

LiQuilaz[®] II S Series

Particle Counting Spectrometer for Liquids



The LiQuilaz[®] II S series optical particle counters are volumetric particle counters with a variety of sizing sensitivities as low as 0.2 μm . They provide high-precision analysis for most process chemicals, including hydrofluoric acid and hot corrosive chemicals up to 306 °F (150 °C).

LiQuilaz II sensors provide the same levels of accuracy, reliability and repeatability that customers have trusted for many years. LiQuilaz II sensors feature both RS-485 and Ethernet network communications. The new Ethernet capability increases product flexibility and makes installation significantly easier.

Volumetric particle counters offer the highest precision possible by measuring 100% sample volumes (up to 80 ml/min) so that short sampling intervals can be utilized without sacrificing statistical significance.

BENEFITS

Yield Improvement

- Real-time characterization and analysis of particle contamination allows for immediate response to contamination
- Volumetric measurements provide greater accuracy for tighter process control
- Optional software makes process control easy with alarm settings, status conditions, sampler setup, and online help

Versatile

- Supports a wide range of applications and fluids
- In-line and batch sampling capabilities
- Works with compression or syringe samplers
- Compatible with various tubing standards
- RS-485 and Ethernet networking compatibility

User-Friendly

- Small footprint for easy placement anywhere in the process
- Flexible software provides numerous viewing options for real-time or retrieved data
- User-selectable particle size thresholds

FEATURES

- 0.2 -3.0 μm size range
- 80 \pm 10% ml/min flow rate (50 ml/min \pm 10% for S02)
- Compatible with a wide range of process chemicals
- Small footprint for easy placement anywhere in the process
- User-selected particle size thresholds

APPLICATIONS

- Effervescent chemical measurements using compression sampling
- Chemical quality assurance
- Process bath monitoring
- DI water monitoring
- Chemical delivery systems
- Photoresist monitoring

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Specifications

	LiQuilaz II S02	LiQuilaz II S03	LiQuilaz II S05
Size range	0.2 – 2.0 µm	0.3 – 3.0 µm	0.5 – 20.0 µm
Channels	User adjustable from 1 to 15		
Flow rate	50 ± 10% ml/min	80 ± 10% ml/min	80 ± 10% ml/min
	20 ± 10% mL/min available for all S series models for sampler applications		
Sample volume	Volumetric 50 ml/min (100%)	Volumetric 80 ml/min (100%)	Volumetric 80 ml/min (100%)
Maximum concentration*	10,000 particles/ml		
Sample temperature	32 – 302 °F (0 – 150 °C)		
Zero count	< 25 counts/liter	< 15 counts/liter	< 15 counts/liter
Pressure range	0 - 100 psi		
Laser source	Laser diode		
Wetted surface materials	Sapphire, Teflon [®] , Kalrez [®] 4079 and Kel-F [®]		
Dimensions (l, w, h)	12.75 x 4.25 x 4.5 in (32.4 x 10.8 x 11.4 cm)		
Weight	6.1 lb (2.8 kg)		
Electrical rating	100 - 240 V, 50/60 Hz, 0.75 A		
Communication modes	5-wire, RS-485, DE9 connectors, PMS serial communications protocol, 10/100BaseT Ethernet, PMS Ethernet Protocol, Modbus TCP		
Calibration	Materials used are traceable to U.S. National Institute of Standards and Technology (NIST) and/or Japanese Institute of Standards (JIS)		
Environment	Temperature: 50 – 95 °F (10 – 35 °C); Humidity: non-condensing		

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

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Teflon[®] is a registered trademark of The Chemours Company, FC, LLC.

Kalrez[®] is a registered trademark of DuPont.

Kel-F[®] is a registered trademark of 3M.

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

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