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More Precision.

optoNCDT ILR2250-100 // Laser distance sensor for industrial applications



High-performance laser distance sensor
for industrial applications

optoNCDT ILR2250-100



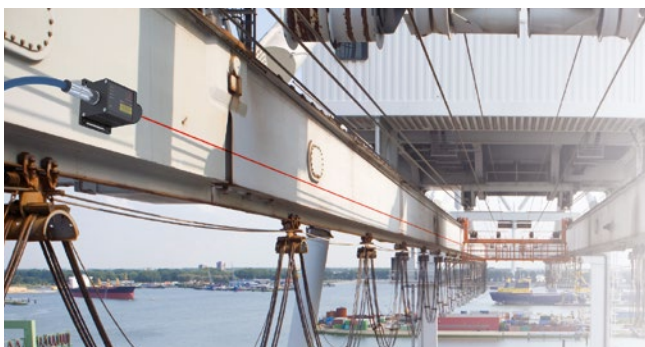
- Large measuring range up to 100 m (150 m with reflector)
- Ideal for OEM serial integration
- Extremely stable measurement
- Highest signal stability on numerous surfaces
- Compact & lightweight design

With the optoNCDT ILR2250-100, Micro-Epsilon presents a new powerful laser distance sensor. The sensor is designed for operation with or without reflector film, which is used depending on the distance and ambient conditions. The sensor measures large distances up to 100 m without contact and provides best results even on challenging (dark, structured or weakly reflecting) surfaces. The measuring range can be extended up to 150 m by attaching a reflector film to the measuring object.

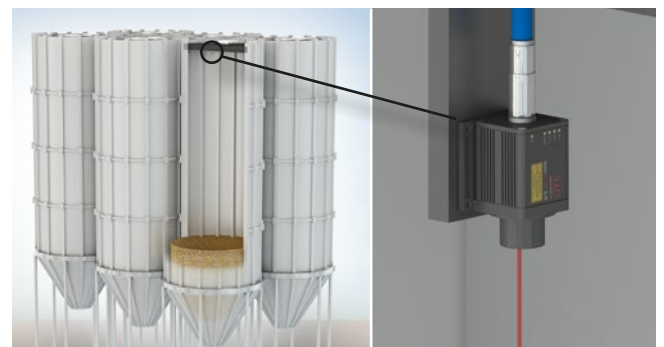
Thanks to the integrated AUTO measurement mode, precise and reliable measurements can be made even on dark, partially reflecting and distant targets.

A simple and fast alignment of the sensor is made possible by the integrated mounting plate with 4 threaded pins.

The ILR2250-100 laser distance sensors provide reliable results even under harsh conditions. They are protected against dust and splashes of water thanks to the robust design in an IP65 certified die-cast aluminum housing. Compact size combined with low weight opens up new fields of application particularly in factory and plant automation, as well as in drone applications for distance measurement from the air.



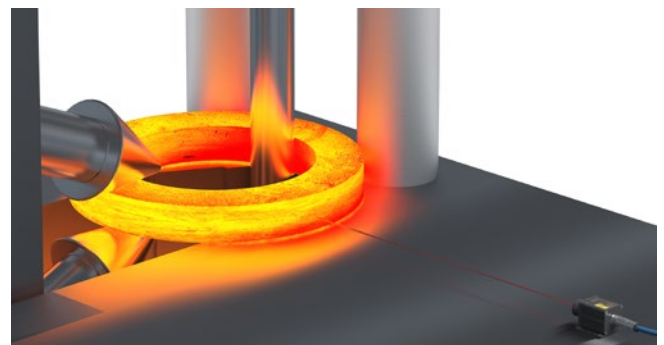
Position measurement on gantry cranes



Filling level measurement in silos



Acquisition of coil diameters



Diameter measurement of rings during rolling

Model		ILR2250-100	
Article number		7112015	
		Start of measuring range	End of measuring range
Measuring range ¹⁾	black 6%	0.05 m	30 m
	gray 40%	0.05 m	70 m
	white 80 %	0.05 m	100 m
	Reflector film ²⁾	35 m	150 m
Measuring rate		20 Hz	
Resolution		0.1 mm	
Linearity		< ±0.5 mm ³⁾	
Repeatability ⁴⁾		< 300 μm	
Temperature compensation		-10 ... +50 °C	
Light source		Semiconductor laser < 1 mW, 655 nm (red)	
Laser safety class		Class 2 in accordance with DIN-EN 60825-1 : 2015-07	
Permissible ambient light		50,000 lx	
Supply voltage		10 ... 30 VDC	
Power consumption		< 1.5 W (24 V)	
Signal input		Trigger	
Digital interface		RS422 / USB ⁵⁾	
Analog output		4 ... 20 mA (16 bit, freely scalable within the measuring range)	
Switching output		Q1 / Q2 / Q3 (configurable)	
Connection		Supply/Signal: M16 screw/plug connection 12-pin	
Mounting		Screw connection and adjustment on sensor bottom plate	
Temperature range	Storage	-25 ... +70 °C (non-condensing)	
	Operation	-10 ... +50 °C (non-condensing)	
Shock (DIN EN 60068-2-27)		15 g / 6 ms in 3 axes, in three directions, 1000 shocks each	
Vibration (DIN EN 60068-2-6)		15 g / 10 ... 500 Hz in 3 axes, 10 cycles each	
Protection class (DIN EN 60529)		IP65	
Material		Aluminum housing	
Weight		approx. 300 g	
Control and display elements		5x LEDs for power, signal strength and switching outputs	

The specified data apply for a consistent room temperature of 20 °C, sensor is continuously in operation. Measured on white, diffuse reflecting surface (reference ceramic)

¹⁾ Depending on target reflectance, ambient light influences and atmospheric conditions

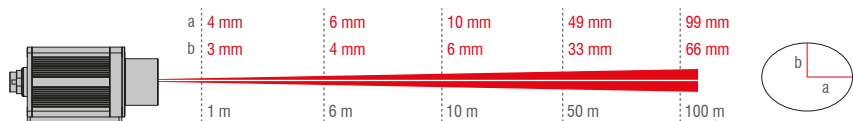
²⁾ ILR-RF210 reflector film 210 x 297 mm, art. 7966058

³⁾ Measured in the range of 0.05 ... 20 m; statistical spread 1σ; < ±1 mm at 2σ

⁴⁾ Measurement frequency of 20 Hz, moving average 10

⁵⁾ Connection via interface module (IF2001/USB or IF2004/USB)

Oval spot diameter ILR22xx-100



The ILR2250 sensor works with a semiconductor laser at a wavelength of 655 nm (visible/red). Laser power is <1 mW. The sensors fall within laser class 2. Devices of this laser class require no special safety precautions.

Dimensions:

