

# Fine dust measurement device Fidas<sup>®</sup> 2



EN 16450 approved fine dust aerosol spectrometer for simultaneous measurement of PM<sub>2.5</sub> and PM<sub>10</sub>, featuring a separate sensor for existing ceiling glands

## Benefits

- Type-approved and certified according to latest EN requirements (EN 15267)
- High flexibility for installation due to separation of sensor unit and control unit
- Continuous and simultaneous real-time measurement of multiple PM values
- Additional information on particle number concentration and particle size distribution
- Adjustable time resolution starting at 1 minute
- Light source: LED with high stability and long lifetime
- Long service life
- Low maintenance
- External check of calibration on site possible
- Intuitive and easy to operate
- Reliable function, very high data availability (> 99 %)
- 2 pumps in parallel operation for additional operational safety due to redundancy
- Permanent monitoring of status, among others on-line monitoring of calibration
- Remote monitoring, maintenance and control easily possible
- Cloud zone via Palas server for worldwide data retrieval

## Applications

- Regulatory pollution control in monitoring networks
- Ambient air monitoring campaigns
- Long-term studies
- Emission source attribution
- Emission dispersion studies (e.g. fires, volcanoes)



<https://www.palas.de/product/fidas200e>

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## Datasheet

Parameter	Description
<b>Interfaces</b>	USB, Ethernet, RS232/485, Wi-Fi
<b>Measurement range (size)</b>	0,18 – 100 µm (3 Messbereiche)
<b>Size channels</b>	64 (32/decade)
<b>Measuring principle</b>	Optical light-scattering
<b>Measurement range (number C<sub>N</sub>)</b>	0 – 20,000 particles/cm <sup>3</sup>
<b>Volume flow</b>	4.8 l/min $\hat{=}$ 0.3 m <sup>3</sup> /h
<b>Data acquisition</b>	Digital, 20 MHz processor, 256 raw data channels
<b>Power consumption</b>	approx. 200 W
<b>User interface</b>	Touch screen, 800 • 480 pixel, 7"
<b>Housing</b>	Table housing, optionally with mounting brackets for rack-mounting (control unit)
<b>Dimensions</b>	450 • 320 • 180.5 mm (H • W • D), 19"
<b>Weight</b>	9.3 kg (control unit only)
<b>Operating system</b>	Windows
<b>Data logger storage</b>	4 GB
<b>Software</b>	PDAnalyze Fidas®
<b>Aerosol conditioning</b>	Thermal with IADS
<b>Measurement range (mass)</b>	0 – 10 000 µg/m <sup>3</sup>
<b>Reported data</b>	PM <sub>1</sub> , PM <sub>2.5</sub> , PM <sub>4</sub> , PM <sub>10</sub> , TSP, C <sub>N</sub> , Partikelgrößenverteilung, Druck, Temperatur, Feuchte
<b>Installation conditions</b>	+5 – +40 °C
<b>Sampling head</b>	Sigma-2
<b>response time (sensor)</b>	< 2s
<b>Linearity</b>	1,06 für PM <sub>2.5</sub> 1,03 für PM <sub>10</sub> (gegen Gravimetrie nach EN16450, TÜV Report)
<b>Accuracy</b>	9,7 % für PM <sub>2.5</sub> 7,5 % für PM <sub>10</sub> (erweiterte Messunsicherheit nach EN16450, TÜV Report)

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