

**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

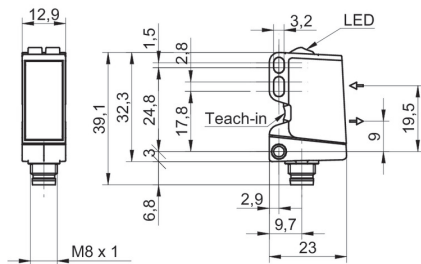
**Mechanical data**

Type	Rectangular
Housing material	Plastic (ASA, PMMA)
Front (optics)	PMMA
Connection types	Connector M8 4 pin

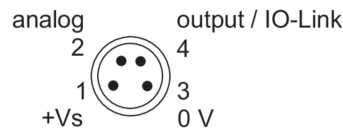
**Ambient conditions**

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

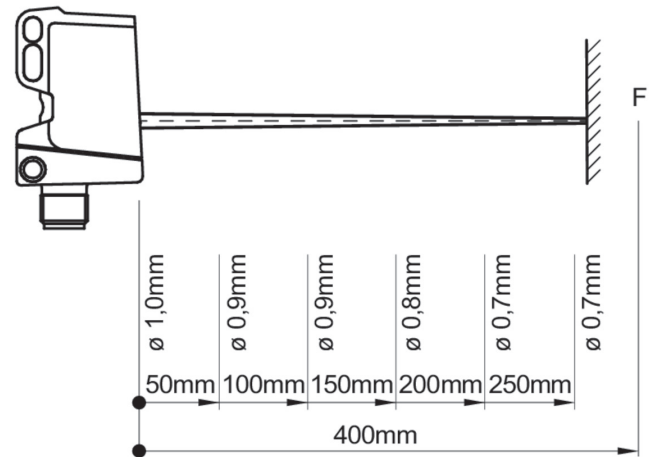
**Dimension drawing**



**Pin assignment**



**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**

