CI-3100 Trident Series Airborne Particle Counters 1 CFM Flow Rate 2 - Channels

When Accuracy Matters! ™

- Continuous Monitoring in Critical Areas
- High Accuracy & Unsurpassed Repeatability of Measurement
- 10,080 Sample Memory Buffer
- VHP Compatible without voiding or reducing the warranty
- PoE+, Wi-Fi, or A/C Available
- HEPA Filtered Exhaust
- Seamless Stainless Steel Enclosure
- Remotely Controlled and a Rear Panel ON/OFF Button
- User Enabled/Disabled Light Ring
- Rear Output Contacts for a dedicated Light Tower
- Optional RH/Temp Probe
- New Proprietary Diagnostics Mitigate Deviation Reports and Failure Investigations.
- Compatible with LIMS and other FMS Software Packages

ISO 21501-4
ISO 14644-1/2
EU GMP, Annex 1
21 CFR Part 11

Innovation

The Trident series of particle counters provide a Sample Data Memory Buffer, an optional RH and Temp probe, and is the industry's first to provide Power-over-Ethernet (PoE+) in a particle counter with an integrated vacuum pump. New features include Wi-Fi, AC power, ON/OFF button, Light Ring for visual alerts, output contacts for a Light Tower, and more. Some new features are patent pending.

Reliability, Accuracy & Support

The **CI-3100 Trident Series** of particle counters are engineered and manufactured with only the highest quality materials. This ensures a long product life-cycle, and up to a decade or more of reliable use. Moreover, we provide calibration support services for all our devices over their lifetime. Our reputation, and where we really excel, is providing highly accurate particle counts over time. Climet internal audits confirm that units returned for their interval calibration pass 99.5% of the time when the instrument is 10 years old or less. Users can subsequently expect a significant reduction in deviation reports/investigation when compared to other alternatives. Simply, Climet particle counters are designed, tested, and calibrated with very tight tolerances to exceed industry standards. Over a decade of count efficiency testing has demonstrated that a properly calibrated Climet particle counter produces good count efficiency, even after more than a decade of field operation!

Lowest Total Cost of Ownership

Not all particle counters are equal. The initial purchase price, cost of calibrations, cost of consumables, out-of-warranty repairs, and product life-cycle all factor into calculating the Total Cost of Ownership (TCO). Other intrinsic factors include assurance, reliability, accuracy, application support, and superior customer service. These make Climet the unsurpassed leader in the manufacture of particle counters for cleanroom monitoring, validation, and certification.

Custom Engineered Solutions

If you have a specific technical requirement, please contact us. We specialize in customizing our products to fit your needs.

Applications Include:

Cleanroom Monitoring & Validation
Medical Device Manufacturing
Pharmaceutical Manufacturing
Hospitals
Food & Beverage Processing
Aerospace Assembly
Pharmaceutical Compounding
Cosmetic Manufacturing

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CI-3100 Trident Series Specifications

Criteria	Description
Particle Channel Sizes:	*0.5 and 5.0 microns on 2-channels* *(please contact us for other size requirements and custom configurations)*
Flow Rate & Control:	1 CFM Electronic, automatic closed loop with alarm
Concentration Limit:	1.0 X 10^6 Particles/FT^3 (35.3 X 10^6 Particles/m^3)
Resolution:	Exceeds requirements of ISO 21501-4 of 15% (4-10% typical)
Count Efficiency:	50% Count Efficiency is ±10% , exceeds ISO 21501-4 of ±20% @ 0.5μm 100% Count Efficiency @ ±10% @ 0.8$m\mu$ per ISO 21501-4
Max. False Count:	1.00 CFM: 7.1 / CM (95% UCL) per ISO 21501-4 (Standard)
Optics:	Rhodium plated wide-scatter metal ellipsoidal mirror Optimal reduction in the coefficient of thermal expansion, which mitigates short-term thermal drift. Allows the capture of more light scatter, resulting in hyper-accuracy and precision of measurement. Extreme durability and resistance to contamination, corrosion, decomposition, and impact damage
Laser Diode:	Optimal balance of long life, stability, and resolution for added accuracy (12-14 years MTBF)
Cleaning:	Compatible with common cleaning and sterilization procedures, including VHP (no warranty reduction)
Vacuum Source:	Power efficient internal vacuum source
RH/Temp output:	6-pin connector (Compatible with Climet RH/Temp probe)
Metadata	Date and time stamp, sample counts, laser status, flow status, temp, RH, serial #, calibration due date, network status, error summary, record number, CRC32 Checksum, and more.
Memory:	10,080 Samples (7 days of storage), date and time stamped
Indicators & Alarms	**LED front panel indicators**: power, sample, alarm, count, flow status, laser status, network ftp, network time server, service required warning, and network link. **LED rear panel indicators**: terminal program in use. **Light Ring**: Green (sample in operation), Red (in alarm or warning state). Unit will alarm if there is a laser, flow, or any other alarm condition. **Audible Alarms**: 100dB audible alarm is triggered when the user programmed alert or action levels are exceeded; when the humidity and temperature limits are exceeded if using an RH/Temp probe. Unit will also alarm if there is a laser, flow, or any other alarm. **External Alarm Tower**: In a typical configuration, action or alert levels are monitored by the LIMS which triggers an alarm tower if exceeded. Also, the user can program the counter with alert or action levels that will trigger a rear dry contact (normally open or closed) - - for this, please ask for a Climet alarm tower. LIMS system can query the unit for alarm status.
Remote Unit Control	Webpage, Ethernet Modbus, serial, Ethernet, FTP, Wi-Fi
Internal HEPA Filtered Exhaust	YES, tested to ISO Class 3 limits
Accessories Included	Zero count filter, IQ/OQ Docs, manual, and external exhaust fitting
Other Available Accessories	Stainless steel isokinetic probes, tubing, probe stands, high pressure diffusers, software, validation documentation, customized cabling, power injector, RH/Temp probe, alarm tower and other accessories sold separately.

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Power Options	Options for Power-over-Ethernet * (PoE+), 24 VDC, or universal wall power *** Refer to Application Note 240312-A in the Climet TechLibrary (www.climet.com)**
Dimensions:	6.125" (W) x 4" (H) x 11.125" (D) (15.558 cm x 10.16 cm x 28.258 cm)
Environmental	**Operating temperature:** 32 - 100^{o} F, 0 - 37.8^{o} C 0-95% relative humidity, non-condensing
Compliance	ISO 21501-4; ISO 14644-1/2; EU GMP, Annex 1; FS-209E; JIS 9921; PIC/S, and FDA 21 CFR Part 11 with software
LIMS/SCADA/MODA Compatible	The instrument operates without middleware and is compatible with all popular LIMS systems. Lonzo MODA, N

PART NUMBER CONFIGURATION

CI-3100 Trident - _____ - _____ - _____ - _____

Interface Voltage Size Sensitivity Flow Rate

INTERFACE OPTIONS

24 = AC Power with Ethernet Networking
25 = Power over Ethernet (PoE+)
26 = AC Power with Wi-Fi
27 = 24 VDC with Ethernet Networking
28 = 24 VDC with Wi-Fi

VOLTAGE OPTIONS

0 = POE **1 = 115 VAC USA** **2 = 230 VAC EURO**
3 = 230 VAC UK **4 = 24 VDC**

SIZE SENSITIVITY OPTIONS

2* = 0.5 / 5.0 µm (Compatible with Vaisala RH/Temp Probe)

FLOW RATE OPTIONS

6* = 1.00 CFM with HEPA Filtered External Exhaust

*** = most popular versions.**

Custom Configurations Upon Request

Recommended calibration frequency, every 12 months with monodisperse polystyrene spheres traceable to NIST.

We value the opportunity to work with you. For further technical information and questions, please contact us.

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