



USER MANUAL

GSM SMOKE&CO ALARM SYSTEM

V1.4

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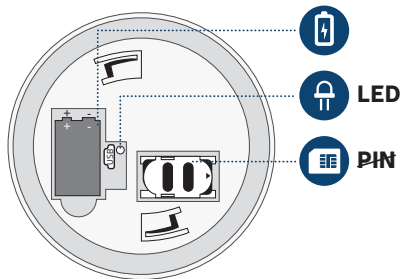
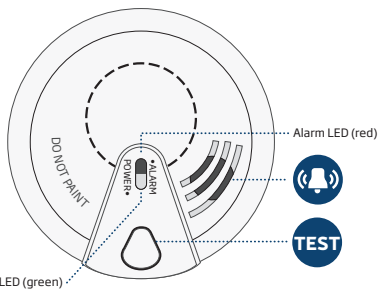
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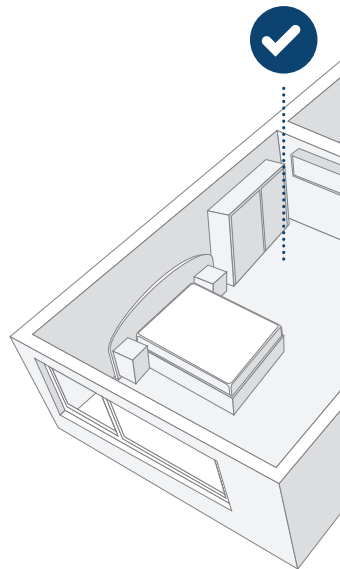
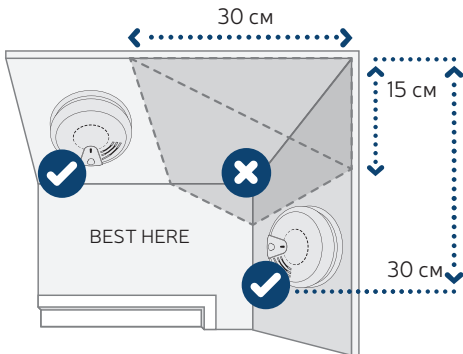
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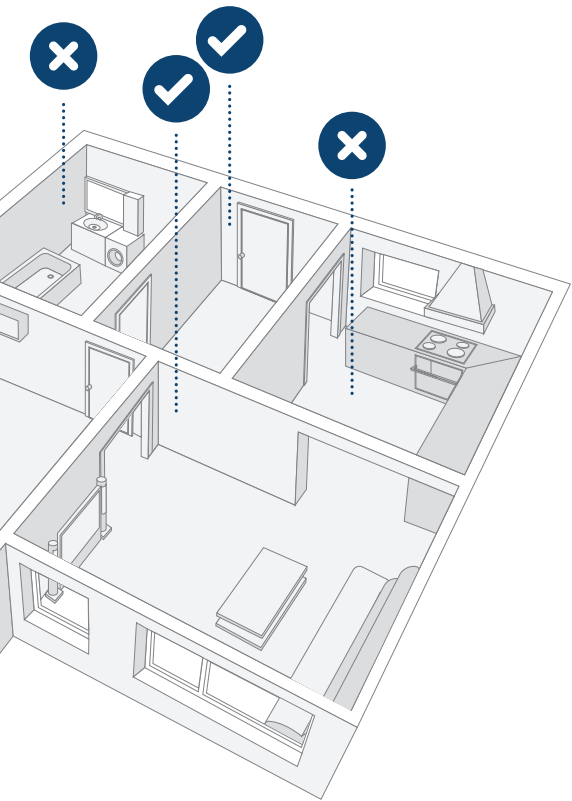


EN Disable PIN code request by inserting the SIM card into your mobile phone and following the appropriate menu steps

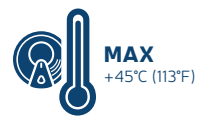
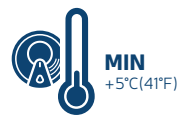
FUMEREX is a certified standalone GSM smoke&CO alarm system.
In case of smoke detection or carbon monoxide level increase, it
will send text SMS to the Central Monitoring Station (CMS).

WHERE TO INSTALL



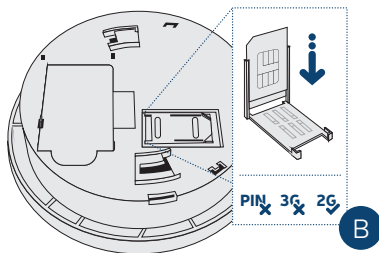
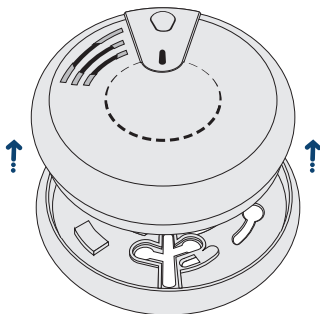
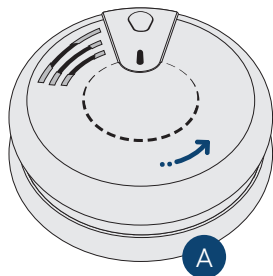


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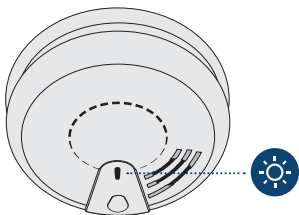
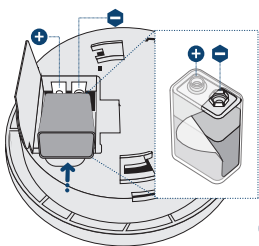
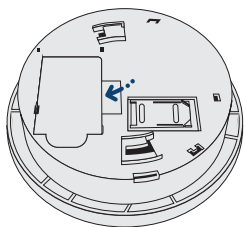


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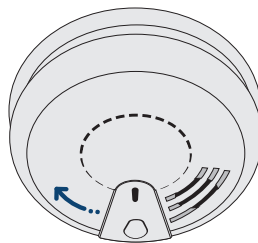
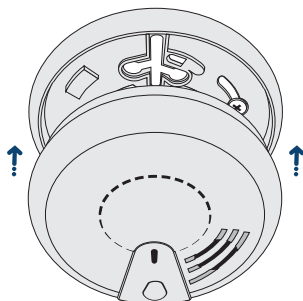
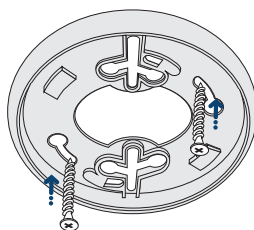
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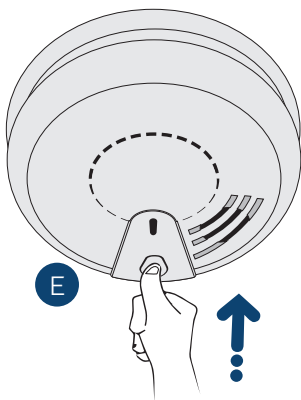


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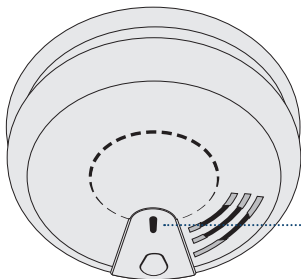


POWER LED (GREEN) LIGHTS UP
(FOR 5 SEC.), INDICATING THAT
THE BATTERY IS OK.





AFTER THE BATTERY IS INSERTED, WAIT AT LEAST FOR 3 MIN. AND ONLY THEN PRESS AND HOLD THE TEST BUTTON FOR **2 SEC.**



WAIT UNTIL **POWER LED (GREEN) LIGHTS UP** (FOR 5 SEC.), INDICATING THAT THE BATTERY IS OK.

WHAT I SHOULD KNOW



CARBON MONOXIDE (CO) POISONING

Carbon monoxide is a product of incomplete combustion of organic matter. It is a toxic gas, but, being colorless, odorless, tasteless, and initially non-irritating, it is very difficult for people to detect.

| CONCENTRATION | SYMPTOMS |
|-------------------|---|
| 35 ppm (0.0035%) | Headache and dizziness within six to eight hours of constant exposure |
| 100 ppm (0.01%) | Slight headache in two to three hours |
| 200 ppm (0.02%) | Slight headache within two to three hours; loss of judgment |
| 400 ppm (0.04%) | Frontal headache within one to two hours |
| 800 ppm (0.08%) | Dizziness, nausea, and convulsions within 45 min; insensible within 2 hours |
| 1,600 ppm (0.16%) | Headache, increased heart rate, dizziness, and nausea within 20 min; death in less than 2 hours |

ppm - Parts Per Million - is used to describe concentrations of contaminants in air.

If your unit is in CO critical concentration level ALARM, keep calm and carry out the following actions in the priority order:

- Open all windows and doors to increase the rate of ventilation
- Turn off the fuel-burning appliances where possible
- Evacuate the building, leaving the windows and doors open and re-enter the property only when the alarm has stopped
- Get immediate medical assistance for anyone suffering the effects of carbon monoxide poisoning (nausea, headache), and report that carbon monoxide inhalation is suspected
- Contact the gas or other fuel supplier on their emergency phone number in order to identify and eliminate the source of carbon monoxide emissions
- Do not use the fuel-burning appliance again until it has been verified and confirmed by a competent person according to national regulations



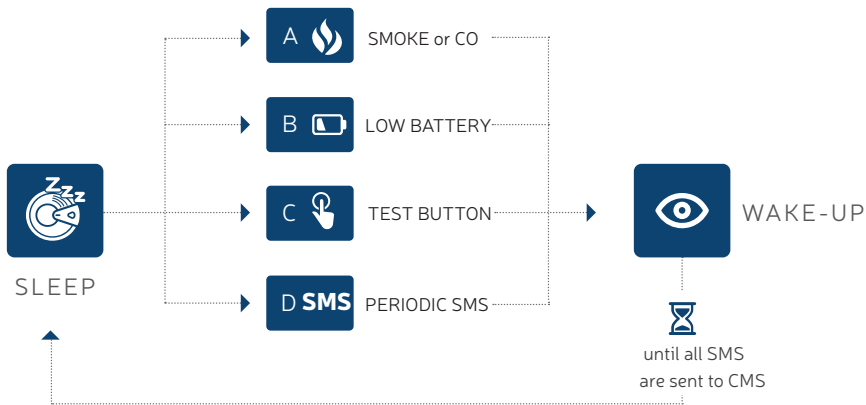
There could be other sources of carbon monoxide emissions. For example large amount of city gas, tobacco smoke or smoldering fire can cause CO concentration ALARM.



Clean the outside case of system occasionally with a clean tissue to ensure that the holes of the unit are not blocked with dirt or dust.

Some household substances can affect the sensitivity of the detectors in a short or long term. Avoid the use of model paint, model glue or nail polish remover close to the alarm. Do not use aerosol sprays, household cleaners, polishes or perfumes close to the system.

HOW FUMEREX WORKS: SLEEP AND WAKE-UP MODES



The system can operate in one of the following modes at a time:



Sleep – The micro-controller and the GSM modem are disabled. This mode is used most of the system's uptime to significantly extend battery life. The system starts up in Wake-up mode.



Wake-Up – The micro-controller and the GSM modem are active and the system is ready to send SMS text messages to Monitoring Station (CMS). The system will switch to Wake-up mode if any of following events occurs:



Smoke or CO has been detected (see **ALARM NOTIFICATION**)



Low battery level has been reached (see **BATTERY STATUS SUPERVISION**)



TEST button has been pressed (see **AUTOMATIC TEST PROCEDURE**)



Automatic periodic SMS has been sent

By default, the system remains in Wake-Up mode **until all SMS are sent to CMS**.



HOW FUMEREX WORKS: ALARM NOTIFICATION

In the event of smoke/CO detection, the system will cause an alarm and notify Monitoring Station (CMS) by SMS text message.

In the event of alarm, the system will follow this pattern:

- The system switches to Wake-Up mode (see **SLEEP AND WAKE-UP MODES**).
- The system attempts to send an SMS text message regarding alarm event to all listed CMS phone numbers simultaneously.
- The system auto-resets the smoke or CO detector when the smoke/CO clears. The system will not extend the Wake-Up mode period nor deliver any extra SMS text message in case of alarm recurrence while the Wake-Up mode period is in progress.
- The system may fail to deliver the SMS text message to CMS phone number in case when the system is out of GSM signal coverage.
- The system sends SMS text message to CMS; in case of unsuccessful attempt, the system remains in Wake-Up mode until the SMS text message has been sent to CMS.

CO related SMS text messages and system indications*:

- **CO critical level 1** – when CO concentration 30-49 ppm remains for more than 120 minutes. This level causes no audible alarm. The event is delivered to the CMS.
 - **CO critical level 2** – when CO concentration 50-99 ppm remains for more than 60 minutes. Indicated by a 2-second beep every 5 seconds and red indicator flash. The event is indicated by a warning delivery to the CMS.
 - **CO critical level 3** – when CO concentration 100-299 ppm remains for more than 10 minutes. Indicated by a 2-second beep every 5 seconds and red indicator flash. The event is indicated by a warning delivery to the CMS.
 - **CO critical level 4** – when CO concentration 300 ppm and more are reached. Indicated by a 2-second beep every 5 seconds and red indicator flash. The event is indicated by a warning delivery to the CMS.
 - **Fresh air** – when CO level decreases from any critical level to 0-29 ppm. This level causes no audible alarm. The event is delivered to the CMS.
 - **CO sensor ERROR** – delivered in case of any technical issue that has occurred (for eg., if CO sensor has failed). The event is delivered to the CMS. **CO sensor lifetime is 7 years.**
- * - **all SMS text messages** are sent to the Central Monitoring Station (CMS) in ADEMCO CONTACT ID protocol (via TCP/IP or Serial port).



HOW FUMEREX WORKS: BATTERY STATUS SUPERVISION

The system supports battery energy supervision feature, allowing to notify the Monitoring Station (CMS) by SMS text message when a low battery level is reached. The system measures the battery level every 60 minutes and in case the battery level is below 5% after two checks in a row, the system will notify the CMS regarding this issue.

In the event of low battery, the system will follow this pattern:

- The system switches to Wake-Up mode (see **SLEEP AND WAKE-UP MODES**).
- The system attempts to send an SMS text message regarding low battery event to all listed CMS phone numbers simultaneously.
- The system may fail to deliver the SMS text message to CMS phone number in case when the system is out of GSM signal coverage.
- In case of unsuccessful attempt, the system remains in Wake-Up mode until the SMS text message has been sent to CMS.

LOW BATTERY WARNING

In the event of low battery, the audio buzzer "chirps" once every 40 seconds. The Alarm LED indicator (red) on the front panel also blinks simultaneously with the audio signal. This warning should last for up to 30 days, but you should **replace the batteries as soon as possible**.



HOW FUMEREX WORKS: AUTOMATIC TEST PROCEDURE

The TEST button intended for verification if the unit is operational as well as to switch it to Wake-Up mode and send an informational SMS text message to CMS, identified as the Test SMS, which provides the following:

- GSM signal strength
- Sensors tests result
- Battery level
- Temperature

Your detectors are automatically tested once in 2 weeks and the periodic SMS is delivered to CMS, so no additional manual testing is required (unless you want to make sure the device is OK). DO NOT use an open flame to test the system. You may ignite and damage the unit or your home.

In the event of test, the system will follow this pattern:

- The system switches to Wake-Up mode (see **SLEEP AND WAKE-UP MODES**).
- The system is successfully registered with the GSM network.
- The system attempts to send an SMS text message regarding test event to all listed CMS phone numbers simultaneously.
- The system may fail to deliver the SMS text message to CMS phone number in case when the system is out of GSM signal coverage.
- The system sends SMS text message to CMS; in case of unsuccessful attempt, the system remains in Wake-Up mode until the SMS text message has been sent to CMS.

SUPPORT



Meanings of Alarm LED (red) and Power LED (green) indicators on the front panel

| STATE | ALARM LED (RED) | POWER LED (GREEN) | MEANING |
|------------------------------------|--|---|---|
| During the smoke alarm | Regular short blinks (4 times per second) | N/A | The smoke alarm indication |
| During CO alarm | Flashes every 5 seconds | N/A | The CO alarm indication |
| While you hold TEST button pressed | Regular short blinks (for ~2 seconds) | Lights up and remains on for 5 seconds | Imitating the smoke alarm indication |
| After battery replacement | N/A | Lights up and remains on for 5 seconds (if the battery is good) | Indicates that the battery is good (positioned correctly) |
| Normal operation | Regular short blinks (once every 40 seconds) | Short blink (1 time per minute) | Device operates correctly |
| Battery low | Regular short blinks (simultaneous with the buzzer's audio signal) | N/A | Indicates that the battery is low and has to be replaced |

Troubleshooting

| INDICATION | POSSIBLE REASON | ACTION |
|---|--|--|
| Sometimes I can hear quiet beeps when I press TEST button | <ul style="list-style-type: none"> Connecting to GSM network. It may occur with some networks depending on the conditions | Please ignore this indication if the GSM network signal strength in your area is sufficient for SMS text message delivery |
| Siren does not sound when I press TEST button or in case of alarm | <ul style="list-style-type: none"> Low battery power Micro-controller fault | Please replace the battery. If this action does not solve the issue, please contact your local supplier for warranty repair service. |

If your problem could not be fixed by the self-guide above, please contact your local support.

Updating the Firmware via USB Cable

It is possible to update the firmware via USB (if necessary, please contact your local support for more information).

Battery replacement

1. Turn FUMEREX counter-clockwise to detach it from the mounting plate.
2. Gently pull the device down.
3. Remove the old battery from the battery pocket.
4. **Press TEST button** to fully discharge device's internal electrical capacities.
5. Position the new battery into the battery slot based on the positive/negative terminals indicated on the enclosure of FUMEREX. **If the battery is good**, then the Power LED indicator (green) will light up and remain on for 5 seconds.
6. Ensure the plastic battery holder is fully pressed when the battery has been fitted.
7. Re-attach FUMEREX to the mounting plate by turning the device clockwise until it snaps into place.
8. After the battery is inserted, wait at least for 3 min. and only then press and hold the test button for 2 sec. to check if is operational.



We strongly recommend using EVE CR9V-P, Ultralife U9 VL-J 6F22 or Varta Ultra Lithium 9V battery.

6. ELECTRICAL AND MECHANICAL CHARACTERISTICS

| | |
|--|--|
| Batteries | Primary 9V Lithium 1200mAh ANSI/NEDA 1604LC (recommended batteries are EVE CR9V-P, Ultralife U9 VL-J 6F22 or Varta Ultra Lithium 9V) |
| Number of batteries | 1 |
| Current consumption in standby mode | 15µA max |
| Peak current consumption in wake-up mode | 350mA max |
| GSM modem frequency | 850/900 MHz |
| Battery operation time | 30 months* |
| Smoke detection type | Photoelectric chamber |
| Carbon monoxide detector type | Electrochemical |
| Sensitivity to smoke | 3.0-6.0 % O bs/m |
| Carbon monoxide concentration detection | 0... 400 PPM |
| Alarm sound level | 85dB at 3m (85dB at 9.84ft) |
| Range of operating temperatures..... | +5... +45°C (41... 113°F) |
| Humidity | 0-90% RH @ 0... +40°C (0-90% RH @ 32... 104°F) (non-condensing) |
| Smoke detector lifetime..... | 10 years |
| Carbon monoxide detector lifetime..... | 7 years |
| Dimensions | 110mm Ø (4.33in) |

* The specified operation time applies in case of no alarms and when the system is automatically tested once in 2 weeks. The operation time might vary in different conditions.



WARNINGS:

Installation of the apparatus should not be used as a substitute for proper installation, use and maintenance of fuel burning appliances including appropriate ventilation and exhaust systems. System installation and any repairs must be done only by fully qualified, safety aware personnel. Never attempt to open or damage the system.

Limited Liability

The buyer agrees that the system will reduce the risk of fire, or other danger but that it does not guarantee against the occurrence of such events. "ELDES", JSC will not take any responsibility for the loss of personal effects, property or revenue whilst using the system. The liability of "ELDES", JSC is limited to the value of the system purchased. "ELDES", JSC is not affiliated with any mobile/wireless/cellular provider and is therefore not responsible for the quality of such services.

Manufacturer Warranty

"ELDES", JSC warrants this system only to the original purchaser and only in case of defective workmanship and materials under normal use of the system for a period of twenty four (24) months from the date of shipment by the "ELDES", JSC. Warranty obligations do not cover expandable materials (components, which require periodic replacement with the operation of system - power elements (batteries), holders and enclosures). The warranty remains valid only if the system is used as intended, following all guidelines outlined in this manual and in accordance with the operating conditions specified. The warranty is void if the system has been exposed to mechanical impact, chemicals, high humidity, fluids, corrosive and hazardous environments or force majeure factors.

SAFETY INSTRUCTIONS

GSM smoke&CO alarm system FUMEREX is equipped with a radio transceiver operating in GSM 850/900 bands. Please read and follow these safety guidelines in order to maintain safety of operators and people around:

- DO NOT use the system where it can cause potential danger and interfere with other systems – such as medical systems.
- DO NOT use the system in hazardous environment.
- DO NOT expose the system to high humidity, chemical environment or mechanical impact.



"ELDES", JSC is not a guard institution. In case of fire or other potential danger do not overestimate your abilities to protect your household. Contact your emergency services first if personal alarm was caused by potential danger.

FUMEREX is a system that must be installed in limited access areas. Remove all batteries before installing.

The system must be powered by a Primary 9V Lithium 1200mAh battery only. When inserting the battery into the battery slots, mind the polarity terminals! Any additional appliance that you connect to the system, such as a computer, must be powered by an EN 60950-1 approved supply.

To switch the system off, remove the battery.

If you use a computer for the FUMEREX firmware update, it must be earthed.



Disposal and recycling information

The WEEE (Waste Electrical and Electronic Equipment) symbol on this product (see left) means it must not be disposed of in household waste. To prevent possible harm to human health and/or the environment, you must dispose of this product in an approved and environmentally safe recycling facility. For further information contact your system supplier, or your local waste authority.

CE 1383 RoHS

CE 16
1438-CPR-0455
EN 14604:2005+AC:2008

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GSM smoke&CO alarm system
FUMEREX



CE 1383 CE ¹⁶
1438-CPR-0455
EN 14604:2005+AC:2008