

Installation and operating manual  
Contact sensor



Ref. 10020032.xx, 10020075



1. General

1.1 Use

O<sub>2</sub>LINE 10020032.xx and 10020075 sensors are designed to detect the opening (and closing) of an opening such as a door, window, etc.. They comprise 2 parts, a sensor (large casing) and a magnet (small casing). As the 10020032.xx sensor is supplied by a solar cell, it is maintenance-free. The 10020075 sensor is the contact sensor with battery option, which is supplied in addition to the solar cell with a battery. This battery takes over when the solar power reserve is empty. As soon as the magnet moves relative to the sensor, a radio signal is immediately sent. Moreover the signal is retransmitted every 15 minutes.

Before any use, the sensor must be associated with a receiver (maximum 2 sensors). Each sensor can control an unlimited number of receivers.

**Note:** Read the operating manual carefully before initial use.

1.2 Guarantee terms

This operating manual is an integral part of the device and our guarantee terms. It must always be delivered to the user. We reserve the right to modify the technical design of these devices without warning. TRIO<sub>2</sub>SYS products are manufactured and their quality checked by making use of the latest technologies and taking into account the applicable national and international directives. If nevertheless a fault arises, TRIO<sub>2</sub>SYS undertakes to remedy the default as follows, without prejudicing the rights of the end customer that arise from the sales contract with his reseller:

If the event of exercising of a legitimate and regular right, TRIO<sub>2</sub>SYS, may at its sole discretion, rectify the device fault or supply a fault-free device. Any claim beyond this and all claims for consequential damages are excluded.

A legitimate fault exists if the device cannot be used at the time of delivery to the end customer because of a design or manufacturing defect or if its practical use is severely limited. The guarantee is void in cases of natural wear and tear, incorrect use, incorrect connection, where the device has been repaired or external influence. The period of guarantee is 24 months (from the date of invoicing). French law applies to the regulation of guarantee rights.

1.3 Recycling of the device



To recycle the device, conform to the legislation and standards in force in the country of use.

## 2. Safety

### Observe the following points:

- The laws, standards and directives in force.
- Best practice at the time of installation
- The device operating manual.
- An operating manual can only give general instructions. They must be interpreted in the context of a specific installation.

The device is intended solely for use conforming to its purpose. Any repairs or modifications by the user are forbidden! Do not use with other devices the operation of which could endanger people, animals or property.

## 3. Technical characteristics

### General characteristics

Transmission frequency	868.3 MHz
Transmission power	10 mW max.
EnOcean Equipment Profile	D5-00-01
Ambient temperature	from -10°C to +60°C
Storage temperature	From -20°C to +60°C
Illumination	>100 lux on average per day
Degree of protection	IP 40 on its base
Installation altitude	2000m max.
Battery type	Lithium CR1220, 3V, 35 mAh, UL1642
Abnormal current loads	>15µA
Battery lifetime	3 years

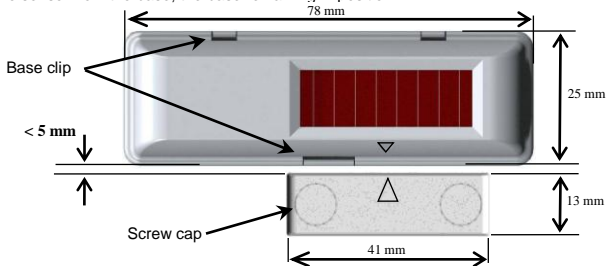
### Range in buildings

Masonry	20m, through 3 walls at most
Reinforced concrete	10m, through 1 wall/ceiling at most
Plasterboard / wood	30m, through 5 walls at most

**Note:** The signal strength between the transmitter and the receiver decreases as the distance increases. Where there is a line of sight connection, the range is approximately 30 m in corridors and 100 m in large workshops or halls. The range can be increased with an **O<sub>2</sub>LINE** repeater.

## 4. Installation and initial use

The sensor is supplied on a base which as well as installation allows a learn process to be performed close to the matched receiver by separating (using a small screwdriver to depress the clips) the sensor from the base; the base remaining in position.



### 4.1 Installation instructions:



Never mount the sensor in a metallic casing or close to a largely metallic object. Installation on the ground or close to the ground is not recommended

- For effective detection, the pointers **must be accurately** aligned.
- Secure the magnet by gluing or screwing: **3mm** screw, max head diameter **6mm**.
- Once positioned, attach the 2 screw caps.
- Secure the sensor by gluing or screwing at a maximum distance of **5 mm** from the magnet.
- Place the sensor on its base until it engages.

### 4.2 Initial use:

The devices are supplied in an operational state but will probably require recharging, following storage of the radio sensors in the dark.

- Prior to first use, charge the sensor's power reserve using light with an illuminance of at least 200 lux for 5 minutes or more.
- Ensure that averaged across the day, the mean illuminance is 100 lux/d.
- The sensor's operating power reserve (when fully charged) in conditions of total darkness is 7 days.

**Note:** The device is designed for internal use. Do not install it in locations that could be sprayed by water! To clean, use a damp cloth!

## 5. Controls and functions

**10020032.xx and 10020075** detectors transmit the detection of opening using the frame described in the document Enocean Equipment Profiles EEP2.1 §D5-00-01 (consultable under [www.enocean.com](http://www.enocean.com)).

### 5.1 Detection of opening:

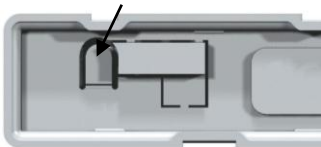
Each time the magnet leaves or returns to its installation position, a radio signal will be transmitted.

LRN button

## 5.2 Programming and LRN button:

Switch the receiver to learn mode and by pressing the **LRN** button placed behind the sensor, initiate the sending of an association frame.

When the sensor is located on its base, it must be first unclipped from the base to access the LRN button and to place the sensor closed to the matched receiver during the identification or association phase (the receiver having reduced sensitivity during this phase).



## 5.3 Battery option

With the integrated battery, **10020075** sensor can work even if the illuminance is too low to charge the power reserve with solar cell. When the power reserve is too empty to power the sensor, the battery takes over until the solar cell is enough illuminated. Battery lifetime is indicated for typical work of an opening par hour.



**Insert the battery with the positive pole on the top!**

**WARNING! THERE IS RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT BATTERY TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.**

## 6. Troubleshooting

### 6.1 New or existing installation

- If the receiver functions at a shorter distance relative to the sensor, it is subject to interference or used outside the transmission range.
- Search in the system environment for changes that could cause the interference (for example movement of metallic cabinets, furniture or partitions).
- Use the sensor or receiver in a more suitable location.
- Clear the receiver and perform a new learn process.

### 6.2 Limitation of the range of the radio signals

- Transmitter/receiver used close to metallic objects or close to materials containing metallic elements. Observe a distance of at least 10 cm.
- Humidity in the materials.
- Devices emitting high frequency signals such as audio and video systems, computers, electronic ballasts or fluorescent tubes. Observe a distance of at least 0.5 m.

### 6.3 Contacts

E-mail:..... [contact@trio2sys.fr](mailto:contact@trio2sys.fr)

## 7. Declaration of conformity

These products can be sold and operated in the countries of the European Union. **TRIO2SYS** hereby declares that the sensors **10020032.xx and 10020075** comply with the essential requirements and other relevant prescriptions of Directive 1999/5/EC R&TTE.

For more details on the applied standards please consult website [www.trio2sys.fr](http://www.trio2sys.fr)

D.Girard

A handwritten signature in black ink, appearing to read 'D. Girard'.