

ON450522

Dimensions 56 x 18 x 32mm

- ✓ Plastic housing, compact design
- ✓ Setting by teach in, for transparent objects
- ✓ LED display with setting guide
- ✓ Suppression of mutual influence M12-connector 4-pin



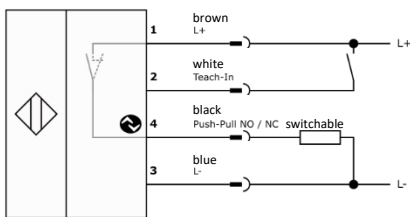
Works like a reflex light barrier - without reflector



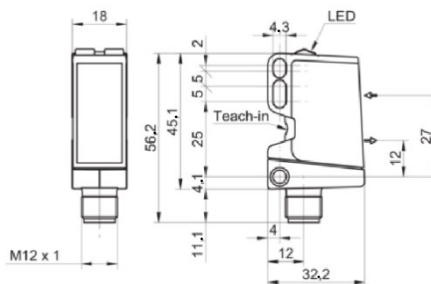
Technical data

Function	Light barrier
Operating range	60 ... 1,000mm
Optical axis alignment	< 1°
Operating voltage	10 ... 30V DC
Current consumption (without load)	≤ 30mA
Output current (max. load)	≤ 100mA
Output signal	Push pull, NO/NC
Voltage drop	≤ 3V DC
Response / release time	≤ 0.25ms
Switching frequency	2kHz
Transmitting element (clocked)	LED, red light, point-shaped
Wavelength	630nm
Short circuit proof	+
Reverse polarity protected	+
Display (operation)	LED green
Display (signal) / setting assistance	LED yellow
Display (teach-In)	LED blue
Material (front screen)	PMMA
Material (housing)	Plastic (ASA, PMMA)
Protection class (EN 60529)	IP 67
Temperature (operation)	-25 ... +60°C
Connection	M12-connector 4-pin
Connection accessories	VK200325
Accessories (universal holder)	AY000138

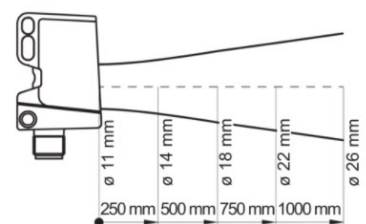
Electrical connection



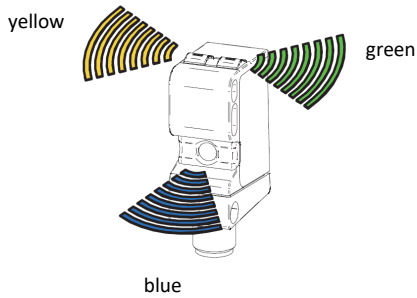
Dimensional drawing



Beam path



LED colors

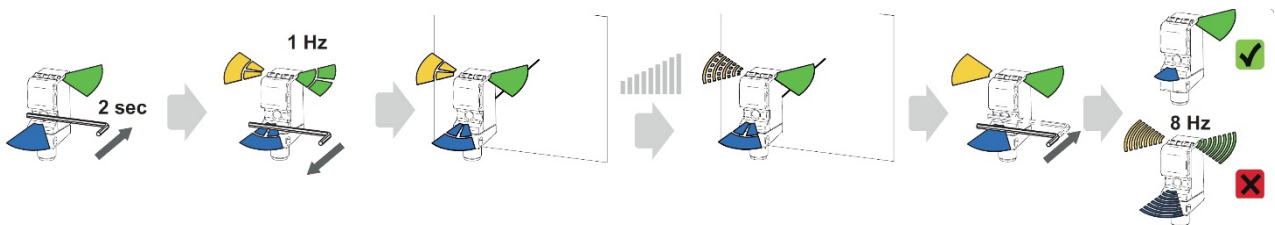


General notes on teach-in:

- The teach-in function locks 5 minutes after switching on.
- In teach mode, the output changes to the non-switched state.
- The teach-in process works both with a ferromagnetic tool and via pin 2 of the M8-connector (white wire) by connecting to the operating voltage (+Ub).
- As soon as a tool is detected, the blue LED lights up brighter.
- The teach-in via the white wire is not affected by the locking after 5min, therefore the teach line (white) must be connected to 0V (blue) in normal operation.
- In normal operation, the yellow LED signals whether the reference surface is detected; it goes out when an object is detected. This does not necessarily correspond to the state of the switching output. If the yellow LED does not light up when there is a clear view of the reference surface, the sensor or reference surface may be dirty.

Teach-in procedure for reference surface:

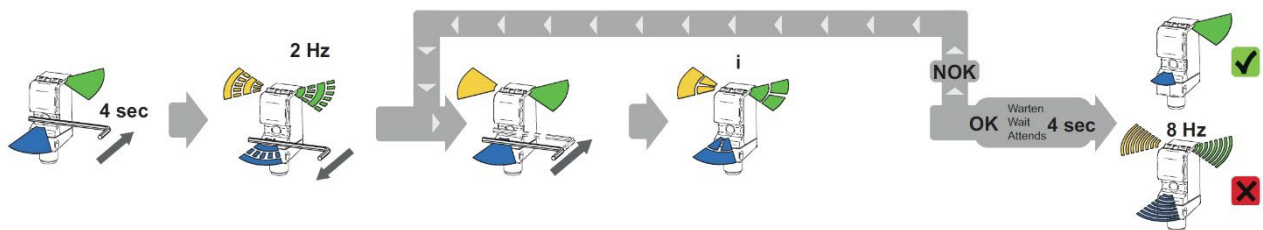
1. Make sure that the blue teach LED is on.
2. Touch the blue teach LED at the back of the housing with a ferromagnetic tool for **longer than 2 seconds, but shorter than 4 seconds**, until all 3 LEDs flash at **1Hz**.
3. Align the sensor with the reference surface; the light beam must hit the surface at a right angle. Pay attention to the flashing frequency of the yellow LED. The faster it flashes, the better the light signal at the receiver.
4. Touch the blue teach LED briefly with a ferromagnetic tool to confirm the position of the reference surface.
5. As soon as the green LED lights up, the teach process is completed.
6. If all 3 LEDs flash quickly (8Hz), the teach process has failed and must be repeated.



Notes: A flat, shiny metallic part is best suited as a reference surface.
Teaching in the reference surface is mandatory, even if the sensor has been pre-parameterized via IO-Link.

Teach-in operation sensitivity level:

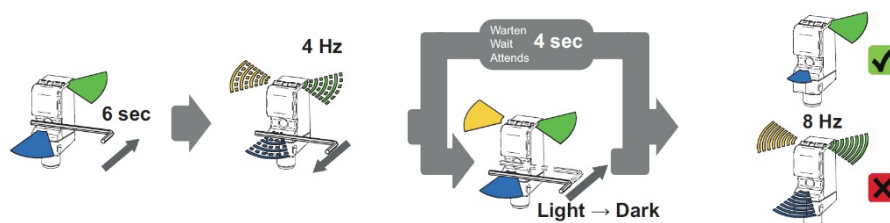
1. Make sure that the blue teach LED is on.
2. Touch the blue teach LED at the back of the housing with a ferromagnetic tool for longer than 4 seconds, but shorter than 6 seconds, until all 3 LEDs flash at 2Hz.
3. Touch the blue teach LED briefly. The sensor shows the set sensitivity level by flashing:
 - 1 x flash: Damping approx. 10% - Collection of clear film, PET bottles or clear glass
 - 2 x flash: Damping approx. 20% - Collection of clear glass bottles, multilayer foils and similar items
 - 3 x flash: Damping approx. 30% - Detection of colored glass, low-transparency bottles or opaque objects
 To change the sensitivity to the next level, touch the blue teach LED one more time each. The new sensitivity level is indicated by the corresponding flashing signal.
4. Approximately 4 seconds after the last touch, the green LED lights up - the teach process is complete.
5. If all 3 LEDs flash quickly (8Hz), the teach process has failed and must be repeated.



Notes: Each time this function is called, it is started with the sensitivity level "1 x flash: damping approx. 10%". When the reference surface is released, the last stored sensitivity level remains saved.

Changeover normally open / normally closed (light / dark switching):

1. Make sure that the blue teach LED is on.
2. Touch the blue teach LED at the back of the housing with a ferromagnetic tool for **longer than 6 seconds, but shorter than 8 seconds**, until all 3 LEDs flash at **4Hz**.
3. Within the next 4 seconds, briefly touch the blue teach LED to select the "normally closed contact" switching function. If the teach LED is not touched within this time, the switching output operates as a "normally open contact".
4. After approx. 4 seconds, the green LED lights up - the teach process is completed.
5. If all 3 LEDs flash quickly (8Hz), the teach process has failed and must be repeated.



Safety instructions:

Before commissioning, please make sure that all safety instructions in the product documentation, if applicable, have been observed!
 In case of direct impact on personal safety, the use of these products is prohibited.