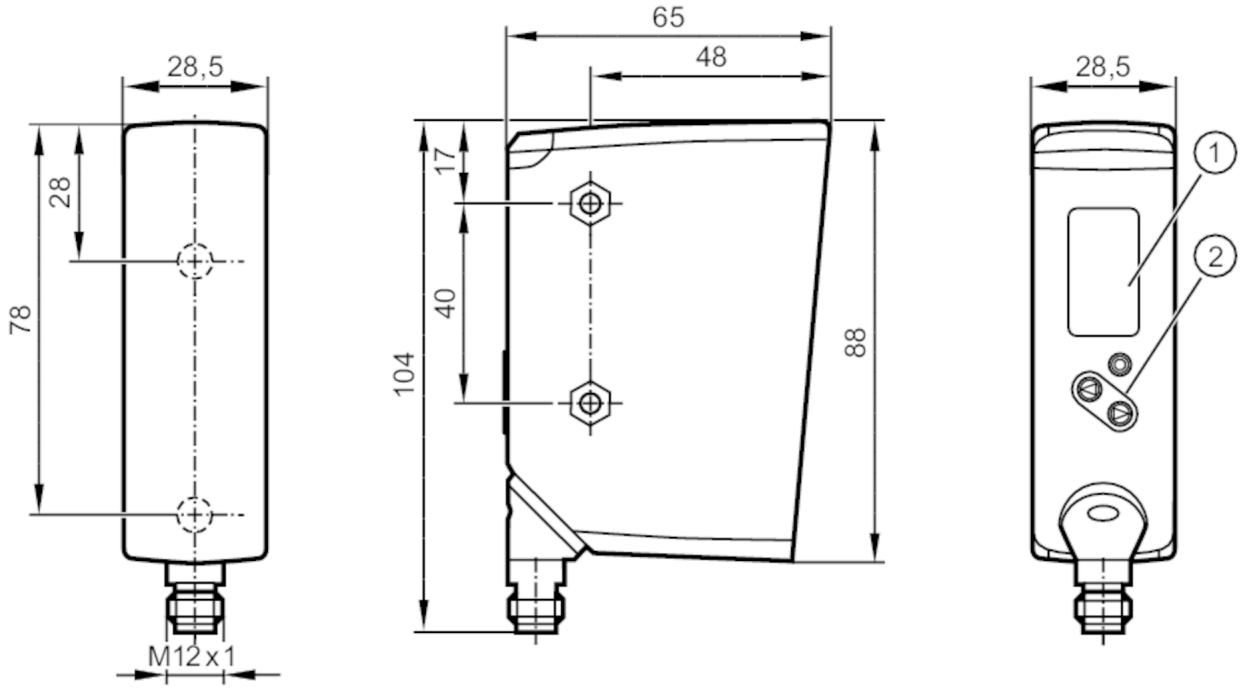
OPD100

Profile sensor

OPDLFPKG



1: Display
2: programming buttons
receiver in upper lens
transmitter in lower lens

Product characteristics		
Type of light		red light
Laser protection class		1
Electrical data		
Operating voltage	[V]	10...30 DC; ("supply class 2" to cULus)
Current consumption	[mA]	< 200; (10 V)
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	2
Type of light		red light
Wave length	[nm]	650
Inputs / outputs		
Number of inputs and outputs		Number of digital inputs: 1; Number of digital outputs: 2
Inputs		
Trigger		external
Number of digital inputs		1

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Outputs		
Electrical design		PNP/NPN; (parameterisable)
Number of digital outputs		2
Output function		2 x normally open / normally closed; (parameterisable)
Max. current load per output	[mA]	100
Type of short-circuit protection		pulsed
Overload protection		yes
Measuring/setting range		
Measuring distance (Z-direction)	[mm]	150...300
Width of the measuring range (X-direction) at min. measuring distance	[mm]	45; (distance = 150mm)
Width of the measuring range (X-direction) at max. measuring distance	[mm]	90; (distance = 300mm)
Sampling rate	[Hz]	5
Accuracy / deviations		
Measured value resolution		Z-direction 200 µm
		X-direction 250 µm
Accuracy		Z-direction ± 500 µm
		X-direction ± 500 µm
		background white (90 % remission)
Software / programming		
Number of profiles which can be stored		1
Number of regions of interest		1
Interfaces		
Communication interface		IO-Link
Transmission type		COM3 (230,4 kBaud)
IO-Link revision		1.1
SDCI standard		IEC 61131-9
Profiles		Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis
SIO mode		yes
Required master port type		A
Min. process cycle time	[ms]	2.3
IO-Link process data (cyclical)		**function** / **bit length**
		process value / 16
		device status / 4
		binary switching information / 1
IO-Link functions (acyclical)		operating hours counter; number of trigger events; ROI setting
Supported DeviceIDs		**Type of operation** / **DeviceID**
		default / 1260
Note		For further information please see the IODD PDF file under "Downloads"
Operating conditions		
Ambient temperature	[°C]	-10...55

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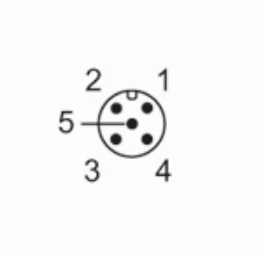
Storage temperature	[°C]	-40...60	
Protection		IP 65	
Max. immunity to extraneous light	[klx]	20	
Tests / approvals			
EMC		EN 60947-5-2	
Laser protection class		1	
Notes on laser protection		Caution:	laser light
		laser class:	1
			EN / IEC60825-1:2007
			EN / IEC60825-1:2014
			Complies with 21 CFR 1040 except for deviations pursuant to Laser Notice No. 50, dated June 2007.
MTTF	[years]	155	
UL approval		Ta	-10...55 °C
		Enclosure type	Type 1
		power supply	Class 2
		File number UL	E174191
Mechanical data			
Weight	[g]	535.8	
Dimensions	[mm]	88 x 65 x 28.5	
Materials		housing: diecast zinc; PPSU; ABS; PMMA; PBT / PC; EPDM; front pane: PMMA	
Displays / operating elements			
Display		switching status	1 x LED, yellow
		Display operation	1 x LED, green
			colour display
Remarks			
Pack quantity		1 pcs.	
Electrical connection			

Connector: 1 x M12; coding: A



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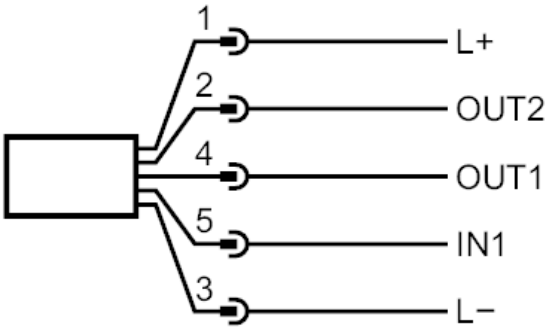
Connection



4:	OUT1 switching output or IO-Link
2:	OUT2 switching output
5:	trigger input

Other data

light line

measuring distance (Z-direction)	light line
150 mm	50 x 1 mm
300 mm	100 x 1 mm
The values apply at	
Extraneous light on the object	< 20 klx
constant ambient conditions	23 °C / 960 hPa
minimum power-on time in minutes	10

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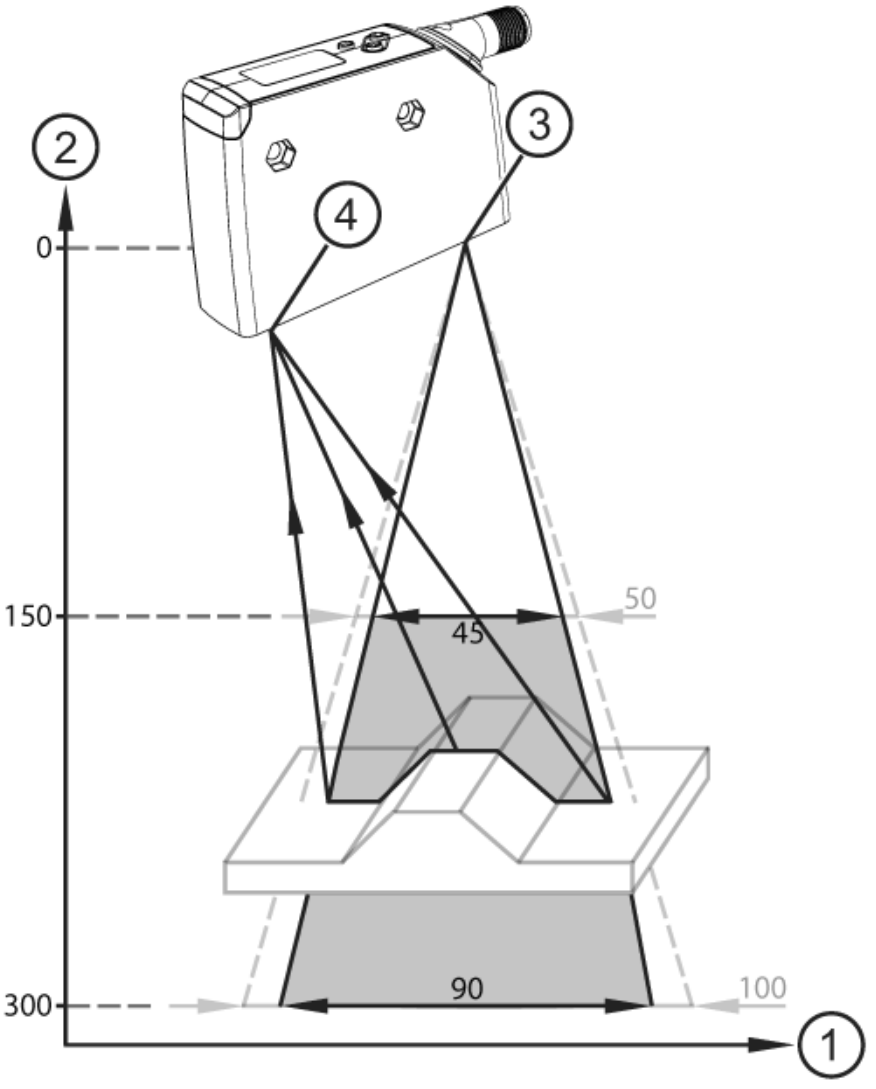
Diagrams and graphs



1 X-direction
2 Z-direction
3 laser beam aperture
4 receiver