

# Liquilaz® II S Series

Particle Counting Spectrometer for Liquids

*High-precision analysis for most process chemicals*

*100% sample volumes (up to 80 ml/min)*

*Without measurement there is no control®*

The LiQuilaz® II S series optical particle counters are volumetric particle counters with a variety of sizing sensitivities as low as 0.2  $\mu\text{m}$ . 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  $\mu\text{m}$  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

MODEL	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
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		
Zero count	≤ 25 counts/liter	≤ 15 counts/liter	≤ 15 counts/liter
Sample volume	Volumetric 50 ml/min (100%)	Volumetric 80 ml/min (100%)	Volumetric 80 ml/min (100%)
Maximum concentration <sup>1</sup>	10,000 particles/ml		
Channels	User adjustable from 1 to 15		
Sample temperature	32 – 302 °F (0 – 150 °C)		
Pressure range	0 - 100 psi		
Wetted surface materials	Sapphire, Teflon®, Kalrez® 4079 and Kel-F®		
Communications	Ethernet (10/100BaseT), Modbus TCP, PMS Ethernet Protocol, 5-wire, RS-485, DE9 connectors, PMS serial communications protocol		
Operating environment	Temperature: 10 - 35 °C (50 - 95 °F) Humidity: non-condensing		
External 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)		
Power	AC: 100 - 240 VAC 50/60Hz, 0.75 A DC: 24 VDC ± 10% AC input voltage fluctuation shall not exceed +/-10%		
Laser source	Laser diode		
Calibration	Materials used are traceable to U.S. National Institute of Standards and Technology (NIST) and/or Japanese Institute of Standards (JIS)		

1 Less than 10% coincidence loss at maximum recommended concentration.

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