OTQ90170 / OTQ90175

difuse reflection sensor

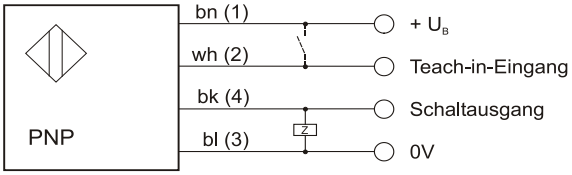
the smallest with background suppression

- **plastic housing, extremely small size**
- **LED display with setting control**
- **background suppression**
- **reduction of optical interference**
- **switching distance teachable via teach-button**
- **short-circuit protection and reverse polarity protection**
- **connection via 4-pin M8 cable connector**

Technical Data

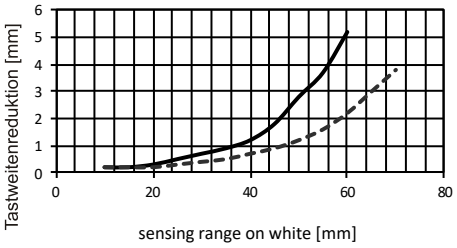
current consumption	≤ 25mA
voltage drop	≤ 1.8V
operating voltage U_B	10 … 30V DC
current rating	100mA
switching output	pnp, teachable
sensing range adjustable	10 … 60mm (via teach-in button or extern teach-in input)
range at sensing range 60mm	2 … 60mm
range at sensing range 10mm	5 … 10mm
receiving display	LED green
setting control/soiling display	LED green flashing
switching state display	LED yellow
transmitting element	LED red, 660nm, pulsed
response time	< 0.5ms
decay time	< 0.5ms
housing material	PMMA, MABS, PA
degree of protection	IP 65 (EN 60529)
ambient temperature	-20°C … +50°C
connection	M8-cable connector 4-pin
max. torque range	0,2 Nm

electric connection



bn=braun, wh=weiß, bk=schwarz, bl=blau
Klemmenbezeichnung der Kabeldose in Klammern

sensing range diagram



Teach-in procedure static:

1. Press the teach-in-button for 2 seconds! When the yellow LED turns on, release the button. The green LED is flashing.
2. Place the object in the beam path at the point at which the switching output is to be switched on! If the device is to operate as NO (light-on mode), select the position close to the sensor. Should it operate as NC (dark-on mode), select the remote sensor position.
3. Press the teach-in button shortly! The yellow LED lights up briefly, then the green LED flashes.
4. Place the object in the beam path at the point at which the switching output is to be switched on!
5. Press the teach-in button shortly! The green LED lights up for about two seconds. The teach-in-procedure is comple-ted.

Note: When the green LED flashes the corresponding teach-in procedure has to be done within one minute, otherwise the the device will automatically switch into the normal operating mode.

If the decvice is operated as NO, both LED light up in case of object recognition. If the green LED doesn't light up the device's front screen is soiled or the device is misaligned.

Operated as NC the yellow LED lights up in case the sensor doesn't detect the object. When the sensor detects the object, only the green LED lights up. If it doesn't light up the device's front screen is soiled or the device is misaligned.

Teach-in procedure dynamic:

This approach is preferable in case of fast movement sequences!

1. Press the teach-in-button for 5 seconds! After approx. 2 seconds the yellow LED lights up and the green LED flashes slowly. As soon as the green LED is flashing, release the button.
2. Move the object to be detected in the desired sensing range through the beam path.
3. Press the teach-in-button shortly. The green LED lights up shortly five times. The teach-in procedure is completed.

Note: It is possible to use the extern teach-in input (white wire, PIN2) instead of the teach-in-button. Instead of pressing the button use the teach-in-input with $+U_B$!

Dimensional drawings

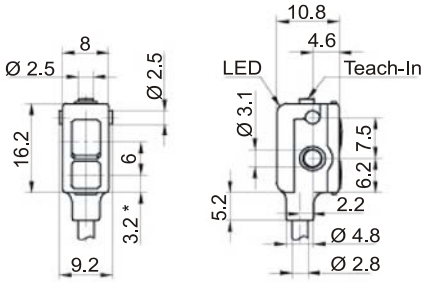


figure 1

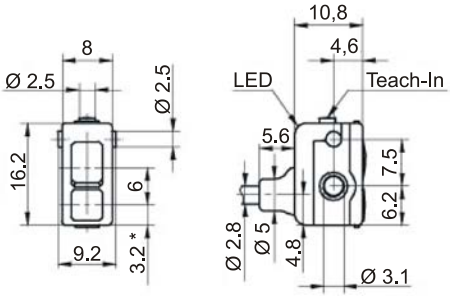


figure 2

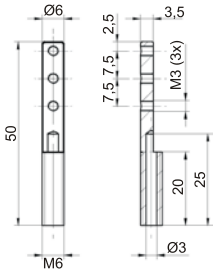


figure 3

Articles

article-no.	design	housing	switching-frequency	sn	voltage	current	output	connection	figure
OTQ90170	9.2x21.4x10.8	plastic	1kHz	60mm	10-30V DC	100mA	pnp	M8-cable connector 4-pin	1
OTQ90175	9.2x16.2x10.8	plastic	1kHz	60mm	10-30V DC	100mA	pnp	M8-cable connector 4-pin	2
AO000092	Q9	Ms vern						aluminum profile	3

The list of articles does only contain the available DC-(pnp) versions. Kindly request the availability of other output functions. We will be pleased to supply the matching cable socket for your devices with connector, f.ex. **VK200375**.

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