

#### 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



#### Technical data

##### general data

type	background suppression
light source	pulsed red laser diode
sensing distance Tw	20 ... 175 mm
sensing range Tb	3 ... 192 mm
smallest object recognizable typ.	0,5 mm at 100 mm
alignment / soiled lens indicator	flashing output indicator
power on indication	LED green
output indicator	LED yellow
sensing distance adjustment	Teach-in and IO-Link
laser class	1
distance to focus	160 mm
wave length	680 nm
suppression of reciprocal influence	yes
beam type	point
alignment optical axis	< 1,5°

##### 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)

##### electrical data

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 switching hysteresis 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
interface	IO-Link V1.1

## Technical data

### communication interface

additional data	excess gain operating cycles device temperature
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cycle time	≥ 0,6 ms
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### mechanical data

width / diameter	8 mm
height / length	25,1 mm
depth	15,8 mm
type	rectangular

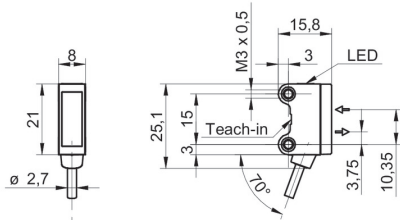
### mechanical data

mechanical mounting	threaded sleeves M3 (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>

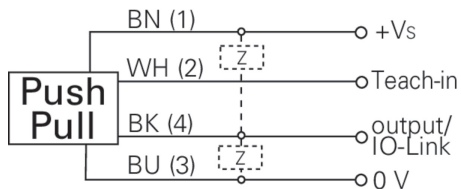
### ambient conditions

operating temperature	-20 ... +50 °C
protection class	IP 67

## dimension drawing



## connection diagram



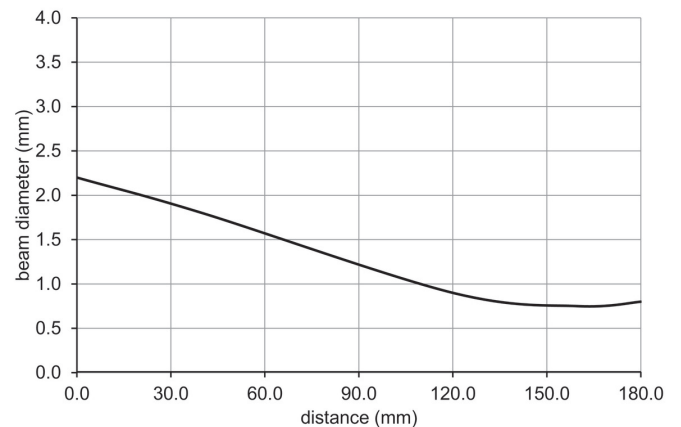
## laser warning

**CLASS 1 LASER  
PRODUCT**

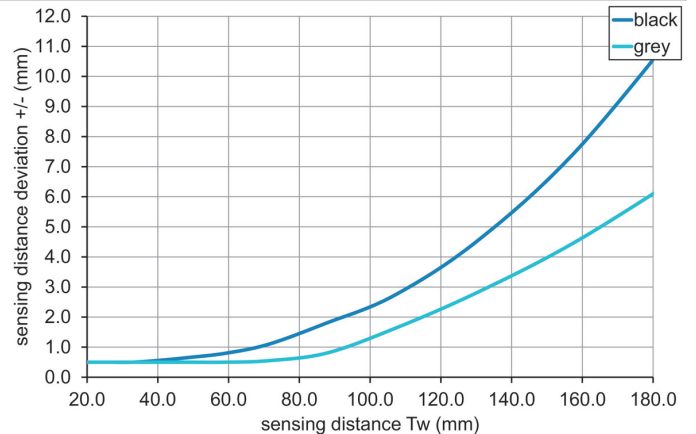
IEC 60825-1/2014

Complies with 21 CFR 1040.10 and 1040.11  
except for deviations pursuant to laser  
notice No. 50, dated June 24, 2007

## beam characteristic (typically)



## sensing distance diagram



**hysteresis curve**

