AQ Guard Smart 1000

AQ Guard Smart 1000 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.

Benefits

- Technology based on the certified Fidas® 200 series (EN 16450 and MCERTS)
- Simultaneous measurement of PM_1, $PM_{2.5}$, PM_4, PM_{10}, TSP, C_N with high temporal resolution
- Easy and fast installation
- Data visualization via cloud MyAtmosphere
- Communication via GPRS / 3G / 4G / Ethernet / Wi-Fi, optional: LoRaWAN
- Extendable with weather station / solar protection

Applications

- Urban air quality monitoring
- Smart city projects
- Open pit mining and landfills
- Formation and dispersion studies
- Construction sites
- Immission monitoring of industrial plants
- Measurement of dust emissions from road and rail traffic as well as ports
- Risk areas (natural and anthropogenic)

DATASHEET

Measuring principle	Optical light scattering at single particles	Reported data	PM_1, $PM_{2.5}$, PM_4, PM_{10}, TSP, CN, particle size distribution, ambient pressure, ambient temperature, rel. ambient humidity, optional: SO_2, CO, NO_2, O_3
Measurement range (number C_N)	0 – 20,000 particles/cm³	Measurement range (size)	0.175 – 20 μm
Measurement range (mass)	0 – 100 mg/m³ (depending on the composition of the aerosol)	Size channels	64 (32/decade)
Time resolution	1 min, moving average 1 min	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	Dimensions	530 • 270 • 208 mm (H • W • D)
Weight	Approx. 6 kg	Special features	Heated inlet, mast / tripod mount
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.		