

SMCOR2K, SMR2K

NG-TRX wireless smoke/combined detectors for residential applications



Addressee for this information: User | Installer

1 DESCRIPTION

SMCOR2K is a combined smoke and carbon monoxide (CO) electrochemical detector.

SMR2K is a smoke detector.

Both detectors are suitable for residential applications.

Smoke detection is performed through an optical chamber exploiting the Tyndall effect, carbon monoxide detection through an electrochemical cell.

A multicolour LED and a buzzer indicate device working activity.

SMCOR2K and **SMR2K** can be programmed using BrowserOne software.

They are compatible with devices that use the NG-TRX protocol, such as VIDOMO2K and GATEWAY2K.

Control unit or device	Firmware version
PREGIO series	3.2.2 or above
VILLEGGIO NG-TRX series	8.7.1 or above
PROXIMA series	1.0.8 or above
RXMULTI2K	1.2.0 or above

2 TECHNICAL DATA

Model	SMCOR2K	SMR2K	
General features			
Detection type	Smoke + carbon monoxide	Smoke	
Identification			
Installation	ceiling mount		

Model	SMCOR2K	SMR2K	
General features			
Operating voltage	Power supply	3	V
	Battery	CR123A	
	Minimum power supply	1.8 V	V
Consumption at power voltage	Idle mode	50 (1)	18 (1) μ A
	Alarm mode	95,0 (2)	110,0 (2) mA
	Transmitting	19 ÷ 22 mA	
Audibility	> 85 dB @ 3m		
Wireless range	nominal	550 (3)	m
	maximum	950 (3)	m
Max power in transmission mode	25		mW
Transmission frequencies	868,120 - 868,820 - 869,525		
Autonomy	2 years	4 years	
Working temperature	-10 ÷ +55		°C
Humidity	5 ÷ 90%		
Protection class	IP42		
Conformity	EN 14604 - EN 50291	-	
Dimensions and weight	Ø 120 × H 45 mm, 160 g		

(1) with closed cover (no fault)

(2) with power buzzer active

(3) refer to the reception of 99% of transmitted packets, with devices installed in open field at 1,5m height, without antennas (nominal range) / with antennas (max range) oriented in the most favourable direction respectively

Parts supplied

Screws, dowels, technical manual, battery mod. CR123A.

3 PRECAUTIONS BEFORE DEVICE MOUNTING



! General warnings are at the end of this manual.

Before installing the product, please read the following indications carefully.

3.1 Carbon monoxide (CO): warnings

Carbon monoxide (CO) gas is produced by the incomplete combustion of fuels (e.g. natural gas, propane, kerosene, coal, gasoline or wood) that can occur in any device (boiler, room heater and similar) used to burn such fuels for energy or heat generation.

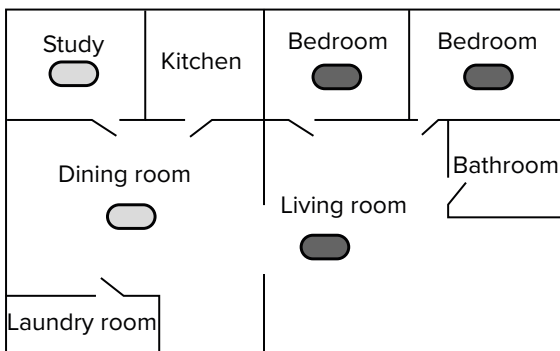
It is a highly dangerous poisonous gas, because it is colorless, odorless, tasteless and very toxic: the presence of CO gas inhibits the capacity of blood to transport oxygen, which can eventually lead to permanent brain damage.

Typical symptoms related to CO poisoning can vary from slight headache and nausea to, in most severe cases, vomit, unconsciousness, convulsions, cardiorespiratory failure or even death. Many victims of carbon monoxide poisoning indicate that, while they were aware of the danger, they became so disoriented and confused that they were unable to move away or call for assistance; exposure during sleep is particularly dangerous, because the victim usually does not awaken.

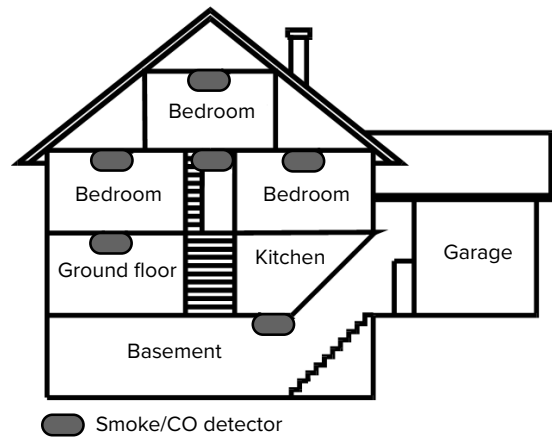
In any enclosed space, even a small accumulation of CO gas can represent a threat.

Therefore, we suggest always guaranteeing a proper air exchange to the rooms and keeping efficient and functioning both the combustion systems and the systems for combustion product transport to the outside.

3.2 Definition of installation position



- Minimum detectors
- Additional detectors



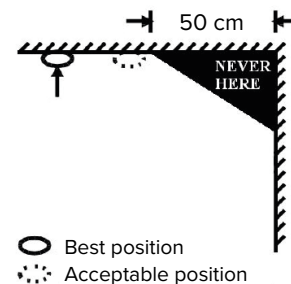
For minimum protection, install at least one detector on each floor and one in each bedroom.

To increase protection:

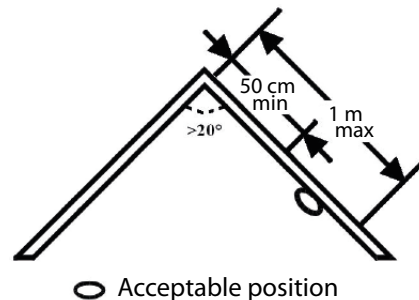
- install smoke detectors at both ends of a bedroom hallway if the hallway is more than 12 meters long;
- install basement detectors at the bottom of the basement stairwell;
- install second-floor detectors at the top of the first-to-second floor stairwell;
- install additional detectors in living rooms, dining rooms, attics.

! For carbon monoxide detection, it is recommended to install a SMCOR2K detector close to any CO emission point.

For maximum protection, install a detector in each room or hallway of each floor.



In case of installation on flat ceilings, position each detector as close to the center of the ceiling as possible. In any case, leave a distance of at least 50 cm from any wall or corner.



In case of installation in rooms that have sloped ceilings (slope higher than 20°), position the detector at a distance between 0.5 m to 1 m from the ceiling peak.

Inadvisable positions

To avoid nuisance alarms, avoid installation:

- in areas where where combustion particles are normally present (kitchens, garages, locations with poor ventilation) or less than 6 meters from such places;
- in damp areas (bathrooms) or areas where condensation may occur, or at less than 3 meters from such places;
- in very hot areas;
- in very dusty or dirty areas;
- in drafty areas;
- in insect-infested areas, since insects might enter the detector sensing chamber;
- at less then 5 meters from fluorescent lights.

3.3 Environment limits (wireless section)

The use of some building materials may reduce the detector wireless signal strength.

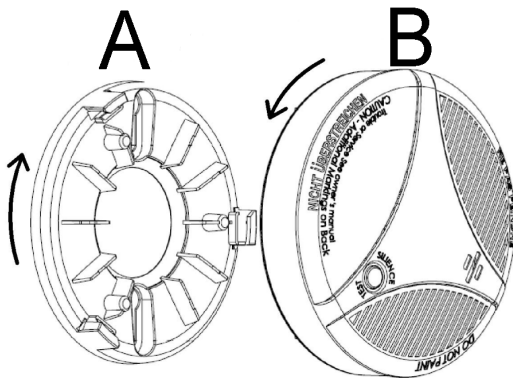
Example:

- plywood and honeycomb walls: 90-100% of full strength;
- solid / hollow brick walls 65-95% of full strength;
- concrete walls or metal sheet and plaster: 0-70% of full strength.

Metal grids, metal gates, and glasses may also affect (i.e. diminish) detector strength.

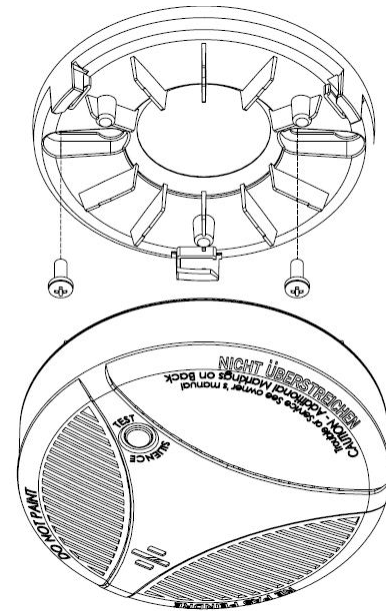
4 DEVICE MOUNTING

! *The electronic board of the detector may be damaged by electrostatic discharges. The installer must completely avoid any presence of electrostatic discharges.*



- A** Detector base
- B** Detector body

- remove the detector body from the base (rotate the body counterclockwise)



- position the base on the mounting surface
- draw a mark in each hole to indicate the fixing points of screws and dowels
- using a 5 mm tip, drill the surface in the marked points
- insert the two supplied dowels in the holes

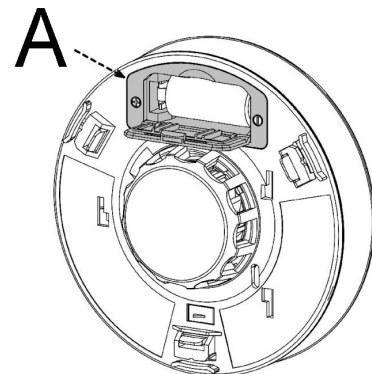
! *During drilling, keep the detector away from dust.*

- fix the base to the surface using the two supplied screws
- install the batteries (see paragraph 5.1 p. 3)
- align the base slits to the detector body
- position the detector body to the base and rotate it clockwise until fixing
- gently pull the detector body to ensure it remains fixed to the base

5 STARTING THE DEVICE

5.1 Power supply

While the detector body is separated from the base:



- A** Battery slot

- open the battery compartment door using a slotted screwdriver
- there is a vertical peg in the battery compartment: push it downwards positioning the battery on it

! The battery negative pole has to be aimed to the peg base.

– close the door

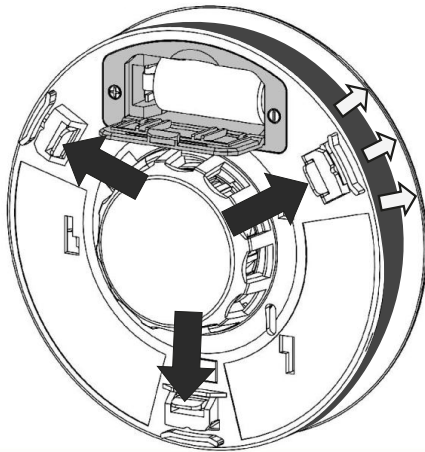
5.2 Device learning to NG-TRX control unit

Before starting learning procedure, remove the front cover (as illustrated in mounting procedure) to be able to access Learning button.

! Verify that the battery is charged otherwise the device will not be learnt.

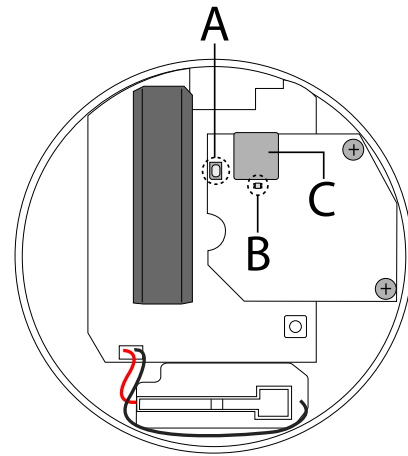
Device learning procedure:

- on control unit keypad, enter installer code followed by **OK** to go to setup menu
- use arrow keys ↑ or ↓ to go to LEARN RADIO DET. option
- press **OK**
- use arrow keys to go to the zone to which learn the device
- press **OK**
- press key 1 (saved to control unit)
- go to the detector
- remove the detector body from the base



- remove the detector outer cover: press one tab at a time and lift the cover on each of the three closing points

! Do not move the cover away from the detector body excessively, in order to avoid the buzzer wires detachment.



- A** Learning button
- B** NG-TRX section LED
- C** NG-TRX section buzzer

- keep learning button (A) on the detector pressed for 3 s
- in case of wrong learning procedure, the unit will not confirm the procedure, the detector will beep once to signal error and the red LED (B) of the NG-TRX section will remain OFF: restart the procedure
- in case of correct learning procedure, the unit and detector buzzers will beep twice and the red LED (B) of the NG-TRX section will switch on
- exit control unit setup menu; when required, press **OK** to save the setup
- fix the cover to the detector body
- fix the detector body to the base

The detector will automatically be learned as "24H" zone.
Note: the detector generates the "Fire alarm" or "Gas alarm" event depending on the performed detection (smoke or carbon monoxide, respectively).

5.3 Setup via BrowserOne

- The device can be set using BrowserOne 3.14.12 or above.
- load the latest module available for the control unit in use
- start control unit connection
- select **Connect to...** key to read control unit setup
- select the grid row corresponding to the zone used to learn the device
- select tab **Radio Devices NG-TRX**

Zones		Areas	Outputs	Users	Telephone Dialler	System Options
	Zone Name					NG-TRX
07	Zone 7					Yes
08	Zone 8					Yes
General		Assign Area/Sector	Radio Devices	Cable Devices	Radio Devices NG-TRX	

5.3.1 NG-TRX options

Detectors parameters common to all channels.
 For detailed information, please see programming manual of the control unit in use.

▼ Performance tuner

Adjust balance between consumption and power used for data transmission.

▼ Supervision interval

Set time intervals for control unit data transmission in order to check device presence and proper working.

▼ Delay supervision anomaly

If enabled, the anomaly caused by lack of supervision will be signalled with a delay equal to 6 times the supervision time.

▼ Tx Boost

Option increasing transmission range (by 10÷30%, effective increase); it may affect battery lifetime at the same time.

5.3.2 [detector name] detector options

▼ Automatic silencing of acoustic signals

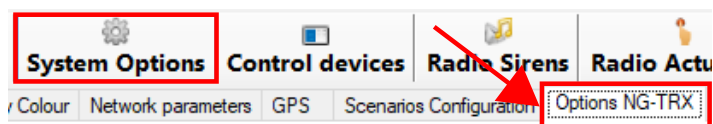
If not flagged, sound signalling will take place according to the indication stated in the table at paragraph 7.2 p. 6.

If flagged, any sound signal for alarm or fault will be automatically silenced after 50 s from its beginning. Then, a single beep tone will be played periodically (every 8 minutes for smoke alarm, 4 minutes for CO alarm, 12 hours for fault) until the alarm or fault condition ends.

5.3.3 Options for communication to control unit

To configure communication between NG-TRX devices and control unit:

- on BrowserOne main page, select **System Options**
- select tab **Options NG-TRX**



▼ Receiving multichannel

When active, the control unit receives on three channels simultaneously; when deactivated, the control unit receives on one channel only (preset/preferred). We recommend to keep it non active only if a channel has disturbances.

▼ Default channel


This is the channel used by the control unit to receive data in case of no interference (default: channel 1). In case of interference, the unit defines a channel (even different from the preset one) according to interference level and uses it for data reception.

▼ Supervision interval

It defines supervision time interval common to all system devices: such interval will be valid for all devices that has no specific interval selected (default).

Select **Enable detection RF interference** to allow the control unit to detect any interference on the three radio channels.


For further information about this option and other in this menu, please see programming manual of the control unit in use.

 *Once all changes have been done, write the new setup to the control unit. It will be sent to the device at the first valid transmission to the unit.*

6 E-CONNECT NOTIFICATIONS

If the device is learned to a control unit connected to e-Connect, it will be possible to receive notifications on your smartphone in case of smoke and/or CO detection.

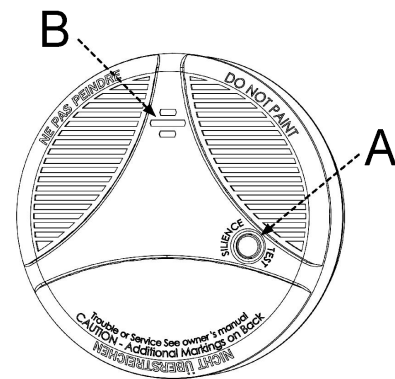
Notification activation must be configured by the installer:

- enter the e-Connect platform using an installer account
- open the **Settings** menu pertaining to the user by clicking on 
- click on **Events**
- check **Gas alarm** and/or **Fire alarm** boxes in column **Push to user**

7 OPERATING MODE

The detector detects and signals the presence of smoke and carbon monoxide.

7.1 Functions



- A** Test/silencing button
- B** Alarm sounder

Silencing

Press button A once to silence the alarm buzzer in case of fault or alarm.

Silencing is temporary and it lasts:

- in case of smoke alarm: 8 minutes;
- in case of CO alarm: 4 minutes;
- in case of fault: 1 hour.

Alarm simulation

Press button A twice within 3 s to simulate smoke alarm.

Buzzer NG-TRX will beep 3 times to confirm the simulation has been sent.

Press button A three times within 3 s to simulate CO alarm (for SMCOR2K only). Buzzer NG-TRX will beep 4 times to confirm the simulation has been sent.

3 s after alarm sending, the related idle state will be sent too.

Note: only alarm and reset sending capacity will be tested, not device functioning.

Threshold test

Long press button A to test smoke and CO thresholds of the detector's sensitive parts.

Keep button pressed until the alarm buzzer beeps three times for confirmation.

In case the test is not successful, the detector generates fault event.

7.2 Optical-acoustic indications

Condition	Indication
CO alarm (for SMCOR2K only)	4 beep tones + 4 blinks of the red LED every 5 s for the first 4 min; 4 beep tones + 4 blinks of the red LED every 60 s after the first 4 min. The indication is repeated until the CO event ends.
Smoke alarm	3 beep tones + 3 blinks of the red LED. The indication is repeated until the smoke event ends. Smoke alarm takes priority when both smoke and CO are present.
Discharged battery	1 beep tone + 1 blink of the yellow LED every 50 s. Replace the battery.
CO sensor failure (for SMCOR2K only)	1 beep tone + 2 blinks of the yellow LED every 50 s. Replace the CO sensor.
Smoke sensor failure	3 beep tones + 1 blink of the yellow LED every 50 s. Replace the smoke sensor.
Smoke sensor cleaning required	2 beep tones + 2 blinks of the yellow LED every 50 s. Perform smoke sensor cleaning or maintenance operations.
Low sensitivity notification	2 beep tones + 1 blink of the yellow LED every 50 s. Replace the smoke sensor.
Detector removal notification	2 long beep tones + 2 blinks of the yellow LED.
End of product life notification	1 beep tone + 4 blinks of the yellow LED every 50 s. Replace the detector.
The device is on	1 blink of the green LED every 50 s.

Note: all the indications shown in the above table are sent to the control unit as faults or specific events.

7.3 Smoke detection

The detection of smoke is signalled through:


- 3 blinks of the red LED
- 3 beep tones

What to do in case of smoke alarm

Never ignore the sound of the alarm.

Check for signs of fire or smoke throughout the residence.

If a fire is discovered, follow the indications listed below.

 *We suggest that you thoroughly familiarize yourself with these instructions and review them periodically with all your family members.*

- Alert all the people in the home, especially children.
- Leave the premises immediately using one of the pre-planned escape routes. Avoid getting dressed or losing time picking up valuables.
- Before opening inside doors, look for smoke seeping in around edges. If the door is hot, try to use another exit. If you feel it is safe, open the door very slowly but be prepared to close it should smoke rush in.
- If your escape route requires you to go through smoke, crawl low and under the smoke where the air is clearer.
- Go to the predetermined meeting place. When two people have arrived, one should leave to call the emergency services (for example, from a neighbor's home), the other should stay to perform a head count.
- Do not reenter the premises under any circumstances until the fire department gives you permission.

7.4 CO detection (for SMCOR2K only)

The detection of CO is signalled through:


- 4 blinks of the red LED
- 4 beep tones

What to do in case of CO alarm

Never ignore the sound of the alarm.

The presence of carbon monoxide can kill.

If CO presence is discovered, follow the indications listed below.

 *We suggest that you thoroughly familiarize yourself with these instructions and review them periodically with all your family members.*

- Press reset/silence button and immediately move to fresh air – outdoors or by an open door/window.
- Call the emergency services.
- Do a head count to check that nobody is missing. Do not reenter the premises nor move away from the open door/window until the emergency services responders have arrived and the premises have been aired out. Wait for the alarm to cease.
- If the alarm reactivates within a 24 hour period, repeat the


previous steps and call a qualified appliance technician to investigate for sources of CO. Once the source has been detected, immediately have maintenance performed to correct the problem. remove it and store it in a protective plastic bag.

7.5 Detector removal

The device signals the state of fault due to the removal of the detector body from the base via:

- 2 blinks of the yellow LED
- 2 long beep tones

The fault event is transmitted to the control unit.

 *Fault notification is inhibited for the first 5 minutes after powering or until the detector is fixed to the base for the first time.*

8 MAINTENANCE



8.1 Working test

Periodically perform a test of smoke/CO alarm event transmission and of the intervention thresholds as indicated in paragraph 7.1 p. 5.

Smoke test

For a more complete smoke test, proceed as follows:

- using a suitable test kit (for example, the SOLO kit), let the smoke enter into the optical chamber for at least 10 s
- upon alarm event, check smoke alarm detection
- wait until the chamber is free from smoke and the zone goes back to idle mode

Carbon monoxide test (for SMCOR2K only)

For a more complete CO test, proceed as follows:

- using a suitable test kit (for example, the SOLO kit), let the gas enter into the electrochemical cell for at least 30 s
- upon alarm event, check CO alarm detection
- wait until the cell is clean and the zone goes back to idle mode

8.2 External detector cleaning

Remove the detector body from the base and vacuum the detector cover and vents with a soft brush attachment to remove dust and dirt.

Reinstall the detector body on the base immediately after cleaning and then test it.

Do not disassemble parts assembled by the manufacturer.

Do not open or tamper with sealed parts.

 *Disassembling the detector will invalidate the warranty.*

Do not use cleansers.

Do not paint the detector.

Before carrying out any work where a detector is installed,

EU DECLARATION OF CONFORMITY

Hereby, EL.MO. Spa declares that the radio equipment SMCOR2K / SMR2K 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.elmospa.com – registration is quick and easy.



GENERAL WARNINGS



This device has been designed, built and tested with the utmost care and attention, adopting test and inspection procedures in compliance with current legislation. Full compliance of the working specifications is only achieved in the event the device is used solely for its intended purpose, namely:

NG-TRX wireless smoke/combined detectors for residential applications

The device is not intended for any use other than the above and hence its correct functioning in such cases cannot be assured. Consequently, any use of the manual in your possession for any purpose other than those for which it was compiled - namely for the purpose of explaining the product's technical features and operating procedures - is strictly prohibited.

Production processes are closely monitored in order to prevent faults and malfunctions. However, the components adopted are subject to an extremely modest percentage of faults, which is nonetheless the case with any electronic or mechanical product.

Given the intended use of this item (protection of property and people), we invite you to adapt the level of protection offered by the system to suit the actual situation of risk (allowing for the possibility of impaired system operation due to faults or other problems), while reminding you that there are specific standards for the design and production of systems intended for this kind of application.

We hereby advise you (the system's operator) to see that the system receives regular routine maintenance, at least in accordance with the provisions of current legislation, and also check on as regular a basis as the risk involved requires that the system in question is operating properly, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. You must let the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.

Work involved in the design, installation and maintenance of systems incorporating this product should be performed only by personnel with suitable skills and knowledge required to work safely so as to prevent any accidents. It is vital that systems be installed in accordance with current legislation. The internal parts of certain equipment are connected to the mains and therefore there is a risk of electrocution when maintenance work is performed inside without first disconnecting the primary and emergency power supplies. Certain products include batteries, rechargeable or otherwise, as an emergency backup power supply.

If connected incorrectly, they may cause damage to the product or property, and may endanger the operator (explosion and fire).

INSTALLER WARNINGS



Comply strictly with current standards governing the installation of electrical systems and security systems, and with the manufacturer's directions given in the manuals supplied with the products.

Provide the user with full information on using the system installed and on its limitations, pointing out that there are different levels of security performance that will need to suit the user's requirements within the constraints of the specific applicable standards. See that the user looks through the warnings given herein.

Work involved in the design, installation and maintenance of systems incorporating this product should be performed only by personnel with suitable skills and knowledge required to work safely so as to prevent any accidents. It is vital that systems be installed in accordance with current legislation. The internal parts of certain equipment are connected to the mains and therefore there is a risk of electrocution when maintenance work is performed inside without first disconnecting the primary and emergency power supplies. Certain products include batteries, rechargeable or otherwise, as an emergency backup power supply. If connected incorrectly, they may cause damage to the product or property, and may endanger the operator (explosion and fire).

USER WARNINGS



Check the system's operation thoroughly at regular intervals, making sure the equipment can be armed and disarmed properly.

Make sure the system receives proper routine maintenance, employing the services of specialist personnel who meet the requirements prescribed by current regulations.

Ask your installer to check that the system suits changing operating conditions (e.g. changes in the extent of the areas to be protected, change in access methods, etc...)

MAIN SAFETY RULES

The use of the device is forbidden for children and unassisted disabled individuals.

Do not touch the device when bare footed, or with wet body parts. Do not directly spray or throw water on the device.

Do not pull, remove or twist the electric cables protruding from the device even if the same is disconnected from the power source.

DISPOSAL WARNINGS



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In accordance with Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), please be advised that the EEE was placed on the market after 13 August 2005 and must be disposed of separately from normal household waste.

This product needs batteries for correct functioning. Exhausted batteries have to be delivered to dumping grounds authorized for battery collection. The materials used for this product are very harmful and polluting if dispersed in the environment.