

5300-AQM1 and 5300-AQM2 Air Quality Monitors

PM, CO₂, Temperature, RH, and TVOC

- Industry's highest concentration of up to 27,000,000 particles/ft³ @ 10% coincidence loss
- Ideal for use in research, industrial health and safety, indoor air quality, and cleanroom applications
- Industry's first Sleep Mode and Power Conservation Mode with Intelligent Battery
- The most comprehensive internal self-diagnostics of any handheld particle counter
- Real-Time Meter detects particle contamination sources with visual and audible indication
- Internet of Things (IoT) communication allows for network or cloud-based data options



The Particles Plus® 5300-AQM1 and 5300-AQM2 Remote Air Quality Monitor measures and displays particle mass concentrations for PM_{1.0}, PM_{2.5}, PM_{5.0} and PM₁₀ including temperature, relative humidity, CO₂ (and TVOC in the 5300-AQM2). This wall-mounted instrument is the most versatile remote air quality monitor available for fixed installations. The advanced power management and the industry's first sleep mode, allows for long intervals between samples over extended and unattended operations. The AQM Series can easily integrate into a building automation and facility monitoring system via Ethernet, USB or (optional) Wireless 802.11 b/g, RS485 or RS232.

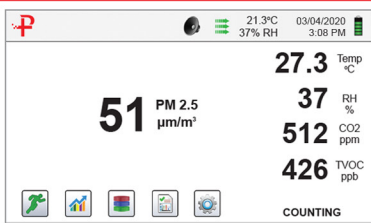
The AQMs report and display 6 user-selectable particle size channels, as well as carbon dioxide (CO₂), temperature, and relative humidity. The model 5300-AQM2 includes a PID Sensor for TVOC. The instrument monitors PM_{1.0}, PM_{2.5}, PM_{5.0}, PM₁₀ and TPM. An easy-to-use Channel Management control panel allows user defined channel sizes.

Features and Benefits

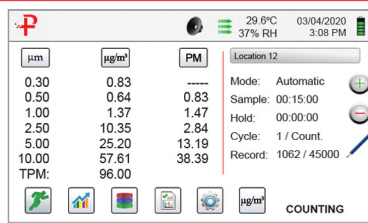
- Measures 0.3 µm to 25.0 µm
- 1.2 LPM flow rate
- Large easy-to-use icon driven color touch screen display
- Approximates mass concentration in µg/m³ with density and refractive index corrections
- Industry's highest concentration of 30,000,000 particles/ft³ @ 10% coincidence
- User-selectable, adjustable particle channel sizes
- 5300-AQM1 measures CO₂, temperature and humidity. The 5300-AQM2 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
- User-selectable channel sizes
- Long life laser diode technology
- Lightweight high-impact injection molded plastic enclosure
- 2 year limited warranty. Extended warranties available.

Specifications

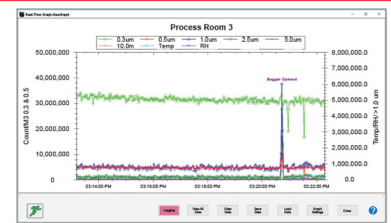
| | |
|---------------------------------|---|
| Model | 5300-AQM1 and 5300-AQM2 |
| Size Range | 0.3 to 25 μm |
| Size Channels | Factory calibrated at 0.3, 0.5, 1.0, 2.5, 5.0, 10.0 μm variable binning |
| Flow rates / Accuracy | 1.2 LPM \pm 3% |
| Aerosol Concentration Range | 0.01 to 20,000 $\mu\text{g}/\text{m}^3$ |
| Light Source | Long life laser diode |
| Resolution | 0.00003 $\mu\text{g}/\text{m}^3$ |
| 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 |
| Vacuum Source | 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 Sensors 5300-AQM1 | 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°F (0.5°C), 15-90% \pm 2% RH |
| Environmental Sensors 5300-AQM2 | Includes all sensors in the 5300-AQM1 and TVOC PID (standard on the 5300-AQM2), 0-50 ppm / minimum detection level 5 ppb, accuracy \pm 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 |
| 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, filter, battery, data download software, USB cable, power supply and cable |
| Optional Accessories | Printed manual, carrying case, spare battery, external battery charger, external printer and isokinetic probes, barbed fittings, IMS-RT monitoring system |
| Data Storage | 45,000 sample records (rotating buffer) including particle count data, environmental data, locations, annotations, and times. Scrollable on screen or printout.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. Extended warranties available. |



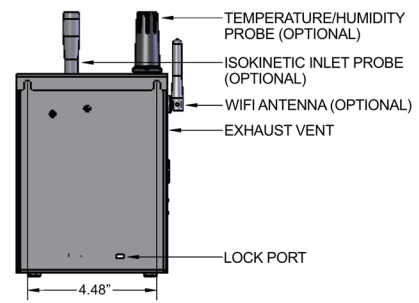
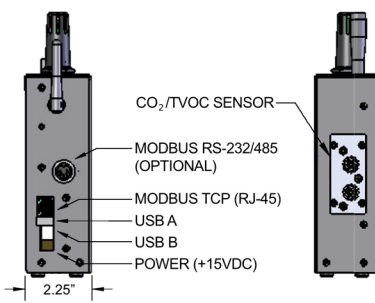
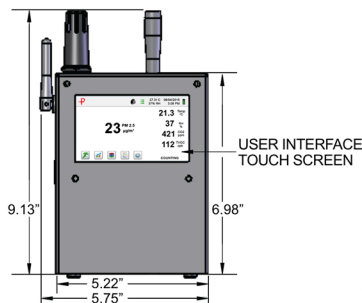
Configurable Environmental Sensor Display



Simultaneous Display of Multiple PM Sizes



Control and Manage Remotely with IMS



PAT. <https://particlepatents.com/> Additional Patents Pending.
 Particles Plus, Inc. reserves the right to change specifications without notice.
 Contact hello@particlesplus.com or your local distributor for more details.
 Particles Plus and the Particles Plus logo are trademarks of Particles Plus, Inc.
 ©2024 Particles Plus, Inc. All rights reserved.

REV 20240318-5300-AQM1/5300-AQM2



31 Tosca Drive
 Stoughton, MA 02072 U.S.A.
 +1-781-341-6898
www.particlesplus.com