

## Household gas detector

**GSH246 - v. 1**

To protect your family



**GSH246/B**



**GSH246/W**

Using the catalytic sensor, the **GSH246** detector detects the presence of **explosive gas** such as: Methane and LPG, with trip sensitivity calibrated at 10% of L.E.L. According to the **CEI 216- 8 Norm of 2005**, the detectors are triggered by a specific combustible gas concentration in the environment. The detectors should tolerate common vapours and interfering substances usually present in household environments, and guarantee a high stability with temperature and humidity variations.

A series of technical features make this gas detector extremely versatile, reliable, accurate, and safe.

The internal jumper makes it possible to select the relay impulse functioning, in order to connect manual reset solenoid valves, or the continuous functioning, and to activate N.C. class "A" solenoid valves and sirens.

The relay, free of voltage, allows installation of multiple detectors on a single solenoid valve ensuring control of multiple dangerous environments.

The technical scheme is completed by a circuit that controls the catalytic sensor "**efficiency level**", and signals any possible fault.

These technical features make the detector ideal for civil environment safety according to EUROPEAN REGULATIONS.



**Important:** Assembly / maintenance of the appliance must be carried out by qualified personnel and in accordance with applicable laws and regulations.

The manufacturer assumes no responsibility for the use of products that have to comply with particular environmental and / or installation standards.



**Important note**

Before connecting the equipment, it is recommended that you read the instruction manual carefully and keep it for future reference. It is also recommended to perform the electrical connections correctly as per enclosed drawings, observing the instructions and the Standards.

**N.B. Refer to the documentation in all cases where the symbol is on the side**



**Installation and user guide**

**CONFORMITY**



**EN 50194  
EN 50270  
CEI 216-8  
EN 61010-1**

## Precautions

**CHECK** the integrity of the probe after having removed it from the box.

Check that the data written on the box correspond to the type of gas used.

When doing the electrical connections, follow the drawing closely.

Any use of the detector for purposes other than the intended one is considered improper, and as a result of which **BEINAT S.r.l.** therefore disclaims any responsibility for possible damages caused to people, animals or objects.

### INSTALLATION

When performing the installation, please remind that if you pierce the box of **GSH246**, it will lose its properties and its conformity to REGULATIONS.

### TERMS and EXPECTATIONS

The installation of the **GSH246** detector, its ordinary and extraordinary maintenance, and its out of service removal at the end of the functional life guaranteed by the manufacturer, must be carried out by **authorized and/or specialized personnel**.

#### Do not allow it to become wet.

The detector can be seriously damaged when immersed in water.

#### Do not drop it.

Heavy knocks or falls during transportation or installation can damage the appliance.

#### Avoid abrupt temperature fluctuations.

Sudden temperature variations can cause condensation and the probe could work poorly.

#### Cleaning

Never clean the device with chemical products. If necessary, wash with a moist cloth.

Absolutely avoid using any cloth dipped in thinners, alcohol and chemical detergents.

## Technical Specifications

Power supply .....	230/240 VAC 50/60 Hz +/- 10%
Power consumption .....	1 W
Range of relay contact switching free of voltage .....	10A 250V resistive
Types of gas detected .....	<b>Natural Gas</b> - for Natural gas <b>LPG-</b> for LPG model
Detection sensor .....	Catalytic
Alarm sensitivity .....	At 10% of L.E.L.
Precision of the detector .....	1% FS
Sensor's faults detected by Fault Circuit .....	Interruption, short circuit, or wear
Test Phase Duration .....	60 seconds
Audible and visual signal alarm by .....	LED diode and buzzer 85 dB at 1 m
Selection of relay working mode .....	through Jumper
Test buttons .....	built-in
Command electrovalve .....	class A o classe B
Functioning Temperature .....	-10°C to +40°C
Functioning Humidity .....	0÷90% RH not condensed
Mounting .....	Embedded box 503
Degree of protection .....	IP42
Electromagnetic Compatibility "CE Reference Norms " .....	EMC <b>EN 50270</b>
Size .....	120x80x65 mm

### Functional Features Of Gas Sensors

The installation of the **GSH246** detector, its ordinary and extraordinary maintenance, and its out of service removal at the end of the functional life guaranteed by the manufacturer, must be carried out by authorized and/or specialized personnel.

The CATALYTIC technology sensor duration is guaranteed for 6 years (in clean air).

The detector's functioning temperature ranges from **-10°C to + 40°C**.

#### WARNING!

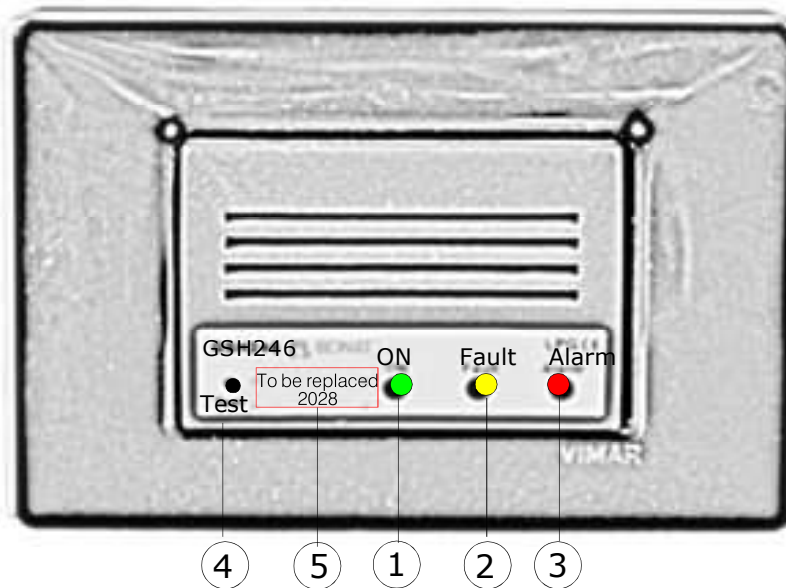
The CATALYTIC probe does not tolerate a gas detection exceeding **100% of L.E.L.**, with consequent natural death of the sensor.

Each immediate puff of gas that exceeds **100% of L.E.L.** takes away months of life from the sensor.

The detector must be tested by simulating the presence of gas by issuing it from a pre-calibrated testing aerosol.

A common cigarette lighter near the sensor does not guarantee excellent functioning.

## Components and commands



**1) MAINS** connected indication **LED**. After turning on, the **GSH246** performs a test of the sensor's efficiency status, and gets it to the functioning temperature. This phase lasts about 60 seconds. At the end, the detector will issue a **"BEEP"**. Then it is ready for detection.

**During the test period, the GSH246 does not detect the gas.**

**2) FAULT** and functional life wear indication **LED**.

If this LED turns on, it means that the gas detection catalytic sensor is not working efficiently and must be replaced by an authorized technician.

The sensor duration is guaranteed for 5 years (in clean air).

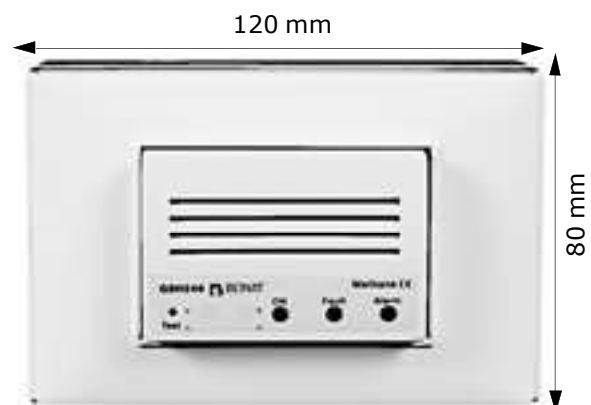
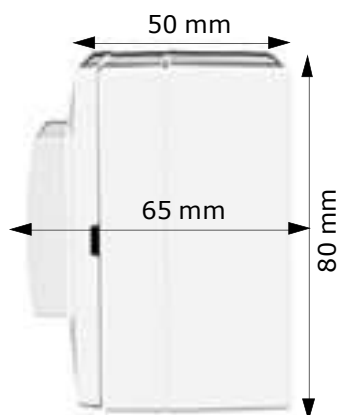
**3) ALARM** indication **LED**. This LED turns on when room gas concentration exceeds the danger level, at 10% of L.E.L.

**4) TEST** hole. To perform a functioning TEST, insert a pointed tool, like a toothpick.

**5) Label** of the gas sensor expiration date.

**This label should be applied by the technician during installation**, keeping in mind that the detector should be **overhauled after 5 years**.

## Dimensions



**The installation of the detector does not exempt....** from the compliance with all regulations concerning the characteristics, installation and use of gas appliances.

Particularly, the ventilation of the spaces and the elimination of combustion products are described in the **UNI norms according to ART. 3 LAW 1083 / 71** and relevant legal provisions.

## Installation measures and positioning

Indeed, the most essential factor for the proper functioning of the **GSH246** is its correct installation. By following the instructions in this paragraph, high precision can be obtained together with the absence of false alarms.

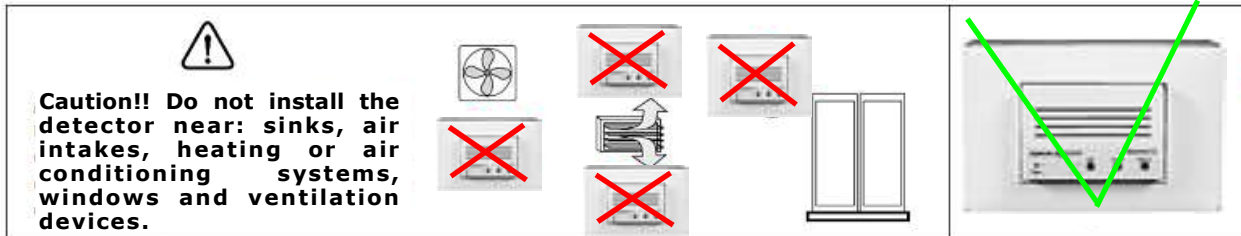
**Install the GSH246** on the wall opposite the possible source of danger, example: kitchens, boilers, or else.

**Do not install:** behind barriers that prevent the prompt detection of gas, near vents or fans, and in rooms where temperature falls below  $-10^{\circ}\text{C}$  or over  $+40^{\circ}\text{C}$ .

It must be placed:

- 30 cm from the lowest point of the floor in order to detect
- 30 cm from the highest point of the ceiling in order to detect

heavy gases (L.P.G. etc.)  
light gases (Methane, etc.)



## Turn on and testing

After turning on, the **GSH246** performs a test of the sensor's efficiency status, and gets it to the functioning temperature.

This phase lasts about 60 seconds. At the end, the detector will issue a "BEEP". Then it is ready for detection.

**Note. during the test period, the GSH246 does not detect the gas.**

### FUNCTIONING TEST

Using a pointed tool, or a toothpick, press the button under the hole indicated by number "4" (see drawing above).

The **ALARM** and **FAULT LEDs** will light up, and the relay will shift its functioning mode after 5 seconds.

After the alarm, the LEDs will turn off, the buzzer will stop, and the connected appliances will be turned off.

To complete the general test, issue gas from a pre-calibrated aerosol within 20% of LEL.

Performing a test using a common cigarette lighter you could damage the sensor.

This test should be carried out at least once a year.

## Before calling a technician

### - If the device does not start up.

Check that the 230V power is correctly connected.

### - If the fault LED lights up.

If the YELLOW LED is remains ON, check the detection capsule status. It is probably faulty and has to be replaced. Call an authorized technician..

### - If the detector is repeatedly issuing an alarm.

Check that there are no gas leaks.

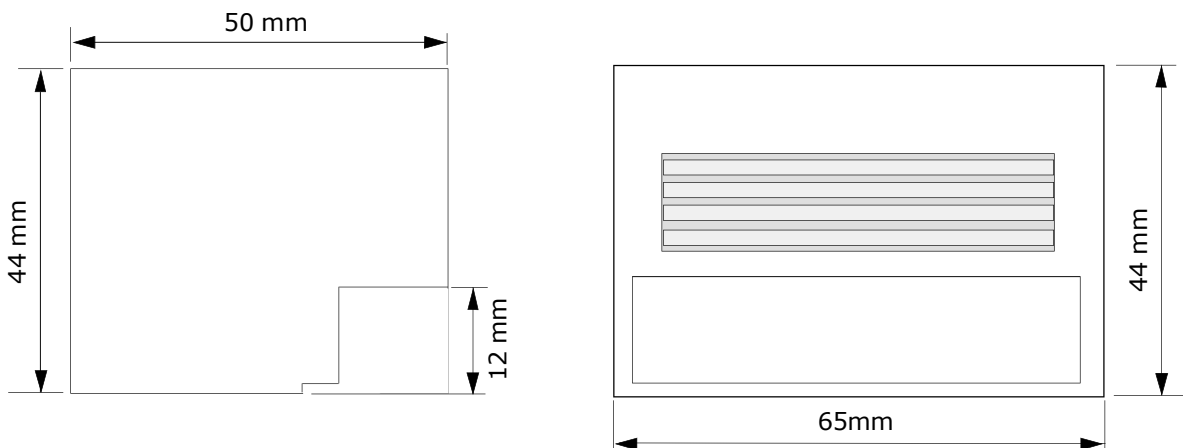
If the alarm signal and the FAULT indicator light turn on together, proceed as in the previous paragraph.

### - If the detector is issuing an alarm and does not shut off the devices connected to it.

Check that the wiring is correct and that the jumper that carries power to the relay has been set properly. **All relays must be free from electrical power.** Check the drawing of the connections.

If other problems arise, a specialised and/or authorised technician and/or the **Distributor** of **BEINAT S.r.l.** should be contacted directly.

## Product size without box



### WARNING! Actions to be taken in case of alarm

- 1) Put out all free flames.
- 2) Close the main gas tap or the LPG cylinder tap.
- 3) Do not turn any lights on or off; do not turn on any electrical device or appliance.
- 4) Open windows and doors in order to increase ventilation.



If the alarm stops, its cause must be found and the relevant consequent measures taken.

If the alarm continues and the cause of gas presence cannot be found or removed, abandon the building and call the emergency services when outside (fire department, distributors, etc.)

### Warning !!

If you have the following symptoms: vomiting, sleepiness, or else, go to the closest first aid station and inform the operators that you could have been poisoned by **Gas Methane or LPG**.



## Electrical Connections



### WARNING

Before connecting to the mains power, ensure the voltage is correct. Carefully follow the instructions and the connections according to Regulations in force. An automatic disconnecting switch (appropriately identified as the detector sectioning device) must be incorporated in the electrical system, suitably located and easily accessible.

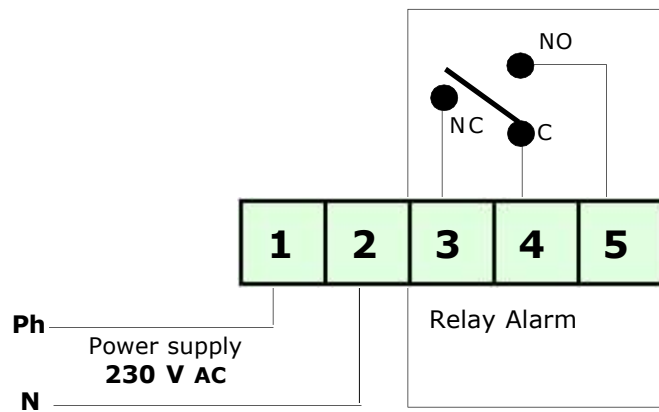
### Connection Scheme of GSH246 Detector

#### WARNING !

All relays are free of voltage.

#### Jumper for Relay working Mode

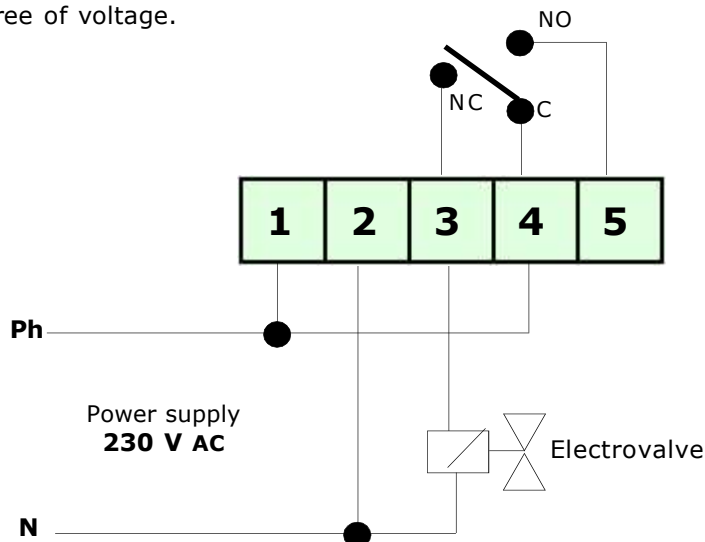
- 1) With the Jumper opened the relay works in continuous Mode.
- 2) With the Jumper closed the relay works in pulsed Mode. The pulse duration is 5 seconds



### One detector with 230V AC normally close valve

#### WARNING !

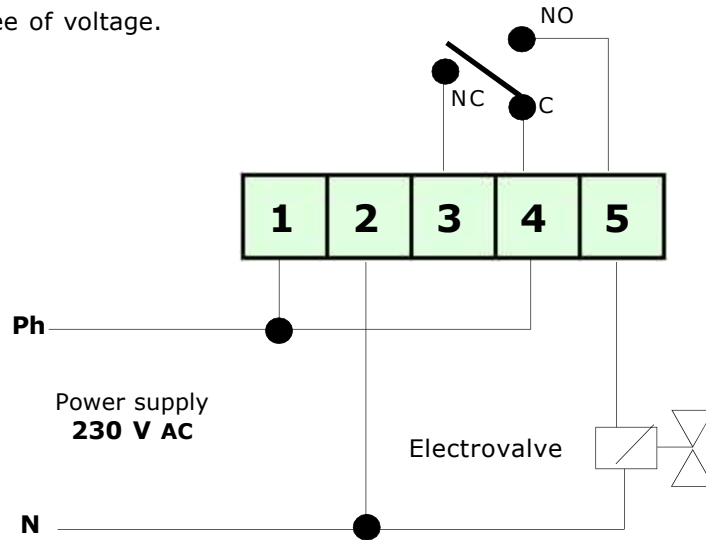
All relays are free of voltage.



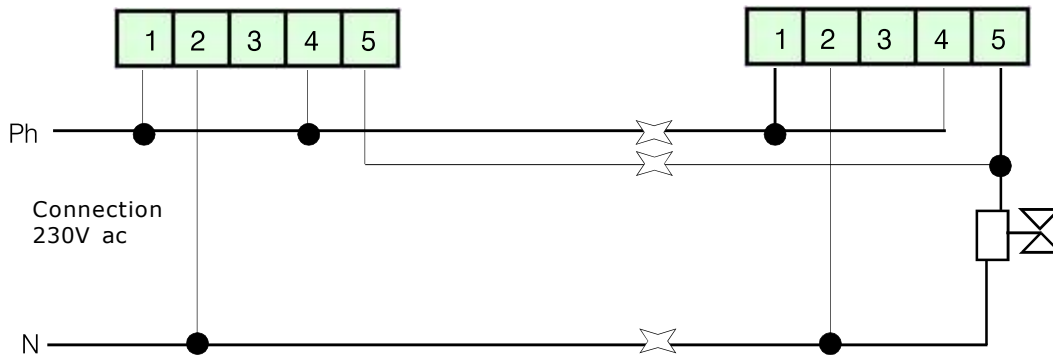
### Connection Scheme with a normally open valve 230VAC

**WARNING !**

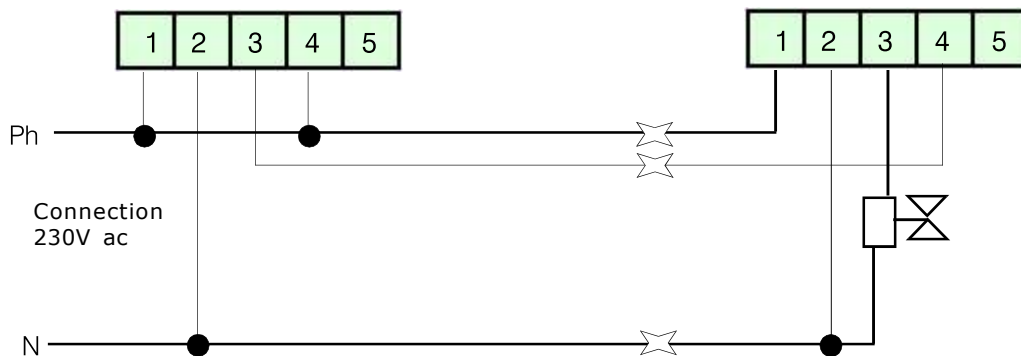
All relays are free of voltage.



### One or more detectors with a normally open valve 230VAC



### One or more detectors with a normally close valve 230VAC



**WARNING !**

All relays are free of voltage.

**INSURANCE.** This device is insured by the SOCIETÀ REALE MUTUA for the PRODUCT'S GENERAL LIABILITY up to a maximum of 1,500,000.00 EURO against damages caused by the device in case of failures in functioning.

**WARRANTY.** The warranty term is 3 years from manufacturing date, in agreement with the following conditions. The components acknowledged as faulty will be replaced free of charge, excluding the replacement of plastic or aluminium cases, bags, packing, batteries and technical reports.

The device must arrive free of shipment charges to **BEINAT S.r.l.**

Defects caused by unauthorized personnel tampering, incorrect installation and negligence resulting from phenomena outside normal functioning shall be excluded from the warranty.

**BEINAT S.r.l.** is not liable for possible damage, direct or indirect, to people, animals, or things; from product faults and from its enforced suspension of use.



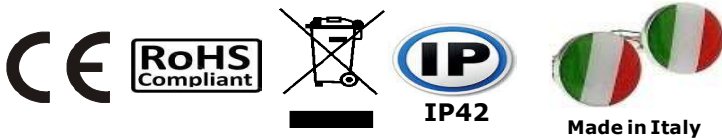
**DISPOSAL OF OLD ELECTRICAL & ELECTRONIC EQUIPMENT.**

This symbol on the product or its packaging indicates that this product shall not be treated as household waste. Instead, it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment, such as for example:

- sales points, in case you buy a new and similar product
- local collection points (waste collection center, local recycling center, etc...).

By ensuring this product is disposed of correctly, you will help prevent potential negative consequence for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

**Attention:** in some countries of the European Union, the product is not included in the field of application of the National Law that applies the European Directive 2002/96/EC and therefore these countries have no obligation to carry out a separate collection at the "end of life" of the product.



Detector **GSH246**

*Lo styling è della b & b design*

Dealer Stamp

Purchase Date:.....

Registration Number :.....

**Beinat S.r.l.** following the targhet to improve its products, reserves the right to modify the technical features, aesthetic and functional any time without prior notice..

**BEINAT S.r.l.**  
Via Fatebenefratelli 122/C 10077, S. Maurizio C/se (TO) - ITALY  
Tel. 011.921.04.84 - Fax 011.921.14.77  
[http:// www.beinat.com](http://www.beinat.com)



**Business** - [info@beinat.com](mailto:info@beinat.com)  
**Help Desk** - [laboratorio@beinat.com](mailto:laboratorio@beinat.com)