

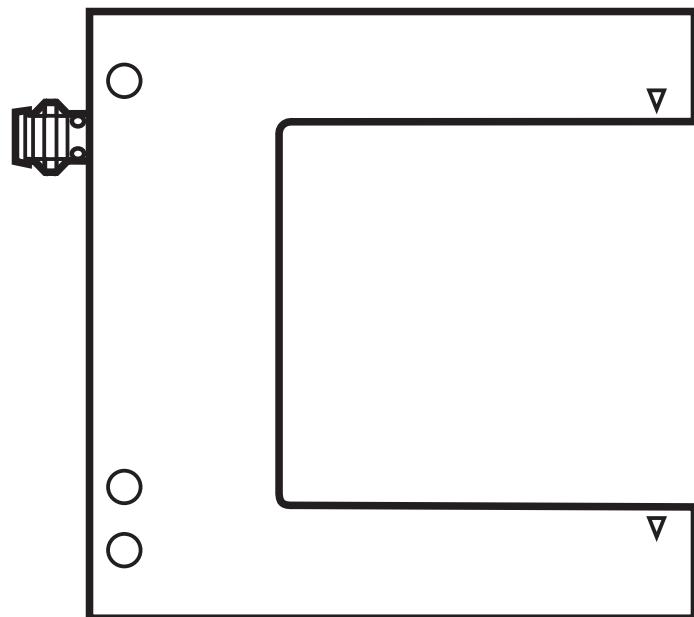


Operating instructions
Laser fork sensor

UK

OPU70x

OPU70x / 02 03 / 2020



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1 Preliminary note

1.1 Symbols used

► Instruction

> Reaction, result

→ Cross-reference



Important note

Non-compliance can result in malfunctions or interference.

2 Safety instructions

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- Please read this document prior to set-up of the unit. Ensure that the product is suitable for your application without any restrictions.
- Improper or non-intended use may lead to malfunctions of the unit or to unwanted effects in your application. That is why installation, electrical connection, set-up, operation and maintenance of the unit must only be carried out by qualified personnel authorised by the machine operator.
- In case of malfunction of the unit please contact the manufacturer. If the unit is tampered with and/or modified, any liability and warranty is excluded.

According to the cULus approval

Caution - Use of controls or adjustments or procedures other than those specified herein may result in hazardous radiation exposure.



Visible laser light; CLASS 1 LASER PRODUCT.

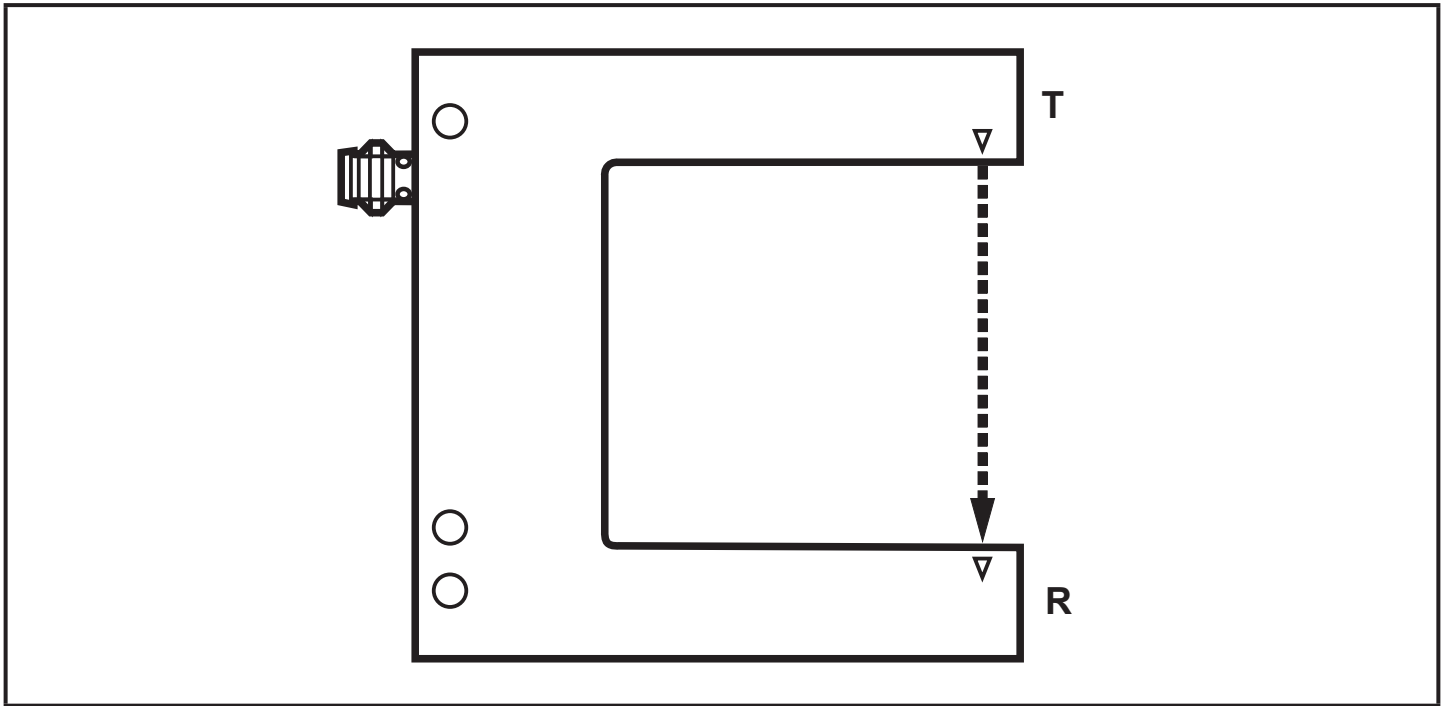
EN/IEC 60825-1 : 2007 and EN/IEC 60825-1 : 2014

complies with 21 CFR 1040 except for deviations pursuant to Laser Notice No. 50, dated June 2007

3 Functions and features

The optical fork sensor detects objects and materials without contact and indicates their presence by a switching signal.

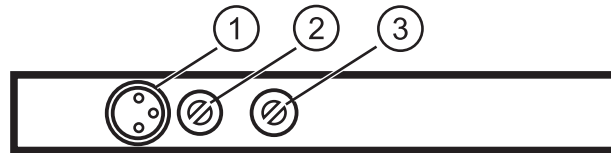
4 Installation



T: transmitter; R: receiver

- Secure the optical fork sensor (OPU...) to a bracket.

5 Operating and display elements



1: LED yellow

2: output function switch

3: sensitivity potentiometer



6 Electrical connection



The unit must be connected by a qualified electrician.

- ▶ The national and international regulations for the installation of electrical equipment must be adhered to.
- ▶ Ensure voltage supply to EN 50178, SELV, PELV.

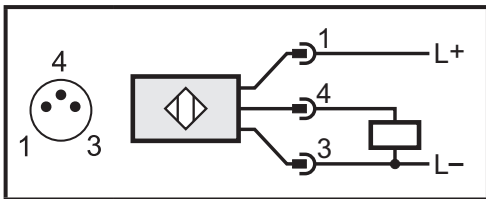
The following indications apply if there is a UL listing mark on the product:

- ▶ For use in NFPA 79 applications only. Adapters providing field wiring means are available from the manufacturer. Refer to manufacturers information.
- ▶ The device shall be supplied from an isolating transformer having a secondary Listed fuse rated
 - a) max 5 amps for voltages 0...20 Vrms (0...28.3 Vp) or
 - b) 100/Vp for voltages of 20...30 Vrms (28.3...42.4 Vp).

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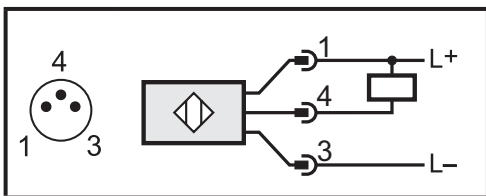
- ▶ Disconnect power.
- ▶ Connect the unit as follows:

DC PNP



pin 1 = L+
pin 3 = L-
pin 4 = OUT / IO-Link

DC NPN



pin 1 = L+
pin 3 = L-
pin 4 = OUT / IO-Link

7 Settings



The unit and the parameters are set via the operating elements (→ 7.2).
For selected units, setting can be done via IO-Link (→ 7.1).

7.1 IO-Link

This unit has an IO-Link communication interface which enables direct access to process and diagnostic data. In addition it is possible to set the parameters of the unit while it is in operation. Operation of the unit via an IO-Link interface requires an IO-Link master.

With a PC, suitable IO-Link software and an IO-Link adapter cable communication is possible when the system is not in operation.

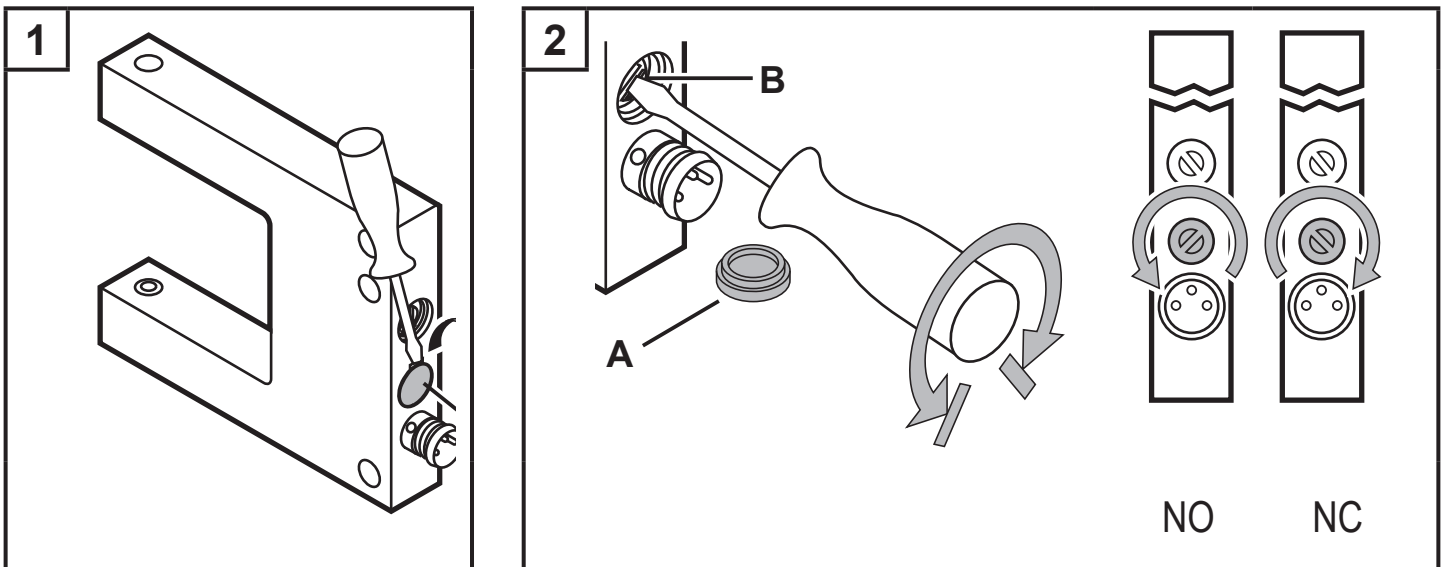
The IO-DDs necessary for the configuration of the unit, detailed information about process data structure, diagnostic information, parameter addresses and the necessary information about the required IO-Link hardware and software can be found at www.ifm.com.



To set the sensor via IO-Link, the parameter [L-r] must be changed from [local] to [remote] via IO-Link.

7.2 Operating elements

7.2.1 Setting of the output function

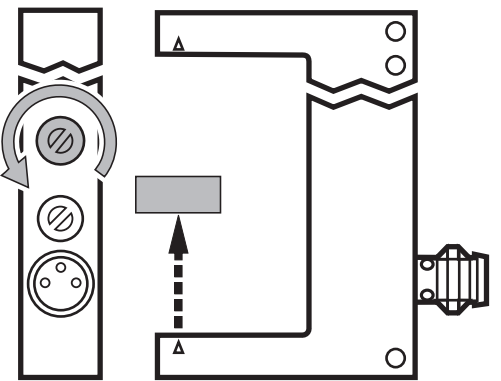


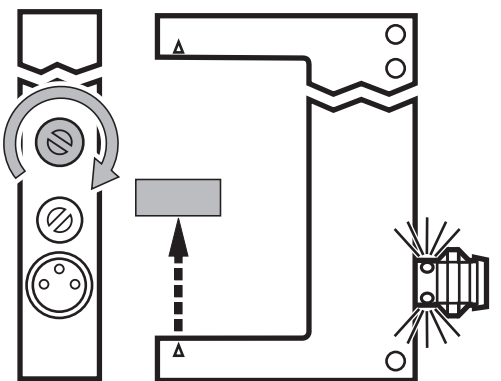
A: cover; B: output function switch

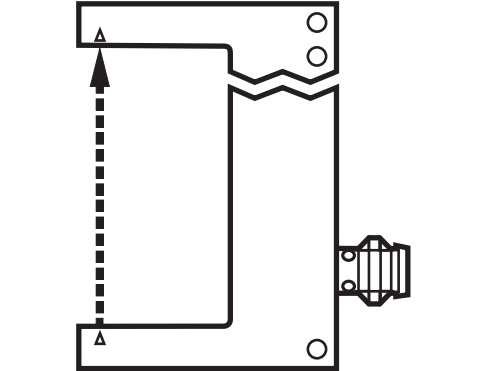
1. Remove the cover (A).
2. Set the output function (NO/NC) via the switch (B) using a screwdriver.
3. Refit the cover (A).

7.2.2 Sensitivity setting

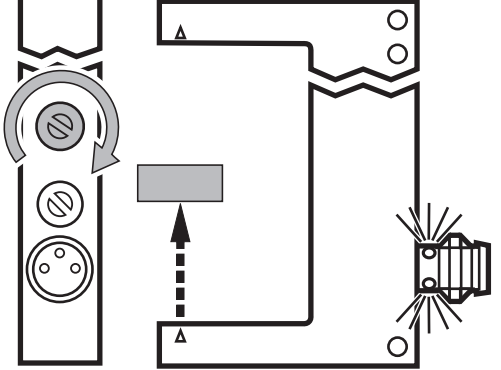
The sensor is to switch when the object is detected

| | | |
|-----------------|--|--|
| <p>1</p> | <ul style="list-style-type: none">▶ Set the setting potentiometer to the lowest sensitivity.▶ Position the object to be detected in the detection zone. |  |
|-----------------|--|--|

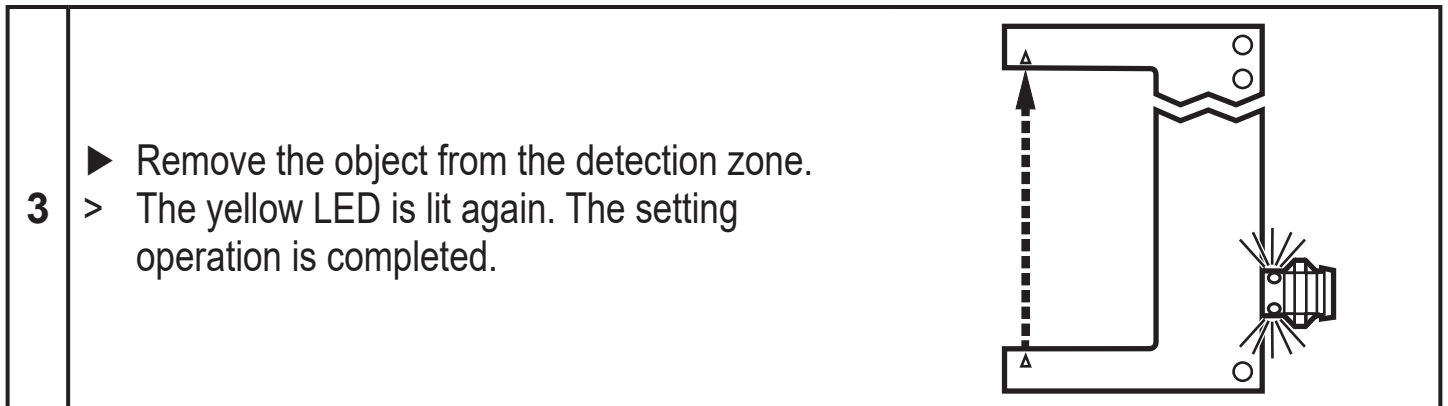
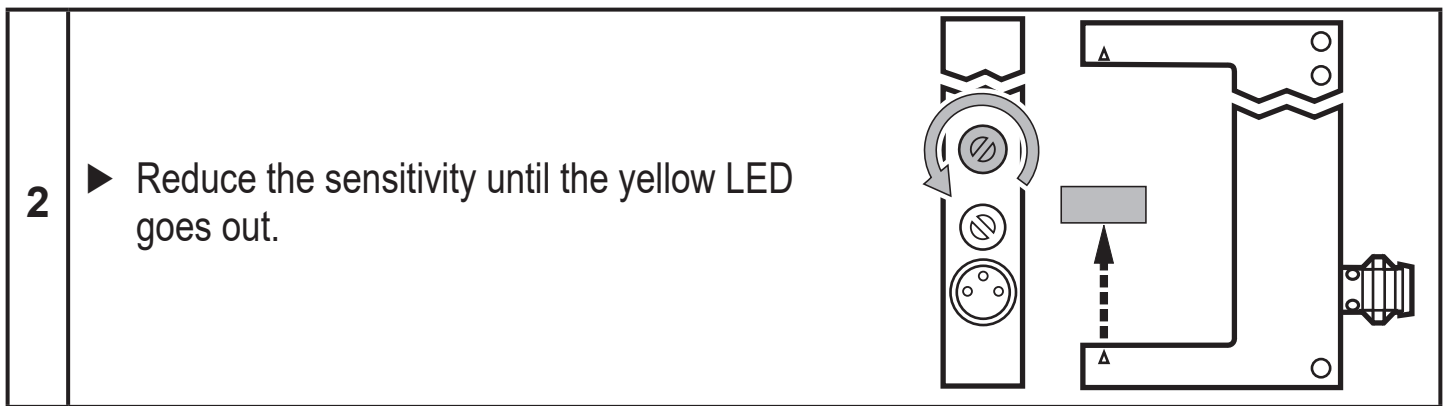
| | | |
|-----------------|---|---|
| <p>2</p> | <ul style="list-style-type: none">▶ Increase the sensitivity until the yellow LED lights. |  |
|-----------------|---|---|

| | | |
|-----------------|--|--|
| <p>3</p> | <ul style="list-style-type: none">▶ Remove the object from the detection zone.> The yellow LED goes out. The setting operation is completed. |  |
|-----------------|--|--|

The sensor is not to switch when the object is detected

| | | |
|-----------------|--|--|
| <p>1</p> | <ul style="list-style-type: none">▶ Set the setting potentiometer to the highest sensitivity. The yellow LED is lit.▶ Position the object to be detected in the detection zone. |  |
|-----------------|--|--|

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8 Operation

- ▶ Check whether the unit operates correctly.
- > The yellow LED is lit when the output is switched.

9 Maintenance, repair, disposal

- ▶ Keep the lens of the sensor free from soiling.
- ▶ For cleaning do not use any solvents or cleaning agents which could damage the lens.
- ▶ After use dispose of the unit in an environmentally friendly way in accordance with the applicable national regulations.

Faulty sensors must only be repaired by the manufacturer.