

PIR Motion Detector



User Manual

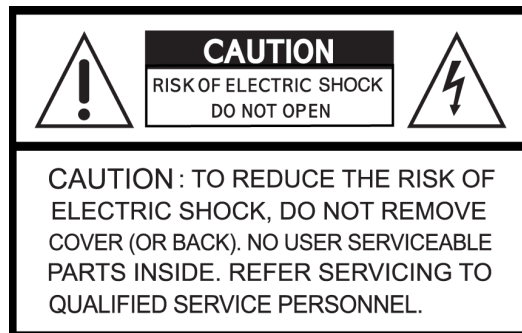
Introduction

Thank you for purchasing the KATHREIN Digital Systems GmbH PIR motion detector. Please take the time to read the following safety and installation information carefully and attentively before using the PIR motion detector. It is imperative to comply with these instructions in order to ensure the safe operation of the device. If you have any further questions, please contact your local retailer or KATHREIN Digital Systems GmbH directly. Your PIR motion detector was developed and built with state-of-the-art technology and complies with European and German standards.

Please keep this manual safe to be able to answer possible questions in the future. The manual is an integral part of the product even in case it is resold to a third party.

Disclaimer

All technical details and descriptions in this manual were compiled with the greatest care. However, KATHREIN Digital Systems GmbH cannot entirely exclude mistakes in this manual. Therefore, we do not assume any legal responsibility or liability resulting from wrong information in this manual. Descriptions, technical illustrations and technical data are subject to change without notice according to technical progress. In addition, KATHREIN Digital Systems GmbH reserves the right to change the product and the manual without prior notice. We do not assume any guarantee with regard to the content of this document. We appreciate any comments on mistakes or inaccuracies which may help us to improve this product and this manual.



This symbol is intended to attract the user's attention to the potential risk of dangerous unprotected voltage inside the housing. This may lead to electric shock.



This symbol is intended to attract the user's attention to user and maintenance instructions in the manual and documents enclosed with the product.

WARNING:

TO MINIMISE THE RISK OF ELECTRIC SHOCK, YOU MUST NOT EXPOSE THIS PRODUCT TO WET AND MOIST CONDITIONS AT ANY TIME.



All KATHREIN Digital Systems GmbH products are lead-free and meet the requirements stated under the European Directive on the Restriction of Hazardous Substances (RoHS). This guarantees that the entire production process and the product itself are free of lead and of all listed hazardous substances.



This product was tested and complies with the regularities for a class of digital devices stated under FCC part 15. These limits were specified to provide reasonable protection against harmful exposure when operating the device in a commercial environment. This product generates, uses and may emit radio energy. It may in addition interfere with other radio communication systems if not installed or used according to this manual. Using the device in residential areas may cause disturbances to be possibly remedied at the user's expense.



Hereby KATHREIN Digital Systems GmbH declares that the PIR motion detector FBM 100 (order number 2220000004, EAN 4021121548819) is in conformity with the relevant provisions of Directive 1999/5/EG.

Conformity:

The declaration of conformity is available at <http://www.kathrein-ds.com> in the download section of the respective product. Alternatively, you can request the declaration of conformity directly from us:

KATHREIN Digital Systems GmbH

Anton-Kathrein-Str. 1-3

83022 Rosenheim, Germany

Important Safety Information



WARNING

The warranty claim will expire in case of damages resulting from the non-observance of this manual.

We do not assume any liability for consequential damages.

We do not assume any liability for damages to persons and/or material whatsoever which result from improper handling or noncompliance with the safety instructions. The warranty claim will expire in such cases!

The PIR motion detector FBM 100 is equipped with a high-quality housing. However, please observe the following safety instructions:

- Operate the PIR motion detector only with the provided batteries.
- Handle the PIR motion detector with care, heavy vibration or bumps may damage the device.
- Do not expose the PIR motion detector to direct sunlight or strong heat, e.g. heaters.
- Do not install the PIR motion detector directly on iron or aluminium surfaces, as this may impair the wireless transmission significantly. Use a non-conducting material to insulate the device from the installation surface.
- Do not install the PIR motion detector directly on iron or aluminium surfaces without isolating the foot of the alarm panel from the floor, as this may impair the wireless transmission significantly.
- Do not install the PIR motion detector in moist, very cold or very hot environments. Please observe the maximum humidity and temperature limits (-10 °C to +45 °C (14 °F to 113 °F), maximum 85% relative humidity).
- Persons (including children) with limited physical, sensory or mental abilities and/or lacking experience and/or knowledge must not use this product.
- Keep children away from the product and other connected electrical appliances at all times. The PIR motion detector includes small parts they can swallow. Lay cables expertly so that they are neither bent nor otherwise damaged. Install the PIR motion detector out of children's reach. Do not leave packaging materials unattended, as they may be dangerous for playing children.
- Use a damp cloth to clean the PIR motion detector's surface, then dry it. Cleaning agents will damage the surface.

Malfunctions and Defects

If you notice any kind of defect, remove the batteries from the PIR motion detector FBM 100 and contact your retailer or KATHREIN Digital Systems GmbH directly. Any further usage of the system may lead to fire or electric shock!

Intended Use

The KATHREIN Digital Systems GmbH PIR motion detector is intended to monitor movements in your rooms by registering any changes in the temperature field. Install the PIR motion detector indoors only. Any other use than that described in this manual is not permitted and will void any warranty or guarantee as well as liability claims. The same applies if the device is modified or retrofitted.

Disposal



Do not dispose of the device with domestic waste!

This product complies with the EU Directive on waste electrical and electronic equipment (WEEE) and therefore must not be disposed of with domestic waste. Dispose of the device via your local collection point for waste electronic equipment!

This product contains software programs subject to the GPL free software license.

This product contains software that was developed by third parties and/or software subject to the GNU General Public License (GPL) and/or the GNU Lesser General Public License (LGPL). We will send you the source code of these programs on request. The GPL and/or LGPL code used and offered in this product is EXCLUSIVE OF ANY GUARANTEE WHATSOEVER and is subject to the copyright of one or several authors. For further details, please refer to the GPL and/or LGPL code of this product and to the terms of use of GPL and LGPL.

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For an unofficial German translation, please go to
<http://www.gnu.de/documents/gpl.de.html>.

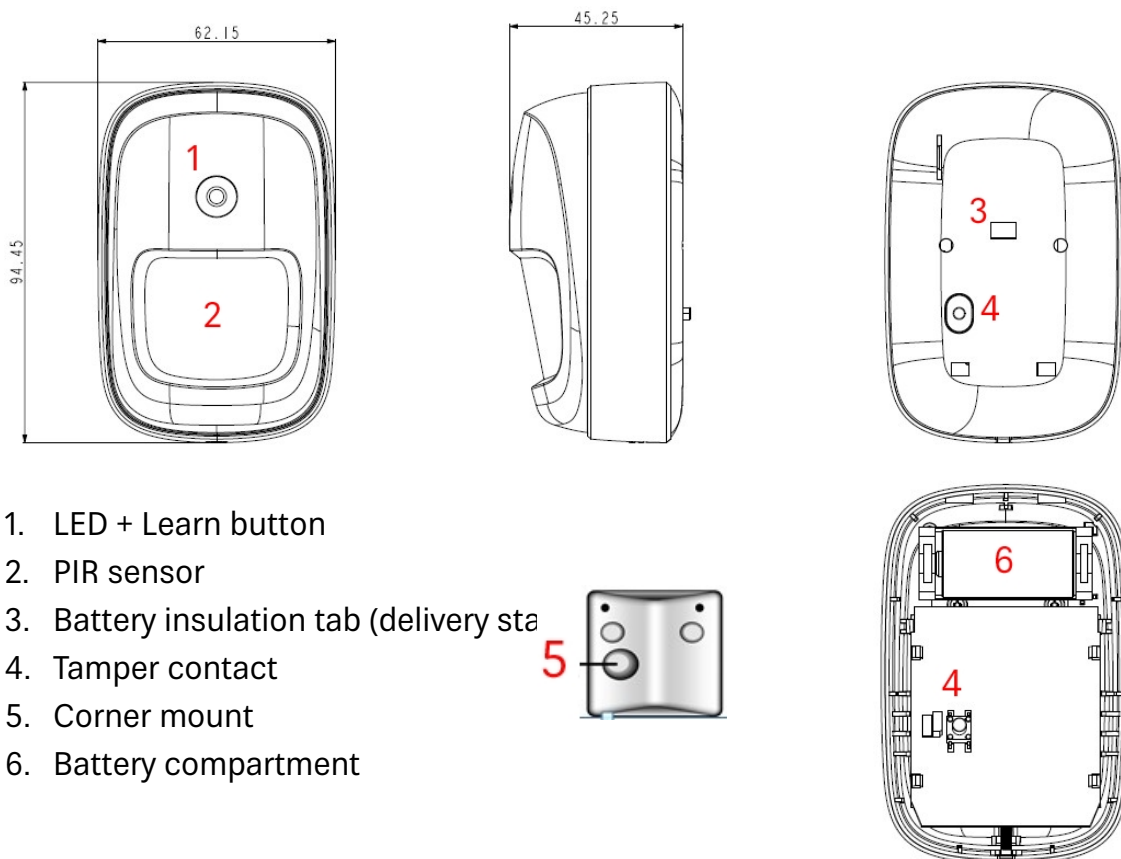
PIR Motion Detector FBM 100

Product description:

The PIR motion detector reliably alerts you to any movements in your rooms. Simply install the PIR motion detector at the location you want to monitor. The PIR motion detector works by means of passive infrared monitoring.

Sensor data:

Dimensions (without mount):	4.2 x 6.4 x 9.4 cm (1.6 x 2.5 x 3.7 in)
Weight:	80 g (0.17 lbs)
Place of installation:	Only indoors (walls, corners)
Operating temperatures:	-10 °C to +45 °C (14 °F to 113 °F)
Humidity:	Maximum 85% (non-condensing)
Radio frequency:	868.35 MHz
Detection method:	Thermal field measurement up to 12 m (13 yd)



1. LED + Learn button
2. PIR sensor
3. Battery insulation tab (delivery sta
4. Tamper contact
5. Corner mount
6. Battery compartment

LED indicator:

Normally, the LED indicator does not flash. Please be aware of the following exceptions:

- If the battery runs low, the LED will flash for two seconds after a movement was detected.
- If a tamper contact of the PIR motion detector is triggered (tamper protection), the LED will flash for two seconds while transmitting the alarm signal.
- If you press the test button for approx. 5 seconds, the PIR motion detector will enter the test mode for 3 minutes. During this time, the LED will flash every time a motion is detected. Use the test mode to adjust the PIR motion detector suit to your individual security requirements.

Battery:

- The PIR motion detector requires a 3 V CR123 lithium battery. This battery will last approx. 2.5 years at an average of 20 detected motions per day.
- When the battery runs low, the PIR motion detector will transmit a notification to the alarm panel.

Connecting the PIR motion detector and putting it into operation

1. Remove the battery insulation tab at the back of the unit before the first use.
2. The PIR motion detector will now enter a boot process. This takes approx. 30 seconds and the LED will flash during this time. Please do not trigger the motion detection during this period – every detected motion during the boot process will result in an extension of the required time.
3. Open the web interface of the alarm panel and go to the menu “Sensors” → “Add” and press “Start”.
4. Press the Learn button of the PIR motion detector.
5. As soon as the alarm panel has found the sensor, it is listed in the lower menu and you hear a brief signal tone from the alarm panel.
6. Click on “Add” to add the PIR motion detector to the sensor list.

Range test:

To test the signal strength at the desired installation location, perform a range test.

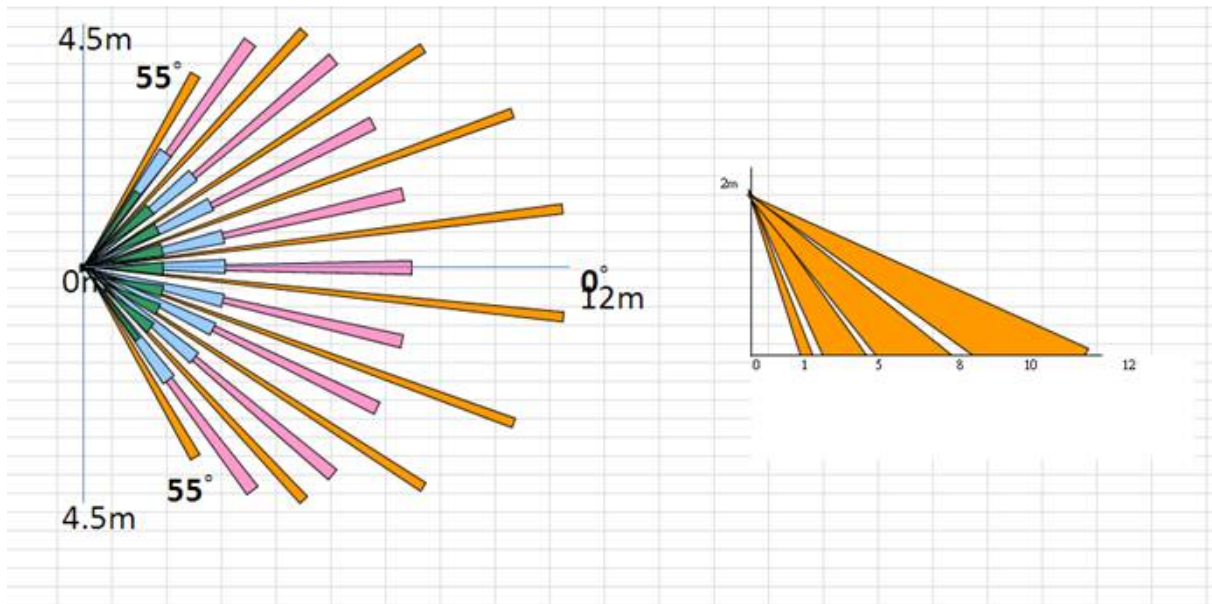
1. Open the alarm panel menu “Sensors” → “Range” and press “Start”.
2. Press the Learn button of the PIR motion detector.
3. The sensor and the signal strength should be indicated. The higher the indicated number the better the reception (1–9).
4. Click “Stop” to end the test.

Please note:

If there is no signal at the installation location or the signal strength is below 4 or frequently falls below this level (signal fluctuations of 2 to 3 are normal), we recommend using a repeater to improve the signal.

Installation:

- There are five holes at the back of the PIR motion detector (three slots, two small holes) – these are used to install the corner mount.
- Use the supplied screws to fasten the corner mount bracket to the wall. Then attach the PIR motion detector to the corner mount bracket.
- For direct wall mounting: Use the supplied screws to pierce through the indentations, then screw the unit to the wall.



- The horizontal angle of the PIR motion detector is 110°.
- The PIR motion detector will detect motions in a range up to 12 meters (13 yd) if it is installed at a height of 2 meters (2.2 yd).
- To ensure the optimal function of the PIR motion detector, make sure that the PIR motion detector is installed at a height of 1.8–2 meters (2–2.2 yd) and that the Learn button is pointing upwards.

Warm-up and rest mode:

Every time the alarm panel is armed or switched to home mode, the PIR motion detector enters a warm-up phase of approx. one minute. During this time, detected motions will not trigger an alarm. However, detected motions will increase the warm-up phase by an additional minute – make sure not to trigger the PIR motion detector during the warm-up phase in order to minimise the duration of the warm-up.

In order to save battery power, the PIR motion detector enters a rest mode after every detected motion (irrespective of the mode of the alarm panel). The rest mode takes approx. one minute and every registered motion during the rest mode will extend its duration.



- Do not install the PIR motion detector in the detection range of another sensor (e.g. an additional motion detector with a light in front of your door).
- Do not expose the PIR motion detector to direct sunlight.
- The PIR motion detector registers movements in the temperature field. Thus, it can also be triggered by the movements of air currents. Make sure not to install the PIR motion detector in areas where air currents with different temperatures may cause movements (e.g. above radiators/stoves/furnaces, heated floors, air conditioning, staircases, or behind windows).