

## AQ Mass Profiler Model 83214

Introducing our latest OEM air quality sensor designed to provide accurate real time measurements of four key particulate concentrations in both indoor and outdoor environments.

This engine reports PM<sub>10</sub>, PM<sub>4.0</sub>, PM<sub>2.5</sub>, and PM<sub>1.0</sub> simultaneously. The AQ Mass Profiler can also size and count airborne particles in up to eight user-definable size ranges from 0.3µm to 10µm. The sensor incorporates sheath air to prevent particles from contaminating the internal optics of the sensor and prevents particles from escaping. Data output can be configured as fast as each second or with longer averaging intervals.



### Specifications

Model Number	83214
Operation	Right angle light scatter detection, using a laser diode as light source.
Concentration Range	0-9,000,000 particles per cubic foot
Number of Mass Channels	4
Number of Particle Channels	8
Particle Size Threshold	0.3 µm
Accuracy	±10% to calibration aerosol
Sample Air Flow Rate	1.0 LPM
Sheath Air Flow Rate	1.0 LPM
Flow Control	PWM Pump driver
Communications	RS-485, RS-232
Connections	Terminal block connections on side of enclosure: DC power, RS-232, RS-485 sensor, RS-485 modem, Heater 1, Heater 2, Flow 1, Flow 2, Pump 1, Pump 2, RH sensor, AT sensor.
Operating Temperature	0° to +50° C
Storage Temperature	-20° to +60° C
Power	10.5-15.5 VDC. Average operating current 70mA, 600mA with AQ Flow, 1.3A with AQ Flow and heated inlet.
Size	Height: 3.63in, Width: 4.75in, Length: 2.34in
Weight	1 lb 10 oz
Serial Settings	Baud=115200, 8 data bits, no parity, and 1 stop bit. (factory Default) 115200, 57600, 38400, 19200, 9600, 4800, 2400 (selectable).
Communications Protocol	Terminal Command Set

*Specifications are subject to change at any time*