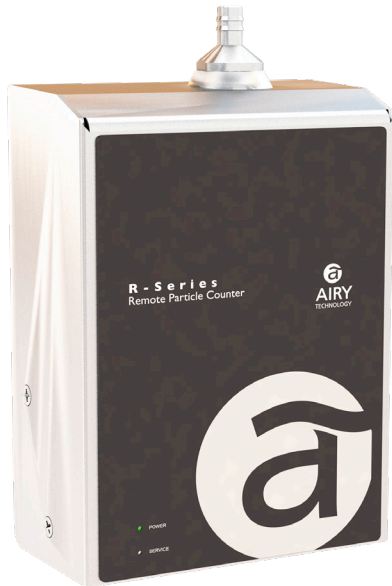




AIRY
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R301P and R501P Remote Airborne Particle Counters

0.1 CFM (2.83 LPM)

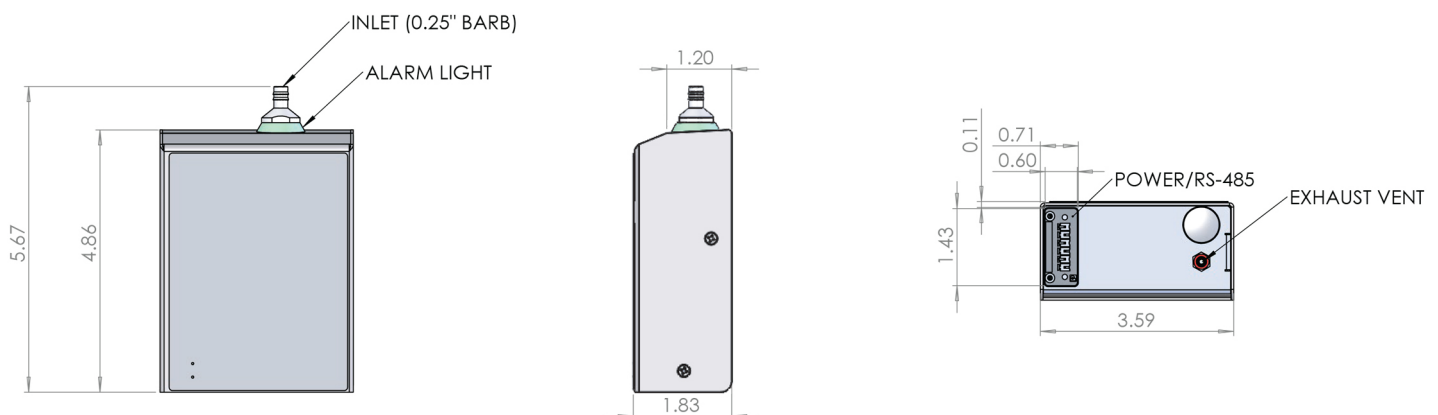


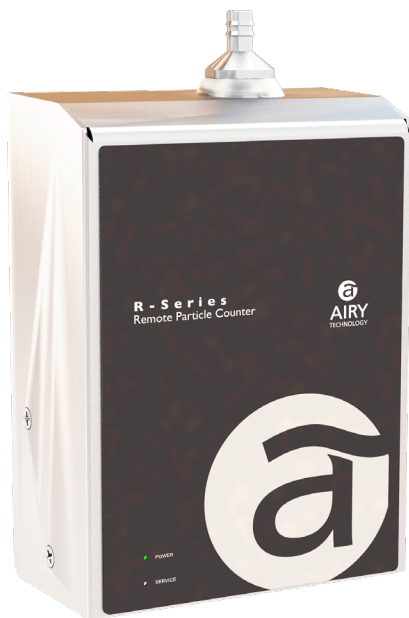
The R301P and R501P particle counters provide a range of particle size measurement from 0.3 to 25.0 μm at 0.1 CFM (2.83 LPM) flow. These sensors allow for efficient particle counting with high accuracy and resolution that meet or exceed ISO 21501-4 and JIS B9921 for the calibration of a particle counter.

These units are equipped with an internal pump and manifold and do not require an external vacuum source. Integration into a building automation or facility monitoring system is easy via standard MODBUS RS-485 communication.

R301P and R501P: Features and Benefits

- R301P: Measures 0.3 μm to 25.0 μm
- R501P: Measures 0.5 μm to 25.0 μm
- 0.1 CFM (2.83 LPM) flow rate
- Long life laser diode technology
- Measures up to 4 channels of simultaneous data
- Accurate in high particle concentration environments
- Internal vacuum pump
- Internal HEPA filter
- Connect using Modbus RTU/ASCII over isolated RS-485
- Complies with ISO 21501-4 and JIS B9921 standards
- Easy to clean and wipe down with minimal particle traps
- Versatile mounting options
- Alarm light
- LED Indicators
- Seamless integration into a facility monitoring system
- Lightweight stainless steel enclosure
- 1 year limited warranty. Extended warranties available.





Specifications

Model	R301P	R501P
Size Range	0.3 μm to 25.0 μm	0.5 μm to 25.0 μm
Size Channels	Factory calibrated at 0.3, 0.5, 1.0, 5.0 μm	Factory calibrated at 0.5, 1.0, 2.5, 5.0 μm
Number of Channels	4 channels	4 channels
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 Rate	0.1 CFM (2.83 LPM)	
Concentration Limits	10,000,000 particles/ft ³ @ 10% coincidence (per ISO 21501-4), 20,000,000 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.	
Calibration	NIST traceable	
Vacuum Source	Internal vacuum pump with HEPA filter	
Filtered Exhaust	Internal HEPA filter	
Airflow	Internally monitored	
Alarm	Alarm LED ring	
Communication Modes	MODBUS™ RTU or ASCII outputs (over isolated RS-485)	
Standards	ISO 21501-4 and JIS B9921	
Instrument Calibration	Recommended minimum once per year	
External Surface	Stainless steel	
Dimensions (L x W x H)	3.59" x 1.83" x 5.66" (9.1 x 4.6 x 14.3 cm) including probes and connectors	
Weight	1.94 lb. (0.88 kg)	
Accessories	Wiring Connector, operating manual on USB flash drive	
Optional Accessories	Power Supply, Remote Mounting Bracket, Stainless Steel Barbed Isoprobe (0.1 CFM/2.83 LPM), Filter Assembly, and Sample & Vacuum Tubing	
Sample Time	1 second to 18 hours	
Power	9 - 24 VDC (< 2.5 watts)	
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	1 year limited warranty. Extended warranties available.	

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

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