

Airnet® II

2-Channel Particle Sensor

AVAILABLE WITH
ISO 17025
CALIBRATION
for select parameters

Easy to install, compact particle counters meeting the latest international regulations

Without measurement there is no control

The Airnet® II particle sensor makes it easy and cost-effective to monitor your cleanroom. This compact particle sensor offers unparalleled performance and data transmission capabilities while meeting ISO 21501-4 and ISO 14644-1:2015.

With a simple installation and versatile power options, the unit is fully configurable to accept distributed power from an in-house system, local power plug-in, or Power over Ethernet (PoE). Communication capabilities include Ethernet to interface with Pharmaceutical Net Pro, Facility Net, or FacilityPro® software, Modbus communications, or optional 4-20 mA output.

Data integrity is maintained through the use of a data queue feature that continues to gather data even if network communication is lost.

To ensure proper flow conditions and vacuum system operation, the Airnet II sensors incorporate a dynamic flow sensing system that alarms with a 15% change in flow conditions.

For applications where decontamination using Vaporized Hydrogen Peroxide (VHP) is required, an optional VHP-compatible unit is available for a simple installation without complex valving (Airnet 510XR).

BENEFITS

- Proven technology provides reliable and accurate data
- Immediate reaction to particle contamination events
- Low-cost solution for multipoint monitoring
- Interfaces with Facility Net, Pharmaceutical Net Pro and FacilityPro Software for comprehensive management of cleanroom conditions
- Small size and flexible mounting options make it easy to install in cleanrooms and mini-environments
- Laser diode drastically reduces the need for maintenance and extends product lifecycle
- Automatic laser shutdown reduces laser failures
- Data queue maintains data integrity when communication is lost
- Optional 4-20 mA output for integration with existing systems
- Optional XR coating protects sensors against corrosive or oxidizing vapors in VHP sterilization processes

FEATURES

- 2 channels
- 0.5 and 5.0 µm size range, suitable for pharmaceutical applications
- 1.0 CFM flowrate
- Interfaces with Modbus communications and optional 4-20 mA output
- Chemical-resistant polycarbonate enclosure
- Low sample point cost
- Small enough for use in remote locations
- ISO 14644-1:2015 compliant

APPLICATIONS

- Cleanroom monitoring
- Dedicated monitoring of critical locations
- Trend analysis
- Statistical process control
- Multi-location monitoring
- Isolator monitoring

Airnet® II

2 Channel Particle Sensor

Specifications

	301	501/501A	510/510XR
Size Range	0.3, 0.5 µm	0.5, 5.0 µm ¹	0.5, 5.0 µm
Maximum Concentration ²	5,695,168/ft ³	9,578,238/ft ³	957,824/ft ³
Flow Rate	0.1 CFM (2.8 LPM)		1.0 CFM (28.3 LPM)
Zero Count	≤ 70.7 counts/m ³		≤ 7.07 counts/m ³
Vacuum Source	> 11 in Hg (> 375 mBar) below atm pressure		> 15 in Hg (> 510 mBar) below atm pressure
Counting Efficiency	50% ± 20% for most-sensitive channel. Meets ISO 21501-4. 100% ± 10% at 1.5 to 2.0 times channel one size. Meets ISO 21501-4.		
Laser Source	Diode		
Laser Classification	Class 1 per EN 60825 (Internally, a Class IIIB laser is used, per EN 60825)		
Exterior Surface	Polycarbonate		
Dimensions (H x W x L)	5.3 x 3.6 x 3.8 in (13.5 x 8.9 x 9.6 cm)		
Weight	1.6 lb (0.73 kg)		
Sample Probe or Tubing	1/4-in ID		
Flow System	External vacuum 1/4-in connection; automatic laser shutoff and alarm on 15% flow variation		
Power	24 VDC (0.5 A) 100 – 240 VAC ± 10%, 50 – 60 Hz, Power Supply (optional), or use of Power over Ethernet 48 VDC via a PoE router		
Communication Connectors	Ethernet (Particle Measuring Systems proprietary protocol, Modbus TCP) RS-232 (configuration and diagnostic tool only, no data) 4-20 mA, optional (3 output channels: 2 particle data, 1 instrument status)		
Status Indicators	Programmable status (two-color LED), Activity (one-color LED)		
Calibration	Calibration materials used are traceable to the National Institute of Standards and Technology (NIST) and meet ISO 21501-4 requirements.		
Environment	Temperature: 4 – 35 °C (39 – 95 °F), 5 – 95%; non-condensing relative humidity		
Complies with	EU RoHS, ISO 21501-4, ISO 14644-1:2015		

¹ Airnet II 501A has 0.5 and 1.0 µm channels.

² 10% coincidence loss at maximum concentration.

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