring ranges on request

YOUR BENEFITS AT A GLANCE

- Compact design
- Long-term stable signal
- Hot gas measurement up to 200 °C
- No gas conditioning, no gas cooler needed
- Low-maintenance measuring gas conveyance by ejector
- User-friendly touch display
- Extension of measuring components without additional hardware possible
- Remote access

PRECONDITIONS ON SITE

- Installation place indoors and dust-free
- Protection against wetness
- Protection against percussions/vibrations
- Instrument air according to ISO 8573.1, class 2
- Appropriate gas sampling

• EN 15267-3 Tested
• QAL1 Certified
• TUV Approved
• Annual inspection

• ISO 9001:2015
• ISO 14001:2015
• ISO 45001:2018

• Certified in compliance with MCERTS Performance Standards
• Certificate no: Sira MC170329/00

• Certified in compliance with GOST
• Certificate no: MN-2550-0272-2016

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Product Information

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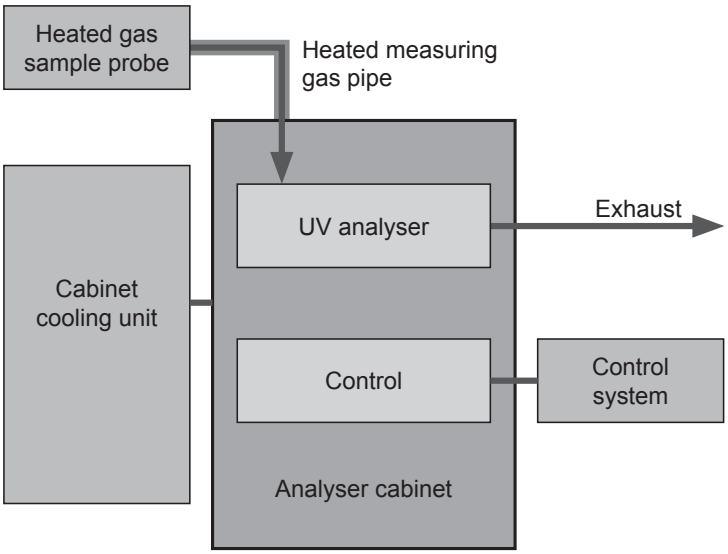
SCHEMATIC DESIGN



TECHNICAL DATA

Housing	steel sheet cabinet; 850 mm x 600 mm x 500 mm (w x h x d), approx. 55 kg
Measuring methods	• spectrometer 180-400 nm (NO2, SO2, NO, NH3, CH2O, H2S, Cl2, Hg0) • zirconium dioxide sensor (O2)
Number of meas. components	up to 12 components (dependent on application) and oxygen
Accuracy	< 2% of the respective measuring range
Ambient conditions	5...40 °C (temperature stability max. 5 K/h); humidity: max. 90% (non-condensing)
Optical bench	• gas path: continuously heated, standard 200 °C (higher temperatures on request) • path length of measuring cell: adjustable - short path cell: 260 mm - long path cell: 730 mm • particle filter: 2 µm
Zero point setting	automatically with instrument air
Measuring gas| conveyance	via ejector
Display / Operating	7“ touch display, 800 x 480 Pixel, status messages for failure, maintenance and maintenance request; Language selection: German, English, French, Chinese
Data storage	data logger function
Interfaces	RS232 (Modbus)
Inputs/outputs	• 8 analogue outputs, 4...20 mA, potential-free, burden max. 500 Ω • 14 digital inputs (optocoupler), max. 30 V • 16 digital outputs, potential-free, max. 60 V, 500 mA
Remote control	VNC, remote control via PC
Power supply	110-250 V AC / 50-60 Hz, 350 W
Other functions	integrated flow measurement; integrated pressure monitoring

Special models are possible on request

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