

Version 01/07



# FAZ 3000-TF-2

## Wireless door/window detector

Item no. 75 03 35

**This user manual belongs to this product. It contains important information specific to its operation and handling. Please bear this in mind when passing on the product to a third party.**

Therefore keep this user manual for future reference!

A contents list can be found in the table of contents on page 2.



### Imprint

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100%  
recycled  
paper.

Bleached  
without  
chlorine.

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# 1. Introduction

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Dear customer,

Thank you for purchasing this product.

**This product meets the requirements of both current national and European guidelines.**

In order to ensure continued fulfilment of legal requirements and safe operation of this product, we kindly ask you to carefully follow the instructions in this user manual!

Please read the user manual completely and observe the safety and operation instructions before using the product!

**All company and product names contained herein are trademarks of their respective owners. All rights reserved.**

**Should you have any further questions, please contact our technical service:**

**Germany:**

Tel. no.: +49 9604 / 40 88 80

Fax. no.: +49 9604 / 40 88 48

Email: [tkb@conrad.de](mailto:tkb@conrad.de)

Mon. to Thur. 8.00am to 4.30pm

Fri. 8.00am to 2.00pm

## 2. Prescribed use

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The wireless door/window detector 'FAZ 3000-TF-2' is only suitable for use with the 'FAZ 3000' wireless alarm system.

The door/window detector has a magnet contact. A signal is transmitted to the alarm base station when it is triggered.

Inside the door/window detector there is an option to connect wired NC and/or NO contacts.

The door/window detector features an internal sabotage contact that immediately sets off an alarm at the alarm base station if a meddler opens the casing of the device.

Batteries must be used for the power supply.

Installation and operation of the wireless door/window detector is only suitable for dry indoor areas. Make sure that the device does not get damp or wet!

Any use other than the one described above may damage the product and can also increase the risk of short-circuit, fire, electric shock, etc.

No part of the product may be modified or adapted. The device may only be operated when its casing is fully closed.



**All the safety instructions and installation notes in this user manual must be observed without fail.**

## 3. Scope of delivery

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- 'FAZ 3000-TF-2' radio door/window detector
- Magnet
- Assembly material
- User manual

## 4. Explanation of icons

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The icon with a lightning flash in a triangle is used to alert you to potential personal injury hazards such as electric shock.



The icon with an exclamation mark in a triangle points to important information in this user manual that must be observed.



The 'hand' symbol indicates special tips and information on operation.

## 5. Safety instructions

---



**The product's guarantee becomes invalid, if the product is damaged as a result of the failure to observe these operating instructions! We do not assume any liability for any resulting damages!**

**We do not assume liability for damage to property or personal injury caused by improper use or failure to observe the safety instructions. In such cases the product's guarantee becomes invalid.**

**Dear customer, the following safety instructions are intended to protect you as well as the device. Please take time to read through the following points:**

### a) General information

- If you are not sure how to assemble, connect and install the device or if you have doubts about its mode of operation, contact a skilled technician.
- For safety and licensing (CE) reasons any unauthorised alterations to and/or modification of the product are not permitted.

- The product is only approved for installation and operation in dry and closed indoor rooms. Make sure that the product does not get damp or wet.
- This product is not a toy and should be kept out of the reach of children.
- Do not leave packaging material lying around. This may become a dangerous plaything in the hands of children.
- Handle the product with care; knocks, blows or even a fall from a low height can damage it.

## **b) Batteries and rechargeable batteries**

- Keep batteries/rechargeable batteries out of the reach of children.
- When inserting the batteries/rechargeable batteries make sure that the polarity is correct.
- Do not leave batteries/rechargeable batteries lying around as they could be swallowed by children or pets. In such case seek immediate medical care.
- Leaking or damaged batteries/rechargeable batteries may cause acid burns, if they come into contact with skin. Therefore, please make sure you use suitable protective gloves.
- Make sure that batteries/rechargeable batteries are not short-circuited or thrown into a fire. They might explode!
- Never take batteries/rechargeable batteries apart!
- Conventional batteries must not be recharged. They might explode!
- If the device is not used for a longer period of time (for example, when stored), remove the inserted batteries/rechargeable batteries to prevent them from leaking and causing damage.



It is possible to operate the door/window detector with rechargeable batteries. However, due to the lower voltage (rechargeable battery = 1.2V, battery = 1.5V) and the lower capacity, the period of operation and the range are reduced. In some instances powering with rechargeable batteries may not be possible when the door/window detector sends a 'battery empty' message to the alarm base station even when the batteries are full, therefore immediately generating a disturbance message. Therefore, to ensure safe operation, only use high-quality alkaline batteries.

## 6. Features and functions

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- Monitoring of doors and windows via the supplied magnets (can be mounted to the left or to the right of the detector)
- Can be mounted to a door or window, for example
- Monitoring of objects that need to be protected against unauthorised removal (pictures, works of art and so on)
- Option to connect additional external NC contacts (NC = normally closed) and NO contacts (NO = normally open)
- The connection for NO contacts is always activated, irrespective as to whether the alarm base station is set to 'disarmed', 'internally armed' or 'externally armed'.



This is ideal, when NO model glass break sensors are used. If the glass breaks an alarm is immediately set off by the alarm base station!

- Battery operation: 2 x AAA batteries (additionally 1 x micro (AAA) and 3 x button cells (LR44) when NO contacts are connected, for example for NO model glass break sensors)
- Sabotage contact
- Test function

## 7. Installation

---

### a) Installation notes

- Magnetic sensors (reed switch) are located inside the 'FAZ 3000-TF-2' door/window detector on the left and on the right side.

This means that you can mount the supplied magnet either on the left or on the right side.



A two-sided installation of 2 magnets (one on the left and one on the right of the door/window detector) is not possible!

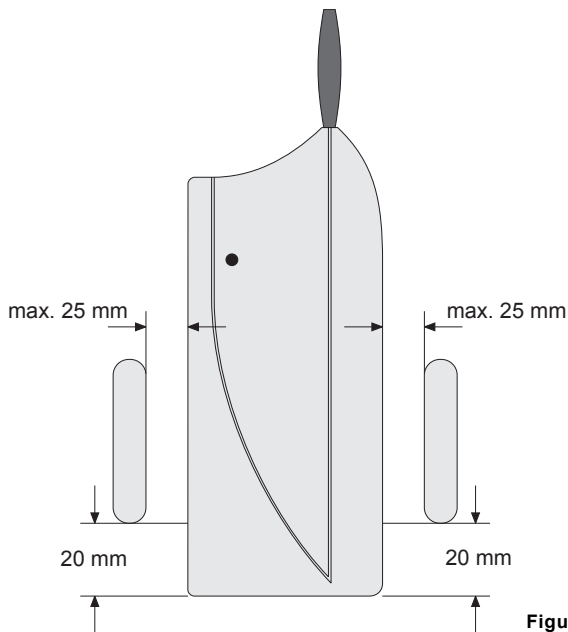


Figure 1

- Make absolutely sure that the lower edge of the magnet is 20mm away from the lower edge of the door/window detector.

Mounting the magnet higher or lower reduces the magnetic range; the magnet must be installed closer to the door/window detector!

The horizontal distance between the magnet and the door/window detector should not exceed 25mm. The ideal distance is approx. 10-15mm.



**Tip:**

Before using screws to mount the device, you should first check that it is working properly so as to avoid drilling any unattractive holes in the 'wrong' location.

- **The internal magnet contact (the magnet sensor/reed switch in the door/window detector) is normally switched off. It is activated when closed for the first time via a magnet, and hereafter signals its state to the alarm base station.**



Due to this factory default setting, the door/window detector may also be operated exclusively with external magnet sensors (without the supplied magnets).

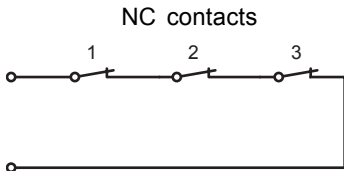
A deactivation of the internal magnet contact (if activated) is only possible by briefly removing the batteries (replacing the batteries) or by deleting and re-registering the sensor.

- In addition to the internal magnet sensor you can attach several external sensors to the door/window detector, such as when you have a wide window bank with several windows/doors.

This refers only to NC contacts that must use the 'KL2' connection, see page 12, figure 5.

When connecting several external NC contacts, they must be connected in series (figure 2).

Do not connect terminating resistors!



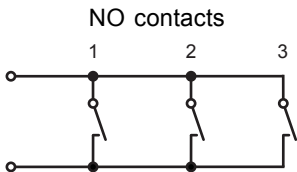
**Figure 2**

- NO contacts on the door/window detector may also be used to complete the monitoring, (use connection 'KL1', see page 12, figure 5).

They must have a potential-free/currentless switching output.

When connecting several NO contacts, they must be connected in parallel (figure 3).

Do not connect terminating resistors here either!



**Figure 3**



**Please note:**

The 'KL1' connection for NO contacts is always active, irrespective as to whether 'disarmed', 'internally armed' or 'externally armed' is set. This is ideal, if glass break sensors with NO contacts are used. An alarm is set off immediately when a pane of glass is smashed!

- The maximum attainable wiring length per alarm loop greatly depends on the cable used and the transfer resistance of the magnet and/or glass break sensors. Under ideal circumstances 100m or more is possible.
- When installing the door/window detector and magnet on metal doors or windows the wireless range may be reduced.
- As a rule, the magnet is mounted on the moving part (window, door panel, picture, for example) and the door/window detector 'FAZ-TF' is attached to the static part (for example, window frame, door frame or wall). Please refer to figure 1 on page 8 for the correct distance between magnet to door/window detector.
- The magnet and the 'FAZ-TF' door/window detector may be attached with commonly available double-sided tape.



You can use suitable screws to mount both components to the surface and thus prevent them from being sabotaged. However, you should first check that they are working properly so as to avoid drilling any unattractive holes in the 'wrong' location.

## b) Installing the door/window detector

- Open the casing; the two casing halves are secured by two catches ('A' in figure 4 below).

Using a fingernail or a flat screwdriver carefully push the two catches approx. 1 millimetre inwards until the casing opens.

First press one catch inwards and pull the casing approx. 1-2 millimetres apart at this location. Then press the other catch inwards; the casing now opens.

- The hole 'B' is used for mounting the device with screws. The two openings labelled 'C' are available to feed a cable into the door/window detector (for hard-wired external sensors).

- Before installing the door/window detector 'FAZ-TF' in the desired location (see following page), the cables of the external sensors (NC or NO contacts, if available) must be inserted.

There are 2 openings ('C') on the back side of the door/window detector, through which the cables can be lead inwards.

Later when installing the door/window detector, make sure not to bend or pinch the cables.

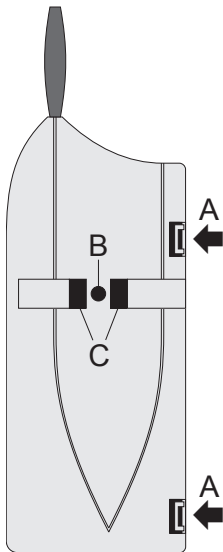


Figure 4

In the door/window detector itself, the cables are fed under the battery compartment for the LR44 button cells to the screw terminal strips (otherwise the LR44 button cells cannot be inserted properly), see figure 5.

**KL1:**

The connection for external NO contacts is always active, irrespective as to whether 'disarmed', 'internally armed' or 'externally armed' is set; the alarm base station sets off an alarm immediately upon a connection between the two screw terminals!

**KL2:**

For external NC contacts (if using KL2, the jumper in the terminal must be removed!)

- Attach the door/window detector using the enclosed double-sided tape.

Alternatively you can attach it with a screw through the opening 'B', see figure 4 on page 11. This also prevents it from being easily removed from the wall (sabotage protection).

The screw is also indicated in figure 5 to the right.

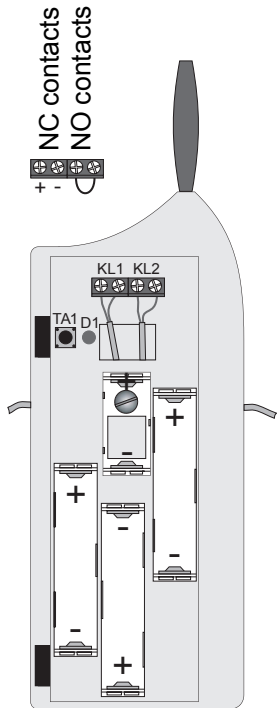


Figure 5



**When drilling or fastening screws be careful not to accidentally damage any power supply lines, gas or water pipes as this could pose a life-threatening danger!**

- Do not insert the batteries yet. The casing should initially remain open.

- If you use the supplied magnet, attach it using the enclosed double-sided tape (please note the recommended distances, see figure 1 on page 8).

Alternatively, you can use 2 screws to attach the magnet. Remove the magnet's casing using a flat screwdriver and screw in suitable screws. Afterwards, replace the casing.

## 8. Registering the door/window detector 'FAZ 3000-TF-2' with the base station

---



To register the sensors the alarm base station must first be set to receive radio signals. Make sure that you also read the user manual of the 'FAZ 3000-Z' alarm base station.

Carry out the following steps on the 'FAZ 3000-Z' alarm base station:

### Description of procedure

### Display on LCD

- The alarm base station must be in the top level. The LCD should appear as on the right, for example, with the time and the date.

```
disarm
16:30 14.12
```

- Briefly press the '**Menü a/A**' button on the control unit of the 'FAZ-Z' alarm base station.

```
troubles
```

- Use the '**↑**' and '**↓**' buttons to select the '**sensors**' menu.

```
sensors
```

- Confirm your selection by briefly pressing the '**OK**' button. '**sensors add**' appears on the LCD.

```
sensors
add
```

- Press the '**OK**' button again. The '**X**' character here stands for the number of sensors that have already been registered plus one.

```
sensor X
clear
```



Now the alarm base station is ready to receive the registration of the 'FAZ 3000-TF-2' door/window detector.

- Go to the door/window detector that you wish to register with the alarm base station.



After installing of the door/window detector as described in section 7. b) on pages 11 to 13, the casing of the device is still open and the batteries are not yet inserted.

- If you want to connect additional NC contacts to the 'KL2' connector, first remove the jumper from the KL2 connector. When connecting several external NC contacts, they must be connected in series. Do not connect terminating resistors.

Please refer to figure 2 on page 9 for connecting NC contacts.

- Insert 3 AAA batteries into the 3 battery holders making sure polarity is correct. See figure 6.
- The door/window detector contacts the alarm base station by sending a radio signal.

The LED of the door/window detector briefly lights up and the alarm base station emits a short signal tone to confirm signal reception.

- If the internal magnet contact is to be used (with the supplied magnets), close the window that the magnet is attached to.

This activates the internal magnet.

**You may need to open and close the windows again to ensure that a radio signal is sent to the alarm base station.**

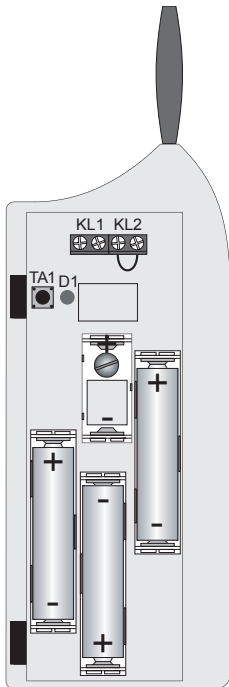


Figure 6

- If you have connected additional NO contacts to the 'KL1' connector (see figure 3 on page 10), please insert 3 type 'LR44' button cells observing correct polarity into the battery compartment, see figure 7.

The 3 button cells must be positioned such that each 'plus' ('+') points upwards (please note the '+' symbol on the circuit board in the battery compartment; the lettering on the button cells).

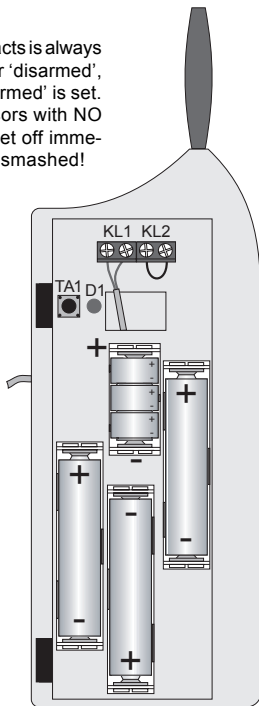


**Please note:**

The 'KL1' connection for NO contacts is always active, irrespective as to whether 'disarmed', 'internally armed' or 'externally armed' is set. This is ideal, if glass break sensors with NO contacts are used. An alarm is set off immediately when a pane of glass is smashed!

If the glass break detector has a polarity specification, attach the 'plus' contact to the left KL1 screw terminal (see figure 5).

- Close the door/window detector's casing, so that the two locking hooks audibly click in.



**Figure 7**

- Return to the alarm base station. The LCD's display has changed. See the figure on the right. The number '3' is the continuous sensor number (and not 'the third door/window detector'). The appropriate number is displayed, depending on the number of sensors you already have registered with the alarm base station.

contact	3
—	

- Use the buttons on the alarm base station to enter the name of the sensor, for example, 'livingr w1' for 'living room, window 1'.

contact	3
livingr	w1

- ▶ To enter the letters use the 2-9 buttons, each of which represents several letters (click through as with a mobile phone by repeatedly and quickly pressing the same button).
- ▶ Numbers and umlauts can also be found on the buttons.
- ▶ Use the '0' button to enter a space character.
- ▶ Special characters can be entered using the '↑' and '↓' buttons.
- ▶ You can use the 'Menü a/A' button to switch between lower and upper case.
- ▶ The cursor automatically jumps to the next position approx. one second after the last button was pressed.
- ▶ You can use the '←C' button to delete a character you entered incorrectly by mistake.

- Once you have entered the name you require, press the 'OK' button. The LCD has the display shown on the right.

close :	N
intern:	N

- Use the '➔' button to set the door/window detector as an internal sensor ('**intern: Y**') or an external sensor ('**intern:N**').

close :	N
intern:	Y

'**intern: N**'      External sensor; alarm set off for 'internally armed' and 'externally armed'

'**intern: Y**'      Internal sensor; alarm set off only for 'externally armed'

More information on this can be found in section 10 on page 21 (or in the user manual of the alarm base station).

- By pressing the '▲' button you can access the closure group settings (the '**N**' in the upper line is now underlined).
- Using the '➔' button you can select whether the door/window detector belongs to the closure group ('**Y**'), or not ('**N**'). You can find further information on this in section 10, page 21 (or in the alarm base station's user manual).

close :	N
intern:	Y

- By pressing the '**OK**' button, you access the registration function for the next sensor. The '**X**' on the right in the figure stands for the number of the next free sensor memory location.

sensor	X
clear	

Now another door/window detector (or a PIR motion detector or smoke detector) can be registered.

- Press the '◀C' button three times to exit the alarm base station's registration mode. You are in the normal display mode again (top level) of the alarm base station.

disarm	
16:45	14.12

## 9. Opening the door/window detector's casing, replacing the batteries

---



Before the casing of the door/window detector may be opened, the alarm base station must be set to maintenance mode. Otherwise the alarm base station immediately sets off the sabotage alarm when the casing is opened.

### Proceed as follows:

- The alarm base station must be in the top level. The LCD should appear as on the right, for example, with the time and the date.

```
disarm
17:25 20.03
```

- Briefly press the '**Menü a/A**' button on the control unit of the 'FAZ-Z' alarm base station.

```
troubles
```

- Use the '▲' and '▼' buttons to select the '**service**' menu. See the figure on the right.

```
service
```

- Confirm your selection by briefly pressing the '**OK**' button. The first sensor that was registered with the alarm base station is displayed.

```
contact 1
livingr w1
```

- Use the '▲' and '▼' buttons to select the sensor that you wish to open (to replace the batteries or to change the wiring, for instance).

```
contact 4
bedr w1
```

Other devices may be selected with the '▶' button (siren control, activation switch, alarm dialler, PC interface and/or alarm base station).

- Confirm your selection by briefly pressing the '**OK**' button.

```
contact 4
- service -
```

You can now open the casing of the selected sensor without setting off a sabotage alarm, in order to replace the batteries, for example. No data is lost and the sensor or the device does not need to be registered again afterwards.

Once the new batteries have been inserted the sensor's LED briefly blinks once. The radio connection to the alarm base station has been established and checked.

For instance, instead of replacing batteries, the wiring of the door/window detector can be changed, to connect additional external sensors, for example.

- Once you have finished replacing the batteries or made changes to the wiring, close the sensor's casing again.
- Briefly press the 'OK' button on the alarm base station to end the maintenance. You are now in the sensor list again. You can use the '▲' and '▼' buttons to select another sensor (or select a device using the '➔' button).
- You can exit the 'service' mode by pressing the '◀C' button three times. This returns you to the normal display mode (top level) of the alarm base station.

```
contact 4  
bedr w1
```

```
disarm  
17:47 20.03
```



#### Please note:

If the internal magnet contact of the door/window detector is used (with the supplied magnets, either mounted on the left or the right), the contact must be **triggered one time** after battery replacement in order to reactivate the internal magnet contact.

**After replacing the batteries, open and close the window or door to which the magnet is attached 1 time.**

## 10. Explanation of 'Internal/external sensor' and 'closure group'

---

### a) Internal/external sensor



By assigning a sensor as an internal or an external sensor, you can determine how each sensor responds:

**Intern: N** External sensor; alarm is set off for 'internally armed' and 'externally armed'

**Intern: Y** Internal sensor; alarm is only set off for 'externally armed'

The alarm base station has two activation options:

#### 1. 'Internally armed'

The 'internally armed' function provides protection to the exterior of a building, such as, when you are in your house at night, for instance.

Only sensors that are involved in protecting the exterior of the building are allowed to respond. These include door/window detectors in an apartment or PIR motion detectors that are mounted externally.

PIR motion detectors located inside the apartment are not allowed to respond and must therefore be set to '**Intern: Y**'.

#### 2. 'Externally armed'

The 'externally armed' function is used to monitor an unoccupied building such as a house, when no one is at home, for instance.

The exterior shell of the building is monitored (using door/window detectors, for example) as well as the indoor areas (provided that internal PIR motion detectors are installed).

All the sensors set off the alarm, irrespective of how they are assigned.

## b) Closure group



All sensors that directly protect external doors such as door/window detectors and PIR motion detectors that are mounted outside should be assigned to the so-called 'closure group'.

When the alarm system is activated and in the case of an alarm the sensors in the 'closure group' initially only set off the internal siren of the 'FAZ 3000-Z' alarm base station (the default setting for the alarm duration is 30 seconds, which you can adjust).

Only afterwards is the 'normal' alarm set off (for example, externally via a siren and a strobe light).



### **Advantage:**

If you forget to deactivate the alarm system when you enter your house, initially only the internal siren is set off.

You then have 30 seconds in which you can deactivate the alarm system, before the external siren (and the alarm dialler or PC interface, for example) signal the alarm outside the building.

### **Disadvantage:**

When there is a 'real' break-in, this also forewarns the intruder. The intruder could then attempt to destroy the alarm system or parts of the alarm system, if these devices are easily accessible and are not protected against force.

**To avoid this problem it makes sense to use the 'FAZ 3000-SE' radio activation switch with a bolt switching contact.**

This device deactivates the alarm system when the house door is opened properly, and consequently prevents false alarms. At the same time the alarm is set off without a delay, if one of the sensors activates.

## 11. Maintenance and cleaning

---

The product requires no servicing except for battery replacement. Any repairs should be carried out by a skilled technician or a professional workshop.

Clean the product with a soft, clean, dry and lint-free cloth. To remove heavier dirt, use a cloth which is slightly moistened with lukewarm water.

Do not use any solvent-based cleaning agents as these may damage the plastic casing.

## 12. Disposal

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### a) General information



When the product is no longer usable, dispose of it in accordance with the applicable statutory regulations.

### b) Batteries and rechargeable batteries

As the consumer, you are legally obliged to return all your used batteries and rechargeable batteries. **Do not dispose of your used batteries via the household rubbish!**



Batteries/rechargeable batteries containing harmful substances are marked with the following icons, which alert you to the fact that disposal via the household rubbish is prohibited. The identifiers for the respective heavy metals are: **Cd**=cadmium, **Hg**=mercury, **Pb**=lead (identifier is on the battery/rechargeable battery, for example, under the rubbish bin icons on the left).



You can return your used batteries/rechargeable batteries free of charge to any authorised disposal station in your area, in our stores or in any other store where batteries/rechargeable batteries are sold.

By doing so you comply with your legal obligations and also make a contribution to environmental protection.

## 13. Information on the range

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### Ranges and interference

- The door/window detector operates in the 868MHz range, which is also used by other radio services. Therefore devices that operate on the same or neighbouring frequencies may restrict both its operation and its range.
- The specified range of 300m is the free-field range, which means the range with visual contact between the transmitter and receiver. In practice, however, ceilings, walls, garages or neighbouring buildings between the transmitter and the receiver may affect and reduce the range accordingly.
- The range also depends on the version of the available alarm base station. Earlier versions of the alarm base station had a range of up to 100m; for others, an external antenna ('FAZ-HF') permitted larger ranges.
- The actual attainable distance between the transmitter and the receiver in normal operation greatly depends on the installation location and the surroundings.  
As a rule – when mounted in a family home, for example – all the components should work properly and there should be no radio reception problems.

### Other causes of reduced ranges:

- All types of high-frequency interference
- Any buildings or vegetation
- Conductive metal parts that are located near the devices or within or near their transmission path, for example, radiators, metallised insulation glass windows, reinforced concrete ceilings and so on.
- Influence on the radiation pattern of antennas due to the distance from the transmitter or receiver to conductive surfaces or objects (also to human bodies or the ground)
- Broadband interference in urban areas that reduces the signal-to-noise ratio; the signal is no longer recognised due to this 'noise'
- Interference radiation resulting from insufficiently shielded electronic devices, for example, operating computers or similar

## 14. Technical specifications

---

- Option to connect additional external NC and NO contacts
  - Installation with supplied magnets possible on left **or** right
  - Batteries: ..... 3 x AAA batteries  
(additionally 3 x button cells LR44, when NO contacts are connected, for example for NO model glass break sensors)
  - Dimensions: ..... 53mm x 163mm x 24mm (W x H x D)
  - Frequency: ..... 868.35MHz
  - Range: ..... up to 300m in free-field (\*)
- (\*) The range depends on the version of the 'FAZ 3000-Z' alarm base station that is used. Earlier versions only permitted a range of up to 100m. Please also see section 13.

## 15. Brief instructions

---

### a) Registering the door/window detector with the alarm base station

- Install the door/window detector, but do not insert batteries yet
- Set the alarm base station to the sensor search mode
- Insert batteries into the door/window detector
- The alarm base station should now recognise the door/window detector
- Enter a name for the door/window detector
- Set properties for the door/window detector (closure group and internal/external sensors)
- Return to the top level of the alarm base station (press the '←C' three times)
- If the internal magnet sensor is to be used (in connection with the supplied magnets), open and close the window 1 time, in order to activate the magnet sensor

### b) Further connection of external NC/NO contacts

- Set the door/window detector on the alarm base station to the maintenance mode
- Open the door/window detector's casing
- Lay or change wiring
- If NO contacts are to be attached to the 'KL1' terminal, 3 additional type LR44 button cells must be inserted
- If NC contacts are to be connected to the 'KL2' terminal, the jumper (factory installed) on the 'KL2' terminal must first be removed.
- Close the casing
- Exit the maintenance mode of the alarm base station
- If the internal magnet sensor is to be used (in connection with the supplied magnets), open and close the window 1 time, in order to activate the magnet sensor again



The door/window detector may also be operated exclusively with external NC/NO contacts, the internal magnet contact is always automatically deactivated after batteries have been replaced.

## c) Opening the casing, replacing the batteries

- Set the door/window detector on the alarm base station to the maintenance mode
- Open the door/window detector's casing
- Replacing the batteries
- Close the casing
- Exit the maintenance mode
- If the internal magnet sensor is to be used (in connection with the supplied magnets), open and close the window 1 time, in order to activate the internal magnet sensor

## 16. Declaration of conformity (DOC)

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We, Conrad Electronic, Klaus-Conrad-Straße 1, 92240 Hirschau (Germany), hereby declare that this product complies with the fundamental requirements and other relevant regulations of directive 1999/5/EC.



You can find the declaration of conformity for this product at [www.conrad.com](http://www.conrad.com)