

A Higher Level of Performance



Data Sheet

Optio S300 Liquid Laser Level Series



Fluid Level Measurement



For more information, please visit >
www.hawkmeasure.com

Overview

OptioLaser S300 Liquid Laser Level Series



Principle of Operation

The OptioLaser S300 Liquid Lasers are user configurable, allowing optimal performance of your specific application. Using an infrared, low-gain GaAs laser diode, light energy of 905 nm. travels to the surface of any liquid and is reflected back. This time-of-flight (the time the laser pulse took to travel to the liquid and back) is then calculated into a distance.

The low-gain diode allows for accurate measurement of even highly reflective, clear liquids- regardless of the dielectric properties. The narrow beam divergence of 3 milliradians (equal to 3ft at 1000ft) allows for easy installation, even near walls or thru narrow passages.

Typical Uses

- Tank Level
- Water Treatment Plant
- Food & Beverage Facilities
- Chemical Processing plant
- Pharmaceutical

Primary Areas of Application

- Water
- Waste water
- Chemicals
- Processing
- Food
- Beverage

Function

The OptioLaser S300 Laser can be used for the detection of all types of liquids, regardless of their dielectric properties. This laser can accurately and reliably measure highly reflective liquids, clear liquids and even turbulence liquids. The OptioLaser, due to its narrow beam divergence, can be used to measure through grates and narrow passages, and even next to flat walls.

Features

- Non-contact measurements without frequent calibrations
- Easily measures all liquids
- Measuring range of 200m (656ft); 50m (164ft) for clear liquids
- Ruggedized Enclosure
- Aligns the transmitter/receiver lenses with laser pointer
- Collects level data as often as you need it
- Optional silo / tank kit
- Measures within narrow openings, even all walls
- Output: 4-20, 4-20 HART, RS232, trigger
- Simple set up

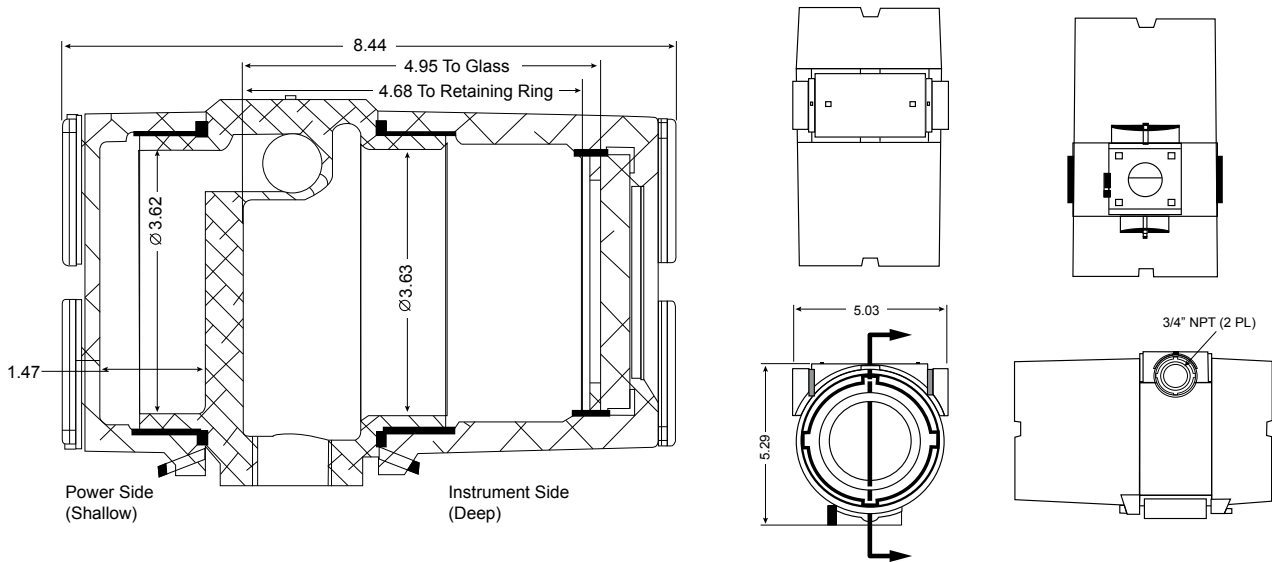
Dimensions and Options

OptioLaser S300 Liquid Laser



OptioLaser S300 Liquid Level

The OptioLaser utilizes a visible alignment laser and offers serial RS232 and 4-20mA outputs, the most commonly used data input/output for industrial applications. In addition to a 4-20mA output, the OptioLaser includes HART capability, allowing the user freedom to communicate with the laser anywhere along the 4-20 loop.



Options

The OptioLaser S300 has a selection of options for use in tanks / silos.



Tank Adapter (Air Purge Ready)



4" Flange



Swivel Mount



Diffuser lens for clear liquids



Spanner Wrench
(necessary for tightening Tank Adapter)



S200
12VDC Power Communication Cable

Description	Part Number	Description	Part Number
S300 series	OL70068XX	Tank Adapter	OL7035146
AC to DC Power Comm. Cable	OL7054691	Wall mount display (optional)	OLPD620006H7
Diffuser Lens	OL7024972	Serial to USB adapter	OLXXXX
Swivel Mount	OL3004959	Spanner Wrench	OL9034501
4 inch Flange	OL3004960		
Calibrator/programmer (optional)	OLTRT438008		

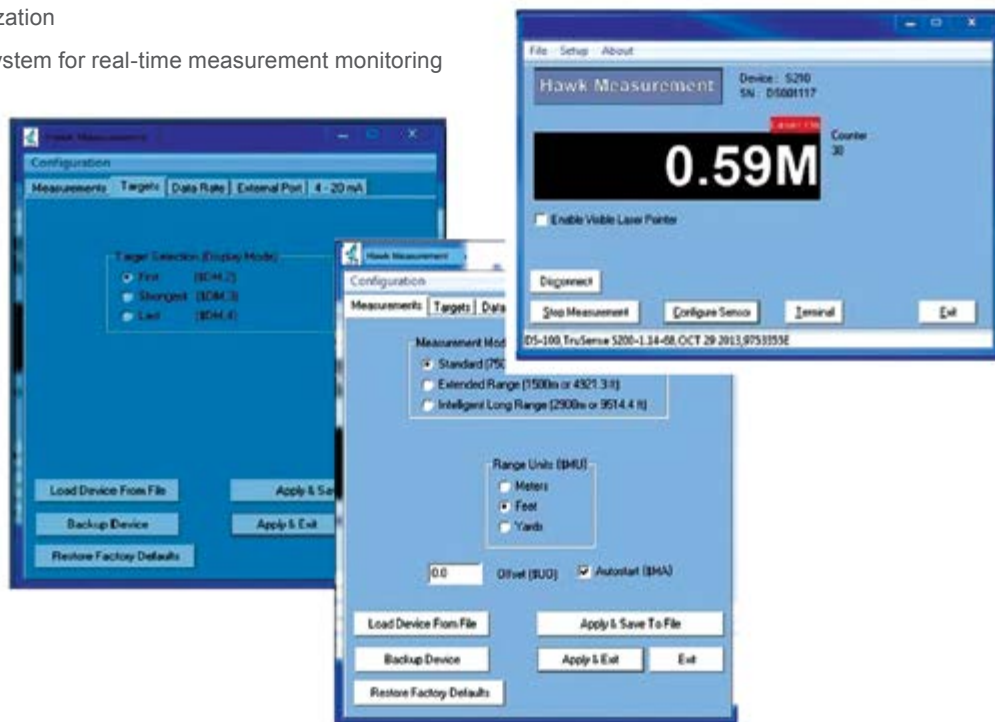
Key Advantages / Specifications

OptioLaser S300 Liquid Laser



Simply configure the parameters for your application via RS232 or HART

- Select the target mode that best fits your liquid application
- Adjust the update rate for process optimization
- Integrate the raw data into your control system for real-time measurement monitoring
- Easily measures difficult liquids such as slurries, oils, agitated liquids, even clear water
- Operates without the need of any calibration
- Unaffected by background noise and vapor pressure
- Handles low dielectric substances and acoustically absorbing materials
- The OptioLaser S300 laser is perfect for applications with obstacles, near walls, even measuring through narrow passages



Performance

- Min range: 1.5ft (46cm)
- Max range: 656 ft (200m); 164ft (50m) for clear liquids
- Accuracy: 1.6" (4cm)
- Data output rate: <1 Hz up to 14Hz, depending on target
- Target Modes: first, strongest, last

Optical and Electrical

- Wavelength: 905 nm (infrared)
- Divergence: 3 mrad
equal to 1ft (30cm) beam dia. at 328ft (100m)
- I/O: 4-20, 4-20 HART, RS232, Trigger, alignment laser
- Input power: 12VDC recommended (12-24 VDC)
- Current draw: measuring = 150mA, Standby - 40mA

Physical

- Dimensions: 5" (12.7cm) dia. X 10" (25.4cm) length
- Conduit fitting: 3/4" NPT
- Weight: 8lbs (3.62kg)

Environmental

- Eye safety:
Class 1, 7mm (FDA, CFR21), Class 1 m (IEC 60825 - 1:2001)
- Shock / Vibration: ML-STD-810
- Moisture: IP54
- Operating temperature: -20°F to 140°F (-28°C to 50°C)

Approvals

- Type 4x
- IP66

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Additional product warranty and application guarantees upon request.
Technical data subject to change without notice.

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