

# FIDAS<sup>®</sup> SMART 100 E



Due to its extended and TÜV-approved inlet, the Fidas<sup>®</sup> Smart 100 E is ideal for retrofitting in existing measurement containers - supplementary for individual fractions (PM<sub>2.5</sub> or PM<sub>10</sub> only) or as a replacement for existing systems.

## 工作原理

## 优势

- Extended inlet for installation in existing measuring containers
- Technology based on the certified Fidas® 200 series (EN16450 and MCERTS); simultaneous measurement of  $C_n$ ,  $PM_1$ ,  $PM_{2.5}$ ,  $PM_4$ ,  $PM_{10}$
- High accuracy due to advanced algorithms
- Long-term stable: up to 2 years of operation without calibration possible.
- On-site calibration with test dust (NIST traceable) is possible
- Operation with AC or DC power source
- Long-life blower for sample airflow
- Regulated aerosol heating to avoid condensation

## 标准和证书

ISO 21501-1

## 技术数据

测量原理	Optical light scattering at single particles
报告数据	PM <sub>1</sub> , PM <sub>2.5</sub> , PM <sub>4</sub> , PM <sub>10</sub> , TSP, C <sub>N</sub> , particle size distribution, ambient pressure, ambient temperature, rel. ambient humidity
测量范围(数量浓度)	0 – 20,000 particles/cm <sup>3</sup>
测量范围(粒径)	0.18–18 µm (certified range, other measuring ranges on request)
测量范围(质量)	0 – 20,000 µg/m <sup>3</sup>
测量不确定性	9.0 % for PM <sub>2.5</sub> , 9.7 % for PM <sub>10</sub> (expanded measurement uncertainty according to EN 16450, TÜV Report)
体积流量	1 l/min $\hat{=}$ 0.06 m <sup>3</sup> /h
Size channels	64 (32/decade)
Time resolution	1 s – 24 h
接口	USB, Ethernet (LAN), Wi-Fi, 4G (optional via LTE stick)
User interface	Touchscreen 800 • 480 Pixel, 5" (12,7 cm)
Protocols	UDP, ASCII, Modbus
Data logger storage	10 GB
软件	PDAnalyze
Data acquisition	Digital, 22 MHz processor, 256 raw data channels
Light source	Long term stable LED
外壳	Polymer housing with weather protection and tripod/wall/pole mount option
Operating system	Windows 10 IoT Enterprise
电源	115 – 230 V, 50/60 Hz
Power consumption	Normal operation: 15 W, max. 60 W
Installation conditions	-20 – +50 °C (weatherproof)
Response time	< 2 s
Dimensions	240 • 320 • 190 mm (H • W • D)
重量	3.9 kg
Probenahmesystem	Drying of the aerosol by compact IADS (Intelligent Aerosol Drying System) - Version E: extended inlet for installation in measuring containers
Noise emission	< 40 dB(A)
Resolution	0.1 µg/m <sup>3</sup>
Power consumption	Normal operation: 15 W, max. 60 W
Data Management	Prepared for connection to the Palas Cloud MyAtmosphere ("MyAtmosphere-ready"); Internet access and separate registration required. The MyAtmosphere terms of use apply.

## 应用领域

- Regulatory environmental monitoring
- Construction sites
- Networks with roads, railways, and ports
- Smart City
- Occupational safety
- Industry



Mehr Informationen:  
<https://www.palas.de/zh/product/fidasmart100e>