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

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 $m^3/h \pm 3\%$ (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
Housing	Weatherproof outdoor housing (IP 65)
Operating system	Windows 10 IoT Enterprise
Power supply	115 – 230 V, 50/60 Hz
Installation conditions	-20 – +50 °C (weatherproof)
Response time	< 2 s
Sampling head	Passive collector Sigma-2
Dimensions	1,810 • 600 • 400 mm (H • W • D)
Weight	Control unit: 9.3 kg, sample head: 2.25 kg, sample tube: 4.5 kg
Sampling system	Drying of the aerosol by IADS (Intelligent Aerosol Drying System)
Noise emission	< 70 dB(A)
Fuse	T2A
Resolution	0.1 $\mu g/m^3$
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
- Emission dispersion studies (e.g. fires, volcanoes)

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Mehr Informationen:
https://www.palas.de/product/fidas200s