Data Sheet

OptioLaser S200
Laser Sensor

For more information, please visit >
www.hawkmeasure.com
Principle of Operation

The OptioLaser S200 series offers an optional visible alignment laser, RS232 and 4-20mA outputs. It uses an infrared semiconductor, GaAs laser diode. A light energy wavelength of approximately 905 nanometers, with a beam divergence of 3 milliradians (equal to 3ft at 1000ft), travels to the material being measured.

Any solid or liquid target in its path, will reflect back a certain percentage of the emitted energy. The OptioLaser calculates the distance, based on the transit time the laser pulse travels to the material and back.

Typical Uses

• Blocked chute detection
• Stockpile Monitoring
• Tank / Silo Level
• Collision Detection
• Truck / Machine Detection

Function

The OptioLaser S200 can be used for blockage detection, barrier detection, machine detection and stock pile monitoring and point level measurement.

Primary Areas of Application

| • Asphalt         | • Packaging        |
| • Brewing         | • Paint            |
| • Cement          | • Paper            |
| • Chemical        | • Pharmaceutical   |
| • Dairy           | • Plastics         |
| • Edible oil      | • Power Generation |
| • Fertilizer      | • Refining         |
| • Food & Beverage | • Semiconductor    |
| • Glass           | • Sugar            |
| • Mining & Metals | • Textile          |
| • Oil & Gas       | • Water & Wastewater |

Features

• Non-Contact measurements without frequent calibrations
• Easily identifies difficult targets
• Measuring range up to 1,600m (5,249ft) for natural targets
• Ruggedized Enclosure
• Targeting of the laser with optional alignment laser
• Collects level data as often as you need it

• Optional silo / Tank kit
• Measures long-distance targets, through narrow openings and from sharp angles
• Simple set up
• Output options: 4-20, 4-20 HART, RS232.
Dimensions and Options

OptioLaser S200 Laser Sensor

The OptioLaser S200 series offers a visible alignment laser and optional RS232 and 4-20mA outputs. This output format is the most commonly used data input/output for industrial applications. In addition to a 4-20mA output, the OptioLaser S200 series offers HART capability, allowing the user to program / communicate with the laser anywhere along the 4-20 mA signal loop.

Options

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

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**Key Advantages / Specifications**

**Optio Laser Level Series**

**OptioLaser S200 Laser Sensor**

**Overview**

- Simply configure the parameters for your application via RS232 or HART
- Select the target mode that best fits your application
- Adjust the update rate for ideal process management
- Integrate the raw data into your control system for real-time measurement monitoring
- Easily identifies difficult targets such as non-reflective materials and liquids
- Operates without the need of any calibration
- Unaffected by background noise and vapor pressure
- Handles low dielectric substances and acoustically absorbing materials
- The OptioLaser S200 is perfect for applications where a compact size and light weight is a must.

**Performance**

- Min range: 1.5ft (46cm)
- Max range: 5,429ft (1,600m), non-reflective target
- Accuracy: +/- 1.6” (4cm)
- Data output rate: <1 Hz up to 14Hz, depending on target
- Target Modes: First, strongest, last, first-second, third, last-second to last, first-strongest-last, first-second-third-strongest-last.

**Optical and Electrical**

- Wavelength: 905 nm (Infrared)
- Divergence: 3 mrad equal to 1ft (30cm) beam diameter at 328ft (100 m)
- I/O: 4-20, 4-20 HART, RS232 with 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 oC to 50°C).

**Approvals**

- Type 4x
- IP66

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**Hawk Measurement Systems (Head Office)**

15 - 17 Maurice Court
Nunawading VIC 3131, AUSTRALIA

Phone: +61 3 9873 4750
Fax: +61 3 9873 4538
info@hawk.com.au

For more information and global representatives: www.hawkmeasure.com

**Hawk Measurement**

90 Glenn Street
Suite 100B, Lawrence, MA 01843, USA

Phone: +1 888 HAWKLEVEL (1-888-429-5538)
Phone: +1 978 304 3000  I  Fax: +1 978 304 1462
info@hawkmeasure.com

Represented by:

**Additional product warranty and application guarantees upon request.**

**Technical data subject to change without notice.**