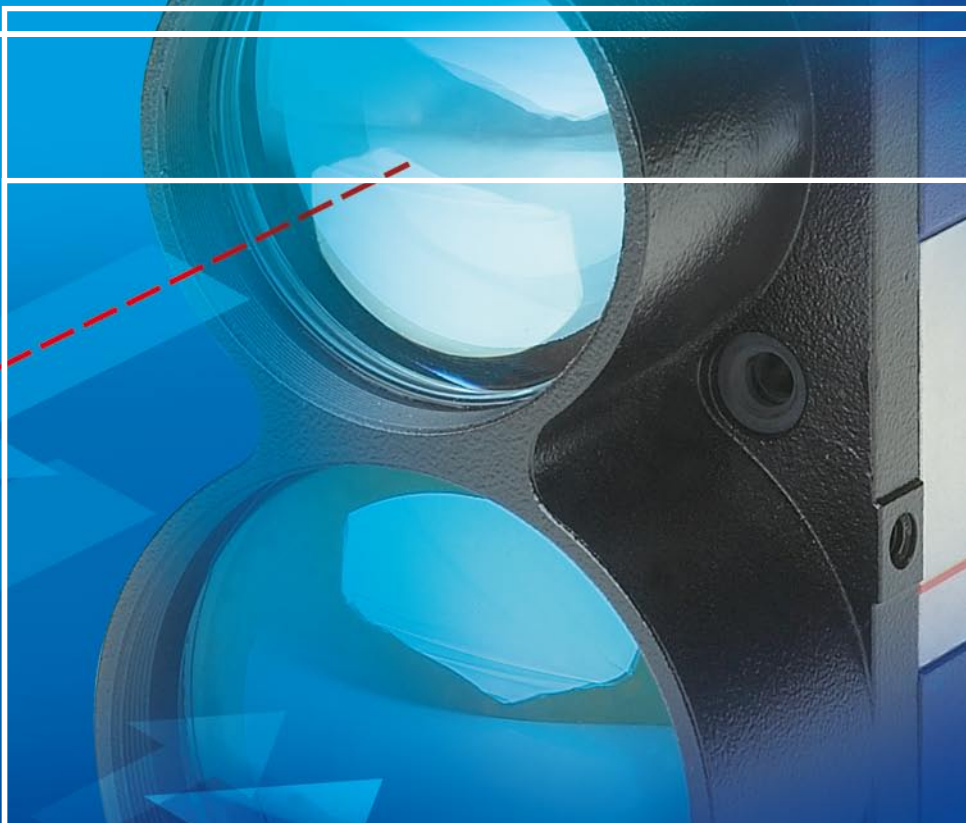




More Precision.

optoNCDT ILR Laser distance sensors




MICRO-EPSILON
optoNCDT

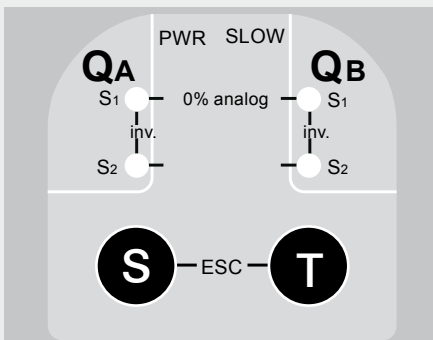
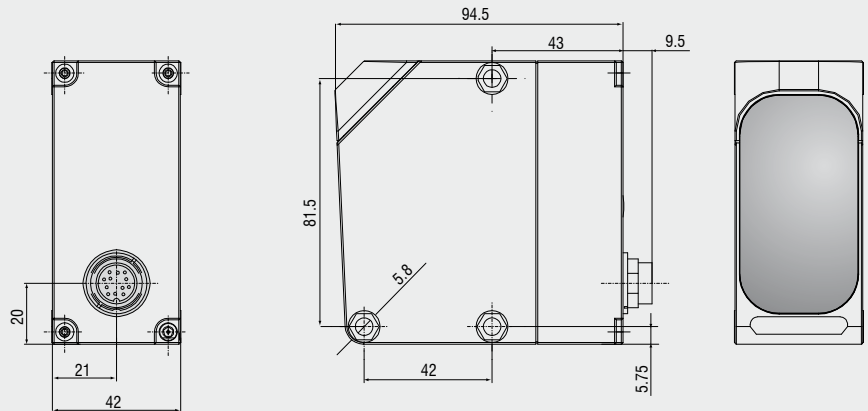


- Advantages**
- Measuring ranges up to 250m with reflector
 - Short response time
 - Excellent price-performance ratio
 - Fast sensor set configuration via touch keys

Distance sensors of the series optoNCDT 1021/1101/1151 are designed for non-contact measurements against objects up to 250m. These distance sensors need a special reflector on the measurement object with the sensor being matched to its reflective properties. The use of this reflector facilitates measurement distances of up to 250m with excellent accuracy.

Precise sensor alignment

The aiming laser can be turned on for accurate alignment of the sensor with the measurement object. With large measurement distances this laser is adjusted using the optical alignment aid available as an accessory. For mounting the sensor a mounting bracket and a fine adjuster are available as accessories, which simplify the precise alignment of the sensor to the measurement object.



ILR1021: Limit switch programming via touch keys


ILR1101/ILR1151: Limit switch programming via software

Model	ILR1021-30	ILR1101-50	ILR1151-250
Measuring range	0.2 ... 30m	0.5 ... 50m	0.5 ... 250m
	reflector required for operation		
Linearity	±60mm	±5mm ¹⁾	±3mm ¹⁾
Resolution	1 ... 5mm	0.1 or 0.125mm	
Repeatability	±5 / 10mm ²⁾	±4mm	±2mm
Response time	65 / 30ms ²⁾	12ms	
Laser class	measuring laser sighting laser	IR 905 nm, laser class 1	IR 900 nm, laser class 1 red 650 nm, laser class 2
Operation temperature	-10° ... +50° C (-20° ... +50° C in continuous operation)		
Storage temperature	-30° ... +75° C		
Limit outputs	QA / QB (max. 100 mA)		
Switching points	free adjustable (teach in)	adjustable in 1-mm-steps	
Switching hysteresis	30mm	min. 20mm (adjustable)	min. 10mm (adjustable)
Plausibility output	-	QP (max. 50mA)	
Service output	-	QS (max. 50mA)	
Serial interface	-	RS422 (2.9ms at 57.6kBaud) SSI - compatible (GRAY / BINÄR adjustable) (SSI Zyklus 80 µs)	
Bus interface	-	Profibus or DeviceNet via respective gateway (accessory)	
Analogue output	4 ... 20 mA	-	-
Temperature stability	<1.2mm / °C	<0.5mm / °C	<±5mm absolut
Supply	18 - 30 VDC		
Max. consumption	<3W at 24V		
Connection	5-pin connector M12	12-pin connector M16	
Protection class	IP 67		
Material (housing)	ABS shock resistant		
Vibration	EN 60947-5-2	10 - 55 Hz, amplitude 1.5mm, period 5 min. at resonant frequency or 55 Hz, stress time 30 min. per axis	
Shock	EN 60947-5-2	acceleration 30 g, pulse duration 11 ms, half sinusoid, 3 shocks/axis	
Weight	appr. 200 g	appr. 230 g	
Accessoires	page 16 - 17		

All data regarding accuracy and distance are based on the specified surface at constant ambient conditions and with a minimum operating time of 15 minutes.

¹⁾ min. distance 2m

²⁾ slow/fast


Operating Mode Laser Class 1 (Infrared)
Setup Mode Laser Class 2 (Visible - Red) Do not stare into beam λ: 650 nm t _p : 0,25 µs; T: 2,5 µs P _{max} : 3 mW
EN 60825-1: 10/2003

optoNCDT ILR 1021/1101/1151 use a semiconductor class 1 laser (operating mode) and a semiconductor class 2 laser (setup mode). With these classes no protection is needed.

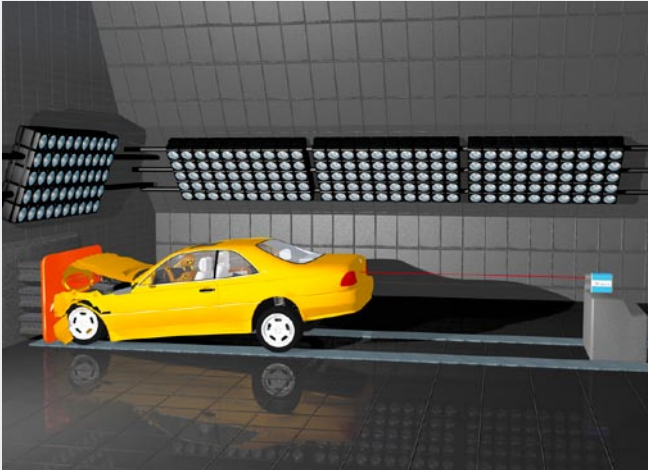
Spot diameter ILR1021



Spot diameter ILR1101/1151



Applications



Speed measurement in the crash test

During the acceleration of vehicles in the crash test, an ILR1191 measures the impact speed and the deformation of the test vehicle.



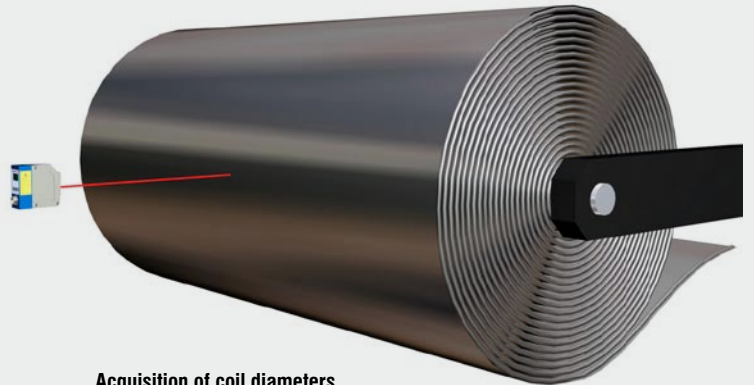
Position measurement on gantry cranes

Numerous measurement tasks on gantry cranes must be performed: Positioning of the trolley, detection and dimensioning of containers and monitoring of the minimum clearance between the cranes. The ILR1191 with a very large measuring range and low response time is designed for these measurement tasks.



Level measurement in container, tanks and silos

Depending on the accuracy demanded, the filling level of silos is found at up to four points. The level is determined from these distances.



Acquisition of coil diameters

The quantities of steel, paper and fabric wound on and off are monitored via the acquisition of coil diameters using laser probes.