

Overview

- Distance measurement via IO-Link or analog output
- Outstanding reliability and unrivalled immunity against ambient light
- Focused laser beam for small objects or gaps
- Manipulation-proof, simple teach-in via qTeach
- IO-Link for extended parameterization options and additional diagnostic data



Picture similar



Technical data

General data

Type	Distance measuring
Measuring distance Sd	20 ... 250 mm
Measuring range Mr	230 mm
Focal distance	400 mm
Adjustment	Teach-in and IO-Link
Power on indication	LED green
Output indicator	LED yellow
Repeat accuracy	≤ 200 ... 3000 µm (Raw) ≤ 150 ... 2250 µm (High Speed) ≤ 100 ... 1500 µm (Standard) ≤ 50 ... 750 µm (High Accuracy)
Linearity error	± 3 % Mr
Beam type	Point
Suppression of reciprocal influence	Yes
Alignment optical axis	< 2°
Temperature drift	< 0,3 % Sde/K

Light Source

Light source	Pulsed red laser diode
Wave length	656 nm
Laser class	1

Electrical data

Response time / release time	< 1.5 ms (Raw) < 2.25 ms (High Speed Mode) < 4.5 ms (Standard Mode) < 14 ms (High Accuracy Mode)
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Electrical data

Voltage supply range +Vs	12 ... 30 VDC
Current consumption max. (no load)	30 mA
Voltage drop Vd	< 2 VDC
Output circuit	Analog 0 ... 10 VDC Push-pull / IO-Link
Output current	< 100 mA (push-pull)
Switching output	Light operate, switchable
Short circuit protection	Yes
Reverse polarity protection	Yes, Vs to GND

Communication interface

Interface	IO-Link V1.1.3
IO-Link port type	Class A
Baud rate	230,4 kBaud (COM 3)
Cycle time	≥ 0.7 ms
Process data length	48 Bit
Process data structure	Bit 0 = SSC1.1 (distance) Bit 1 = SSC1.2 (distance) Bit 2 = quality Bit 3 = alarm Bit 8-15 = scale factor Bit 16-47 = 32 Bit measurement

Technical data

Communication interface

Adjustable parameters	Switching point
	Operation mode
	Time filters
	LED-function
	Output logic
	Output circuit
	Analog output characteristic
	Deactivate the sensor element
	Locator function
	Teach-in mode

Additional data	Distance
	Excess gain
	Device temperature

Mechanical data

Width / diameter	12.9 mm
Height / length	32.3 mm
Depth	23 mm

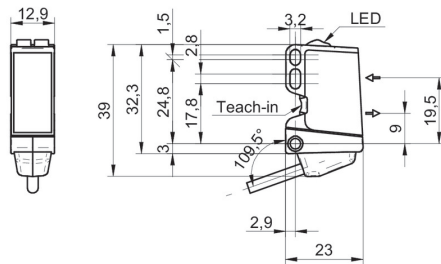
Mechanical data

Type	Rectangular
Housing material	Plastic (ASA, PMMA)
Front (optics)	PMMA
Connection types	Cable 4 pin, 2 m

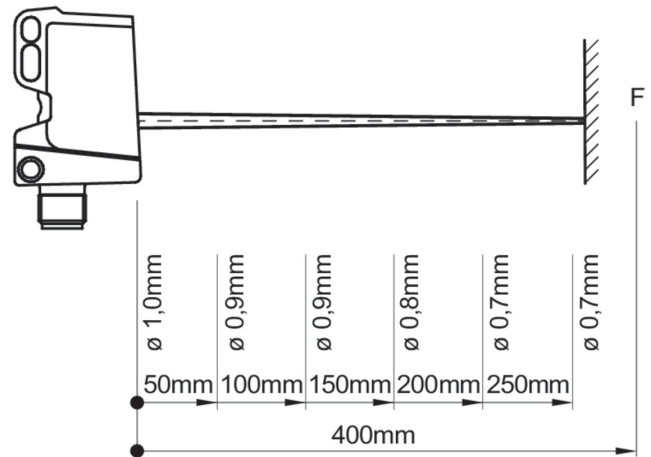
Ambient conditions

Protection class	IP 67
Operating temperature	-10 ... +60 °C
Storage temperature	-40 ... +70 °C
Vibration (sinusoidal)	IEC 60068-2-6:2008 10 g at f = 10 - 2000 Hz, duration 150 min per axis
Shock (semi-sinusoidal)	IEC 60068-2-27:2009 50 g / 11 ms, 10 impulses per axis and direction

Dimension drawing



Beam characteristic (typically)



Laser warning

CLASS 1 LASER PRODUCT

IEC 60825-1/2014

Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019

Connection diagram

