Airnet® II

4 Channel Particle Sensor

Without measurement there is no control.

The Airnet II 4-Channel particle sensor makes easy, cost-effective cleanroom monitoring simple. These particle sensors offer a small footprint, unparalleled performance, and data transmission capabilities while meeting ISO 21501-4.

Installation is simplified using Power over Ethernet (PoE) or configured with an optional 24 VDC input to accept distributed power from an in-house system.

Standard communication capabilities include Ethernet communications to interface with Pharmaceutical Net or Facility Net, OPC, Modbus TCP, 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 communication is lost.

To assure 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

Reduce Defects

- Real-time monitoring of defect-causing particles
- Proven technology provides reliable and accurate data
- Users can react immediately to particle contamination events
- Meets ISO 21501-4

Cost Effective

- Low-cost solution for multipoint monitoring
- Small footprint and flexible mounting options make it easy to install in cleanrooms and minienvironments
- Easy to clean/wipe down; designed to minimize particle traps
- Rugged, chemical-resistant Polycarbonate enclosure
- Long-life laser diode
- Dynamic flow sensing system alarm shuts down laser if instrument flow deviates15%
- Power over Ethernet (PoE) simplifies installations
- OPC or Modbus TCP communications easily utilized
- Optional 24 VDC input / 4-20 mA output configurations available

APPLICATIONS

- Cleanroom monitoring
- Dedicated monitoring of critical locations
- Multi-location monitoring

PARTICLE MEASURING SYSTEMS

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)
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
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 EN60825 (Internally, a Class IIIB laser is used, per EN60825)				
Exterior surface	Polycarbonate				
Dimensions (l, w, h)	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" 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] 10% coincidence loss at maximum concentration.

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