U-RANGE 2000



The Palas U-RANGE combines two systems for continuously measuring airborne particles in a size range of 8 – 40,000 nm (standard) (4 – 40,000 nm available upon request) (depending on the configuration).

The U-SMPS is a standard system for exact measurements of nanoparticle size distributions. Aerosol particles are selected in the classifier (DEMC) according to their electrical mobility and then counted by a condensation particle counter (UF-CPC). Prof. Wiedensohler (IfT Leipzig, Germany) developed the algorithm used by Palas for the inversion of the measured data to yield the particle size distribution for the U-SMPS.

The Fidas® 200 is a fine dust measurement system for ambient air quality measurements for regulatory purposes. It uses the recognized measurement technology of optical light scattering of single particles and is equipped with an LED light source with ...

Benefits

- Particle size distributions from 8 – 40,000 nm (standard), 4 – 40,000 nm available (upon request)
- Additional determination of PM fractions (e.g. $PM_{2.5}$, PM_{10})
- Continuous and fast-scanning principle of measurement
- High resolution in up to 64 size classes/decade
- Graphic display of measurement values
- Intuitive operation using 7″ touchscreen and GUI
- Integrated data logger
- Supports multiple interfaces and remote access

Applications

- Aerosol research
- Environmental and climatic studies
- Inhalation experiments
- Filter test
- Interior and workplace measurements
- Distribution studies (e.g. fires, volcanoes)

DATASHEET

Particle size range	8 – 40.000 nm (Standard), 4 – 40.000 nm möglich (auf Anfrage)
Volume flow	4.8 l/min
Volume flow (sheath air)	2.5 – 10 l/min
Size channels	Max. 120 (32/decade)
Time resolution	3 min
Interfaces	USB, Ethernet (LAN), Wi-Fi, RS-232/485
User interface	Touchscreen, 800 • 480 pixel, 7″ (17.78 cm)
Data logger storage	4 GB
Software	PDAnalyze
Power supply	115 – 230 V, 50/60 Hz
Working fluid	Butanol, isopropanol, water or other (UF-CPC)
Dimensions	Fidas®: 185 • 450 • 320 mm (H • B • T) (19″), UF-CPC: 330 • 380 • 240 mm (H • B • T), U-SMPS Säule: 150 • 570 mm (ø base • H, U-SMPS), U-SMPS Kontrolleinheit: 330 • 380 • 240 mm (H • B • T)
Weight	Approx. 9.3 kg (Fidas®, U-SMPS column), approx. 12.9 kg (U-SMPS control unit), approx. 10 kg (U-SMPS UF-CPC)

NORMS AND CERTIFICATES

EN 16976:2024-09, CEN/TS 17434:2020, ISO 27891:2015, ISO 21501-1