FIBARO

FIBEFGMS-001-ZW5

Motion Sensor, Temperature Sensor, Light Sensor, Accelerometer

Firmware Version : 3.2

Quick Start

> **S** This device is a Z-Wave Sensor. Inclusion, Exclusion and Wake Up are confirmed by triple clicking the B-Button inside the case.

Please refer to the chapters below for detailed information about all aspects of the products usage.

Product description

The Fibaro Motion Sensor is a universal Z-Wave multi-sensor. Along with detecting motion the device measures the temperature and light intensity. The sensor has a built-in accelerometer to detect any tampering of the device. The Fibaro Motion Sensor is battery powered device and designed to be installed qickly and easily on any surface. The LED indicator signals motion, temperature level, operating mode and can be used to see if device is within the Z-Wave network. The motion sensor can be used for lighting scenes and security monitoring systems.

Installation Guidelines

INSTALLATION POSITION

Fibaro Motion Sensor has to be installed in a corner of the room or perpendicularly to the doors. Actual range of the sensor can be influenced by environment conditions. Should false motion alarms be reported, check for any moving objects within the sensor's detection area, such as trees blowing in the wind, cars passing by, windmills. False motion alarms may be caused by moving masses of air and heat as well. If the device keeps on reporting false alarms, despite eliminating all of the above-mentioned factors, install the device in another place.
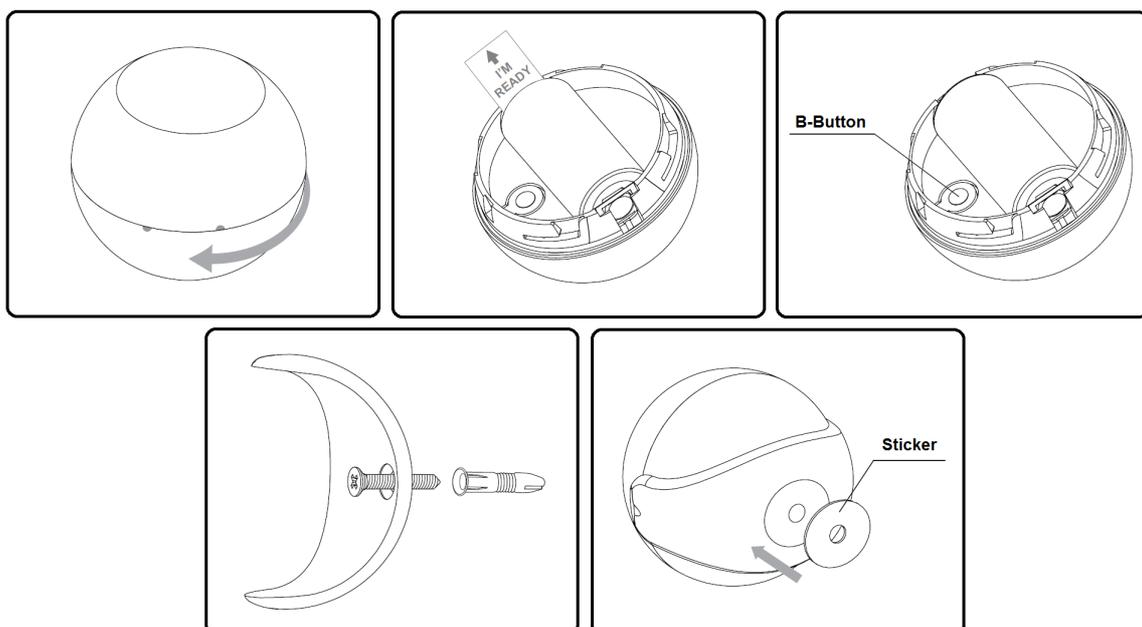
SENSOR INSTALLATION

- Open the casing by turning the two parts in opposite directions.

- Insert the battery or remove the battery insulator.

- Set the main controller into the learning mode.

- Quickly, triple click the B-button - LED diode will glow blue.

- Install the sensor's holder in desired location.

- Reassemble the device (follow the markings).

- Insert the Motion Sensor in its holder.

Note: Fibaro Motion Sensor cannot be pointed at any source of heat (e.g.radiators, fireplaces, cookers, etc.) or at any source of light (direct sunlight, lamps). It's not recommended to install the motion sensor in places prone to drafts. Sensor can be mounted using screw or the sticker.

Behavior within the Z-Wave network

| **I** | On factory default the device does not belong to any Z-Wave network. The device needs to join an existing wireless network to communicate with the devices of this network. This process is called **Inclusion**. Devices can also leave a network. This process is called **Exclusion**. Both processes are initiated by the primary controller of the Z-Wave network. This controller will be turned into exclusion respective inclusion mode. Please refer to your primary controllers manual on how to turn your controller into inclusion or exclusion mode. Only if the primary controller is in inclusion or exclusion mode, this device can join or leave the network. Leaving the network - i.e. being excluded - sets the device back to factory default.

If the device already belongs to a network, follow the exclusion process before including it in your network. Otherwise inclusion of this device will fail. If the controller being included was a primary controller, it has to be reset first.

Make sure that your Z-Wave Controller is in the Inclusion-/Exclusion-Mode. Tripple click the Z-Wave button inside the case to confirm the process.

Operating the device

Fibaro Flood Sensor has four sensors built in - Motion Sensor, Temperature Sensor, Light Sensor and Accelerometer.

It is compatible with any Z-Wave controller. The sensors detect motion using a passive IR sensor, measures the temperature and measures the light intensity. It is easy to install on a wall or any surface. It is protected against tampering and theft - once vibrations are detected, the notification is sent to the main controller. The alarms of movement and temperature are signaled by blinking of LED diode. The accelerometer has also a simple earthquake detector mode.

By using association with Fibaro's devices the Fibaro Motion Sensor may control another Z-Wave network device, e.g. a Dimmer, Relay Switch, Roller Shutter, RGBW Controller, Wall Plug, or a scene. Fibaro Motion Sensor allows for the association of three groups. The Fibaro Motion Sensor allows for controlling 5 regular and 5 multichannel devices per an association group, out of which 1 field is reserved for the Z-Wave network main controller.

EARTHQUAKE DETECTOR MODE

Fibaro Motion Sensor can be configured to work as a simple earthquake detector, by setting the Parameter 24 value to 4. Reports with scale of the vibrations (dimensionless) will be sent at the time intervals specified in Parameter 22. First report will be sent immediately after vibrations have been detected. The minimum value of the vibrations, resulting in report being sent, can be defined in Parameter 20. Once the vibrations cease, reports will stop being sent.

Z-Wave Range Test

Fibaro Multi Sensor has a built in Z-Wave network range test for the main controller. Follow the instruction to test the main controller's range:

- Press and hold the B-button for 2 to 4 seconds until the LED glows violet.

- Release the B-button.

- Press the B-button again, briefly.

- LED will indicate the Z-Wave network's range (range signaling modes described below).

- To exit Z-Wave range test, press the B-button breifly.

Z-Wave Range Tester signaling modes:

LED Indicator pulsing green - Fibaro Motion Sensor attempts to extablish a direct communication with the main controller. If a direct communication attempt fails, sensor will try to establish a routed communication, through other modules, which will be signaled by LED indicator pulsing yellow.

LED Indicator glowing green - Fibaro Motion Sensor communicates with the main controller directly.

LED Indicator pulsing yellow - Fibaro Motion Sensor tries to establish a routed communication with the main controller through other modules (repeaters).

LED Indicator glowing yellow - Fibaro Motion Sensor communicates with the main controller through the other modules. After 2 seconds the sensor will retry to establish a direct communication with the main controller, which will be signaled with LED blinking in green.

LED Indicator pulsing violet - Fibaro Motion Sensor does communicate at the maximum distance of the Z-Wave network. If connection proves successful it will be confirmed with a yellow glow. It's not recommended to use the sensor at the range limit.

LED Indicator glowing red - Fibaro Motion Sensor is not able to connect to the main controller directly or through another Z-Wave network device (repeater).

Wakeup Intervals - how to communicate with the device?

`W` This device is battery operated and turned into deep sleep state most of the time to save battery life time. Communication with the device is limited. In order to communicate with the device, a static controller **C** is needed in the network. This controller will maintain a mailbox for the battery operated devices and store commands that can not be received during deep sleep state. Without such a controller, communication may become impossible and/or the battery life time is significantly decreased.

This device will wakeup regularly and announce the wakeup state by sending out a so called Wakeup Notification. The controller can then empty the mailbox. Therefore, the device needs to be configured with the desired wakeup interval and the node ID of the controller. If the device was included by a static controller this controller will usually perform all necessary configurations. The wakeup interval is a tradeoff between maximal battery life time and the desired responses of the device.

Tripple click on the B-button inside the case will wake up the device.

It is possible to set the node ID to 255 to send wakeup notifications as broadcast. In this mode device takes more time to go to sleep and drains battery faster, but can notify all it's direct neighbors about a wakeup.

Node Information Frame

`NI` The Node Information Frame is the business card of a Z-Wave device. It contains information about the device type and the technical capabilities. The inclusion and exclusion of the device is confirmed by sending out a Node Information Frame. Beside this it may be needed for certain network operations to send out a Node Information Frame.

Tripple click on the B-button inside the case or a detection by one of the sensors will send a Node Information Frame.

LED Control

The Fibaro Motion Sensor is equipped with a LED diode for indicating sensor's operating modes and alarms. In addition the LED indicator may inform of the Z-Wave network range and the current temperature.

LED indicator signaling modes:

- Motion Alarm's colour will vary depending on the temperature. The colour and the signaling mode can be set in parameter 80.

- Tamper alarm is signaled with an alternating blinking in red - blue - white.

- The Z-Wave Node Info command frame is signaled with glowing in blue. Node Info command frame is sent each time the device wakes up.

- To enter MENU press and hold the B-button for 3 seconds. MENU levels will be signaled with the LED colours:

    VIOLET - Z-Wave network range tester.

    YELLOW - sensor reset.

Associations

`A` Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called *association*. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called **association groups** and they are always related to certain events (e.g. button pressed, sensor triggers, ...). In case the event happens all devices stored in the respective association group will receive a common wireless command.

Association Groups:

1	Group 1 (max. nodes in group: 1)
2	Group 2 (max. nodes in group: 5)
3	Group 3 (max. nodes in group: 5)
4	Group 4 (max. nodes in group: 5)
5	Group 5 (max. nodes in group: 5)

Technical Data

IP Rating	
Explorer Frame Support	No
SDK	
Device Type	Slave with routing capabilities
Generic Device Class	
Specific Device Class	
Routing	No
FLiRS	No
Firmware Version	3.2