Leuze electronic

# Retro-reflective photoelectric sensors for bottles

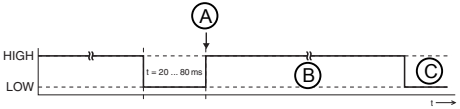
## PRK25C.T / PRK25C.TT Autokollimation

We reserve the right to make changes – 2019/01 – 50141909

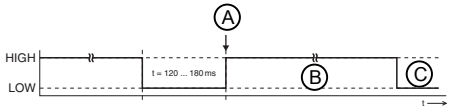
ПРОМЭЛЕКТРОНИКА / sales@prom-elec.com

Leuze electronic GmbH + Co. KG In der Braike 1 D-73277 Owen Tel.: +49 (0) 7021 573-0
info@leuze.com www.leuze.com

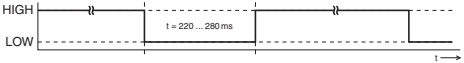
# 1


A
HIGH
LOW
t = 20 ... 80 ms
B
C
t

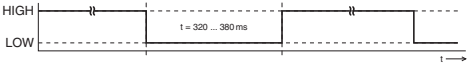
# 2


A
HIGH
LOW
t = 120 ... 180 ms
B
C
t

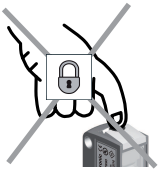
# 3


HIGH
LOW
t = 220 ... 280 ms
t

# 4


HIGH
LOW
t = 320 ... 380 ms
t

# 5



## *Sensor adjustment (teach) via teach button*

The sensor is factory-adjusted for maximum operating range. After the sensor has been commissioned, it is essential to perform a teach procedure on the reflector with clear light path.

| **(1) High sensitive teach (maximum sensitivity) for the detection of a highly transparent object (e.g. filled single bottle, glass pane or film)** | | **(2) Sensitive teach (increased sensitivity) for the detection of a transparent object (e.g. empty single bottle)** | |
|---|---|---|---|
| Clear the light path before teaching! | | | |
| 1 | Hold down the teach button (2 to 7 s) 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. |
| The sensor switches reliably when a highly transparent object (e.g. filled single bottle, glass pane or film) is transported through the light beam. | | The sensor switches reliably when a transparent object (e.g. empty single bottle) is transported through the light beam. | |
| Device settings are stored fail-safe. | | | |

| | *NOTICE* |
|---|---|
| ! | With the "high sensitive teach" setting, the sensor can always detect empty or filled highly transparent bottles reliably. The sensor then reacts sensitively to contamination or moisture condensation.<br>↳ If necessary, check whether the "sensitive teach" setting would provide adequate sensitivity. The advantage of this setting is the slightly lower sensitivity to contamination and moisture condensation. |

ПРОМЭЛЕКТРОНИКА / sales@prom-elec.com

| (3) Teach at max. operating range (factory setting) | | (4) Set switching behavior (light/dark switching) | |
|---|---|---|---|
| Obstruct the light path before teaching! | | When the function is activated, the switching output is always inverted relative to the previously set state. | |
| 1 | Hold down the teach button (2 to 7 s) until the yellow and green LEDs flash simultaneously. | 1 | Hold down the teach button longer than 12 s until only the green LED flashes.<br>– LED ON: switching output now light switching (output active if light path is free)<br>– LED OFF: switching output now dark switching (output active if object in light path) |
| 2 | Release teach button – ready. | 2 | Release teach button – ready. |
| The sensor now operates with the maximum function reserve/operating range. | | **Note**: The yellow LED is not dependent on the switching behavior setting and always indicates light switching in normal operation. | |
| Device settings are stored fail-safe. | | | |

## *Sensor adjustment (teach) via teach input (pin 2)*

This device setting is only available for sensors in the PRK25C…T3/…T… or PRK25C…TT3/…T… variant.

| *NOTICE* | |
|---|---|
| ! | The following description applies to PNP switching logic!<br>Signal level LOW ≤ 2V<br>Signal level HIGH ≥ ($U_B$-2V)<br>With the NPN models, the signal levels are inverted! |

**1**

### High sensitive teach (maximum sensitivity)

A High sensitive teach (maximum sensitivity) is performed
B Teach button is locked
C Teach button may now be operated again

2

**Sensitive teach (increased sensitivity)**

A Sensitive teach (increased sensitivity) is performed
B Teach button is locked
C Teach button may now be operated again

3

**Light switching logic**
Switching outputs are light switching, i.e., outputs are active, when there is no object currently in the light path.
With antivalent switching outputs: OUT 1 (pin 4) light switching, OUT 2 (pin 2) dark switching.

4

**Dark switching logic**
Switching outputs are dark switching, i.e., outputs are active, when there is an object currently in the light path.
With antivalent switching outputs: OUT 1 (pin 4) dark switching, OUT 2 (pin 2) light switching.

## *Locking the teach button via the teach input*

5

This device setting is only available for sensors in the PRK25C…T3/…T… or PRK25C…TT3/…T… variants (teach input via pin 2).
A static high signal (≥ 20 ms) at the teach input locks the teach button on the sensor if required, such that no manual operation is possible (e.g., protection from erroneous operation or manipulation).
If the teach input is not connected or if there is a static low signal, the button is unlocked and can be operated freely.