

Fine Dust Sensor

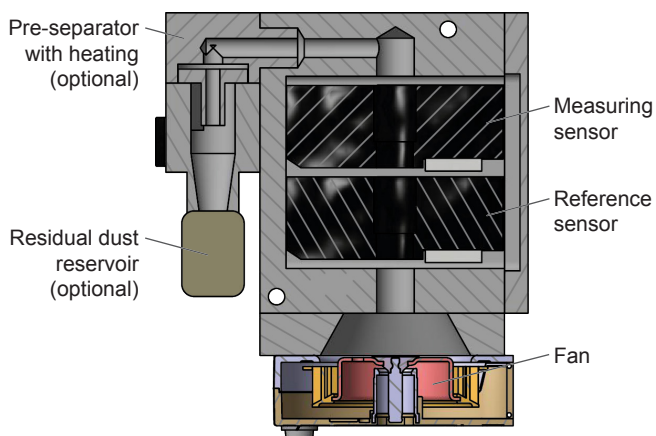


Optical sensor for continuous measurement and monitoring of fine dust contents indoor and outdoor

APPLICATION

By means of the FDS 15 it is possible to determine the current particulate matter concentration of the environment and make out health hazards.

SENSOR DESIGN



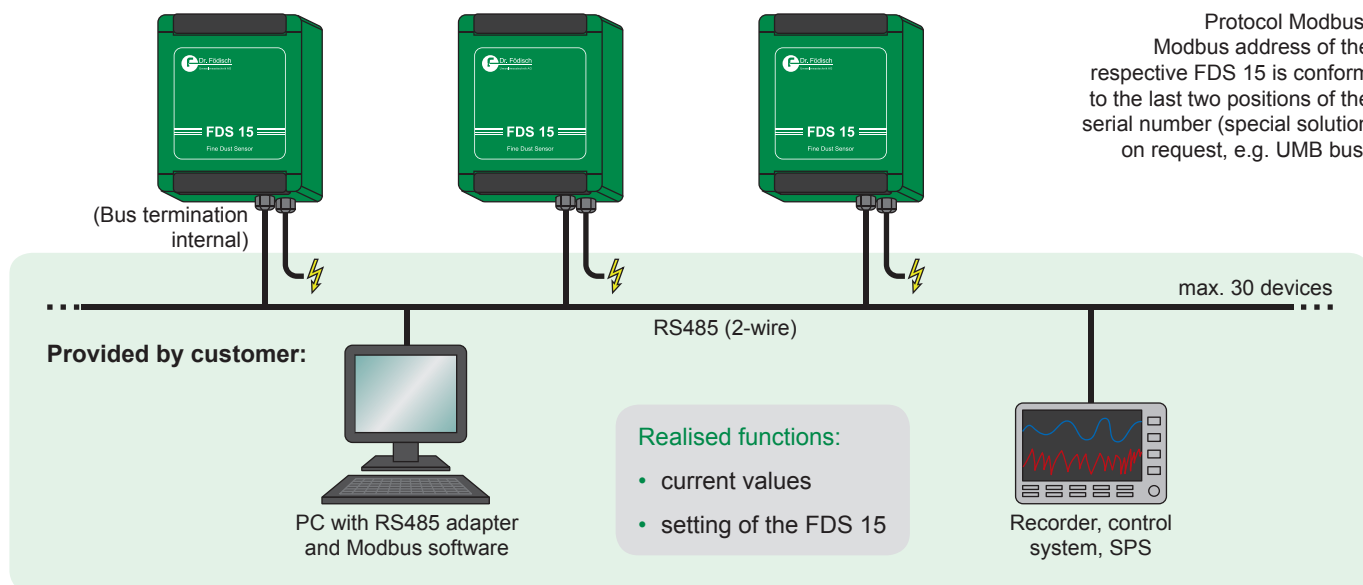
YOUR BENEFITS AT A GLANCE

- real-time measurement
- robust design
- active suction
- long-term stability through two sensors
- cross linking of several FDS 15
- network-compatible, WLAN
- easy installation without special tool
- low operational costs
- patented electrostatic precipitator for zero point setting (optional)

PRECONDITIONS ON SITE

- ambient temperature: -20...+50 °C
- relative humidity: 0...95%
- place with representative dust loading
- protection against draught
- no direct solar radiation
- location free of percussion
- power supply
- signal connection (Modbus / mA / WLAN)

INSTALLATION EXAMPLE



TECHNICAL DATA

| | |
|--|---|
| Housing: | compact sensor housing made of aluminium; IP33 |
| Dimensions: | 130 mm x 160 mm x 90 mm (w x h x d) |
| Weight: | approx. 2 kg |
| Ambient temperature: | -20...+50 °C |
| Relative humidity: | 0...95% |
| Measuring method: | scattered light measurement |
| Average dust contents: | up to 200 µg/m³ (with electrostatic precipitator up to 500 µg) |
| Detection limit: | 2 µg/m³ |
| Flow: | 2 l/min |
| Sensors: | 2x optical sensor; separated control and signal evaluation |
| Zero point setting: | automatic, interval 2-8 h (optional by internal electrostatic precipitator with high voltage module, approx. 10 kV) |
| Fan: | for flow enforcement |
| Heating: | for conditioning of measuring gas (compliance with the dew-point spread) |
| Interface: | RS485 (Modbus) |
| Clip contacts: | max. 0.5 mm; power supply connection: max. 2.5 mm |
| Power supply: | 100-240 V AC, 0.7 A, 50-60 Hz (optional 12-24 V DC, 2.1 A); pre-fuse min. 5 A |
| Optional: | <ul style="list-style-type: none"> • 4...20 mA current loop • WLAN module • pre-separator with regulated heating • electrostatic precipitator |
| <i>Special models are possible on request.</i> | |