

# 5301 and 5501 Remote Airborne Particle Counters

## 0.1CFM (2.83 LPM)



The Particles Plus® 5301 and 5501 Remote Particle Counters measure particles from 0.3 or 0.5 to 25.0  $\mu\text{m}$  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. Manage data directly on the device or through the Particles Plus® free 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.

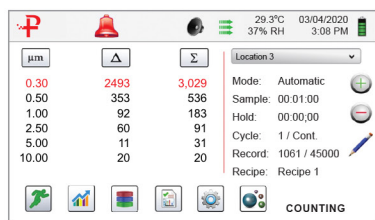
### Features and Benefits

- Measures up to six particle size channels simultaneously
- Approximates mass concentration with density and refractive index corrections
- Large, icon-driven color touchscreen display for easy operation
- Optional temperature, relative humidity, CO2 and TVOC sensors
- Stores up to 45,000 sample records, 1,000 locations, and 50 sampling recipes
- Annotation feature allows users to save 32-character notes with sample records
- Connect using Ethernet, USB, Wi-Fi (optional), RS 485 or RS232
- Long-life laser diode technology for reliable sensor performance
- Troubleshoot issues remotely from anywhere with an internet connection
- Resolve issues quickly from any location with internet-enabled remote diagnostics
- Seamlessly integrates into facility monitoring and building automation systems
- Easy to clean, lightweight stainless steel enclosure with minimal particle traps
- Complies with ISO 21501-4 and JIS B9921 standards
- Built-in audible and visual alarms for real-time alerts
- Versatile mounting options
- 2 Year Limited Warranty (Extended and Lifetime Warranties available)

## Specifications

Model	5301	5501
Size Range	0.3 to 25.0 $\mu\text{m}$	0.5 to 25.0 $\mu\text{m}$
Size Channels	Factory calibrated at 0.3, 0.5, 1.0, 2.5, 5.0, 10.0 $\mu\text{m}$ variable binning	Factory calibrated at 0.5, 0.7, 1.0, 2.5, 5.0, 10.0 $\mu\text{m}$ variable binning
Counting Efficiency	50% @ 0.3 $\mu\text{m}$ ; 100% for particles >0.45 $\mu\text{m}$ per JIS	50% @ 0.5 $\mu\text{m}$ ; 100% for particles >0.75 $\mu\text{m}$ per JIS
Concentration Limits	15,000,000 particles/ft <sup>3</sup> @ 10% coincidence (per ISO 21501-4), 30,000,000 particles/ft <sup>3</sup> @ 10% coincidence (as tested and validated <sup>1</sup> )	
Flow rates	0.1 CFM (2.83 LPM)	
Light Source	Long life laser diode	
Zero Count	<1 count / 60 minutes (<1 particles / 6 ft <sup>3</sup> ). No fault count subtraction.	
Count Modes	Real-Time Meter and graph, cumulative/differential count/m <sup>3</sup> and count/ft <sup>3</sup> , 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 built-in alarm	
Reports	ISO 14644-1, EU GMP Annex 1, FS 209E	
Communication Modes	Ethernet and USB (Optional) Wireless 802.11 b/g, RS485 or RS232.	
Environmental Sensor	(Optional) Temperature 32° to 122°F (0° to 50°C) $\pm 1^\circ\text{F}$ (0.5°C) and relative humidity probe 15-90% $\pm 2\%$	
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 2.3" x 8.9" (13.3 cm x 5.8 cm x 22.6 cm) includes barb fittings	
Weight	2.6 lb (1.18 kg)	
Accessories	Operating manual on USB flash drive, isokinetic probe, temperature relative humidity sensor, 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 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	41-104°F (5-40°C) / 20% to 95% non-condensing	
Storage Conditions	32-122°F (0-50°C) / Up to 98% non-condensing	
Warranty	2 year limited warranty. Extended warranties available.	

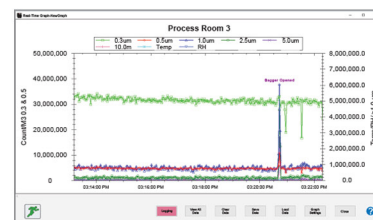
1- Validated by independent analysis see paper available at [www.particlesplus.com/aac2022\\_paper](http://www.particlesplus.com/aac2022_paper)



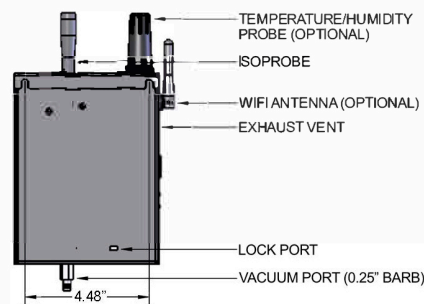
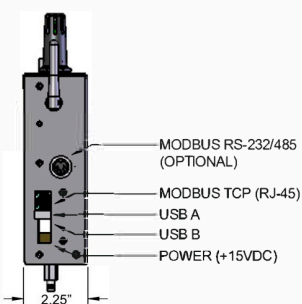
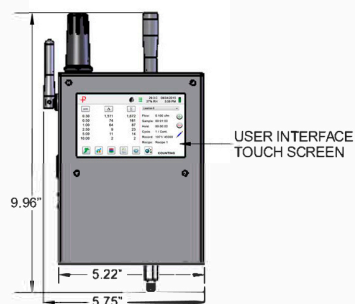
Audible and Visual Alarm Management



Icon Driven Menus for Ease-of-Use



Control and Manage Remotely with IMS



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