

# AQ GUARD SMART 1200



Air quality analyzer for monitoring fine particulate matter and pollutant gases (PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>4</sub>, PM<sub>10</sub>, TSP, SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>, CO, TVOC, CO<sub>2</sub>) under demanding environmental conditions incl. GPS

## BENEFITS

- Technology based on the certified Fidas® 200 series (EN 16450 and MCERTS)
- Simultaneous measurement of PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>4</sub>, PM<sub>10</sub>, Cn with high temporal resolution
- Additional SO<sub>2</sub>, CO, NO<sub>2</sub>, O<sub>3</sub>, TVOC, CO<sub>2</sub>
- Easy and fast installation
- Data visualization via cloud "MyAtmosphere"
- Communication via GPRS/3G/4G/Ethernet/Wi-Fi, optional: LoRaWAN
- GPS integrated
- Extendable with weather station / LoRa / 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 of single particles
Reported data	PM1, PM2,5, PM4, PM10, TSP, CN, particle size distribution, ambient pressure, ambient temperature, rel. ambient humidity, SO2, CO, NO2, O3, TVOC, CO2
Measurement range (number $C_N$ )	0 – 20,000 particles/cm <sup>3</sup>
Size channels	64 (32/decade)
Measurement range (size)	0.175 – 20 $\mu$ m
Measurement range (mass)	0 – 100 mg/m <sup>3</sup> (depending on the composition of the aerosol)
Measurement uncertainty	< 15 % for PM <sub>2,5</sub> , < 20 % for PM <sub>10</sub> (expanded measurement uncertainty according to EN 16450, corrected – MCERTS)
Time resolution	1 min, moving average 1 min
Light source	Long term stable LED
Power consumption	1.2 A in standard operation, 1.7 A with additional heating
Weight	Approx. 6 kg
Response time	< 3 s (gas sensor)
Installation conditions	-20 – +50 °C
Interfaces	USB, Ethernet (LAN), Wi-Fi, 3G/4G via Modem, GPS, optional: LoRaWAN
Protocols	ASCII, MODBUS, UDP

additional parameter on our website ...



Further information:  
<https://www.palas.de/product/aq-guard-smart1200>