PARTICLES
P L U S

5301-AQM and 5302-AQM Remote Airborne Particle Counter and Environmental Monitor (CO2, Temp, RH and TVOC)

The Particles Plus AQM Series Remote Particle Counter and Environmental Monitor measures 0.3 µm to 25 µm particles with mass concentration and stores indoor air quality measurements of temperature, relative humidity, CO2, and TVOC in the 5302-AQM. This instrument is the most versatile remote Air Monitor available, with advanced power management and the industry's first sleep mode. The AQM Series can be used as a stand-alone instrument or it can be easily integrated into a building automation and facility monitoring system via Ethernet, USB or (optional) Wireless 802.11 b/g, RS485 or RS232 connection.

The AQMs reports and displays 6 user-selectable particle size channels, as well as carbon dioxide (CO2), temperature, and relative humidity. The model 5302-AQM includes a PID Sensor for TVOC. The instrument monitors PM1, PM 2.5, PM5, PM 10 & TPM (and any other PM size value the user specifies) with an easy-to-use Channel Management control panel. The instrument also monitors flow, sensor status, date of last calibration, serial number, laser on-time, and date of manufacture for easy maintenance and warranty management.
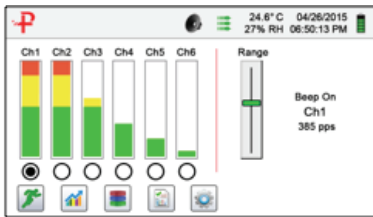
User friendly field calibration for the integrated environmental sensors allows for single or dual point offsets, and ensures accuracy for air quality investigations. View data and generate environmental reports real-time on screen, via printer or USB key, or export to Particles Plus Instrument Management Software. Particles Plus instruments can be controlled and monitored remotely via web browser from any PC, tablet or smartphone supporting 20 concurrent user sessions.

The 5301-AQM and 5302-AQM store up to 45,000 time stamped particle count and environmental data records which provides data redundancy on every instrument.
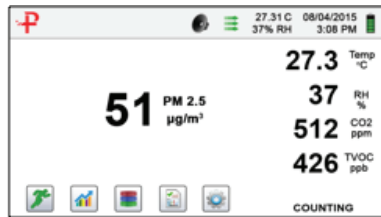
The AQMs mass concentration mode approximates density in µg/m³ and allows for density and refractive index corrections to ensure accuracy. All Particles Plus counters meet ISO 21501-4 and JIS B9921. The AQM series guarantees compliance and accuracy with an on-board pulse height analyzer.
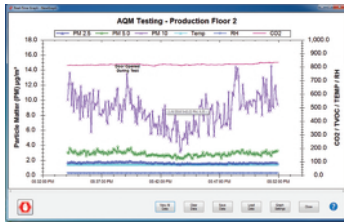
Features and Benefits

- Measures 0.3 µm to 25 µm
- 0.1 CFM (2.83 LPM) flow rate
- Large easy-to-use icon driven color touch screen display
- Approximates mass concentration in µg/m³ and indicates simultaneous PM values
- User-selectable, adjustable particle channel sizes
- 5301-AQM measures CO2, temperature and relative humidity with user alarm set points. The 5302-AQM includes TVOC
- Stores up to 45,000 sample records, 1,000 sample locations and 50 recipes
- Connect using Ethernet, USB or (optional) Wireless 802.11 b/g, RS485 or RS232
- Static or dynamic IP address (DHCP) connects to a local network or the internet
- Seamless integration into a facility monitoring system with MODBUS RTU, ASCII or TCP
- Included software permits remote operations, data management, diagnostics & more
- Displays and externally prints information with optional printer
- Internal audible alarm with user selectable thresholds for all environmental parameters
- Advanced power management
- Easy configuration and transferable from instrument to instrument
- User friendly field calibration with single or dual point offsets for all sensors
- Lightweight stainless steel enclosure
- Long life laser diode technology
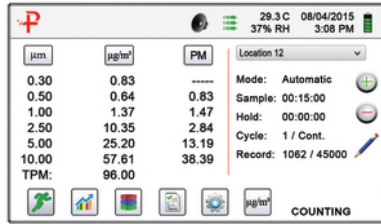- 2 year limited warranty, extended warranties available

Real-Time Meter™ Pinpoints Particle

Configurable Environmental Sensor Display

Control, monitor & graph from a remote PC

Simultaneous display of multiple PM Sizes

Specifications

Model	**5301-AQM and 5302-AQM**
Size Range	0.3 to 25µm
Size Channels	Factory calibrated at 0.3, 0.5, 1.0, 2.5, 5.0, 10.0 µm variable binning
Flow rate	0.1 CFM (2.83 LPM)
Concentration Limit	>4,000,000 Particles/ft³ @ 5% coincidence loss
Light Source	Long life laser diode
Counting Efficiency	50% @ 0.3 µm; 100% for particles >0.45 µm per JIS
Zero Count	<1 count / 5 minutes (<2 particles / ft³) (per ISO 21501-4 & JIS)
Count Modes	Automatic, manual, beep, cumulative/differential, mass concentration, count or concentration
Count Alarms	1 to 9,999,999 counts
Calibration	NIST traceable
Display	4.3" (10.9 cm) WQVGA (480x272) color touch screen
Printer (Optional)	Optional external thermal printer available. Prints in all available languages.
Internal Vacuum Pump	Internal brushless pump with automatic flow control
Filtered Exhaust	Internal HEPA filter
Number of Channels	6
Custom Size Channels	Calibration for custom size channels available
Audible Alarm	Adjustable built-in alarm
Communication Modes	Ethernet, USB
Optional Communication Modes	Wireless 802.11 b/g, RS485 or RS232
Environmental Sensors 5301-AQM	Includes NDIR CO_2 (0-5000 ppm, resolution 1 ppm, accuracy ±1% FS, Response rate 20 seconds), temperature and relative humidity probe 32° to 122°F (0° to 50°C) ±1°F (0.5°C), 15-90% ±2% relative humidity
Environmental Sensors 5302-AQM	Includes all sensors in the 7301-AQM and TVOC PID (standard on the 7302-AQM), 0-50 ppm / min. detection level 5 ppb, accuracy ±1.5%, Response rate <3 seconds
Alarm	Alarms on counts for all particle sizes, low battery, sensor failure, environmental sensors and flow
Standards	ISO 21501-4 and JIS B9921
Calibration	Recommended minimum once per year
External Surface	Stainless steel
Dimensions (L x W x H)	5.2" x 4.15" x 8.25" (13.3 cm x 10.5 cm x 21 cm) includes barb fittings
Weight	4 lb (1.8 kg)
Accessories	Quick start guide, operating manual on USB flash drive, isokinetic probe, temperature relative humidity sensor, purge filter, Instrument Management Software, USB cable, power supply & cable
Optional Accessories	RS232/RS485 Connector, Printed manual, spare battery, external printer, isokinetic probes, AQM Field Calibration Cap for gas sensor & analytical calibration gases
Buffer Memory	45,000 sample records (rotating buffer) including particle count data, environmental data, locations and times Scrollable on screen or printout
Sample Time	1 second to 99 hours
Power	110 to 240 VAC 50/60 Hz universal in-line power supply
Operating Conditions	41° to 104°F (5° to 40°C) / 20% to 95% non-condensing
Storage Conditions	32° to 122°F (0° to 50°C) / Up to 98% non-condensing
Warranty	2 Year Limited Warranty. 1-Year Limited Warranty for CO_2 & TVOC Sensors

CE   RoHS LEAD FREE COMPLIANT   Made in USA

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