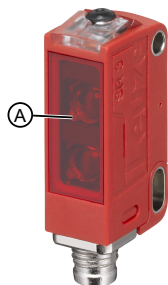


Diffuse reflection sensor with teach

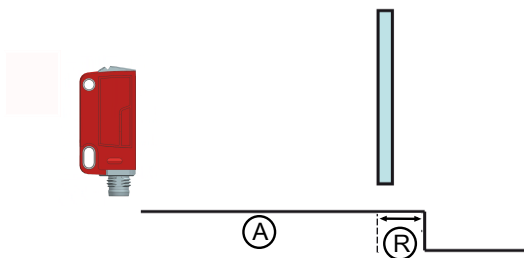
ODT3CL1-2M.3



1



2





Notes



Application notes

- Optimum detection behavior is achieved when the light spot is fully on the object.
- The maximum possible angle relative to the object surface depends on the reflection properties.
- An only partially covered light spot can affect the detection behavior.

Laser safety notices - laser class 1

 ATTENTION	
	<p>LASER RADIATION – CLASS 1 LASER PRODUCT</p> <p>The device satisfies the requirements of IEC 60825-1:2014 / EN 60825-1:2014+A11:2021 safety regulations for a product of laser class 1 and complies with 21 CFR 1040.10 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.</p> <p>⚠ Observe the applicable statutory and local laser protection regulations.</p> <p>⚠ The device must not be tampered with and must not be changed in any way.</p> <p>There are no user-serviceable parts inside the device.</p> <p>CAUTION! Opening the device may result in hazardous radiation exposure!</p> <p>Repairs must only be performed by Leuze electronic GmbH + Co. KG.</p>

Electrical connection

 CAUTION	
	<p>UL applications!</p> <p>For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).</p>

Sensor adjustment (teach) via teach button (SSC1 and SSC2)

Object test	
Upon activation of the function, the light spot begins to flash brightly to brightly display the light spot on the object that is to be detected. During this process, the function reserve is tested on the object that is to be detected.	
1	Briefly press the teach button (250 ms ... 2 s). The yellow and green LEDs flash alternately and quickly.
2	The light spot begins to flash brightly.
3	Alignment with the object that is to be detected.
4	Green LED illuminates: sufficient function reserve present. Yellow LED illuminates: function reserve in critical range.
5	Press the teach button between 250 ms and 2 s to switch off the object test and return to the standard light spot and operation. Object test ends automatically after 15 seconds.

This device setting is only available for sensors with two switching outputs SSC1 and SSC2.

- Switching points SP1 and SP2 of the sensor are set to 1000 mm (SP1) and 500 mm (SP2) on delivery.

(1) 1-point teach of SSC1 with reserve		(2) 1-point teach of SSC2 with reserve	
Position the object that is to be taught.			
1	Hold down the teach button (2 to 7s) until the yellow and green LEDs flash simultaneously.	1	Hold down the teach button (7 to 12 s) until the yellow and green LEDs flash alternately.
2	Release teach button – ready.	2	Release teach button – ready.
With this teach mode, the switching distance is configured in such a way that the object which is in the beam path during the teach procedure is detected with reserve. The reserve R refers to the additional distance by which the operating range is increased/decreased with respect to the distance to the teach object. Thus, all objects located up to just beyond the distance of the taught object are detected.		With this teach mode, the switching distance is configured in such a way that the object which is in the beam path during the teach procedure is detected with reserve. The reserve R refers to the additional distance by which the operating range is increased/decreased with respect to the distance to the teach object. Thus, all objects located up to just beyond the distance of the taught object are detected.	

Hysteresis:

To ensure continuous object detection in the switching point, the sensor has a switch hysteresis.

The object is no longer detected if:

distance to sensor > teach point + reserve + hysteresis.

(3) Set switching behavior (light/dark switching)

When the function is activated, the switching outputs are inverted relative to the previously set state.

1 Hold down the teach button longer than 12 s until only the green LED flashes.

2 Release teach button.

3 The green LED flashes for another two seconds.

Behavior of the yellow LED during the continued flashing of the green LED:

- Yellow LED ON: switching output now light switching (output active if object within the set detection range)
- Yellow LED OFF: switching output now dark switching (output active if no object within the set detection range)

Device settings are stored fail-safe.

NOTICE



The yellow LED only indicates the switching behavior of SSC1 and is dependent on the setting of the switching behavior. In normal operation, it always indicates the light path.

1

A Laser aperture

2

A Set operating range

R Reserve