# FIBARO FGS-2×3 Single Double Switch 2 User Manual



**FIBARO FGS-2×3 Single Double Switch 2 User Manual**

Contents



## 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.

**Danger of electrocution!**
FIBARO Switch 2 is designed to operate in electrical home installation. Faulty connection or use may result in fire or electric shock. All works on the device may be performed only by a qualified and licensed electrician. Observe national regulations. Even when the device is turned off, voltage may be present at its terminals. Any maintenance introducing changes into the configuration of connections or the load must be always performed with disabled fuse.

## Description and features

FIBARO Switch 2 is designed to be installed in standard wall switch boxes or anywhere else where it is necessary to control electric devices. FIBARO Switch 2 allows to control connected devices either via the Z-Wave Plus network or via a switch connected directly to it and is equipped with active power and energy consumption metering functionality

**Main features of FIBARO Switch 2:**

- Compatible with any Z-WaveTM or Z-Wave PlusTM Controller,
- Supports protected mode (Z-Wave network security mode) with AES-128 encryption,
- Advanced microprocessor control,
- Active power and energy metering functionality,
- Works with various types of switches – momentary, toggle, three-way, etc,
- To be installed in wall switch boxes of dimensions allowing for installation, conforming to provisions of applicable regulations,
- FIBARO Switch 2 is an extension unit.

## Supported loads

**The Switch 2 may operate under the following loads:**

- Conventional incandescent light sources,
- Halogen light sources,
- Electrical appliances which power consumption does not exceed the limit for a specified device.

**Applied load and the Switch 2 itself may be damaged if the applied load is inconsistent with the technical specifications!**

**When connecting the Switch 2 act in accordance with the following rules:**

- Do not connect loads greater than those recommended!
- Do not connect types of loads other than resistive and incandescent!

**Rated load current table:**

| | **IEC standards** | **UL standards** |
|---|---|---|
| | **Resistive load** | |
| **FGS-213** | 8A | 6.5A |
| **FGS-223** | 6.5A per channel 10A overall | 6A per channel 9.5A overall |
| | **Tungsten load** | |
| **FGS-213** | 8A | 5A |
| **FGS-223** | 6.5A per channel 10A overall | 3A per channel |

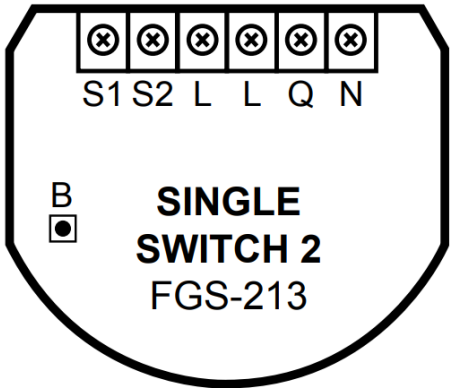
## Installation

Connecting the Switch 2 in a manner inconsistent with this manual may cause risk to health, life or material damage.

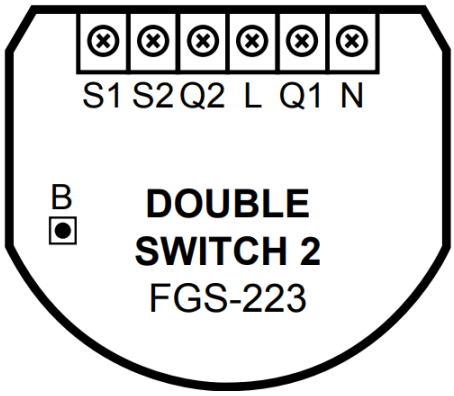
**When connecting the Switch 2 act in accordance with the following rules:**

- Connect only in accordance with one of the diagrams,
- The Switch 2 should be installed in a wall switch box compliant with a relevant national safety standards and with depth no less than 60mm,
- Electrical switches used in installation should be compliant with the relevant safety standards,
- Length of wires used to connect the control switch should not exceed 10m.

**Notes for the diagrams:**




**S1 –** terminal for 1st switch (has the function of activating the learning mode)
**S2 –** terminal for 2nd switch
**L –** terminal for live lead
**Q/Q1 –** output terminal of the 1st channel




**Q2 –** output terminal of the 2nd channel (only Double Switch 2)
**N –** terminal for neutral lead
**B –** service button (used to add/remove the device and navigate the menu)

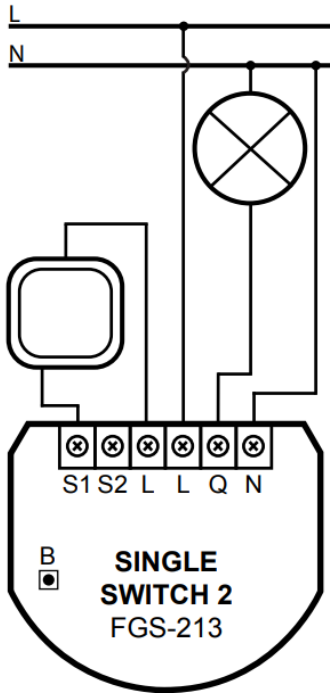
**Tips for arranging the antenna:**

- Locate the antenna as far from metal elements as possible (connecting wires, bracket rings, etc.) in order to prevent interferences,
- Metal surfaces in the direct vicinity of the antenna (e.g. flush mounted metal boxes, metal door frames) may impair signal reception!
- Do not cut or shorten the antenna – its length is perfectly matched to the band in which the system operates.
- Make sure no part of the antenna sticks out of the wall switch box.

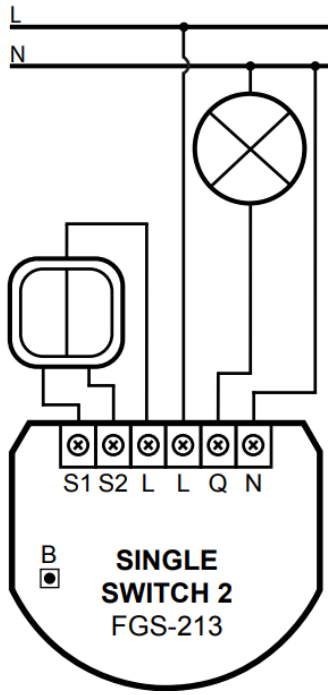
**Installation of the Switch 2:**

1. Switch off the mains voltage (disable the fuse).
2. Open the wall switch box.
3. Connect with one of following the diagrams for appropriate device:

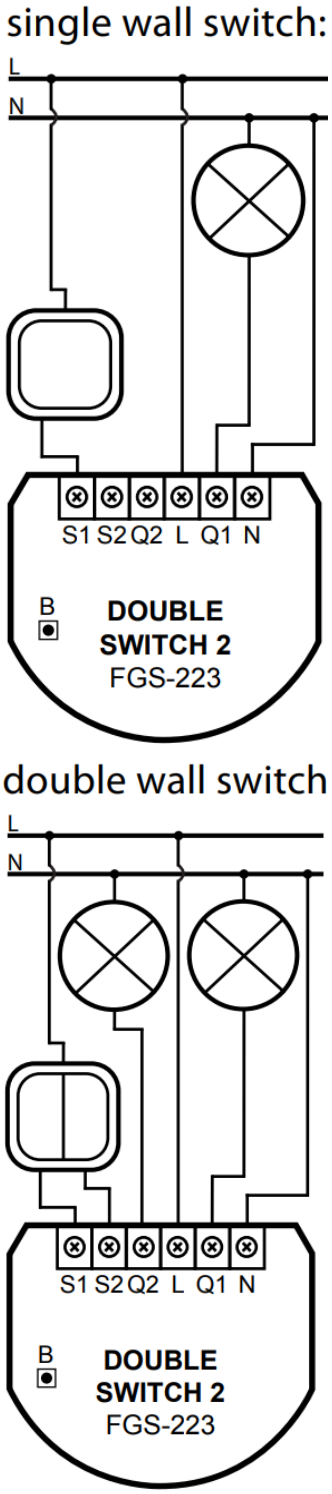
single wall switch:




double wall switch




**Wiring diagrams – Single Switch 2**




**Wiring diagrams – Double Switch 2**

4. After verifying correctness of the connection switch on the mains voltage.
5. Add the device to the Z-Wave network (see “Adding/removing the device” on page 8).
6. Turn off the mains voltage, then arrange the device and its antenna in a wall switch box.
7. Close the wall switch box and turn on the mains voltage.

## Adding/removing the device

**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 Switch 2 within the direct range of your Z-Wave controller.

2. Identify the S1 switch.
3. Set the main controller in (security/non-security) add mode (see the controller's manual).
4. Quickly, three times press the S1 switch.
5. Wait for the adding process to end.
6. Successful adding will be confirmed by the Z-Wave controller's message.

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

**To remove the device from the Z-Wave network:**

1. Place the Switch 2 within the direct range of your Z-Wave controller.
2. Identify the S1 switch.
3. Set the main controller in remove mode (see the controller's manual).
4. Quickly, three times press the S1 switch.
5. Wait for the removing process to end.
6. Successful removing will be confirmed by the Z-Wave controller's message.

## Operating the device

Controlling the Switch 2 using a momentary switch and parameter 20 set to 0:

**1x click:**

- Change the state of the connected load to the opposite one (S1 switches 1st channel, S2 switches 2nd channel),
- Change the state of 2nd, 3rd (S1 switch), 4th and 5th (S2 switch) association group to the opposite one.

**2x click:**

- Set maximum level of devices associated in 2nd, 3rd (S1 switch), 4th and 5th (S2 switch) group.

**Hold:**

- Start smooth control of devices associated in 3rd (S1 switch) and 5th (S2 switch) group.

**Release:**

- Stop smooth control of devices associated in 3rd (S1 switch) and 5th (S2 switch) group

**Controlling the Switch 2 using a toggle switch and parameter 20 set to 1:**

**Close switch contact:**

- Turn ON the connected load (S1 switches 1st channel, S2 switches 2nd channel),

- Turn ON devices associated in 2nd, 3rd (S1 switch), 4th and 5th (S2 switch) group.

**Open switch contact:**

- Turn OFF the connected load (S1switches 1st channel, S2switches 2nd channel).
- Turn OFF devices associated in 2nd, 3rd (S1 switch), 4th and 5th (S2 switch) group.

**Controlling the Switch 2 using a toggle switch and parameter 20 set to 2:**

**Change switch position once:**

- Change the state of the connected load to the opposite one (S1 switches 1st channel, S2 switches 2nd channel),
- Change the state of 2nd, 3rd (S1 switch), 4th and 5th (S2 switch) association group to the opposite one.

**Change switch position twice:**

- Set maximum level of devices associated in 2nd, 3rd (S1 switch), 4th and 5th (S2 switch) group.

**Controlling the Switch 2 using the B-button:**
The Switch 2 is equipped with a B-button, which allows to use the menu and perform the following actions:

**1x click:**

- Cancel alarm mode (flashing alarm).
- Select desired menu position (if menu is active).
- Exit range test.
- Turn 1st channel ON/OFF.

**3x click:**

- Send the Node Info Z-Wave command frame (adding/removing).

**Hold:**

- Enter the menu (confirmed by the LED indicator).

Menu allows to perform Z-Wave network actions. In order to use the menu:

1. Switch off the mains voltage (disable the fuse).
2. Remove the Switch 2 from the wall switch box.
3. Switch on the mains voltage.
4. Press and hold the B-button to enter the menu.
5. WHITE LED indicates menu entry. Wait for the LED to indicate the desired menu position with colour:
    - GREEN – reset energy consumption memory

- VIOLET – start range test
- YELLOW – reset the device

6. Quickly release and click the B-button again.

**Resetting the Switch 2:**

1. Switch off the mains voltage (disable the fuse).
2. Remove the Switch 2 from the wall switch box.
3. Switch on the mains voltage.
4. Press and hold the B-button to enter the menu.
5. Wait for the visual LED indicator to glow yellow.
6. Quickly release and click the B-button again.
7. After few seconds the device will be restarted, which is signalled with the red LED indicator colour.

**Controlling the Switch 2 using FIBARO controller:**
After adding the Switch 2 to the network, it will be represented in the interface by two similar icons, one for each channel. Icon for second channel is hidden for Single Switch 2: Turning the device ON/OFF – ON and OFF icons are used for operating the load.

## Power and energy consumption

The Switch 2 allows for the active power and energy consumption monitoring. Data is sent to the main Z-Wave controller, e.g. Home Center. Measuring is carried out by the most advanced micro-controller technology, assuring maximum accuracy and precision (+/- 1% for loads greater than 5W).

**Electric active power –** power that energy receiver is changing into a work or a heat. The unit of active power is Watt [W].
**Electric energy –** energy consumed by a device through a time period. Consumers of electricity in households are billed by suppliers on the basis of active power used in given unit of time. Most commonly measured in kilowatt-hour [kWh]. One kilowatt-hour is equal to one kilowatt of power consumed over period of one hour, 1kWh = 1000Wh.

**Resetting consumption memory:**
The Switch 2 allows to erase stored consumption data in three ways:
**a)** Using functionality of a Z-Wave controller (see the controller's manual).
**b)** Manually clearing the data using the following procedure:

1. Switch off the mains voltage (disable the fuse).
2. Remove the Switch 2 from the wall switch box.
3. Switch on the mains voltage.
4. Press and hold the B-button to enter the menu.
5. Wait for the visual LED indicator to glow green.
6. Quickly release and click the B-button again.
7. Energy consumption memory will be erased.

**c)** By resetting the device (see "Operating the device" on

## Associations

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 Switch 2 provides the association of five 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 (S1)"** is assigned to switch connected to the S1 terminal (uses Basic command class).
**3rd association group – "Dimmer (S1)"** is assigned to switch connected to the S1 terminal (uses Switch Multilevel command class).
**4th association group – "On/Off (S2)"** is assigned to switch connected to the S2 terminal (uses Basic command class).
**5th association group – "Dimmer (S2)"** is assigned to switch connected to the S2 terminal (uses Switch Multilevel command class).

The Switch 2 in 2nd to 5th 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 Fibaro controller):**

1. Go to Settings
2. Go to Devices.
3. Select the appropriate device from the list.
4. Select the Associations tab.
5. Specify to which group and what devices are to be associated.
6. Save the changes.
7. Wait for the configuration process to end.

## Z-Wave range test

The Switch 2 has a built in Z-Wave network main controller's range tester.

**Follow the below instructions to test the main controller's range:**

1. Switch off the mains voltage (disable the fuse).
2. Remove the Switch 2 from the wall switch box.
3. Switch on the mains voltage.
4. Press and hold the B-button to enter the menu.
5. Wait for the visual LED indicator to glow violet.
6. Quickly release and click the B-button again.
7. Visual indicator will indicate the Z-Wave network's range (range signalling modes described below).
8. To exit Z-Wave range test, click the B-button.

**Z-Wave range tester signalling modes:**
**Visual indicator pulsing green –** the Switch 2 attempts to establish a direct communication with the main controller. If a direct communication attempt fails, the device will try to establish a routed communication, through other modules, which will be signalled by visual indicator pulsing yellow.
**Visual indicator glowing green –** the Switch 2 communicates with the main controller directly.

**Visual indicator pulsing yellow –** the Switch 2 tries to establish a routed communication with the main controller through other modules (repeaters).
**Visual indicator glowing yellow –** the Switch 2 communicates with the main controller through the other modules. After 2 seconds the device will retry to establish a direct communication with the main controller, which will be signalled with visual indicator pulsing green.
**Visual indicator pulsing violet –** the Switch 2 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 device at the range limit.
**Visual indicator glowing red –** the Switch 2 is not able to connect to the main controller directly or through another Z-Wave network device (repeater).

## Additional functionality

**Overheat and overcurrent protection:**
The Switch 2 after detecting overheat or overcurrent will:

- switch off its relay/relays,
- send information about switching off the relay/relays to the controller,
- send Notification Report to the controller (Heat Alarm for overheat, Power Management for overcurrent).

**Activating scenes:**
The Switch 2 can activate scenes in the Z-Wave controller by sending scene ID and attribute of a specific action using Central Scene Command Class. By default scenes are not activated, set parameters 28 and 29 to enable scene activation for selected actions.

| Switch | Action | Scene ID | Attribute |
|---|---|---|---|
| Switch connected to S1 terminal | Switch clicked once | 1 | Key Pressed 1 time |
| | Switch clicked twice | 1 | Key Pressed 2 times |
| | Switch clicked thrice | 1 | Key Pressed 3 times |
| | Switch held | 1 | Key Held Down |
| | Switch released | 1 | Key Released |
| Switch connected to S2 terminal | Switch clicked once | 2 | Key Pressed 1 time |
| | Switch clicked twice | 2 | Key Pressed 2 times |
| | Switch clicked thrice | 2 | Key Pressed 3 times |
| | Switch held | 2 | Key Held Down |
| | Switch released | 2 | Key Released |

## Advanced parameters

The Switch 2 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 Switch 2 (using the Home Center controller):

1. Go to Settings
2. Go to Devices.

3. Select the appropriate device from the list.
4. Select the Parameters tab.
5. Change values of selected parameters.
6. Save your changes.

**Restore state after power failure**
This parameter determines if the device will return to state prior to the power failure after power is restored.

| | | | |
|---|---|---|---|
| Available settings: | **0** – the device does not save the state prior to the power failure and returns t o „off” position**1** – the device restores its state prior to the power failure | | |
| Default setting: | **1** | Parameter size: | **1** [byte] |

**First channel – operating mode**
This parameter allows to choose operating for the 1st channel controlled by the S1 switch.

| | | | |
|---|---|---|---|
| Available settings: | **0** – standard operation**1** – delay ON **2** – delay OFF **3** – auto ON **4** – auto OF F**5** – flashing mode | | |
| Default setting: | **0** | Parameter size: | **1** [byte] |

**First channel – reaction to switch for delay/auto ON/OFF modes**
This parameter determines how the device in timed mode reacts to pushing the switch connected to the S1 terminal.

| | | | |
|---|---|---|---|
| Available settings: | **0** – cancel mode and set target state**1** – no reaction to switch – mode runs until it ends**2** – reset timer – start counting from the beginning | | |
| Default setting: | **0** | Parameter size: | **1** [byte] |

**First channel – time parameter for delay/auto ON/OFF modes**
This parameter allows to set time parameter used in timed modes.

| | | | |
|---|---|---|---|
| Available settings: | **0** (0.1s)**, 1-32000** (1-32000s, 1s step) – timeparameter | | |
| Default setting: | **50** (50s) | Parameter size: | **2** [bytes] |

**First channel – pulse time for flashing mode**
This parameter allows to set time of switching to opposite state in flashing mode.

| | | | |
|---|---|---|---|
| Available settings: | **1-32000** (0.1-3200.0s, 0.1s step) – timeparameter | | |
| Default setting: | **5** (0.5s) | Parameter size: | **2** [bytes] |

**Second channel – operating mode (FGS-223 only)**
This parameter allows to choose operating for the 1st channel controlled by the S2 switch.

| | | | |
|---|---|---|---|
| Available settings: | **0** – standard operation**1** – delay ON **2** – delay OFF **3** – auto ON **4** – auto OF F**5** – flashing mode | | |
| Default setting: | **0** | Parameter size: | **1** [byte] |

**Second channel – reaction to switch for delay/auto ON/OFF modes (FGS-223 only)**
This parameter determines how the device in timed mode reacts to pushing the switch connected to the S2 terminal.

| | | | |
|---|---|---|---|
| Available settings: | **0** – cancel mode and set target state**1** – no reaction to switch – mode runs until it ends**2** – reset timer – start counting from the beginning | | |
| Default setting: | **0** | Parameter size: | **1** [byte] |

**Second channel – time parameter for delay/auto ON/OFF modes (FGS-223 only)**
This parameter allows to set time parameter used in timed modes.

| | | | |
|---|---|---|---|
| Available settings: | **0** (0.1s)**, 1-32000** (1-32000s, 1s step) – timeparameter | | |
| Default setting: | **50** (50s) | Parameter size: | **2** [bytes] |

**Second channel – pulse time for flashing mode (only FGS-223)**
This parameter allows to set time of switching to opposite state in flashing mode.

| | | | |
|---|---|---|---|
| Available settings: | **1-32000** (0.1-3200.0s, 0.1s step) – timeparameter | | |
| Default setting: | **5** (0.5s) | Parameter size: | **2** [bytes] |

**Switch type**
This parameter defines as what type the device should treat the switch connected to the S1 and S2 terminals.

| | | | |
|---|---|---|---|
| Available settings: | **0** – momentary switch**1** – toggle switch (contact closed – ON, contact opened – OFF)**2** – toggle switch (device changes status when switch change s status) | | |
| Default setting: | **2** | Parameter size: | **1** [byte] |

**Flashing mode – reports**
This parameter allows to define if the device sends reports during the flashing mode.

| | | | |
|---|---|---|---|
| Available settings: | **0** – the device **does not send** reports**1** – the device **sends** reports | | |
| Default setting: | **0** | Parameter size: | **1** [byte] |

**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. This parameter 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**8** – 5th group sent as secure | | |
| Default setting: | **15** (all) | Parameter size: | **1** [byte] |

**S1 switch – scenes sent**
This parameter determines which actions result in sending scene IDs assigned to them.

| | | | |
|---|---|---|---|
| Available settings: | **1** – Key pressed 1 time**2** – Key pressed 2 times**4** – Key pressed 3 times**8** – Key Hold Down and Key Released | | |
| Default setting: | **0** | Parameter size: | **1** [byte] |

**S2 switch – scenes sent**
This parameter determines which actions result in sending scene IDs assigned to them.

| | | | |
|---|---|---|---|
| Available settings: | **1** – Key pressed 1 time**2** – Key pressed 2 times**4** – Key pressed 3 times**8** – Key Hold Down and Key Released | | |
| Default setting: | **0** | Parameter size: | **1** [byte] |

**S1 switch – associations sent to 2nd and 3rd association groups**
This parameter determines which actions are ignored when sending commands to devices associated in 2nd and 3rd association group. All actions are active by default.

| | | | |
|---|---|---|---|
| Available settings: | **1** – ignore turning ON with 1 click of the switch **2** – ignore turning OFF with 1 click of the switch **4** – ignore holding and releasing the switch* **8** – ignore double click of the switch** | | |
| Default setting: | **0** | Parameter size: | **1** [byte] |

**S1 switch – Switch ON value sent to 2nd and 3rd association groups**
This parameter defines value sent with Switch ON command to devices associated in 2nd and 3rd association group.

| | | | |
|---|---|---|---|
| Available settings: | **0-255** – sent value | | |
| Default setting: | **255** | Parameter size: | **2** [bytes] |

**S1 switch – Switch OFF value sent to 2nd and 3rd association groups**
This parameter defines value sent with Switch OFF command to devices associated in 2nd and 3rd association group.

| | | | |
|---|---|---|---|
| Available settings: | **0-255** – sent value | | |
| Default setting: | **0** | Parameter size: | **2** [bytes] |

**S1 switch – Double Click value sent to 2nd and 3rd association groups**
This parameter defines value sent with Double Click command to devices associated in 2nd and 3rd association group.

| | | | |
|---|---|---|---|
| Available settings: | **0-255** – sent value | | |
| Default setting: | **99** | Parameter size: | **2** [bytes] |

**S2 switch – associations sent to 4th and 5th association groups**
This parameter determines which actions result in sending commands to devices associated in 4th and 5th association group. All actions are active by default.

| | | | |
|---|---|---|---|
| Available settings: | **1** – ignore turning on with 1 click of the switch **2** – ignore turning off with 1 click of the switch **4** – ignore holding and releasing the switch* **8** – ignore double click of the switch** | | |
| Default setting: | **0** | Parameter size: | **1** [byte] |

**S2 switch – Switch ON value sent to 4th and 5th association groups**
This parameter defines value sent with Switch ON command to devices associated in 4th and 5th association group.

| | | | |
|---|---|---|---|
| Available settings: | **0-255** – sent value | | |
| Default setting: | **255** | Parameter size: | **2** [bytes] |

**S2 switch – Switch OFF value sent to 4th and 5th association groups**
This parameter defines value sent with Switch OFF command to devices associated in 4th and 5th association group.

| | | | |
|---|---|---|---|
| Available settings: | **0-255** – sent value | | |
| Default setting: | **0** | Parameter size: | **2** [bytes] |

**S2 switch – Double Click value sent to 4th and 5th association groups**
This parameter defines value sent with Double Click command to devices associated in 4th and 5th association group.

| | | | |
|---|---|---|---|
| Available settings: | **0-255** – sent value | | |
| Default setting: | **99** | Parameter size: | **2** [bytes] |

**Reaction to General Alarm**
This parameter determines how the device will react to General Alarm frame.

| | | | |
|---|---|---|---|
| Available settings: | **0** – alarm frame is ignored **1** – turn ON after receiving the alarm frame **2** – turn OFF after receiving the alarm frame **3** – flash after receiving the alarm frame | | |
| Default setting: | **3** | Parameter size: | **1** [byte] |

**Reaction to Flood Alarm**
This parameter determines how the device will react to Flood Alarm frame.

| | | | |
|---|---|---|---|
| Available settings: | **0** – alarm frame is ignored**1** – turn ON after receiving the alarm frame **2** – tu rn OFF after receiving the alarm frame **3** – flash after receiving the alarm fram e | | |
| Default setting: | **2** | Parameter size: | **1** [byte] |

**Reaction to CO/CO2/Smoke Alarm**
This parameter determines how the device will react to CO, CO2 or Smoke frame.

| | | | |
|---|---|---|---|
| Available settings: | **0** – alarm frame is ignored**1** – turn ON after receiving the alarm frame **2** – tu rn OFF after receiving the alarm frame **3** – flash after receiving the alarm fram e | | |
| Default setting: | **3** | Parameter size: | **1** [byte] |

**Reaction to Heat Alarm**
This parameter determines how the device will react to Heat Alarm frame.

| | | | |
|---|---|---|---|
| Available settings: | **0** – alarm frame is ignored**1** – turn ON after receiving the alarm frame **2** – tu rn OFF after receiving the alarm frame **3** – flash after receiving the alarm fram e | | |
| Default setting: | **1** | Parameter size: | **1** [byte] |

**Flashing alarm duration**
This parameter allows to set duration of flashing alarm mode.

| | | | |
|---|---|---|---|
| Available settings: | **1-32000** (1-32000s, 1s step) – duration | | |
| Default setting: | **600** (10min) | Parameter size: | **2** [bytes] |

**First channel – power reports**
This parameter determines the minimum change in consumed power that will result in sending new power report to the main controller.

| | | | |
|---|---|---|---|
| Available settings: | **0** – reports are disabled**1-100** (1-100%) – change in power | | |
| Default setting: | **20** (20%) | Parameter size: | **1** [byte] |

**First channel – minimal time between power reports**
This parameter determines minimum time that has to elapse before sending new power report to the main controller.

| | | | |
|---|---|---|---|
| Available settings: | **0** – reports are disabled**1-120** (1-120s) – report interval | | |
| Default setting: | **10** (10s) | Parameter size: | **1** [byte] |

**First channel – energy reports**
This parameter determines the minimum change in consumed energy that will result in sending new energy report

to the main controller.

| Available settings: | **0** – reports are disabled**1-32000** (0.01 – 320 kWh) – change in energy | | |
|---|---|---|---|
| Default setting: | **100** (1 kWh) | Parameter size: | **2** [bytes] |

**Second channel – power reports (FGS-223 only)**
This parameter determines the minimum change in consumed power that will result in sending new power report to the main controller.

| Available settings: | **0** – reports are disabled**1-100** (1-100%) – change in power | | |
|---|---|---|---|
| Default setting: | **20** (20%) | Parameter size: | **1** [byte] |

**Second channel – minimal time between power reports (FGS-223 only)**
This parameter determines minimum time that has to elapse before sending new power report to the main controller.

| Available settings: | **0** – periodic reports are disabled**1-120** (1-120s) – report interval | | |
|---|---|---|---|
| Default setting: | **10** (10s) | Parameter size: | **1** [byte] |

**Second channel – energy reports (FGS-223 only)**
This parameter determines the minimum change in consumed energy that will result in sending new energy report to the main controller.

| Available settings: | **0** – reports are disabled**1-32000** (0.01 – 320 kWh) – change in energy | | |
|---|---|---|---|
| Default setting: | **100** (1 kWh) | Parameter size: | **2** [bytes] |

## Specifications

**Power supply:**
100-240V~ 50/60 Hz

**Rated load current:**
**Single Switch 2 (FGS-213):**
IEC standards: 8A
UL standards:
6.5A – resistive loads
5A – tungsten loads
**Double Switch 2 (FGS-223):**
IEC standards: 6.5A per channel 10A overall
**UL standards:**
6A per channel – resistive loads
3A per channel – tungsten loads
9.5A overall – resistive loads

**Operating temperature:**
0-35°C

**For installation in boxes:**
Ø ≥ 50mm, depth ≥ 60mm

**Radio protocol:**
Z-Wave (500 series chip)

**Radio signal power:**
up to 5dBm

**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;
920.9, 921.7 or 923.1 MHz TW;

## 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.

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.

**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. Product is covered by one or more claims of patents found at http://sipcollc.com/patent-list/ and http://intusiq.com/patent-list/.

**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.

**Declaration of conformity**
Hereby, Fibar Group S.A. declares that the device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.manuals.fibaro.com

**WEEE Directive Compliance**
Device labelled with this symbol should not be disposed with other household wastes. It shall be handed over to the applicable collection point for the recycling of waste electrical and electronic equipment.

## Documents / Resources

| | |
|---|---|
|  | FIBARO FGS-2x3 Single Double Switch 2 [pdf] User Manual<br>FGS-2x3 Single Double Switch 2, FGS-2x3, Single Double Switch 2, Double Switch 2 |

## References

- Patent-list | Sipco
- Home Automation - Smart Home | FIBARO
- FIBARO Manuals | Smart home automation devices