

# IQM 60

## Indoor Air Quality Monitor

### The complete instrument for analysis of indoor air quality

We spend about 90% of our time breathing "indoor air." Indoor air quality (IAQ) broadly refers to the environmental characteristics inside buildings that may affect human health, comfort, or work performance. These include concentrations of pollutants in indoor air, as well as air temperature and humidity. Many of the symptoms of poor IAQ can be alleviated by properly identifying and eliminating the offending sources. Aeroqual's IQM 60 Indoor Air Quality Monitor is used to simultaneously measure multiple gases, temperature, humidity and particulates.

The IQM 60 monitor utilizes Aeroqual's proprietary Analytic GSS Technology integrated with photo-ionization detector (PID) and non-dispersive infra-red (NDIR) sensors to achieve precise measurement for carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), volatile organic compounds (VOC), nitrogen dioxide (NO<sub>2</sub>) and ozone (O<sub>3</sub>). Precision laser-diode particle monitors and counters are offered as options for measuring particulate matter.

Data is logged to a removable Secure Digital (SD) card or logged directly to a PC using the supplied software. The data can then be exported to common spreadsheet programs such as MS Excel for generating reports. Applications include IAQ and HVAC analysis, IAQ complaint investigation, and Sick Building Syndrome (SBS) assessment. The IQM 60 is the complete instrument for analysis of your indoor air quality.



#### Features

- Multiple Gas Measurements
- Temperature and Relative Humidity
- GSS, PID and NDIR Sensor Technology
- Particulate Measurement Options
  - Particle Counter: 2-channel
  - Particulate Profiler: 8-channel
  - Particle Monitor: TSP, PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>
- Active-air Sampling System
- Multi-point Factory Sensor Calibration
- Zero and Span Calibration User-facility
- Real-time Data Sampling
- Removable Data Storage
- PC Data-logging Software
- Wireless Communication Options
- Compact and Portable
- Low Maintenance

#### Applications

- IAQ Complaint Investigation
- HVAC System Performance Monitoring
- Sick Building Syndrome (SBS) Surveys
- Health and Comfort Assessment
- Odour Investigation and Remediation
- Testing the Efficiency of Air Purifiers
- Clean Room Monitoring and Verification
- Filtration Testing
- Residential and Commercial Buildings
- Airport Lounges and Shopping Malls
- Schools and Kindergartens
- Hospitals and Elderly Care Facilities
- Epidemiological Studies
- Re-entrainment Studies

## IQM 60 Specifications

IQM 60 base instrument configuration includes CO<sub>2</sub> and CO gas modules plus Temperature and Humidity sensor.

Gas Modules	Calibrated Range	Minimum Detection Limit	Accuracy of Factory Calibration	Precision	Resolution <sup>(2)</sup>
Carbon Dioxide CO <sub>2</sub> (NDIR)	0-2000 ppm	6 ppm	<40 ppm + 3% of reading	10 ppm	1 ppm
Carbon Dioxide CO <sub>2</sub> (NDIR)	0-5000 ppm	6 ppm	<150 ppm + 5% of reading	10 ppm	1 ppm
Carbon Monoxide CO (GSE)	0-100 ppm	0.2 ppm	<±2 ppm 0-20 ppm; <±10% 20-100 ppm	0.2 ppm	0.1 ppm
Ozone O <sub>3</sub> (GSS)	0-0.15 ppm	0.001 ppm	<±0.005 ppm	0.002 ppm	0.001 ppm
Ozone O <sub>3</sub> (GSS)	0-0.5 ppm	0.001 ppm	<±0.008 0-0.1 ppm; <±10% 0.1-0.5 ppm	0.005 ppm	0.001 ppm
Nitrogen Dioxide NO <sub>2</sub> (GSS)	0-0.2 ppm	0.001 ppm	<±0.010 0-0.1 ppm; <±10% 0.1-0.2 ppm	0.005 ppm	0.001 ppm
Volatile Organic Compounds (PID) <sup>(1)</sup>	0-20 ppm	0.01 ppm	<±10%	0.02 ppm	0.01 ppm
Non-methane Hydrocarbon (GSS) <sup>(1)</sup>	0-25 ppm	0.1 ppm	≤±10%	0.2 ppm	0.1 ppm
Volatile Organic Compounds (GSS) <sup>(1)</sup>	0-25 ppm	0.1 ppm	≤±10%	0.2 ppm	0.1 ppm

(1) Calibrated to isobutylene (non-specific sensor)

(2) Gas concentration is displayed in units of ppm on the IQM 60 instrument and available in units of ppm or mg/m<sup>3</sup> in the supplied PC software

<b>Temperature &amp; Humidity Sensor</b>	Range Temp. -20°C to +100°C	Range RH 0-100% RH	Accuracy Temp.   RH @ 25°C ±0.3°C   ±2% RH	Temp Res. 0.01°C	RH Res. 0.1% RH
<b>Particulate Profiler</b> 2-channels : >0.3 µm & >2.5 µm	Range 0-100000 PPL	Particle Sizes >0.3 & >2.5 µm	Accuracy ±10% to calibration aerosol	Flow rate 1.0 LPM	Resolution 1 PPL
<b>Particulate Profiler</b> 8-channels : 0.3 to 10 µm	Range 0-100000 PPL	Particle Sizes 0.3-10 µm (8)	Accuracy ±10% to calibration aerosol	Flow rate 1.0 LPM	Resolution 1 PPL
<b>Particle Monitor</b> Inlet options : PM <sub>1</sub> , PM <sub>2.5</sub> , PM <sub>10</sub> , TSP	Range 0-2000 µg/m <sup>3</sup>	Sensitivity 1 µg/m <sup>3</sup>	Accuracy 8% of NIOSH 0600	Precision 3 µg/m <sup>3</sup>	Resolution 1 µg/m <sup>3</sup>
<b>Controller Module</b>	Communication RS 232	Data Storage 2 GB SD card	Data Sampling Rate 2 to 255 minutes (programmable)	Display VFD 4 x 20	PC Software Included
<b>Gas Treatment Module</b>	Sampling Pump BLDC	Zero Scrubber Built-in	Replaceable Zero Scrubber Media Cartridges Chemisorbant, activated carbon & Hopcalite		

**Environmental Operating Range** 0 to 50°C; 10 to 90% RH  
(non-condensing)

**Communication Interface** RS 232 (DB9 port)  
Cable & USB adaptor supplied

**Power Supply (standard)** Switch mode power supply 12V DC  
Input 90-260V AC; 47-63Hz

**Remote Communication (optional)** GSM/GPRS modem;  
Ethernet; Wireless

**Portable Power Station (optional)** Li-ion battery station & charger  
222WH or other capacity

**Dimensions** PM models : 378 x 236 x 132 (mm)  
Non PM models : 278 x 236 x 132 (mm)

**Enclosure Material** Aluminium & powder-coated steel

**Instrument Weight** Net 4-9 Kg  
(subject to configuration)

**Instrument Carry Case** Impact & water resistant  
515 x 430 x 200 (mm)

**Conformity**

Power Supply  
UL | CUL | TUV | BSMI | CCC | CB | FCC |  
CE UL60950-1, TUV EN60950-1, BSMI  
CNS14336, CCCGB4943; EN55022 class  
B, FCC PART 15, CISPR22 class B,  
CNS13438 class B, GB9254 class B;  
EN61000-3-2,3, GB17625.1; EN61000-4-  
2,3,4,5,6,8,11

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 Directive  
72/23/EEC; EN 61010-1; EN 60825-  
1:1996; US 21 CFR 1040.10

