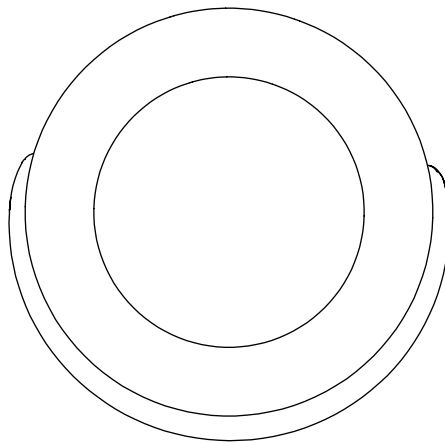




# OPERATING MANUAL

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## FIBARO MOTION SENSOR FGBHMS-001



### CONTENTS

v1.0

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## Important safety information



### **Read this manual before attempting to install the device!**

Failure to observe recommendations included in this manual may be dangerous or cause a violation of the law. The manufacturer, Fibar Group S.A. will not be held responsible for any loss or damage resulting from not following the instructions of operating manual.

## HomeKit technology

**Apple HomeKit** technology provides an easy, secure way to control HomeKit-enabled accessories using Siri on your iPhone, iPad, or iPod touch.

After installing your **FIBARO Motion Sensor**, configure it from a compatible app with just a few simple steps.

You can even create your own custom scenes to control your home settings. For example, you can create a scene to automatically turn off the lights, lock your doors, close the garage door, and set the thermostat to the desired temperature in just one step.



Controlling this HomeKit-enabled accessory requires an iPhone, iPad, or iPod touch with iOS 9.3 or later.

Controlling this HomeKit-enabled accessory away from home requires a third-generation Apple TV with Apple TV software 7.2.1 or later or a fourth generation Apple TV with tvOS 9.2 or later and an iPhone, iPad, or iPod touch with iOS 9.3 or later

## #1: Description and features

**FIBARO Motion Sensor** is a HomeKit-enabled multi-sensor using *Bluetooth*® low energy technology.

Along with detecting motion, the accessory measures the ambient temperature and light intensity.

The sensor has a built-in accelerometer to detect any tampering with the accessory.

FIBARO Motion Sensor is battery powered and designed to be installed quickly and easily on any surface.

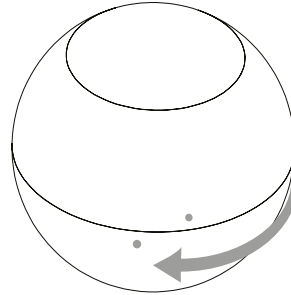
The eye-shaped LED indicator signals motion, temperature level, tampering and can be used to identify the accessory.

### **Main features of FIBARO Motion Sensor:**

- compatible with Apple HomeKit technology
- *Bluetooth*® low energy technology for wireless communication
- detects motion using a passive IR sensor
- measures ambient temperature
- measures light intensity
- detects tampering using accelerometer
- easy installation
- may be installed anywhere - wall or any surface
- battery powered
- indicates state using multicolor LED diode

## #2: Powering the accessory

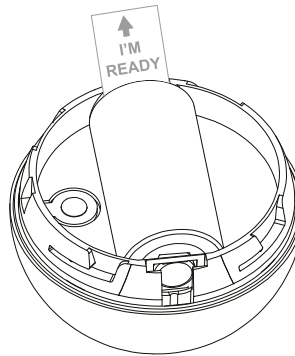
1. Turn the cover counter-clockwise and open it.



**i** NOTE

Remember to use only battery type specified in the manual and keep the right polarity.

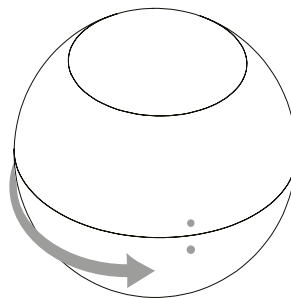
2. Remove the battery blocker and check if the battery is placed correctly.



**i** NOTE

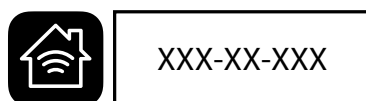
If the accessory blinks green after powering, it is already paired and has to be reset to pair again.

3. The accessory will glow red – it is ready to be paired.
4. Close the cover and turn it clockwise, dots on the casing should align.



## #3: Pairing the accessory

1. Open the Settings app on your iOS device.
2. Go to the *Bluetooth*® section, and turn the *Bluetooth*® on.
3. Place the accessory next to your iOS device.
4. Open a HomeKit compatible app of your choosing on your iOS device.
5. Open pairing window in your HomeKit app to detect available accessories.
6. Choose Motion Sensor you wish to pair.
7. You can identify it - Motion Sensor will triple blink blue 3 times.
8. Find HomeKit Setup Code on the last page of *Quick Start Guide* included in the box that looks like this:



9. Start pairing with your HomeKit app.
10. Point your iOS device's camera at the Setup Code to scan it or enter the Setup Code manually.
11. If entered Setup Code is valid, the device will complete the setup process.
12. Follow instructions displayed in the application.

### NOTE

Use Fibaro app to fully utilize this product. Other HomeKit compatible apps might not support all of its features.

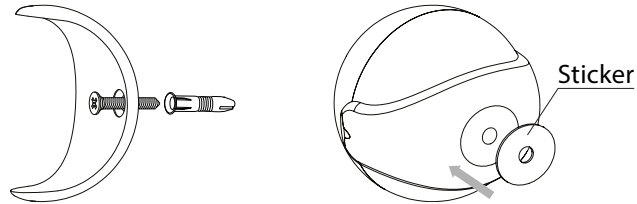
### NOTE

Remember to keep your HomeKit Setup Code in safe place. You may need it in case of re-pairing.

## #4: Physical installation

### Installing the Motion Sensor:

1. Install the holder (using an expansion bolt or a sticker).

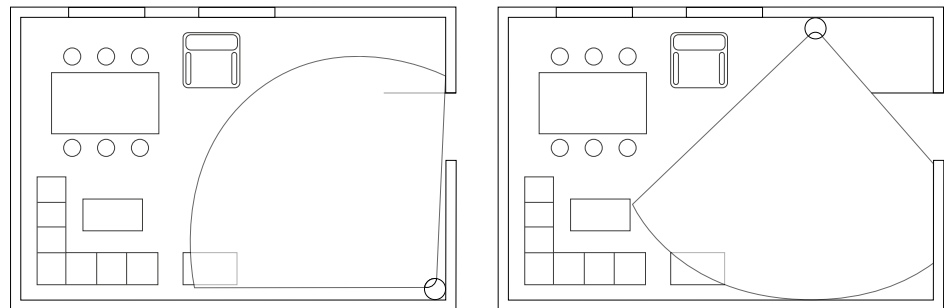


2. Insert the device into the holder.
3. Test the operation - check whether the accessory indicates motion detection.

### Installation location and working conditions:

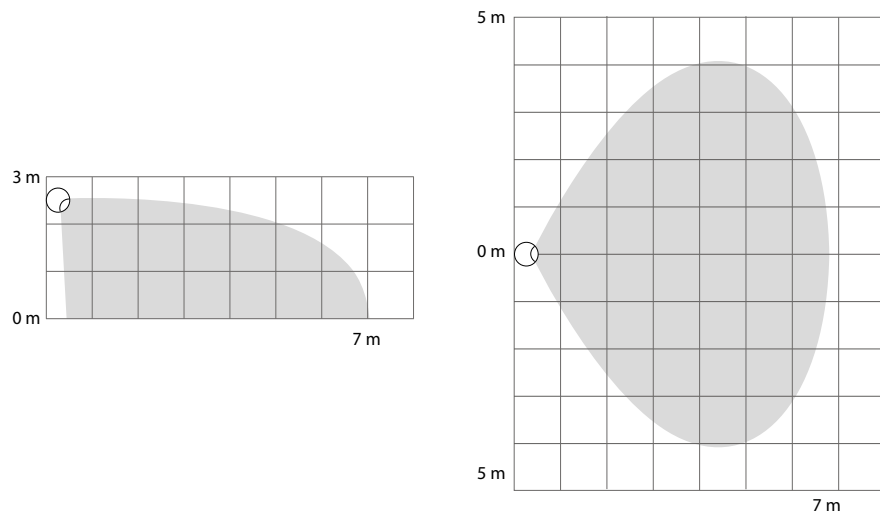
The Motion Sensor should be installed in a corner of the room or perpendicularly to the doors.

Moving objects such as trees blowing in the wind, cars passing by, household fans and moving masses of air and heat within detection area of the sensor can cause false motion detection.



### Detection range:

Detection range of the Motion Sensor is shown below. Actual range of the Sensor can be influenced by environmental conditions.

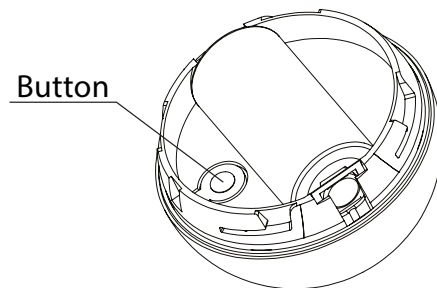


## #5: Reset

### Resetting the Motion Sensor to factory defaults:

Reset procedure allows to restore the accessory back to its factory settings including HomeKit pairing.

1. Open the cover.
2. Press and hold the button.



3. Wait for the LED indicator to glow yellow.
4. Release the button.
5. Click the button to confirm.
6. Accessory will glow red to confirm reset.
7. Delete the accessory from the app before pairing it again.

## #6: Functionality

### **i** NOTE

If you are using FIBARO app you can adjust sensitivity, sustain time and LED indication for motion detection using parameters.

### **i** NOTE

If you are using FIBARO app you can adjust sensitivity and indications for tamper detection using parameters.

### **i** NOTE

The accessory measures temperature in the place of installation. Remember that temperature near the ceiling may differ from that on eye-level or the floor.

### **i** NOTE

The accessory measures light intensity in the place of installation, not where the sensor is pointed.

### **Motion detection:**

The Motion Sensor detects movement using PIR sensor and reports it to your iOS device.

Blink of LED indicates detected motion. Color of blink is dependent on current ambient temperature (smooth transition through blue, green and red). Brightness of blink is adjusted by measured light intensity.

### **Tamper detection:**

The Motion Sensor detects tampering when accessory is moved and reports it to your iOS device. Tampering is indicated with an alternate blinking in red, blue and white.

### **Temperature measuring:**

The Motion Sensor measures ambient temperature every 5 minutes. If the measured temperature differs from previously reported by at least 2°C (3.6°F), accessory reports it to your iOS device.

### **Battery level measuring:**

The Motion Sensor measures battery level every 24 hours and reports it to your iOS device. Additionally, if battery level is below 15%, the accessory will report low level battery status to your iOS device.

### **Light intensity measuring:**

The Motion Sensor measures light intensity. If the measured light intensity differs from previously reported by at least 200 lux, accessory reports it to your iOS device.

### **PIR sensor malfunction detection (Fault Code 1):**

The Motion Sensor detects malfunction of PIR sensor (responsible for motion detection) and reports it to your iOS device.

Getting Fault Code 1 warning means that the accessory is damaged and should be returned to the distributor for the warranty (if still valid).



## #7: Configurable parameters

### 1. Motion detection – sensor sensitivity

This parameter allows to set sensitivity of PIR sensor used for motion detection.

The higher the value of this parameter, the higher the sensitivity.

Available settings:	<b>1</b> – low sensitivity <b>2</b> – medium sensitivity <b>3</b> – high sensitivity
Default setting:	<b>2</b> (medium sensitivity)

### 2. Tamper – sensor sensitivity

This parameter allows to set sensitivity of tamper detection.

The higher the value of this parameter, the higher the sensitivity.

Available settings:	<b>0</b> – tamper disabled <b>1</b> – low sensitivity <b>2</b> – medium sensitivity <b>3</b> – high sensitivity
Default setting:	<b>2</b> (medium sensitivity)

### 3. Motion detection – LED indication

This parameter allows to choose how the LED indicator will behave after detecting motion.

Available settings:	<b>0</b> – LED indications disabled <b>1</b> – color dependent on temperature* <b>2</b> – flashlight mode** <b>3</b> – white, <b>4</b> – red, <b>5</b> – green, <b>6</b> – blue, <b>7</b> – yellow, <b>8</b> – cyan, <b>9</b> – magenta
Default setting:	<b>1</b> (color dependent on temperature)

### 4. Tamper – LED indication

This parameter allows to choose if accessory will indicate tampering using LED (alternate blinking in red, blue and white).

Available settings:	<b>0</b> – tamper indication disabled <b>1</b> – tamper indication enabled
Default setting:	<b>1</b> (tamper indication enabled)

#### **i** NOTE

\* Color is a smooth transition from blue through green to red in range 18-30°C (64.4-86°F).

\*\* In flashlight mode the LED provides white light with higher brightness.

### 5. Motion detection - sustain time

This parameter allows to set how long the information about detected motion is sustained by the accessory. Each subsequent motion detection causes time to be counted from the beginning.

Available settings:	<b>1-32767</b> – sustain time in seconds
Default setting:	<b>30</b> (30 seconds)

## #8: Specifications

Power supply:	3.0V DC battery
Battery type:	CR123A
EU directives compliance:	R&TTE 1999/5/EC RoHS 2011/65/EU
Radio protocol:	<i>Bluetooth</i> ® low energy
Radio frequency:	2.4 GHz
Range:	up to 50m (free range) (164 feet)
Recommended installation height:	2.4 meters (7.87 feet)
Operating temperature:	0-40°C (32-104°F)
Temperature measuring range:	0-40°C (32-104°F)
Temperature measuring accuracy:	±0.5°C (±0.9°F)
Light intensity measuring range:	0-32000 lux
Dimensions (diameter):	46 mm (1.8 inch)

### CAUTION

Using batteries other than specified may result in explosion. Dispose of properly, observing environmental protection rules.

## #9: Regulations

### **This device complies with Part 15 of the FCC Rules**

Operation is subject to the following two conditions:

1. This device may not cause harmful interference
2. This device must accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### **Note**

Changes and modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission's rules.

### **Industry Canada (IC) Compliance Notice**

This device complies with Industry Canada license-exempt RSSs. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux normes d'exemption de licence RSS d'Industry Canada. Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

### **Radio frequency (RF) exposure statement**

This equipment should be installed and operated keeping the radiator at least 20 cm or more away from person's body.

Cet équipement doit être installé et utilisé en gardant une distance de 20 cm ou plus entre le dispositif rayonnant et le corps.

## DGT Warning Statement

### Article 12

Without permission, any company, firm or user shall not alter the frequency, increase the power, or change the characteristics and functions of the original design of the certified lower power frequency electric machinery.

### Article 14

The application of low power frequency electric machineries shall not affect the navigation safety nor interfere a legal communication, if an interference is found, the service will be suspended until improvement is made and the interference no longer exists.

#### 第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

#### 第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

## Legal Notices

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All other brands and product names referred to herein are trademarks of their respective holders.

Use of the Works with Apple HomeKit logo means that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

## Declaration of conformity



Hereby, Fibar Group S.A. declares that FIBARO Motion Sensor is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

