



PARTICLES
PLUS®

2301 and 2501 Remote Airborne Particle Counters 0.1 CFM (2.83 LPM)

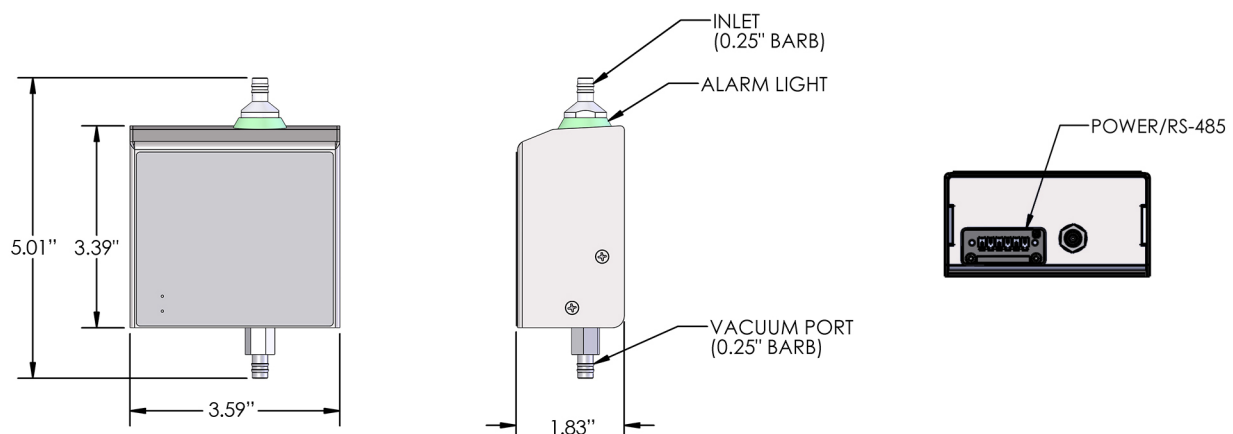


The 2301 and 2501 particle counters provide a range of particle size measurement from 0.3 or 0.5 to 25.0 μm at a flow rate of 0.1 CFM (2.83 LPM). These sensors allow for efficient particle counting with specifications that exceed the ISO 21501-4 and JIS B9921 calibration standards.

These sensors have 4 fixed particle size channels and are equipped with an integral critical orifice and flow sensor to provide a stable flow rate from an external vacuum source. Integration into a building automation or facility monitoring system is easy via isolated RS-485 Modbus communication.

2301 and 2501: Features and Benefits

- 2301: Measures 0.3 μm to 25 μm
- 2501: Measures 0.5 μm to 25 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 critical orifice
- 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
- 2 year warranty. Extended warranties available.





Specifications

| Model | 2301 | 2501 |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Size Range | 0.3 μm to 25 μm | 0.5 μm to 25 μm |
| Size Channels | Factory calibrated at 0.3, 0.5, 1.0, and 5.0 μm | Factory calibrated at 0.5, 1.0, 2.5, and 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) | |
| Calibration | NIST traceable | |
| Vacuum Requirements | External vacuum > 15" (38.1cm) of Hg | |
| Airflow | Internally monitored | |
| Alarm | User configurable alarm light | |
| 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 5.01" (9.1 cm x 4.6 cm x 12.7 cm) including probes and connectors | |
| Weight | 1.65 lb. (0.75 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), Purge 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 | 2 year limited warranty. Extended warranties available. | |

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