

P7-301AQM and P7-302AQM 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

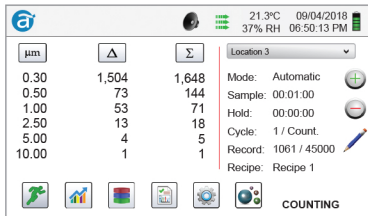


The Airy Technology Japan AQM Series Remote Particle Counter and Environmental Monitor measures 0.3 μm to 25 μm particles with mass concentration, and stores indoor air quality measurements of temperature, relative humidity, CO₂, and TVOC in the P7-302AQM. These instruments are the most versatile remote Air Monitors 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.

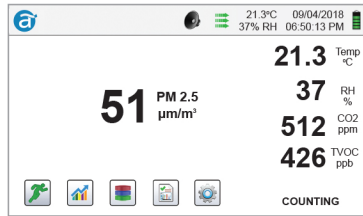
The AQMs report and display 6 user-selectable particle size channels, as well as carbon dioxide (CO₂), temperature, and relative humidity. The model P7-302AQM includes a PID Sensor for TVOC. The instruments monitor PM1, PM 2.5, PM5, PM 10 & TPM (and any other PM size value the user specifies) with an 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 $\mu\text{g}/\text{m}^3$ and indicates simultaneous PM values
- User-selectable, adjustable particle channel sizes
- P7-301AQM measures CO₂, temperature and relative humidity with user alarm set points. The P7-302AQM 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 and retrieval
- Included software permits remote operations, data management, diagnostics, and 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



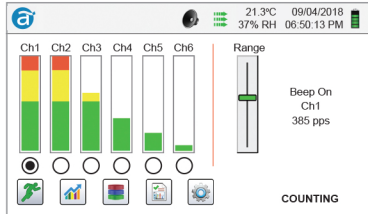
4.3" Color Touch Screen



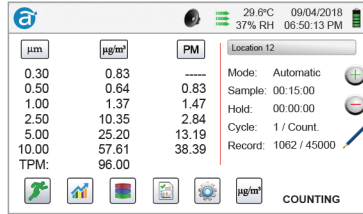
Configurable Environmental Sensor Display



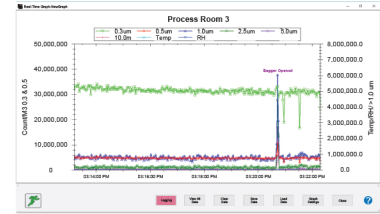
Icon Driven Menus for Ease-of-Use



Real-Time Meter Pinpoints Particle Sources



Simultaneous Display of Multiple PM Sizes



Control, & Manage from a Remote Device

Specifications

Model	P7-301AQM and P7-302AQM
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/ft ³ @ 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 / ft ³) (per ISO 21501-4 & JIS)
Count Modes	Real-Time Meter & graph, cumulative/differential count/m ³ & count/ft ³ , 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	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
P7-301AQM	
Environmental Sensors	Includes all sensors in the P7-301AQM and TVOC PID (standard on the 7302-AQM), 0-50 ppm / min. detection level 5 ppb, accuracy ±1.5%, Response rate <3 seconds
P7-302AQM	
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, and 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

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

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