Lasair® III 110 Inline

Particle Counter

Perfect solution for continuous monitoring of critical locations

Without measurement there is no control‘

The Lasair® III 110 Inline is a laser diode-based true 0.1 µm particle counter with 1.0 CFM flow rate.

With a comprehensive set of features and unequaled accuracy, the Lasair III 110 offers reduced operating costs and the reliability and longevity to support its three-year laser warranty.

BENEFITS

Reduce Defects

- Real-time measurement of yield-impacting particles
- Full range of accessories for monitoring in different applications
- Actual detection of 0.1 µm particles

Increase Productivity

- Quiet operation improves work environment
- Interfaces with Facility Net software for comprehensive data management

Cost-Effective

- Use same particle counter for ISO Class 1 – 9 applications
- Eliminates need for frequent, costly laser cleaning
- Easy to clean/wipe down; designed to minimize particle traps
- Rugged, chemical-resistant, stainless steel casing
- Long-lasting cooled diode with 3-year laser warranty
- Critical orifice configuration can use house vacuum for aerosol manifold applications

FEATURES

- Diode laser
- 8 user-adjustable sizing channels from 0.1 – 5.0 µm
- Integrates up to 4 environmental sensors

APPLICATIONS

- Cleanroom and minienvironment monitoring
- High-sensitivity applications
- Manifold sampling (with Aerosol Manifold II)
- Process gas monitoring (with High Pressure Diffuser)
- Ultraclean zones (ISO 1–2)
- Filter testing

PARTICLE MEASURING SYSTEMS®

a spectris company

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Particle Counter

Specifications

Channel thresholds	0.1, 0.15, 0.2, 0.25, 0.3, 0.5, 1.0, and 5.0 µm by default – All 8 channels are user-adjustable
Counting efficiency	50% @ 0.1 µm
Flow rate	1 CFM (28.3 LPM)
Calibration	Materials traceable to US National Institute of Standards and Technology (NIST) ISO 21501-4 Compliant
Test methodology	0.1 µm particles verified by Differential Mobility Analysis; larger sizes verified by transmission electron microscopy
Maximum concentration	@ 10% coincidence loss: > 950,000/ft^3 (optional diluter required for ISO Class 8+); automatic coincidence alarm
Zero count level	Exceeds JIS (Japanese Industrial Standards), allowing use in ISO Class 1 and ISO Class 2 rooms
Laser source	Laser diode, 6 W (de-rated to 2.5 W), 810 nm, infrared
Laser cooling	Thermoelectric chilling (Peltier cooler), heat sink, dedicated cooling fan
Vacuum	1/4” barbed fitting. Requires > 15 in Hg
Warranty	3-year warranty on laser module, 2-year warranty on other components
Communication modes	Ethernet (PMS Protocol, Modbus TCP) or RS-232; four 4-20 mA outputs (3 particle, 1 status) Pulse/TTL Output
Environmental sensors	Optional Temp/RH probe; integrates up to 4 external sensors via 4-20 mA input
Remote operation	Use Facility Net software to control remotely
Data and sampling security	Stored data records cannot be altered; sampling recipes can be password protected
External surface	Stainless steel chassis and anodized aluminum chassis all ESA/ESD compliant
Cleaning materials	Bleach, ethyl/isopropyl alcohol, peroxide/quaternary ammonium solutions
Dimensions (w, h, l)	11.0 x 12.5 x 18.5 in (28.0 x 31.8 x 47.0 cm)
Weight	29.6 lb (13.4 kg)
Power	100 – 240 V, 3 A, 50 – 60 Hz
Operating environment and sample conditions	Temperature: 15 – 30 °C (59 - 86 °F); Humidity: 1 – 95% non-condensing; Ambient pressure @ altitudes from 0 – 7,000 ft (0 – 2,134 m)

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COMMITTED TO Net Zero

BUSINESS AMBITION FOR 1.5°C