

Fine dust sensor

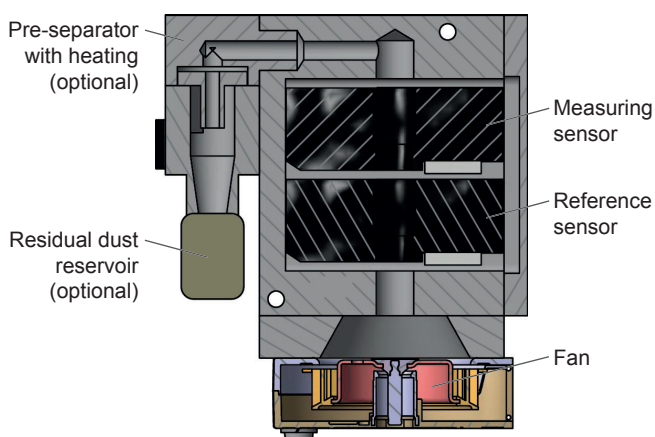


Optical sensor for continuous measurement and monitoring of fine dust contents indoor and outdoor

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



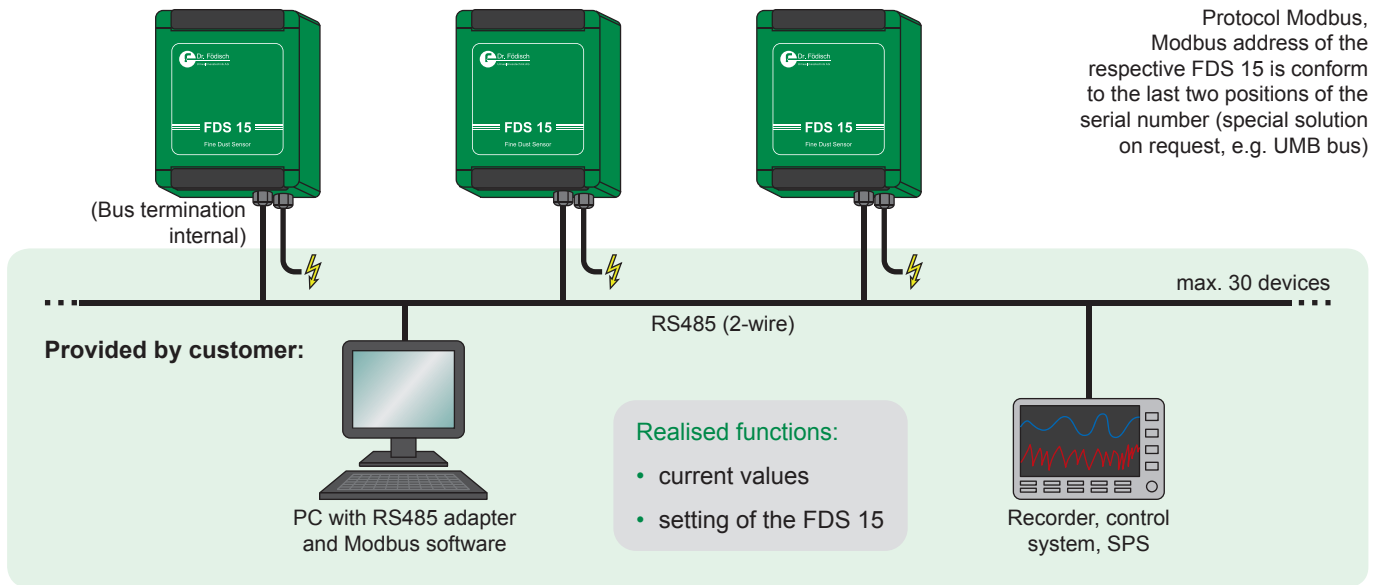
YOUR BENEFITS AT A GLANCE

- real-time measurement (PM10 or PM2.5)
- 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/m ³ (with electrostatic precipitator up to 500 µg)
Detection limit:	2 µg/m ³
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), integrated over temperature protection
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>	