

## Agasthya Series BI 9000 Ambient Air Quality Monitoring System



BI 9000 AQMS Air Quality Station delivers accurate measurement data in real time for a wide range of air quality criteria in a compact and modular package. Measurable parameters include Ozone (O<sub>3</sub>), Nitrogen Dioxide (NO<sub>2</sub>), Nitric Oxide (NO), Carbon Monoxide (CO), Carbon Dioxide (CO<sub>2</sub>), Sulphur Dioxide (SO<sub>2</sub>), Hydrogen Sulphide (H<sub>2</sub>S), and other toxic gases.

Also the other particulate matter by parts measured are PM 2.5, PM10 and TSP.

Electrochemical, IR and Optical Sensor technology deliver high performance within a flexible platform.

The modular design of the BI 9000 AQMS also facilitates cost-effective service. External sensors can be integrated that measure temperature, humidity, wind speed, wind direction, environmental noise, solar radiation and other meteorological parameters. Data is stored in memory and remotely accessible in real time via RS 485 & supports MODBUS protocol.

The BI 9000 AQMS Air Quality Station meets the global trend for real time measurement of air quality in the micro-environment.

### Features

- 5.7 Inch Touch Screen Display
- 32 Bit powerful ARM processor
- Remote site operation
- PC software included
- Climate-controlled compact enclosure
- Built-in zero air scrubber
- Real time data acquisition
- Negligible zero and span calibration slope drift
- Zero and Span calibration of gases at site
- Multiple gas measurements
- Measurement up to 12 parameters under one roof
- Multi-point factory calibration
- Particle monitoring PM2.5, PM10 & TSP
- Excellent linearity and sensitivity
- Meteorological sensors as option
- Analytic Electrochemical Technology
- Active sampling via brushless pumps
- Temperature and humidity sensors
- GSM / MODBUS / Ethernet communication
- Lower capital cost for affordable profiling and assessments

### Technical Specification

GAS MEASUREMENT - ELECTROCHEMICAL			
PARAMETER	RANGE	RESOLUTION	ACCURACY
Oxygen	0 - 25%	0.1%	< ± 2% of FS
Carbon Monoxide	0 - 50 ppm	10 ppb	< ± 2% of FS
Nitrogen Oxide	0 - 5000 ppb	5 ppb	< ± 2% of FS
Nitrogen Dioxide	0 - 5000 ppb	5 ppb	< ± 2% of FS
Sulphur Dioxide	0 - 5000 ppb	3 ppb	< ± 2% of FS
Hydrogen Sulphide	0 - 10000 ppb	4 ppb	< ± 2% of FS
Ozone	0 - 1000 ppb	3 ppb	< ± 2% of FS
Ammonia	0 - 25 ppm	1 ppm	< ± 2% of FS
Chlorine	0 - 10000 ppb	50 ppb	< ± 2% of FS
GAS MEASUREMENT - INFRARED			
Carbon Dioxide	0 - 2000 ppm	100 ppm	< ± 3% of FS
Methane	0 - 2000 ppm	100 ppm	< ± 3% of FS
GAS MEASUREMENT - PID			
TVOC	0 - 1000 ppm	1 ppm	< ± 1% of FS
	0 - 10000 ppm	1 ppm	< ± 1% of FS
GAS MEASUREMENT TECHNOLOGY - TUNABLE DIODE LASER SPECTROMETRY (LASER)			
HCl	0 - 10 ppm	0.1 ppm	< ±2% of FS
PARTICULATE MATTER - OPTICAL SENSOR			
PM 10	0.001-20 mg/m <sup>3</sup>	0.001 mg/m <sup>3</sup>	1% of FS
PM 2.5	0.001-20 mg/m <sup>3</sup>	0.001 mg/m <sup>3</sup>	1% of FS
OTHER PARAMETERS			
Barometric Pressure	800 to 1100 hPa	1hPa	±0.3 hPa
Ambient Temperature	- 40°C to 60°C	0.1°C	±0.2°C
Humidity	0 - 100% Rh	0.1 Rh	±1% Rh

### Systems Specifications

- Gas Connections : 1/4 Inch fitting, rear panel entries
- Operating Conditions : -20 to 50°C Ambient Temperature, 0-96 rh Relative humidity
- Power Requirements : 110 / 230 V AC, 250 VA Maximum
- Analog Output : 4-20 mA for each gas
- Computer Interface : RS 232, RS485, supports MODBUS protocol & Ethernet as option
- Dimensions : H 1500 mm X W 600 mm X D 800 mm
- Weight : From 200 kg to 300 kg dependent upon configuration
- Relative Humidity Range : 15 to 85%
- Pressure Range : Atmospheric  $\pm$  10%

### Applications

- Environmental impact assessments
- Park and forest monitoring
- Indoor air quality monitoring
- Industrial perimeter air quality monitoring
- Construction site monitoring
- Local community exposure: residential, schools, hospitals
- Urban air quality monitoring
- Near road air quality monitoring
- Ecological mobility management
- Long term air quality trend analysis
- Low cost air quality networks to support reference AAQM stations

### Bhoomi Advantages

- High quality products at low cost of ownership
- A truly trouble - free sales and customer service experience
- Spares and accessories availability guaranteed for years at reasonable price
- Team includes well trained & qualified engineers