article number **OT330571**
dimensions 39 x 13 x 23mm

**operating range 30 … 200mm**

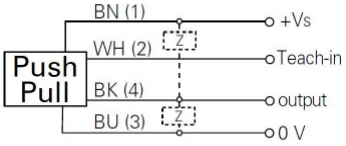
- ✓ **plastic housing, compact design**
- ✓ **setting by Teach-In**
- ✓ **LED-display with setting control**
- ✓ **small beam-spot because of PinPoint-LED**
- ✓ **suppression of reciprocal influence**
- ✓ **M8-connector, 4-pin**

**color independent diffuse reflection sensor with background suppression**

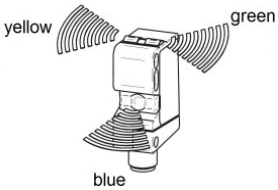

## technical data

| | |
|---|---|
| function | background suppression |
| sensing range | 30 … 200mm |
| adjustment range | 30 … 200mm |
| operating voltage | 10 … 30V DC |
| current consumption (without load) | ≤ 45mA |
| output current (max. load) | ≤ 100mA |
| output signal | push-pull, no/nc |
| voltage drop | ≤ 3V DC |
| response time / decay time | ≤ 0.5ms |
| sampling frequency | 1kHz |
| transmitting element (pulsed) | LED, red-ligth, punctual |
| wavelength | 630nm |
| short-circuit protection | + |
| reverse polarity protection | + |
| operating mode display | LED green |
| display (signal) / setting control | LED yellow |
| display (Teach-In) | LED blue |
| interference suppression | + |
| housing material | plastic (ASA, MABS) |
| front screen material | PMMA |
| degree of protection (EN60529) | IP67 |
| operating temperature | -25 … +60℃ |
| connection | M8-connector, 4-pin |

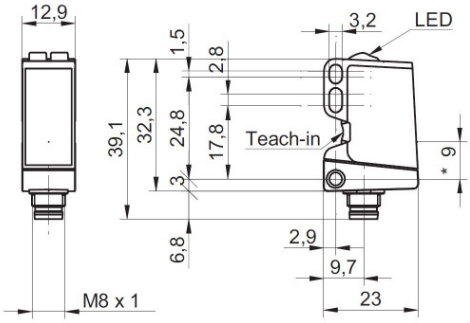
## electric connection




## colors of LED

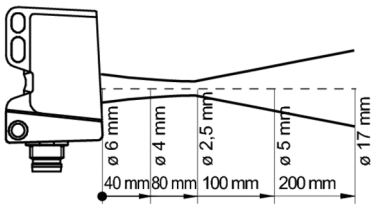



## dimensional drawing



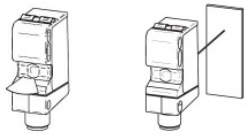

● all dimensions in mm *transmitter axis

## light beam form

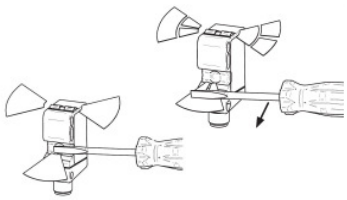


**Teach-in procedure for 1 point-teach (normal):**

1. Aim the sensor to a reference surface e.g. a reflecting machinepart and make sure that the blue Teach-LED ligths.

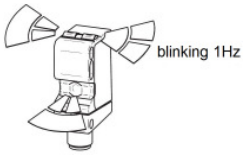


2. Touch the blue Teach-LED which is placed at the rear side of the housing with a ferromagnetic tool for longer than 2 sec. but max. 4 sec., until all 3 LEDs start blinking with a frequency of 1 HZ.
   The blue Teach-LED flashes stronger once a tool is detected.



3. Touch the blue Teach-LED again for a short time with a ferromagnetic tool in order to confirm the reference surface.

4. The standard configuration of the output is nc (normally closed).
   It can be changed to no (normally open) by touching the blue LED again for a short time within 4 sec. During this time all 3 LEDs are blinking slowly (1Hz).

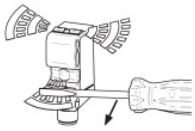



5. As soon as only the blue LED lights, the Teach-in procedure is finished successfully.

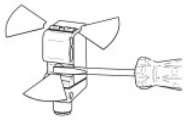
**Teach-in procedure for 2 point-teach (for objects close to background):**

1. Aim the sensor to a reference surface e.g. a reflecting machinepart and make sure that the blue Teach-LED ligths.

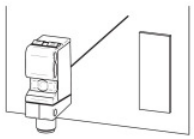
2. Touch the blue Teach-LED which is placed at the rear side of the housing with a ferromagnetic tool for longer than 4 sec. but max. 6 sec., until all 3 LEDs start blinking with a frequency of 2Hz.
   The blue Teach-LED flashes stronger once a tool is detected.



3. Touch the blue Teach-LED again for a short time with a ferromagnetic tool in order to confirm the reference surface.

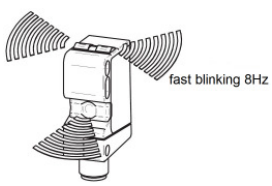


4. Remove the object from detection range and touch the blue Teach-LED for a short time to teach the background.



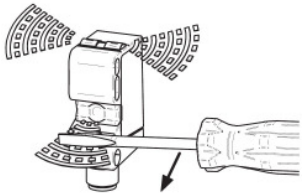
5. As soon as only the blue LED lights, the Teach-in procedure is finished successfully.

If all LEDs blink fast (8Hz), the Teach-in procedure failed and has to be repeated.



**Note:** The yellow LED indicates the detection of an object, but does not compulsory correspond to the switching output. The Teach-In function is active for only 5min. after switching on power. The Teach-in procedure is operating with a ferromagnetic tool as well as with 2 pin of M8-connector (white wire) by connection to operating voltage (+Ub).

**Reset to the factory settings**
Touch the blue Teach-LED which is placed at the rear side oft he housing with a ferromagnetic tool for 6 sec. until all 3 LEDs blink with a frequency of 4Hz and remove the tool immediately. Following the blue Teach-LED should blink normally and the sensor removes to factory settings.



connection: e.g. **VK200375**

mounting bracket: **AY000118**

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