

AQ GUARD SMART 1200



AQ Guard Smart 1200 is a compact and cloud-enabled air quality measurement device. The system is designed for the requirements of outdoor air measurement in the smart city environment to improve granularity while maintaining high comparability to official measurements for environmental monitoring and health protection.

The simultaneous measurement of pollutant gases makes the device perfect for measuring in environmentally sensitive areas, especially where they are already common or required by law.

BENEFITS

- Quick and easy installation
- Long-term stability (24/7) and low maintenance
- Flexibility in communication and data transmission
- Reliable measurements (near-reference standard for particles)
- Simultaneous measurement of PM₁, PM_{2.5}, PM₄, PM₁₀, TSP, C_N
- Additionally SO₂, CO, NO₂, O₃, CO₂
- Versatile application possibilities even in demanding environments
- Suitable for high dust concentrations
- Access to data in real time and with high temporal resolution

APPLICATIONS

- Urban air quality monitoring
- Smart City projects
- Surface mining and landfills
- Formation and dispersion studies
- Construction and remediation sites
- Immission monitoring of industrial plants
- Measurement of dust emissions in road and rail traffic and at ports
- Risk areas (natural and anthropogenic)

FEATURES

- On-site calibration and correction (size resolution and volume flow)
- Communication via GPRS / 3G / 4G / Ethernet / Wi-Fi, optional: LoRaWAN
- Technology based on the certified Fidas® 200 series
- Expandable with third-party devices, metrology and sensors
- Data visualization via Palas Cloud ("MyAtmosphere-ready")
- Measurement data acquisition per second

DATASHEET

Measuring principle	Optical light scattering at single particles	Reported data	PM ₁ , PM _{2,5} , PM ₄ , PM ₁₀ , TSP, C _N , particle size distribution, ambient pressure, ambient temperature, rel. ambient humidity, SO ₂ , CO, NO ₂ , O ₃ , CO ₂
Measurement (number C_N)	range 0 – 20,000 particles/cm ³	Measurement (size)	range 0.175 – 20 μm
Measurement (mass)	range 0 – 100 mg/m ³ (depending on the composition of the aerosol)	Measurement uncertainty	< 15 % for PM _{2,5} , < 20 % for PM ₁₀ (expanded measurement uncertainty according to EN 16450, corrected – MCERTS)
Size channels	64 (32/decade)	Time resolution	1 min, moving average 1 min (MyAtmosphere), every second via internal protocols
Interfaces	USB, Ethernet (LAN), Wi-Fi, 3G/4G via Modem, optional: LoRaWAN	Protocols	ASCII, MODBUS, UDP
Light source	Long term stable LED	Power supply	Supplied power supply: 12 V
Power consumption	Standard operation: 1.2 A (1.7 A with additional heating)	Installation conditions	-20 – +50 °C
Response time	< 3s (Gassensorik)	Dimensions	530 • 270 • 208 mm (H • W • D)
Weight	Approx. 6 kg	Special features	Heated inlet, mast / tripod mount
Resolution	0.01 ppm (gas sensor)	Data Management	Prepared for connection to the Palas Cloud MyAtmosphere ("MyAtmosphere-ready"); internet access and separate registration required. MyAtmosphere terms and conditions of use apply.

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