Natural Gas Detector ML-310

User's Manual

This gas detector detects methane gas.

When gas is detected, an alarm (flashing of red LED, sounding of warning alarm) will be activated.

Read, understand and retain this manual for future reference.

Safety Precautions

Read these precautions before using the product and be sure to follow these precautions in order to prevent hazardous situations and property damage.

Precautions are classified with the following symbols according to the severity of the hazards and damage that may arise due to incorrect handling of this product.

⚠️ DANGER

This indicates details for which incorrect handling of the product is expected to lead to situations having an imminent chance of hazards leading to death or serious injury.

⚠️ WARNING

This indicates details for which incorrect handling of the product is expected to lead to situations having a chance of hazards leading to death or serious injury.

⚠️ CAUTION

This indicates details for which incorrect handling of the product is expected to lead to situations having a chance of injury or property damage.

⚠️ DANGER

Make sure that the following are observed when a gas alarm sounds. There may be a risk of explosion.

Leave the building immediately, opening doors and windows as you leave. Take others with you. If you are outside when you smell the gas, leave the area immediately.

Avoid causing a spark, which might cause the gas to explode.

1. Do not remove the connector from the lithium battery.
2. Do not light a match or smoke.
3. Do not turn appliances or lights on or off.
4. Do not use a flashlight.
5. Do not start a car.
6. Do not use a telephone.

Find a phone away from the area and immediately call 911 and/or your natural gas utility. You can report leaks anonymously. Always call to report the problem. Do not assume someone else will do it.

Do not re-enter the area until the source of the leak is found and corrected. Follow directions from utility employees or emergency responders who are on site.

⚠️ WARNING

This gas detector is equipped with an End Of LIfe timer that will expire after 5 years from date of installation. Replace any gas detectors for which 5 years has passed since their installation with a new gas detector.

Do not subject the gas detector to water either by submerging it in water or spraying water on it.

Do not disassemble or modify this product.

Do not subject this product to any impact.

Gas Detector Functions

Visual and audible signals will not stop until the product is reset by removing and reinstalling the battery.

- When a gas leak occurs
  - An alarm sounds when the level of gas in the area of the gas detector reaches or exceeds a certain concentration.

  - An alarm sounds every 6 seconds stating "Beep Beep Beep Beep Detector error".
  - By pressing the switch for 3 seconds, an alarm will sound stating "Beep Beep Detector error".

- When trouble occurs
  - When trouble occurs, a trouble alarm sounds.

  - An alarm sounds every 60 seconds stating "Beep Beep Detector error".
  - By pressing the switch for 3 seconds, an alarm will sound stating "Beep Beep Detector error".

Names and Functions of Parts

- Green LED (power)
  - This LED flashes when the test switch is pressed.

- Test switch
  - Used to test power, alarm sounds.

- Production serial number label
  - Serial No.: 1807-12345
  - Date of manufacture: 08/12/2024

- Alarm speaker
  - Sounds an alarm when gas leakage, gas detector trouble, or low battery is detected.

- Red LED (alarm)
  - This LED flashes when gas is detected.

- Yellow LED (trouble)
  - This LED flashes when trouble occurs, when the battery is low, or when the end of service life has been reached.

- Gas detection unit
  - Detects a gas leak.

- Battery cover (transparent)
  - Open to replace a battery.

Red LED (alarm)
- Flashes once every 2 seconds

Yellow LED (trouble)
- Flashes once every 10 seconds

Useage Instructions

1. Open the battery cover on the back of the gas detector.
2. Connect the included lithium battery by inserting the battery harness connector into the product as shown in the attached illustration.
3. Once the lithium battery is connected, the gas detector’s green LED (power) will flash once for 1 second.
4. Insert the lithium battery and close the cover.
5. After the battery is plugged in, the detector will enter an initialization period for approximately 30 seconds. A "Beep" will sound after this 30 second period and the detector will begin monitoring.
   - The device status will be confirmed during this 30 second period.
   - A "Beep" sounds 30 seconds after power is turned on.

General Maintenance

This detector has been designed to be as maintenance-free as possible, but there are a few simple things you must do to keep it working properly.

- Test it at least once a week.
- Clean the detector at least once a month; gently vacuum the outside of the detector using your household vacuum’s soft brush attachment. Test the alarm. Never use water, cleaners or solvents since they may damage the unit.
- Replace the unit if it sounds frequent unwanted alarms. See “Where This Alarm Should Not Be Installed” for details.
- If product enters low battery mode, the batteries must be replaced. Batteries in this device are not available in retail. Please call NEW COSMOS ELECTRIC CO., LTD for replacement batteries.

In order to replace the battery, open the battery cover on the back of the product and gently disconnect the battery harness connector from the product. Follow the Usage Instructions section to install the new battery.

Green LED (power)
- Flashes once every second during the 30 second initialization period.
Test Functions

- **Power check function**
  A “Bleep” sound when the switch is pushed. If the switch is then released in less than 3 seconds, the green LED will flash twice every second (for 3 seconds) to indicate that the power is on.

- **Alarm push button function**
  If the switch is pressed for approximately 3 seconds, both a “Bleep” and a “Bleep Bleep” will sound. If the switch is then released in less than 10 seconds, the red LED will flash once every 2 seconds and the gas alarm “Bleep Bleep Bleep Bleep Danger – gas leak explosion risk – evacuate, then call 911.” will sound twice.

- **Green LED (power)**
  Flashes twice every second (for 3 seconds)

- **Red LED (alarm)**
  Flashes once every 2 seconds

How to Install

Gas detectors should be installed in all rooms where a gas leak may occur or gas appliances is located. Examples are a kitchen (gas leaks from gas ovens and cook tops), laundry (gas leaks from a gas clothes dryer), and furnace area (gas leaks from furnace burners or boilers). However, do not install closer than 10 feet (3 meters) from gas appliance. It is possible that gas leaks may migrate along pipes so consideration should be given to place gas detectors in multiple rooms. Gas detectors should be located between 6 to 12 inches (0.15 to 0.3 meters) from the ceiling. Air movement around the detector must not be impeded by items hanging from the ceiling or near the ceiling such as curtains, drapes, ceiling fans. The detector should not be installed in the peak of a cathedral ceiling.

Wall Mounting

Tools you will need:
- Drill with 3/16” or 5mm drill bit
- Phillips head screwdriver
- Hammer
- Screwdriver

1. **Choose a location on the wall between 6 inches (0.15 meters) to 12 inches (0.3 meters) from the ceiling.** Make a mark in the Mounting Tab of the detector where you will drill the mounting hole.
2. **Use a 3/16” or 5mm drill bit to drill the mounting hole.**
3. **Insert the plastic screw anchor into the mounting hole until it is flush with the wall.** If necessary, tap it gently with a hammer.
4. **Tighten the screw into the anchor until the screwhead is about 3/16 inch (5 mm) away from the wall, leaving enough space for the Mounting Tab.
5. **Hang the Mounting Tab on the screw.**

Troubleshooting

<table>
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<tr>
<th>Symptom</th>
<th>Possible Causes</th>
<th>Solution</th>
</tr>
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<tr>
<td>Yellow LED flashing</td>
<td>3 flashes every 10 seconds</td>
<td>Replace the gas detector.</td>
</tr>
<tr>
<td>Battery is low</td>
<td>Battery connector not plugged</td>
<td>Plug in the battery connector.</td>
</tr>
<tr>
<td>Yellow LED flashing</td>
<td>2 flashes every 10 seconds</td>
<td>Replace the gas detector.</td>
</tr>
<tr>
<td>Yellow LED flashing</td>
<td>1 flash every 10 seconds</td>
<td>Replace the gas detector.</td>
</tr>
<tr>
<td>Low battery</td>
<td>Battery connector not plugged</td>
<td>Plug in the battery connector.</td>
</tr>
<tr>
<td>End of service life</td>
<td>Gas detector service life</td>
<td>Replace the gas detector.</td>
</tr>
<tr>
<td>End of service life</td>
<td>Gas detector service life</td>
<td>Replace the gas detector.</td>
</tr>
</tbody>
</table>

Disposal

When disposing of this product, do so in accordance with local laws and regulations. Also, remove the lithium battery when disposing.

WARNING

- Wrap the removed lithium battery with tape, etc., so that the connector portion does not show.
- A short may cause heat generation, an explosion, or ignition to occur.
- Any of these may result in injury or fire.

Specifications

- Confirming standards: UL standard (UL1484), FCC certified
- Detection principle: MEMS hot wire semiconductor sensor
- Target gas: Methane gas
- Gas immunity*: Acetone, ethanol, bleach solution
- Operating temperature range: 32°F (0°C) to 122°F (50°C)
- Operating humidity range: 5% to 95%, no condensation
- Power supply: CR1/3NO3R-2CR-CN DC3V, 200mA (dedicated connector connection)
- Battery warranty: 5 years
- Alarm level: 91 dB (A)
- Response time: 120 sec. (35% LEV)
- Sound pressure: Gas alarm: 85 dB(A)/10 feet
- Initial/power-up time: Approx. 30 seconds (green LED flashes once every second)
- Power indicator: A “Bleep” will sound once when the switch is pressed for less than 3 seconds and the green LED will flash twice every second (for 3 seconds)
- Gas alarm: “Bleep Bleep Bleep Bleep Danger – gas leak explosion risk – evacuate, then call 911!” every 6 seconds.
- Alarm will continue as described for 4 minutes. After 4 minutes, Alarm sound will produce 1kHz tone and LED will blink as described during sound.
- Troubleshooting: Yellow LED flashes 3 times every 10 seconds. Trouble alarm sounds “Bleep Bleep Bleep Detecto- error every 60 seconds.
- Low battery: Yellow LED flashes once every 10 seconds. Low battery sound “Bleep Bleep Low battery” every 60 seconds.
- End of service life: Yellow LED flashes twice every 10 seconds. End of service life sound “Bleep Bleep Please replace detector” every 60 seconds.
- Battery removal indicator: The battery removal indicator will consist of a transparent battery cover that when a battery is not present exposes a warning flag label with the following markings: WARNING NO BATTERY. Alarm is non-operational.
- Weight and dimensions: Approx. 130 g. W 85 x H 100 x D 22 mm (excluding protrusions)
- Installation: Pipe mount by cable ties or wall mount with hardware.
- Accessories: User’s Manual (this manual)
- FCC Compliance: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Contact Details

NEW COSMOS ELECTRIC CO., LTD.
Overseas Business Department
Hamamatsucho 262 Bldg.,2-2-2 Hamamatsu-cho,
Minato-ku, Tokyo 105-0013 JAPAN
email: e-info@new-cosmos.co.jp
WEB: https://www.newcosmos-global.com/
Quick Start Guide

1. Open the battery cover on the back of the detector and connect the battery by inserting the battery harness connector into the product. Insert the battery into the battery compartment and close the cover.

2. Choose a location on the wall between 6' (1.8 meters) to 12' (3.6 meters) from the ceiling where you will mount your detector. Use a 3/16" (5 mm) drill bit to drill a mounting hole and insert the plastic screw anchor. Temporarily tighten the screw into the anchor until the screw head is about 3/16" (5 mm) away from the wall.

3. Hang the Mounting Tab of the detector to the screw and lightly tighten the screw to secure the detector. Press and hold the Test Switch for more than 3 seconds to test the alarm.

Refer to User’s Manual for additional information and instructions.

Guía de inicio rápido

1. Abra la tapa de la batería en la parte posterior del detector y conecte la batería insertando el conector del mazo de cables de la batería en el producto. Inserte la batería en el compartimento de la batería y cierre la tapa.

2. Elija una ubicación en la pared entre 0,15 y 0,3 metros desde el techo donde se procederá a montar el detector. Use una broca de 8 mm para taladrar un orificio de montaje e inserte el anclaje plástico para tornillos. Apriete temporalmente el tornillo en el anclaje hasta que la cabeza del tornillo esté a unos 5 mm de la pared.

3. Enganche la pestaña de montaje del detector en el tornillo y apriete ligeramente el tornillo para asegurar el detector. Mantenga presionado el interruptor de prueba durante más de 3 segundos para probar la alarma.

Consulte el Manual del usuario para obtener información e instrucciones adicionales.