

FIDAS® 200 S



The Fidas® 200 S version is a 19" plug-in unit mounted in a splash-proof stainless steel control cabinet for outdoor use (temperature range -20 - 50 °C). A larger, air-conditioned control cabinet is available on request, allowing the installation of additional devices. Variants of the Fidas® 200 S are the basic Fidas® 200 and the Fidas® 200 E with a remote sensor (for easier integration into stations with existing roof feed-through).

OPERATION PRINCIPLE

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 lifetime
- 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 online monitoring of calibration
- Remote monitoring, maintenance and control easily possible
- Cloud zone via Palas server for worldwide data retrieval
- No radioactive material
- No consumables
- Low energy consumption
- Reduces your operating expenses

DATASHEET

Measurement range (number C_N)	0 – 20,000 particles/cm ³
Size channels	64 (32/decade)
Measurement range (size)	0.18 – 18 μm (certified range, other measuring ranges on request)
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 (mass)	0 – 10,000 $\mu\text{g}/\text{m}^3$
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 $\hat{=}$ 0.3 m ³ /h \pm 3% (24h), compliant with EN 16450
Time resolution	1 s – 24 h
Data acquisition	Digital, 20 MHz processor, 256 raw data channels
Light source	Long term stable LED
User interface	Touchscreen, 800 • 480 pixel, 7" (17.78 cm)
Housing	Weatherproof outdoor housing (IP 65)
Weight	Control unit: 9.3 kg, sample head: 2.25 kg, sample tube: 4.5 kg
Operating system	Windows 10 IoT Enterprise
Data logger storage	Capacity for 2 years continuous operation at 60 s storage interval
Software	PDAnalyze
Response time	< 2 s
Installation conditions	-20 – +50 °C (weatherproof)
Interfaces	USB, Ethernet (LAN), RS-232, Wi-Fi
Protocols	UIDEP, UDP, ASCII, MODBUS, Bayern-Hessen
Power supply	115 – 230 V, 50/60 Hz
Sampling head	Passive collector Sigma-2
Dimensions	1,810 • 600 • 400 mm (H • W • D)
Sampling system	Drying of the aerosol by IADS (Intelligent Aerosol Drying System)
Noise emission	< 70 dB(A)
Fuse	T2A
Resolution	0.1 $\mu\text{g}/\text{m}^3$
Power consumption	Normal operation: 60 W, max. < 300 W
Data Management	Prepared for connection to the Palas®Cloud MyAtmosphere ("MyAtmosphere-ready"); internet access and separate registration required. MyAtmosphere terms and conditions of use apply.

APPLICATIONS

- Regulatory pollution control in monitoring networks
- Ambient air monitoring campaigns
- Preliminary assessments (spot checks)
- Long-term studies
- Emission source attribution
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Mehr Informationen:
<https://www.palas.de/product/fidas200s>