7301-AQM and 7302-AQM
Air Quality Monitor (PM, CO2, Temp, RH and TVOC)

- Industry's highest concentration of 15,000,000 particles/Ft³ @ 10% coincidence loss
- Ideal for use in Cleanrooms, Industrial Health & Safety and Indoor Air Quality applications
- >8 hours continuous operation on a fully charged battery
- Industry's first Sleep Mode and Power Conservation Mode with intelligent battery
- Unparalleled and most comprehensive internal self-diagnostics of any air quality monitor
- Real-Time Meter detects particle contamination sources with visual and audible indication
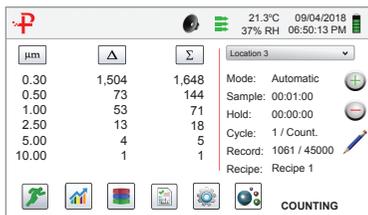- Internet of Things (JSON) communication allows for network or cloud based service and data access options

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, CO_2, and TVOC in the 7302-AQM. This instrument is the most versatile remote Air Monitor available, with advanced power management and the industry's first sleep mode, allowing for battery operation of periods that can exceed a month on a single charge. The AQM Series can be used as a stand-alone battery operated 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..
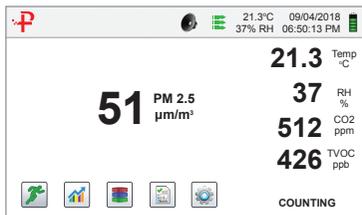
The AQMs reports and displays 6 user-selectable particle size channels, as well as carbon dioxide (CO_2), temperature, and relative humidity. The model 7302-AQM includes a PID Sensor for TVOC. The instrument monitors PM1, PM 2.5, PM5, PM 10 & TPM (and any other PM size value the user specifies) with an easy-to-use Channel Management control panel.

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
- 7301-AQM measures CO2, temperature and relative humidity with user alarm set points. The 7302-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
- Internet of Things JSON output allows for cloud based storage & retrieval
- 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 allows for long battery operation and patented sleep mode
- Easy configuration and transferable from instrument to instrument
- User friendly field calibration with single or dual point offsets for all sensors
- Remote diagnostics allows for remote service investigation through the Internet
- Lightweight stainless steel enclosure
- Long life laser diode technology
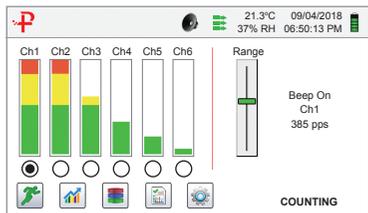- 2 year limited warranty, extended warranties available
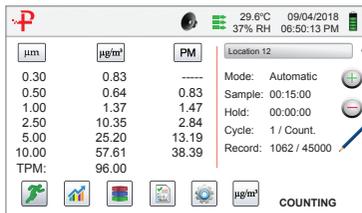
4.3" Color Touch Screen

Configurable Environmental Sensor Display

Icon Driven Menus for Ease-of-Use

Real-Time Meter Pinpoints Particle Sources

Simultaneous Display of Multiple PM Sizes

Control, & Manage from a Remote Device

Specifications

Model	7301-AQM and 7302-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	15,000,000 Particles/ft³ @ 10% coincidence loss
Battery Run Time	>8 hours (continuous operation)
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	Real-Time Meter & graph, cumulative/differential count/m³ & count/ft³, and mass concentration (PM)
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 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
Battery	Removable Li-ion
Battery Recharge Time	4 hours within instrument (2 hours with external charger)
Communication Modes	Ethernet, USB
Optional Communication Modes	Wireless 802.11 b/g, RS485 or RS232
Environmental Sensors 7301-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 7302-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	Operating manual on USB flash drive, isokinetic probe, temperature relative humidity sensor, purge filter, battery, 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 CO2 & TVOC Sensors

Patents US 9,140,638, US 9,140,639, US 9,157,847, US 9,158,652, US 9,677,990. Additional Patents Pending.

CE

Made in USA

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