

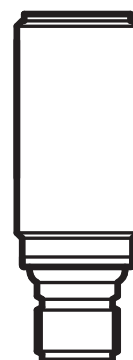


Operating instructions Ultrasonic diffuse-reflection sensor

UGB
UGC

UK

80260897 / 00 01 / 2017



1 Preliminary note

1.1 Symbols used

► Instructions

> Reaction, result

→ Cross-reference



Important note

Non-compliance may result in malfunction or interference.



Information

Supplementary note

2 Safety instructions

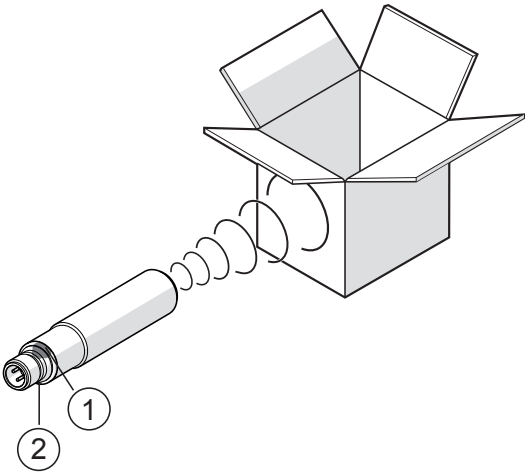
- Read this document before setting up the product and keep it during the entire service life.
- The product must be suitable for the corresponding applications and environmental conditions without any restrictions.
- Only use the product for its intended purpose (→ Functions and features).
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property may occur.
- The manufacturer assumes no liability or warranty for any consequences caused by tampering with the product or incorrect use by the operator.
- Installation, electrical connection, set-up, operation and maintenance of the unit must be carried out by qualified personnel authorised by the machine operator.
- Protect units and cables against damage.

3 Functions and features

Ultrasonic sensors detect objects of various materials without any contact. Detected objects are signalled via a switching output.

4 Installation

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1: Status LED
(yellow)

2: Echo LED (green)

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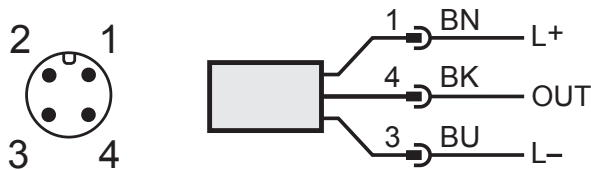
- Position object.
- Align the ultrasonic sensor so that it directly faces the object or the background and secure it to a bracket.
- > Object / background is detected when the echo LED (green) lights.

 Sound-absorbing surfaces have a negative effect on a reliable function.

 During installation of the device, consider the dead zone.

5 Electrical connection

- Disconnect power.
- Connect device (depending on the type selected):

Core colours			Units with switching output
BK	black		OUT: switching output / IO-Link
BN	brown		
BU	blue		
Colours to DIN EN 60947-5-2			

6 Set-up

Note the LED behaviour for the set-up:

Echo LED green	
On	Echo is received.
Off	No echo (object / background not detected).
Off	For the time of resetting to factory setting.

7 Settings / operation

The unit is set via the IO-Link interface (→ 4.78 and → 79)



On delivery the unit can also be used without IO-Link setting with the preset switch points.

8 IO-Link

This unit has an IO-Link communication interface which requires an IO-Link-capable module (IO-Link master) for operation.

The IO-Link interface enables direct access to the process and diagnostic data and provides the possibility to set the parameters of the unit during operation.

In addition communication is possible via a point-to-point connection with a USB adapter cable.

The IODDs necessary for the configuration of the unit, detailed information about process data structure, diagnostic information, parameter addresses and the necessary information about the required IO-Link hardware and software can be found at www.ifm.com

8.1 Process data via IO-Link

All process data is available via IO-Link:

- The unit is laid out for fully bidirectional communication.
- The following options are available:
 - Remote display: Read and display the current status.
 - Remote parameter setting: Read and change the current parameter setting.

9 Parameter setting



The unit can only be configured via IO-Link function.

The parameters can be set prior to installation and set-up of the unit or while in operation.



Changing parameters during operation can influence the function of the plant.

- ▶ Ensure that there will be no malfunctions in the plant.

9.1 Parameter setting via PC

For parameter setting an IO-Link software is necessary (e.g. LR SENSOR, LR DEVICE).

IO-Link interfaces from ifm are available for the connection of the unit via the USB interface of a computer → www.ifm.com.

- ▶ Prepare computer, software and interface.
- ▶ Connect unit with IO-Link interface.
- ▶ Follow the menu of the IO-Link software.
- ▶ Set the parameters.
- ▶ Put the unit into operation.

10 Operation

- ▶ Check whether the unit operates correctly.
- > Display by LEDs:

Green LED lights	Echo is received.
Yellow LED lights	Output 1 is switched / object is in the detectable area.
LED green flashes	Short circuit at the output.



The minimum distance between the "metal housing of the proximity sensor" and a "non-isolated part outside the sensor" must be 12.7 mm.

More information at www.ifm.com