TEESING

COMPACT AIR QUALITYMONITORING STATION
ACCURATE REAL-TIME AIR QUALITY INFORMATION, MADE AFFORDABLE

THE AQM 65

Now you can measure outdoor air pollutants in real-time with high data quality, at a price you can afford. The AQM 65 enables Near Reference performance for 3-5 times less cost than traditional reference stations built on analyzers. Compared to cheap alternatives the AQM 65 offers much higher levels of data quality and can be calibrated in the field against certified reference standards for maximum traceability.

The AQM 65 is customized to measure the parameters your application demands. Choose from: criteria pollutants ozone (O3), nitrogen dioxide (NO2), nitrogen oxides (NOx), carbon monoxide (CO), sulfur dioxide (SO2), particulate matter (TSP, PM10, PM2.5, PM1); other special interest pollutants volatile organic compounds (VOC), hydrogen sulfide (H2S), non-methane hydrocarbons (NMHC), carbon dioxide (CO2); plus sensors for noise and meteorological parameters such as temperature, humidity, wind speed and direction, pressure, rain and solar radiation.

KEY FEATURES

- Real-time measurement of common pollutants to WHO air quality standards
- Can be installed by one person in less than 30 min.
- Compact size creates new possible monitoring locations
- Remote data acquisition system with fail safe on board storage
- Network mode for urban and national air monitoring
- Modularity allows addition of sensors over time
- Temperature control permits long-term operation in extreme climates
- Can be calibrated onsite to traceable reference standards
- Optional integrated and automatic calibration
- Optional plug and play environmental sensors

APPLICATIONS

- Urban and national air monitoring networks
- Industrial perimeter monitoring: petrochemical, power plants, waste sites, mining, heavy industry, airports, ports, railways, construction sites
- Near road: motorways, street canyons, traffic information systems
- Mobile vehicle-mounted monitoring
- Short term monitoring of 'hot spots'
- Community exposure: epidemiological studies, microenvironment, residential, schools, hospitals
- Environmental Impact Assessments

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AQM 65 SPECIFICATIONS

Gas Modules	Range	Noise /ppm	Lower Detectable limit /ppm	Precision
Ozone O (GSS)	0-0.5 ppm	<0.001	0,001	"<0.002 ppm 0 to 0.1 ppm <2% of reading above 0.1 ppm"
Nitrogen Dioxide NO (GSS)	0-0.2 ppm	<0.001	0,001	"<0.003 ppm 0 to 0.1 ppm <3% of reading above 0.1 ppm"
Carbon Monoxide CO (GSE)	0-25 ppm	0,020	0,040	"<0.050 ppm 0 to 2 ppm <3% of reading above 2 ppm"
Sulfur Dioxide SO (GSE)	0-10 ppm	0,004	0,009	"<0.009 ppm 0 to 0.3 ppm <3% of reading above 0.3 ppm"
Nitrogen Oxides NO (GSS)	0-1 ppm	<0.001	0,001	"<0.003 ppm to 0.1 ppm <3% of reading above 0.1 ppm"
Hydrogen Sulfide H S (GSE)	0-10 ppm	0,006	0,012	"<0.012 ppm 0 to 0.4 ppm <3% of reading above 0.4ppm"
Carbon Dioxide CO (NDIR)	0-2000 ppm	<5	10	"<10 ppm 0 to 400 ppm <3% of reading above 400 ppm"
Volatile Organic Compounds VOC (PID)	0-20 ppm	0,005	0,010	"<0.010 ppm 0 to 0.5 ppm <2% of reading above 0.5 ppm"
Non-methane hydrocarbons NMHC (GSS)	0-25 ppm	0,020	0,040	"<0.05 ppm 0 to 1 ppm <5% of reading above 1 ppm"
Ammonia NH (GSE)	0-10 ppm	0,050	0,100	"<0.1 ppm 0 to 2 ppm <5% of reading above 2 ppm"

Particle Modules	Sizes	Range	Accuracy	Flow Rate	Lower Detectable
Particle Monitor (nephelometer)	PM1, PM2.5, PM10 or TSP	0 to 2000 µg/m3	<±(2 µg/m3 + 5% of reading)	2.0 LPM	2.0 LPM
Particle Profiler (OPC)	PM1, PM2.5, PM10 and TSP	"PM1 200 µg/m3 PM2.5 2000 µg/m3 PM10 5000 µg/m3 TSP 5000 µg/m3"	<±(5 µg/m3 + 15% of reading)	1.0 LPM	1.0 LPM

AQM 65 SYSTEM SPECIFICATIONS

Control System	Embedded fanless PC, Intel Atom N2600, 1.6GHz, 2GB RAM, 32GB SSD, Ubuntu Linux
Communications	Standard: WIFI, Ethernet (LAN) Optional: Cellular IP GPRS modem
Gas Sampling System	"Inlet: Teflon, glass-coated stainless steel Pump: 12V brushless DC diaphragm"
Thermal Management System	"Direct current compressor, R134a refrigerant, 12-24V 60W resistance heater"
Software	"Accessed via web browser (e.g. IE, Firefox, Chrome, Safari) Connect: configuration, diagnostics, journal, calibration and data acquisition Cloud: as for Connect plus SMS and Email Alerts, and Auto Export (accessed via cloud servers)"
Power Requirements	"90*-264VAC, 47-63Hz Typical draw: 100W** (depends on configuration)"
Enclosure	"Outer: IP65 rated aluminium skin with solar reflective coating Inner: 40-50 mm layer of cross-linked PE foam insulation"
Dimensions	"Standard: 900Hx510Wx280D mm With AirCal 8000: 900Hx655WX280 mm Weight (installed): 30 Kg**"
Environmental Operating Range	Temperature: -35°C to +50°C
Gas Calibration (optional)	"Portable: AIRCAL 1000 with gas dilution module and zero air source Integrated: AIRCAL 8000 integrated system with gas dilution module, zero air source, 2 x regulators and span gas storage"
"Factory Integrated & Tested Sensors (optional)"	Gill WindSonic (ultrasonic wind sensor) Vaisala WXT520 (weather transmitter) Met One MSO (weather transmitter) Cirrus MK427 Class 1 (noise monitor) Novalynx Pyranometer (solar radiation)
Conformity	"Power Supply : EN55015, EN55022 Class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547, EN61347-1, EN61347-2-13; UL1012, UL60950-1; TUV EN60950-1 Gas Modules : Part 15 FCC Rules, 2004/108/EC; EN 61000-6-1: 2001, EN 61000-6-3: 2001 Particle Monitor & Profiler : Class 1 laser; IEC 60825-1:1998; 72/23/EEC; EN 61010-1; EN 60825-1:1996; US 21 CFR 1040.10"

*   Power supply efficiency derates at high ambient T (>50°C). Need 110VAC minimum at above 50°C.
** Configuration used for power consumption and weight: Embedded PC, Sample Pump, System Manager, NOx, NO2, O3, CO, PM10 + inlet heater, SO2, H2S (43W internal load); Internal temperature set point = 30°C, Ambient temperature used is 30°C.

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