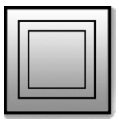
OTQ80576

Optical sensors
Diffuse reflection sensor with background suppression

- **plastic housing**
- **setting via teach-in**
- **status LED as alignment aid**
- **M8-connecor 4-pin**

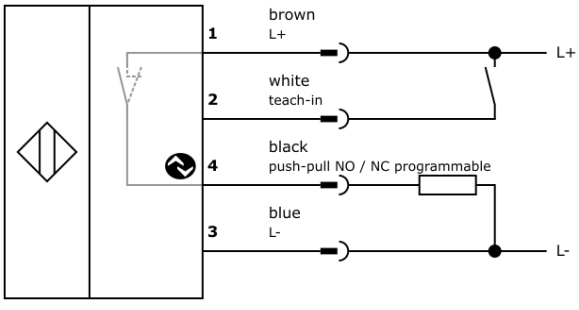
small light spot thanks to PIN-Point-LED
IO-Link interface

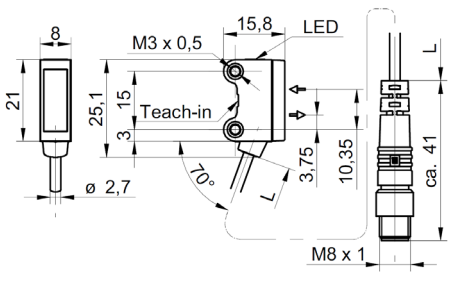
TECHNICAL DATA

function	diffuse reflection sensor, background suppression
sensing range	3 … 132mm
sensing distance	20 … 120mm
voltage supply +Vs	10 … 30V DC
current consumption (w/o load)	40mA
voltage drop (max. load)	2V
output current (max. load)	50mA
output signal	Push-pull, no/nc
short-circuit protection	+
reverse polarity protection	+
response / delay time (high-speed-mode)	≥ 0.25ms
sampling frequency (high-speed-mode)	≤ 2kHz
transmitting element (pulsed)	LED, red light, punctiform
wave length	644nm
display (operation)	LED green
display (signal / alignment)	LED yellow
switchpoint setting	teach-in and IO-Link
suppression of reciprocal influence	+
housing material	plastic (ASA, PMMA)
front screen material	PMMA
degree of protection (EN 60529)	IP 67
operating temperature	-25 … +60°C
connection	M8 cable connector, 4-pin, L=200mm
connection accessories	e.g. **VK200375**
accessories (universal-holder)	**AY000116**

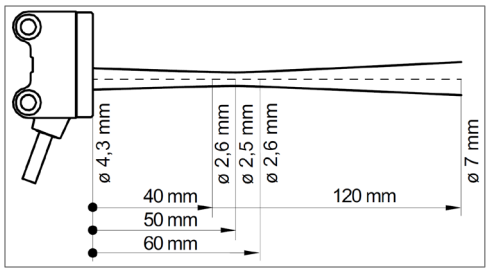
Connection



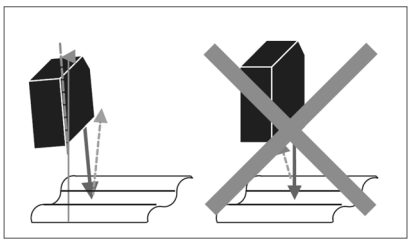
Dimensional drawing



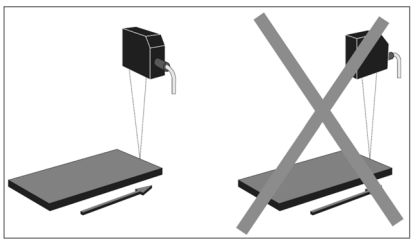
Beam path



Mounting



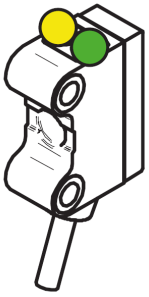
The direct reflection from glossy or reflective objects must not impinge on the receiver. This can be avoided by slightly tilting the sensor.



It is recommended that the object to be detected approaches the active area of the sensor from the side, which avoids malfunctions caused by deflection of the light beam at edges.

Description of the LED-display:

LED-indication



Legend

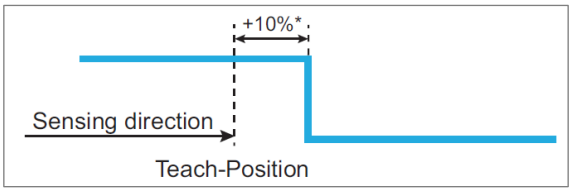
- LED on
- LED flashing 1Hz
- LED flashing 2Hz
- LED flashing 8Hz

operating mode

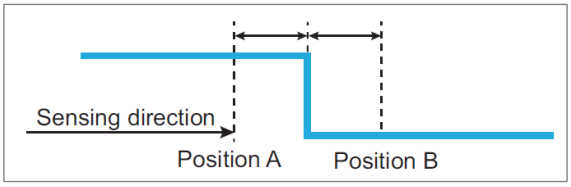
LED-indicators	green	yellow
power on	●	
short-circuit	1	
output 1 active		●
output 1 signal close to threshold		8
teach-in mode	see teach-in instruction	

Description Teach-In Level 1 & 2:

Level 1 = 1-point teach: sets the switchpoint at the position of the object + 10%*



Level 2 = 2-point teach: sets the switchpoint in the middle of position A & B



* This value is adjustable by IO-Link. Please check the IO-Link manual.

Optional teach-in methods, configurable via IO-Link:

Window-mode: Level 1 / 1-point teach: set a window of ± 10% around the position of the object.

Level 2 / 2-point teach: set a window within the object is being detected.

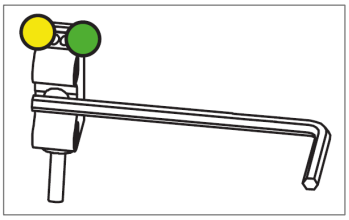
Dynamic Teach-In: Available also for window mode. Enter teach level 1 to start the data acquisition and TAP to stop the data acquisition (duration 2 … 15s). The switchpoint or window is defined by the detected min & max value.

Teach-in instruction

Enter teach level

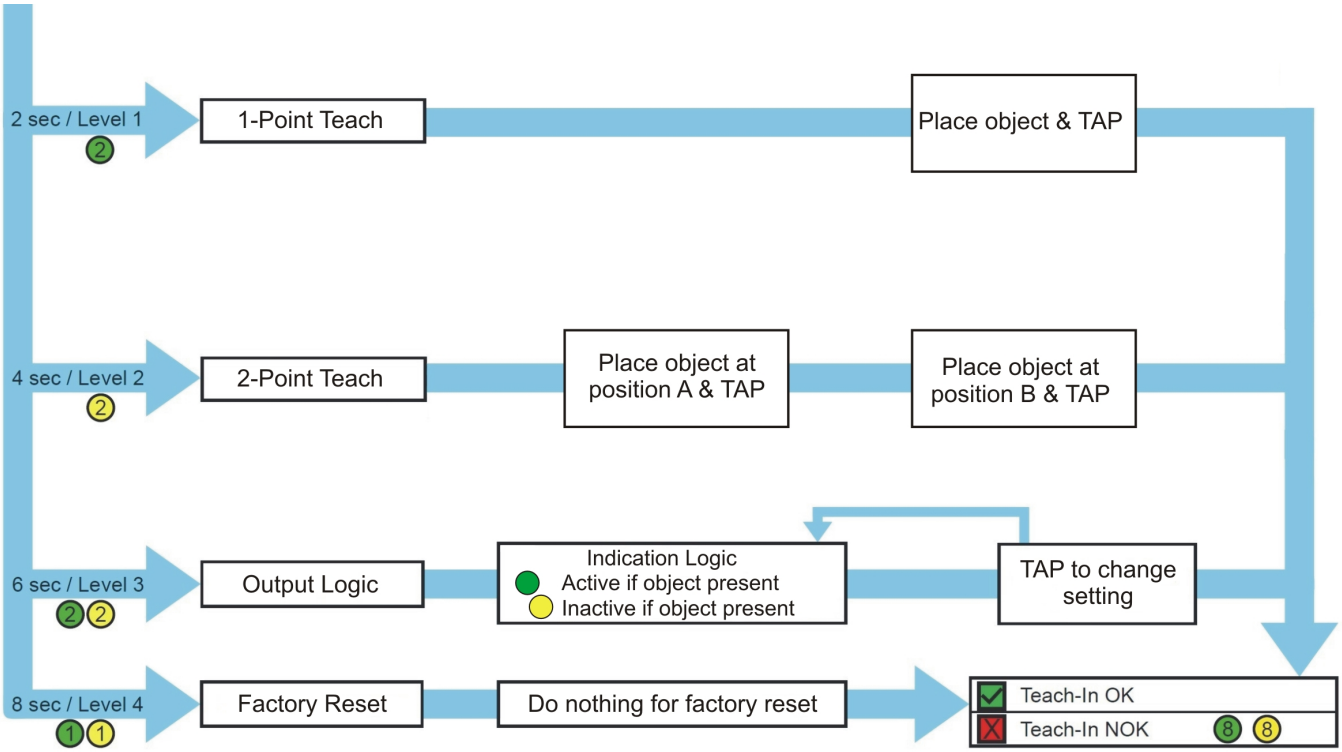
- Place a ferromagnetic tool as shown right or connect teach-in wire +Vs.
- Green and yellow LED light up, if tool / teach-in is recognized properly.
- Remove tool after n seconds for desired level

A TAP is a short touch of the tool as shown right.



General information

- 5min after power up the teach with tool will be locked.
- In teach mode the output changes to 0V.
- During operation the teach wire should be connected to 0V.
- For external teach-in connect the teach wire to +Vs.
- External teach-in is always possible (no locking)
- Place tool > 2sec: Leave teach-in without changes.



SAFETY WARNINGS:

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information!

Never use these articles in applications where the safety of a person depends on their functionality.