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
## Specifications

**Airnet® II**  
4 Channel Particle Sensor

<table>
<thead>
<tr>
<th></th>
<th>201-4</th>
<th>301-4</th>
<th>310-4</th>
<th>501-4</th>
<th>510-4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size Range (µm)</strong></td>
<td>0.2, 0.3, 0.5, 1.0</td>
<td>0.3, 0.5, 1.0, 5.0</td>
<td>0.3, 0.5, 1.0, 5.0</td>
<td>0.5, 1.0, 5.0, 10.0</td>
<td>0.5, 1.0, 5.0, 10.0</td>
</tr>
<tr>
<td><strong>Flow Rate</strong></td>
<td>0.1 CFM (2.8 LPM)</td>
<td>0.1 CFM (2.8 LPM)</td>
<td>1.0 CFM (28.3 LPM)</td>
<td>0.1 CFM (2.8 LPM)</td>
<td>1.0 CFM (28.3 LPM)</td>
</tr>
<tr>
<td><strong>Counting Efficiency</strong></td>
<td>50% ± 20% for most sensitive channel. Meets ISO 21501-4</td>
<td>100% ± 10% at 1.5 to 2.0 times channel one size. Meets ISO 21501-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Zero Count</strong></td>
<td>≤ 70.7 counts/m³</td>
<td>≤ 70.7 counts/m³</td>
<td>≤ 7.07 counts/m³</td>
<td>≤ 70.7 counts/m³</td>
<td>≤ 7.07 counts/m³</td>
</tr>
<tr>
<td><strong>Maximum Concentration¹</strong></td>
<td>5,057,310 /ft³</td>
<td>4,862,798 /ft³</td>
<td>702,404 /ft³</td>
<td>7,437,220 /ft³</td>
<td>890,371 /ft³</td>
</tr>
<tr>
<td><strong>Laser Source</strong></td>
<td>Diode</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Laser Classification</strong></td>
<td>Class 1 per EN60825 (Internally, a Class IIIB laser is used, per EN60825)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Exterior Surface</strong></td>
<td>Polycarbonate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dimensions (H x W x L)</strong></td>
<td>3.8 x 3.6 x 5.3 in (9.6 x 8.9 x 13.5 cm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1.6 lb (0.73 kg)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sample Probe or Tubing</strong></td>
<td>1/4” ID</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **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 |

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

---

**Headquarters**  
5475 Airport Blvd  
Boulder, Colorado 80301 USA  
T: +1 303 443 7100, +1 800 238 1801  
Instrument Service & Support  
T: +1 800 557 6363  
Customer Response Center  
T: +1 877 475 3317  
E: info@pmeasuring.com  
www.pmeasuring.com

---

**GLOBAL OFFICES**

**AUSTRIA**  
T: +43 512 390 500  
E: pmsaustria@pmeasuring.com

**BENELUX**  
T: +32 10 23 71 56  
E: pmsbelgium@pmeasuring.com

**BRAZIL**  
T: +55 11 5188 8227  
E: pmsbrazil@pmeasuring.com

**CHINA**  
T: +86 21 6113 3600  
E: pmschina@pmeasuring.com

**FRANCE**  
T: +33(0)1 60 10 32 96  
E: pmsfrance@pmeasuring.com

**GERMANY**  
T: +49 6151 6671 632  
E: pmsgermany@pmeasuring.com

**ITALY**  
T: +39 06 9053 0130  
E: pmssrl@pmeasuring.com

**JAPAN**  
T: +81 3 5298 8175  
E: pmsjapan@pmeasuring.com

**KOREA**  
T: +82 31 286 5790  
E: pmskorea@pmeasuring.com

**MEXICO**  
T: +52 55 2271 5106  
E: pmsmexico@pmeasuring.com

**NORDIC**  
T: +45 707 028 55  
E: pmsnordic@pmeasuring.com

**PUERTO RICO**  
T: +1 787 718 9096  
E: pmspuertorico@pmeasuring.com

**SINGAPORE**  
T: +65 6496 0330  
E: pmssingapore@pmeasuring.com

**SWITZERLAND**  
T: +41 71 987 01 01  
E: pmsswitzerland@pmeasuring.com

**TAIWAN**  
T: 886-3-5525300 Ext: 301  
E: pmstaiwan@pmeasuring.com

---

© 2016 Particle Measuring Systems, Inc. All rights reserved.