Air Quality Monitor

Each lightweight instrument is designed to simultaneously measure particulate, gas and weather data all in real-time! As an Internet of Things (IoT) solution, these hyperlocal, cloud-based monitors offer data interfacing using WiFi/cellular and comes standard with an SD memory card for duplicate date storage. While specifically designed for outdoor environmental monitoring, Air Quality Monitors can also be utilized inside buildings, homes and manufacturing facilities to measure indoor air quality. Environmental Air Quality Monitors are compatible with our cloud-based software solution that allows customers to track in real-time air quality information, as well as provide integration with customers own platform, third-party software and analytical tools thanks to API Data Services.

Features and Benefits

- Precision data – factory-calibrated sensors with the option to program custom calibration factors and measurement offsets
- Pin-point levels of gas air pollution such as CO_2, NO_2, CO, O_3, and SO_2
- Unique laser-based light scattering particle sensors – simultaneously outputs PM1, PM2.5, PM4, PM10, mass concentration data
- Designed to also measure relative humidity, temperature, and barometric pressure
- Self diagnostics – notify user of poor sensor performance while maintaining data integrity
- Designed for outdoor use – performs consistently in a wide range of humidity and temperatures, and protected from rain, bugs and direct sunlight
- Multiple ways to download data - from the cloud (.csv file), from API Data Services, and removable SD Card
- Data buffering – internally logs data (up to 2 weeks at 15 min interval via on board memory) for data redundancy
- Easy and quick installation
- Low power consumption - powered using an IP67 rated AC/DC power supply or solar power accessory
- ROHS compliant with CE Mark

Applications

- Fenceline/Perimeter Monitoring
- Municipalities & Smart Cities
- Community Monitoring Programs
- Hot Spot Detection
- Indicative Comparisons to Federal Reference Air Quality Data

Available with Solar and Cellular Accessories

** The Company reserves the right to change any product specifications without prior notification.*

Air Quality Monitor

Device	
Operational Temperature	-10°C to 60°C
Storage Temperature	-40°C to 70°C
Operational Humidity	0 to 95% RH (Non-condensing)
Dimensions	6 inch x 5.5 inch x 4.5 inch
Weight	0.35 lbs (~6 oz.)
Available Reporting Interval	1, 5, 10, 15, 30, 60 min (average of sensor sampling frequency)
PM Sensor	
Sensor Type	Light-scattering single particle counter
Aerosol	
Concentration Range	0 to 1000 µg/m3
Measurements	PM1, PM2.5, PM4 and PM10
Measurement Resolution	1 µg/m3
Counting Efficiency	50% @ 0.3 µm and 98% at 0.5 µm
Accuracy (PM 2.5)	±10 % @ 100 to 1000 µg/m3
	±10 µg @ 0 to 100 µg/m3
Zero Stability	±1 µg/m3
Sample Flow Rate	~ 0.3 LPM
Start-up Time	< 8 seconds
Acoustic Emissions Level	25 dBA @ 0.2 m
Calibration	Factory pre-calibrated sensor
Temperature Sensor	
Range	-40°C to 50°C
Accuracy	±0.5°C
Humidity Sensor	
Range	0 to 100% RH
Accuracy	±3% RH

Barometric Pressure Sensor	
Range	8 to 35 inHg (270 to 1185 hPa)
Accuracy	± 0.12 inHg (± 4 hPa)
Carbon Dioxide (CO2)	
Sensor Type	NDIR (non-dispersive infrared)
Range	0 - 10,000 ppm
Accuracy	+/- 30 ppm + 3% of reading
Resolution	1 ppm
Carbon Monoxide (CO)	
Sensor Type	Electrochemical
Range	0 - 20 ppm
Accuracy	+/- 0.150 ppm
Resolution	.001 ppm
Ozone (O3)	
Sensor Type	Electrochemical
Range	0 - 5,000 ppb
Accuracy	+/- 30 ppb
Resolution	1 ppb
Nitrogen Dioxide (NO2)	
Sensor Type	Electrochemical
Range	0 - 5,000 ppb
Accuracy	+/- 30 ppb
Resolution	1 ppb
Sulfur Dioxide (SO2)	
Sensor Type	Electrochemical
Range	0 - 5,000 ppb
Accuracy	+/- 50 ppb
Resolution	1 ppb
Power Requirements	
Input Voltage	5 VDC
Power Consumption	1 W

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