microsonic

EVERY THING ULTRA SONIC

extract from our online catalogue:

ucs ultrasonic sensors

current to: 2026-11-03

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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

Basics

- 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

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

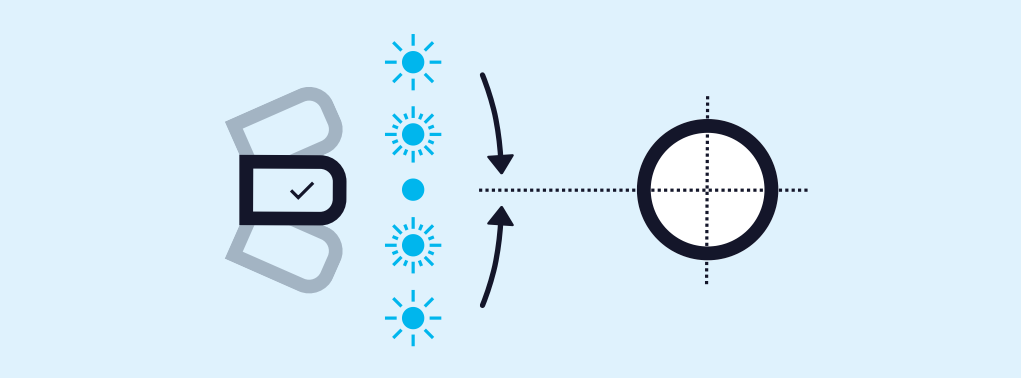
on the sensor´s top allows for a convenient setting of the desired detection distance and operating mode.

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.



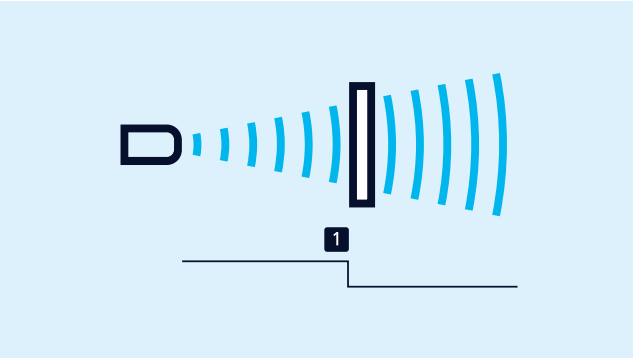
ucs sensor using alignment assistance

The ucs sensors have three operating modes:

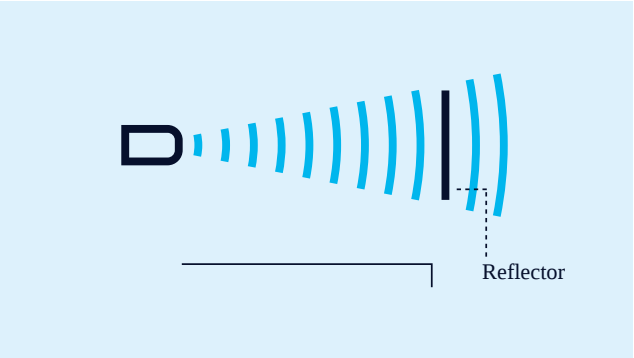
- Single switching point
- Two-way reflective barrier
- Window mode

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



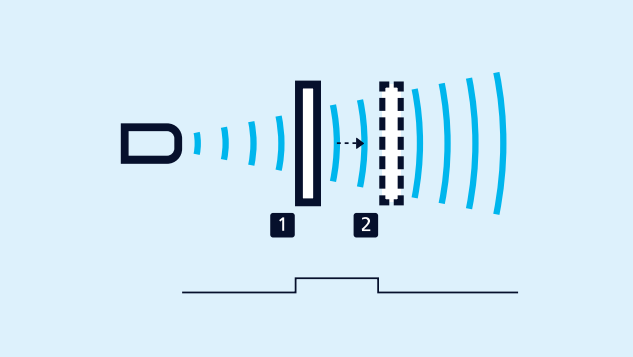
Teach-in of a two-way reflective barrier

A two-way reflective barrier

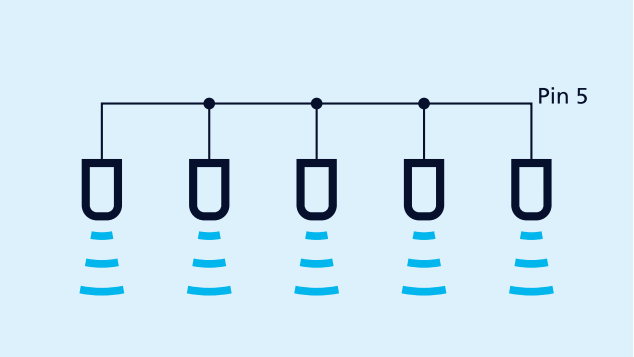
can be set up with the help of a permanently mounted reflector by mounting the ucs sensor and the reflector, then pressing the button for approx. 3 seconds and then pressing it once more for approx. 10 seconds. Now, the two-way reflective barrier has been set.

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.

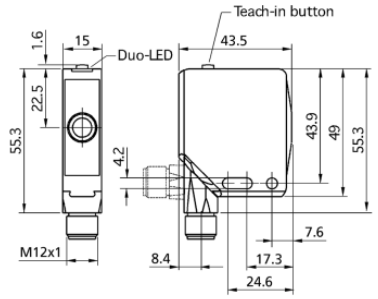
You have special requirements?

Nothing as simple as that.

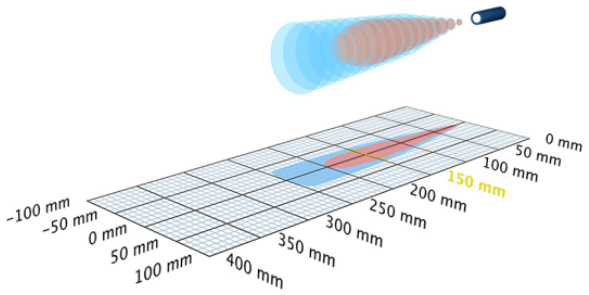
With us, you can easily find an individual solution. Let us talk about your application: +49 231 97 51 51-82.

ucs-15/CFF

scale drawing



detection zone



2 x Push-Pull | 250 mm

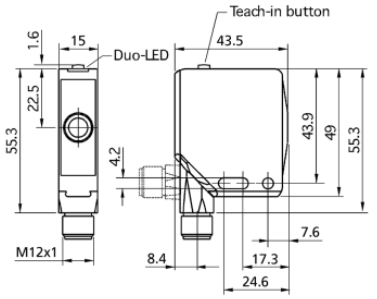
design	cuboidal
operating mode	IO-Link proximity switch/reflective mode reflective barrier window mode
particularities	cuboidal design narrow sound field IO-Link version 1.1 Smart Sensor Profile UL Listed

Ultrasonic-Specific

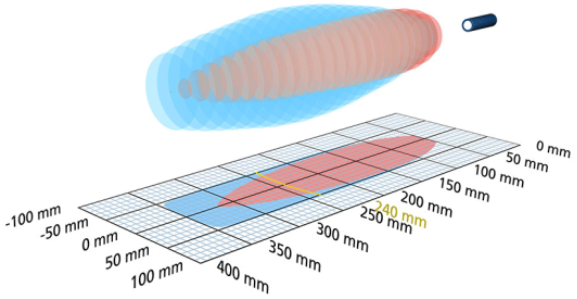
means of measurement	echo propagation time measurement
transducer frequency	380 kHz
blind zone	20 mm
operating range	150 mm
max. range	250 mm
resolution	0.10 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

ucs-24/CFF

scale drawing



detection zone



2 x Push-Pull | 350 mm

design	cuboidal
operating mode	IO-Link proximity switch/reflective mode reflective barrier window mode
particularities	cuboidal design IO-Link version 1.1 Smart Sensor Profile UL Listed

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	≤ 60 mA
type of connection	5-pin M12 initiator plug

Outputs

output 1	switching output Push-Pull, U_B-3 V, -U_B+3 V,I_{max} = 100 mA NOC/NCC adjustable, short-circuit-proof
Ausgang 2	switching output Push-Pull, U_B-3 V, -U_B+3 V,I_{max} = 100 mA NOC/NCC adjustable, short-circuit-proof
switching hysteresis	2.0 mm
switching frequency	25 Hz
response delay	32 ms
delay prior to availability	< 300 ms

Inputs

input 1	com input synchronisation input teach-in 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	65 g

Electrical Data

operating voltage U_B	10 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 60 mA
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Ausgang 2	switching output Push-Pull, U_B-3 V, -U_B+3 V,I_{max} = 100 mA NOC/NCC adjustable, short-circuit-proof
switching hysteresis	2.0 mm
switching frequency	20 Hz
response delay	40 ms
delay prior to availability	< 300 ms

Inputs

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Housing

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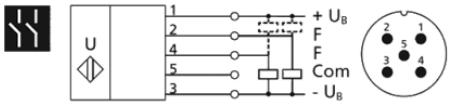
Technical Features/Characteristics

temperature compensation	yes
controls	1 push-button com input
scope for settings	Teach-in via push-button LCA-2 with LinkControl IO-Link
synchronization	yes
multiplex	yes
indicators	Duo-LED green/yellow

Accessories

deployable accessory	KST5A-2/M12 KST5A-5/M12 KST5G-2/M12 KST5G-5/M12 LCA-2 LCA-2 Koffer

pin assignment



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pin assignment

