

Optical dust and opacity meter

New system for monitoring dust emissions on smaller plants and in process applications.

Features

- In-situ measurement directly in the flue gas flow
- Digital operation with microprocessor
- Adjustable limit value
- 2 contact switch outputs
- Measuring value integral 4/15/64 seconds
- Internal event memory
- PC-interface for easy maintenance
- Modbus RTU interface
- Measurement results shown as opacity or extinction
- No weather protection covers needed.

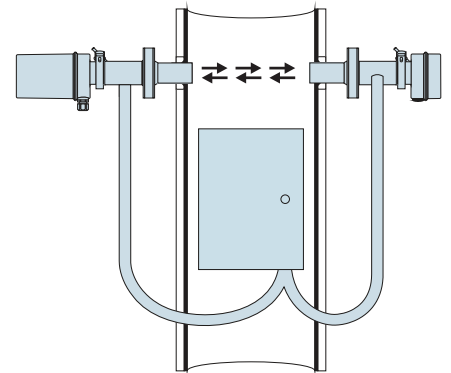
Applications

- Non-compliant device for smaller plants
- Heating stations, power stations
- Boiler plants in industry, barracks, hospitals, schools
- Dust extraction and filter plants
- Process monitoring
- Filter monitoring.



Measuring principle

The device operates using the double-pass method according to the auto-collimation principle. The light beam traverses the measuring distance twice. The attenuation of the light beam by the dust content in the measuring section is measured and evaluated.



System components

- D-R 220 measuring head
- Reflectors for measuring distances 0.4 to 10 m
- Mounting flanges
- Supply box with purge air unit
- Zero point reflector.

Models

- System 1: for measuring sections up to 3 m
- System 2: for measuring sections from 2.5 m up to 10 m.

Options

- Neutral density filters for linearity check
- Sighting scope

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| measurements | opacity, extinction | accuracy | <2% of measuring range |
| measuring ranges | 0-25/50/100% OP 0-0.2/1.6 Ext | detection limit | <3% of measuring range |
| measuring principle | transmission | supply voltage | 24 VDC, 0.4 A |
| flue gas temperature | above dew point up to 200°C, optional up to 500°C, depending on application | dimensions (H x W x D) | measuring head 160 x 150 x 314 mm |
| flue gas pressure | -50 up to +10 hPa, optional higher | weight | measuring unit 2.7 kg, reflector 1,6 kg |
| duct diameter | 400-10,000 mm | supply box | |
| ambient temperature | -20 up to +50°C | purge air supply | integrated |
| protection | IP65 | supply voltage | 85-264 VAC, 46-63 Hz, 50 VA |
| measuring output | 0 / 4-20 mA / 400 Ohm | dimensions (h x w x d) | 210 x 300 x 380 mm |
| digital outputs | 2 relay outputs 30 VA, max. 48 V/1A | weight | 13 kg |
| digital inputs | NA | protection | IP54 |

