ULTRASONIC SENSORS US

SWITCHING AND / OR MEASURING

di-soric

ULTRASONIC – A SUCCESS PRINCIPLE
WITH MANY BENEFITS.

ALL PRACTICAL BENEFITS – UNIFIED IN ONE SENSOR

IO-Link – for future-proof communication
- Constant monitoring of device functions and parameters
- Extended setting options

Reflective mode – the guarantee of success in the background

The sensor is taught in to the background, not to the objects to be detected, so it only has to detect a deviation from the background.
- Detection regardless of surface
- Much more stable, simpler processes

A clear switch point due to temperature compensation

Even when the temperature fluctuates, constant measurement accuracy thanks to integrated temperature compensation – which can be enabled and disabled.
- Always a clear switch point, even if temperatures change slowly
- Constantly high measurement accuracy for optimum process quality
- Shall be disabled if temperatures change rapidly
- Maximum system availability and reduction in machine downtimes

Ultra-simple teach-in: 3 teach modes and other settings
- Window mode
- 2-point mode
- Auto-teach mode
- The output can be switched

Compact and short from M8 to Q12 – threaded and cuboid designs
- Simple machine integration, thanks to extremely small and short housing dimensions
- Maximum flexibility even in tight installation spaces
- Retrofit – perfectly suited to retrofitting or replacement

THE SWITCHING ULTRASONIC RANGE.
ULTRA-SIMPLE – ULTRA-FLEXIBLE.

STABLE PROCESSES DUE TO DI-SORIC ULTRASONIC SENSORS.

Simple machine integration

thanks to extremely small and, in particular, short housing dimensions

Maximum flexibility

due to different designs and configurable operating ranges

Stable applications

due to resistance to dirt and insensitivity to noise, independent surface properties such as color

Stable processes

thanks to narrow sound beams and optional reflective mode

Durability and a long service life

due to metal housing, plugs and IP67

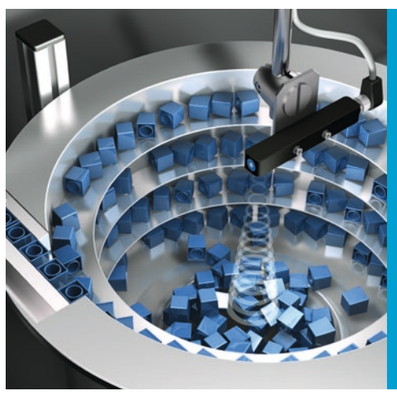
Quickly ready for operation

due to simple teach-in and IO-Link

Reliability

due to high tolerance of contamination and temperature compensation

IO-Link

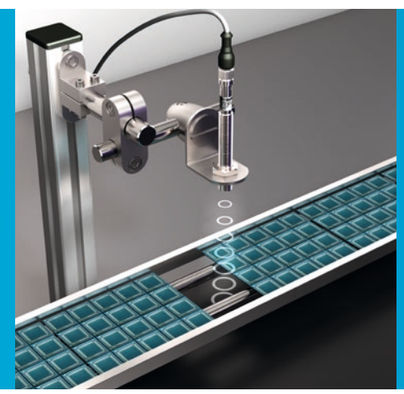


Level control in the hopper
US Q12

The ultrasonic sensor reliably monitors the fill level in the vibratory feeder. Thanks to its cuboid design, it can even be installed directly on the hopper wall of step feeders.

Accumulation monitoring for boxes
US 12 / US 18

The long ranges achieved by the ultrasonic sensor, which works with IO-Link, enable it to reliably identify accumulations and gaps between boxes being transported, ensuring that packages are transported smoothly and without disruption.



Detecting the presence of PCBs
US 08

Its unique M8 design and extremely narrow sound beam make the US 08 the perfect problem-solver where classic proximity switches reach the limits of their scanning ranges.
For example, it can be used to detect the presence of PCBs at a greater distance (up to 100 mm).

THE MEASURING ULTRASONIC RANGE.
ANALOG OUTPUT AND MULTI-I/O.

JUST ONE SENSOR FOR BOTH MEASUREMENT TASKS AND OTHER TASKS FOR WHICH ANOTHER SENSOR WOULD BE REQUIRED.

Teach, switch and measure
using MI/O

6 seconds
is all you need to teach it in and configure it

Reliable detection
even of small parts, due to high resolution and narrow sound beam

Shortest designs
with lengths from 60 mm, M12, M18, M30 and Q12

Can be configured flexibly
as an ultrasonic sensor or a barrier

Cost saving
due to connection with 4-core standard sensor circuits instead of expensive 5-core circuits – yet with full functionality

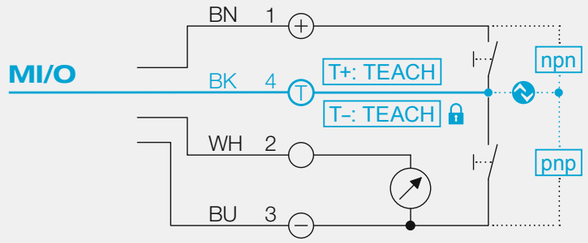
IO-Link

THE WORLD'S FIRST MULTI-I/O
IN ONE SENSOR: MI/O.

TRUE MULTI FUNCTIONALITY AND A FULL RANGE OF FUNCTIONS, WITH ONLY 4 PINS.

HOW MI/O WORKS

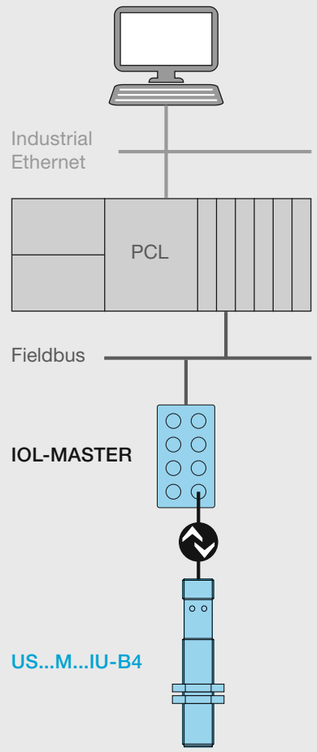
Using MI/O, a connected IO-Link Master is recognized automatically and the sensor changes to communication mode. Instead of the teach input, a switching output can then be configured.

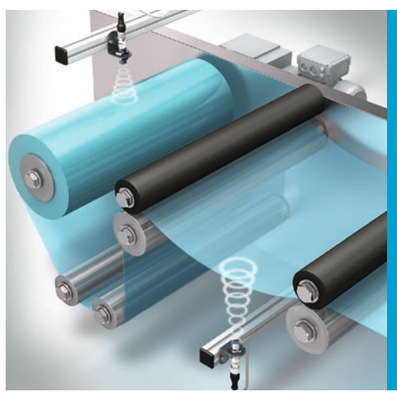


BN: brown | BK: black | WH: white | BU: blue

MI/O PIN 4
A connection PIN that performs multiple functions:
1. Teach-In
2. IO-Link communication
3. Switching output

IO-LINK

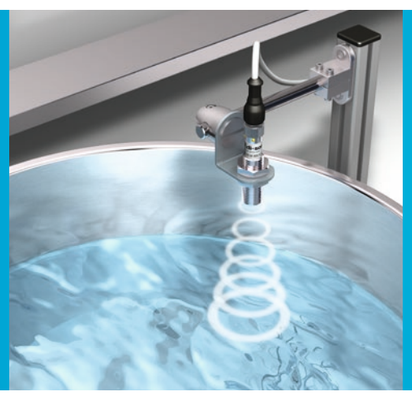




Roller diameter check
US 18 M 1500 IU-B4

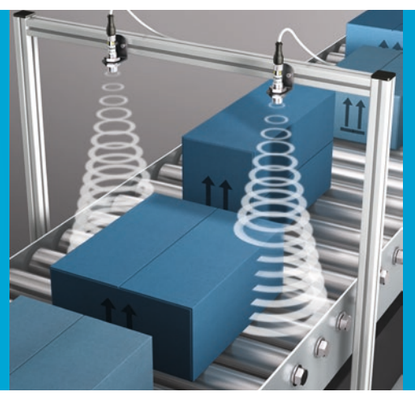
Sag check (speed regulation)
US 12 M 400 IU-B4

Using MI/O enables optimal planning of roller replacement through continual sag checks, monitoring and a signal over a configurable switching output if the roller thickness drops below the set minimum.



Container monitoring
US 18 M 800 IU-B4

The container fill level can be monitored using an analog signal – the additional switching output can be used as a warning output if a critical level is exceeded, or no longer achieved, to control filling or perform an emergency stop, by starting a dry run, to protect the machine.



Box height measurement
US 18 M 1500 IU-B4

The classic analog application: use this ultrasonic sensor to measure different box heights reliably, using analog signals, no matter what their surface properties, such as color, at a working distance of 1.5 m.

ULTRASONIC SENSORS US
SWITCHING

Type	US 08 M 100 G3-T4	US 12 M 150 FB G3-B4	US 12 M 200 G3-B4	US 12 M 400 G3-B4	US 18 M 800 G3-B4	US 18 M 1500 G3-B4
Design	M8	M12	M12	M12	M18	M18
Length	70 mm	84 mm	65 mm	65 mm	55.5 mm	55.5 mm
Range	20 ... 100 mm	0 ... 150 mm	20 ... 200 mm	40 ... 400 mm	80 ... 800 mm	120 ... 1500 mm
Scanning	✓	✓	✓	✓	✓	✓
Reflex	✓	✓	✓	✓	✓	✓
Extra		Focusing nozzle				
Setting	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link

Type	US 30 M 3000 G3-B4	US 30 M 6000 G3-B4	US Q12 M 200 G3-T4	US Q12 M 400 G3-T4	US Q12 M 400 FP G3-T4	US Q12 M 400 HP G3-T4
Design	M30	M30	Cuboid	Cuboid	Cuboid	Cuboid
Length	60 mm	78 mm	83.5 mm	83.5 mm	90.5 mm	90.5 mm
Range	300 ... 3000 mm	600 ... 6000 mm	20 ... 200 mm	40 ... 400 mm	40 ... 400 mm	40 ... 400 mm
Scanning	✓	✓	✓	✓	✓	✓
Reflex	✓	✓	✓	✓	✓	✓
Extra					Fill level monitoring of all media	Sensor with background suppression
Setting	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link, Potentiometer	Remote teach, IO-Link, Potentiometer

Via: Remote teach, IO-Link, Potentiometer

ULTRASONIC SENSORS US
MEASURING / SWITCHING

Typ	US 12 M 150 FB IU-B4	US 12 M 200 IU-B4	US 12 M 400 IU-B4	US 18 M 800 IU-B4	US 18 M 1500 IU-B4
Design	M12	M12	M12	M18	M18
Length	84 mm	65 mm	65 mm	65.5 mm	65.5 mm
Range	0 ... 150 mm	20 ... 200 mm	40 ... 400 mm	50 ... 800 mm	150 ... 1500 mm
Scanning	✓	✓	✓	✓	✓
Reflex	✓	✓	✓	✓	✓
Measuring	✓	✓	✓	✓	✓
Extra	Focusing nozzle				
Setting	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link

Typ	US 30 M 6000 IU-B4	US 30 M 6000 IU-B4	US Q12 M 200 IU-T4	US Q12 M 400 IU-T4
Design	M30	M30	Cuboid	Cuboid
Length	60 mm	78 mm	83.5 mm	83.5 mm
Range	300 ... 3000 mm	600 ... 6000 mm	20 ... 200 mm	40 ... 400 mm
Scanning	✓	✓	✓	✓
Reflex	✓	✓	✓	✓
Measuring	✓	✓	✓	✓
Setting	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link	Remote teach, IO-Link

Can be used anywhere:

IOL-MASTER
IO-LINK DEVICE TOOL

- 1 Port > USB
- Universal IO-Link Master with PC software
- For devices with IODD Specification 1.0.1 / 1.1
- Status LED for IO-Link and SIO mode
- M12 connection for devices
- Up to 80 mA over USB connection
- Up to 1 A with AC adapter

Via: Remote teach, Via IO-Link

SOLUTIONS. CLEVER. PRACTICAL.

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