microsonic



extract from our online catalogue:

lcs+340/DD

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lcs+

The lcs+ ultrasonic sensors come in a very compact square-shaped housing - with analogue or switching output + IO-Link.

Highlights

- Very compact housing dimensions › only 62 mm x 62 mm x 37.2 mm
- IO-Link interface › for support of the new industry standard
- Smart Sensor Profiles › more transparency between IO-Link Devices
- Synchronisation and multiplex mode › for simultaneous operation of up to ten sensors in close quarters
- 8 m maximum detection range
- UL Listed to Canadian and US safety standards

Basics

- 1 Push-Pull switching output, or 2 pnp switching outputs
- Analogue output 4–20 mA and 0–10 V › with automatic switching between current and voltage outputs
- microsonic Teach-in by using button T1 and T2
- 0.18 mm to 2.4 mm resolution
- Temperature compensation
- 9–30 V operating voltage
- LinkControl › for configuration of sensors from a PC

The Ics+ ultrasonic sensors

have a block-like plastic housing with a base area of only 62 × 62 mm and four fastening bores.
The sensors are Listed to applicable UL Standards and requirements by UL for Canada and the US.

Two dual colour LEDs

show all operating statuses.

Using the two Teach-in buttons T1 and T2

the Ics+ sensors can be easily set (Teach-in).

Three output stages are available for selection:



1 Push-Pull switching output with pnp or npn switching technology with IO-Link interface



2 pnp switching outputs



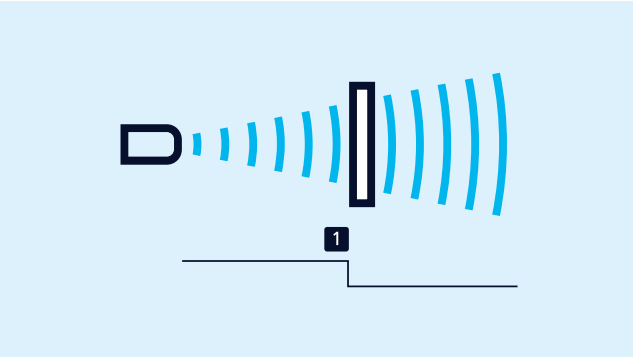
1 analogue output 4–20 mA or 0–10 V

The Ics+ sensors with switching output have three operating modes:

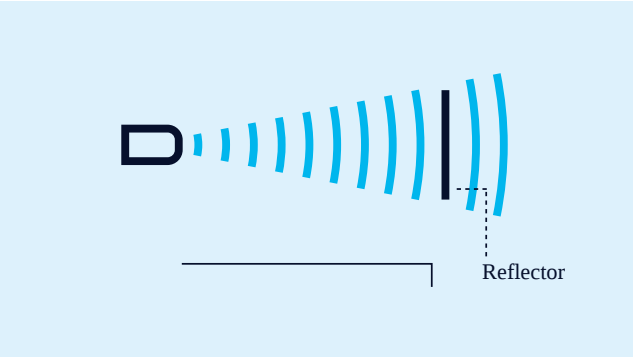
- Single switching point
- Two-way reflective barrier
- Window mode

Teach-in of a single switching point

- Place object to be detected (1) at the desired distance
- Push button T2 for about 3 seconds
- Then push button T2 again for about 1 second



Teach-in of a switching point



Teach-in of a two-way reflective barrier

Teach-in of a two-way reflective barrier

with a fixed mounted reflector

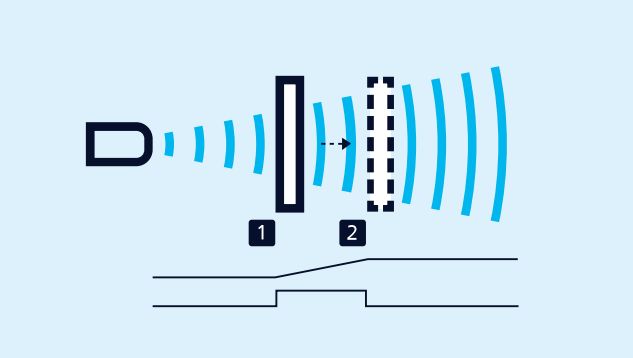
- Push button T1 for about 3 seconds
- Then push button T1 again for about 10 seconds

For setting the analogue output

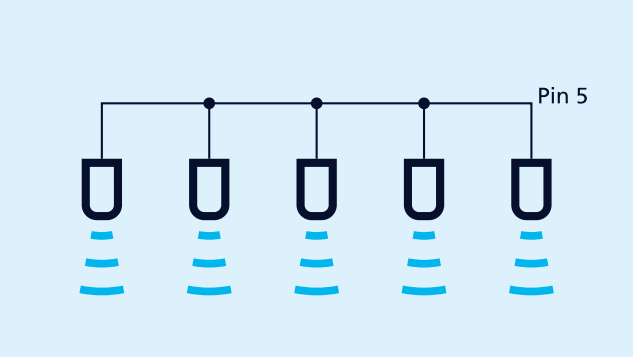
- Initially position the object to be detected to the sensor-close window limit (1)
- Push button T1 for about 3 seconds
- Then move the object to the sensor-distant window limit (2)
- Then push button T1 again for about 1 second

For configuration of a window

with two switching points on a single switched output, the procedure is the same as setting the analogue.



Teach-in of an analogue characteristic or a window with two switching points



Synchronisation using pin 5

Easy to synchronise

If several Ics+ ultrasonic sensors are operated in one application, the can be synchronised via pin 5 to prevent.
If more than 10 sensors must be synchronised, this can be carried out with the SyncBox1 , which is available as an accessory. Synchronisation via pin 5 is also possible in IO-Link mode.

Analogue sensors

check the connected working resistance at the output and automatically switch to 4–20 mA current output or 0–10 V voltage output.

NCC/NOC

and rising/falling analogue characteristics can also be set via the buttons.

LinkControl

permits comprehensive parameterisation of Ics+ ultrasonic sensors via the LinkControl adapter LCA-2 which connects the sensors to the PC.



Sensor connected to the PC via LCA-2 for programming

IO-Link

Ultrasonic sensors Ics+340/F/A and Ics+600/F/A have a Push-Pull switching output and support IO-Link in version 1.1 as well as the Smart Sensor profile.

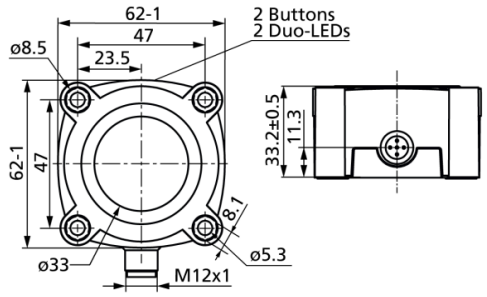
You have special requirements?

Nothing as simple as that.

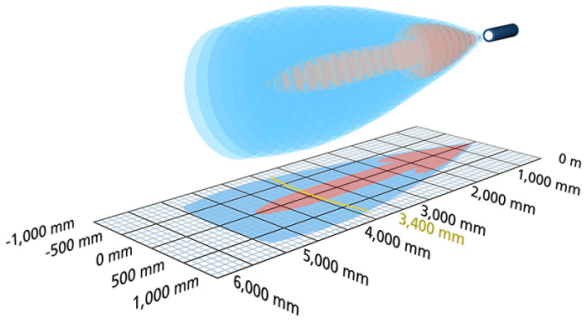
With us, you can easily find an individual solution. Let us talk about your application: +49 231 97 51 51-82.

lcs+340/DD

scale drawing



detection zone



2 x pnp

5,000 mm

design	cuboidal
operating mode	proximity switch/reflective mode reflective barrier window mode
particularities	UL Listed

Ultrasonic-Specific

means of measurement	echo propagation time measurement
transducer frequency	120 kHz
blind zone	350 mm
operating range	3.400 mm
max. range	5,000 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

Electrical Data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 60 mA

outputs

output 1	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
Ausgang 2	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	50 mm
switching frequency	4 Hz
response delay	172 ms
delay prior to availability	< 380 ms

Inputs

input 1	com input synchronisation input

housing

material	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	180 g

Technical Features/Characteristics

temperature compensation	yes
controls	2 push-buttons
scope for settings	Teach-in via push-button LCA-2 with LinkControl
synchronization	yes
multiplex	yes
indicators	2 x three-colour LED

Accessories

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

pin assignment

