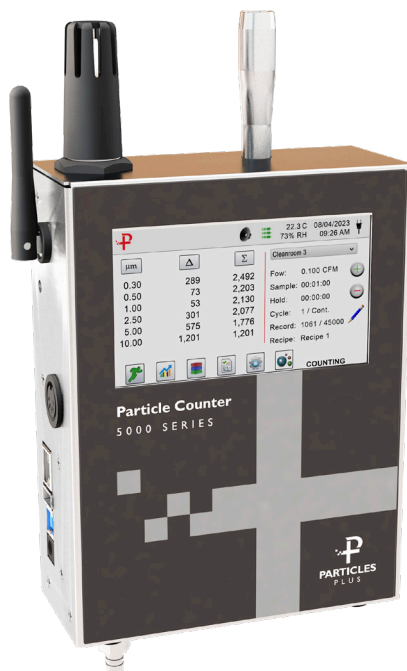# 5301 and 5501 Remote Airborne Particle Counters
0.1CFM (2.83 LPM)

The Particles Plus® 5301 and 5501 Remote Airborne Particle Counters measure particles from 0.3 or 0.5 to 25.0 μm at a flow rate of 0.1 CFM (2.83 LPM). These compact and user-friendly instruments display up to six selectable particle size channels, along with optional temperature and relative humidity sensors.

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 and enables 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.
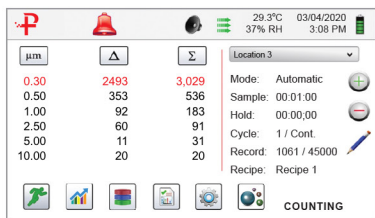
Features and Benefits

- 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 Ethernet, USB, Wi-Fi (optional), RS 485 or RS232
- 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

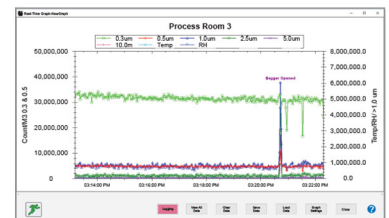| Model	5301	5501
Size Range	0.3 to 25.0 µm	0.5 to 25.0 µm
Size Channels	Factory calibrated at 0.3, 0.5, 1.0, 2.5, 5.0, 10.0 µm variable binning	Factory calibrated at 0.5, 0.7, 1.0, 2.5, 5.0, 10.0 µm variable binning
Counting Efficiency	50% @ 0.3 µm; 100% for particles >0.45 µm per JIS	50% @ 0.5 µm; 100% for particles >0.75 µm per JIS
Flow Rates	0.1 CFM (2.83 LPM)	
Concentration Limits	15,000,000 particles/ft^3 @ 10% coincidence (per ISO 21501-4), 30,000,000 particles/ft^3 @ 10% coincidence (as tested and validated[1])	
Light Source	Long life laser diode	
Zero Count	<1 count / 60 minutes (<1 particles / 6 ft^3). No fault count subtraction. No appreciable drift.	
Count Modes	Real-Time Meter and graph, cumulative/differential count/m^3 and count/ft^3, 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	
Printer (Optional)	External thermal printer available	
Vacuum Requirements	External vacuum >15" (38.1 cm) of Hg	
Airflow	Internally monitored	
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	
Communication Modes	Ethernet, USB, Wireless 802.11 b/g (Optional), RS485 or RS232	
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, low battery, 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)	5.2 x 2.3 x 8.9 in (13.3 x 5.8 x 22.6 cm) includes barb fittings	
Weight	2.6 lb (1.18 kg)	
Accessories	User manual + Instrument Management Software (IMS) on USB flash drive, isokinetic probe, zero-count filter, USB cable, and power supply	
Optional Accessories	Printed manual, external printer, isokinetic, temperature and relative humidity probes	
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)	

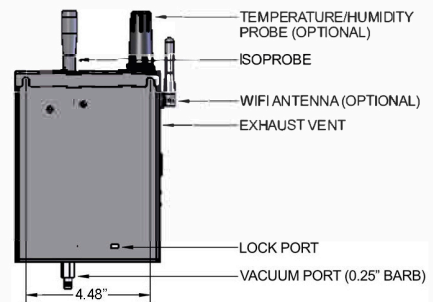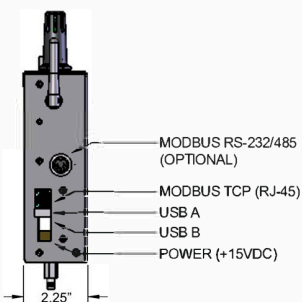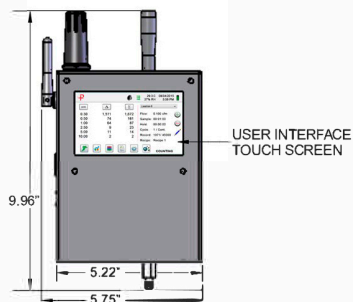1- Validated by independent analysis see paper available at www.particlesplus.com/aac2022_paper

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Icon Driven Menus for Ease-of-Use

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5.75"

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MODBUS TCP (RJ-45)
USB A
USB B
POWER (+15VDC)
2.25"

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VACUUM PORT (0.25" BARB)
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