Dust monitor

Innovative measuring device with laser technology to monitor small to medium dust emission according to the new European regulations.

Features

- **Integrated display: Measuring value, threshold value, parameter in probe**
- In-situ measuring procedure with continuous measurement
- High sensitivity
- Easy installation on one side of the duct
- Can also be deployed in thick-walled stone/insulated channels
- **Long lifetime, as there are no moving parts inside the duct**
- Hermetically sealed electronic housing against exhaust gas
- Parameterisation and operation with keyboard plus easily readable display directly on device or via bus interface
- Automatic function test with soiling correction
- Two analog outputs with adjustable measuring ranges
- **Automatic switching of measuring ranges according to 17. BImSchV.**

Applications

- Power stations
- Cement plants, the metallurgy and wood industries, chemical industry etc.
- Waste incineration plants
- Monitoring of dust filter plants.

Approvals

- Suitability-tested by the TÜV Cologne, test report 936/21205307/A
- Itemized in the list of suitable measuring devices for continuous emission measuring
- MCERTS pending.

Measuring principle

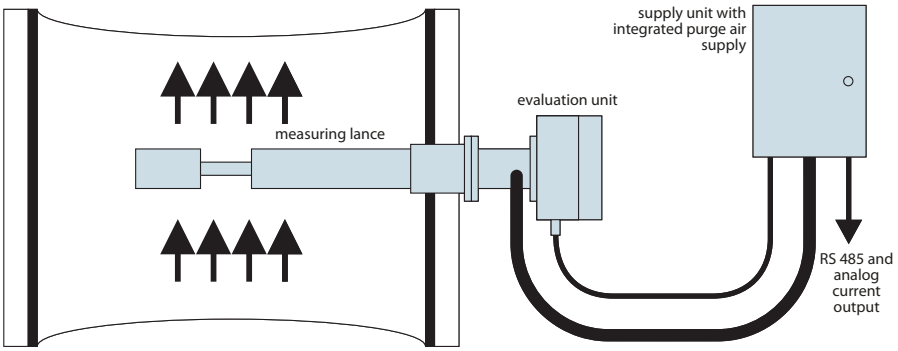
The D-R 800 device works according to the principle of forward scattering. The concentrated and modulated light of a laser diode penetrates the measuring volume. The forward-scattered light largely reflected from dust particles is measured and assessed.

System components

- Measuring lance
- Supply unit with integrated purge air supply
- Mounting flange 130 / 240 / 500 mm.

Options

- Weather protection cover
- **Temperature compensation through additional analog input.**



measurements	dust concentration	accuracy	<1% of measuring range limit
measuring ranges	0–10 mg/m³ ... 0–200 mg/m³ 1)	detection limit	<0.5% measuring range
measuring principle	forward scattering	reference point drift	<0.7% of measuring range/month
flue gas temperature	above dew point up to 220 °C	zero point drift	<0.15 % of measuring range/ month
flue gas pressure	-50 up to +10 hPa	supply voltage	85–264 VAC, 47–63 Hz, 50 VA
duct diameter	0.4–8 m	dimensions (h x w x d)	measuring lance: 160 x 160 x 600 / 1000 mm supply unit: 380 x 300 x 210 mm
probe length (from flange)	473 / 787 mm	weight	measuring lance: 7 kg supply unit: 13 kg
ambient temperature	-20 up to +50°C	purge air supply	integrated into supply unit
protection	IP65		
measuring outputs	2 x 0 / 4–20 mA / 500 Ohm, Modbus RTU (RS485)		
digital outputs	4 relay outputs, programmable, permissable load 24 V / 25 VA		
digital inputs	2 potential free inputs, programmable	remarks	1) after gravimetric calibration

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