MICRO-EPSILON

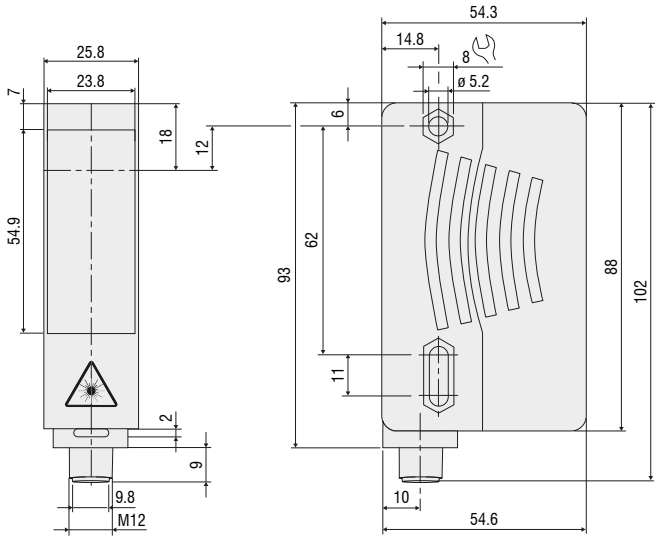
More Precision.

optoNCDT ILR // Laser-optical distance sensors

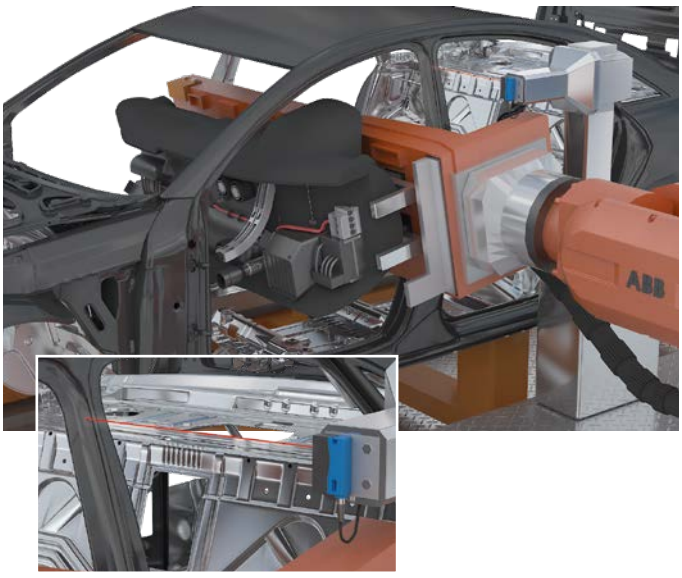
Compact and reliable laser distance sensor
optoNCDT ILR 103x/LC1

- Measuring range up to 15 m (with reflector 50 m)
- Ideal for series applications automation
- Laser class 1
- IP67 Robust design IP67
- Fast response time
- Compact & lightweight design

The ILR103x/LC1 laser distance sensors operate according to the time-of-flight technology. Based on this technology, these sensors provide accurate, reliable and unambiguous as well as reproducible measurement results regardless of ambient conditions such as surface properties, dark colors or ambient light. The sensors use a measuring laser with laser class 1.



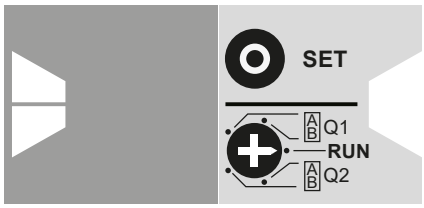
(dimensions in mm, not to scale)



optoNCDT ILR1030-8/LC1
Distance measurements in robot positioning tasks

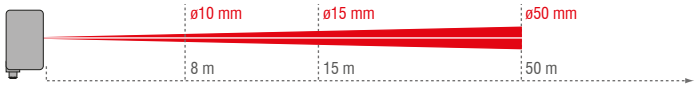
Model		ILR1030-8/LC1		ILR1030-15/LC1		ILR1031-50/LC1	
Article number		7112011.01		7112013.01		7112012.01	
		SMR	EMR	SMR	EMR	SMR	EMR
Measuring range [1]	black 10 %	0.2 m	2.5 m	0.2 m	5 m	-	
	gray 18 %	0.2 m	3.5 m	0.2 m	6 m	-	
	white 90 %	0.2 m	8 m	0.2 m	15 m	-	
	Reflector film [2]	-		-		0.2 m	50 m
Measuring rate		100 Hz					
Resolution		1 mm					
Linearity [3]		±25 mm					
Repeatability		<5 mm					
Temperature stability		≤ 0.25 mm / K					
Light source		Semiconductor laser < 1 mW, 660 nm (red)					
Laser class		Class 1 in accordance with DIN EN 60825-1:2007					
Typ. service life		85,000 h					
Permissible ambient light		50,000 lx					
Supply voltage		10 … 30 VDC					
Power consumption		< 1.5 W (24 V)					
Analog output		4 … 20 mA, short circuit- and overload-proof, (12 bit D/A, max. load 500 Ohm)					
Switching output		Q1 / Q2 push-pull outputs (configurable)					
Connector		Supply/signal: 4-pin M12 screw/plug connection (see accessories for connection cable)					
Assembly		Through bores					
Temperature range	Storage	-30 … +70 °C (non-condensing)					
	Operation	-30 … +55 °C (non-condensing)					
Shock (DIN EN 60068-2-27)		25 g / 6 ms in 3 axes					
Vibration (DIN EN 60068-2-6)		2 g / 10 … 2000 Hz					
Protection class (DIN EN 60529)		IP67					
Material		Plastic housing ABS, plastic pane					
Weight		90 g					
Control and indicator elements		1x LED for power, 1x LED for switch signal 5-step rotary switch for the selection of switching thresholds and analog scaling Button for setting the switching threshold and analog scaling length 660 nm					
Special features		-					

SMR = Start of measuring range, EMR = End of measuring range
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] Depends on the reflectivity of the target, ambient light interference and atmospheric conditions
[2] ILR-RF250 reflector film 250 x 250 mm; article no: 7966001
[3] Statistical spread 2 σ



ILR103x: Adjust analog output and switching output via touch keys

Spot diameter ILR103x/LC1



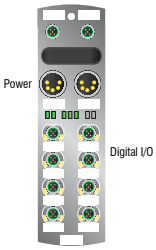
The ILR103x/LC1 sensors use a semiconductor laser of class 1.
Devices of this laser class require no special safety precautions.
They work with a semi-conductor laser with a wavelength of 660 nm (visible/red).
Laser power is <1 mW.

Accessories
optoNCDT ILR

Accessories optoNCDT ILR103x/LC1

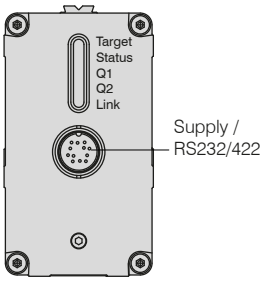
Connection	Interface modules	Connection cables	Sensor	Accessories
Supply/PLC Power supply unit PS2031 Art. no.: 2420096 		Supply and output cable Art. no.: 2901232 (2 m) 2901233 (2 m, 90°) 2901234 (5 m) 2901235 (5 m, 90°) 2901268 (10 m, 90°) 29011248 (10 m) 		Reflector 250 x 250 mm Art. no.: 7966001 
Digital output/Ethernet 	IF1032/ETH Art. no.: 2420066 			

Accessories optoNCDT ILR2250-100 / ILR2250-100-H / ILR2250-100-IO

Connection	Interface modules	Connection cables	Sensor	Accessories
Supply/PLC Power supply unit PS2031 Art. no.: 2420096 		Supply and output cable Art. no.: 2901524 (3 m) 2901239 (3 m, 90°) 2901573 (5 m) 2901240 (5 m, 90°) 2901236 (10 m) 2901241 (10 m, 90°) 2901237 (20 m) 2901242 (20 m, 90°) 2901238 (30 m) 2901243 (30 m, 90°)	ILR2250-100 ILR2250-100-H 	Reflector 210 x 297 mm Art. no.: 7966058 
PLC Ethernet 	IF2030 for PROFINET Art. no.: 2420087 IF2030 for EtherNet/IP Art. no.: 2420088 			Air purge collar Art. no.: 7966062 
Digital output/Ethernet 	IF2001/USB Art. no.: 2213025 			Protective glass Art. no.: 7966061 
	IC2001/USB Art. no.: 2213041 			
	IF1032/ETH Art. no.: 2420066 			Filter glass Art. no.: 7966063 ILR-NDF 0.75 7966066 ILR-NDF 0.5 7966068 ILR-NDF 0.9 
	IF2004/USB Art. no.: 2213024 	Art. no.: 29011342 (3 m) 29011347 (5 m) 29011348 (10 m) 29011372 (20 m) 2x 2901528 (0.3 m)		
PLC Ethernet 	IF2008/ETH for 8 sensors Art. no.: 2213030 	Art. no.: 29011107 (5 m) 29011398 (3 m) 		
	IO-Link master 	IO-Link standard cable Art. no.: 29011362 (5 m) 29011363 (10 m) 29011364 (15 m) 	ILR2250-100-IO Sensor + adapter cable (0.3 m) IO-Link inside 	

Accessories
optoNCDT ILR

Accessories optoNCDT ILR1191-300

Connection	Interface modules	Connection cables	Assembly	Accessories
Supply/PLC Power supply unit PS2031 Art. no.: 2420096 		Supply and output cable Art. no.: 2901524 (3 m) 2901239 (3 m, 90°) 2901573 (5 m) 2901240 (5 m, 90°) 2901236 (10 m) 2901241 (10 m, 90°) 2901237 (20 m) 2901242 (20 m, 90°) 2901238 (30 m) 2901243 (30 m, 90°) 	Electrical connections 	Reflector 250 x 250 mm Art. no.: 7966001 
Digital output/Ethernet 	IF2001/USB Art. no.: 2213025 			Mounting plate Art. no.: 7966014 
	IF1032/ETH Art. no.: 2420066 			Protection tube Art. no.: 7966016 
				Alignment aid Art. no.: 7966060 

Sensors and Systems from Micro-Epsilon

Sensors and systems for displacement, position and dimension

Sensors and measurement devices for non-contact temperature measurement

Measuring and inspection systems for quality assurance

Optical micrometers, fiber optics, measuring and test amplifiers

Color recognition sensors, LED Analyzers and inline color spectrometers

3D measurement technology for dimensional testing and surface inspection

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