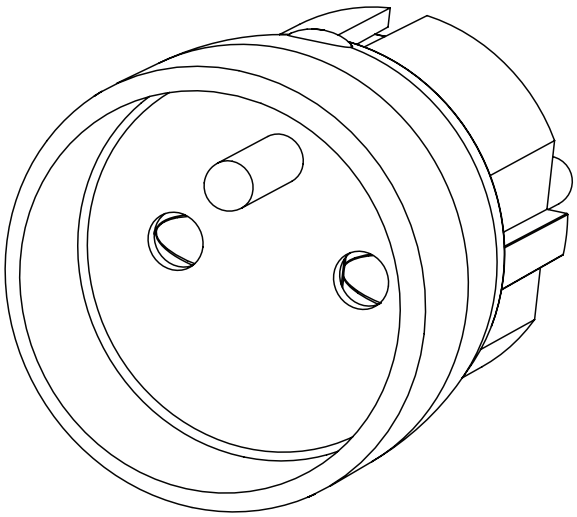
FIBARO®
HOME INTELLIGENCE

OPERATING MANUAL

EN



FIBARO WALL PLUG

FGWP-102

CONTENTS

v2.1

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.

This product is intended for indoor use only in dry locations.

Do not use in damp or wet locations, near a bathtub, sink, shower, swimming pool, or anywhere else where water or moisture are present.

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 Wall Plug is a universal, Z-Wave Plus compatible, remotely controlled outlet adapter. This device may be applied wherever you want to control electrical devices with up to 2500W load.

The Wall Plug is equipped with a power and energy metering function. It uses a LED ring to visualize the current load with colour changing illumination and operating mode. This is the smallest and most attractive device of this type available in the world.

The Wall Plug may be operated using the B-button located on its casing or via any Z-Wave compatible controller.

Main features of FIBARO Wall Plug:

- Compatible with any Z-Wave or Z-Wave Plus Controller.
- Supports protected mode (Z-Wave network security mode) with AES-128 encryption.
- Extremely easy installation - simply plug the device into the mains socket.
- Works as a Z-Wave signal repeater.
- Active power and energy consumption metering.
- Current value of the load and operating mode are indicated by the multi-colour LED ring.

FIBARO Wall Plug is a fully compatible Z-Wave Plus device.

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.

NOTE

FIBARO Wall Plug is a Security Enabled Z-Wave Plus product and a Security Enabled Z-Wave Controller must be used in order to fully utilize the product.

#2: Basic activation

NOTE

When powered, the device will indicate Z-Wave status with colour of LED ring:

- **Green** - the device is already added to the Z-Wave network.
- **Red** - the device is not added to any Z-Wave network.

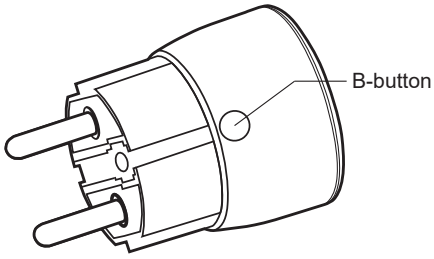
NOTE

Socket used for the Wall Plug should be easily accessible.

CAUTION

Do not put one Wall Plug into another.

1. Plug the device into a socket nearby the main Z-Wave controller.
2. Set the main controller in (security/non-security) add mode (see the controller's manual).
3. Quickly, triple click the B-button located on the casing.



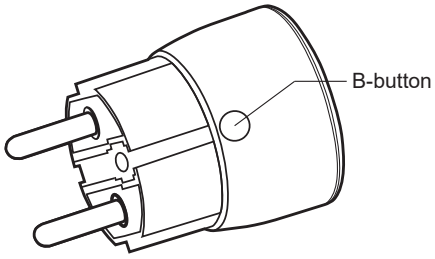
4. Wait for the device to be added to the system.
5. Successful adding will be confirmed by the controller.
6. Plug a device you want to control into the Wall Plug.
7. Test the device by turning it on and off using the B-Button.

#3: Adding 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. Plug the device into a socket nearby the main Z-Wave controller.
2. The LED ring will glow red signalling not being added (reset or remove the device otherwise).
3. Set the main controller in (security/non-security) add mode (see the controller's manual).
4. Quickly, triple click the B-button located on the casing.



5. Wait for the adding process to end.
6. Successful adding will be confirmed by the Z-Wave controller's message.

NOTE

Adding in security mode must be performed up to 2 meters from the controller.

NOTE

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

#4: Removing the device

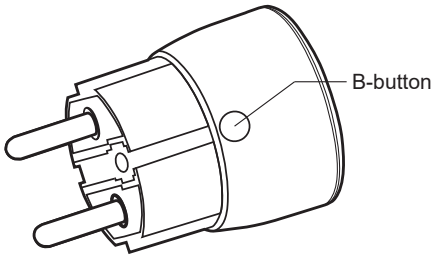
NOTE

Removing the Wall Plug 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 from the Z-Wave network:

1. Plug the device into a socket nearby the main Z-Wave controller.
2. The LED ring will glow green signalling being added (removing is not necessary otherwise).
3. Set the main controller into remove mode (see the controller's manual).
4. Quickly, triple click the B-button located on the casing.



5. Wait for the removing process to end.
6. Successful removing will be confirmed by the Z-Wave controller's message.

#5: Operating the device

Controlling the Wall Plug using the B-button:

Wall Plug is equipped with a B-button, which allows to use the menu and additionally perform the following actions:

1x click: turn controlled device ON/OFF, confirm selected menu option (if menu is active)

3x click: add/remove the device to/from a Z-Wave network

Holding: enter/navigate through menu

CAUTION

To avoid risk of electrical shock, do not operate the device with wet or moist hands.

Visual indications:

The Wall Plug is equipped with a LED ring, signalling sensor's operating modes and current active power consumption. In addition the visual indicator may inform of the Z-Wave network range.

Visual indicator ring signalling modes:

1. By default, when the device is turned ON, the colour will vary depending on the current active power consumption.
2. Once inserted to mains socket the device signals Z-Wave network inclusion status with blink (green - added, red - not added).
3. Menu position is signalled with assigned illumination colour.
4. Ongoing software update is signalled with cyan blinking.
5. Range of the Z-Wave network with colour depending on type of communication or the lack of it (only in range tester mode).

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

1. Press and hold the B-button.
2. Wait for the device to indicate desired position with a colour:
   - **GREEN** - erase energy consumption memory
   - **VIOLET** - Z-Wave network's range test
   - **YELLOW** - device reset
3. Release the B-button.
4. Click the B-button to confirm selection.

NOTE

Menu is preceded by two white flashes of the LED ring 6 seconds after the B-button is pressed.

NOTE

Disabling the LED ring indications will also affect alarm signalization.

Disabling visual indicator:

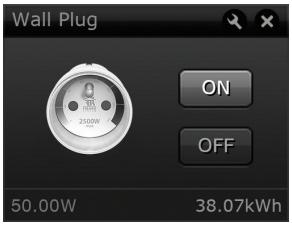
Visual indication ring may be turned off for status signalling (turned ON/OFF, power consumption). That means each status change will be signalled by a short white blink of the ring. Disabling it will not change operation of the device. To disable the LED ring:

1. Insert the Wall Plug in a socket.
2. Press and hold the B-button for about 3 seconds.
3. Release the B-button after LED ring starts pulsing white.

To restore visual indications perform above procedure again.

Controlling the Wall Plug with FIBARO Home Center controller:

The Wall Plug after successful adding is represented in the Home Center interface with a single icon. It allows to turn on and off the device and displays current active power and cumulative energy consumption.



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 described in "Adding the device" on page 5.

Resetting the device to factory defaults:

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.

1. Make sure the device is powered.
2. Press and hold the B-button.
3. Wait for the LED ring to glow yellow (3rd menu position).
4. Release the B-button.
5. Click the B-button once to confirm selection.
6. After few seconds the device will restart with factory settings, which is signalled with the red ring colour.

#6: Power and energy consumption

The Wall Plug allows to monitor the active power and energy consumption. 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.

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:

Wall Plug allows to erase stored consumption data (turning it off/on or removing it from the socket will not erase consumption):

1. Make sure the device is powered.
2. Press and hold the B-button.
3. Release the B-button when the LED ring glows green (1st menu position).
4. Press the B-button briefly.

#7: Association

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

2nd association group commands are sent only in case of manual operation through the B-button.
3rd association group commands are sent automatically, depending on parameters 21, 22, 23 and 24.

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 Wall Plug provides the association of three 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 (Button)" devices in this group will be switched on or off when relay status is changed using the B-button (uses Basic command class).

3rd Association Group – "On/Off (Power)" devices in this group will be switched on or off depending on the current load (uses Basic command class).

The Wall Plug in 2nd and 3rd group allows to control up to 10 regular or multichannel devices per an association group. "LifeLine" group 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 the 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. Wait for the configuration process to end.

#8: Z-Wave range test

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

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

1. Press and hold the B-button.
2. Wait for the LED ring to glow violet (2nd menu position).
3. Release the B-button.
4. Click the B-button once to confirm selection.
5. Visual indicator will indicate the Z-Wave network's range (range signalling modes described below).
6. To exit Z-Wave range test, press the B-button briefly.

Z-Wave range tester signalling modes:

Visual indicator pulsing green - the Wall Plug 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 Wall Plug communicates with the main controller directly.

Visual indicator pulsing yellow - the Wall Plug tries to establish a routed communication with the main controller through other modules (repeaters).

Visual indicator glowing yellow - the Wall Plug 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 Wall Plug 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 Wall Plug is not able to connect to the main controller directly or through another Z-Wave network device (repeater).

CAUTION

To make Z-Wave range test possible, the device must be added to the Z-Wave controller. Testing may stress the network, so it is recommended to perform the test only in special cases.

NOTE

Communication mode of the Wall Plug may switch between direct and one using routing, especially if the device is on the limit of the direct range.

#9: Advanced parameters

The Wall Plug 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 Wall Plug (using the FIBARO Home Center 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.

GENERAL SETTINGS

1. "Always On" mode

In this mode Wall Plug will turn on connected device permanently and will stop reacting to attempts of turning it off (through Z-Wave network or pushing the B-button).

"Always On" function turns the Wall Plug into a power and energy meter. Connected device will not be turned off upon receiving an alarm frame from another Z-Wave device (parameter 31 will be ignored).

In "Always on" mode, connected device may be turned off after exceeding the power defined in parameter 3 or in case of detecting current greater than 110% of rated current. In such cases, connected device can be turned on again by pushing the B-button or sending a control frame. By default, overload protection is inactive.

Available settings:	**0** - function inactive **1** - function activated		
Default setting:	**0**	Parameter size:	**1** [byte]

2. Remember device status before the power failure

This parameter determines how the Wall Plug will react in the event of power supply failure (e.g. power outage or taking out from the electrical outlet).

After the power supply is back on, the Wall Plug can be restored to previous state or remain switched off.

This parameter is ignored in „Always On" mode - the device automatically turns ON after plugging it into the socket.

Available settings:	**0** - device remains switched off **1** - device restores the state from before the power failure		
Default setting:	**1**	Parameter size:	**1** [byte]

3. Overload safety switch

This function allows to turn off the controlled device in case of exceeding the defined power. Controlled device will be turned off even if "Always On" function is active (parameter 1).

Controlled device can be turned back on via B-button or sending a control frame. By default this function is inactive.

Available settings:	**0** - function inactive **10-30000** (1.0-3000.0W, step 0.1W) - power threshold		
Default setting:	**0**	Parameter size:	**2** [bytes]

POWER AND ENERGY MEASUREMENT

The default values of the parameters suit most types of devices. They were selected to show in real time the instantaneous power values, while not overloading the Z-Wave network in the process. In specific cases it may be necessary to modify default settings in order to optimize Z-Wave network's use. In extreme cases it is recommended to turn off reporting completely and configure power polling or periodic reports in the Z-Wave controller.

The Wall Plug reports the power load with specified frequency. Below configuration parameters allow to specify how and how frequently power load will be reported.

10. High priority power report

This parameter determines the minimum percentage change in active power that will result in sending power report to the main controller with the highest priority in the Z-Wave network.

By default, the Wall Plug immediately sends the power report if the power load changes by 80%.

Available settings:	**1-99** - power change in percent **100** - reports are disabled		
Default setting:	**80** (80%)	Parameter size:	**1** [byte]

11. Standard power report

This parameter determines the minimum percentage change in active power that will result in sending power report to the main controller

Compared to parameter 10, the maximum number of reports sent is reduced (parameter 12) to 5 in a specified time interval. In addition, the reports are not sent in mode, which may result in overloading the Z-Wave network.

By default changes in power load may be reported up to 5 times per 30 seconds, when power load changes by 15%.

Available settings:	**1-99** - power change in percent **100** - reports are disabled		
Default setting:	**15** (15%)	Parameter size:	**1** [byte]

CAUTION

The device has a protection that will turn the load off in the case of detecting current greater than 110% of rated current (>12A). It is a safety function and it cannot be turned off. After its activation the load can be turned on back again by pressing the B-button or sending a control frame. This function is independent of overload safety switch set in the parameter no. 3.

NOTE

Overload safety switch functionality is not an overload safety protection nor a short circuit protection. Circuit needs additional short circuit and overload protection!

NOTE

In extreme cases, reports may be sent every second if rapid and significant power load changes occur. Frequent reporting may overload the Z-Wave network so these parameter's settings should reflect significant changes in power load only.

i NOTE

By default the Wall Plug sends up to 5 reports each 30 seconds, provided the power load changes by 15%.

12. Power reporting interval

This parameter defines the time interval of sending at most 5 standard power reports when the power changes by the value set in parameter 11. The higher the value of parameter 12, the fewer reports the device will send.

Available settings:	**5-600** (in seconds)		
Default setting:	**30** (30s)	Parameter size:	**2** [bytes]

13. Energy reporting threshold

This parameter specifies the minimum change in energy consumption (in relation to the previously reported), that will result in sending a new report.

Available settings:	**0** - energy reports inactive **1-500** (0.01-5kWh, step 0.01kWh) - threshold		
Default setting:	**10** (0.1kWh)	Parameter size:	**2** [bytes]

14. Power and energy periodic reports

This parameter defines time period between independent reports sent when changes in power load have not been recorded or if changes are insignificant. By default reports are sent every hour.

Available settings:	**0** - periodic reports inactive **5-32400** (in seconds)		
Default setting:	**3600** (1h)	Parameter size:	**2** [bytes]

15. Measuring energy consumed by the Wall Plug itself

This parameter determines whether power metering should include the amount of power consumed by the Wall Plug itself. Results are being added to the value of power consumed by controlled device.

Available settings:	**0** - function inactive **1** - function activated		
Default setting:	**0**	Parameter size:	**1** [byte]

„ON/OFF" ASSOCIATION GROUPS

20. Control of „On/Off (Button)" association group (2) devices

Controlling devices with the B-Button. This parameter is inactive in "Always On" mode (parameter 1).

Control as the Wall Plug:

- switching the Wall Plug on – switch the devices on (parameter 24)
- switching the Wall Plug off – switch the devices off (parameter 24)

Control opposite to the Wall Plug:

- switching the Wall Plug on – switch the devices off
- switching the Wall Plug off – switch the devices on

Available settings:	**0** - control as the Wall Plug **1** - control opposite to the Wall Plug		
Default setting:	**0**	Parameter size:	**1** [byte]

21. DOWN value - „On/Off (Power)" association group (3)

Lower power threshold, used in parameter 23. DOWN value cannot be higher than a value specified in parameter 22.

Available settings:	**0-24900** (0.0-2490.0W, step 0.1W)		
Default setting:	**300** (30W)	Parameter size:	**2** [bytes]

22. UP value - „On/Off (Power)" association group (3)

Upper power threshold, used in parameter 23. UP value cannot be lower than a value specified in parameter 21.

Available settings:	**100-25000** (10.0-2500.0W, step 0.1W)		
Default setting:	**500** (50W)	Parameter size:	**2** [bytes]

23. The response after exceeding defined power values

This parameter defines the way that 3rd association group devices are controlled. Depends on the actual measured power (as parameters 21 and 22 settings).

Available settings:	**1** - turn the associated devices ON, once the power drops below DOWN value (parameter 21) **2** - turn the associated devices OFF, once the power drops below DOWN value (parameter 21) **3** - turn the associated devices ON, once the power rises above UP value (parameter 22) **4** - turn the associated devices OFF, once the power rises above UP value (parameter 22) **5** - combination of 1 and 4. Turn the associated devices ON, once the power drops below DOWN value (parameter 21). Turn the associated devices OFF, once the power rises above UP value (parameter 22). **6** - combination of 2 and 3. Turn the associated devices OFF, once the power drops below DOWN value (parameter 21). Turn the associated devices ON, once the power rises above UP value (parameter 22).		
Default setting:	**6**	Parameter size:	**1** [byte]

i NOTE

Setting parameter 24 to appropriate value will result in:

0 - turning off associated devices

1-99 - forcing level of associated devices

255 - setting associated devices to the last remembered state or turning them on

24. SWITCH ON value - „On/Off" association groups

The value of BASIC SET command frame sent to the devices associated in „On/Off" association groups (2, 3).

„On/Off (Button)" association group - in accordance with parameter 20.

„On/Off (Power)" association group - in accordance with parameter 23.

Available settings:	**0-99** or **255**		
Default setting:	**255**	Parameter size:	**2** [bytes]

ALARMS

30. Active alarms

Define Z-Wave network alarms to which the Wall Plug will respond.

Available settings:	**1** - general alarm **2** - smoke alarm **4** - CO alarm **8** - CO2 alarm **16** - high temperature alarm **32** - flood alarm		
Default setting:	**63** (all)	Parameter size:	**1** [byte]

i NOTE

If "Always On" function is active (parameter 1), settings of parameter 31 are ignored.

31. Response to alarm frames

This parameter defines how the Wall Plug will respond to alarms (device's status change).

In case of values 1 or 2 the Wall Plug is operating normally and LED ring signals an alarm through time defined in parameter 32 or until the alarm is cancelled.

In case of values 5 to 50 the Wall Plug does not report status change, power changes, ignores BASIC SET command frames. After time defined in parameter 32 or after the alarm cancellation, connected device is set to the previous state.

Available settings:	**0** - no reaction, **1** - turn connected device on **2** - turn connected device off **5-50** (0.5-5.0s, step 0.1s) - cyclically change device state with set period		
Default setting:	**0**	Parameter size:	**1** [byte]

i NOTE

The alarm may be cancelled by pressing and holding the B-button.

32. Alarm state duration

This parameter specifies the duration of alarm state. If a device sending an alarm frame through the Z-Wave network sets alarm duration as well, this settings are ignored.

Available settings:	**1-32400** (in seconds)		
Default setting:	**600** (10min)	Parameter size:	**2** [bytes]

COLOUR SETTINGS

40. Power load for violet colour

This parameter determines maximum active power value, which when exceeded, causes the LED ring flash violet. Function is active only when parameter 41 is set to 1 or 2.

Available settings:	**1000-30000** (100.0-3000.0W, step 0.1W)		
Default setting:	**25000** (2500W)	Parameter size:	**2** [bytes]

41. LED ring colour when controlled device is on

When set to 1 or 2, LED ring colour will change depending on active power and parameter 40. Other colours are set permanently and do not depend on power consumption.

Available settings:	**0** - illumination turned off completely **1** - colour changes continuously depending on active power **2** - colour changes in steps depending on active power **3** - white, **4** - red, **5** - green, **6** - blue, **7** - yellow **8** - cyan, **9** - magenta		
Default setting:	**1**	Parameter size:	**1** [byte]

42. LED ring colour when controlled device is off

This parameter defines the illumination colour after turning off.

Available settings:	**0** - illumination turned off completely **1** - LED ring is illuminated with a colour corresponding to the last measured power, before the controlled device was turned off **3** - white, **4** - red, **5** - green, **6** - blue, **7** - yellow **8** - cyan, **9** - magenta		
Default setting:	**0**	Parameter size:	**1** [byte]

43. LED ring colour at the Z-Wave network alarm detection

This parameter defines the illumination colour in case of Z-Wave alarm.

Available settings:	**0** - illumination turned off completely **1** - no change in colour. LED ring colour is determined by settings of parameters 41 or 42 **2** - LED ring flashes red/blue/white **3** - white, **4** - red, **5** - green, **6** - blue, **7** - yellow **8** - cyan, **9** - magenta		
Default setting:	**2**	Parameter size:	**1** [byte]

OTHERS

50. 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:	**0** - none of the groups sent as secure **1** - 2nd group sent as secure **2** - 3rd group sent as secure **3** - 2nd and 3rd group sent as secure		
Default setting:	**3**	Parameter size:	**1** [byte]

#10: Specifications

Power supply:	230V AC, 50/60 Hz
Rated load current (for resistive load):	11A - continuous load
Power consumption:	up to 1.6W
Power output (for resistive load):	2.5kW at continuous load
To be used with E or F type (Schuko) sockets:	- CEE 7/16 - max load 2.5A - CEE 7/17 - max load 11A - Dual type plugs E/F
Active element:	Micro-gap relay switch μ
EU standards compliance:	RoHS 2011/65/EU RED 2014/53/EU
Pollution Degree:	2 (home and office use, indoor only)
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 outdoors up to 40m indoors (depending on terrain and building structure)
Operating temperature:	0 - 40°C
Dimensions (Diameter x Height):	43 x 65 mm

Safety classification rating: home and office use only

Type 1 action according to features of automatic action as per clause 6.4.1 of EN 60730-1:2012 standard.

Software class A device, according to EN 60730-1:2012 standard.

NOTE

In case of loads other than resistive please observe cosφ and, if necessary, use load lower than rated. It is recommended not to exceed 3A for 250 V AC, cosφ=0.4.

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.

#11: Regulations

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.

Warning

This product is not a toy. Keep away from children and animals!

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.