



GAS LEAK ALARM: Model: GLA-03

USER MANUAL: Version 2018-02 UK

WARNING

Never use combustible gas concentration for testing!



Read the full version of the manual before using the product.
Check for updates and corrections on our website.
Save this user manual for later use.



Check our website for offers on exchange and change of batteries.
Do not throw the product into the household waste.
Deliver electronics products and plastic for recycling.

RoHS

The product is manufactured according to the RoHS directive.
The directive restricts using lead and hazardous substances.



ABS



PVC

The alarm is made of ABS
The packing is made of PVC



This product is designed to comply with the EN50194 standard.
The standard describe all requirements and testing for this product.

Norwegian product made by iSens AS - www.iSens.no

1. WARRANTY

iSens only want satisfied customers. GLA is therefore delivered with a one year warranty from the date of purchase. GLA is designed to have the same lifetime as the energy source, but may also have a reduced lifetime, dependent on the external environment, use, alarm etc. A single alarm may completely drain the energy source. See technical data. This product is therefore a consumable item for one time use, and not an electric household apparatus with several years warranty.

The warranty applies only to material and malfunction related to the production, and only if the product has been used and maintained properly. The guarantee applies only if the product has not been opened, attempted to open or repaired. The guarantee does not apply in case of visible/measurable damages or empty batteries. When using the warranty, GLA must be delivered to the dealer in original packing together with the original receipt. iSens's responsibility is limited to repair the product. iSens may alternatively replace it with the same or newer model, or refund the original sales price.

iSens is not responsible to cover any damages or loss that may occur if GLA is not working. iSens is not responsible for any loss or damages to persons, material or otherwise resulting from gas leakage, fire and explosion. iSens responsibility is limited to the product's purchase value. GLA does by no means replace or meet recommended or required safety measures for gas leakage, fire and explosion in accordance with applicable laws and regulations. GLA is not approved as a mandatory fire/smoke alarm. GLA do not meet or replace any kind of insurance. Read also about automatic calibration in technical data. GLA only provides an additional voluntary contribution to increased security.

If the buyer disagrees with these warranty terms, GLA must be returned before use in original packing, immediately and at the latest within the return deadline, which is usually 14 days for e-commerce.

2. DESCRIPTION

GLA is a Norwegian patent protected product for detection of heavy combustible gases such as propane and butane, as well as, and hence carbon monoxide CO from combustions indirectly. GLA is ideal for all places where gas is used; home, cabin, camping, boat etc. The sensor also alerts if the level of increases from i.e. open fire, grill, heater, exhaust leakage. GLA will notify first with a red LED and then a pulsed acoustic alarm. GLA cannot be used to detect light combustible gases such as natural gas and methane. GLA is not approved as a mandatory fire/smoke alarm.

Gas leakage can come from gas installations, stove, heater and other apparatus. GLA will notify you of heavy combustible gases such as propane and butane. Heavy gases sink down to the floor, into cavities and basements. The gas can ignite when the concentration becomes greater than LEL (Lower Explosion Limit). GLA alerts you in good time before that happens, already at 10-15% of LEL.

Exhaust and smoke can come from engines, heaters and fire. GLA will notify about carbon dioxide CO₂ in the air in good time. Alert will occur when the level is increased to about 5000ppm. This correspond to about 25ppm CO by dispersion of exhaust from a diesel engine or heater. Normally less CO from open fires.

Carbone dioxide is produced by humans, animals, plants, fire, light and heaters. The limit for working environment in the Norwegian regulations is 5000ppm for CO₂ and 25ppm for CO to avoid impaired performance and other health consequences. GLA will notify when this limit is exceeded. This gives a good indication of the air quality and indoor environment.

Ultra low energy consumption. Built-in power source may last for up to 10 years (see warranty). There is no need for power connection, adapters, battery chargers or replacements. It is no need for fixed installation. GLA provides security at all places without main power, even in case of main power failure.

Environmental focus. Part of the electric main power, also in Norway, is produced by combustion. Batteries are charged from the main power and contain electrochemical waste. Electrical devices including power supplies, chargers, adapters etc. are special waste. GLA offers longer lifetime and better environment.

3. SAFETY

The safety rules must be read before the product is installed and used.

It is recommended to use at least two GLA sensors for better operation reliability. More sensors give better coverage of places where gas can accumulate, and significant increased security against sensor malfunction and empty energy source.

Important factors for GLA to work normally:

- Front switch must be ON.
- Correct installation (undisturbed place, low).
- Cleaning, remove dust with a dry cloth or brush.
- Regular check of LED flashing (daily)
- Regular testing (weekly).
- Save energy (turn off alarm immediately when testing).

Important factors that can cause the GLA to function incorrectly:

- Front switch is OFF.
- Incorrect installation.
- Lack of supervision and testing.
- Coverage, dust.
- Direct sunlight or heat radiation.
- Rapid or large temperature differences or changes.
- Exposure to temperatures outside recommended range.
- Water, condensation and abnormal high humidity.
- Solvents or other abnormal gases, smoke and fog.
- Powerful electrical or magnetic disturbances.
- Strong acoustic noise, outside audible area.
- Mechanical impact (vibration, shaking, stroke, fall to the ground).
- Drain of energy source (false alarms and testing).

Remember that odor from combustion gas, exhaust and smoke may be unpleasant high before the alarm level is reached. If GLA is not working normally, turn it off. Check the warranty. Never attempt to open the box or repair the product yourself. This poses a high risk of electro static and other damage to the product.

4. USE

INSTALLATION

When installing, it is important to take into account the safety points and technical data. In order to achieve the fastest possible detection of gas, the location is very important. Heavy fuel gas sink to the lowest point, also through cracking and down into cavities. It is important to choose a place where the gas collects and at the same time there is minimum ventilation and air movement. For exhaust and smoke, the sensor should be placed in breathing zone or higher. Avoid location near heat sources and openings. Installation should be done by a competent person.

GLA is normally placed with on its silicone legs standing on the floor or a straight surface. The screw slots on the underside may also be used. Remember that the alarm must sound good. Engine compartments are soundproofed. When GLA is switched on, an alarm may sometimes resume for 5-10 seconds. This is quite normal. Then the LED will flash every 5 seconds.

- Set the front switch to ON, and then check that the LED is flashing.

TESTING

NEVER test gas sensors without EX approval with flammable gas concentration. Normal gas alarms are designed to alert long before the concentration becomes flammable. GLA has therefore, a smart built-in safe testing function. It is designed to respond at a high concentration of CO₂ contained in the air we exhale. Put the sensor on a quiet place without ventilation, possibly in a plastic bag. Breath gently into one side opening to fill up the box and wait about 10-20 seconds until the alarm goes. Switch GLA off immediately and wait a few minutes until all gas has been vented before turning it on again. This gives a complete test of all features.

ALARM TIPS

Any situation may be different due to gas leakage, fire and explosion. Follow the national/local rules and practice. In addition, the following tips may be helpful.

- Stop leak. Close the main gas valve, set the gas tank outside.
- Lower the gas concentration. Open doors and windows.
- Extinguish fumes and flames from cigarettes, candles, oil lamps etc.
- Do not touch electrical appliances, telephone or power switches.
- Evacuate to a safe place until the gas has disappeared.

5. TECHNICAL DATA:

Materials:	ABS box and PVC packing
Outside dimensions:	110x80x30mm
Color:	White with black sides and front
Mounting:	Silicon legs (slots for screws)
Weight:	Ca 100g
Operation:	OFF-ON switch in front
Connections:	None
Gas types:	Propane, butane and CO ₂ (CO indirect)
Detection limit:	10-15% of LEL (Lower Explosion Limit)
Detection limit:	Exhaust and smoke 5000ppm CO ₂ (ca 25ppm CO)
Detection time:	5 seconds interval. LED flashing indicator
Reaction time:	10 seconds (with logic check of error)
Alert mode:	Red LED light in front and Alarm
Alarm level:	>85dB at 1m (2,7kHz) pulsed 5sekunder on/off
Alarm time:	60 minutes total (full power source)
Error signal:	LED stops flashing, alarm sounds.
Sensor technique:	Acoustic
Testing:	Smart safe test function with CO ₂ (breathing air)
Temperatures:	Stable temperature, without rapid changes (5-35°C)
Storage:	Dry air, no condensation (-20°C to +40°C)
Energy source:	Lithium 3-6Vdc
Energy lifetime:	Up to 10 years (estimated from measurements)

GLA has a build-in auto calibration. If GLA has been exposed to a high gas concentration for a while, it should be placed without gas (outside) for a few days to reset it. If a gas leak is very small and last for a very long period of time, the automatic calibration could cause GLA to give alarm at a small concentration above the original calibration. Normally a very small gas leak will be handled by natural ventilation in the room. GLA is designed to alert in case of sudden accidents where the concentration of gas rises significantly in time, from zero.