

AQM 65

Specification Sheet

Near reference real-time monitor for multiple gases plus particulate fractions

The AQM 65 is a fully integrated, temperature controlled air quality monitoring station that delivers 'near reference' levels of performance in real-time for multiple gases, particulates and environmental parameters.

Continuously measure air pollutants including O₃, NO₂, NO_x, CO, SO₂, VOC, H₂S, CO₂, CH₄, TSP, PM₁₀, PM_{2.5}, PM₁, noise and meteorological parameters.



What is it?

- Proven long term performance in extreme climates with purpose-built enclosure and advanced temperature and humidity control
- Reduce site visits using two-way communications-remotely troubleshoot, upgrade software, change settings, and calibrate
- Plug in all your devices – noise, weather, reference monitors – to the AQM 65 and view data in one software dashboard
- Enables automatic scheduling of calibrations with optional integrated calibration system
- Respond in real-time thanks to configurable email / SMS alerts

What can it measure?

- Multiple gases, dust fractions, wind, weather and noise



Who is it for?

- Industrial operators who need a cost-effective and robust solution to manage and control dust and gas emissions from site activities within regulatory or permitted limits:
 - Industrial perimeter monitoring
 - Oil and gas facilities
 - Quarry and mine operators
 - Port and bulk handling authorities
 - Waste management sites
- Regulatory authorities who need to fill the gaps in the regulatory monitoring networks
- Environmental consultants and researchers who want defensible data without the usual time and hassle of air monitoring projects
 - Research and consultancy projects
 - Environmental impact assessments
 - Short term hot spot monitoring
 - Roadside air monitoring

Specifications | AQM 65

Gas module	Range	Display Resolution	Noise Zero; Span % of reading	Lower Detection Limit (2σ)	Precision	Linearity (% of FS)	Drift 24 hour Zero; Span % of FS
Ozone O ₃	0-500 ppb	0.1 ppb	1 ppb; 1%	1 ppb	2% of reading or 2 ppb	1%	1 ppb; 0.2%
Nitrogen dioxide NO ₂	0-500 ppb	0.1 ppb	1 ppb; 1%	1 ppb	2% of reading or 2 ppb	1.5%	1 ppb; 0.2%
Carbon Monoxide CO	0-25 ppm	0.001 ppm	0.02 ppm; 1%	0.04 ppm	3% of reading or 0.05 ppm	1%	0.14 ppm; 2%
Sulfur Dioxide SO ₂	0-10000 ppb	0.1 ppb	1 ppb; 0.02%	2 ppb	0.14% of reading	0.6%	1 ppb; 0.3%
Nitrogen Oxides NO _x	0-500 ppb	0.1 ppb	1 ppb; 1%	1 ppb	3% of reading or 3 ppb	1%	1 ppb; 0.2%
Hydrogen Sulfide H ₂ S	0-10000 ppb	0.1 ppb	1 ppb; 0.1%	2 ppb	1% of reading or 3 ppb	0.5%	1 ppb; 0.5%
Carbon Dioxide CO ₂	0-2000 ppm	1 ppm	5 ppm; 1%	10 ppm	3% of reading or 10 ppm	2%	1 ppm; 0.6%
VOC (Low range)	0-500 ppb	0.1 ppb	1 ppb 1%	1 ppb	2% of reading or 1 ppb	1%	1 ppb; 1%
VOC (High range)	0-30 ppm	0.01 ppm	0.1 ppm; 1%	0.05 ppm	2% of reading or 0.05 ppm	2%	0.1 ppm; 1%
Methane CH ₄	0-100 ppm	0.01 ppm	0.02 ppm; 0.3%	0.04 ppm	0.4% of reading	<1%	0.14ppm; 2%
Particle module	Sizes		Range	Accuracy	Display Resolution	Lower Detectable Limit (2σ)	
Nephelometer	PM ₁ , PM _{2.5} , PM ₁₀ OR TSP		0 to 60,000 µg/m ³	±(2 µg/m ³ + 5% of reading)	0.1 µg/m ³	1 µg/m ³	
Profiler (Optical Particle Counter)	PM ₁ , PM _{2.5} , PM ₁₀ AND TSP		PM ₁ 200 µg/m ³ PM _{2.5} 2000 µg/m ³ PM ₁₀ 5000 µg/m ³ TSP 5000 µg/m ³	±(5 µg/m ³ + 15% of reading)	0.1 µg/m ³	1 µg/m ³	
Optional Particulate Counts: 0.3, 0.5, 0.7, 1.0, 2.0, 3.0, 5.0, 10 microns (counts range: 0-100,000 counts/L)							
System specifications							
Control system	Embedded fanless PC (Intel Celeron® N3350, 1.1GHz, dual core, 4GB RAM, 32GB SSD hard drive), Debian Linux Operating System						
Communications ¹	Standard: WIFI, Ethernet (LAN) Optional modem: Cellular IP 3G or 4G LTE						
Software	Aeroqual Cloud – Choose a plan that is right for you Optimize: Reduce site visits and improve data quality by managing your monitors and optimizing network performance remotely. Plus: Stay one step ahead with enhanced features for viewing and sharing data, real-time alerts, and analysis. Talk to our sales team to learn more about Aeroqual Cloud plans.						
Data logging	32 GB Hard Drive (> 5 years data storage)						
Averaging period	1 min, 5 min, 10 min, 15 min, 20 min, 30 min, 1 hr, 2 hr, 4 hr, 8 hr, 12 hr, 24 hr						
Power requirements ²	90 - 264 Vac, 47 - 63 Hz Typical draw: 100 W (depends on configuration and ambient temperature)						
Enclosure	Outer: IP65 rated aluminum skin with solar reflective coating Inner: 40 - 50 mm (1.6 - 2 ") layer of cross-linked PE foam insulation. Built in temperature and relative humidity sensor.						
Gas sampling system	Inlet: Teflon, glass-coated stainless-steel Pump: 12 V brushless DC diaphragm						
PM sampling system	Inlet: Omni-directional 36 cm (14.1 inches) heated inlet; Optional sharp cut cyclones for PM ₁₀ , PM _{2.5} or PM ₁ size selection Pump: 12 V brushless DC diaphragm Optics: 670 nm laser, near-forward scattering nephelometer with sheath air protection						
Dimensions ³	Standard: 1310 H x 510 W x 280 D mm (51½" H x 20" W x 11" D)						
Weight ⁴	< 30 kg						
Operating range	-35 °C to +50 °C (-31 °F to 122 °F)						
Mounting	Pole, tripod and wall mounting brackets included						
47mm sample filter ⁵	47 mm filter for particle loading analysis						
Factory integrated sensors ⁵	Gill WindSonic (ultrasonic wind sensor), Vaisala WXT536 (weather transmitter), Met One MSO (weather transmitter), Cirrus MK427 Class 1 (noise sensor), Novalynx Pyranometer (solar radiation)						
Compliance							
In conformity with EC Directives 2014/30/EU and 2014/35/EU; FCC 47 CFR Part 15; RoHS 3 (EU2015/863), REACH							

¹ 4G LTE not available in all markets.

^{2,4} Configuration used for power and weight calculations: base unit, nephelometer, PM₁₀ sharp cut, modem, heater on.

³ Dimensions are for enclosure. PM sampling inlet with cyclone adds 360 mm (14.17") to total height.

⁵ Optional

