



PM-2.5 and PM-10



- ▶ Simultaneous or separate determination of PM10 and PM2.5
- ▶ Monitoring of fine dust in:
 - production area (workshops, factories, etc.)
 - indoor air quality monitoring in offices
 - monitoring the ambient air
 - Integration in weather station
- ▶ Wide operative environmental conditions: -20...50°C, 0-95% RH
- ▶ Automatic zero setting
- ▶ 2 l/min fan
- ▶ 4...20 mA output
- ▶ RS485 Modbus-RTU output

The fine dust sensors are optical sensors for continuous measurement and control of fine dust contents, three particulate sizes are available: simultaneous PM10 and PM2.5, and separate PM 2.5 and PM10. The determination of the dust content is based on the method of scattered light measurement. The sucked air is tempered. The flow enforcement takes place via the integrated fan (2 l/min). In the device there is a periodic control and correction of zero point and reference point which is enabled by the electrostatic precipitator with integrated high voltage module. A high zero point stability is achieved by evaluation of the internal measuring signals.

Technical Specifications


PN	PRPMA1002	PRPMA1102	PRPMA1000	PRPMA1100	PRPMA1001	PRPMA1101
						
Measurement	PM2.5 and PM10		PM2.5		PM10	
Output	4...20 mA	RS485	4...20 mA	RS485	4...20 mA	RS485
Protocol		Modbus RTU		Modbus RTU		Modbus RTU
Measurement Range	up to 500 µg/m ³ (with electrostatic precipitation 2000 µg/m ³)		up to 200 µg/m ³ (with electrostatic precipitation 500 µg/m ³)			
Auto-zero (zero-point check)	Yes, every 4 h		Yes, interval 2...8 h			
Weight	4 Kg		2 Kg			
Dimensions	200x297x121 mm		130x160x90 mm			

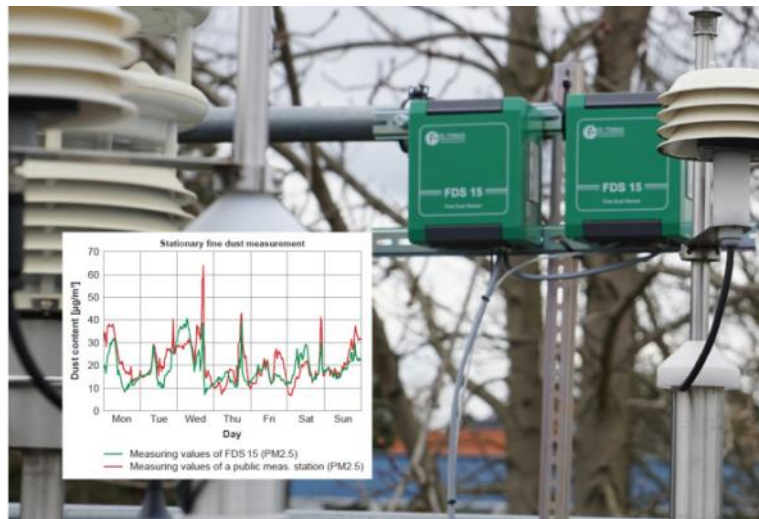
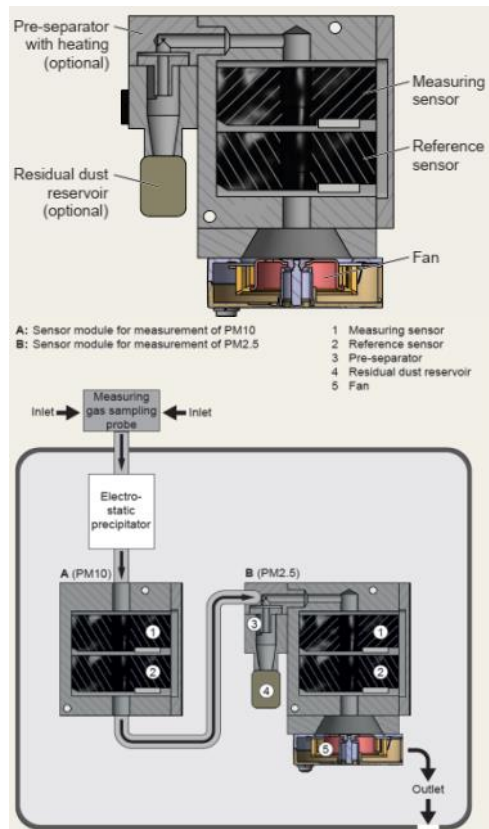
Common Technical Specifications

Particulate	Measuring method	Scattered light measurement
	Standard (PM 2.5)	DIN EN 481- Workplaces atmospheres; size fraction definitions for measurement of airborne particles
	Sensor	2x optical sensors; separated control and signal evaluation
	Sensitivity/Resolution	2µg/m ³
	Nephelometer accuracy	±5 µg up to 100 µg/m ³ and ±5% over 100 µg/m ³
	Min. particle size sensitivity	0.25 µm
	Flow	2 l/min

General Information	Heater	YES
	Housing	Aluminium
	Power supply	12Vdc (2.1 A)
	Protection grade	IP33 (designed for outdoor use, splash water from below should be avoided)
	Operative limits	-20±50°C, 0±95% RH%
	Compatibility	Alpha-Log, E-Log

Accessories

	MAPSA1200	Arm for protecting from rain and solar radiation and for fixing dust sensors on pole (diam 45-65 mm)
	MN1510.20R	CAT 5 cable for data connection. L= 20 m
	MN1510.25R	CAT 5 cable for data connection. L= 25 m
	MN1510.50R	CAT 5 cable for data connection. L= 50 m



► Outdoor measurement of the particulate in combination with other typical meteorological sensors. The RS485 signal can be connected to LSI-LASTEM data loggers (Alpha-Log, E-Log)