



### 5301-IAQ Remote Airborne Particle Counter and Environmental Monitor (CO<sub>2</sub>, Temp, RH)

The Particles Plus 5301-IAQ Remote Particle Counter and Environmental Monitor measures 0.3 µm to 25 µm particles with mass concentration and stores indoor air quality measurements of CO<sub>2</sub>, temperature and relative humidity. This wall-mounted instrument is the most versatile remote particle counter available for fixed installations. The advanced power management and the industry's first sleep mode, allows for battery operation of periods that can exceed a month on a single charge, ensuring seamless monitoring in the event of a power failure. The 5301-IAQ 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-IAQ reports and displays 6 user-selectable particle size channels, as well as Carbon Dioxide (CO<sub>2</sub>), temperature, and relative humidity. The instrument monitors PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>5</sub>, PM<sub>10</sub> (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 can operate using a facilities existing vacuum system, or can be fitted with an optional 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 Particles Plus data-download software during monitoring system or network failure. Particles Plus 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-IAQ 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-IAQ mass concentration mode approximates density in µg/m<sup>3</sup> and allows for density and refractive index corrections to ensure accuracy. All Particles Plus counters meet ISO 21501-4 and JIS B9921. The 5301-IAQ ensures compliance with an on-board pulse height analyzer.

#### Features and Benefits

- Measures 0.3 µm to 25 µm
- 0.1 CFM (2.83 LPM) flow rate
- Long life laser diode technology
- Measures up to 6 channels of simultaneous data
- Approximates mass concentration in µg/m<sup>3</sup>
- (Optional) internal vacuum pump
- Measures CO<sub>2</sub>, Temperature and Relative Humidity with user alarm set-points
- 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.
- User-selectable channel sizes
- 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
- Lightweight stainless steel enclosure allows for easy wall-mounted installation
- 2 year warranty, extended warranties available



## Specifications

<b>Model</b>	<b>5310-IAQ</b>
Size Range	0.3 to 25µm
Size Channels	Factory calibrated at 0.3, 0.5, 1.0, 3.0, 5.0, 10.0 µm variable binning
Flow rate	0.1 CFM (2.83 LPM)
Concentration Limit	>4,000,000 Particles/ft <sup>3</sup> @ 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
Zero Count	<1 count / 5 minutes (<2 particles / ft <sup>3</sup> ) (per ISO 21501-4 & JIS)
Count Modes	Automatic, manual, beep, cumulative/differential, mass concentration, count or concentration
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.
Vacuum Requirements	External vacuum >15" (38.1 cm) of Hg
Optional 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 battery charger)
Communication Modes	Ethernet, USB
Optional Communication Modes	Wireless 802.11 b/g, RS485 or RS232
Environmental Sensors	Includes CO <sub>2</sub> (0-5000 ppm), temperature and relative humidity probe 32° to 122°F (0° to 50°C) ±1°F (0.5°C), 15-90% ±2% relative humidity
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	Quick start guide, operating manual on USB flash drive, isokinetic probe, temperature relative humidity sensor, purge filter, battery, data download software, USB cable, power supply & cable
Optional Accessories	Printed manual, spare battery, external battery charger, external printer and isokinetic probes
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 Years, extended warranties available

### Patent Pending

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