



extract from our online catalogue:

***ucs-24/CEE/QM***

current to: 2026-10-09



## UCS

The ucs sensors in a sturdy metal housing are mechanically compatible with the industrial standard of opto sensors.

## Highlights

- › Robust metal housing › for harsh usage conditions
- › Dovetail design › for fast installation
- › Mechanically compatible with the industry standard › a true alternative to the optical sensor
- › IO-Link interface › for support of the new industry standard
- › Smart Sensor Profile › more transparency between IO-Link Devices
- › Automatic synchronisation › for simultaneous operation of up to ten sensors in close quarters
- › UL Listed › to Canadian and US safety standards
- › 2 Push-Pull switching outputs › pnp or npn basis
- › Antivalent switching output F1
- › microsonic Teach-in using a button
- › 0.1 mm resolution
- › Temperature compensation
- › 10–30 V operating voltage
- › LinkControl › for configuration of sensors from a PC

## Basics

## ***The sturdy metal housing***

of the ucs sensors is mechanically compatible with the industrial standard of optical sensors. The rotatable circular connector allows for flexible selection of the mounting location and facilitates flexible wiring.

### ***The ucs sensors***



are available with 2 Push-Pull switching outputs in pnp- or npn-circuitry with IO-Link interface.

By default, switching output F1 works antivalent to switching output F2. Using LinkControl or IO-Link, the antivalence of switching output F1 can be canceled.

### ***The Teach-in button***

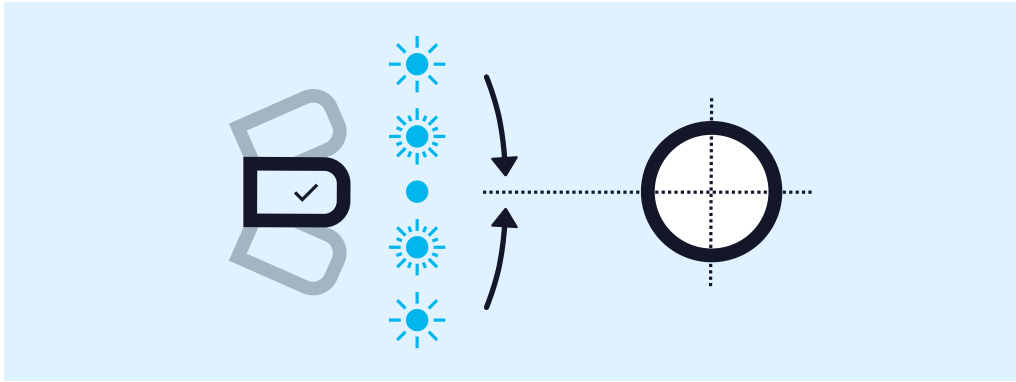
on the sensor's top allows for a convenient setting of the desired detection distance and operating mode.

### ***A dual LED***

indicates the switching status of the two switching outputs.

### ***New! With the internal alignment assistance***

the sensor can be optimally aligned to the object during installation.



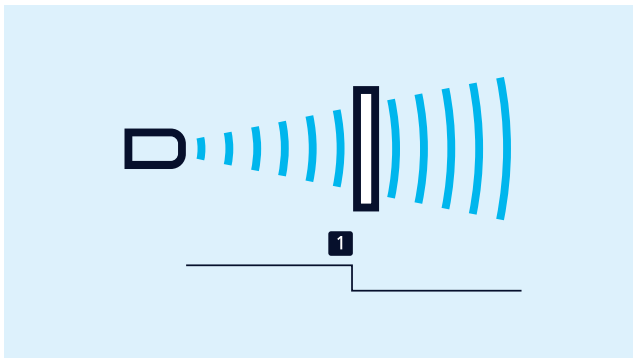
*ucs sensor using alignment assistance*

***The ucs sensors have three operating modes:***

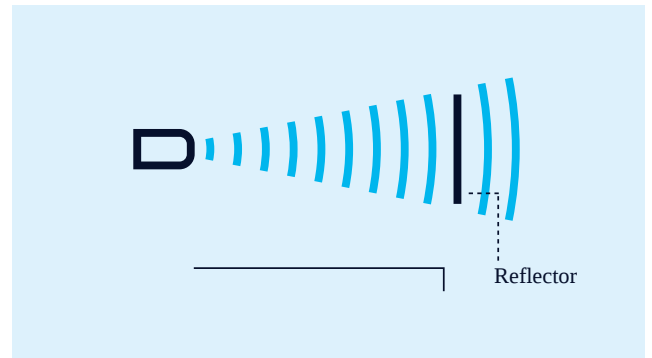
- Single switching point
- Two-way reflective barrier
- Window mode

***The switching output is set***

- by positioning the object to be detected within the desired distance (1) to the sensor, pressing the button for approx. 3 seconds and then pressing it once more for approx. 1 second. Ready.



*Teach-in of a switching point*



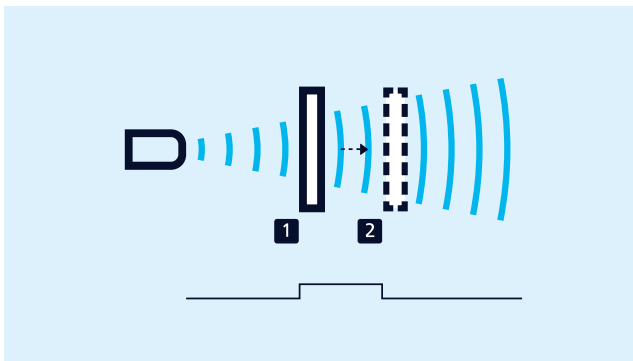
*Teach-in of a two-way reflective barrier*

## **A two-way reflective barrier**

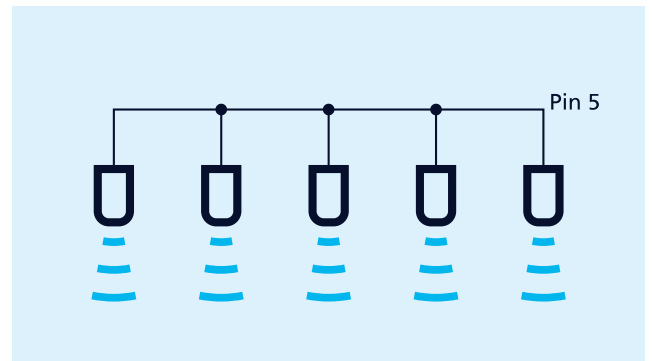
can be set up with the help of a permanently mounted reflector by mounting the ucs sensor and the reflector, then pressing the button for approx. 3 seconds and then pressing it once more for approx. 10 seconds. Now, the two-way reflective barrier has been set.

## **Set a window**

by initially positioning the object to be detected on the sensor-close window limit (1), pressing the button for approx. 3 seconds, shifting the object to the sensor-distant window limit (2) and pressing the button once more for approx. 1 second. Ready.



*Teach-in of a window with two switching points*



*Synchronisation using pin 5*

## **Up to ten sensors**

can be synchronised with one another. To do this, all the sensors are electrically connected on pin 5 on the M12 circular connector.

If more than 10 sensors must be synchronised, this can be carried out with the SyncBox1, which is available as an accessory

## **LinkControl**

optionally permits the extensive parameterisation of ucs sensors. The LCA-2 LinkControl adapter, which is available as an accessory, can be used to connect ucs sensors to the PC.



*Sensor connected to the PC via LCA-2 for programming*

### ***IO-Link integrated***

in version 1.1.2 The ucs ultrasonic sensors are equipped with Smart Sensor Profile, which creates more transparency between IO-Link devices.

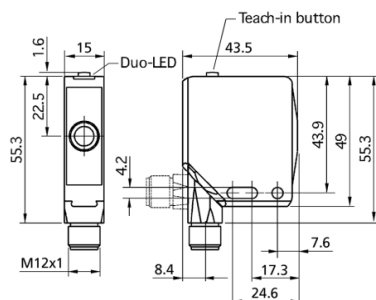
## ***You have special requirements?***

Nothing as simple as that.

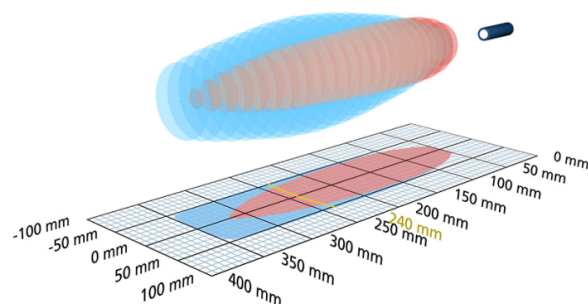
With us, you can easily find an individual solution. Let us talk about your application: +49 231 97 51 51-82.

# ucs-24/CEE/QM

## scale drawing



## detection zone



Successor model available

ucs-24/CFF



2 x npn

350 mm

design

cuboidal

operating mode

 proximity switch/reflective mode  
 reflective barrier  
 window mode

particularities

cuboidal

## Ultrasonic-Specific

means of measurement

echo propagation time measurement

transducer frequency

500 kHz

blind zone

55 mm

operating range

240 mm

max. range

350 mm

resolution

0.10 mm

reproducibility

± 0.15 %

accuracy

± 1 % (temperature drift internally compensated)

## Electrical Data

operating voltage  $U_B$ 

10 - 30 V d.c., reverse polarity protection

voltage ripple

± 10 %

no-load current consumption

≤ 40 mA

type of connection

5-pin M12 initiator plug

## outputs

|                             |                                                                                                               |
|-----------------------------|---------------------------------------------------------------------------------------------------------------|
| output 1                    | switching output<br>npn: $I_{\max} = 200 \text{ mA}$ ( $-U_B+2V$ )<br>NOC/NCC adjustable, short-circuit-proof |
| Ausgang 2                   | switching output<br>npn: $I_{\max} = 200 \text{ mA}$ ( $-U_B+2V$ )<br>NOC/NCC adjustable, short-circuit-proof |
| switching hysteresis        | 2.0 mm                                                                                                        |
| switching frequency         | 25 Hz                                                                                                         |
| response delay              | 24 ms                                                                                                         |
| delay prior to availability | < 300 ms                                                                                                      |

## Inputs

|         |           |
|---------|-----------|
| input 1 | com input |
|---------|-----------|

## housing

|                                 |                                                    |
|---------------------------------|----------------------------------------------------|
| material                        | zinc die-casting, plastic parts, PBT               |
| ultrasonic transducer           | polyurethane foam, epoxy resin with glass contents |
| class of protection to EN 60529 | IP 67                                              |
| operating temperature           | -25°C to +70°C                                     |
| storage temperature             | -40°C to +85°C                                     |
| weight                          | 75 g                                               |

## Technical Features/Characteristics

|                          |                                                     |
|--------------------------|-----------------------------------------------------|
| temperature compensation | yes                                                 |
| controls                 | 1 push-button<br/>com input                         |
| scope for settings       | Teach-in via push-button<br>LCA-2 with LinkControl  |
| synchronization          | yes                                                 |
| multiplex                | no                                                  |
| indicators               | 1 x Duo-LED; green: working / yellow: switch status |

## Accessories

|                      |                                                                                   |
|----------------------|-----------------------------------------------------------------------------------|
| deployable accessory | KST5A-2/M12<br>KST5A-5/M12<br>KST5G-2/M12<br>KST5G-5/M12<br>LCA-2<br>LCA-2 Koffer |
|----------------------|-----------------------------------------------------------------------------------|

## pin assignment

