

5301-AQM and 5302-AQM Air Quality Monitor (PM, CO₂, Temp, RH and TVOC)

- Industry's highest concentration for an air quality monitor reporting particle size distribution
- Ideal for indoor air quality and industrial health and safety applications
- The most comprehensive internal self-diagnostics of any air quality monitor
- Remote diagnostics allow for remote service investigation through the Internet
- Can be used as bench-top or wall-mounted for fixed installation
- Internet of Things (IoT) communication allows for network or cloud-based data 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, CO₂, and TVOC in the 5302-AQM. This instrument is the most versatile remote Air Monitor available, and can be used as a stand-alone instrument or easily integrated into a building automation and facility monitoring system via Ethernet, USB, or (optional) Wireless 802.11 b/g, RS485 or RS232 connection.

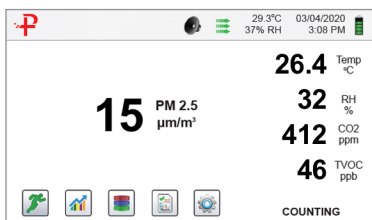
The AQM reports and displays 6 user-selectable particle size channels, as well as carbon dioxide (CO₂), temperature, and relative humidity. The model 5302-AQM includes a PID Sensor for TVOC. The instrument monitors PM1, PM2.5, PM5, PM10 and TPM. An easy-to-use Channel Management control panel allows user defined channel sizes.

Features and Benefits

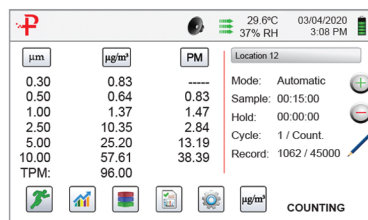
- Measures 0.3 µm to 25 µm
- 0.1 CFM (2.83 LPM) flow rate
- Large easy-to-use icon driven color touch screen display
- Approximates mass concentration in µg/m³ and indicates simultaneous PM values
- User-selectable, adjustable particle channel sizes
- 5301-AQM measures CO₂, temperature, and humidity. The 5302-AQM includes TVOC.
- Stores up to 45,000 sample records
- 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 data 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
- 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
- Long life laser diode technology
- Lightweight stainless steel enclosure
- 2 year limited warranty, extended warranties available.

Specifications

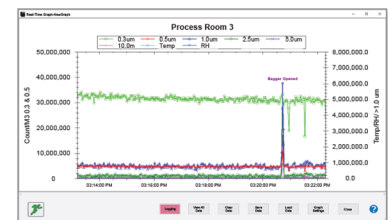
| Models | 5301-AQM and 5302-AQM |
|-----------------------------|---|
| Size Range | 0.3 to 25 μm |
| Size Channels | Factory calibrated at 0.3, 0.5, 1.0, 2.5, 5.0, 10.0 μm variable binning |
| Flow Rate / Accuracy | 0.1 CFM (2.83 LPM) / +/- 3% |
| Aerosol Concentration Range | 0.01 to 20,000 $\mu\text{g}/\text{m}^3$ |
| Light Source | Long life laser diode |
| Resolution | .00000003 mg/m^3 |
| Zero Stability | No appreciable drift |
| Count Modes | Real-Time Meter and graph, cumulative/differential count/ m^3 and count/ ft^3 , and mass concentration (PM) |
| Log Interval | Minimum 1 second with no hold time, maximum 99 hours |
| Calibration | NIST traceable |
| Display | 4.3" (10.9 cm) WQVGA (480x272) color touch screen |
| Printer | (Optional) External thermal printer available |
| 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 |
| Communication Modes | Ethernet, USB. (Optional) Wireless 802.11 b/g, RS485 or RS232. |
| Environmental | Includes NDIR CO_2 (0-5000 ppm, resolution 1 ppm, accuracy $\pm 1\%$ FS, Response rate 20 seconds), temperature and relative humidity probe 32° to 122°F (0° to 50°C) $\pm 1^\circ\text{F}$ (0.5°C), 15-90% $\pm 2\%$ RH |
| Sensors 5301-AQM | Includes all sensors in the 5301-AQM and TVOC PID (standard on the 5302-AQM), 0-50 ppb / minimum detection level 5 ppb, accuracy $\pm 1.5\%$, Response rate <3 seconds |
| Environmental | |
| Sensors 5302-AQM | |
| Alarm | Alarms on counts for all particle sizes, low battery, sensor failure, environmental sensors and flow |
| Standards | ISO 21501-4 and JIS B9921 |
| Instrument Calibration | Recommended minimum once per year. Gases, temperature and humidity sensors field calibratable. |
| External Surface | Stainless steel |
| Dimensions (L x W x H) | 5.22" x 2.25" x 9.13" (13.3 cm x 5.7 cm x 23.2 cm) includes barb fittings |
| Weight | 4 lb (1.8 kg) |
| Accessories | Operating Manual and IMS Software on USB flash drive, isokinetic probe, temperature relative humidity sensor, purge filter, battery, USB cable, and power supply |
| Optional Accessories | Calibration cap for gas sensor, carrying case, external printer, isokinetic probes, barb fittings, spare battery, external battery charger, printed manual, and IMS-RT monitoring system |
| Data Storage | 45,000 sample records (rotating buffer) includes particle count data, environmental data, locations, times and annotations, 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. Extended warranties available. |



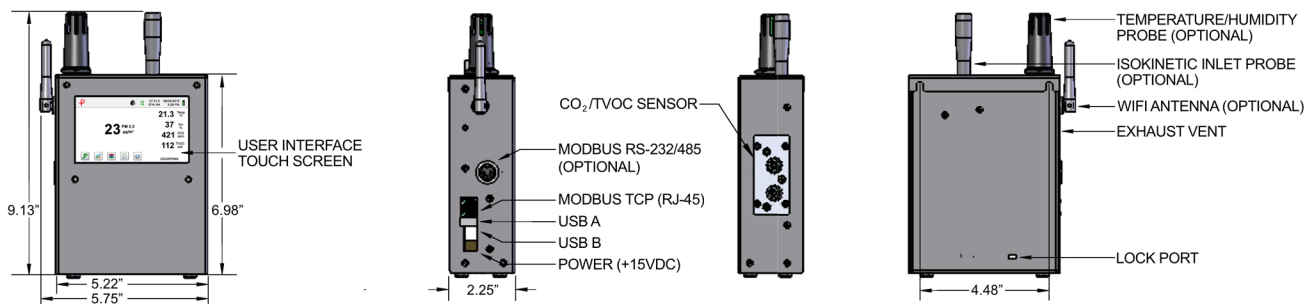
Configurable Environmental Sensor Display



Simultaneous Display of Multiple PM Sizes



Control and Manage Remotely with IMS



PAT. <https://particlepatents.com/> Additional Patents Pending.

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