

Industrial Grade Single Parameter Air Quality Monitor



AQBot™ is an industrial air quality monitor with automation capabilities. AQBot™ Series offers a wide range of air quality parameters to choose from. The range of available parameters consists of all the important Gases, Particulates, and Noise related monitoring for Industrial scenarios. AQBot™ product range consists of critical ambient parameters and toxic gases like Total Volatile Organic Compounds (TVOC), Ammonia (NH₃), Hydrogen sulfide (H₂S), Methane (CH₄), Carbon Monoxide (CO), Formaldehyde (CH₂O), Particulate Matter (PM₁, PM_{2.5}, PM₁₀, PM₁₀₀), Ambient Noise, etc. The AQBot series is designed for easy and inexpensive maintenance.

Product Features



On Device Display



Ultimate Durability



Weatherproof Enclosure



Compact and Lightweight



Internal Data Storage



SMS and Email Alerts



Real-Time Data



Built-in Relay



Wired Communications



Wireless Communications



Over-The-Air Updates

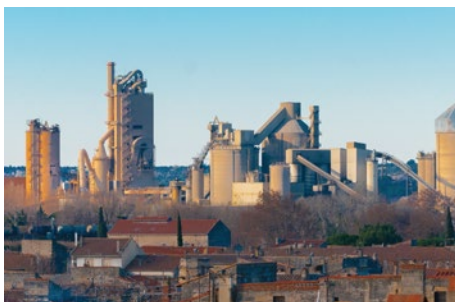


Data Analytics Software

Why Monitor Particulate Matter?

“PM” (Particulate Matter) is not a single pollutant but refers to a complex mixture of solids and aerosols of varying shape, size, and chemical composition. It may contain many chemical species like organic compounds, inorganic ions, metallic compounds, elementary carbon, etc. When inhaled, it irritates the eyes, nose, throat, and airways, and the toxic substances in the PM may lead to other adverse health impacts such as nasal cancer, pulmonary fibrosis, etc. Emission of particulate matter into the atmosphere takes place from combustion processes, crushing or grinding activities, resuspension of dust, etc. Stakeholders like safety managers or workshop supervisors can further take necessary precautions with such actionable information.

Product Applications



Cement Industry
Packaging and ash handling system.



Mining Industry
Drilling, blasting and transportation.



Thermal Power Plants
Ash extraction plants

The best in class **Particulate Monitor**

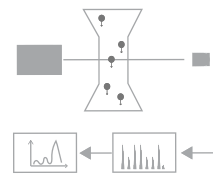
AQBot™ consists of the NEMA 4X approved enclosure to last long in a harsh industrial environment. It offers all industry-standard output signals like MODBUS, CANbus, RS-485, RS-232, etc. In addition, the fixed air quality monitor can also offer other communication modes like GSM, GPRS, 3G, WiFi, LoRa, Ethernet, etc. The monitor can easily integrate with existing building monitoring or plant control systems infrastructure. Using such a wide range of communication capabilities, AQBot™ enables the Industrial Internet Of Things (IIoT) which is the backbone of Industrial Revolution 4.0. Using such a wide range of communication capabilities, AQBot™ enables the Industrial Internet Of Things (IIoT) which is the backbone of Industrial Revolution 4.0.

Key **Benefits**

- Quick sensing for threshold based alerts
- Highly accurate data to detect low ppb concentrations
- Robust built to sustain harsh industrial conditions
- Easy data integrations to match industry standards
- In-built relay operation for automation
- Data transmissions through multiple channels
- Real time data display for keeping a check
- Siren and strobe for audio and visual alerts
- Effortless installations with versatile mounting arrangement

AQBot **Specifications**

ID	PARAMETER	RANGE	RESOLUTION
OZPM_1	Particulate Matter (PM _{2.5})	Upto 5000 µg/m ³	0.1 µg/m ³
OZPM_2	Particulate Matter (PM ₁₀)	Upto 5000 µg/m ³	
OZPM_3	Particulate Matter (PM ₁)	Upto 5000 µg/m ³	
OZPM_4	Particulate Matter (PM ₁₀₀)	Upto 30 mg/m ³	



Opticle Particle Counter

TECHNICAL

Processor	Quad-Core ARM Cortex A-72
Memory	2GB RAM, 8GB eMMC ROM
Internal Data Storage	Up to 12 months
Device Interface	On-device software, API, Display
Display Specification	6 digit 7 Segment Display

ELECTRICAL

Power Supply	AC: 90VAC- 265VAC 50/60Hz
Power consumption	3.5 W (average)
Wiring connections	Pre-wired supplied with 2m cable

GENERAL PERFORMANCE

Operation temperature	-20 to +60°C
Operation humidity	0 - 90%RH, non-condensing
Storage conditions	10 - 40°C
Net Weight	2.8 kg
Dimensions	210mm (W) × 258mm (H) × 105mm (D)
Installation method	Wall mount / Pole mount
Housing	NEMA-4X Fire-retardant FRP enclosure
Weather Protection	Weather Resistant IP66 Enclosure

COMMUNICATION

Wireless Communications	Global 2G/3G/4G, LoRa, LTE, NB-IoT, Sigfox, Wifi (Any one)
Wired Communications	Ethernet, MODBUS TCP, MODBUS RTU, RS-485, CANbus (Any one)
Analog Output	1 x 4~20mA Current Loop with 12-bit Resolution
Relay Outputs	2 programmable relays, volt free relay contacts (1NO, 1 NC)
Beacon/sounder	Built-in, RED flashing light with alarm sounder 95db @ 1m

SENSING

Warm up time	15 minutes (cold start)
Response Time (T90)	< 60 Seconds
Signal refresh rate	5 Seconds
Accuracy	<±5%FS (at 20±5°C/ 50±20%RH)
Sensor life	5000 hours

Accurate Air Quality Monitoring And Advanced Data Analytics



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