ifm electronic

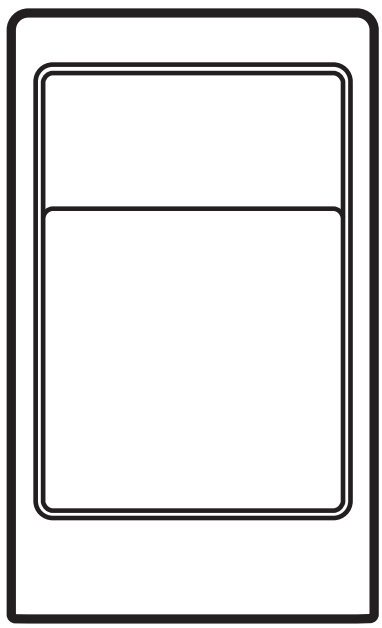
CE

Brief instructions
Illumination unit

UK

efector250®

O3M950
O3M960



80236594/00 03/2016

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1 About these instructions

This document is intended for specialists. These specialists are people who are qualified by their appropriate training and their experience to see risks and to avoid possible hazards that may be caused during operation or maintenance of the device. The document contains information about the correct handling of the device.

Read this document before use to familiarise yourself with operating conditions, installation and operation. Keep this document during the entire duration of use of the device.

For a detailed description of the device please read the operating instructions and the programming manual.

1.1 Symbols used

► Instructions
> Reaction, result
[…] Designation of keys, buttons or indications
→ Cross-reference


Important note
Non-compliance may result in malfunction or interference.


Information
Supplementary note

1.2 Warnings used

⚠ CAUTION

Warning of personal injury.
Slight reversible injuries may result.

2 Safety instructions

These instructions are part of the device. They contain texts and figures concerning the correct handling of the device and must be read before installation or use.

Note the safety instructions. Use the device as intended.

The installation and connection must comply with the applicable national and international standards. Responsibility lies with the person installing the unit.

Only the signals indicated in the technical data or on the device label may be supplied to the connections or wires.

⚠ CAUTION

Invisible infrared light

The illumination unit emits infrared light of risk group 1 (IEC 62471:2006) invisible to the human eye.

The infrared light can cause damage to the retina.

- ► Use the illumination unit with the described devices and settings.
- ► Avoid staring into the infrared beam.
- ► Observe the safety note (→ 2.1).

UK

2.1 Safety note



NOTICE
IR light emitted from this product.

Classification acc. CEI/IEC 62471:2006
Risk Group 1

3 Functions and features

The illumination unit illuminates a scene using infrared light. A sensor processes the infrared light reflected by the surfaces.

The illumination unit may be used as a component of a photoelectric system only with the following devices:

- O3M150 Mobile 3D Sensor
- O3M160 Mobile 3D Sensor
- O3M151 Smart Sensor
- O3M161 Smart Sensor

4 Items supplied

- O3M950 / O3M960 illumination unit
- Brief instructions

The illumination unit is supplied without sensor, installation and connection accessories and software.

5 Accessories

The following accessories are needed for the operation of the illumination unit:

Description	Article no.
Mobile 3D sensor or Smart sensor	O3M150 / O3M160 O3M151 / O3M161
MCI connection cable between sensor and illumination unit	E3M121 (alternatives: E3M122, E3M123)
Power supply cable for illumination unit	E3M131 (alternatives: E3M132, E3M133)

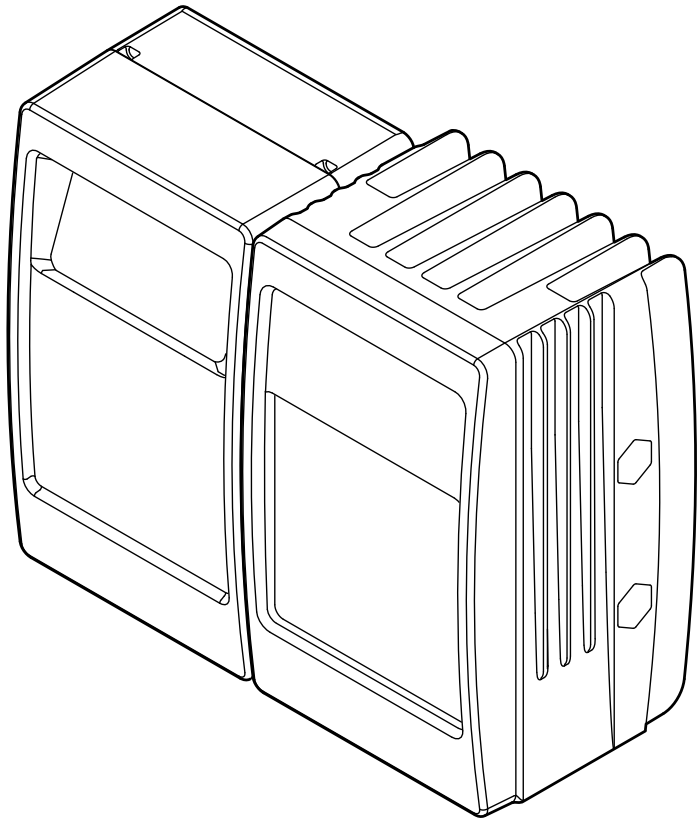
You can find more information about the accessories at
www.ifm.com → Data sheet search → e.g. O3M950 → Accessories

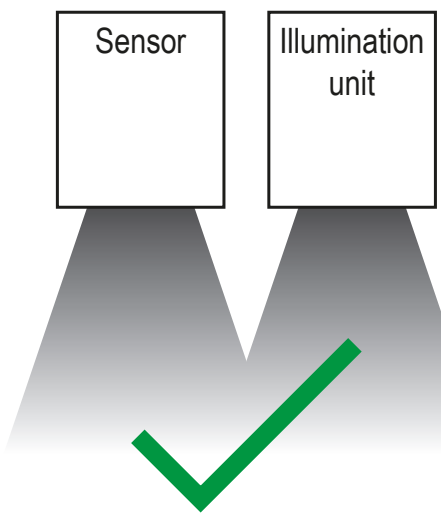
6 Installation

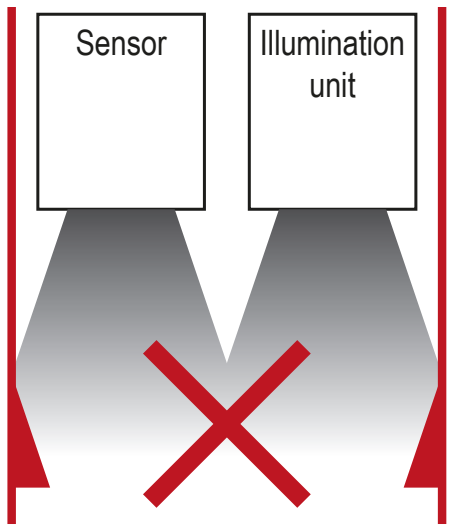
The sensor is operated as a system together with the illumination unit.

During installation note the following:

- ► Operate sensor and illumination unit in combination.
- ► Install sensor and illumination unit between 0 and 2.80 m apart.
- > Select the matching MCI connection cable depending on the distance.
- ► Keep the area illuminated by the illumination unit free from any obstructions in a close range (up to 50 cm).
- ► Use cables with strain relief.







6.1 Mounting accessory

Depending on the intended location and type of mounting the following mounting accessories are available:

Description	Article no.
Mounting set U-shaped (U-shaped fixture, adjustable for types O3Mxxx)	E3M100
Mounting set for rod mounting Ø 14 mm (clamp and bracket for types O3Mxxx)	E3M103
Mounting rod straight Ø 14 mm, length 130 mm, M12	E20939
Rod, angled Ø 14 mm, length 200 mm, M12	E20941

You can find more information about the accessories at
www.ifm.com → Data sheet search → e.g. O3M950 → Accessories

7 Electrical connection

NOTE

The unit must be connected by a qualified electrician.

Device of protection class III (PC III)
The electric supply must only be made via PELV circuits.

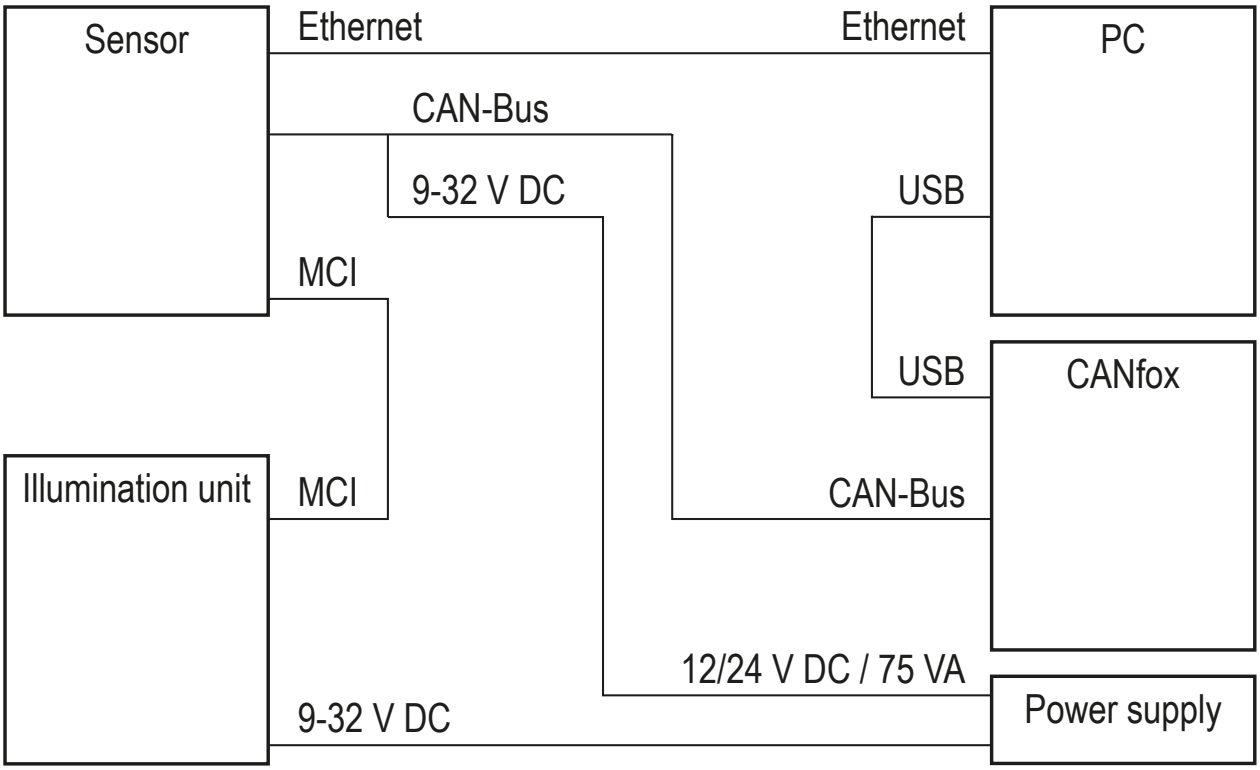
► Switch off the power supply before electrical connection.

NOTE

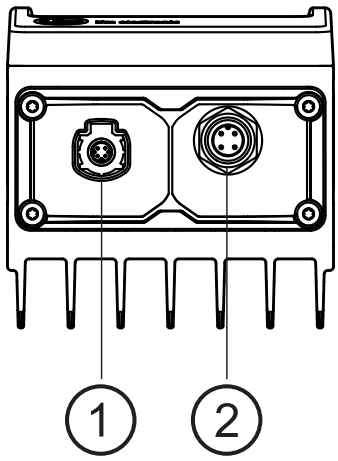
The IP rating given in the data sheet is only guaranteed if the M12 connectors are firmly screwed.

The unit can be damaged by insufficiently tightened M12 connectors.

► Firmly screw the M12 connectors to the unit.



7.1 Wiring illumination unit



(1) MCI - Modulation and communication interface	
Connection sensor - illumination unit	
Only use original ifm cables E3M121, E3M122 or E3M123.	
(2) Power supply	
M12 connector, A-coded, 4 poles	
	1 GND 2 9..32 V 3 9..32 V 4 GND

Before wiring note the following:

- ► Use all 4 wires of the M12 connector for the power supply.
- ► Unnecessarily long cables cause an additional voltage drop. For the power supply keep the cable short.
- ► Up to 14 A may flow via the cable for the power supply. Ensure a sufficiently dimensioned core cross-section.
- ► Use original ifm cables E3M131, E3M132 or E3M133.

8 Set-up

8.1 Put the sensor into operation

To put the sensor into operation follow the instructions below.

1. Switch off the power supply.
2. Use MCI cable to connect sensor and illumination unit.
3. Connect sensor with Ethernet cable.
4. Connect the sensor with the sensor cable for CAN bus and power supply.

> The sensor cable connects the power supply and CAN with the sensor.

5. Connect illumination unit with power supply.
6. Connect CANfox USB interface with PC via USB and with CAN via adapter cable.
7. Establish power supply.

During the first set-up the sensor connects with the illumination unit. Connection may take up to 60 s.

9 Approvals/standards

The CE Declaration of Conformity is available on our website.

Alternativ steht die CE-Konformitätserklärung auch im Internet zur Verfügung.

www.ifm.com → Datenblatt-Suche → z.B. O3M → Zulassungen

10 Note on the software

This unit contains (maybe modified) Open Source software which is subject to special licensing terms.

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For software subject to the GNU General Public License or the GNU Lesser General Public License the source code can be requested against payment of the copying and shipping costs.