

**Overview**

- Extended functional reserve capacities for maximum reliability
- Object detection through smallest holes and gaps without blind area thanks to single-lens optics
- Parallel laser beam for uniform detection over the measuring range
- Manipulation-proof, simple teach-in via qTeach or line teach
- IO-Link for extended parameterization options and additional diagnostic data
- Robust housing with stainless steel spacer sleeves



Picture similar



**Technical data**

**General data**

Type	Retro-reflective sensor
Version	Single lens optics
Light source	Pulsed red laser diode
Actual range Sb	0,8 m
Nominal range Sn	1,2 m
Smallest object recognizable typ.	3 mm at 500 mm
Polarization filter	Yes
Alignment / soiled lens indicator	Flashing output indicator
Output indicator	LED yellow
Power on indication	LED green
Sensitivity adjustment	Teach-in and IO-Link
Laser class	1
Distance to focus	Parallel beam
Wave length	680 nm
Suppression of reciprocal influence	Yes
Alignment optical axis	< 1,5°

**Electrical data**

Response time / release time	< 0,05 ms (High Speed Mode)
Jitter	< 0,02 ms (High Speed Mode)
Voltage supply range +Vs	10 ... 30 VDC

**Electrical data**

Current consumption max. (no load)	20 mA (@ 10 VDC)
Current consumption typ.	10 mA (@ 24 VDC)
Voltage drop Vd	< 2 VDC
Output function	Light / dark operate
Output circuit	Push-pull
Output current	< 50 mA
Short circuit protection	Yes
Reverse polarity protection	Yes

**Communication interface**

Baud rate	230,4 kBaud (COM 3)
Adjustable parameters	Switching point Time filters LED status indicators Output logic Counter Operation mode Deactivate the sensor element Find Me function Teach-in mode
IO-Link port type	Class A
Process data length	32 Bit
Process data structure	Bit 0 = SSC1 (presence) Bit 2 = quality Bit 3 = alarm Bit 5 = SSC4 (counter) Bit 16-31 = 16 Bit measurement

**Technical data**

**Communication interface**

Interface	IO-Link V1.1
Additional data	Signal strength Excess gain Operating cycles Device temperature
Cycle time	≥ 0,6 ms

**Mechanical data**

Width / diameter	8 mm
Height / length	25,1 mm
Depth	15,8 mm

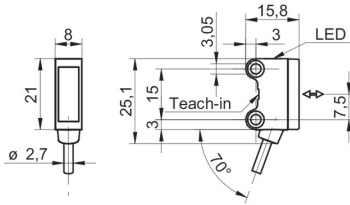
**Mechanical data**

Type	Rectangular
Mechanical mounting	Sleeve smooth (stainless steel)
Housing material	Plastic (ASA, PMMA)
Front (optics)	PMMA
Connection types	Cable 4 pin, 2 m
Cable characteristics	PVC / PVC 4 x 0,08 mm <sup>2</sup>

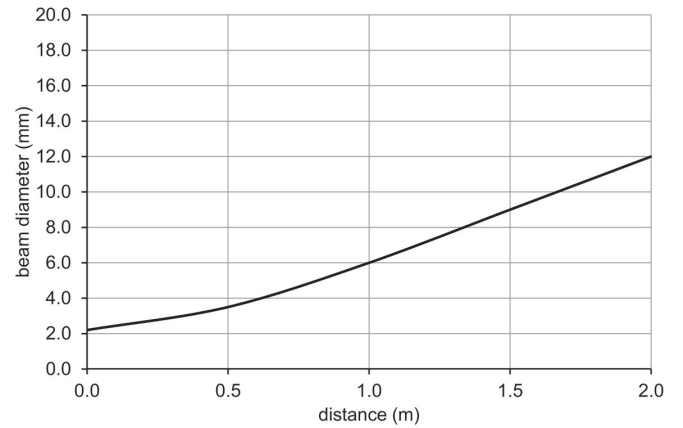
**Ambient conditions**

Operating temperature	-20 ... +50 °C
Protection class	IP 67

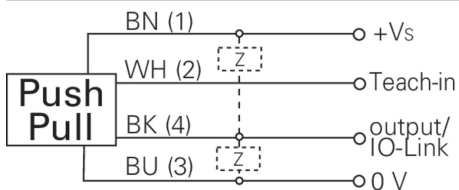
**Dimension drawing**



**Beam characteristic (typically)**



**Connection diagram**



**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

**Excess gain curve**

