

Fine dust measurement device Fidas[®] 2



EN 16450 approved fine dust aerosol spectrometer for simultaneous measurement of PM_{2.5} and PM₁₀, in weatherproof cabinet for outdoor installation

Benefits

- Type-approved and certified according to latest EN requirements (EN 15267)
- Explicitly approved for outdoor installation, highly flexible application ranges
- Continuous and simultaneous real-time measurement of multiple PM values
- Additional information on the basis of particle number concentration
- Adjustable time resolution from > 1 s to 24 h
- Light source: LED with high stability and long life-time
- Long service life
- Low maintenance
- External check of calibration on site possible
- Intuitive and easy to operate
- Reliable function, very high data availability (> 99 %)
- 2 pumps in parallel operation for additional operational safety due to redundancy
- Permanent monitoring of status, among others on-line monitoring of calibration
- Remote monitoring, maintenance and control easily possible
- Cloud zone via Palas server for worldwide data retrieval

Applications

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



<https://www.palas.de/product/fidas200s>

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Datasheet

Parameter	Description
Interfaces	USB, Ethernet, RS232/485, Wi-Fi
Measurement range (size)	0,18 – 100 µm (3 Messbereiche)
Size channels	64 (32/decade)
Measuring principle	Optical light-scattering
Measurement range (number C_N)	0 – 20,000 particles/cm ³
Volume flow	4.8 l/min $\hat{=}$ 0.3 m ³ /h
Data acquisition	Digital, 20 MHz processor, 256 raw data channels
Power consumption	approx. 200 W
User interface	Touch screen, 800 • 480 pixel, 7"
Housing	Weatherproof outdoor housing (IP 65)
Dimensions	1,810 • 600 • 400 mm (H • W • D)
Weight	approx. 60 kg
Operating system	Windows
Data logger storage	4 GB
Software	PDAnalyze Fidas®
Aerosol conditioning	Thermal with IADS
Measurement range (mass)	0 – 10 000 µg/m ³
Reported data	PM ₁ , PM _{2.5} , PM ₄ , PM ₁₀ , TSP, C _N , Partikelgrößenverteilung, Druck, Temperatur, Feuchte
Installation conditions	-20 – +50 °C, weatherproof (EN-certified)
Sampling head	Sigma-2
response time (sensor)	< 2s
Linearity	1,06 für PM _{2.5} 1,03 für PM ₁₀ (gegen Gravimetrie nach EN16450, TÜV Report)
Accuracy	9,7 % für PM _{2.5} 7,5 % für PM ₁₀ (erweiterte Messunsicherheit nach EN16450, TÜV Report)

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