FIDAS® FROG

The fine dust measurement device Fidas® Frog allows for a fast, reliable, and quality-assured determination of fine dust, e.g., monitoring within the scope of Health, Safety, and Environment (HSE) management at workplaces (exposure assessment) or in the range of indoor air quality measurements (e.g., for offices, public buildings such as schools, passenger compartments...).

It simultaneously measures the environmentally relevant mass fractions PM_1, $PM_{2.5}$, PM_4, PM_{10}, and TSP, as well as the particle number and the particle size distribution within the particle size range of 0.18 – 93 μm. By providing fine dust values with high time resolution, the operator receives comprehensive information for evaluation and assessment of the fine dust pollution for the investigated application.

The very compact and light design as a portable hand-held monitor with either battery ...

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BENEFITS

- Continuous and simultaneous real-time measurement of PM_1, $PM_{2.5}$, PM_{10} and TSP-values
- Additional particle number concentration and particle size distribution
- Wide measuring range: 0.18 – 93 μm
- Adjustable time resolution from 1 s
- Direct comparison of different measurements
- Configuration of limit values possible
- High quality of measuring data through implementation of the sensor / evaluation algorithm of EN-certified Fidas® 200
- Additonal expanded range of applications by possible separation of the measuring device and the Tablet-PC for control (communication via WLAN)
- Ergonomic design and low weight
- Intuitive and simple operation
- Integrated camera for documentation of the measurement
- Export function for measured data
- Possibility to generate a measurement report as pdf in Fidas® Frog
- Remote monitoring and control via network integration easily possible
- PDAnalyze Fidas® software for individual analysis of your measurement data on an external PC

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

APPLICATIONS

- Fine dust monitoring at alternating locations or in movement
- Air quality monitoring indoors, at the workplace, or inside vehicles
- Use as an aerosol spectrometer in setups where space is limited

FEATURES

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
Measurement range (number C_N)	0 – 20,000 particles/cm³	Measurement range (size)	0.18 – 93 µm (2 measurement ranges)
Measurement range (mass)	0 – 100 mg/m³ (depending on the composition of the aerosol)	Volume flow	1.4 l/min
Size channels	32/decade, 256 raw data channels	Interfaces	USB, Ethernet (LAN) by USB-adapter, Wi-Fi access point
User interface	Touchscreen, 1,280 • 800 pixel, 8″ (20.32 cm)	Data logger storage	Approx. 16 GB (extendable by micro-SD)
Data acquisition	Digital, 20 MHz processor, 256 raw data channels	Light source	LED
Housing	Synthetic housing	Operating system	Windows 10
Power consumption	13 W	Installation conditions	0 – +40 °C
Battery operation	Li-ion batteries, non-removable, base unit: 77 Wh (14.8 V; 5,200 mAh), 8 cells tablet: 20 Wh (3.8 V; 5,200 mAh), 2 cells	Dimensions	100 • 240 • 150 mm (H • W • D)
Weight	Approx. 2.1 kg (operating panel: 0.4 kg, measuring unit: 1.7 kg)		