

**Overview**

- Outstanding reliability and unrivalled immunity against ambient light
- Extra range - best-in-class
- Manipulation-proof, simple teach-in via qTeach or line teach
- IO-Link for extended parameterization options and additional diagnostic data
- Quick mounting by means of M3 threaded bushes made of stainless steel



Picture similar



**Technical data**

**General data**

Type	Background suppression
Sensing distance Tw	20 ... 175 mm
Sensing range Tb	3 ... 192 mm
Smallest object recognizable typ.	0.5 mm at 100 mm
Power on indication	LED green
Alignment / soiled lens indicator	Flashing output indicator
Output indicator	LED yellow
Sensing distance adjustment	Teach-in and IO-Link
Distance to focus	160 mm
Suppression of reciprocal influence	Yes
Beam type	Point
Alignment optical axis	< 1,5°

**Light Source**

Light source	Pulsed red laser diode
Laser class	1
Wave length	680 nm

**Electrical data**

Response time / release time	≤ 0.25 ms (High Speed Mode)
Jitter	≤ 0.06 ms (High Speed Mode)
Voltage supply range +Vs	10 ... 30 VDC
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

**Electrical data**

Output current	50 mA
Short circuit protection	Yes
Reverse polarity protection	Yes

**Communication interface**

Interface	IO-Link V1.1
IO-Link port type	Class A
Baud rate	230.4 kBaud (COM 3)
Cycle time	≥ 0.6 ms
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
Adjustable parameters	Switching point Switching hysteresis Time filters LED status indicators Output logic Counter Operation mode Deactivate the sensor element Find Me function Teach-in mode

**Additional data**

Excess gain	
Operating cycles	
Device temperature	

**Mechanical data**

Width / diameter	8 mm
Height / length	25.1 mm
Depth	15.8 mm
Design	Rectangular

**Technical data**

**Mechanical data**

Mechanical mounting	Threaded sleeves M3 (stainless steel)
Housing material	Plastic (ASA, PMMA)
Front (optics)	PMMA
Connection types	Cable 4 pin, 2 m

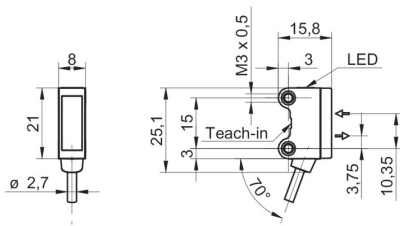
**Mechanical data**

Cable characteristics	PVC / PVC 4 x 0.08 mm <sup>2</sup>
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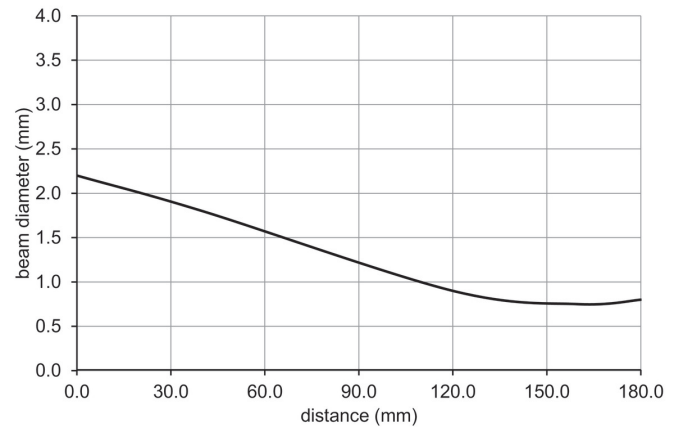
**Ambient conditions**

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

**Dimension drawing**



**Beam characteristic (typically)**



**Laser warning**

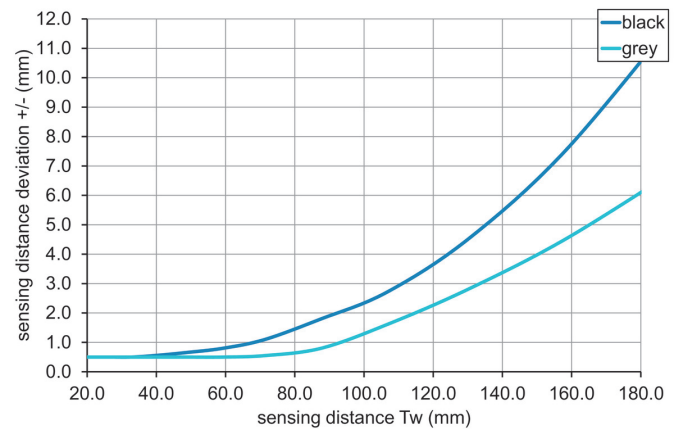


**CLASS 1 LASER  
PRODUCT**

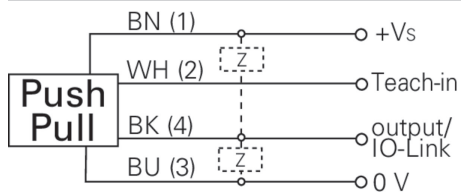
IEC 60825-1/2014

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

**Sensing distance diagram**



**Connection diagram**



## Hysteresis curve

