Ultrasonic fast

Just like our sensors.
Discover them now!

microsonic

NEW

microsonic

The fastest ultrasonic label sensor of its time.

We detect
where others falter.

esf+1 pro

500 kHz

IO-Link



For all standard labels.

esf+1 expert

200 kHz

IO-Link



Both sensors are identical in construction and interchangeable.

For labels that are difficult to detect.

NEW

microsonic

esf+1 – the future of label detection.



1 _ High-tech plastic housing

The special plastic used has metal-like properties and is light but very robust.

2 _ M12 connector can be pivoted by 90°

In this way, the connection line can be led to the sensor from behind or, to save space, from above.

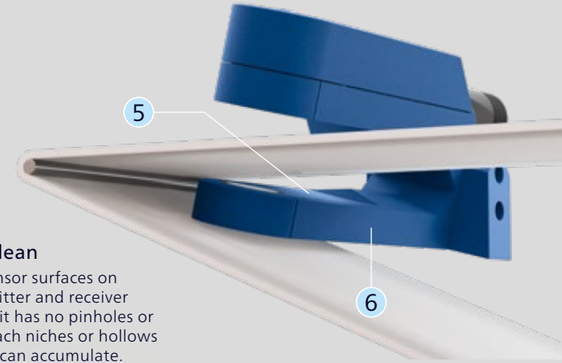
3 _ Mounting adapter for two fitting positions

The asymmetrical mounting adapter can be inserted in 2 directions, thereby allowing it to be positioned optimally to the right and left of the dispensing edge.



4 _ Simple Teach-in

The label material can be taught-in very easily with the aid of the button.



5 _ Easy to clean

The flat sensor surfaces on the transmitter and receiver mean that it has no pinholes or hard-to-reach niches or hollows where dirt can accumulate.

6 _ Flat fork leg

The very flat design of the lower fork leg allows the material to be positioned close to the dispensing edge.

microsonic.de/en/esf+1

DUAL-HEAD SENSORS

dbk+4 Double-sheet control



The dbk+ controls single electrode layers in the production of lithium-ion batteries.



Receiver with 90° angular head

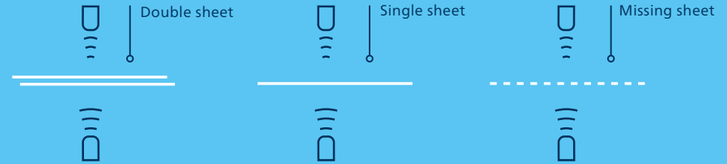


Transmitter and receiver in M12 threaded sleeve



Standard housing

The **double-sheet control** identifies one or two overlying materials, such as paper, film, metal sheets or electrodes.



dbk+4

The industry standard for double-sheet detection

- No Teach-in required
- 3 control inputs for sensitivity settings for the material
- Double-sheet and missing-sheet output
- High-performance variant for detecting thick materials
- Teach-in option, e.g. for detecting wafers stuck together by a water film
- Stainless steel housing option for battery production
- IO-Link interface

microsonic.de/en/dbk+4

DUAL-HEAD SENSORS

esp-4
Reliable splice detection

Transmitter and receiver in M12 threaded sleeve

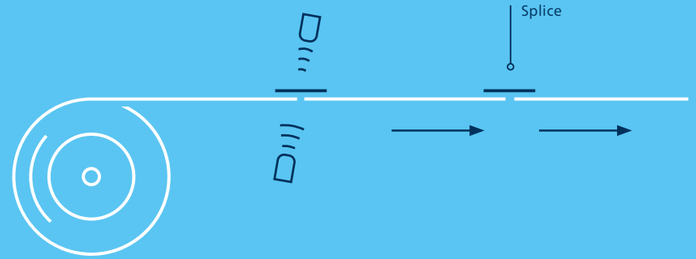




Standard housing

Even in the case of extremely inhomogeneous web materials

Web materials are connected with an abutting or overlapping adhesive strip. A splice sensor must reliably detect these adhesive points (splices) in a web material that is usually unwound from a coil.



esp-4

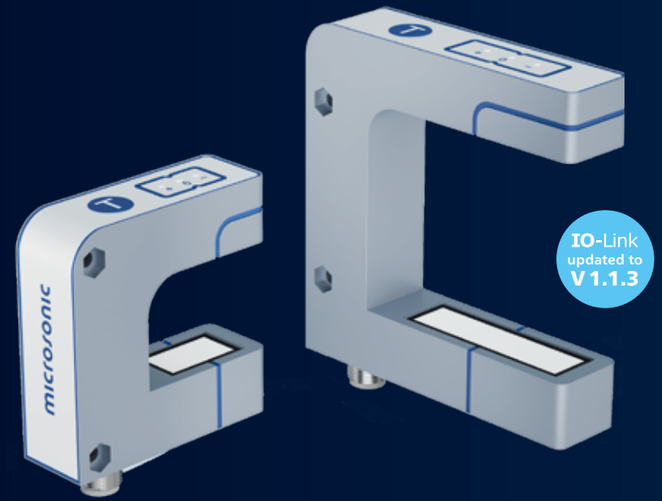
Splice and label sensor

- 3 Teach-in methods
- Transmitter and receiver separate in the M18 or M12 housing
- 2 Push-Pull switching outputs for label/splice detection and web break monitoring
- Response time < 300 µs
- IO-Link interface

microsonic.de/en/esp-4

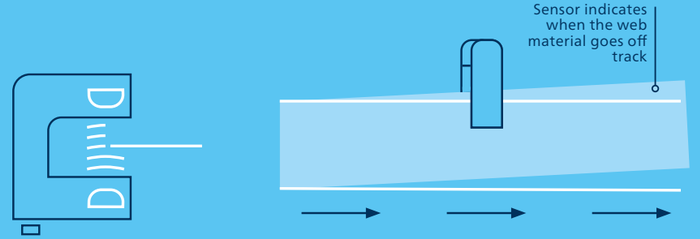
DUAL-HEAD SENSORS

bks+
Contact-free web edge detection



bks+3 bks+6

The **web edge sensor** allows the web edges of foil, paper and other sound-impermeable materials to be scanned without contact in order to regulate the web run.



bks+

Keeping web material on track

- Robust metal housing
- 2 housing designs with fork widths of 30 mm and 60 mm
- Choice of 12 mm or 40 mm measuring range
- Analogue output 4–20 mA and 0–10 V + 1 Push-Pull switching output + IO-Link
- 3 LEDs and 1 button
- IO-Link interface

microsonic.de/en/bks+

SENSOR EXPERTISE

Ultrasonic sensors for any of your applications.

Here's what ultrasonic can do!



Cylindrical, cubic and chemical-resistant sensors.

CYLINDRICAL SENSORS

mic+

The universally usable ultrasonic sensor

- M30 brass sleeve
- Digital display with direct measured value output
- microsonic Teach-in using T1 or T2 button
- 5 detection ranges: 350 mm, 600 mm, 2,000 mm, 5,000 mm and 8,000 mm
- 1 Push-Pull switching output + IO-Link
- 1 or 2 switching outputs
- Analogue output 4–20 mA and 0–10 V
- Analogue output + 1 pnp switching output



IO-Link

Digital display

Highly communicative due to direct measured value output in mm, cm or %

TouchControl

Quick and easy configuration with microsonic Teach-in using T1 or T2 button

5 detection ranges

mic+ sensors are available in four device variants with five different detection ranges: 350 mm, 600 mm, 2,000 mm, 5,000 mm and 8,000 mm.

microsonic.de/en/mic+

mic

For harsh operating conditions



5 detection ranges and M30 all-metal sleeve.

- M30 all-metal sleeve
- 5 detection ranges: 350 mm, 600 mm, 2,000 mm, 5,000 mm and 8,000 mm
- 1 pnp switching output
- Analogue output 4–20 mA and 0–10 V

microsonic.de/en/mic

nano

The smallest M12 ultrasonic sensor on the market!



IO-Link

Just 55 mm long with 2 detection ranges.

- M12 all-metal sleeve
- Threaded sleeve just 55 mm long (60 mm for analogue sensor)
- 2 detection ranges: 250 mm and 350 mm
- 1 Push-Pull switching output + IO-Link
- Analogue output 4–20 mA or 0–10 V

microsonic.de/en/nano

pico+

Small but extremely versatile



IO-Link

4 detection ranges and M18 all-metal sleeve.

- M18 all-metal sleeve
- 2 housing variants: direct beam and with 90° angular head
- 4 detection ranges: 250 mm, 350 mm, 600 mm and 1,300 mm
- 1 Push-Pull switching output + IO-Link
- Analogue output 4–20 mA or 0–10 V

microsonic.de/en/pico+

wms

The robust ultrasonic sensor



For customer signal evaluation, especially on agricultural machinery.

- M30 all-metal sleeve
- For use in microprocessor controllers
- Trigger input for controlling the ultrasonic transmitter
- Echo output for customer evaluation in the controller
- 5 detection ranges: 350 mm, 600 mm, 2,000 mm, 5,000 mm and 8,000 mm
- Variant with connector or cable outlet including Superseal connector for agricultural machinery

microsonic.de/en/wms

lpc+

2 output stages and IO-Link



IO-Link

Specially for measuring fill levels and detecting potential jams on conveyor belts.

- M18 all-metal sleeve
- 2 housing variants: direct beam and with 90° angular head
- 4 detection ranges: 250 mm, 350 mm, 600 mm and 1,300 mm
- 2 Push-Pull switching outputs + IO-Link
- Analogue output 4–20 mA or 0–10 V + 1 Push-Pull switching output

microsonic.de/en/lpc+

CUBIC SENSORS

sks

The smallest of its kind



IO-Link

Identical in construction with many optical sensors.

- Miniature housing with 2 M3 threaded bushes for cramped installation conditions
- Optional: SoundPipe sks1 waveguide attachment
- Measuring range: 20–250 mm
- microsonic Teach-in using a button
- 1 Push-Pull switching output + IO-Link
- Analogue output 4–20 mA or 0–10 V

microsonic.de/en/sks

lcs+

The compact sensor with a long detection range



IO-Link

In cuboid housing: 62 mm x 62 mm.

- 2 detection ranges: 5,000 mm and 8,000 mm
- microsonic Teach-in using T1 or T2 button
- 1 Push-Pull switching output + IO-Link
- 2 pnp switching outputs
- Analogue output 4–20 mA and 0–10 V

microsonic.de/en/lcs+

cube

Ultrasonic sensor with rotatable sensor head

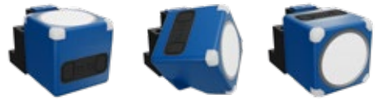
- Housing: 40 mm x 40 mm x 40 mm
- 3 detection ranges: 600 mm, 3,400 mm and 5,000 mm
- Sensor head mountable in 5 positions
- microsonic Teach-in using T1 or T2 button
- 1 Push-Pull switching output + IO-Link
- 1 Push-Pull switching output + IO-Link and 1 analogue output or switchable to second switching output



IO-Link

Easy to attach

With QuickLock mounting bracket.



Ultra-agile

Mountable in 5 beam directions.

microsonic.de/en/cube



IO-Link

ucs

The robust option with short detection ranges

Specially designed for use in the printing and timber industry.

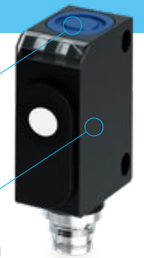
- Robust metal housing
- Dovetail guide
- Mechanically compatible with opto sensors
- 2 detection ranges: 250 mm and 350 mm
- 2 Push-Pull switching outputs + IO-Link

microsonic.de/en/ucs

zws

The ultrasonic sensor in a miniature housing

- Cuboid miniature housing
- Up to 250 Hz switching frequency for fast scanning
- Optional extra: SoundPipe zws1 waveguide attachment
- Identical in construction with many optical sensors
- microsonic Teach-in by using a button
- 5 detection ranges: 100 mm, 250 mm, 350 mm, 600 mm and 1,000 mm
- 1 switching output
- Analogue output 4–20 mA or 0–10 V



Easy to configure

microsonic Teach-in using buttons

Cuboid miniature housing

The housing is identical in construction to the housing of many optical sensors: 20 mm x 32 mm x 12 mm.



Ultra-narrow beam spread

The SoundPipe zws1 helps to focus sound fields and allows measurements to be taken in narrow openings with diameter of less than 5 mm.

microsonic.de/en/zws

CHEMICAL-RESISTANT SENSORS



IO-Link

pico+ TF

The small sensor with a PTFE membrane

Contact-free fill-level measurement for chemically aggressive liquids or granules.

- M22 threaded sleeve in PVDF
- PTFE-encapsulated ultrasonic transducer
- 4 detection ranges: 250 mm, 350 mm, 600 mm and 1,300 mm
- 1 Push-Pull switching output + IO-Link
- Analogue output 4–20 mA or 0–10 V

Application recommendation, e.g. for digital printing machines

microsonic.de/en/pico+TF

hps+

Fill-level sensors with a PTFE membrane

- Stainless steel housing or optional PVDF housing
- PTFE membrane to protect against aggressive media
- Digital display with direct measured value output in mm, cm or %
- microsonic Teach-in using T1 or T2 button
- 4 detection ranges: 350 mm, 600 mm, 2,000 mm and 5,000 mm
- 2 switching outputs
- 1 pnp switching output with analogue output



Stainless steel housing

Suitable for use in the food industry

hps+ 340



PVDF housing

Highly resistant against aggressive media

hps+ 340

microsonic.de/en/hps+

crm+

Fill-level sensors with PEEK membrane



IO-Link

5 detection ranges and stainless steel housing in M30.

- M30 stainless steel sleeve
- Ultrasonic transducer protected by PEEK membrane
- Digital display with direct measured value output in mm, cm or %
- microsonic Teach-in using T1 or T2 button
- 5 detection ranges: 350 mm, 600 mm, 2,000 mm, 5,000 mm and 8,000 mm
- 1 or 2 switching outputs + IO-Link
- Analogue output 4–20 mA and 0–10 V

microsonic.de/en/crm+

pms

Stainless steel sensor in hygienic design

- Innovative housing in Washdown Design and EHEDG certified
- Robust stainless steel housing
- PTFE membrane for protection against aggressive media
- Sensor screw connection in hygienic design
- Certified by EHEDG and ECOLAB
- 4 detection ranges: 250 mm, 350 mm, 600 mm and 1,300 mm
- 1 Push-Pull switching output + IO-Link
- Analogue output 4–20 mA or 0–10 V

microsonic.de/en/pms



IO-Link

PTFE membrane

to protect against chemically aggressive cleaning agents

Robust design

made of stainless steel 1.4404 with peak-to-valley height Ra < 0.8 µm

Intelligent sensor design

compliant with EHEDG guidelines

The housing's special geometry ensures that, no matter what fitting positions are used for the sensor, no surfaces are aligned horizontally.

If any challenge in the world can be solved with ultrasonic, we will develop and build the sensor!

microsonic



mic+ sensors control the volume flow in the food industry.



pms ultrasonic sensor for applications in the food and pharmaceutical industries.



The **bks+** web edge sensor detects the edge of foil or other sound-impermeable materials without contact in order to regulate the web run.



zws sensors measure the dimensions of pharmaceutical packaging in automated pharmacy warehouses.

UNSER HERZ SCHALLT ULTRA

How to reach us directly:

→ **+49 231 975151-82**

→ **sales@microsonic.de**

microsonic GmbH
Phoenixseestraße 7 / 44263 Dortmund / Germany
T +49 231 975151-0 / **E** info@microsonic.de / **W** microsonic.de

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