

## C0922 Gas Detector

**C0922**



The **C0922** detector has been designed and built according to European regulations to detect the presence of **CO toxic** gas.

A microprocessor is used to create a complete surveillance and control system with maximum flexibility. Thanks to this and its other features, this detector is suitable for household applications.

The gas detected by the **C0922** is Carbon Monoxide, when both the maximum CO admissible concentration threshold of 300ppm is exceeded, and when low CO concentrations persist in the environment for lengthy periods, which according to the principle of accumulation could also damage the human organism.

The probe can activate solenoid valves, sirens, and any other signal or alarm handling devices using the built-in relay. A series of technical features make this detector extremely versatile, reliable, accurate, and safe.

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

The detector is complete with a special circuit that controls the sensor's efficiency level, and signals any possible fault. The external container has an IP42 protection degree.

**User Guide**

**Firmware**

**Version 2.0**

**CONFORMITY**

**EN 50291  
 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 unit 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.

**IMPORTANT:** Do not test the device using the gas tap as this does not necessarily provide sufficient concentration to activate the main alarm.

**TERMS and EXPECTATIONS:** The installation of the **CO922** gas detector, its ordinary and extraordinary maintenance, every six months, and its out of service removal at the end of the functional life guaranteed by the manufacturer, must be carried out by **authorized or specialized personnel.**

In order to achieve long and satisfactory use of your **CO922** gas detector,, use it by respecting the following precautions.

**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 detector could work poorly and could become very sensitive, and generate false alarms.

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

The control unit can be seriously damaged as it is not waterproof either when immersed in water or exposed to high levels of humidity.

**Cleaning**

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

## Technical Specifications

Power supply .....	230Vac 50 Hz +/- 10%
Power consumption .....	1W
Change-over relays for CO toxic gas detection.....	10A 250V ~ resistive 5A 30Vdc
CO toxic gas sensor .....	Electrochemical Cell
CO detector alarm sensitivity .....	30÷300ppm
CO gas detector alarm threshold according to norm EN 50291 on gas accumulation	30 to 300ppm
Audible and visual signal alarm by .....	LED diode and buzzer
Sensors' faults detected by Fault Circuit .....	Interruption, short circuit, or wear
Functioning Temperature .....	-10°C to +40°C
Functioning Humidity .....	0÷90% RH non condensed
Electromagnetic Compatibility "CE Reference Norms " .....	EN 50270
External degree of protection .....	IP42
Mounting .....	External wall mount, or embedded box 503
Body material .....	ABS self-extinguishing
Dimensions .....	115x150x52
Warranty .....	3 years

**Operating specifications of the gas sensors**

The **ELECTROCHEMICAL CELL** technology sensor has a duration of: 5 years.

The sensor's functioning temperature, independently of the technology used, ranges from **-10°C** to **+40°C**

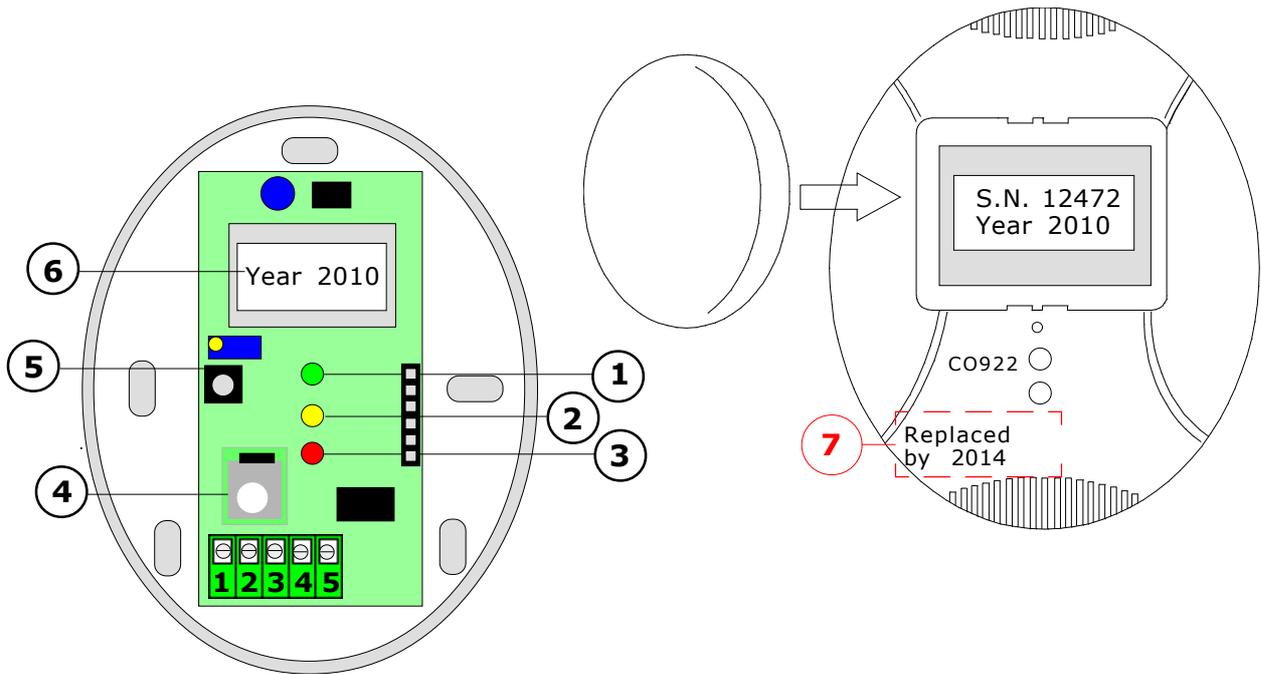
**ATTENTION!**

To test the toxic gas, issue gas from a pre-calibrated aerosol from 30 to 300 ppm, into the grey sensor.

**Using other types of gas is useless and could damage the sensor.**

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

## Components and commands



**1)** MAINS connected indication LED. When the unit turns on, this LED blinks and a test of the gas detection sensors' efficiency status is carried out. This phase takes about 100 seconds. Afterwards the LED stays on without blinking.

**During the test period, the CO922 does not detect the gas.**

**2)** FAULT indication LED. If this LED turns on, it means that one of the gas detection sensors is not working efficiently and must be replaced in an authorized centre. A relay is connected to the fault circuit as well as the light indication and a "cricket" siren.

**3)** CO ALARM indication LED. This LED will light up when the gas concentration level has reached the 300ppm concentration, or when the accumulation level is reached. The relay contact is closed, and an impulsive sound is issued.

**4)** Electrochemical Cell sensor for Carbon Monoxide detection

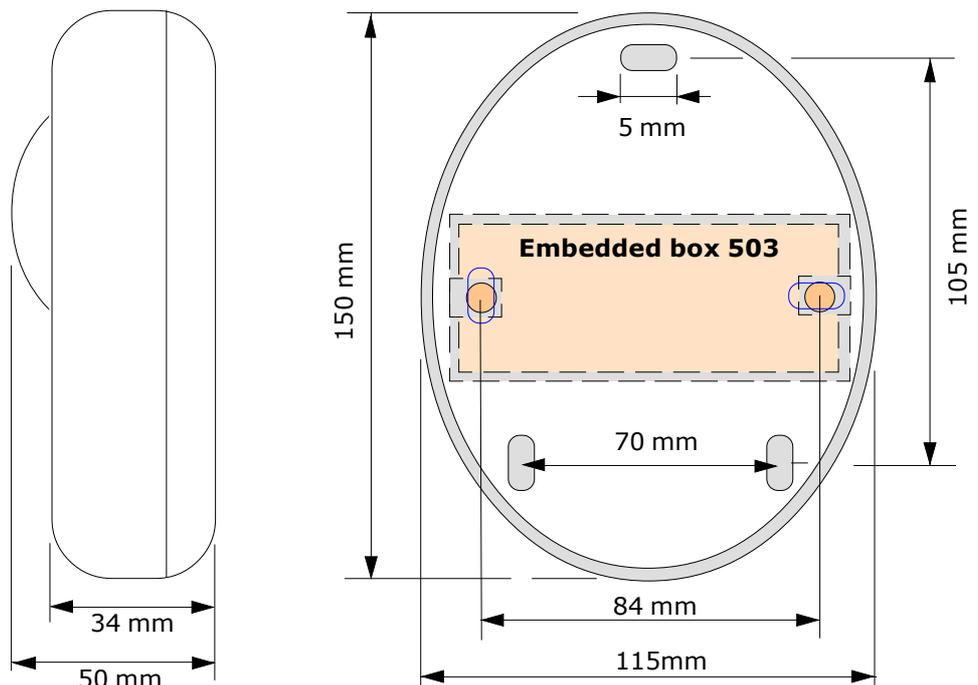
**5)** TEST button. This button is used to simulate a gas leak, after installation.

**6)** Identification label, registration number and manufacturing year, located under the ABS small dome.

**7)** 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**

## Measures



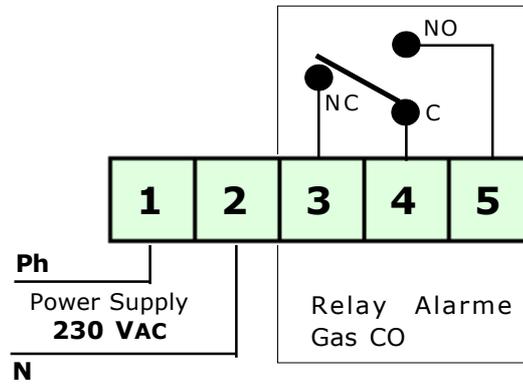
## Electrical connections

### WARNING

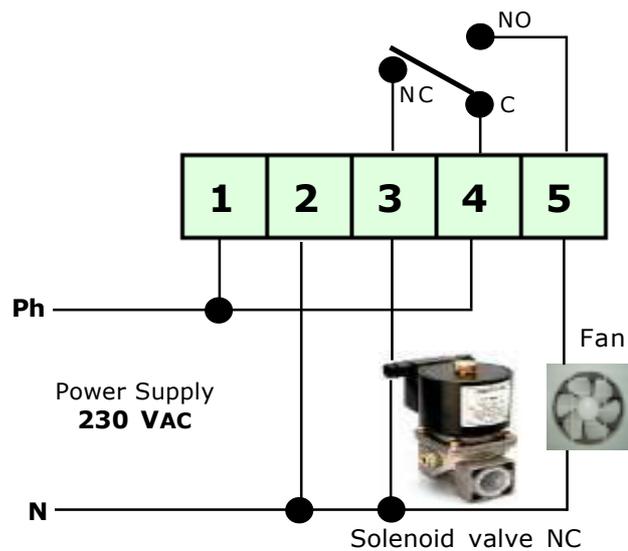
Before connecting to the mains power, ensure the voltage is correct. Carefully follow the instructions and the connections according to Regulations in force, keeping in mind that the signal cables should be laid separate from the power cables.

**ATTENTION !** The relays are voltage free

### Connection Scheme of Detector

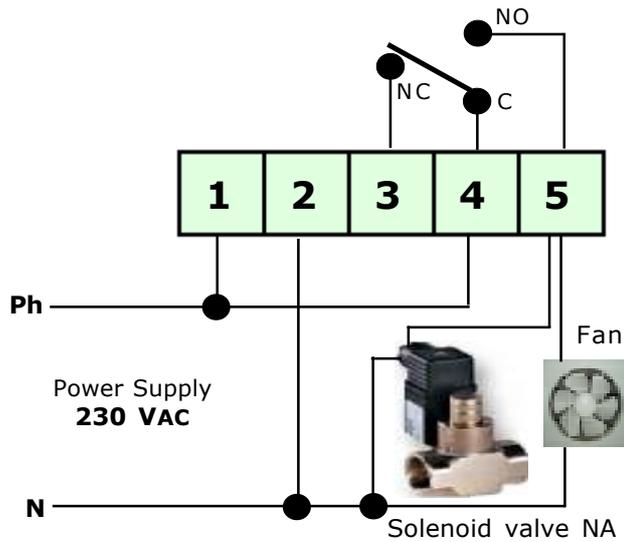


### Connection Scheme normally close valve 230VAC

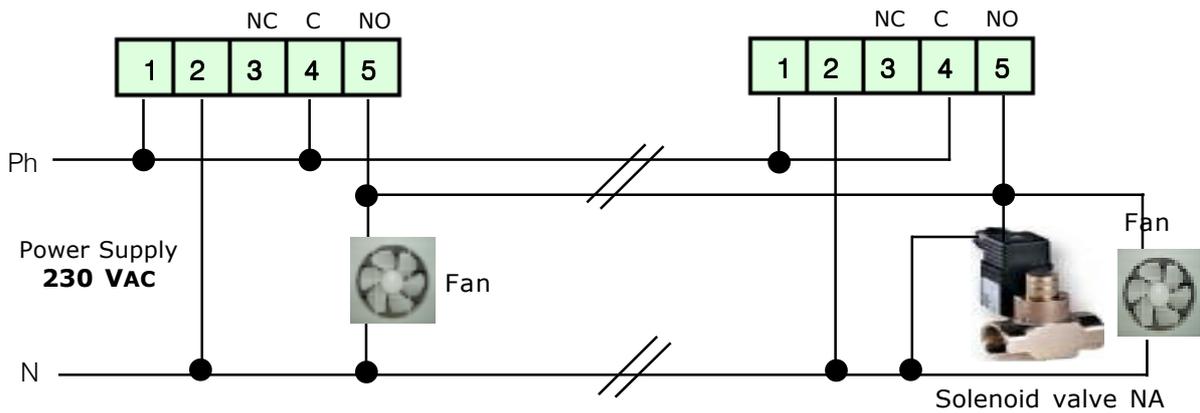


## Electrical connections

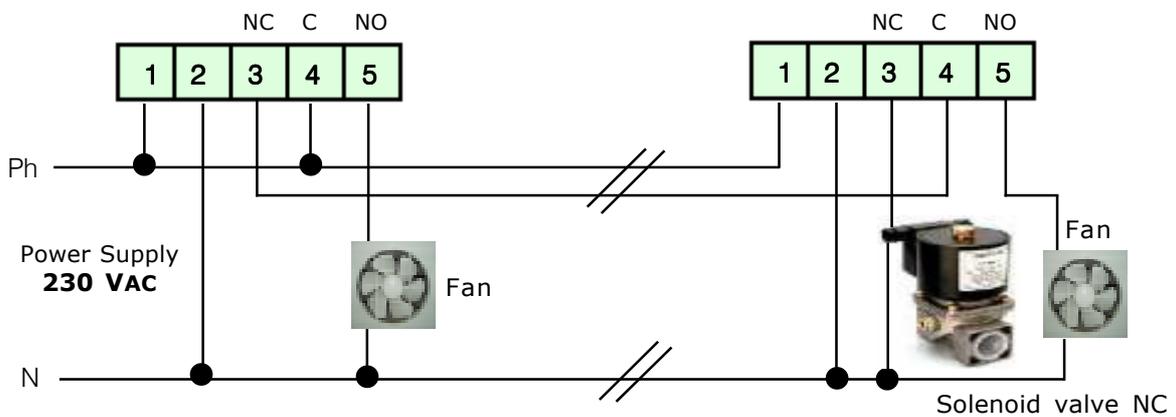
### Connection Scheme normally open valve 230VAC



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



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



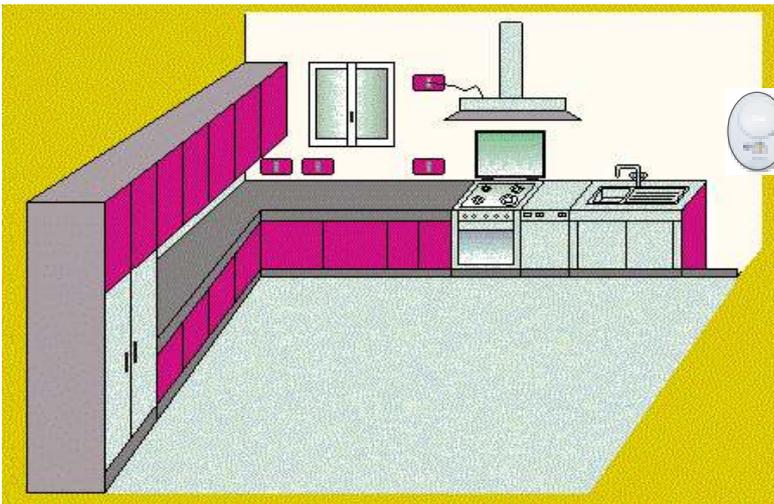
## Installation measures and positioning

The position of the detector is a crucial factor for its correct functioning during gas detection. In order to obtain the maximum results from a device and minimize the probability of false alarms, it is recommended to follow this scheme and keep in mind the following general regulations. the **detector** is an equipment adapted to be mounted on a wall. When installing is good to use reasonable care that requires an electronic device, and then:

- Install the detector away from sources of heat.
- Avoid that the liquids may come into contact with the detector, remembering that its box has a degree of protection IP42.

The detector **must not be installed** behind the barriers that hinder the prompt detection of gas . near of aspirators or fans and in areas where the temperature falls below 10 ° C or rises above 40 ° C.

The installation height of the detector must be at average height of the room about:  
**Minimo 160** cm. from the floor



Carbon monoxide gas detector  
min. 1,60 from the floor



## Turn on and testing

1) When powering on the **CO922**, you will see that the MAINS LED lights up and starts blinking for about 90 seconds. Afterward the LED stays on without blinking, the **CO922** is ready to detect.

2) Press the **button** placed on the side the sensor to simulate the presence of gas. The **Led alarm** lights up, the relay changes the state of work. Ceased the alarm, the Led turns off, it stops the sound of the buzzer and the connected devices will be disabled.

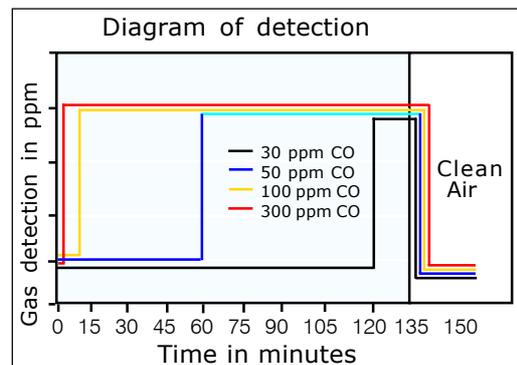
### Test run with GAS

To test the toxic gas emit gas from a pre-calibrated bottle from 30 to 300 ppm, in the grey sensor, see item 5 (of page 3).

Using other types of gas could damage the sensor.

**N.B.** This test is recommended to be performed once a year.

"CONDITIONS		ALARMS "
CONCENTRATION	CO	ALARM AFTER
30 ppm		120 minutes
50 ppm		60 minutes
100 ppm		10 minutes
300 ppm		within 3 minutes



## Before calling a technician check ...



### If the device does not start up.

Check that the 230V power is correctly connected.

### If the fault LED lights up.

Check the **CO922** detection capsule status. They may faulty or to have exhausted after 5/6 years must be replaced.

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

1) Check that there are no gas leaks.

2) Check that there is not a persistent low concentration of CO, Check! see table on page 4

Make sure that together with the alarm it does not turn on even the FAULT led.,in this case proceed to the control of the sensors.

### 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

We advise that **all relays are tension free.**

Check the drawing of the connections.

### If the CO922 is connected to a solenoid valve 12VDC and is not operate

The **CO922** can not be connected directly to solenoid valves, sirens to 12 VDC

Si deve sempre ricorrere ad una alimentazione esterna.

### Do not tamper the detector.

Not to cause the decalibration of the device, and electric shock.

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

### 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 **Carbon Monoxide.**



### Symptoms of Carbon Monoxide "CO" poisoning

#### ppm

150 HEADACHE within 2 hours

250 HEADACHE within 3 hours

450 STRONG HEADACHE

800 CONVULSIONS within 30 minutes

1500 DEATH within 2 hours

5000 DEATH within 20 minutes

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.

**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 handing 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.



**CO922 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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