5300P Remote Airborne Particle Counter

1.2 LPM

The Particles Plus® 5300P Remote Airborne Particle Counter measures particles from 0.3 to 25.0 µm. These compact and user-friendly instruments are purpose-built for ambient and indoor air quality monitoring, industrial hygiene, environmental research, and health & safety applications. Featuring a 1.2 LPM flow rate, the 5300P is optimized for high-concentration environments providing improved accuracy, reduced coincidence loss, and extended instrument lifespan in comparison to higher-flow models.

Built for research, industrial hygiene, indoor air quality, and cleanroom applications, the 5000 Series delivers reliable, high-performance monitoring across a wide range of environments. From the cleanest labs to the dirtiest worksites, confidently monitor any environment thanks to the industry's highest particle concentration limits.

One of the key advantages of the 5000 Series as a remote particle counter is its built-in touchscreen display. It provides real-time visual feedback for technicians working in critical areas, enabling immediate identification of elevated particle counts. Adjustable audible alarms offer an additional layer of awareness in critical environments.

Designed for continuous, powered operation, the 5000 Series is ideal for fixed installations where uninterrupted monitoring is essential. Data can be managed directly on the device, through a facility monitoring system or through the free Particles Plus® software. Export raw data in .CSV or generate custom reports (ISO 14644-1, EU GMP Annex 1, or FS 209E). Remote diagnostics are available through the software from anywhere with an internet connection. The 5000 Series can function as a standalone unit or be seamlessly integrated into building automation and cleanroom management systems.

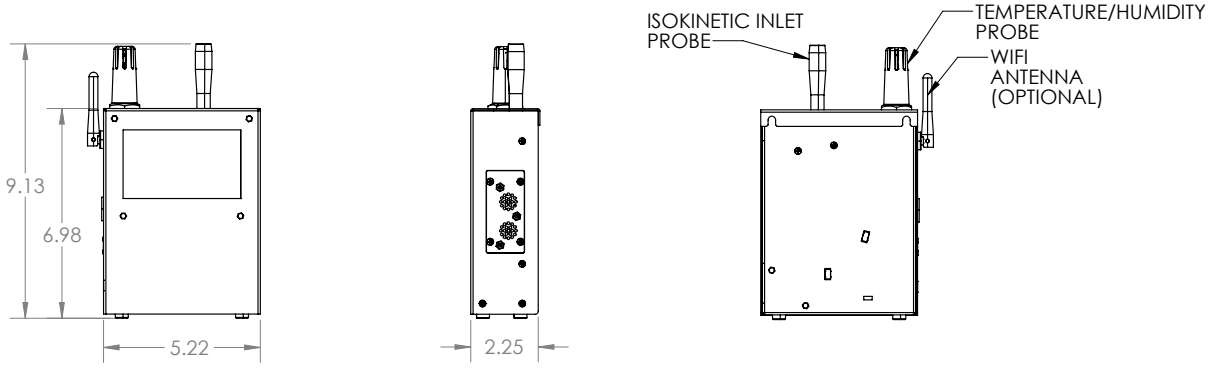
Features and Benefits

- Stores up to 45,000 sample records, 1,000 sample locations and 50 recipes
- Long life laser diode technology for reliable performance
- Approximates mass concentration in µg/m³ with density and refractive index corrections
- User selectable PM sizes from 0.3 or 0.5 µm to 10 µm including TPM of up to 25.0 µm
- Large, intuitive color touch screen display with an easy-to-use icon-driven interface
- Versatile mounting options
- Resolve issues quickly from any location with internet-enabled remote diagnostics
- Annotation function allows user to save 32 character notations to a live sample record
- Common interface ensures ease of use across all products
- Connect using MODBUS™ TCP over Wired. Optional MODBUS™ TCP over WiFi and optional MODBUS™ RTU or MODBUS™ ASCII over RS-485 or RS-232
- Displays user-definable reports for ISO 14644-1, EU GMP Annex 1 and FS 209E
- Built-in visual and audible alarms with comprehensive alarm management
- Complies with ISO 21501-4 and JIS B9921 standards
- Easy to clean, lightweight stainless steel enclosure with minimal particle traps
- 2 year Limited Warranty (Extended and Lifetime warranties available)

Specifications

Model	5300P
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	1.2 LPM
Concentration Limits	27,000,000 particles/ft³ @ 10% coincidence (per ISO 21501-4), 50,000,000 particles/ft³ @ 10% coincidence (as tested and validated[1])
Aerosol Concentration Range	0.01 to 20,000 µg/m³
Light Source	Long life laser diode
Counting Efficiency	50% @ 0.3 µm; 100% for particles >0.45 µm per JIS
Zero Count	<1 count / 60 minutes (<1 particles / 6 ft³). No fault count subtraction. No appreciable drift.
Count Modes	Particles/second, Real-Time Meter, cumulative/diff. (count/m³ and count/ft³) and mass concentration (PM)
Count Alarms	1 to 9,999,999 counts
Calibration	NIST traceable
Display	4.3″ (10.9 cm) WQVGA (480×272) color touch screen
Optional Printer	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 integrated alarm
Reports	ISO 14644-1, EU GMP Annex 1, FS 209E
Recipes	50 user-configurable recipes
Communication Modes	MODBUS™ TCP over Wired. Optional MODBUS™ TCP over WiFi and optional MODBUS™ RTU or MODBUS™ ASCII over RS-485 or RS-232
Optional Environmental Sensor	Temperature 32º to 122ºF (0º to 50ºC) ±1ºF (0.5ºC) and relative humidity probe 15-90% ±2%
Alarm	Alarms on counts for all particle sizes, sensor failure, environmental sensors and flow rate
Standards	ISO 21501-4 and JIS B9921
Calibration	Recommended minimum once per year
External Surface	Stainless steel
Dimensions (L x W x H)	5.22 x 2.25 x 9.13 in (13.3 x 5.7 x 23.2 cm) includes barb fittings
Weight	2.6 lb (1.18 kg)
Accessories	User manual + Instrument Management Software (IMS) on USB flash drive, isokinetic probe, USB cable, and power supply
Optional Accessories	Printed manual, external printer and isokinetic probes, zero-count filter
Buffer Memory	Securely stores up to 45,000 records with particle counts, environmental data, locations, and timestamps
Sample Locations	Up to 1,000 locations 20 characters long
Sample Time	1 second to 99 hours
Power	110 to 240 VAC 50/60 Hz universal in-line power supply
Operating Conditions	41-104ºF (5-40ºC) / 20% to 95% non-condensing
Storage Conditions	32-122ºF (0-50ºC) / Up to 98% non-condensing
Warranty	2 Year Limited Warranty (Extended and Lifetime Warranties available)

1- Validated by independent analysis see paper available at www.particlesplus.com/aac2022_paper



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.
©2025 Particles Plus, Inc. All rights reserved.

REV 20260220-5300P

Made in USA

PARTICLES PLUS®

1490 Central Street
Stoughton, MA 02072 U.S.A.
+1-781-341-6898
www.particlesplus.com