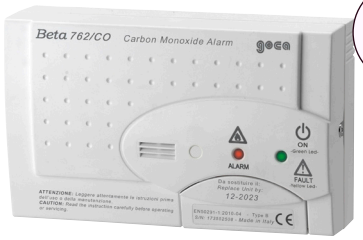
CARBON MONOXIDE DETECTOR

English

serie **Beta**

mod. **762/CO** & **SE325EC**



Made in Italy

	Beta	Detected gas
geca	**762/CO**	Carbon Monoxide
Tecno Control	**SE325EC**	Carbon Monoxide

Installation of this appliance should not be considered as a substitute for proper installation, operation and maintenance of combustion appliances, including suitable ventilation and drainage systems.

- This unit is designed to protect people from the acute effects of exposure to carbon monoxide. It does not completely protect people with particular pathologies. In case of doubt, consult a doctor.

- Long exposure to low levels (> 10 ppm) of CO may cause chronic effects. In case of doubt, consult a doctor.

- The CO alarm device conforms to European Standard EN 50291-1: 2010 "Electrical Appliances for Detecting Carbon monoxide in domestic environments."

INTRODUCTION

*The **Beta** gas detector can be installed in domestic environments.*
This appliance should only be used for the detection of carbon monoxide ("CO").
Carbon monoxide is a very poisonous, colorless and odorless gas produced due to bad combustion.
The high poisonous of the CO can causes - even at very low concentrations, if exposed for a long period - nausea, cephalia, loss of consciousness. If exposure to higher concentrations is continuous, CO may lead to death, having the ability to bind to blood much more easily than oxygen. In this regard, we give the following table to clarify the CO dangerousness in function of its concentration and exposure:

Concentration of CO in air	**Symptoms on human**
100 ppm (0,01%)	Light headache in 2-3 hours.
400 ppm (0,04%)	Light headache in 1-2 hours, rising after 2-3 hours.
1600 ppm (0,16%)	Headaches, dizziness and nausea in 20 minutes, dying within 2 hours.
6400 ppm (0,64%)	Headaches and diarrhea in 1 or 2 minutes, death in 10-15 minutes.
12800 ppm (1,28%)	Death in 1-3 minutes.

Tab.1

It is evident from the above that the CO detector, having to provide a preventive action, must intervene at very low concentrations, before that the concentration of CO absorbed by the organism becomes pernicious.
The unit is calibrated at the factory to signal the alarm when a CO concentration is measured in the air of:

- *50 ppm for 70 minutes*
- *100 ppm for 20 minutes*
- *300 ppm for 1 minute*

These thresholds are guaranteed by the manufacturer for a period of more than 6 years after this period or when the "FAULT" LED is switched on, the product must be replaced.
On the front of the detector is also indicated the date beyond which the product must necessarily be replaced.

GENERAL OPERATIONS

*The **Beta** gas detector has a sensitive element to the concentration of carbon monoxide in the air.*

When the detector is switched to "ON" the GREEN LED (ON) flashes every minute.
When the concentration of carbon monoxide (CO) measured in the air by the detector exceeds one of the three predefined alarm thresholds it turns to the "ALARM" mode by activating it with 0.5 sec intermittence. the buzzer and the RED LED.

VISUAL AND ACUSTIC SIGNALS

This detector features with three luminous signals:

- GREEN LED (ON): STATUS ON in normal operation or in stabilization.

- YELLOW LED (FAULT): The detector does not work properly and must be replaced.

- RED LED (ALARM): Indicates the status of alarm for exceed ed concentration of carbon monoxide (CO) or stabiliza tion mode.

A complete description of the detector's mode can be found on the next page in the "DETECTOR'S MODE" section.

INSTALLATION WARNINGS

Warning: the instrument must be installed and put out of order by qualified technical personnel.

POSITIONING

***Beta** detectors must be installed in each room containing a combustion appliance and additional detectors should be installed to ensure that proper signaling is provided to the occupants of other premises (eg remote areas or bedrooms).*

*If the **Beta** detector is installed in a room containing a combustion equipment:*

- *It should be installed at a height higher than any door or window and close to the ceiling.*
- *If installed on a ceiling, it must be installed at a distance of 30 cm from any wall.*
- *If installed on a wall, it must be located at a distance of 15 cm from the ceiling.*
- *It should be installed at a distance of 1 to 3 mt from the gas utilities (kitchen, boiler, etc.).*

*<u>If the **Beta** detector is installed in a room without a combustion unit (bedroom, living room, etc.).</u>*
- *Does be wall-mounted in line with the height of breathing of the people in the room.*

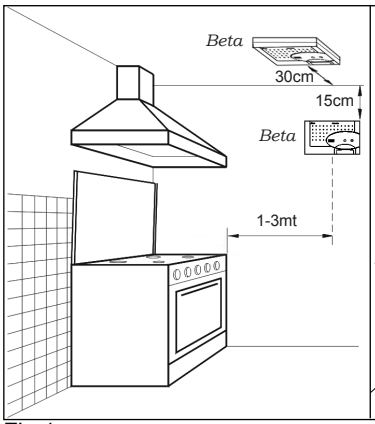


Fig.1

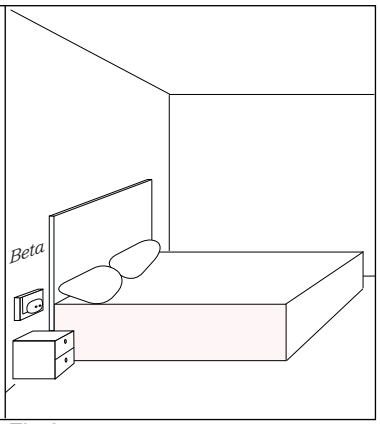


Fig.2

The appliance MUST NOT BE INSTALLED:
- On a shelf.
- Directly above the washbasin or gas appliance.
- In closed rooms or corners where there is no free air circulation.
- Near to walls or other obstacles that can block gas flow from the user to the detector, or aspirators and fans that can deactivate airflow.
- In environments where the temperature may reach above 45 ° C or below -10 ° C.

● *In a damp or wet wall.*
● *In critical environments where dust and dirt can damage the gas sensor.*
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INSTALLATION

With the help of a screwdriver, unscrew the screw on the right side of the product and remove the front panel (Fig.3).

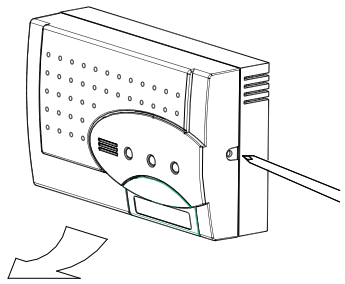

Fig.3

Position the base correctly and secure it to the 3-module recessed box or to the wall using screws and dowels supplied.
For fixing the dowels, pierce the wall with a tip of 5 mm diameter.

FIRST TIME USE

*The **Beta** gas detector is powered by a 3V 1400mAh lithium battery - which guarantees its operation for at least 6 years (under normal conditions).*
After opening the front part, proceed as follows:
● *To turn on the **Beta** gas detector, move the JUMPER inside from the OFF position to the ON position (Fig.4).*
*Each single LED will be blinking accompanied by a "**Beep**".*

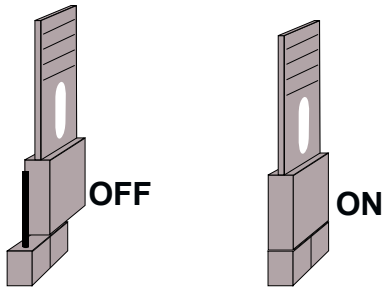

Fig.4

Now the detector goes into stabilization mode.
Place the front part of the detector and screw.

STABILIZATION MODE

Once switched on, the detector needs a stabilization period of about two minutes before working properly. During this period, the detection functions are inhibited.
This state is represented by the synchronous flashing every 8 seconds of the GREEN and RED LEDs.
After the stabilization period has elapsed, the detector switches to normal state ON.

DETECTOR'S MODE

*The table "Tab.2" shows all the operating modes of the **Beta** gas detector.*
*Each MODE is recognizable by a specific number of flashes and / or "**Beeps**" of the buzzer over a period of 1 minute.*

- MODE ON
*The **Beta** Gas Detector emits a flash of the GREEN LED every minute.*
*This means that the **Beta** Gas Detector is active in the detection of Carbon Monoxide (CO).*

- SELF TEST
*The **Beta** Gas Detector performs an automatic* **self-test** *every 10 minutes.*
This is a check of the electronic components inside it, including the sensor, to ensure the full functionality of the detector.
*If the **Self-Test** detects problems, the detector switches to FAULT STATUS.*

- FAULT MODE
*In this status the gas detector emits 2 "**Beeps**" and 2 "flashes" of the YELLOW LED per minute (Tab 2).*
*This means that the **Beta** gas detector is no longer functioning properly and gas detection is no longer guaranteed.*
The gas detector must be replaced.
*You can silence the 2 **Beeps** for a 24-hour period by pressing the **TEST / HUSH** key (see **TEST/HUSH** paragraph).*

- ALARM MODE
In this mode the detector is detecting a concentration of carbon monoxide over the alarm thresholds.
*In this state, the detector emits "**Beeps**" and the RED LED flash intermittently .*
*If the **Beta** gas detector is in ALARM status for more than 15 minutes, to save battery charge, it reduces the "**Beep"** frequency and red LED **flashes**.*
*Only if the amount of gas measured in air is less than 300 ppm it is possible to silence the buzzer for a period of 15 minutes by pressing the **TEST / HUSH** button (see **TEST / HUSH** paragraph).*
After that period, if the gas concentration exceeds the alarm thresholds, the BUZZER will be automatically switched on.

- LOW BATTERY MODE
*In this mode the gas detector emits 1 "**Beep**" and 1 yellow LED blinking every minute (Tab 2).*
*It is also possible to silence the "**Beep**" for a period of 24 hours by pressing the **TEST / HUSH** button (see **TEST / HUSH** paragraph).*
The gas detector must be replaced.

- END OF LIFE OF THE SENSORS' STATUS
*In this mode, the gas detector emits 3 "**Beeps**" and 3 LED YELLOW LED **flashes** every minute (Tab 2).*
The gas detector has exceeded the maximum time in which the operation is guaranteed.

☼ = N° Flash LED per minute

🔊 = N° Beep per minute

	Flash & Beep/Minute		
MODE	RED LED & Beep	GREEN LED & Beep	YELLOW LED & Beep
ON	-	N°1 ☼	-
FAULT	-	-	N°2 ☼ N°2 🔊
ALARM	N°60 ☼ N°60 🔊	-	
END LIFE	-	-	N°3 ☼ N°3 🔊
LOW BATTERY	-	-	N°1 ☼ N°1 🔊

Tab. 2

TEST/HUSH BOTTON

Loosen in the slot with a flat screwdriver (Fig.5) and open the cover below the signal LEDs.

Fig.5

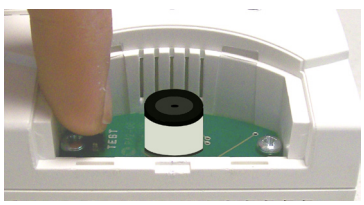

Fig.6

By pressing the TEST / HUSH button (Fig.6) you can:
● *Test the operation of the LEDs and BUZZER of the unit when the detector is in ON mode.*
*In this case, the detector flashes one by one LEDs, associating each one with a **Beep**.*
We recommend you to do this at least once a week.
In case of anomalies contact support.

●*Silence the BUZZER sound (**Beep**) when the detector is in FAULT, END LIFE and LOW BATTERY mode.*
The gas detector will stop "beep" for 24 hours while the YELLOW LED will continue to flash.
After 24 hours the BUZZER will be automatically switched on.

● *silence the BUZZER sound (**Beep**) when the detector is in ALARM status with a concentration below 300 ppm.*
*The gas detector will stop "**Beep**" for 15 minutes while the RED LED will continue to flash.*
After 15 minutes if there is still a concentration of harmful carbon monoxide (CO), BUZZER will be automatically switched on.

ATTENTION!

In the event of an alarm:

1) Open doors and windows to increase the ventilation of the environment.
2) Close the gas counter tap and stop using any combustion device.
3) If the alarm continues and the cause of gas leak is not detectable or negligible, abandon the property and, from the outside, alert the emergency service.
4) If there were people with nausea or headache symptoms, immediately call the health emergency number.
If the alarm stops, it is necessary to identify the cause that has caused it and to act accordingly.

PERIODICAL VERIFICATIONS

We warmly suggest doing a check-test of the detector working, carried-out from your installer - at least once a year.

WARNING

To clean the appliance, use a cloth to remove the dust on the case. Keep in mind that the sensor has good resistance to commonly used products such as sprays, detergents, alcohol, glues or paints, but these products can contain substances that, in large quantities, interfere with the sensor causing false alarms.
It is advisable to ventilate the room when using these products.
Solvent or silicone vapors can deteriorate the gas sensor even during storage in the warehouse.
The use of the gas detector outside the temperature range and humidity indicated may damage the sensor and reduce its life duration.
It is reminded that the detector is unable to detect leaks that occur outside the room where it is installed either inside the walls or under the floor.

SALES CONDITION

THE PRESENT CERTIFICATE IS THE ONLY DOCUMENT TO HAVE THE RIGHT OF REPARATION OF DEVICE IN WARRANTY

• The product is warranted for 24 month from purchase date.
• Any damages caused by tampering and incorrect use or installation will be not covered by warranty.
• The warranty is valid only if is full compiled.
• In case of defects covered by warranty, the producer will repair or replace the free product.

PERFORMANCES OUT OF WARRANTY:
When warranty's terms are spent, the eventual reparations will debited in according to the replaced parts and to the hand costs.

WARRANTY CERTIFICATE

COMPILE AND SEND IN CASE OF DAMAGE.

DEVICE:
☐ *serie **Beta** mod. 762/CO* ☐ *serie **Beta** mod. SE325EC*

Serial number (s.n.)_____

DEALER
Stamp:

Date of purchase:

_____/_____/_____

USER
*Surname and name*_____
*Address*_____*N°*_____
*City*_____
*Telephone*_____

TO COMPILE BY THE INSTALLER:

Installation date _____
Substitution date _____
Installation local _____
Instruments' serial number _____
(to read on the frontal plastic involucres)

Stamp

Sign _____

TECHNICAL CHARACTERISTICS

- Power:	*Lithium battery 3V - 1400 mAh (NOT replaceable)*
- Battery life:	*more than 6 years (in normal operation)*
- Sensor life:	*more than 6 years in a domestic environment according to specifications.*
- Working temperature:	*-10 ° C ... + 45 ° C.*
- Relative humidity:	*30% ... 90% UR.*
- Sensor operation limit:	*5000 ppm max 15 minutes*
- Maximum storage time:	*6 months*
- Intervention thresholds:	*●50 ppm for 70 minutes.* *●100 ppm for 20 minutes.* *●300 ppm for 1 minute.*
- Acoustic signal:	*80 dB (A) to 1 meter.*
- Protection degree:	*IP42.*

- Electronic self-diagnosis with anomaly signal.
- The CO alarm device conforms to the European standard EN 50291-1: 2010 "Electrical devices for the detection of carbon monoxide in domestic environments".

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