



CleanAir Solutions, Inc.

The Cleanroom Specialists

5301-AQM Remote Air Quality and Environmental Monitor (CO₂, Temp, RH)



The 5301-AQM Remote Air Quality Monitor measures and displays particle mass concentrations for PM₁, PM_{2.5}, PM₅ and PM₁₀ including temperature, relative humidity and CO₂. 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 5301-AQM 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 5301-AQM reports and displays 6 user-selectable particle size channels, as well as Carbon Dioxide (CO₂), temperature, and relative humidity. The instrument monitors PM₁, PM_{2.5}, PM₅, PM₁₀ (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. The remote monitor operates using a long-life internal 0.1 CFM pump.

View data and generate environmental reports real-time on screen, via printer or USB key, through the versatile output options, or export to our Instrument Management Software during monitoring system or network failure. Our instruments can be controlled and monitored remotely via web browser from any PC, tablet or smartphone supporting up to 20 concurrent user sessions.

The 5301-AQM particle counter stores 45,000 time-stamped particle count and environmental data records for redundant protection in the event of a monitoring system or network failure. The 5301-AQM mass concentration mode approximates density in $\mu\text{g}/\text{m}^3$ and PM (particle matter) allowing for density and refractive index corrections to ensure accuracy. All particle counters meet ISO 21501-4 and JIS B9921. The 5301-AQM ensures compliance with an on-board pulse height analyzer.



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Features & Benefits:

Measures mass concentration in $\mu\text{g}/\text{m}^3$ and indication of PM (Particle Matter)

Measures up to 6 channels of simultaneous data

Measures CO₂, Temperature and Relative Humidity with user alarm set-points

User adjustable single and two point sensor calibration offset

User-selectable channel sizes

Long life laser diode technology

Internal 0.1 CFM (2.83 LPM) vacuum pump

Large easy-to-use icon driven color touch screen display

Stores up to 45,000 sample records, 1,000 sample locations and 50 recipes

Easy configuration and transferable from instrument to instrument

Connect using Ethernet, USB or (optional) Wireless 802.11 b/g, RS485 or RS232

Static or dynamic IP address (DHCP)

Displays and externally prints environmental reports

Internal audible alarm with user selectable thresholds for all environmental parameters

User-definable reports

Ideal for fixed system ventilation rate monitoring

Complies with ISO 21501-4 and JIS B9921 standards

Easy to clean and wipe down with minimal particle traps

Seamless integration into a facility monitoring system

Light weight stainless steel enclosure allows for easy wall-mounted installation

2 year warranty, extended warranties available



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Specifications:

Size Range	0.3 to 25 μm
Size Channels	Factory calibrated at 0.3, 0.5, 1.0, 3.0, 5.0, 10.0 μm variable binning
Particle Mass Indication	PM0.5, PM1.0, PM2.5, PM5.0, PM10 & TPM
Flow rates	0.1 CFM (2.83 LPM)
Concentration Limit	4,000,000 Particles/ft ³ @ 5% coincidence loss
Battery Run Time	10 hours
Light Source	Long life laser diode
Counting Efficiency	50% @ 0.3 μm ; 100% for particles >0.45 μm per JIS
Count Modes	Automatic, manual, real-time meter, cumulative/differential, mass concentration, count over
Count Alarms	1 to 9,999,999 counts
Calibration	NIST traceable
Display	4.3" (10.9 cm) WQVGA (480×272) color touch screen
Printer (Optional)	Optional external thermal printer available. Prints in all available languages
Vacuum Requirements	External vacuum >15" (38.1 cm) of Hg
Optional Internal Vacuum Pump	External vacuum >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



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Optional Communication Modes	Wireless 802.11 b/g, RS485 or RS232
Environmental Sensor	Includes CO2, temperature and relative humidity probe 0 – 2000 ppm, -32° to 122°F (0° to 50° C)
Alarm	Alarms on counts for all particle sizes, mass concentration, low battery, sensor failure, end of run
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, CO2 temperature probe, power supply & cable
Optional Accessories	Printed manual, external printer, and isokinetic probes
Buffer Memory	45,000 sample records (rotating buffer) including particle count data, environmental data, and CO2
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 Ye