

FDS 17

Fine Dust Sensor



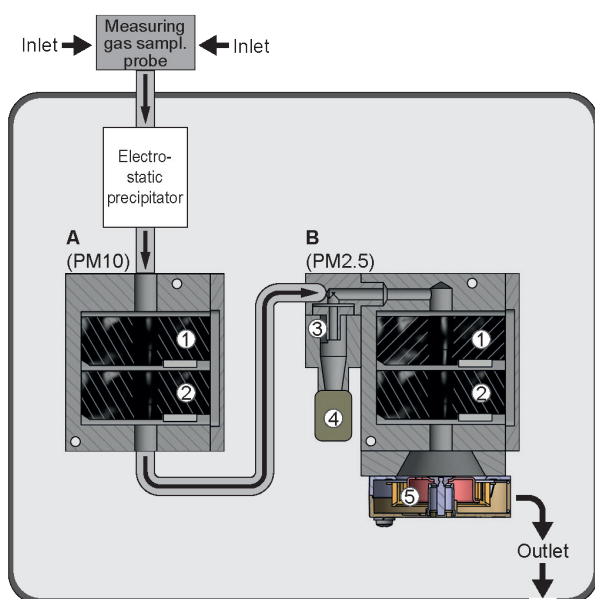
Product Information

Optical sensor for continuous, simultaneous measurement and monitoring of fine dust contents PM10 and PM2.5 indoor & outdoor



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)



SCHEMATIC DESIGN

- A** Sensor module for measurement of PM10
- B** Sensor module for measurement of PM2.5

- 1** Measuring sensor
- 2** Reference sensor
- 3** Pre-separator
- 4** Residual dust reservoir
- 5** Fan

FEATURES AND BENEFITS

- Simultaneous real-time measurement of PM10/TSP and PM2.5
- Patented electrostatic precipitator for zero point setting
- Robust design
- Active suction
- Long-term stability
- Cross linking of several FDS 17
- Network-compatible, WLAN
- Easy installation without special tool
- Low operational costs



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



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



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

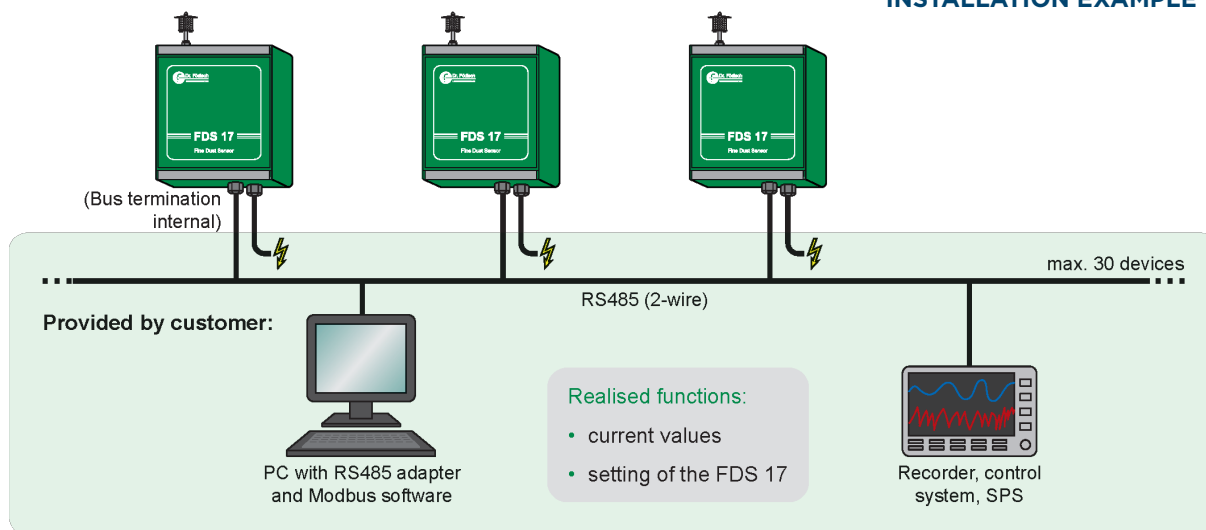


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• Certificate no: MW-2550-0272-2016





INSTALLATION EXAMPLE



TECHNICAL DATA

Housing:	compact sensor housing made of aluminium; IP33
Dimensions:	200 mm x 313 mm x 121 mm (w x h x d)
Weight:	approx. 4 kg
Ambient temperature:	-20...+50 °C
Relative humidity:	0...95%
Measuring method:	scattered light measurement
Average dust contents:	up to 500 µg/m³ (max. 2000 µg/m³)
Detection limit:	2 µg/m³
Flow:	2 l/min
Sensors:	2x sensor module with two optical sensors for each; separated control and signal evaluation
Zero point setting:	automatic by internal electrostatic precipitator with high voltage module, approx. 10 kV; interval 2-8 h
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:	• 4...20 mA current loop • WLAN module



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