



Advanced Test Equipment Corp.

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Lasair® III

Aerosol Particle Counter Models 310B, 310C, 350L, 5100



The Lasair III Particle Counter sets the standard for portable aerosol particle counters and meets the requirements of ISO 21501-4.

The Lasair III Particle Counter is available in three different flow rate configurations (1 CFM, 50 LPM and 100 LPM) to meet a variety of cleanroom applications. It can be used for routine fixed and portable cleanroom monitoring. Interactive software steps the user through the ISO 14644-1, EC GMP Annex 1, China GMP, and FS 209E room certification process. The results of cleanroom certifications are available either through a local printout, downloadable via USB in a secure format, or through the use of external software packages such as DataAnalyst, Facility Net software or Pharmaceutical Net software.

The user interface is facilitated by the use of a large easy-to-read IR touchscreen. The touchscreen eliminates interaction problems commonly associated with resistive or capacitive touchscreens such as requiring the use of a stylus or difficulties using a touchscreen while wearing gloves.

The rugged chemical-resistant enclosure is lightweight for portability and has a streamlined design to minimize particle traps, making the unit easy to clean. Power is provided to the unit through the use of the on-board hot-swappable batteries. Power can also be provided through the use of an external AC power source, which can simultaneously power the unit as well as charge the on-board batteries.

The Lasair III Particle Counter can accept inputs from a wide range of environmental sensors through the four built-in 4-20 mA inputs. Wireless network communications is made easy with an externally-mounted wireless adapter, simplifying communications with network systems. The unit can be remotely managed via the built-in web browser function or through Ethernet to Pharmaceutical Net, Facility Net, or FacilityPro™ software.

BENEFITS

- ISO 21501-4 compliant with a built-in Pulse Height Analyzer (PHA)
- 100 LPM, 50 LPM, or 1 CFM flow rates available
 - 100 LPM flow samples 1 m³ in 10 minutes
- Large IR touchscreen for simplified use
- Quiet pump improves work environment
- Calculates and creates reports for ISO 14644-1, EC GMP Annex 1, China GMP, and FS 209E
- 21 CFR Part 11 compliant download
- Comprehensive validation manual makes it easy to meet pharmaceutical regulatory requirements
- Operates in cleanrooms via a web browser: Set up, sample, display, print, download data
- Choose from ten languages for display and printout
- Removable batteries with optional external charger for continuous mobile use
- Stores sampling recipes to reduce operator errors
- Long-term data archiving with DataAnalyst software
- Local printout for immediate hardcopy results
- USB electronic printouts for long term storage
- CSV file download for easy data integration
- Web browser for simplified remote operation

APPLICATIONS

- Cleanroom monitoring
- Facility certification for ISO, EC GMP, China GMP, FS 209E
- Trend analysis
- Statistical process control
- Troubleshooting particle excursions
- Manifold compatible
- Portable or dedicated use



	310B, 310C	350L	5100
Channels	310B: 0.3, 0.5, 1.0, 3.0, 5.0, 10.0 µm 310C: 0.3, 0.5, 1.0, 5.0, 10.0, 25.0 µm	0.3, 0.5, 1.0, 5.0, 10.0, 25.0 µm	0.5, 1.0, 2.0, 5.0, 10.0, 25.0 µm
Flow rate	1.0 CFM (28.3 LPM) ± 5%	50 LPM ± 5%	100 LPM ± 5%
Calibration	Meets ISO 21501-4 requirements		
Maximum concentration ^a	> 1,380,270/ft ³	> 832,599/ft ³	> 688, 495/ft ³
Counting efficiency	50% ± 20% for most sensitive threshold. Meets ISO 21501-4 requirements.		
Zero count	7.07 counts/m ³ (1CFM); 4.00 counts/m ³ (50 LPM); 2.00 counts/m ³ (100 LPM)		
Data storage	3,000 complete data sets. 21 CFR 11 compliance. Long-term data storage/analysis with DataAnalyst.		
Communication modes	Ethernet or RS-232; USB data downloading; optional wireless Ethernet		
Controlling software	Facility Net, Pharmaceutical Net, FacilityPro, Microsoft® Internet Explorer® 5.0+, Firefox®		
Remote operation	Remote web browser operation; real-time download to Facility Net or Pharmaceutical Net		
Reports	USB reports; sample printouts; cleanroom certification reports for ISO, EC GMP, and FS 209E; averaging		
Environmental sensors	Four 4-20 mA inputs		
Languages	English, French, German, Italian, Japanese (Kanji), Korean, Mandarin Chinese (Traditional or Simplified), Spanish, Russian		
Display and printer	8.4" color VGA display (640 x 480); IR touch screen (IP65 rated); built-in thermal printer		
External surface	Polycarbonate (PC)		
Enclosure cleaning materials	Bleach, ethyl/isopropyl alcohol, peroxide/quaternary ammonium solutions		
Sample tubing ID ^b	3/8", 8 m max. length	1/2", 8 m max. length	3/4", 8 m max. length
Sample output filtering	Internally filtered to > 99.97% at 0.3 µm		
Power and battery ^c	100 – 264 V, 50 – 60 Hz, 150 W Lithium battery: estimated operation 3 hr (single) 6 hr (dual) for 1 CFM unit		
Dimensions (h, w, d)	11.9 x 12.9 x 10.2 in (30.1 x 32.7 x 25.9 cm)		
Weight	13.2 lb (6 kg) without battery, 16.5 lb (7.5 kg) with two optional batteries		
Operating environment	Temperature: 32 – 86 °F (0 – 30 °C); Humidity: 5 – 95% RH non-condensing		

All dimensions, weights and values not provided with a tolerance are +/-10% values.

a. Less than 10.0% coincidence loss at maximum recommended concentration.

b. For pharmaceutical applications, tubing length should equal 2m maximum.

c. Battery life is based on continuous operation running one (1) minute samples and printing every minute.

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U.S. and foreign patents pending.

Particle Measuring Systems, Inc. reserves the right to change specifications without notice.



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