

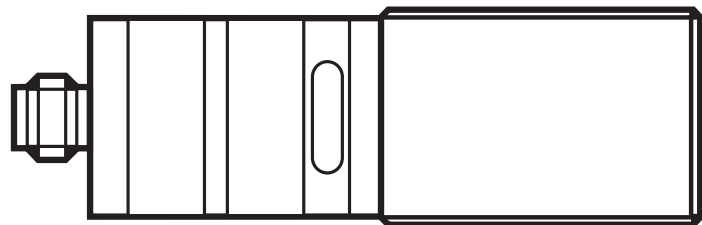


Operating instructions
Optical distance sensor

UK

OID20x

80284285 / 00 04 / 2019



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1 Preliminary note

1.1 Symbols used

▶ Instruction

> Reaction, result

[...] Designation of pushbuttons, buttons or indications

→ Cross-reference



Important note

Non-compliance can result in malfunctions or interference.



Information

Supplementary note.

1.2 Warning signs used

WARNING

Warning of serious personal injury.

Death or serious irreversible injuries may result.

2 Safety instructions

- 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.
- The unit conforms to the standard EN 61000-6-4. The unit may cause radio interference in domestic areas. If interference occurs, the user must take appropriate remedial actions.

⚠ WARNING

Visible laser light; laser protection class 2.






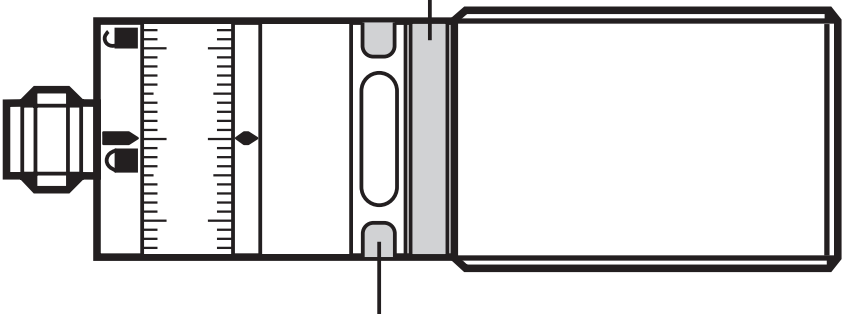
Use of controls or adjustments other than those specified herein may result in hazardous radiation exposure. Damage to the retina is possible.

- ▶ Do not stare into the laser beam!
- ▶ Apply the enclosed labels (laser warning) in the immediate vicinity of the unit.
- ▶ Adhere to the caution and warning notes on the product label.
- ▶ Use the enclosed label for the power supply cable.
- ▶ 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

Label for supply cable

ATTACH TO CABLE	WARNING:
	CLASS 2 LASER PRODUCT DO NOT STARE INTO BEAM - AVOID EXPOSURE - UNPLUG CONNECTOR TO EXTINGUISH LASER BEAM
ifm electronic gmbh D-45128 Essen	

Product label

 	AVOID EXPOSURE LASER RADIATION EMITTED FROM THIS APERTURE	 CAUTION	LASER RADIATION DO NOT STARE INTO BEAM max. POWER $\leq 4,0$ mW, PULSE 1,3 ns, $\lambda = 650$ nm	 	CLASS 2 LASER PRODUCT 21 CFR PART 1040 IEC 60825-1:2014	
						
POWER	OID2xx	CLASS 2 LASER PRODUCT	www.ifm.com	CE	TS AA 1301	OUT

3 Functions and features

The unit is used as an optical distance sensor.

3.1 Applications

- The optical distance sensor measures distances between 0.03 and 2 m.
- It has a background suppression of up to 20 m.
- The switching outputs are complimentary.



The distance between the sensor and the background must be limited to max. 20 m by the customer. Otherwise the measured value may be ambiguous. → 4.1 Installation conditions

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4 Installation

4.1 Installation conditions

- ▶ Install the unit so that the object to be detected is within a measuring range of 0.03...2 m.

Any object between the set switch point and a distance of 20 m from the sensor is suppressed.



Reflecting objects in the direct beam path of the sensor - also in the range > 20 m – are to be avoided by the customer. Otherwise the measured values may be ambiguous.

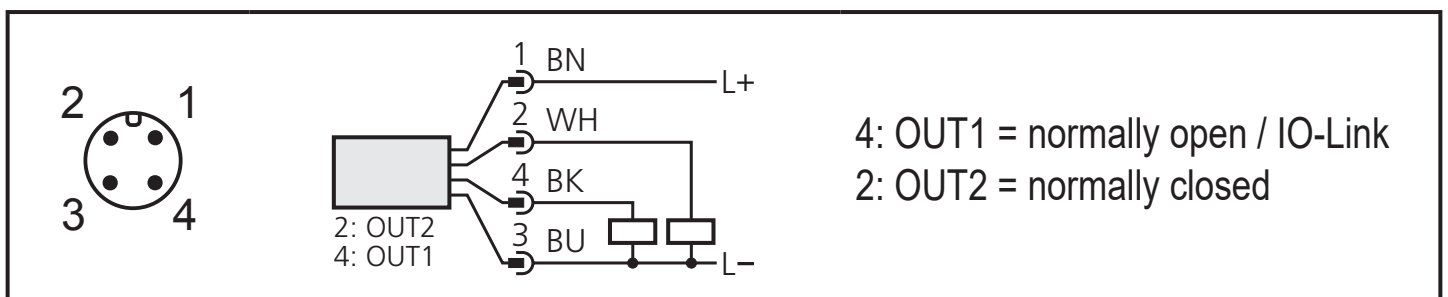
5 Electrical connection



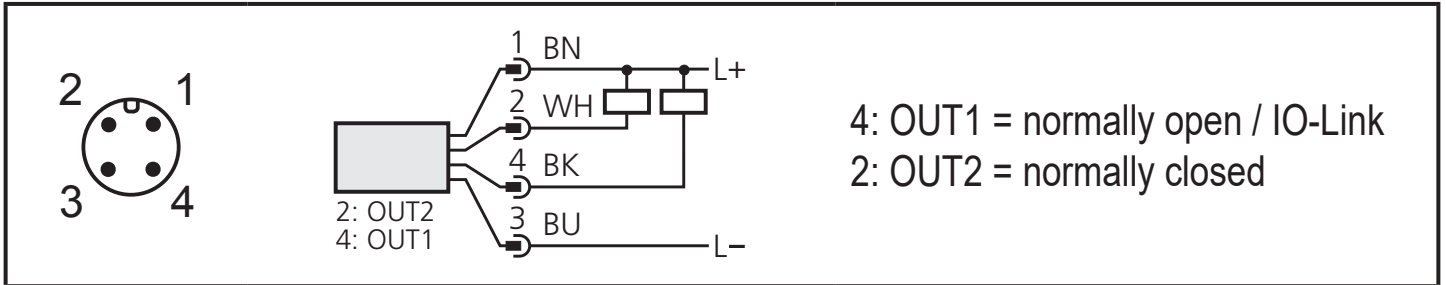
The unit must be connected by a qualified electrician.

- ▶ The national and international regulations for the installation of electrical equipment must be adhered to.
 - ▶ Ensure voltage supply according to EN 50178, SELV, PELV.
- ▶ Disconnect power.
- ▶ Connect the unit as follows:

DC PNP



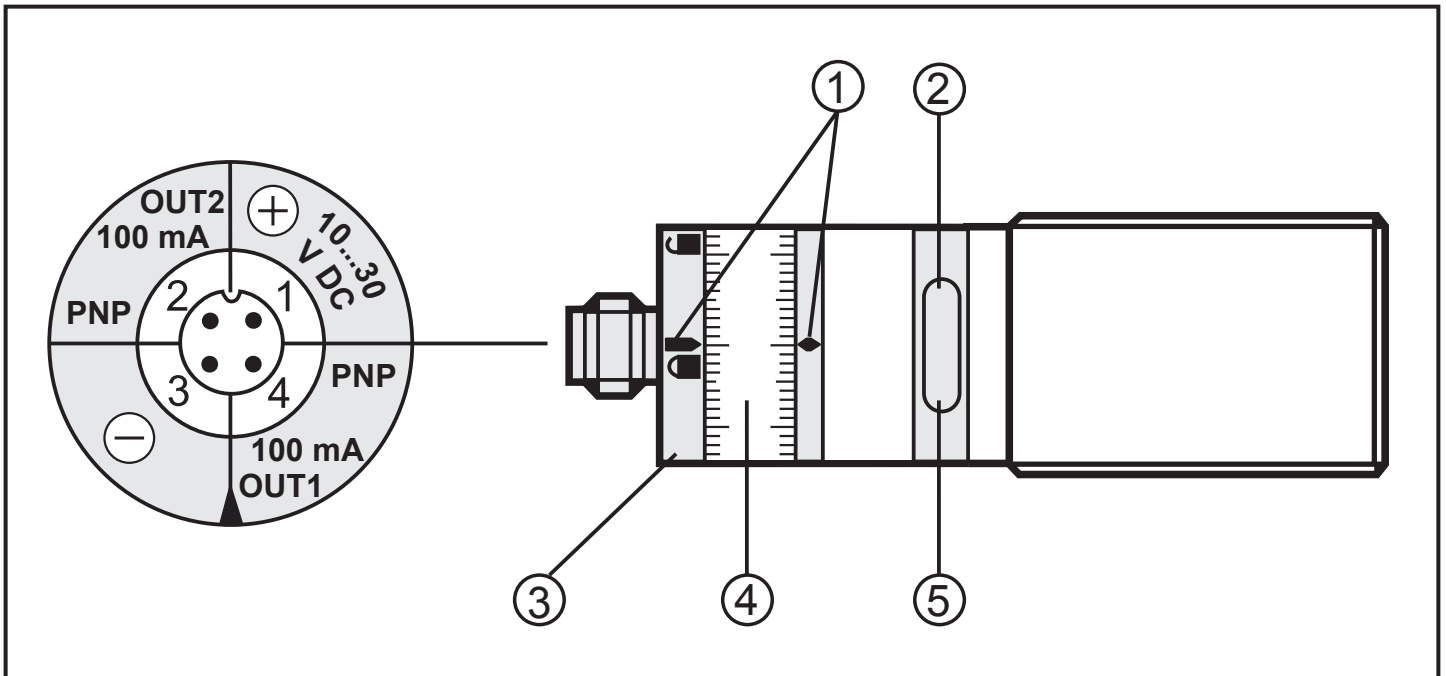
DC NPN



Core colours of ifm sockets:

1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black)

6 Setting / Operation



1: Setting marks

2: Yellow LED: Set1 value reached, output = ON

3: Locking ring

4: Setting ring (manually adjustable after unlocking)

5: Green LED: supply voltage O.K.

- To obtain the setting accuracy: Set the ring to the maximum value, then set the requested value.

► After mounting, wiring and programming check whether the unit operates correctly.



Lifetime of a laser diode: 50,000 hours

7 IO-Link

7.1 General information

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 sensor values and parameters 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.

You will find more detailed information about IO-Link at www.ifm.com.

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7.2 Device-specific information

You will find the IODDs necessary for the configuration of the IO-Link unit and detailed information about sensor values, diagnostic information and parameters in the overview table at www.ifm.com.

7.3 Parameter setting tools

You will find all necessary information about the required IO-Link hardware and software at www.ifm.com.

8 Maintenance, repair and disposal

Faulty sensors must only be repaired by the manufacturer.

- ▶ Keep the front lens of the sensor free from soiling.
- ▶ After use dispose of the unit in an environmentally friendly way in accordance with the applicable national regulations.
- ▶ Do not try to open the module enclosure. There are no user-serviceable components inside.