ifm electronic

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.

2 Safety instructions

According to the cULus approval

Caution - Use of controls or adjustments or procedures other than those specified herein may result in hazardous radiation exposure.
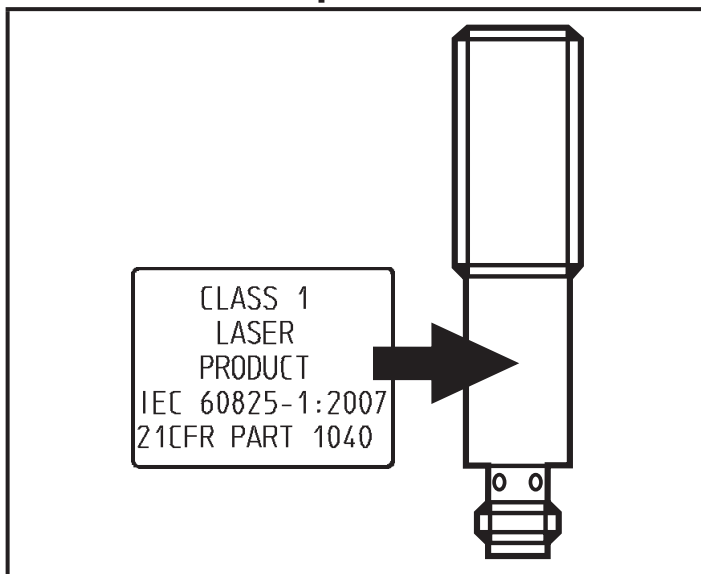
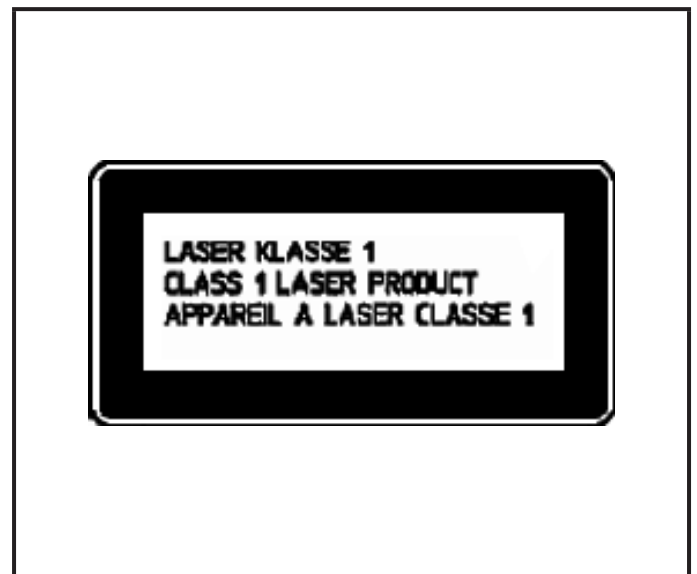Visible laser light; CLASS 1 LASER PRODUCT.
IEC 60825-1 : 2007
Complies with 21 CFR 1040.10 except for deviations pursuant to Laser Notice No. 50, dated June 2007.

Position of the product label
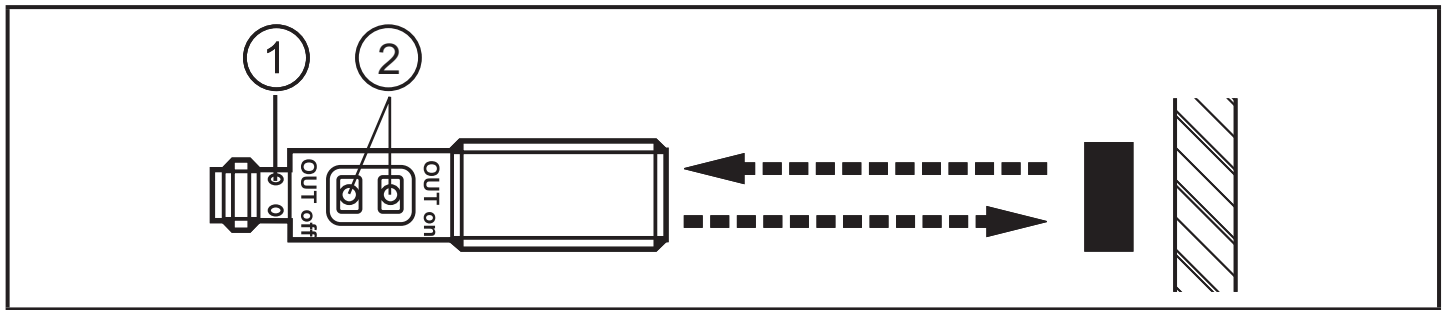

Additional label

3 Functions and features

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

Range 20 ... 200 mm (on white paper 200 x 200 mm, 90 % remission)
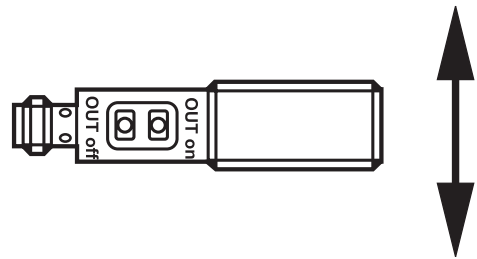
4 Installation

1: LED
2: programming buttons

▶ Align the diffuse reflection sensor to the object to be detected.

▶ Secure it to a bracket.

> **Note:**
> The objects to be detected are to move transver-
> sally to the lens of the sensor.
> ▶ In case of other directions of movement
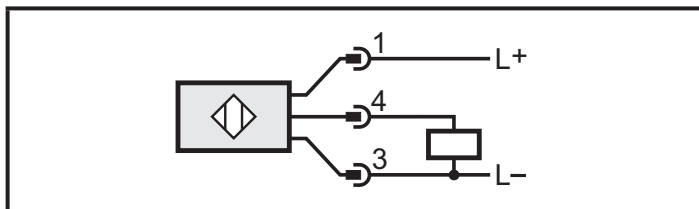>   it should be tested before whether safe
>   switching is guaranteed.

5 Electrical connection

The unit must be connected by a qualified electrician.

▶ The national and international regulations for the installation of electri-
   cal equipment must be adhered to.

▶ Voltage supply according to EN 50178.

▶ Disconnect power.

▶ Connect the unit as follows:

DC PNP

pin 1 = L+ (10...36 V DC)
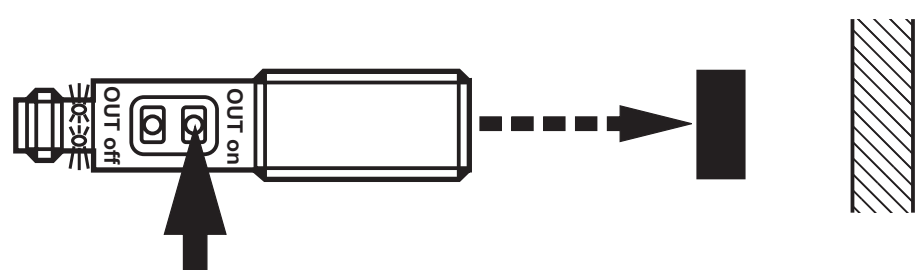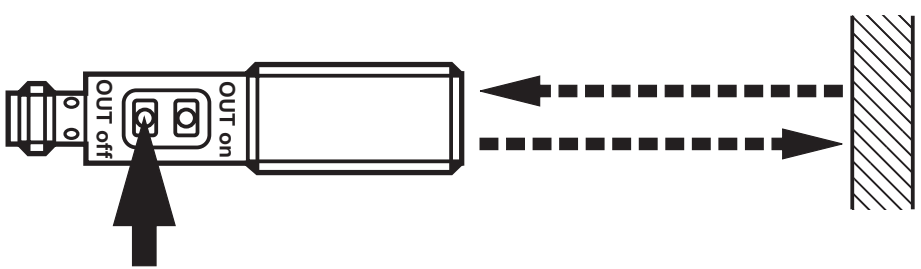pin 3 = L-
pin 4 = load (200 mA)
(pin 2 = not connected)

DC NPN

pin 1 = L+ (10...36 V DC)
pin 3 = L-
pin 4 = load (200 mA)
(pin 2 = not connected)

3
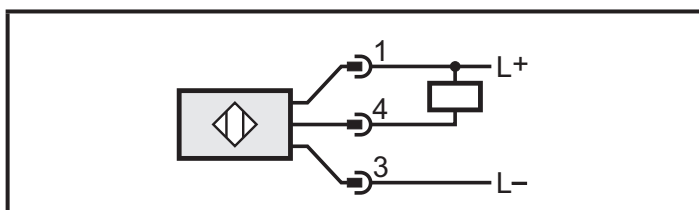
6 Settings

6.1 The sensor is to switch when the object is detected

1	▶ Position the object
	▶ Press [OUT on] for 2 s. > The sensitivity is set to the object. > The LED flashes.
2	▶ Remove the object
	▶ Press [OUT off]. > The sensitivity is set without object. > The LED goes out. The programming is finished.

6.2 The sensor is not to switch when the object is detected

▶ Position the object (see figure 1) and press [OUT off] for 2 s.

▶ Remove the object (see figure 2) and press [OUT on].

The setting can also be carried out first without object and then with object.

6.3 Setting of the maximum sensitivity

▶ Align the sensor so that no light is reflected.

The sensor is to switch when the object is detected

▶ First press [OUT on], then [OUT off].

The sensor is to switch when the object is not detected

▶ First press [OUT off], then [OUT on].

6.4 Programming unsuccessful

> The LED flashes quickly, 8 Hz.

- Measured value difference too small

- Max. programming time (15 min.) exceeded.

6.5 Electronic lock

Lock or unlock the buttons

▶ Press [OUT on] and [OUT off] simultaneously for 10 s.

> Acknowledgement is indicated by a change of the LED status.

7 Operation

▶ Check whether the unit operates correctly.

> The LED lights when the switching output is switched.

8 Maintenance, repair and disposal

▶ Keep the front pane of the sensor free from soiling.

▶ For cleaning do not use any solvents or cleaning agents which could damage the plastic material.

▶ Do not try to open the module enclosure. There are no user - serviceable components inside.

Technical data and further information at

www.ifm.com → Select your country → Data sheet direct: