

**LISST-200X**

**Submersible Particle**

**Size Analyzer**

# LISST-200X

## Next Generation Submersible Particle Size Analyzer

### SPECIFICATIONS (subject to change without notice)

#### Technology

- Small-angle forward scattering
- 32-ring custom photodiode Ring Detector + 4 large angle detectors
- 25 mm optical path

#### Parameters measured

- Particle Size Distribution from 1.0-500 $\mu$ m in 36 size ranges
- Depth (600 m max depth @ 0.01 m resolution)
- Temperature @ 0.01 deg C resolution
- Optical transmission @ 0.1% resolution
- Volume Concentration @ 0.1 $\mu$ l/l resolution
- Volume Scattering Function from 0.36 to 13.8 degrees in water
- Analog output of Mean Size and Volume Concentration

#### Operating Concentration range

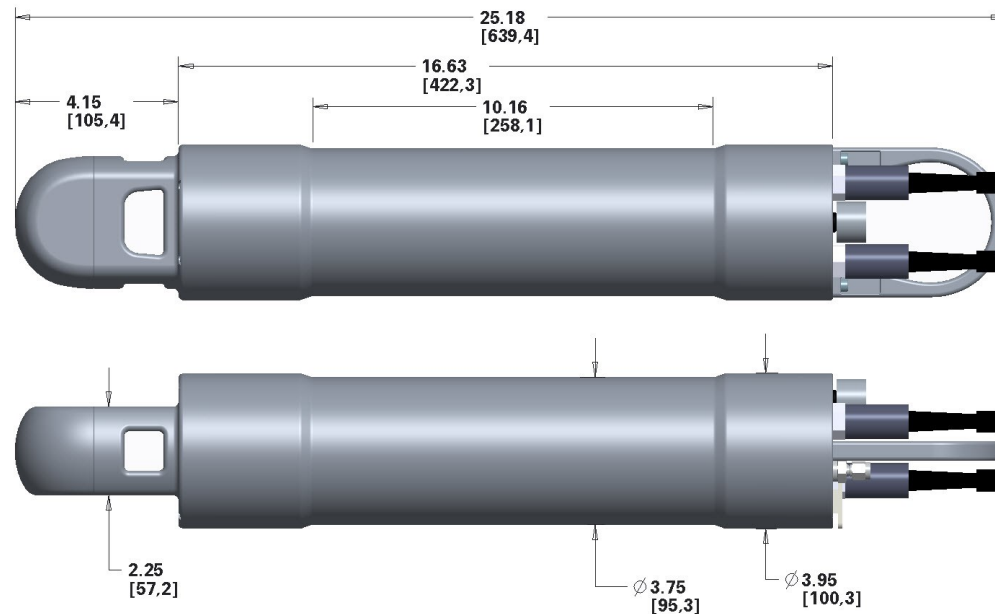
- Optical transmission from 0.3-0.99 (30-99%)
- Concentration from ~ 0.5-700 mg/l (grain-size dependent)

#### Mechanical and electrical

- Dimensions 10.03 cm (3.95") dia., 63.9 cm (25.2") long
- Weight: 5.4 kg (11.8 lbs) in air, 1.7 kg (3.8 lbs) in water
- 600 meter depth rating
- External power input: 12VDC nominal, 8-24VDC
- Sampling rate: Up to 1 Hz
- Current drain at 12V: 100mA Sampling, 8 mA between samples
- Data storage: 1 GB (~12,500,000 size distributions)

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The LISST-200X replaces our old workhorse: the LISST-100X laser - diffraction particle size analyzer. It remains the best instrument for measuring particle size and concentration in rivers, streams, ports, harbors, coasts and oceans whether for biological, sediment transport, or environmental monitoring needs. For marine optics applications it provides the small-angle Volume Scattering Function.

20 years of LISST-100X experience combined with feedback from users has led us to create this Smaller, Deeper, and Smarter Particle Size Analyzer.

The LISST-200X is significantly smaller than the LISST-100X but it has also been

made stronger and is now able to make measurements at twice the depth: up to 600 meters. Improved optics cover the size range 1-500 microns in 36 size classes (formerly requiring Type-B and Type-C instruments). The optics are more robust and have improved rejection of ambient light. A superior depth sensor and faster temperature sensor improve profiling data. The 25mm optical path allows a wider working range of particle concentrations Auxiliary information, such as calibrations and background files, are stored in the saved data file. All information needed to process the data are included in this single file, therefore alleviating the need for tracking multiple files.

The new LISST-200X also outputs the Mean Size and Total Concentration as analog voltages while simultaneously storing the full size distribution internally for later downloading. This allows real-time monitoring of summary data during profiles via existing CTD interfaces.

A full range of accessories are available for the LISST-200X including small and large External Battery Packs, Mixing Chamber, Flow Through Chamber, BioBlock Anti-Fouling Shutter, Settling Column, Path Reduction Modules, and towed and AUV configurations.

This next generation particle sizer is simply smaller, deeper and smarter.