

A Higher Level of Performance



Data Sheet

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## OptioLaser L100

Level, Distance & Position Measurement  
of Solids and Liquids



For more information, please visit >  
[www.hawkmeasurement.com](http://www.hawkmeasurement.com)

# Overview

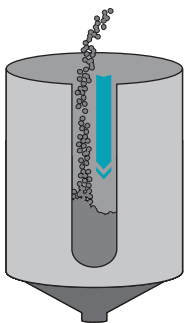
## OptioLaser L100



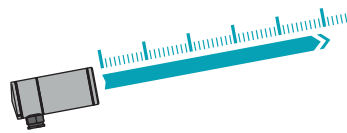
### Principle of Operation

The OptioLaser L100 is a non-contact laser sensor used to measure the distance to solid and liquid surfaces, slurries or murky water. Solid surfaces can be anything from a metal plate on the side of an overhead crane, to the top of material stored in a silo. With an easy to use menu system, the OptioLaser can be configured for either distance or level measurement and the high accuracy, long range and fast update rate make this the ideal sensor for many different applications.

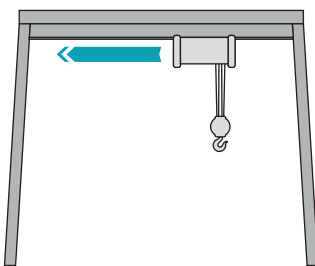
### Applications



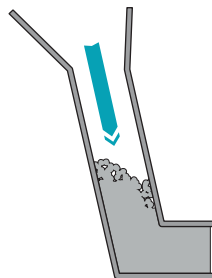
Level control



Distance measurement



Positioning



Blockage detection

### Technical Specifications

Performance data		
Sensing range	0.3 ... 50 m (0.98' ... 164')	
Resolution	10 mm (0.39")	
Accuracy	< 0.1% of full range at 20°C	
Update rate	5 readings per second	
Technical data		
Power supply	24 V dc nominal (12 ... 28 V dc)	
Current consumption	100 mA nominal	
Output		
Analog	4 ... 20 mA NAMUR compliant self-powered & non-isolated. 2 x Relays (N/O), 42 V dc at 1.3 A.	
Communication	USB at 115200 baud 8-N-1	
Mechanical data		
Diameter	L100 : 63.5 mm (2.36")	L100/DT: 140 mm (5.51")
Length	L100 : 144 mm (5.51")	L100/DT: 110 mm (4.33")
Weight	L100 : 1.25 kg (2.76 lb)	L100/DT: 0.83 kg (1.83 lb)
Connection	Flange accessory (L100 /DT) with 4 Ø 8.5 cm holes on 120 PCD	
Housing material	303 Stainless steel	
Optical data		
Optical aperture	60 mm (2.36")	
Beam divergence	< 1° to half power points	
Lens material	Impact resistant acrylic	
Laser safety classification	Class 1M CAUTION: Do not view laser directly with optical instruments	
Environmental data		
Operating temperature	-20°C ... +60°C	
Pressure	Atmospheric	
Enclosure rating	IP66	

### Features

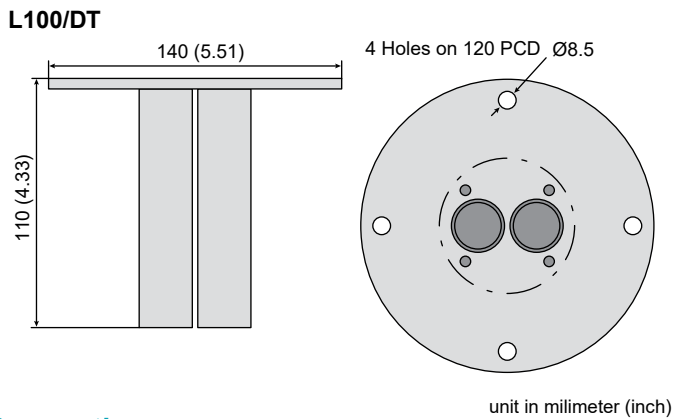
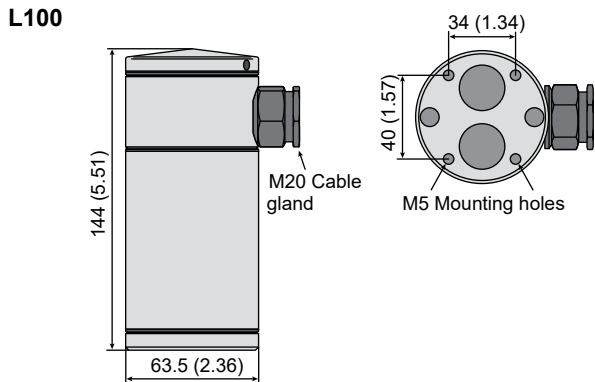
- Non-contact measurement with laser technology
- 303 Stainless steel housing
- Measurement range up to 50 meters (164 feet)
- Continuous measurement with a resolution of 10 mm
- NAMUR compliant 4...20 mA output
- 2 Normally open relay outputs
- Easy conguration via USB).

# Overview

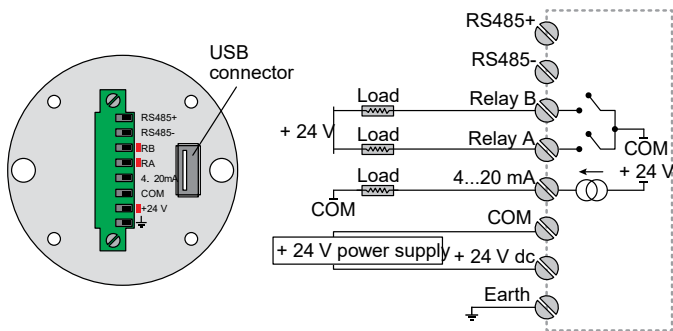
OptioLaser L100



## Dimension Drawings



## Connections



## OptioLaser L100/L200 Laser Transmitter Spare Parts

### Model

**LXDT** Dust Tube for L100/L200 OptioLaser Laser Level Transmitter

**LXHP** Handheld Programmer for L100/L200 OptioLaser Level Transmitter

**LXSB** Swivel Bracket for L100/L200 OptioLaser Laser Level Transmitter

## Software Menus

- Open Laser Terminal Software and connect.
- Press the <CORRESPONDING> keyboard key to access the settings menu.
- Press the keyboard key to select the required menu item.
- To restart measurements, press the <SPACE> keyboard key.

Menu	Selection	Default value
<A> 4 ... 20 mA settings	<B> 4 mA	25.00 m
	<C> 20 mA	0.60 m
	<D> Fail safe current	> 21.0 mA
	<E> Test	21.50 mA
<F> Relay settings	<G> Relay A switch point 1	1.00 m
	<H> Relay A switch point 2	2.00 m
	<I> Relay A mode	near => closed far => open
	<J> Relay B switch point 1	1.00 m
	<K> Relay B switch point 2	2.00 m
	<L> Relay B mode	near => closed far => open
<N> System settings	<M> Relay test	A:closed B:closed
	<O> Measuring units	meters
	<P> Zero distance offset	0.00 m
	<Q> Lost signal timeout	4.0 sec
	<R> Smoothing filter	ON
	<S> Filling rate filter	OFF
	<U> Moving obstacle filter	ON
<V> Obstacle filter size	16 results	

## OptioLaser L100 Laser Transmitter for Level

### Model

**L100** OptioLaser Laser Level Transmitter (up to 164ft)

**L200** OptioLaser Laser Level Transmitter (up to 328ft)

**Dust Tube + USB Programming Cable**  
(Required for every OptioLaser L100/L200)

DT Dust Tube, Stainless Steel

**Accessories - Handheld Programmer**  
(Optional)

HP Handheld Programmer

XX Not Required

**Accessories - Swivel Bracket**  
(Optional)

SB Swivel Bracket

XX Not Required

**L100 DT HP SB**

## Contact

OptioLaser L100



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

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