

Household gas detector

GS911K



The elegance and the prestige, that have always made **BEINAT S.r.l** stand out from its competitors, together with the concept of home fitness comes the household gas detector **GS911K** detects through the **catalytic sensor**, the presence of explosive gas such as: Methane, LPG.

Gas detection

The detector is tested and calibrated to **10% of L.E.L.**

Through the built-in relay, the **GS911K** can activate: solenoid valves, sirens, and any other device alarm

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

through an internal jumper it is possible to select the relay impulse functioning, to connect manual reset solenoid valves, or the continuous functioning, to activate 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 detector is complete with a special **circuit that controls the catalytic sensor's efficiency level**, and signals any possible fault

These technical features make the detector ideal for the safety of civil environments according to EUROPEAN STANDARD.

Installation and user guide

Firmware Version 12.0

CONFORMITY

**EN 50194
CEI 216-3
EN 50270**

Important Note

Before connecting the unit careful reading of instruction booklet is recommended, and it is kept in a safe place for future reference.

Furthermore, the correct electrical connections according to the enclosed drawings, complying with instructions and regulations in force, is recommended.

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 **GS911K** container, it will lose its properties and its conformity to REGULATIONS.

TERMS and EXPECTATIONS: The installation of the **GS911K** 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.

Disposal of the device

Concerning the conservation, the protection and the improvement of the quality of the environment, as well as for the protection of human health and the careful and rational use of natural resources, the device has to be the object of a selective collection for the disposal of electronic equipments and can not be disposed with the common domestic waste.

The user thus has the obligation to separate the device of the other waste to ensure that it is recycled in a sure way for preserving the environment. For more details on the sites that are involved in the collection, contact the local administration or the distributor of this product.

Technical Specifications

Power supply	230/240 VAC 50/60 Hz +/- 10%
Power consumption	3,1 W
Range of relay contact switching free of voltage	10A 250V resistive
Insulation	Class II
Types of gas detected	Natural Gas - for Natural gas LPG- for LPG mod
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
Degree of protection	IP42
Electromagnetic Compatibility "CE Reference Norms "	EMC EN 50270
Dimensions	115x150x50

Functional Features Of Gas Sensors

The installation of the **GS911K** 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!

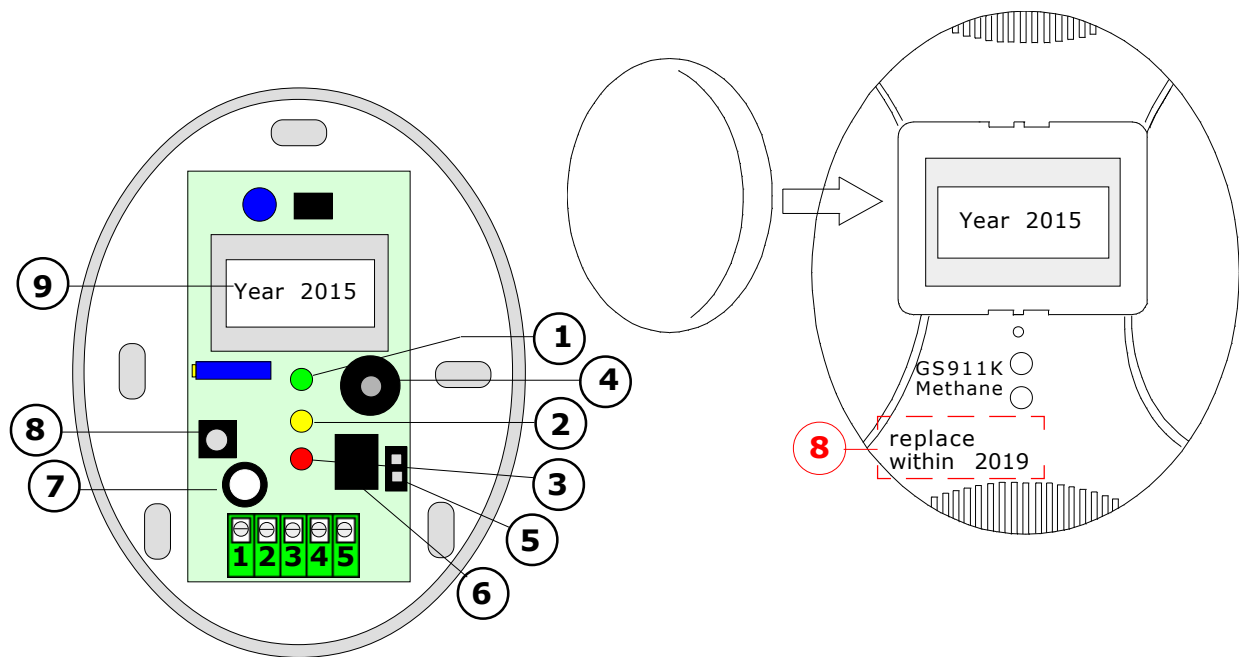
The CATALYTIC probe does not tolerate a gas detection exceeding **100% of L.E.L.**, with consequent natural death of the sensor.

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

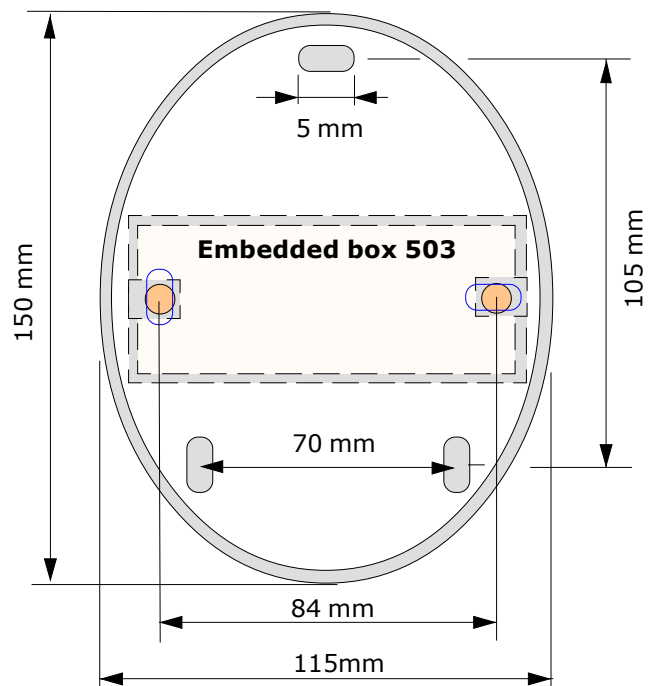
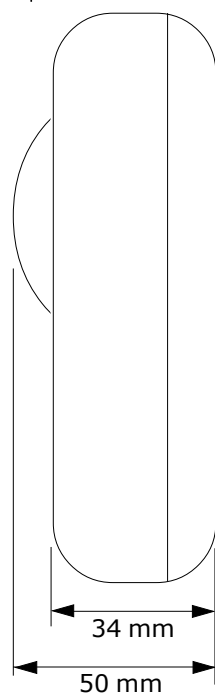
The detector must be tested by simulating the presence of gas by issuing it from a pre-calibrated testing aerosol.

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

Components and commands



- 1) MAINS connected indication LED (ON).
 - 2) FAULT LED and decadence of the functioning period
If this LED turns on, it means that the gas detection catalytic sensor is not working efficiently and must be replaced by an authorized service center.
 - 3) ALARM LED. This LED turns on when the amount of gas dispersed in the environment exceeds the danger threshold, 10% of the LEL
 - 4) BUZZER. This Buzzer sounds when the detector has exceeded the alarm threshold.
 - 5) JUMPER to select the relay functioning mode closing the two poles, the relay will work at pulse, in the sense that once tripped the alarm relay will close the C and NA contacts for about 90 seconds, and then will reopen them. This is needed to prevent damaging some types of manual reset solenoid valve coils. By opening the two poles, the relay will be set to continuous functioning.
 - 6) Relay. The alarm relay switches when the detector has exceeded the threshold for gas setting.
 - 7) Catalytic sensor for Methane or LPG explosive gas detection.
 - 8) TEST button. This button is used to simulate a gas leak, after installation.
 - 9) Identification label, registration number and manufacturing year, located under the ABS small dome.
- 8) Label of the gas sensor expiration date.**
This label must be applied by the technician during the installation and remembering that the gas sensor **must be reviewed after 5 Years.**



Installation measures and positioning

Currently national standards enforceable in the installation country covering the installation and use of gas powered equipment are to be respected, as are standards covering smoke dispersion and ventilation of enclosed areas, even though gas detection equipment is installed

Essential element for the correct functioning of the detector is its correct installation.

Following the suggestions in this section you will get a high accuracy combined with a total absence of false alarms.

The **GS911K** is an equipment adapted to be mounted externally on a wall. Installing, it is fine to use ordinary care that requires an electronic device, and then:

- Install the detector away from sources of excessive heat.
- Avoid that liquids come into contact with the detector **GS911K**, remembering that its external structure has degree of protection **IP42**.

The detector should not be installed:

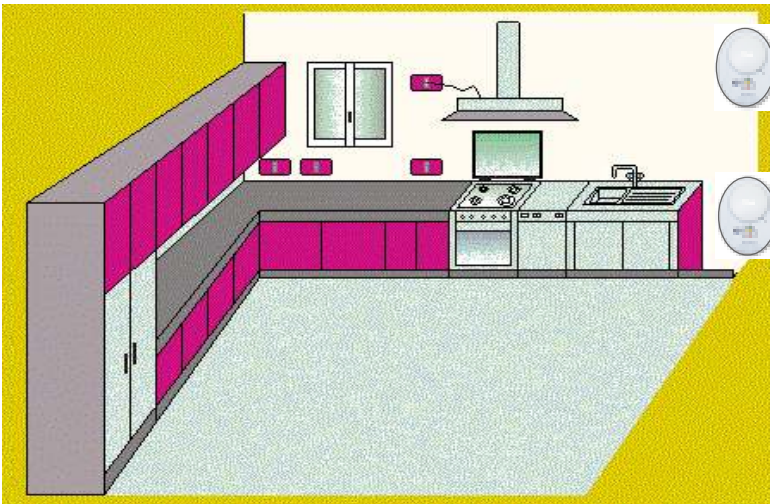
- 1) behind barriers that hinder prompt detection of gas.
- 2) near exhaust fans or blowers.
- 3) Do not install the detectors near: sink, air vents, HVAC appliances or windows; furthermore, the detectors must not be installed in enclosed spaces, such as behind a curtain or inside a close
- 4) in environments where the temperature drops below 10 ° C or rises above 40 ° C.

The detector is equipped to detect different types of gases, and according to these, its must to be positioned at different heights.

These heights are:

- **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
- Install detectors from 1 to 4 m from gas appliances

heavy gases (LPG, etc)
light gase (Methane etc)



METHANE gas detector
max. 30 cm from the ceiling

LPG gas detector
max. 30 cm from the floor

POSITIONING



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

Turn on and testing

1) By providing the proper voltage with an external switch, which must be provided with safety fuses, you will see that the **POWER LED**, wait 60 seconds, after this time the **GS911K** is ready to detect.

2) Pressing the TEST button, you get the simulation of a gas leak and the detector performs the following actions: The **LED ALARM** will turn on and the relay will change its working state after 5 seconds. Ceased the alarm, the LED will turn off, it will stop the buzzer sound and the connected devices will be disabled.

* To complete the general test, emit gas from a calibration bottle pre-calibrated within 20% of the LEL.

Do a test with a common cigarette lighter could cause damage to the sensor.

We recommend that you make this test at least once a year.

WARNING! Actions to be taken in case of alarm

- 1) Extinguish all the flames and smoking materials.
- 2) Extinguish all the gas powered devices.
- 3) Shut off the gas supply at the meter or close the Valve of the lpg cylinder.
- 4) Do not operate light switches (on or off); Do not Switch on electrical appliances and devices.
- 5) Do not use the phone in presence of gas leakage.
- 6) Open doors and windows to increase ventilation in The environment.

If the alarm stops, find out the cause and take the appropriate Corrective action.

If the alarm continues and the gas escape cannot be located or Eliminated, leave the building and call the emergency services from Outside.

Before calling a technician ...



- If the device does not start up.

Check that the 230/240 VAC power is correctly connected.

When the fault LED lights up

Check the capsule detector, the **GS911K** may have failed. It may be exhausted: after 5/6 years should be replaced.

If the detector goes into alarm repeatedly.

Check that there are no gas leaks. Check that together with the alarm does not turn on even the led FAULT, in this case, proceed with the inspection of the capsule detector.

If the detector goes into alarm and closes the connected equipment.

Check that connections are correct and that the jumper which leads to the common voltage of the relay has been carried out, **all the relays are voltage free**. Check the scheme of connection

If GS911K is connected to a Solenoid valves 12V.cc and does not work.

To **GS911K** you can not connect directly solenoid valves, sirens in 12V DC. It must always to use to an external supply.

Do not tamper with the detector

In order not to cause decalibration of the device and electric shock.

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

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, keeping in mind that the signal cables should be laid separate from the power cables

Connection scheme of GS911K detector

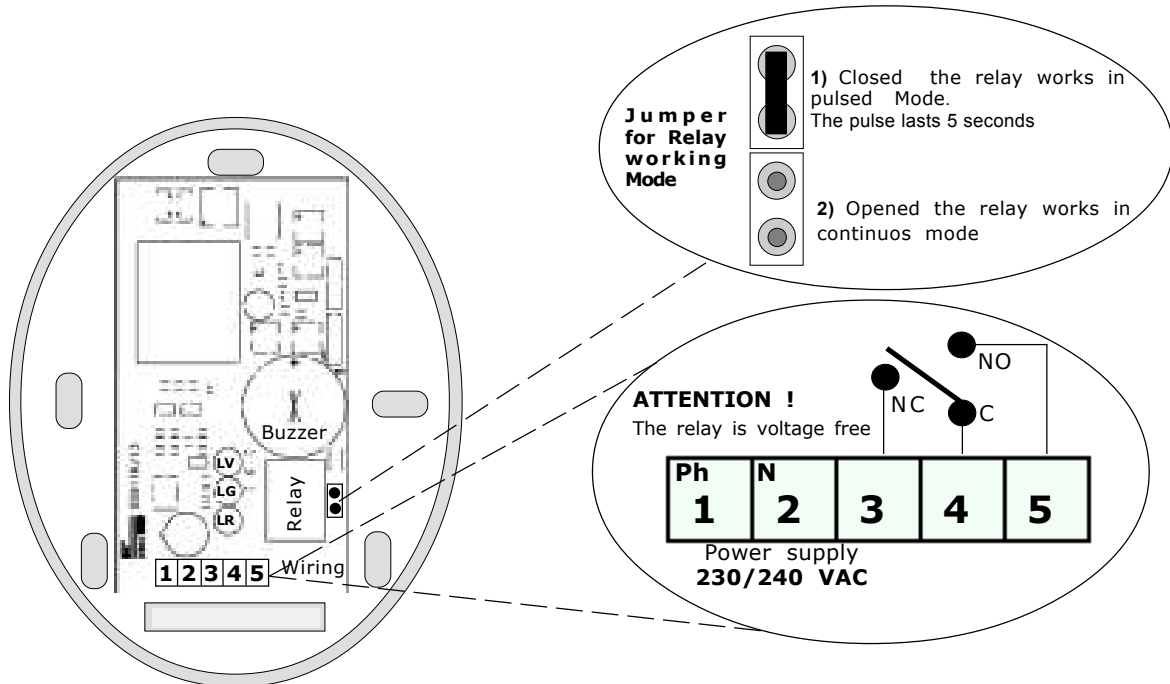
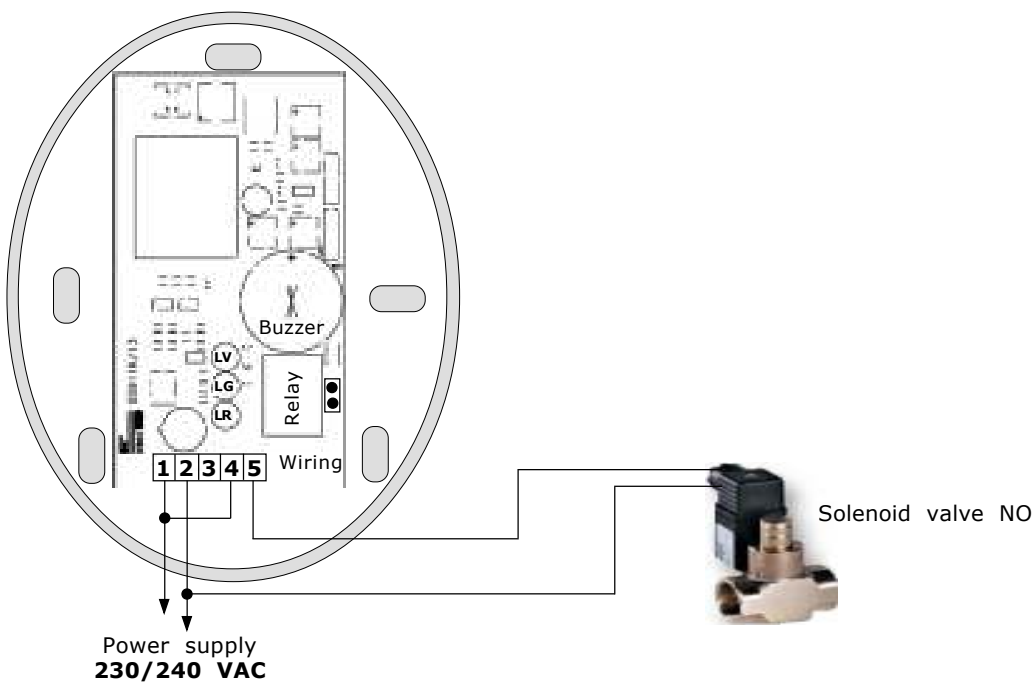
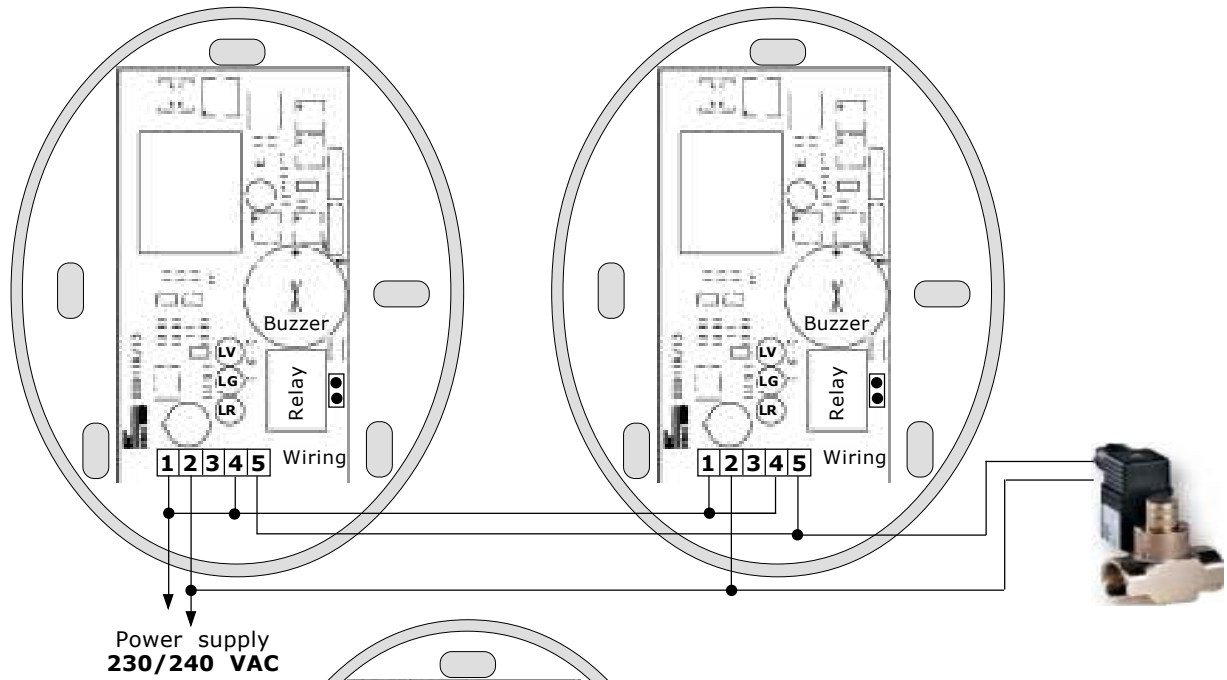


Diagram of connection with a valve normally open 230VAC

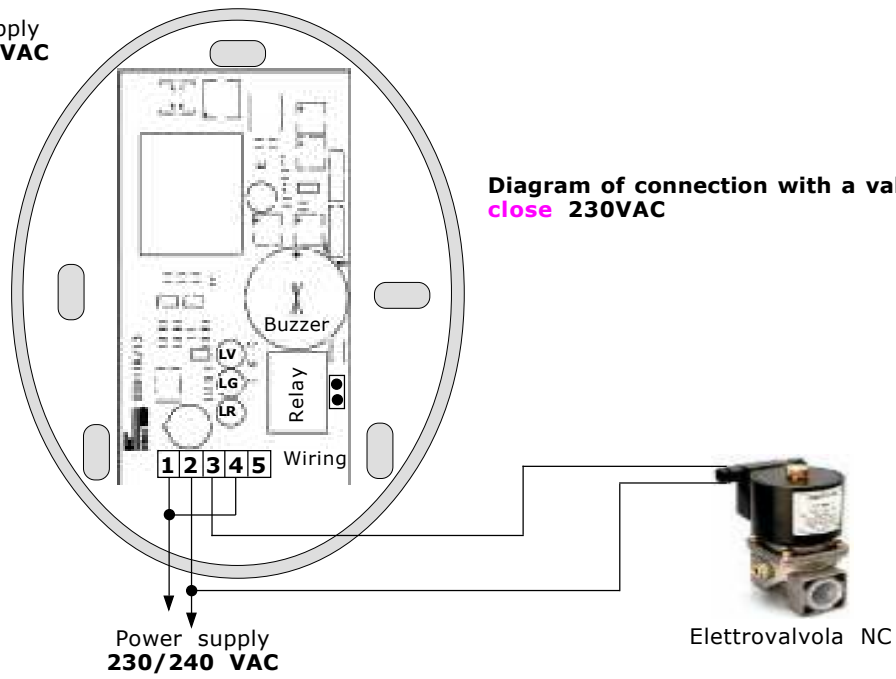


One or more detectors with a valve normally open 230VAC



Power supply
230/240 VAC

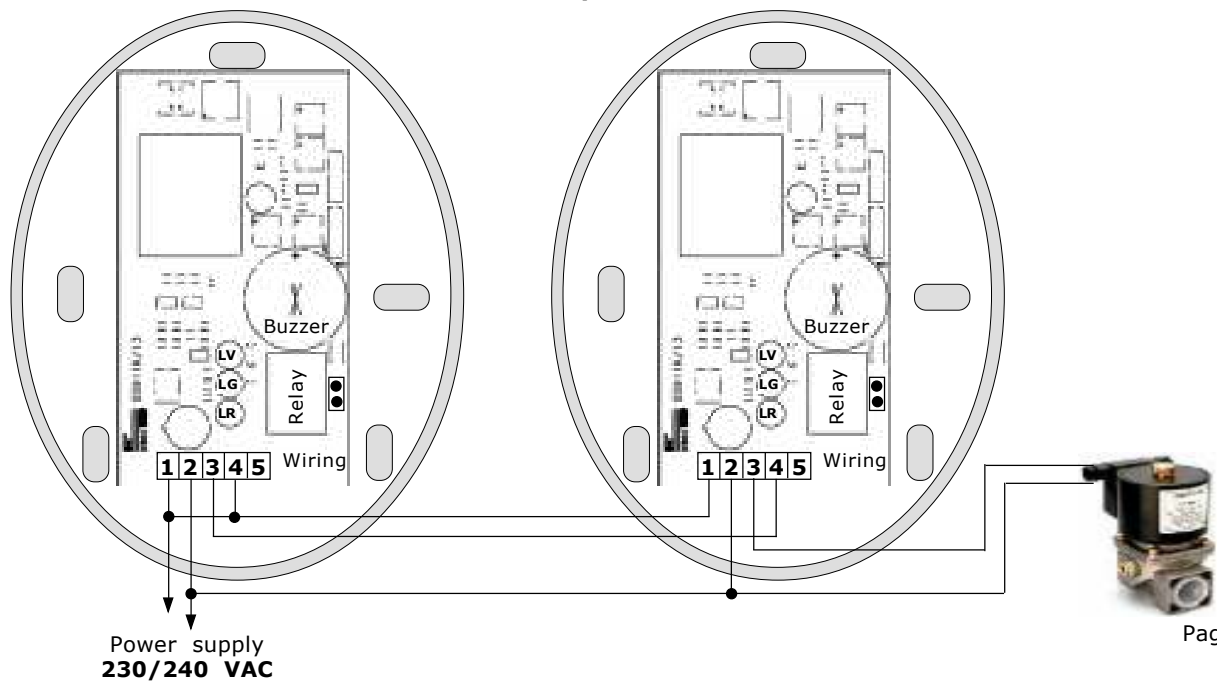
Diagram of connection with a valve normally close 230VAC



Power supply
230/240 VAC

Elettrovalvola NC

One or more detectors with a valve normally closed 230VAC



Power supply
230/240 VAC

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.



GS911K GAS DETECTOR

Lo styling è della b & b design

Purchase Date	Stamp and signature of the dealer
Registration Number	

In agreement with our continuous development policy, we reserve the right to modify our products without notice.

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