

FIDAS® SMART 100



Particulate matter analyzer for simultaneous measurement of PM_{2.5} and PM₁₀ (EN 16450, MCERTS) incl. PM₁, PM₄, TSP, CO₂, TVOC. Estimation of the carbon-based PM fraction (PM_x-CE)

BENEFITS

- Technology based on the type approved Fidas® 200 series (EN16450 and MCERTS); simultaneous measurement of C_n, PM₁, PM_{2.5}, PM₄, PM₁₀
- Computation of air quality index based on measurements of particulates, CO₂, and VOC
- High accuracy due to advanced algorithms
- Long term stable due to self calibration for measurement of flow rate, particulates, and gaseous pollutants
- 2 years operation without calibration; re-calibration with NIST traced test powder possible on site
- Operates on AC or DC

APPLICATIONS

- Industry:
 - Production processes
 - Bulk material handling (mixing, discharge, storage, packaging etc.)
 - Fenceline Monitoring
- Construction sites: Roads, railroads, demolition sites
- Buildings: Schools, kindergartens, hospitals, hotels, offices, public service buildings
- Residential buildings near construction sites or other polluted areas

MODEL VARIATIONS



Fidas® Smart 100 E

Fine dust measuring device for existing roof openings for measuring PM_{2.5} and PM₁₀ (EN 16450 certified) and other parameters such as PM₁, PM₄, TSP

<https://www.palas.de/product/fidasmart100e>

DATASHEET

Measuring principle	Optical light scattering of single particles
Reported data	PM1, PM2.5, PM4, PM10, TSP, CN, particle size distribution, ambient pressure, ambient temperature, rel. ambient humidity, CO2, TVOC, Air Quality Index, source indication (depending on configuration)
Measurement range (number C_N)	0 – 20,000 particles/cm ³
Size channels	64 (32/decade)
Measurement range (size)	0.175 – 20 µm
Measurement range (mass)	0 – 20,000 µg/m ³
Measurement uncertainty	R2 > 0.98 for PM _{2.5} and R2 > 0.94 for PM ₁₀ versus EN 16450-certified Fidas® 200 (15 min average, each)
Volume flow	1.0 l/min $\hat{=}$ 0.06 m ³ /h
Data acquisition	Digital, 22 MHz processor, 256 raw data channels
Light source	Long term stable LED
Power consumption	Normal operation: 15 W, max. 60 W
User interface	Touchscreen 800 • 480 pixel, 5" (12.7 cm)
Weight	3.9 kg
Operating system	Windows 10 IoT Enterprise
Data logger storage	10 GB
	additional parameter on our website ...



Further information:
<https://www.palas.de/product/fidas-smart100>