Airnet® II

4 Channel Particle Sensor



The Airnet II 4-Channel particle sensor makes it easy and cost-effective to monitor your cleanroom. This particle sensor offers a small footprint, unparalleled performance, and data transmission capabilities while meeting the specification of ISO 21501-4 and ISO 14644-1:2015.

Simple installation with versatile power options, the unit can be configured 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, Facility Net, or FacilityPro® software, OPC communications, 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, these units incorporate a Dynamic Flow Sensing system that will alarm with a 15% change in flow conditions.

BENEFITS

- Proven technology provides reliable and accurate data
- Allows for immediate reaction to particle contamination events
- A low-cost solution for multipoint monitoring
- Interfaces with Facility Net, Pharmaceutical Net and FacilityPro Software for comprehensive management of cleanroom conditions
- A small footprint and flexible mounting options make it easy to install in cleanrooms and mini-environments
- A laser diode (LD) 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 to help you understand your environment and communicate with other systems

FEATURES

- 4 channels
- 0.2 and 10.0 µm size range
- 0.1 and 1.0 CFM flow rate
- Interfaces with object linking and embedding (OLE) for process control (OPC) communications, Modbus communications and optional 4-20 mA output
- Chemical-resistant polycarbonate (PC) enclosure
- Low sample point cost
- Small enough for use in remote locations
- Includes system validation documentation
- ISO14644-1:2015 Compliant

APPLICATIONS

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

PARTICLE MEASURING SYSTEMS®
a spectris company

Without measurement there is no control

Airnet® II

4 Channel Particle Sensor

Specifications

	201-4	301-4	310-4	501-4	510-4
Size Range (µm)	0.2, 0.3, 0.5, 1.0	0.3, 0.5, 1.0, 5.0	0.3, 0.5, 1.0, 5.0	0.5, 1.0, 5.0, 10.0	0.5, 1.0, 5.0, 10.0
Flow Rate	0.1 CFM (2.8 LPM)	0.1 CFM (2.8 LPM)	1.0 CFM (28.3 LPM)	0.1 CFM (2.8 LPM)	1.0 CFM (28.3 LPM)
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				
Zero Count	≤ 70.7 counts/m^3	≤ 70.7 counts/m^3	≤ 7.07 counts/m^3	≤ 70.7 counts/m^3	≤ 7.07 counts/m^3
Maximum Concentration[1]	5,057,310 /ft^3	4,862,798 /ft^3	702,404 /ft^3	7,437,220 /ft^3	890,371 /ft^3
Laser Source	Diode				
Laser Classification	Class 1 per EN60825 (Internally, a Class IIIB laser is used, per EN60825)				
Exterior Surface	Polycarbonate				
Dimensions (H x W x L)	3.8 x 3.6 x 5.3 in (9.6 x 8.9 x 13.5 cm)				
Weight	1.6 lb (0.73 kg)				
Sample Probe or Tubing	1/4" ID				
Flow System	External vacuum 1/4" connection Automatic laser shutoff and alarm on 15% flow variation				
Vacuum Source	> 12 in Hg required				
Power	Power over Ethernet (PoE) via PoE router (48 VDC) or PoE power injector Optional 24 VDC (0.5 A) power input				
Communication Connectors	Ethernet (Particle Measuring Systems proprietary protocol, OPC, Modbus TCP) Optional 4-20 mA (5 output channels: 4 particle data, 1 instrument status) RS-232 (configuration and diagnostic only)				
Status Indicators	Programmable status (two-color LED), Activity (one-color LED)				
Calibration	Calibration materials used are traceable to the National Institute for Standards and Technology (NIST) and meet ISO 21501-4 requirements				
Environment	Temperature: 39 – 95 °F (4 – 35 °C) Relative humidity: 5 – 95%, non-condensing				
Complies With	EU RoHS, ISO 21501-4				

[1]Greater than 90% accuracy (less than 10% coincidence loss) at maximum recommended concentration.

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