# 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).

## 优势

- Explicitly approved for outdoor installation, highly flexible application ranges
- 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

## 特点

- 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

## 应用领域

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

## 技术数据

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|---|---|
| 测量原理 | Optical light scattering at single particles, 90° sideways scattering |
| 报告数据 | $PM_1$, $PM_{2.5}$, $PM_4$, $PM_{10}$, TSP, $C_N$, particle size distribution, ambient pressure, ambient temperature, rel. ambient humidity |
| 测量范围(数量浓度) | 0–20.000 颗粒/$cm^3$ |
| 测量范围(粒径) | 0.178 - 17.8 $\mu$m (additional: 0.4 - 40$\mu$m, 1-100$\mu$m) |
| 测量范围(质量) | 0–10.000 $\mu g/m^3$ |
| 测量不确定性 | 9.7 % for $PM_{2.5}$, 7.5 % for $PM_{10}$(expanded measurement uncertainty according to EN 16450, 450, (see Qal1.de)) |
| 体积流量 | 4.8 Nl/min (25°C, 1013 hPa) < +/- 1% (MFC-controlled diaphragm pump) |
| Size channels | 64 (32/decade) |
| Time resolution | 1s - 24h variable adjustable |
| 接口 | USB, Ethernet (LAN), RS-232, Wi-Fi (Dongle), digital |
| 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 |
| Data acquisition | Max. 256 raw data channels (32 size channels/decade) |
| Light source | Polychromatic LED |
| 外壳 | Steel cabinet |
| Operating system | Windows 10 IoT (LTSA) |
| 电源 | 115 – 230 V, 50/60 Hz |
| Installation conditions | Operating temperature: 5 – +40 °C, operating humidity: 0 - 100% (non-condensing) |
| Sampling head | Sigma head (non-selective passive collector) |
| Dimensions | 1,810 • 660 • 470 mm (H • W • D) (including IADS) |
| 重量 | 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) |
| Resolution | 0.1 $\mu g/m^3$ |
| Power consumption | Normal operation: 60 W, max. 200 W |
| Data Management | Prepared for connection to the Palas Cloud MyAtmosphere (“MyAtmosphere-ready”) |
| Repeatability | 3 % |

## 标准和证书

VDI 4202-1, VDI 4203-3, EN 12341, EN 14907, EN 16450, EU-Äquivalenzleitfaden, EN 15267-1/-2, ISO 21501-1, LCSQA (2023)