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AQM 60

Ambient Air Quality Monitor

ANALYTIC G.S.S. TECHNOLOGY

The New Benchmark for Cost Effective Air Quality Monitoring.

AQM 60 Ambient Air Quality Monitors fill the gap between full reference monitoring stations and simple diffusion samplers. Typical applications include traffic or roadside monitoring, urban air quality measurement and fenceline monitoring of air pollution sources. Aeroqual utilises proprietary Analytic GSS Technology to provide high performance within a flexible cost effective package. AQM 60 monitors are discreet, highly compact, and deliver precise measurement data for a wide range of ambient pollutants including O_3, NO_2, CO, SO_2, CO_2, VOC, plus PM_{10} and environmental parameters such as temperature, humidity, wind speed and direction, noise and other meteorological sensors. Data is stored internally and is also available in real-time via GSM modem, low power radio, Ethernet and other communication options.

Features

- Analytic GSS Technology
- Multiple gas sensors (up to six)
- Temperature and humidity sensors
- Rapid real-time data sampling (2-minute)
- Large data storage capacity (>15 years)
- RS 232 with PC data logging software
- Zero and span calibration facility
- Remote diagnostics capabilities
- Weatherproof and compact enclosures
- Thermal management system
- Particulate monitor ($PM_{2.5}$ or PM_{10}) *
- Wind speed and direction anemometer *
- Noise and meteorological sensors *
- Modem (RF, GSM, GPRS, UMTS) or Ethernet (LAN, WLAN) communication *

  * Optional features available

Applications

- Urban air quality monitoring
- Roadside and tunnel monitoring
- Fenceline and point source monitoring
- Trend analysis and hotspot screening
- Substitution of manual sampler networks
- Commercial indoor air quality monitoring

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AQM 60 Specifications

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Gas Modules	Calibrated Range	Lowest Detection	Accuracy	Precision	Resolution	Power
Ozone *	0-150 ppb	1 ppb	<±0.005 ppm	0.002 ppm	0.001 ppm	2.9 W
Nitrogen dioxide	0-200 ppb	1 ppb	<±0.010 ppm	0.005 ppm	0.001 ppm	12.3 W
Carbon monoxide	0-25 ppm	0.1 ppm	<±1 ppm	0.2 ppm	0.1 ppm	2.5 W
Sulphur dioxide	0-10 ppm	0.2 ppm	<±0.5 ppm	0.2 ppm	0.01 ppm	2.5 W
Non-methane hydrocarbon	0-25 ppm	0.1 ppm	<±0.5 ppm	0.2 ppm	0.1 ppm	2.5 W
Volatile Organic Compounds	0-25 ppm	0.1 ppm	<±10%	0.2 ppm	0.1 ppm	2.5 W
VOC (PID)	0-20 ppm	10 ppb	<±10%	0.02 ppm	0.01 ppm	1.5 W
Hydrogen sulphide	0-10 ppm	10 ppb	<±0.5 ppm	0.03 ppm	0.01 ppm	2.5 W
Carbon dioxide (NDIR)	0-2000 ppm	6 ppm	<40 ppm + 3%	6 ppm	1 ppm	1.0 W

* Also available in 0-500 ppb

Particle Monitor Module	Range	Lowest Detection	Accuracy	Precision	Sharp Cut Points	Power
Forward light scatter nephelometer	0-2000 µg/m^3	1 µg/m^3	8% NIOSH 0600	3 µg/m^3	PM1 | PM2.5 | PM10	5.2 W

Anemometer Module	Wind Speed	Wind Direction	Accuracy	Resolution WS	Resolution WD	Power
Sonic or mechanical combination	0-160 Km/h	0-360°	±3% WS | ±3° WD	0.1 m/s	1°	1.0 W

Temperature & Humidity Module	Temperature	Humidity	Accuracy @ 25°C	Resolution T°	Resolution RH	Power
	-20°C to +100°C	0-100% RH	±0.3°C | ±2% RH	0.01°C	0.1% RH	0.05W

Control Module	Data Storage	Sampling Rate	Communication	Display	Diagnostics	Power
	1 GB	2-255 min.	RS 232	4 x 20	Yes	5.8 W

Gas Treatment Module	Sampling Pump	Sampling Train	Zero Air Scrubber	Zero Calibration	Span Calibration	Power
	Diaphragm	SS | PTFE	Yes	Auto or manual	Yes	1.0 W

Thermal Management System	Cooler	Heater	External Cowling	Thermal Insulation	Temperature Control	Power
	Thermoelectric	Yes	Yes	Yes	Yes	85-200 W

Environment Operating Range	10°C to 25°C (standard)
	-20°C to 45°C (with heater | cooler)
	10 to 90% RH (non condensing)
Power Requirements	12VDC (power subject to configuration)
	AC power module 100 - 250 VAC
Maintenance Checks Routine	3 | 6 | 12 months (site dependent)
Standard Enclosure	Fibre reinforced polycarbonate | IP66 NEMA4
	600H x 500W x 230D mm (includes cooler)
	Thermal insulation on internal walls
Weight	15-25 Kg (subject to configuration)
Communications Options	GSM modem | RF modem
	Ethernet LAN
Other Sensor Options	Noise sensors | Particle counters
	Meteorological sensors
Enclosure Options	Insulated roadside boxes
	Mounting accessories
	Metal enclosures
Approvals	*Electrical Safety and Conformity*
	CE; UL E215312
	Gas Sensors
	EN50082-1:1997; EN50081-1:1992
	Part 15 FCC Rules; IPCA 610D Class2
	Particle Monitor
	Class 1 laser; IEC 60825-1:1998
	GSM Modem
	CE 0681; Group 3 FAX support Class 1/2
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