FIBARO SYSTEM

OPERATING MANUAL

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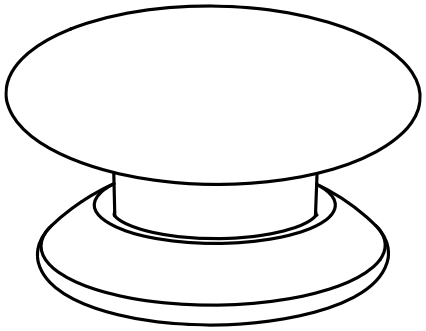


FIBARO BUTTON

FGPB-101

CONTENTS

v1.1

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.

General information about the FIBARO System

FIBARO is a wireless smart home automation system, based on the Z-Wave protocol. All of available devices can be controlled through a computer (PC or Mac), smartphone or tablet. Z-Wave devices are not only receivers, but can also repeat the signal, increasing the Z-Wave network's range. It gives advantage over traditional wireless systems that require direct link between transmitter and receiver, as a result the construction of the building could affect network's range negatively.

Every Z-Wave network has its unique identification number (home ID). Multiple independent networks can exist in the building without interfering. Transmission security of FIBARO System is comparable to wired systems.

Z-Wave technology is the leading solution in smart home automation. There is a wide range of Z-Wave devices that are mutually compatible, independently of manufacturer. It gives the system the ability to evolve and expand over time. For more information visit: www.fibaro.com.

#1: Description and features

FIBARO Button is a compact, battery-powered, Z-Wave Plus compatible device. It allows you to control devices through the Z-Wave network and run various scenes defined in FIBARO System.

Different actions may be triggered with one to five clicks or by holding the button down. In panic mode, each press of the button results in triggering the FIBARO Alarm.

With its small design and wireless communication, the FIBARO Button can be conveniently mounted on any surface and in any position or location at home, e.g. beside the bed or under the desk.

NOTE

This device may be used with all devices certified with the Z-Wave Plus certificate and should be compatible with such devices produced by other manufacturers.

Main features of FIBARO Button:

- Compatible with any Z-Wave or Z-Wave+ Controller,
- Supports Z-Wave network Security Mode with AES-128 encryption,
- Completely wireless with battery power and Z-Wave communication,
- May be installed anywhere in your home,
- Extremely easy installation - simply add and put on desired surface,
- Many colour variations: black, white, red, green, blue, yellow, orange and brown.

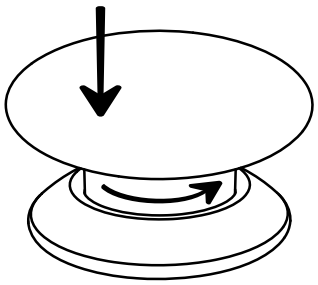
NOTE

Z-Wave Controller must support Z-Wave Security Mode in order to fully utilize the product.

FIBARO Button is a fully compatible Z-Wave PLUS device.

#2: Basic activation

1. Press and turn the button **counter-clockwise** to open the casing.



2. Remove the **paper strip** underneath the battery.
3. Press and turn the button **clockwise** to close the casing.
4. Place the device within the direct range of your Z-Wave controller.
5. Set the main controller in (security/non-security) **add mode** (see the controller's manual).
6. Click the button **6 times** at least.
7. Wait for the device to be added into the system, successful adding will be confirmed by the controller.
8. Install the device in desired location using the attached self-adhesive pad.
9. Click the button **4 times** to wake it up.

#3: Adding/removing the device

NOTE

Adding in Security Mode must be performed up to 2 meters from the controller.

NOTE

In case the device is not added, repeat the adding procedure.

Adding (Inclusion) - Z-Wave device learning mode, allowing to add the device to existing Z-Wave network.

To add the device to the Z-Wave network:

1. Place the Button within the direct range of your Z-Wave controller.
2. Set the main controller in (Security/non-Security) add mode (see the controller's manual).
3. Click the Button at least six times.
4. Wait for the adding process to end.
5. Successful adding will be confirmed by the Z-Wave controller's message.

NOTE

Removing the Button from the Z-Wave network restores all the default parameters of the device.

Removing (Exclusion) - Z-Wave device learning mode, allowing to remove the device from existing Z-Wave network.

To remove the device to the Z-Wave network:

1. Place the Button within the direct range of your Z-Wave controller.
2. Set the main controller in remove mode (see the controller's manual).
3. Click the Button at least six times.
4. Wait for the removing process to end.
5. Successful removing will be confirmed by the Z-Wave controller's message.

#4: Operating the device

Operating the Button:

1 click: send action to associated devices (switch on/off by default) and/or trigger a scene

2 clicks: send action to associated devices (switch on maximum level by default) and/or trigger a scene

3 clicks: send action to associated devices (no action by default) and/or trigger a scene

4 clicks: wake the device up and/or trigger a scene

5 clicks: start reset procedure (press and hold for 5s to confirm) and/or trigger a scene

6 or more clicks: learning mode (adding/removing)

Hold: send action to associated devices (start level change up/down) and/or trigger a scene

Release: send action to associated devices (stop level change) and/or trigger a scene

Waking up the device:

The Button needs to be woken up to receive information about the new configuration from the controller, like parameters and associations.

Click the Button **4 times** to wake it up.

Scene ID:

Every action with the Button is send to the main controller with Scene ID equal to **1**. Controller recognizes type of action using the attribute assigned to it.

Action	Attribute
1 click	Key Pressed 1 time
2 clicks	Key Pressed 2 times
3 clicks	Key Pressed 3 times
4 clicks	Key Pressed 4 times
5 clicks	Key Pressed 5 times
Hold	Key Held Down
Release	Key Released

Reset procedure of the Button:

Reset procedure allows to restore the device back to its factory settings, which means all information about the Z-Wave controller and user configuration will be deleted. In order to reset the device:

1. Click the Button exactly five times.
2. Press and hold the Button for at least 5 seconds.

i NOTE

If notifications are enabled, each press of the button results in sending a command (Notification Type=HOME_SECURITY, Event=Intrusion, Unknown Location).

i NOTE

Resetting the device is not the recommended way of removing the device from the Z-Wave network. Use reset procedure only if the primary controller is missing or inoperable. Certain device removal can be achieved by the procedure of removing.

#5: Associations

NOTE

Association ensures direct transfer of control commands between devices, is performed without participation of the main controller and requires associated device to be in the direct range.

NOTE

The device supports the generic Z-Wave command class "Basic" but will ignore any SET or GET commands and will not respond with a Basic Report.

NOTE

Increasing number of associations will increase battery consumption resulting in shorter battery life.

Association (linking devices) - direct control of other devices within the Z-Wave system network e.g. Dimmer, Relay Switch, Roller Shutter or scene (may be controlled only through a Z-Wave controller).

The Button provides the association of four groups:

1st association group – "Lifeline" reports the device status and allows for assigning single device only (main controller by default).

2nd association group – "On/Off" is assigned to clicking the button and is used to turn on/off associated devices.

3rd association group – "Dimmer" is assigned to holding the button and is used to change level of associated devices.

4th association group – "Alarm" is assigned to clicking and/or holding the button (triggers are defined in parameter 30) and is used to send alarm frames to associated devices.

FIBARO Button in 2nd, 3rd and 4th group allows to control 5 regular or multichannel devices per an association group, with the exception of "LifeLine" that is reserved solely for the controller and hence only 1 node can be assigned.

It is not recommended to associate more than 10 devices in general, as the response time to control commands depends on the number of associated devices. In extreme cases, system response may be delayed.

To add an association (using the Home Center controller):

1. Go to device options by clicking the icon:
2. Select the „Advanced" tab.
3. Click the "Setting Association" button.
4. Specify to which group and what devices are to be associated.
5. Save the changes.
6. Wake up the device manually to confirm changes (4 clicks).

#6: Advanced parameters

The Button allows to customize its operation to user's needs. The settings are available in the FIBARO interface as simple options that may be chosen by selecting the appropriate box.

In order to configure the Button (using the HC controller):

1. Go to the device options by clicking the icon: 
2. Select the „Advanced" tab.
3. Modify values of chosen parameters.
4. Save the changes.
5. Wake up the device manually to confirm changes (4 clicks).

Wake up interval

Available settings: **0** or **3600-64800** (in seconds, 1h - 18h)

Default setting: **0**

The Button will wake up at each defined time interval and always try to connect with the main controller. After successful communication attempt, the device will update configuration parameters, associations and settings and then will go into Z-Wave communication standby.

After failed communication attempt (eg. no Z-Wave range) the device will go into Z-Wave communication standby and retry to establish connection with the main controller after the next time interval.

Setting wake up interval to 0 disables sending Wake Up notification to the controller automatically. Wake up may be still performed manually by clicking the Button 4 times.

NOTE

Longer wake up time interval means less frequent communication and thus a longer battery life.

1. Scenes sent to the controller

This parameter determines which actions result in sending scene IDs and attributes assigned to them.

Available settings:	**1** - Key Pressed 1 time **2** - Key Pressed 2 times **4** - Key Pressed 3 times **8** - Key Pressed 4 times **16** - Key Pressed 5 times **32** - Key Held Down **64** - Key Released		
Default setting:	**127** (all)	Parameter size:	**1** [byte]

NOTE

Values of parameter 1 may be combined, e.g. 1+2=3 means that scenes will be sent after pressing the button once or twice.

NOTE

Values of parameter 3 may be combined, e.g. 1+2=3 means that 2nd & 3rd group are sent as secure.

3. Associations in Z-Wave network Security Mode

This parameter defines how commands are sent in specified association groups: as secure or non-secure. Parameter is active only in Z-Wave network Security Mode. It does not apply to 1st „Lifeline" group.

Available settings:	**1** - 2nd group sent as secure **2** - 3rd group sent as secure **4** - 4th group sent as secure		
Default setting:	**7** (all)	Parameter size:	**1** [byte]

10. Key Pressed 1 time – command sent to 2nd association group

This parameter defines commands sent to devices associated in 2nd association group after a single click.

Available settings:	**0** - no action **1** - SWITCH ON **2** - SWITCH OFF **3** - SWITCH ON/OFF – alternately		
Default setting:	**3**	Parameter size:	**1** [byte]

NOTE

Setting parameters 11, 13, 15, 21, 23 and 25 to appropriate value will result in:
1-99 - forcing level of associated devices
255 - setting associated devices to the last remembered state or turning them on

11. Key Pressed 1 time – value of SWITCH ON command sent to 2nd association group

This parameter defines value of SWITCH ON command sent to devices in 2nd association group after a single click.

Available settings:	**1-255** - sent value		
Default setting:	**255**	Parameter size:	**2** [bytes]

12. Key Pressed 2 times – command sent to 2nd association group

This parameter defines commands sent to devices associated in 2nd association group after a double click.

Available settings:	**0** - no action **1** - SWITCH ON **2** - SWITCH OFF **3** - SWITCH ON/OFF – alternately		
Default setting:	**1**	Parameter size:	**1** [byte]

13. Key Pressed 2 times – value of SWITCH ON command sent to 2nd association group

This parameter defines value of SWITCH ON command sent to devices in 2nd association group after a double click.

Available settings:	**1-255** - sent value		
Default setting:	**99**	Parameter size:	**2** [bytes]

14. Key Pressed 3 times – command sent to 2nd association group

This parameter defines commands sent to devices associated in 2nd association group after a triple click.

Available settings:	**0** - no action **1** - SWITCH ON **2** - SWITCH OFF **3** - SWITCH ON/OFF – alternately		
Default setting:	**0**	Parameter size:	**1** [byte]

15. Key Pressed 3 times – value of SWITCH ON command sent to 2nd association group

This parameter defines value of SWITCH ON command sent to devices in 2nd association group after a triple click.

Available settings:	**1-255** - sent value		
Default setting:	**255**	Parameter size:	**2** [bytes]

20. Key Pressed 1 time – command sent to 3rd association group

This parameter defines commands sent to devices associated in 3rd association group after a single click.

Available settings:	**0** - no action **1** - SWITCH ON **2** - SWITCH OFF **3** - SWITCH ON/OFF – alternately		
Default setting:	**3**	Parameter size:	**1** [byte]

21. Key Pressed 1 time – value of SWITCH ON command sent to 3rd association group

This parameter defines value of SWITCH ON command sent to devices in 3rd association group after a single click.

Available settings:	**1-255** - sent value		
Default setting:	**255**	Parameter size:	**2** [bytes]

22. Key Pressed 2 times – command sent to 3rd association group

This parameter defines commands sent to devices associated in 3rd association group after a double click.

Available settings:	**0** - no action **1** - SWITCH ON **2** - SWITCH OFF **3** - SWITCH ON/OFF – alternately		
Default setting:	**1**	Parameter size:	**1** [byte]

23. Key Pressed 2 times – value of SWITCH ON command sent to 3rd association group

This parameter defines value of SWITCH ON command sent to devices in 3rd association group after a double click.

Available settings:	**1-255** - sent value		
Default setting:	**99**	Parameter size:	**2** [bytes]

24. Key Pressed 3 times – command sent to 3rd association group

This parameter defines commands sent to devices associated in 3rd association group after a triple click.

Available settings:	**0** - no action **1** - SWITCH ON **2** - SWITCH OFF **3** - SWITCH ON/OFF – alternately		
Default setting:	**0**	Parameter size:	**1** [byte]

25. Key Pressed 3 times – value of SWITCH ON command sent to 3rd association group

This parameter defines value of SWITCH ON command sent to devices in 3rd association group after a triple click.

Available settings:	**1-255** - sent value		
Default setting:	**255**	Parameter size:	**2** [bytes]

29. Key Held Down – command sent to 3rd association group

This parameter defines commands sent to devices associated in 3rd association group after holding the button down.

Available settings:	**0** - no action **1** - START LEVEL CHANGE UP (brightening) **2** - START LEVEL CHANGE DOWN (dimming) **3** - START LEVEL CHANGE UP/DOWN (brightening/dimming) – alternately		
Default setting:	**3**	Parameter size:	**1** [byte]

i NOTE

Values of parameter 30 may be combined, e.g. 1+2=3 means that alarm frames will be sent after pressing the button once or twice.

30. Alarm frame triggers

Parameter determines which actions result in sending alarm frames to 4th association group.

Available settings:	**1** - Key Pressed 1 time **2** - Key Pressed 2 times **4** - Key Pressed 3 times **8** - Key Pressed 4 times **16** - Key Pressed 5 times **32** - Key Held Down **64** - Key Released		
Default setting:	**127** (all)	Parameter size:	**1** [byte]

#7: Specifications

Battery type:	ER14250 ½AA 3.6V
Battery life:	est. 2 years (with default settings and max. 10 pushes per day)
Operating temperature:	0 - 40°C (32 - 104°F)
EU standards compliance:	RoHS 2011/65/EU R&TTE 1999/5/EC
Radio protocol:	Z-Wave (500 series chip)
Radio frequency:	868.4 or 869.8 MHz EU; 908.4, 908.42 or 916.0 MHz US; 921.4 or 919.8 MHz ANZ; 869.0 MHz RU;
Range:	up to 50m (164 ft) outdoors up to 40m (131 ft) indoors (Depending on terrain and building structure)
Dimensions (diameter x height):	46 x 34 mm (1.81" x 1.34")

CAUTION

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

NOTE

Radio frequency of individual device must be same as your Z-Wave controller. Check information on the box or consult your dealer if you are not sure.

#8: 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.

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.

Legal Notices

All information, including, but not limited to, information regarding the features, functionality, and/or other product specification are subject to change without notice. Fibaro reserves all rights to revise or update its products, software, or documentation without any obligation to notify any individual or entity.
FIBARO and Fibar Group logo are trademarks of Fibar Group S.A. All other brands and product names referred to herein are trademarks of their respective holders.

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.

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。

Declaration of conformity

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