

LISST-GLIDER

PARTICLE SIZE ANALYZER FOR GLIDERS

- **Particle Size Distribution**
- **Volume Concentration**
 - **Beam Attenuation**
 - **Volume Scattering**

The LISST-Glider is a version of the LISST-200X designed for glider integration. The LISST-Glider is available in a version for Teledyne Webb Research's SLOCUM G2 and G3 gliders and another for Kongsberg's Seaglider C2. The LISST-Glider must be purchased from either Teledyne Webb Research or Kongsberg Underwater Technology.



FEATURES

- Small angle forward scattering laser diffraction technology
- Measures particle size, concentration, beam attenuation, volume scattering function (VSF)
- Self-contained with internal programmable datalogger for autonomous data collection
- Output of mean particle size and volume concentration to internal glider control system

SPECIFICATIONS (subject to change without notice)

Parameters Measured

- Particle size distribution in 36 size ranges
- Optical transmission @ 0.1 % resolution
- Volume concentration @ 0.1 $\mu\text{L}\cdot\text{L}^{-1}$ resolution
- VSF at 36 angles

Measurement Ranges

- Particle size distribution from 1 μm to 500 μm
- Optical transmission from 0.3 to 0.99 (30 % to 99 %)
- Concentration from $\sim 0.5 \text{ mg}\cdot\text{L}^{-1}$ to $700 \text{ mg}\cdot\text{L}^{-1}$ (particle-size dependent)
- VSF from 0.036° to 13.8° in water

Technology

- Small-angle forward laser light scattering
- 670 nm laser diode
- 32-ring custom photodiode Ring detector + 4 large angle detectors
- 25 mm optical path

Mechanical and Electrical

- Dimensions: Depending on glider
- Weight: Depending on glider
- Depth rating: 600 m
- External power input: 12 VDC nominal, 8 VDC - 24 VDC
- Current drain @ 12 V: 100 mA sampling, 8 mA between samples
- Sampling rate: Up to 1 Hz
- Data storage: 1 GB ($\sim 12,000,000$ measurements; ~ 140 days @ 1 Hz)