

More Precision



optoNCDT ILR104x-IO-I/U

Compact and reliable laser distance sensor

- ToF method up to 150 m
- IO-Link data communication
- Short response times
- Compact and lightweight sensor design
- Ideal for series use in automation
- Very high signal stability on numerous surfaces
- Robust design IP67 / IP69 / IP69K



Model		ILR1040-10-IO-I	ILR1040-10-IO-U	ILR1041-60-IO-I	ILR1041-60-IO-U	ILR1041-150-IO-I	ILR1041-150-IO-U
Measuring range ^[1]	Start of measuring range	0.03 m	0.03 m	-	-	-	-
	End of measuring range	10 m	10 m	-	-	-	-
	Start of measuring range with reflector film ILR-RF250	-	-	0.2 m	0.2 m	0.2 m	0.2 m
	End of measuring range with reflector film ILR-RF250	-	-	60 m	60 m	150 m	150 m
Measuring rate		adjustable up to 333 Hz					
Max. travel speed		10 m/s					
Resolution		1 mm					
Linearity ^[2]		typ. ±20 mm					
Repeatability ^[3]		< 3 mm				< 6 mm	
Light source		Semiconductor laser < 1 mW, 660 nm (red) 2mrad 4ns					
Laser class		Class 1 in accordance with DIN EN 60825-1:2014					
Typ. service life		85.000 h					
Permissible ambient light		50,000 lx @ 2.5 m standard white 90 %, 10,000 lx @ 2.5 m black 6 %					
Supply voltage		18 ... 30 VDC					
Power consumption		25 mA					
Digital interface		IO-Link 1.1 (via C/Q pin 4)					
Analog output		4 ... 20 mA (12-bit DA)	0 ... 10 V (12-bit DA)	4 ... 20 mA (12-bit DA)	0 ... 10 V (12-bit DA)	4 ... 20 mA (12-bit DA)	0 ... 10 V (12-bit DA)
Switching output		Q1 (max 100 mA) push-pull output (configurable) reverse polarity protected, overvoltage-proof					
Connection		Supply & signal: M12 x1 , 4-pin					
Mounting		Through bores					
Temperature range	Storage	-40 ... +70 °C					
	Operation	-30 ... +60 °C					
Protection class (DIN EN 60529)		IP67 / IP69 / IP69K					
Material		PC (polycarbonate)					
Weight		37 g					
Control and indicator elements		3x LED for power, switching status and teach-in; 5-position rotary switch for selecting the operating modes; teach-in button					
Special features		Operating mode: single measurement, external triggering, distance tracking, continuous measurement					

^[1] The specified data apply at a constant room temperature of 20 °C with continuous sensor operation.
Measurements were taken on a white, diffusely reflective surface (reference ceramic). Reflector film RF250

^[2] Statistical spread 2σ

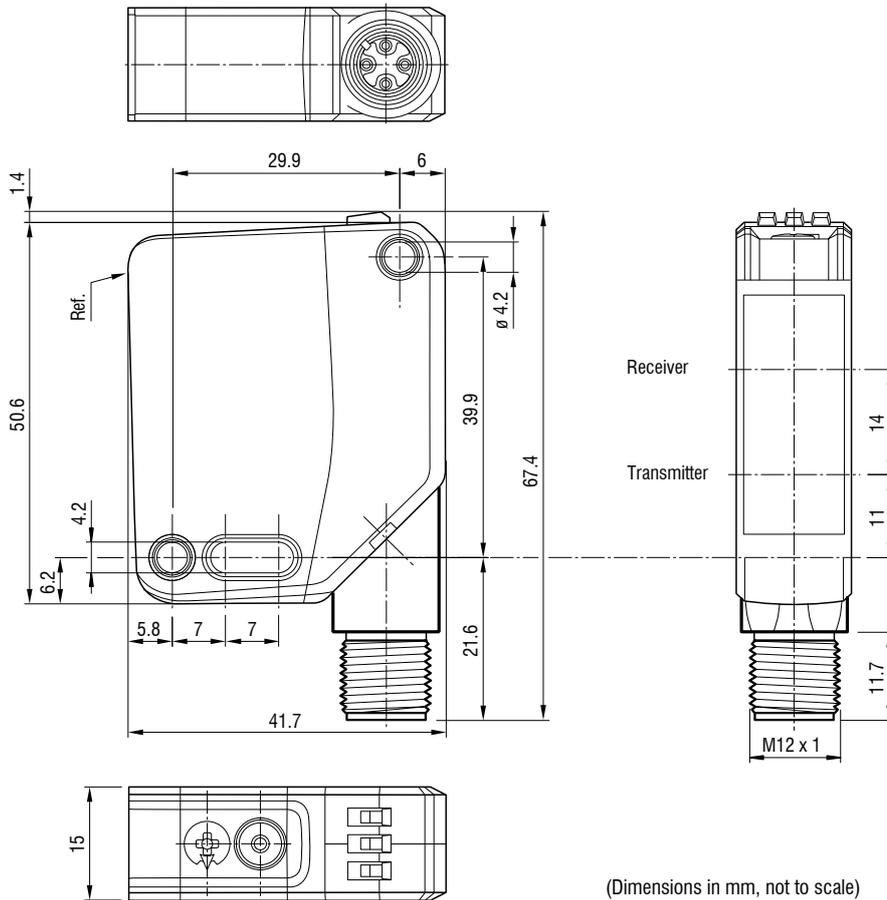
^[3] Incl. thermal influence

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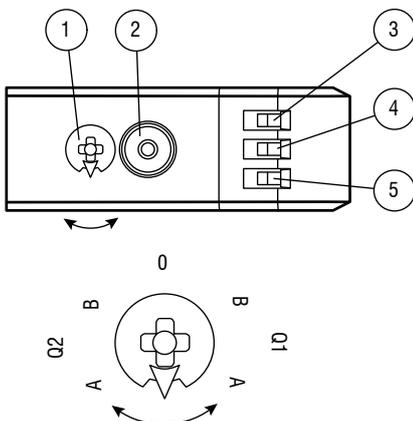


Dimensions:



(Dimensions in mm, not to scale)

Pin assignment:



1	Mode rotary switch	
2	Teach-in button	
3	Switching output display Q2	YE
4	Switching output display Q1	YE
5	Operating display	GN

Q1B	Switching output 1 / switching point B
Q1A	Switching output 1 / switching point A
Q2A	Switching output 2 / switching point A
Q2B	Switching output 2 / switching point B
0	Key lock