

**Overview**

- Measurement value via IO-Link
- Reliable also on very dark and shiny objects
- Manipulation-proof, simple teach-in via qTeach or line teach
- Extended parameterization options and additional diagnostic data
- Longest distances thanks to time of flight principle
- Laser performance for an accurate switching behavior
- Compact, miniaturized housing format



Picture similar



**Technical data**

**General data**

Type	Background suppression
Version	Time of Flight
Light source	Pulsed red laser diode
Sensing distance Tw	100 ... 1800 mm
Sensing range Tb	70 ... 1890 mm
Repeat accuracy	≤ 1400 ... 5500 µm
Temperature drift	± 15 mm
Linearity error	± 10 mm
Power on indication	LED green
Output indicator	LED yellow
Sensing distance adjustment	Teach-in and IO-Link
Laser class	1
Distance to focus	700 mm
Wave length	680 nm
Suppression of reciprocal influence	Yes
Beam type	Point
Alignment optical axis	< 2°

**Electrical data**

Response time / release time	< 4 ms (High Speed Mode) < 8 ms (Standard Mode) < 50 ms (Long Range Mode)
Voltage supply range +Vs	12 ... 30 VDC
Current consumption max. (no load)	60 mA
Voltage drop Vd	< 2 VDC
Output function	Light operate, switchable
Output circuit	Push-pull / IO-Link
Output current	< 50 mA

**Electrical data**

Short circuit protection	Yes
Reverse polarity protection	Yes

**Communication interface**

Interface	IO-Link V1.1.3
Profile	DMSS
IO-Link port type	Class A
Baud rate	230,4 kBaud (COM 3)
Cycle time	≥ 2 ms
Process data length	32 Bit
Process data structure	Bit 0 = SSC1 (distance) Bit 1 = SSC2 (distance) Bit 2 = quality Bit 3 = alarm Bit 5 = SSC4 (counter) Bit 8-15 = scale factor Bit 16-31 = 16 Bit measurement

**Adjustable parameters**

- Switching point
- Switching hysteresis
- Operation mode
- Time filters
- LED status indicators
- Output logic
- Output circuit
- Counter
- Deactivate the sensor element
- Find Me function
- Teach-in mode

**Technical data**

**Communication interface**

Additional data	Distance
	Excess gain
	Operating cycles
	Operating hours
	Boot cycles
	Operating voltage
	Device temperature
	Histograms

**Mechanical data**

Width / diameter	12.9 mm
Height / length	32.3 mm
Depth	23 mm
Type	Rectangular
Housing material	Plastic (ASA, PMMA)

**Mechanical data**

Front (optics)	PMMA
Connection types	Cable 4 pin, 2 m

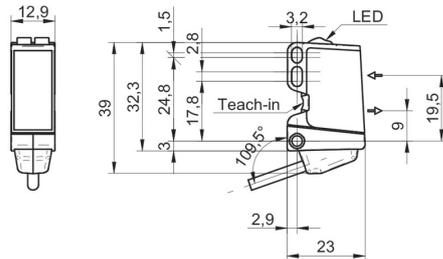
**Ambient conditions**

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

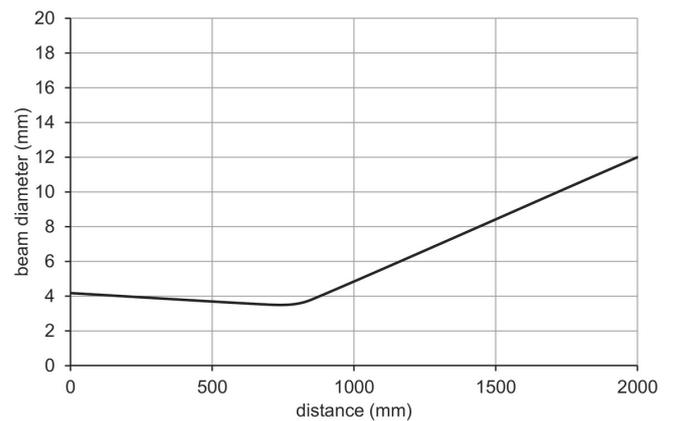
**Remarks**

- Measurement on 90% remission (white)

**Dimension drawing**



**Beam characteristic (typically)**

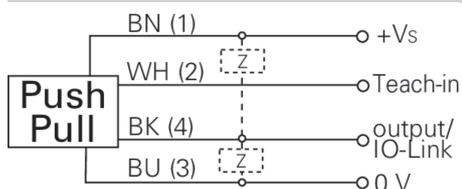


**Laser warning**

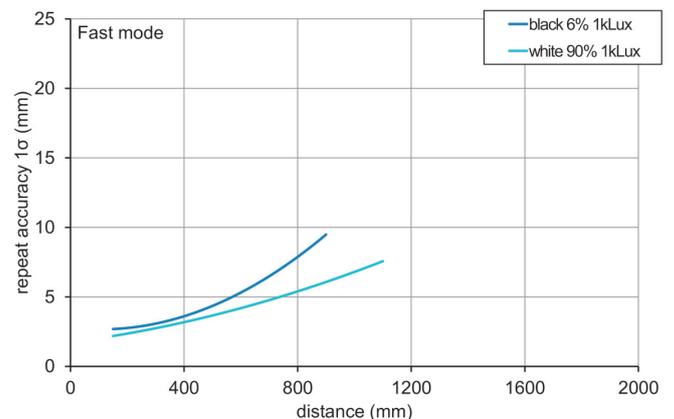
**CLASS 1 LASER PRODUCT**

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**



**Repeat accuracy**

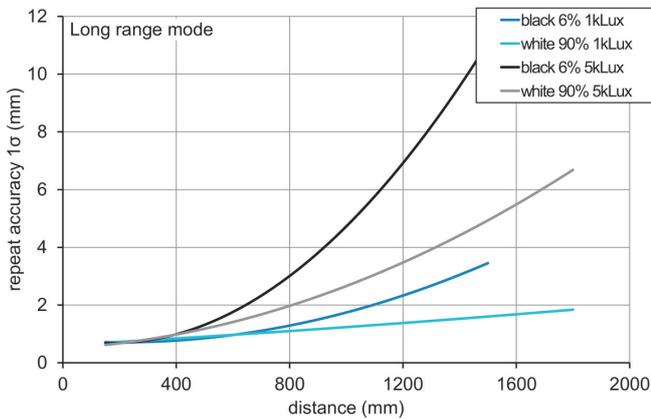
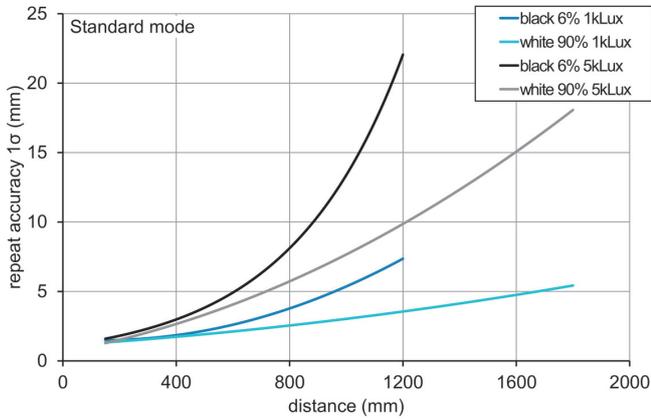


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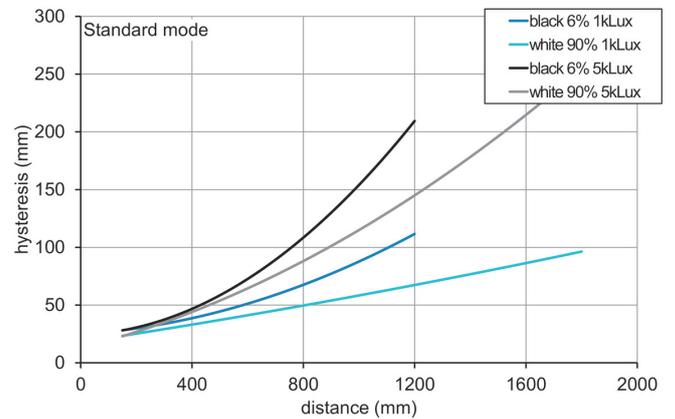
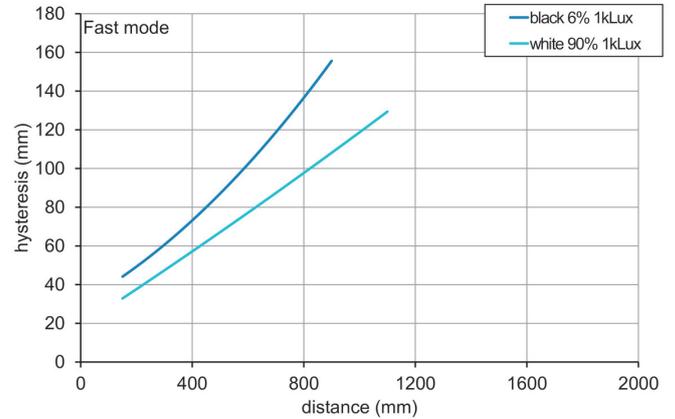
Diffuse sensors with background suppression - miniature

Article number: 11240058

## Repeat accuracy



## Hysteresis curve



## Sensing distance diagram

