FIDAS® 200

The Fidas® System particulate matter monitor was explicitly developed for environmental regulatory monitoring. It is the market leader for continuous and simultaneous monitoring of ambient $PM_{2.5}$ and PM_{10} in European countries and countries close to Europe. The Fidas® 200 version is a 19″ plug-in unit for air-conditioned monitoring stations (temperature range 5 - 40 °C). Fidas® 200 E has a remote sensor for easier integration into stations with existing roof penetration. Fidas® 200 S is designed for outdoor installation (with stainless steel weatherproof housing), whereby this does not require full air conditioning, but can be operated with an auxiliary heater. All versions are available with different weather stations and sampling tubes of different lengths.

BENEFITS

- Type-approved and certified according to latest EN requirements (EN 15267)
- Continuous and simultaneous real-time measurement of multiple PM values
- Additional information on particle number concentration and particle size distribution
- Long service life
- Low maintenance
- External check of calibration on site possible
- Intuitive and easy to operate
- Reliable function, very high data availability (> 99 %)
- Permanent monitoring of status, among others online monitoring of calibration
- No radioactive material and no consumables
- Low energy consumption

FEATURES

- On-site calibration and adjustment (particle size and volume flow)
- Light source: LED with high stability and a long lifetime
- Two pumps in parallel operation for additional operational safety due to redundancy

APPLICATIONS

- Regulatory pollution control in monitoring networks
- Ambient air monitoring campaigns
- Long-term studies
- Emission source attribution
- Emission dispersion studies (e.g. fires, volcanoes)

MODEL VARIATIONS

Fidas® 200 E

EN 16450 approved fine dust aerosol spectrometer for simultaneous measurement of $PM_{2.5}$ and PM_{10}, featuring a separate sensor for existing roof glands

https://www.palas.de/en/product/fidas200e

Fidas® 200 S

EN 16450 approved fine dust aerosol spectrometer for simultaneous measurement of $PM_{2.5}$ and PM_{10} in weatherproof cabinet for outdoor installation

https://www.palas.de/en/product/fidas200s

DATASHEET

Measuring principle	Optical light scattering at single particles	Reported data	PM_1, $PM_{2.5}$, PM_4, PM_{10}, TSP, C_N, particle size distribution, ambient pressure, ambient temperature, rel. ambient humidity
Measurement range (number C_N)	0–20.000 particles/cm^3	Measurement range (size)	0.18–18 μm (certified range, other measuring ranges on request)
Measurement range (mass)	0–10,000 $\mu g/m^3$	Measurement uncertainty	9.7 % for $PM_{2.5}$, 7.5 % for PM_{10} (expanded measurement uncertainty according to EN 16450, TÜV Report)
Volume flow	4.8 l/min $\triangleq$ 0.3 m^3/h ± 3% (24h), complient with EN 16450	Size channels	64 (32/decade)
Time resolution	1 s–24 h	Interfaces	USB, Ethernet (LAN), RS-232, Wi-Fi
User interface	Touchscreen, 800 • 480 pixel, 7″ (17.78 cm)	Protocols	UIDEP, UDP, ASCII, MODBUS, Bayern-Hessen
Data logger storage	Capacity for 2 years continuous operation at 60 s storage interval	Software	PDAnalyze
Data acquisition	Digital, 20 MHz processor, 256 raw data channels	Light source	Long term stable LED
Gehäuse	Table housing, optional: with mounting brackets for rack-mounting	Operating system	Windows 10 IoT Enterprise
Power supply	115 – 230 V, 50/60 Hz	Installation conditions	+5–+40 °C

additional parameter on our website …

NORMS AND CERTIFICATES

VDI 4202-1, VDI 4203-3, EN 12341, EN 14907, EN 16450, EU-Äquivalenzleitfaden, EN 15267-1/-2, ISO 21501-1