



**EN** Operating instructions. . . . . pages 1 to 2  
Original

**1. About this document**

**1.1 Function**

This operating instructions manual provides all the information you need for the mounting, set-up and commissioning to ensure the safe operation and disassembly of the device. The operating instructions must be available in a legible condition and a complete version in the vicinity of the device.

**1.2 Target group: authorised specialist personnel**

All operations described in this operating instructions manual must be carried out by trained specialist personnel, authorised by the plant operator only.

The device may only be installed and commissioned by persons who are familiar with these operating instructions and the applicable regulations concerning operational safety and accident prevention.

The machine builder must carefully select the harmonised standards to be complied with as well as other technical specifications for the selection, mounting and integration of the components.

**1.3 Explanation of the symbols used**



**Information, hint, note:**

This symbol is used for identifying useful additional information.



**Caution:** Failure to comply with this warning notice could lead to failures or malfunctions.

**Warning:** Failure to comply with this warning notice could lead to physical injury and/or damage to the machine.

**1.4 Appropriate use**

The device must be exclusively used in accordance with the versions listed below or for the applications authorised by the manufacturer. Detailed information regarding the range of applications can be found in the chapter "Product description".

**1.5 General safety instructions**

The user must observe the safety instructions in this operating instructions manual, the country-specific installation standards as well as all prevailing safety regulations and accident prevention rules.



Further technical information can be found in the Schmersal catalogues or in the online catalogue on the Internet: [products.schmersal.com](http://products.schmersal.com).

The information contained in this operating instructions manual is provided without liability and is subject to technical modifications.

There are no residual risks, provided that the safety instructions as well as the instructions regarding mounting, commissioning, operation and maintenance are observed.

**1.6 Warning about misuse**



In case of improper use or manipulation of the device, personal hazards or damages to machinery or plant components cannot be excluded.

**1.7 Exclusion of liability**

We shall accept no liability for damages and malfunctions resulting from defective mounting or failure to comply with this operating instructions manual. The manufacturer shall accept no liability for damages resulting from the use of unauthorised spare parts or accessories.

For safety reasons, invasive work on the device as well as arbitrary repairs, conversions and modifications to the device are strictly forbidden, the manufacturer shall accept no liability for damages resulting from such invasive work, arbitrary repairs, conversions and/or modifications to the device.

**2. Product description**

**2.1 Ordering code**

This operating instructions manual applies to the following types:

**IFOD 10-①-10/01-P**

No.	Option	Description
①	30	Brass
	300	Plastic

**2.2 Purpose**

With photoelectric sensors, a beam of light emitted by a transmitter is captured by a photo element in the receiver. Photoelectric sensors are suitable for general automation applications such as counting parts, determining positions and as non-contact limit switches.



They are not suitable for use in the functional safety of machines and plants.

### 2.3 Technical data

Standards:	IEC 60947-5-2
Enclosure:	
- Metal version:	nickel-plated brass
- Plastic version:	thermoplastic
Lens material:	polycarbonate
<b>Optical data</b>	
Range $S_d$ :	0 ... 1000 mm
Light type:	LED, infrared
Hysteresis:	≤ 15 %
Reference material:	white paper 200 x 200 mm (reflection factor 90 %)

### Electrical data

Operating voltage $U_B$ :	10 ... 30 VDC
No-load current $I_0$ :	24 V ≤ 20 mA
Output current $I_a$ :	200 mA
Voltage drop $U_d$ :	approx. 1.5 V (200 mA)
Switching frequency f:	approx. 80 Hz
Minimum operating current $I_m$ :	1 mA
Ripple:	≤ 10 %
Output:	p-switching

### Functions

Switching output indicator LED:	yellow
Setting:	via potentiometer
Output function:	normally open contact or normally closed contact

### Mechanical data

Degree of protection:	IP65 in accordance with IEC 60529
Operating temperature:	-5 °C ... +70 °C
Cable entry:	M16 x 1.5
Weight:	
- Metal version:	140 g
- Plastic version:	70 g

## 3. Mounting

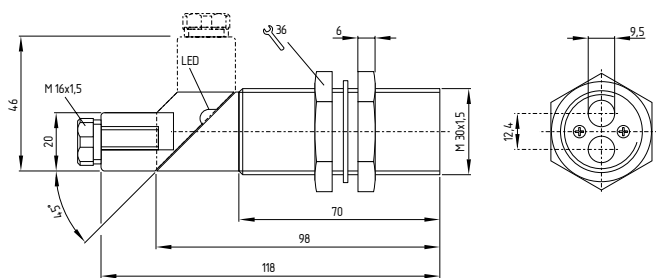


Assembly is only permitted when the device is dead and may only be carried out by authorised specialist personnel.

The following maximum tightening torques must be observed for the models when installing the sensors: plastic 4 Nm for nuts, brass 30 Nm. Attachment nuts must be screwed onto the sensor from the front/lens side.

### Dimensions

All measurements in mm.



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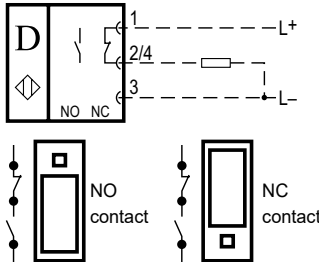
## 4. Electrical connection



The electrical connection may only be carried out by authorised personnel in a de-energised condition.



An earthed power supply must be provided to prevent damage and faults.



## 5. Set-up and maintenance

### 5.1 Function check

We recommend carrying out the following checks before operation:

1. A check that the wiring matches the device's installation diagram;
2. Hold the object within the scanning distance in front of the sensor surface and check for the response of the switching LED;
3. If the object is not recognised, the potentiometer must be calibrated until the LEDs light up to indicate the switching operation.

The sensor may only be disconnected when the device is switched off.

### 5.2 Maintenance

We recommend regular visual and function checks comprising:

1. Checking the sensor lens for dirt (dust and other particles);
2. Removing dirt deposits;
3. Checking the condition of cables and connections

**Damaged or defective components must be replaced.**

## 6. Disassembly and disposal

### 6.1 Disassembly

The sensor must be disassembled in a de-energised condition only.

### 6.2 Disposal

The sensor must be disposed of in an appropriate manner in accordance with the national prescriptions and legislations.