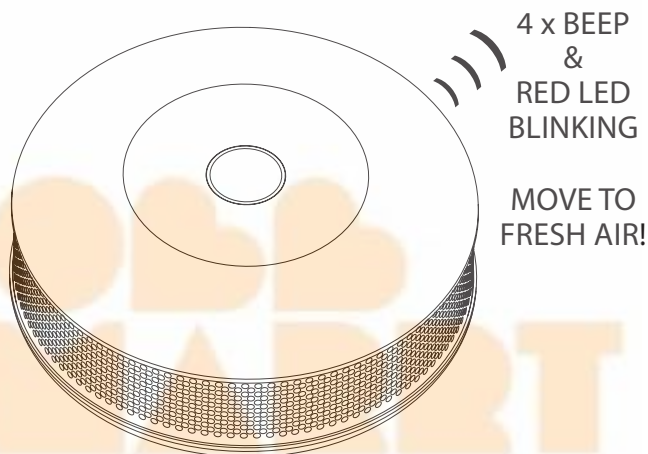




FIBARO CO SENSOR FGBHCD-001



CONTENTS

v1.1

#1: Description and features	3	#6: Functionality	8
#2: Powering the accessory	4	#7: Visual indications & acoustic signals	9
#3: Pairing the accessory	5	#8: Battery	10
#4: Physical installation	6	#9: Specifications	11
#5: Operating the device	7	#10: Regulations	12

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 carbon monoxide information

Carbon monoxide (CO) is a colourless, odourless, and tasteless poison gas that can be fatal when inhaled. It is produced when liquid, solid, or gas fuel is burned.

Symptoms of carbon monoxide poisoning

The early symptoms of carbon monoxide poisoning can be confused with flu-like symptoms: headache, dizziness and nausea. Breathing carbon monoxide causes these symptoms even in healthy people. It can also cause sleepiness, vision problems (including blurred vision), ringing in the ears, aching arms and legs, irregular breathing, fatigue and confusion. At very high levels, it causes loss of consciousness and death.

Some external factors, eg. exposure to high concentration of basic (non-acidic) gases, silicone vapors, hydrogen sulfide or sulfuric acid gas, organic vapors, contact with water, dust and oil mist, or dew condensation **may affect** the reliability of the device operation.

This device **may not** protect from long-term exposure to low levels of carbon monoxide which can also lead to neurological symptoms.

The device **is not** a substitute for appropriate ventilation and exhaust systems.

HomeKit technology

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

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

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



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

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

#1: Description and features

FIBARO CO Sensor is a HomeKit-enabled carbon monoxide detector using *Bluetooth*® low energy technology.

Its high sensitivity allows to detect the presence of the carbon monoxide (CO) gas at the early stage in order to prevent carbon monoxide poisoning.

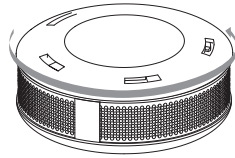
Alarm is signalled with a built-in siren, blinking LED indicator and by sending information to your iOS device.

Additionally, the accessory is equipped with a temperature sensor.

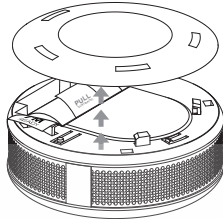
Main features of FIBARO CO Sensor:

- compatible with Apple HomeKit technology
- *Bluetooth*® low energy technology for wireless communication
- detects tampering when the casing is opened
- wall-mounted
- battery-powered
- alarm signalled with a built-in siren and LED diode
- built-in temperature sensor measuring ambient temperature

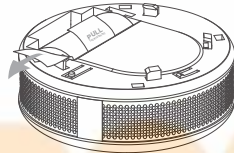
#2: Powering the accessory



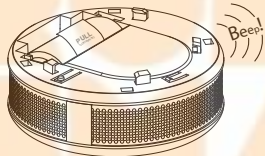
1. Turn the cover counter-clockwise.



2. Take off the cover.



3. Remove the paper strip protecting the battery.



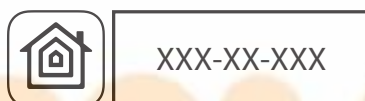
4. Proper powering up will be confirmed with a short beep.
5. Pair the accessory if you want to use it with HomeKit.

i NOTE

FIBARO CO Sensor may operate as a stand-alone carbon monoxide detector or may be used in cooperation with HomeKit technology as a part of smart home system.

#3: Pairing the accessory

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



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

NOTE

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

#4: Physical installation



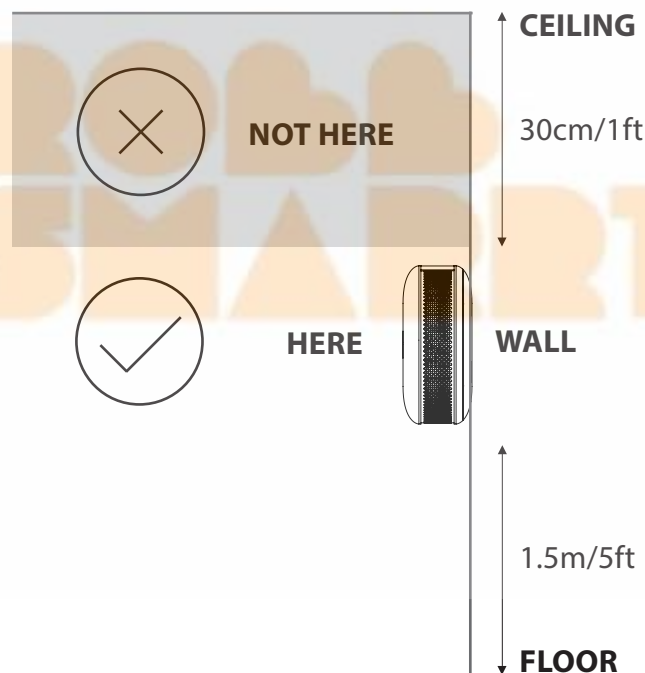
READ BEFORE INSTALLATION AND HEED ALL THE WARNINGS!

- The accessory **should** be installed below the ceiling level.
- The accessory **should** be installed on the wall, at least 30 cm (1 ft) away from the corners.
- The accessory **should not** be installed: in a bathroom, next to heat sources, within range of kids, obstructed from possible carbon monoxide sources, in direct sunlight.
- The accessory **should** be installed by a qualified installer.
- Do **not** paint the accessory.
- The accessory **should** be cleaned with a slightly damp cloth or moistened tissue.

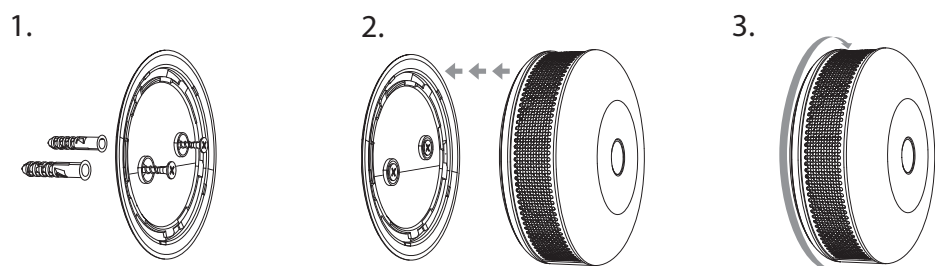
i NOTE

Recommended height of installation is dependant on the purpose of the room and height at which head typically is.

Place of installation:



Installation on the wall:

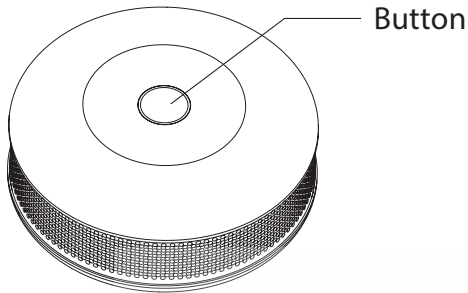


1. Mount the cover on a wall.
2. Attach the accessory to its cover.
3. Turn the accessory clockwise to close it.

#5: Operating the device

Menu allows to perform different actions. In order to use the menu:

1. Press and hold the button for 3 seconds.



2. You should hear a short signal while the LED diode blinks white.
3. Release the button.
4. Wait for the device to indicate desired menu position with a colour:
 - **White** - confirm the start of the firmware update process
 - **Green**
 - **Magenta** - reset the CO peak value
 - **Yellow** - the device reset
5. Press the button to confirm selection.

Resetting the accessory to factory defaults:

Reset procedure allows to restore the accessory back to its factory settings including HomeKit pairing. Stored carbon monoxide and temperature measurement are not deleted.

1. Press and hold the button.
2. Release the button when LED indicator glows white and short beep sounds.
3. Click the button when LED indicator glows yellow.
4. After few seconds the device will be reset (confirmed by red LED indicator and long beep).

Self-test allows to check operation of the accessory.

To start the self-test:

1. Press and hold the button.
2. The LED indicator will glow white and you will hear a short beep.
3. Release the button when you hear the first alarm sequence.
4. Move away from the accessory to protect your hearing.



If the self-test procedure does not result in emitting sound and red light signal, replace the accessory.



NOTE

CO Sensor must be detached from the wall and battery level must be greater than 30% of its full capacity to perform the firmware update process.



CAUTION

The alarm is very loud! Only the first alarm sequence is quieter.

#6: Functionality

Carbon monoxide alarm:

The CO Sensor alarms about abnormal levels of carbon monoxide concentration with 4 red blinks and 4 loud beeps (every 5 seconds).

Alarm is also reported to your iOS device.

Carbon monoxide measuring and storing:

The CO Sensor measures carbon monoxide concentration and reports. If measured value differs from previously reported by at least 1ppm, accessory reports it to your iOS device.

Last 2500 measurements are stored in non-volatile memory of the accessory and can be accessed via FIBARO for HomeKit app.

i NOTE

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

Temperature measuring:

The CO Sensor measures ambient temperature every 30 seconds. If the measured temperature differs from previously reported by at least 1°C (1.8°F), accessory reports it to your iOS device.

Last 2500 measurements are stored in non-volatile memory of the accessory and can be accessed via FIBARO for HomeKit app.

Tamper detection:

The CO Sensor detects tampering when accessory is removed from its base and reports it to your iOS device. Tampering is indicated with one white blink and beep.

Battery level measuring:

The CO Sensor measures battery level every 6 hours and reports it to your iOS device. Additionally, if battery level is below 15%, the accessory will report low level battery status to your iOS device and indicate it with one yellow blink and beep.

#7: Visual indications & acoustic signals

Indications and signals:

The CO Sensor is equipped with a LED diode and a buzzer, signalling menu position and status of the accessory.

Accessory status indications:

What you hear	What you see	What it means	What to do
4 x BEEP every 5s	4 x RED BLINK every 5s	Detected presence of carbon monoxide which can kill you!	1. Open the windows 2. Move to fresh air! 3. Contact emergency services
1 x BEEP	1 x YELLOW BLINK every 30s	Low battery level	Replace the battery
1 x BEEP every 30s	–	Sensor error	Reset the accessory, replace if no effect
2 x BEEP	1 x CYAN BLINK every 30s	End of lifespan	Reset the accessory, replace if no effect
1 x BEEP	1 x WHITE BLINK	Tamper alarm	Check the housing
–	1 x GREEN BLINK after button press	Accessory powered	–
1 x BEEP	1 x GREEN BLINK after powering	Paired with HomeKit	–
1 x BEEP	1 x RED BLINK after powering	Not paired with HomeKit	–
–	CYAN BLINKING	Firmware update	Wait for completion

NOTE

Replace the accessory before date on the front or if sensor error is detected.

#8: Battery



CAUTION

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



CAUTION

Use only type of battery specified in this manual and keep proper polarity!



NOTE

It is required to launch the HomeKit-compatible app, open the accessory view and swipe down the screen to refresh its state after each battery replacement.

FIBARO CO Sensor can be powered with CR123A (included) battery. Estimated battery life with accessory on default settings is 3 years (tested with Panasonic Industrial Lithium).

Checking battery level:

The CO Sensor measures battery level every 6 hours and reports it to your iOS device. Additionally, if battery level is below 15%, the accessory will report low level battery status to your iOS device and indicate it with one yellow blink and a short beep.

Replacing the battery:

1. Remove the accessory from the cover by turning it counter-clockwise.
2. Pull the paper strip to take out the battery.
3. Press and hold the button for at least one second.
4. Insert a new CR123A battery observing the polarities shown inside.
5. Attach the accessory to its cover by turning it clockwise and perform the test (as described in #5: Operating the device).
6. Launch your HomeKit app and swipe down to refresh the device state.

#9: Specifications

Power supply:	CR123A 3.0V battery (included)
Battery life:	3 years on default settings (tested with Panasonic Industrial Lithium)
Lifespan under typical conditions:	8 years
CO concentration measurement range:	0 - 450 ppm
Measuring accuracy:	$\pm 10\text{ppm}$ / $\pm 5\%$
Alarm response times:	50ppm 60-90min 100ppm 10-40min 300ppm <1.5min
Alarm siren sound level:	85 dBA at 3 meters (10 feet)
Operating temperature:	0 - 50°C (32-122°F)
Operating humidity:	10-95%RH without condensation
Conformity with EU requirements:	RED 2014/53/EU RoHS 2011/65/EU EN 50291-1:2010
Radio protocol:	Bluetooth® low energy
Radio frequency:	2.4 GHz
Range:	up to 50m (free range) (164 feet)
Dimensions (d x h):	65 x 28 mm (2.56 x 1.1 inches)

CAUTION

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

NOTE

Replace the accessory before date on the front or if sensor error is detected.

#10: 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.

Apple, iPhone, iPad, iPad Air, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. HomeKit is a trademark of Apple Inc.

The Bluetooth word mark is registered trademark of Bluetooth SIG, Inc. All other brands and product names referred to herein are trademarks of their respective holders.

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

Warning

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

Information according REACH

The included Panasonic CR123A battery contains 1,2-Dimethoxyethane substance. Normal use of the device does not expose the user to a given substance.

Declaration of conformity



Hereby, Fibar Group S.A. declares that the device is in compliance with 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.