$\mathsf{C}\,\mathsf{E}$
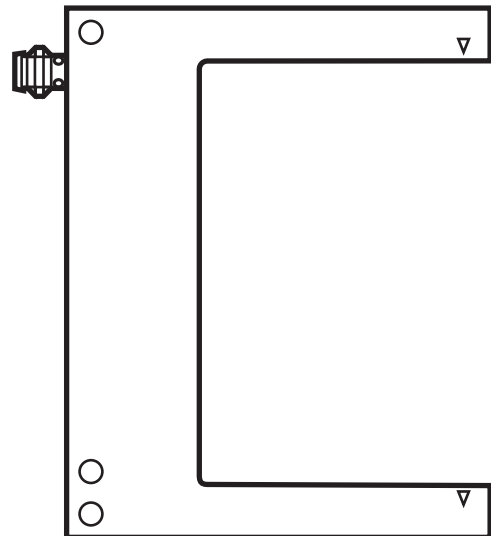
Operating instructions
optical fork sensor

OPU2xx

OPU201 / 01   01 / 2020

Contents

1 Preliminary note

1.1 Symbols used

▶   Instruction

>   Reaction, result

→   Cross-reference

[!]   Important note
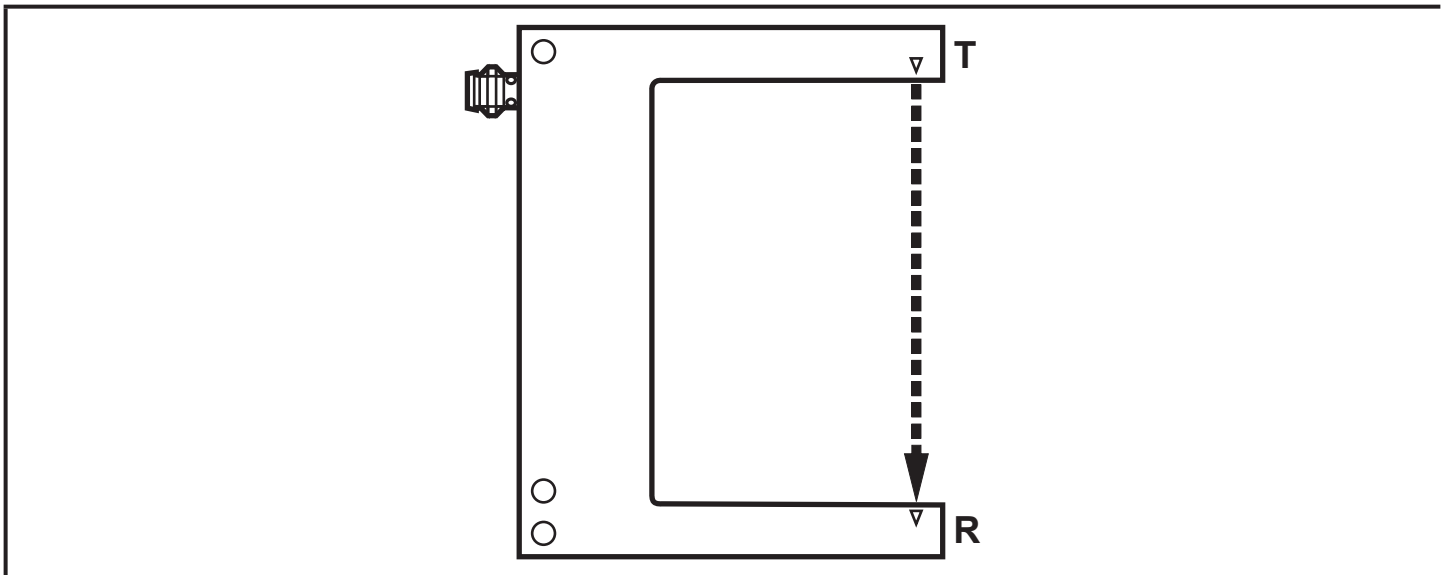   Non-compliance can result in malfunctions or interference.

2 Functions and features

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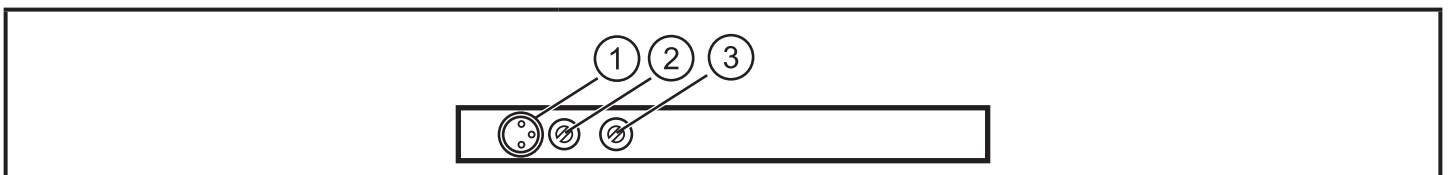
3 Installation

T: transmitter; R: receiver

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

4 Operating and display elements

1:	LED yellow	
2:	output function switch	
3:	sensitivity potentiometer	

5 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
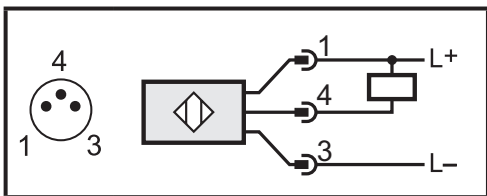b) 100/Vp for voltages of 20...30 Vrms (28.3...42.4 Vp).

▶ Disconnect power.

▶ Connect the unit as follows:

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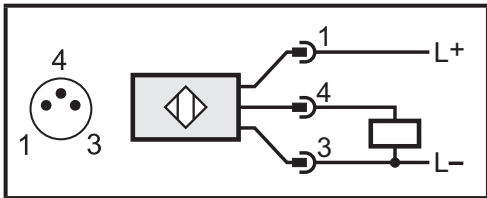
pin 1 = L+
pin 3 = L-
pin 4 = OUT / IO-Link

DC NPN

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

6 Settings

ℹ️ The unit and the parameters are set via the operating elements (→ 6.2).
For selected units, setting can be done via IO-Link (→ 6.1).

6.1 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 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.

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

6.2 Operating elements
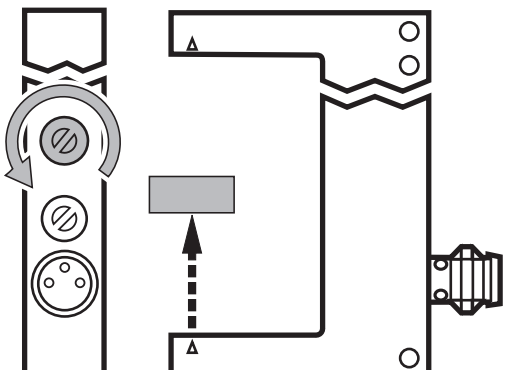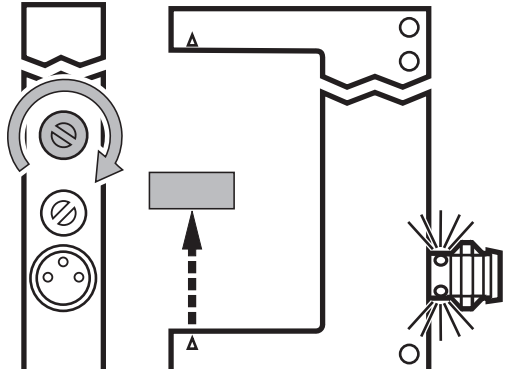
6.2.1 Setting of the output function
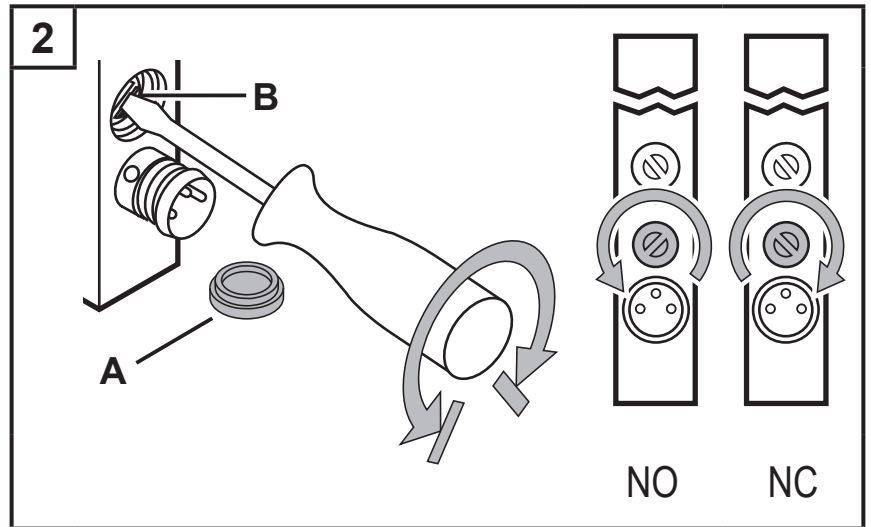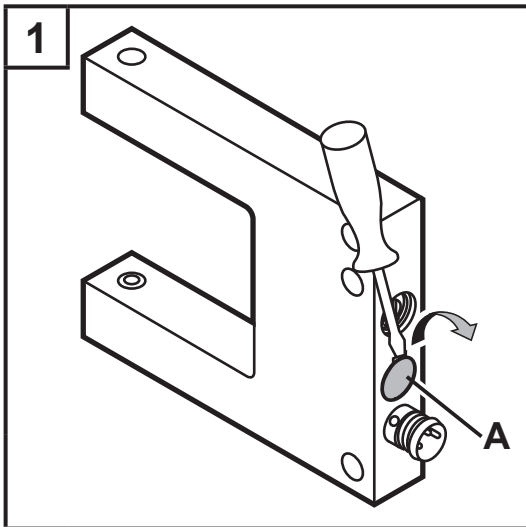
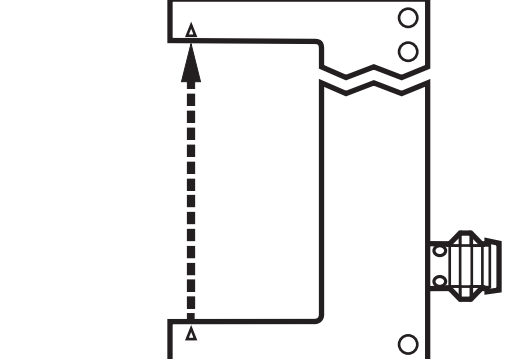A: cover; B: output function switch

1. Remove the cover (A).

2. Set the output function (NO/NC) via the switch (B) using a screwdriver.

3. Refit the cover (A).
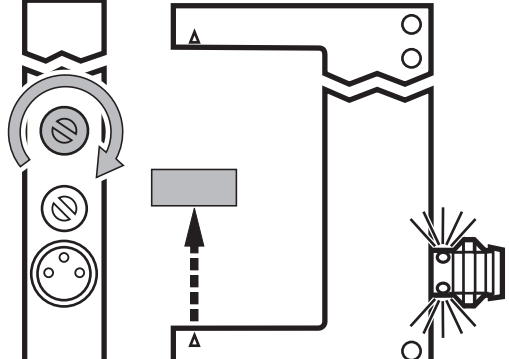
6.2.2 Sensitivity setting
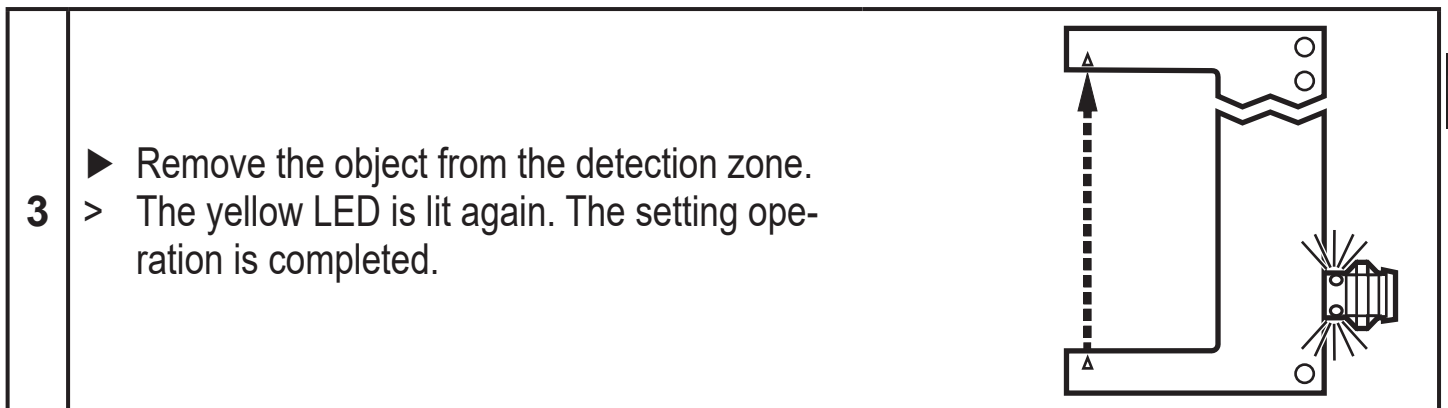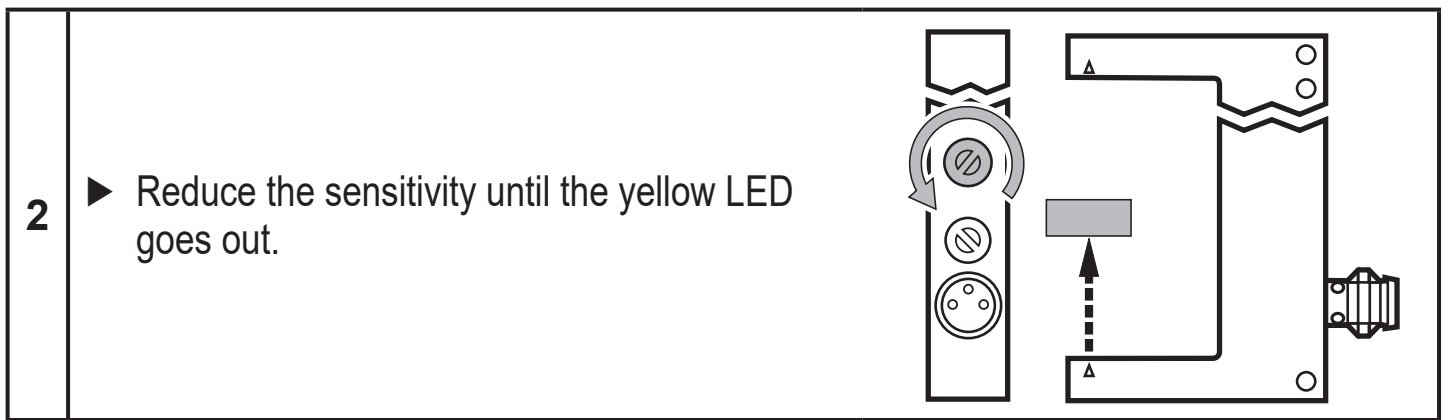
The sensor is to switch when the object is detected

1	▶ Set the setting potentiometer to the lowest sensitivity. ▶ Position the object to be detected in the detection zone.

2	▶ Increase the sensitivity until the yellow LED lights.

3	▶ 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

1	▶ Set the setting potentiometer to the highest sensitivity. The yellow LED is lit. ▶ Position the object to be detected in the detection zone.

| 2 | ▶ Reduce the sensitivity until the yellow LED goes out. | |

| 3 | ▶ Remove the object from the detection zone.
> The yellow LED is lit again. The setting operation is completed. | |

7 Operation

▶ Check whether the unit operates correctly.

> The yellow LED is lit when the output is switched.

8 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.

Technical data and further information at www.ifm.com