welas® digital 3000

Aerosol spectrometer **with two aerosol sensors**, highest particle size resolution, measuring range from 200 nm to 100 µm for **quasi simultaniously measurements**

Benefits

- Measuring range of 0.2 to 100 µm (4 measuring ranges selectable in one device)
- Up to four measuring ranges in only one device:
  - 0,2 µm – 10 µm
  - 0,3 µm – 17 µm
  - 0,6 µm – 40 µm
  - 2 µm – 100 µm (additionally for sensors 2300 and 2500)
- Up to 128 size channels per measuring range
- Concentration range of 1 particle/cm^3 up to 10^6 particles/cm^3
- Calibration curves for different refractive indices
- Very high and reproducible counting efficiency rate starting at 0.2 µm (see Graph 2)
- High temporal resolution down to 10 ms
- Optical fibre technology
- Measurement in potentially explosive environment
- Long service life of the light source of 2000 h
- Extensive PDControl and FTControl software
- Simple operation
- Calibration, cleaning and lamp replacement can all be performed independently by the customer
- Low maintenance

Applications

- Determination of the separation efficiency of car interior filters, engine air filters, room air filters, compressed air filters, vacuum cleaner filters, cleanable filters, electrostatic precipitators, oil separators, cooling lubricant separators, wet scrubbers, cyclones and other separators
- Isothermal and isobaric particle size and quantitative determination, for instance in the automobile, chemical, pharmaceutical and food industries
- Analysis of fast, transient processes
- Inspection of smoke detectors
- Particle formation for cloud formation

Model Variations

model available in additional variations
. . . more variations available

https://www.palas.de/product/welasdigital3000

Version: September 3, 2020

PALASCOUNTS

welas® digital 3000

Datasheet

Parameter	*Description*
Interfaces	USB
Measurement range (size)	0.2 µm – 10 µm, 0.3 µm – 17 µm, 0.6 µm – 40 µm, 2 µm – 100 µm
Size channels	up to 64/decade
Measuring principle	Optical light-scattering
Measurement range (number C_N)	< 1 • 10^6 particles/cm^3
Time resolution	≥ 10 ms
Thermodynamic conditions	10 – 40 °C, -100 – 50 mbar
Volume flow	5 l/min
Data acquisition	20 MHz processor, 256 raw data channels, digital
Light source	Xenon arc lamp 35 W
User interface	Laptop
Power supply	115 – 230 V, 50 – 60 Hz
Housing	Table housing, optionally with mounting brackets for rack-mounting
Dimensions	185 • 450 • 315 mm (H • W • D) (19")
Weight	approx. 18 kg (control unit), ca. 2.8 kg (per sensor)
Software	PDControl, FTControl
Installation conditions	+5 – +40 °C (control unit)

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