

Preliminary

Overview

- 2.5 m sensing range thanks to time of flight principle
- Distance 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 via IO-Link
- Infrared laser light source suitable for use in dusty or smoky environments
- Alignment Guide - visible, red light beam for aligning the infrared laser



Technical data

General data

Type	Background suppression
Version	Time of Flight
Sensing distance Tw	0 ... 2500 mm
Sensing range Tb	0 ... 2625 mm
Repeat accuracy	< 2 ... 1.5 mm
Temperature drift	<0.3 mm/K: <750mm <0,04 % Sde/K: >750 mm
Power on indication	LED green
Output indicator	LED yellow
Sensing distance adjustment	Teach-in and IO-Link
Suppression of reciprocal influence	Yes
Beam type	Point
Alignment optical axis	< 1,5°
Black/white shift	0%

Light Source

Light source	Pulsed infrared laser diode
Laser class	1
Wave length	940 nm

Electrical data

Response time / release time	< 25 ms (High Speed Mode) < 50 ms (Standard Mode) < 200 ms (High Accuracy Mode)
Voltage supply range +Vs	10 ... 30 VDC
Current consumption max. (no load)	55 mA (@ 10 VDC)
Current consumption typ.	25 mA (@ 24 VDC)
Voltage drop Vd	<2.5 VDC
Output function	Light operate
Output circuit	Push-pull / IO-Link

Electrical data

Output current	100 mA
Short circuit protection	Yes
Reverse polarity protection	Yes

Communication interface

Interface	IO-Link V1.1.4
Profile	DMSS
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 = Uncertainty Flag Bit 3 = alarm Bit 8-15 = scale factor Bit 16-47 = 32 Bit measurement
Adjustable parameters	Switching point Operation mode Time filters Locator function Output logic Sensor element function (on/off) Teach-in mode Analog output characteristic

Additional data	Distance Excess gain Device temperature
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Mechanical data

Width / diameter	11 mm
Height / length	32 mm
Depth	21 mm
Design	Rectangular
Mechanical mounting	Sleeve smooth (brass)

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Technical data

Mechanical data

Housing material	Plastic (ABS, ASA, PMMA)
Front (optics)	PMMA
Connection types	Flylead connector M12, L=300 mm

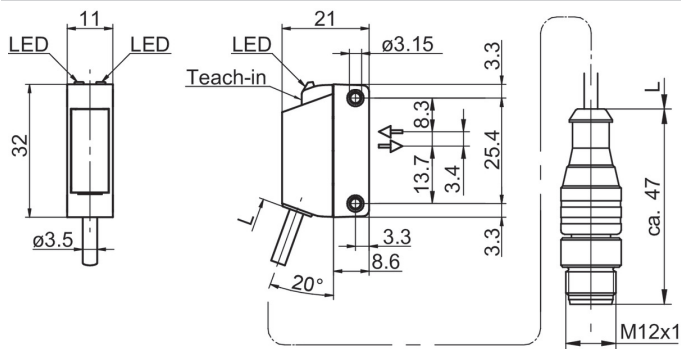
Ambient conditions

Protection class	IP 67
Operating temperature	-25 ... +55 °C
Storage temperature	-40 ... +70 °C

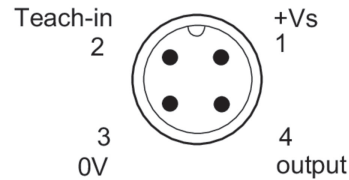
Ambient conditions

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 resp. 100 g / 6 ms, 10 jolts per axis and direction

Dimension drawing



Pin assignment



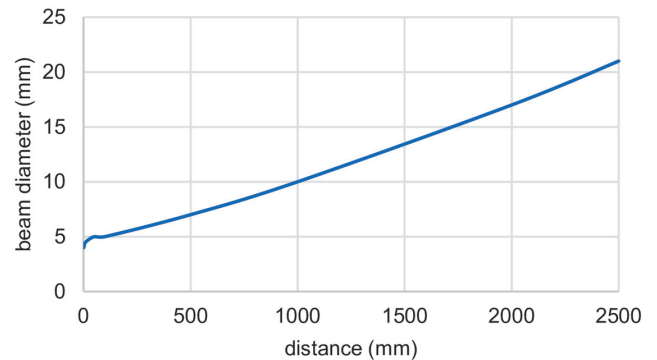
Laser warning

**CLASS 1 LASER
PRODUCT**

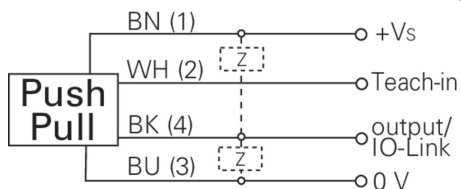
IEC 60825-1/2014

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

Beam characteristic (typically)



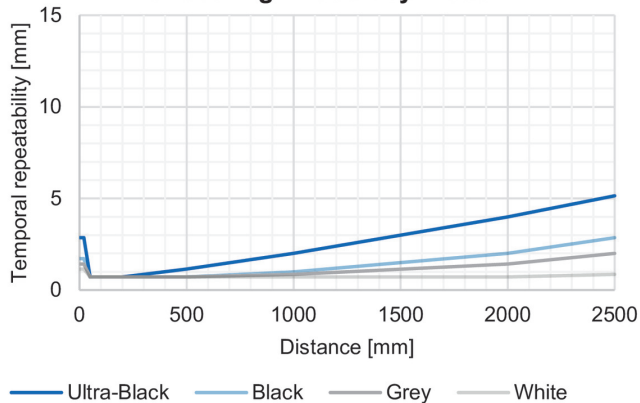
Connection diagram



Preliminary

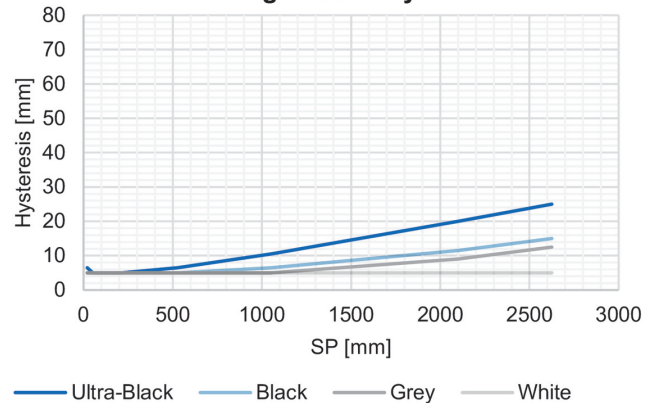
Repeat accuracy

OT330 High Accuracy Mode

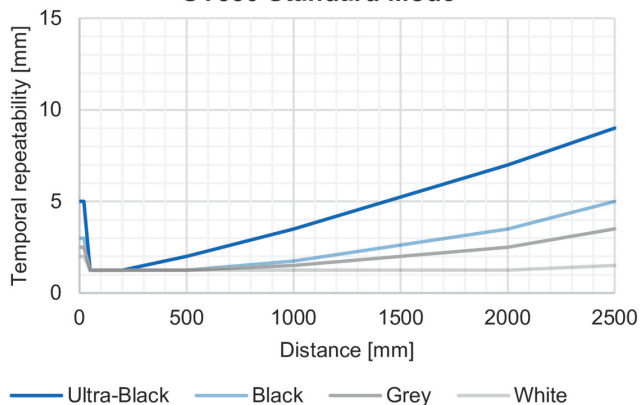


Hysteresis curve

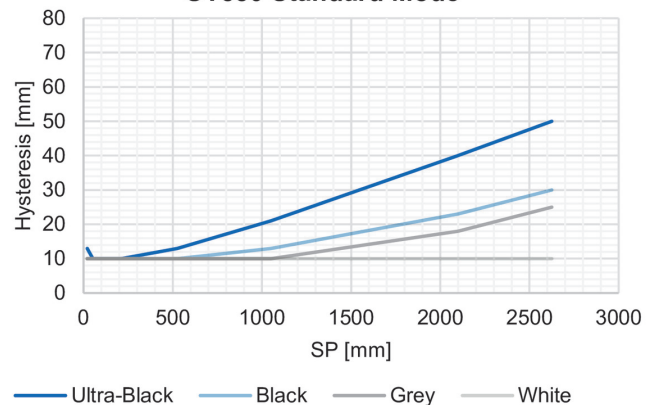
OT330 High Accuracy Mode



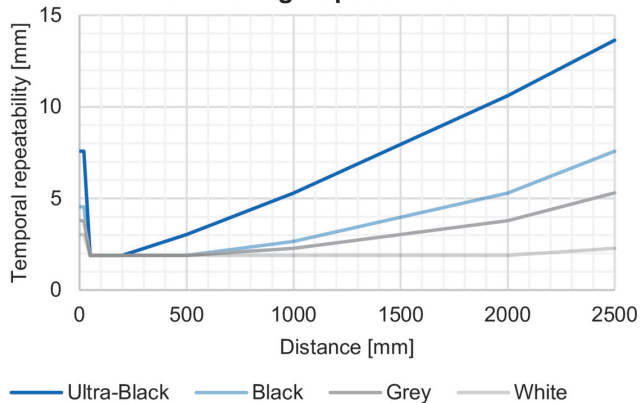
OT330 Standard Mode



OT330 Standard Mode



OT330 High Speed Mode



OT330 High Speed Mode

