



With automatic regulation of sampling volume flow by the aerosol sensors welas<sup>®</sup> under overpressure up to 10 bar

## Benefits

- Three measuring ranges in only one device:
  - 0.2  $\mu\text{m}$  – 10  $\mu\text{m}$
  - 0.3  $\mu\text{m}$  – 17  $\mu\text{m}$
  - 0.6  $\mu\text{m}$  – 40  $\mu\text{m}$
- Up to 128 size channels per measuring range
- Concentration range from  $< 1 \text{ particle/cm}^3$  to  $5 \cdot 10^5 \text{ particles/cm}^3$
- Calibration curves for different refractive indices
- Very high and reproducible counting efficiency rate starting at 0.2  $\mu\text{m}$
- High temporal resolution down to 10 ms
- Extensive PDControl and FTControl software
- Strong, powerful external suction pump ASP 1000
- Calibration, cleaning and lamp replacement can all be performed independently by the customer
- Simple operation
- Low maintenance
- Reliable function
- Reduces your operating expenses

## 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
- Emission measurements
- Immission measurements



<https://www.palas.de/product/welasdigital1000p>

## Datasheet

Parameter	Description
<b>Interfaces</b>	USB
<b>Measurement range (size)</b>	0.2 - 10 µm, 0.3 - 17 µm, 0.6 - 40 µm
<b>Size channels</b>	up to 64/decade
<b>Measuring principle</b>	Optical light-scattering
<b>Measurement range (number C<sub>N</sub>)</b>	< 5 • 10 <sup>5</sup> particles/cm <sup>3</sup>
<b>Time resolution</b>	≥ 10 ms
<b>Thermodynamic conditions</b>	10 - 40 °C, 10 bar
<b>Volume flow</b>	5 l/min, 1.6 l/min regulated by mass flow
<b>Data acquisition</b>	20 MHz processor, 256 raw data channels, digital
<b>Light source</b>	Xenon high pressure lamp 75 W
<b>User interface</b>	Laptop
<b>Power supply</b>	115 - 230 V, 50 - 60 Hz
<b>Housing</b>	Table housing, optionally with mounting brackets for rack-mounting
<b>Dimensions</b>	185 • 450 • 315 mm (H • W • D) (19")
<b>Weight</b>	approx. 8 kg (control unit), approx. 18 kg (sensor)
<b>Software</b>	PDControl, FTControl
<b>Installation conditions</b>	+5 - +40 °C (control unit)

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