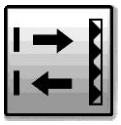
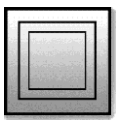
ORQ80571

Optical sensors
Retro-reflective sensor with polarization filter

- **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

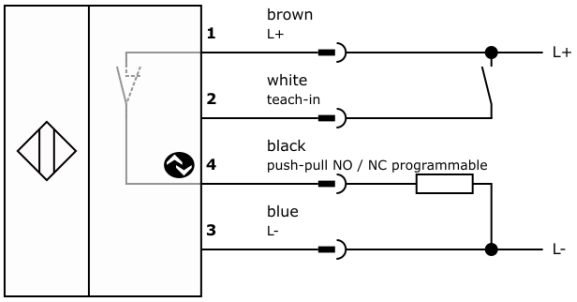


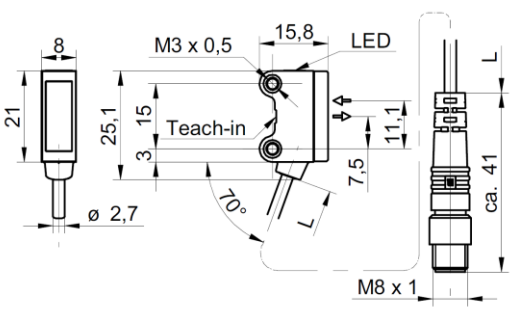
TECHNICAL DATA

function	retro-reflective sensor
actual range	3m
nominal range	4m
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**

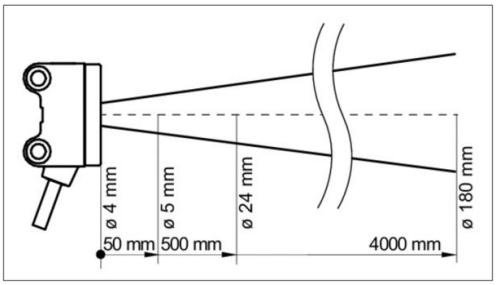
Connection



Dimensional drawing



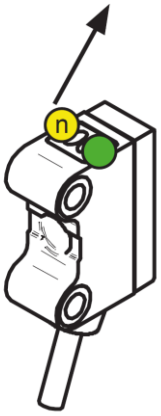
Beam path



Alignment aid

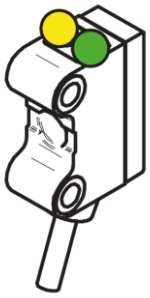
Retro-reflective sensors are equipped with an alignment aid, which is integrated in teach level 1. The alignment aid indicates the strength of the received signal.
Align sensor, faster flashing, better reception.

gaster flashing
-> stronger signal



Description of the LED-display

LED-indication



Legend

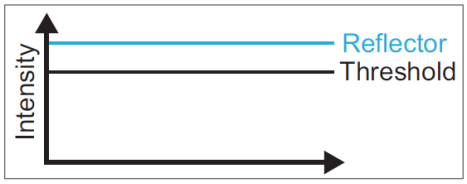
- LED on
- LED flashing 1Hz
- LED flashing 2Hz
- LED flashing 8Hz

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 threshold as close to the measured value as possible.



Level 2 = 2-point teach: sets the threshold in the middle of reflector and object [SP = sqrt (TP1 * TP2)]

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

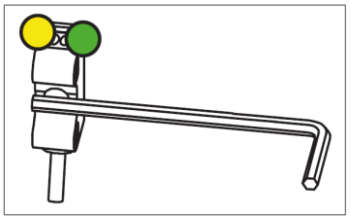
Dynamic teach-In: Enter teach-level 1 to start the data acquisition and TAP to stop the data acquisition (duration 2 … 15sec). The switchpoint is defined by the detected min & max value.

Teach-in instruction

Enter teach level

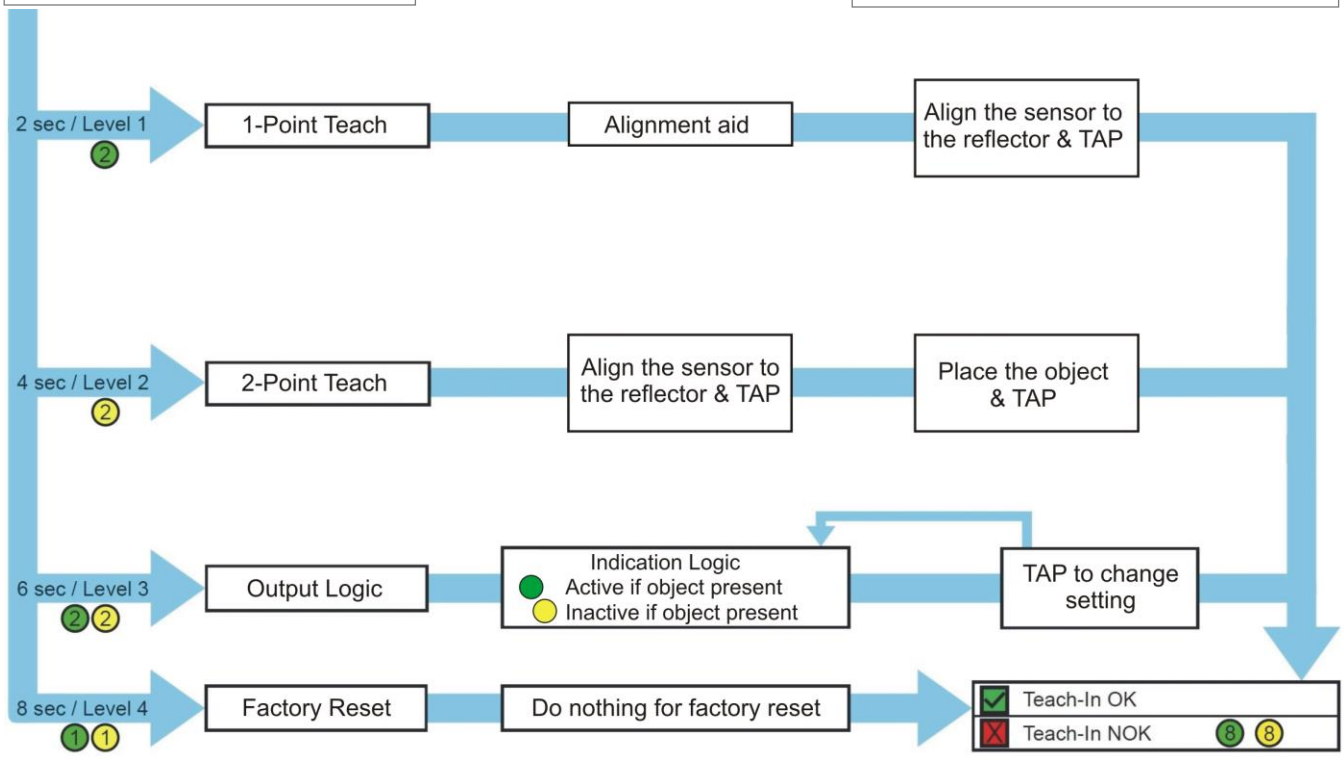
- Place a ferromagnetic tool as shown right or connect teach-in wire +Vs.
- Green and yellow LED light up, if tool / teach-in is recognized properly.
- Remove tool after n seconds for desired level

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 ouput 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.