

dimensions 43 x 14.8 x 32.5mm

operating distance 800mm

- ✓ robust plastic housing, compact design
- ✓ for detecting transparent objects
- ✓ Teach in-based setting
- ✓ LED display for fine adjustment
- ✓ reduction in the level of reciprocal optical interference
- ✓ connection with 4-pin M8-connector



new: works like a retro-reflective sensor - but without a reflector



Technical data

version	transparent objects recognition (trays / bottles)
background position (Sde)	200 ... 800mm on shiny metallic surfaces
detection range (Sa)	100% of Sde
operating voltage UB	10 ... 30V DC
current consumption (w/o load)	≤ 35mA
output current (max. load)	≤ 100mA
output signal	push-pull, no/nc
voltage drop (max. load)	≤ 2V DC
reaction- /decay time	≤ 1.8msec
sampling frequency	≤ 270Hz
short-circuit protection	+
reverse polarity protection	+
display (signal)	green LED
display (status) / setting control	red LED
transmitting element	red LED, 660nm, pulsed
light spot size	Ø 15mm at 800mm
housing material	plastic (ASA-MABS)
front screen material	PMMA
system of protection	IP67 (EN 60529)
operating temperature	-30°C ... +60°C
connection	M8-connector, 4-pin
max. tightening torque	0.8Nm

description:

These completely new through-beam sensors work according to the principle established with the retro-reflective sensor. With these devices however, no retro-reflector is used. Any flat surface can be used as a reflector, e.g. the wall of a piece of machinery.

This is 'taught in' as a background item, via the Teach-In line (white wire, PIN 2). Each object that is located between the sensor and background position is detected. This induces a change to the signal at the switch output. The system also detects transparent objects. The position and characteristics of the background should not change whilst the device is in operation. In the case of metallic shiny surfaces, the maximum range is 800mm. In the case of other materials, the operating distance is reduced!

the teach-in procedure relating to through-beam sensor operation:

1. Align the sensor towards a reflective part of the machinery.
2. Connect the Teach-In line (white, PIN 2) for longer than 2 seconds (however less than 5 seconds) with +UB. The red LED will flash.
3. Connect the Teach-In line again for a short period with +UB.
4. If the sensor is intended to work as a break contact (output switched if an object is detected), then connect the Teach-In line again for a short period with +UB. Otherwise the device works as a make contact.
5. In the case of soiling and temperature effects, the switching threshold is only corrected if the path of light to the reflecting machinery part is free from obstructions.

notes: The above status information applies to a „plus switching“ (pnp) connection. For a „minus switching“ (npn) connection the status information has to be inverted.

In the teach mode, the output changes over to 0V.

Under normal operations, the Teach-In line must be grounded (0V)!

If the sensor is `taught in' outside of its detection range, or if the quality of the signal is insufficient, a warning signal will be displayed (rapid flashing of the red LED). The sensor will then retain its previous setting.

If there is a short circuit at the switching output, the red LED will flash approx. once a second.

alignment mark

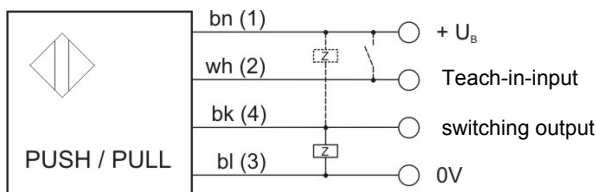
Connect the teach-line to +UB for more than 10 seconds. The red LED flashes rapidly.

Break the connection. If the red LED light now goes out, this means that the signal quality is insufficient, or the sensor is outside the detection range. No teach in is possible. In the case of a flashing LED, the signal quality is good. The sensor can now be taught.

In order to return to the normal mode, connect the Teach-In line for a short period to +UB.

electric connection

dimension drawing



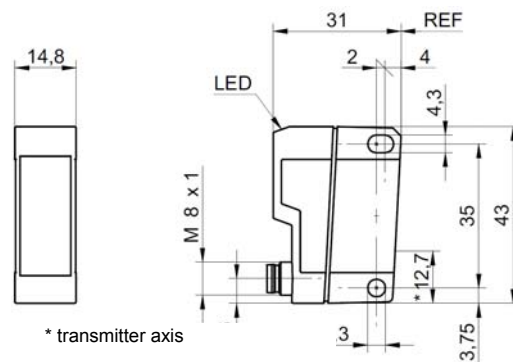
wire colors: bn = brown (1), wh = white (2), bu = blue (4), bk = black (4)

article-no.:

ON430571

suitable cable socket:

e.g. **VK200375**



Warning:

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