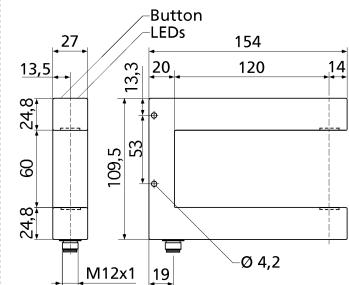
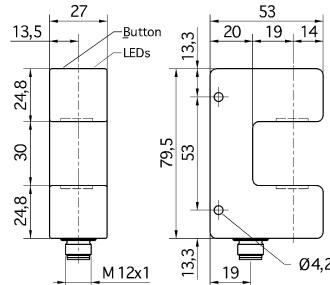




Technical data



Operating Instructions

bks-3/CIU
bks-6/12/CIU

Ultrasonic edge sensor with one analogue output

Product Description

The bks ultrasonic edge sensor is a fork sensor for scanning the edges of sound-impermeable materials such as foil or paper.

The fork's lower leg is equipped with an ultrasonic sensor which cyclically emits short sound impulses, which are detected by the ultrasonic receiver accommodated in the upper fork leg. Material immersing into the fork covers this sound path and thus attenuates the receive signal in dependence of the coverage, which is evaluated by the internal electronics.

An analogue signal is output in dependence of the coverage degree.

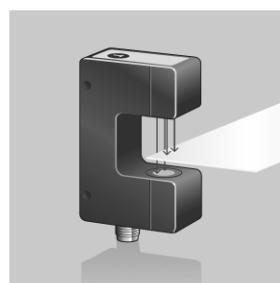


Fig.1: Functional principle

- Via the teach-in button on the edge sensor's top, the zero position of the edge to be controlled is set.
- Choosing between rising and falling output characteristic is possible.
- Three LEDs indicate the position of the web material inside the fork.

Safety Notes

- Read the operating instructions prior to start-up.
- Connection, installation and adjustment works may only be carried out by expert personnel.

- No safety component in accordance with the EU Machine Directive.

Installation

- Mount the sensor at the installation site.
- Connect a connection cable to the M12 device plug.

Factory setting

- Analogue output on voltage output

Start-Up

- Connect the power supply.
- Carry out the adjustment in accordance with the diagram.

cordance with the diagram.

Maintenance

microsonic sensors are maintenance-free. With heavy dirt deposits, we recommend a cleaning of the white sensor surface.

Note

- The web material should be in the area of ± 5 mm around the center between the ultrasonic transmitter and receiver.



2014/30/EU

Sensor adjustment with Teach-in procedure

Adjust operating point
(recommended setting)

Adjust operating point
(if the fork cannot be freed from
the webmaterial)

Completely free the fork from
the web material

Align the web edge inside the
fork with the two marks to ob-
tain a 50 % coverage of the
sound path

Press the button for approx. 3 s
until the two yellow LEDs flash
alternately

Press the button for approx. 10 s
until the two yellow LEDs are
statically illuminated

Normal mode operation

Adjust sensor to zero position of web edge

Set rising / falling output
characteristic curve

Set current output 4-20 mA /
voltage output 0-10 V

Turn supply voltage OFF

Turn supply voltage OFF

While pressing the button turn
supply voltage ON

While pressing the button turn
supply voltage ON

Keep button pressed for approx.
3 s until the two yellow LEDs
flash alternately

Keep button pressed for approx.
10 s until the two yellow LEDs
are statically illuminated

Characteristic
of output has
changed

Current- / vol-
tage output
has changed

Normal mode operation

Further settings