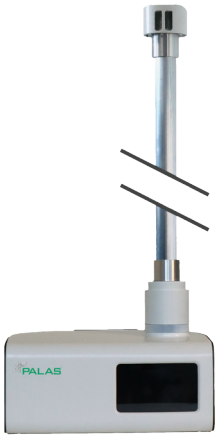
FIDAS® SMART 100 E



Due to its extended and TÜV-approved inlet, the Fidas® Smart 100 E is ideal for retrofitting in existing measurement containers - supplementary for individual fractions ($PM_{2.5}$ or PM_{10} only) or as a replacement for existing systems.

BENEFITS

- 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

FEATURES

- Smallest and lightest EN 16450-certified device on the market
- On-site calibration and adjustment (particle size and volume flow)
- Installation and operation directly outdoors without air conditioning
- Data visualization via Palas Cloud (”MyAtmosphere-ready”)
- Measurement data acquisition per second
- E-version also available with extendable sampling tube for installation in a measuring container

APPLICATIONS

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

https://www.palas.de/product/fidasmart100e

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/cm³	Measurement range (size)	0.18–18 µm (certified range, other measuring ranges on request)
Measurement range (mass)	0 – 20,000 µg/m³	Measurement uncertainty	9.0 % for $PM_{2.5}$, 9.7 % for PM_{10} (expanded measurement uncertainty according to EN 16450, TÜV Report)
Volume flow	1 l/min $\triangleq$ 0.06 m³/h	Size channels	64 (32/decade)
Time resolution	1 s – 24 h	Interfaces	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	Software	PDAnalyze
Data acquisition	Digital, 22 MHz processor, 256 raw data channels	Light source	Long term stable LED
Housing	Polymer housing with weather protection and tripod/wall/pole mount option	Operating system	Windows 10 IoT Enterprise
Power supply	115 – 230 V, 50/60 Hz	Power consumption	Normal operation: 15 W, max. 60 W

additional parameter on our website …