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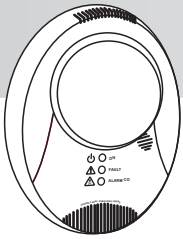


ELECTRIC PERRY
PERRY ELECTRIC Srl
Via Milanese, 11 - 22070 VENIANO (CO) - ITALY - www.perry.it

CO Gas Detector

1GA 50916/CO

BUILT ACCORDING TO THE REGULATIONS: EN50291-1 EN50270

The detector has been designed and built according to European regulations to detect, in versatile way, 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 CO 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.

⚠ AVVERTENZE ⚠

Before connecting the unit careful reading of instruction booklet is recommended, and it is kept in a safe place for future reference. The manufacturer reserves the right to make all technical and manufacturing modifications deemed necessary without prior notice.

Important: installation/maintenance of the appliance must be implemented by qualified personnel and in conformity with current laws and regulations. The manufacturer declines any liability in connection with the use of products subject to special environmental and/or installation standards.

Installation / maintenance of the appliance must be carried out in the absence of mains voltage.

This equipment is designed to protect individuals from acute exposure to monooxide carbon. This equipment will not completely protect individuals with specific medical conditions.
In doubt, consult a practitioner.

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 the manufacturer 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.

CRITERIA, OBLIGATIONS, INDICATIONS FOR THE CORRECT OPERATION OF THE DETECTOR

The installation of the CO gas detector, its ordinary and extraordinary maintenance, once a year, 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 CO gas detector, use it by respecting the following precautions:
- 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.
- 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.

Cleaning: never clean the device with chemical products. If necessary, wash with a moist cloth.
Avoid contacting the go near the device with cloths soaked with diluents, alcohol and chemical detergents.

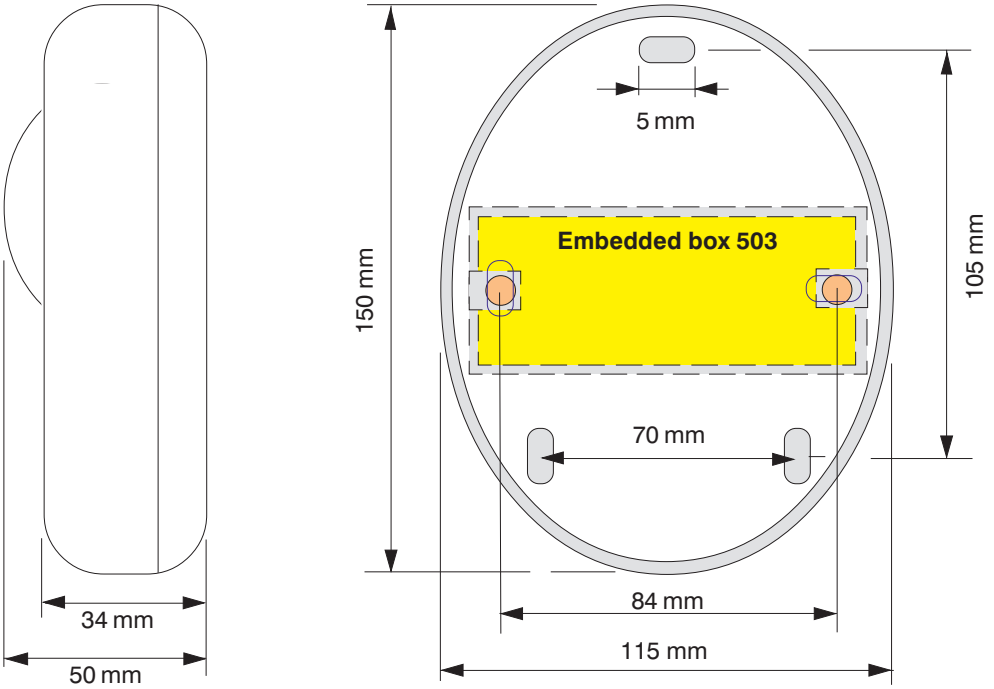
Operating specifications of the gas sensors
The ELECTROCHEMICAL CELL technology sensor, for toxic gas CO, has a duration of 5 years.
The sensor's functioning temperature ranges from -10°C to +40C°

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.

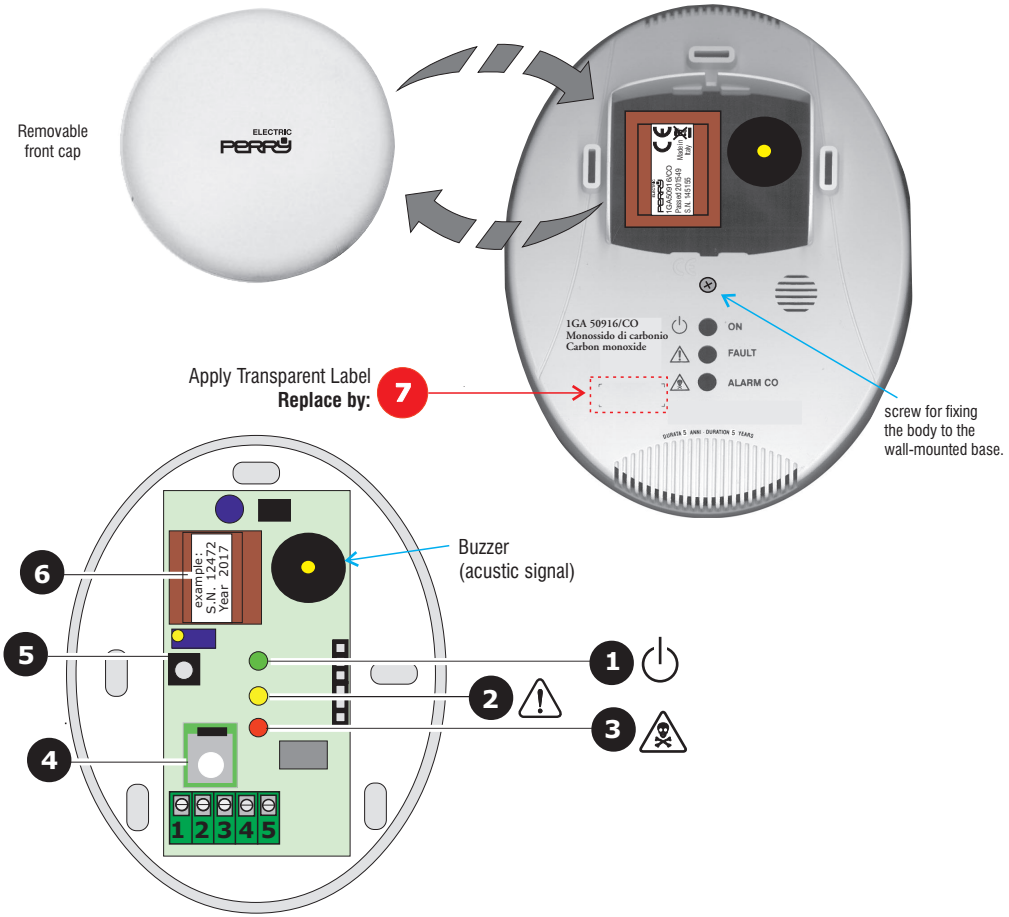
Maintenance
Every 6 months, the user must perform a detector's operation check by spraying appropriate test gases in the slots placed on the front of the appliance, until the detector alarm status is reached:
- At least once a year make a more accurate check by a specialist technician.
- Disabling the detector (after 5 years from installation) must be carried out by qualified personnel.

TECHNICAL SPECIFICATIONS	
Power supply	**230V~ ±10% 50Hz**
Power consumption	3W
Change-over relays for CO toxic gas detection	5(2)A / 250V~
CO toxic gas sensor	Electrochemical Cell
CO detector alarm sensitivity	as per EN 50291 Accumulation 30÷300ppm
Precision of the equipment	1% FS
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	115x150x50

DIMENSIONS



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 90 seconds.
Afterwards the Led stays on without blinking. **During the test period, the CO 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 (CO)** 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.

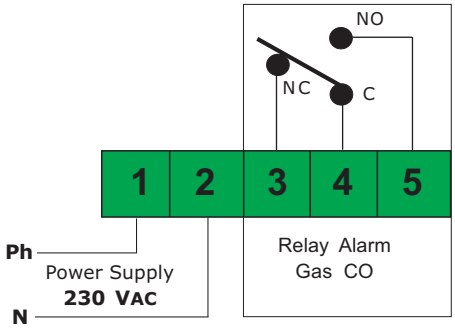
The fact of installing a co detector does not in any way diminish the obligation to observe all the usual rules governing the specifications, installation and use of gas appliances, the ventilation of premises and the removal of products of combustion as prescribed by the UNI standards as well as ART. 3 LAW 1083 / 71 and the relevant provisions of the Law.

ELECTRICAL CONNECTIONS

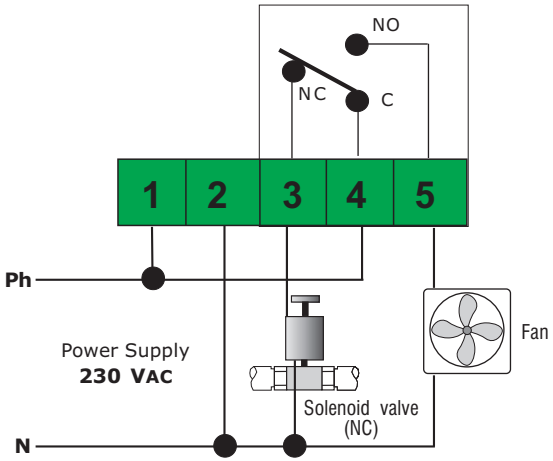
WARNING!
Before connecting to the mains power, ensure the voltage is correct.
Carefully follow the instructions and the connections according to Regulations in force, keeping in mind that the signal cables should be laid separate from the power cables.

ATTENTION ! The relays are voltage free

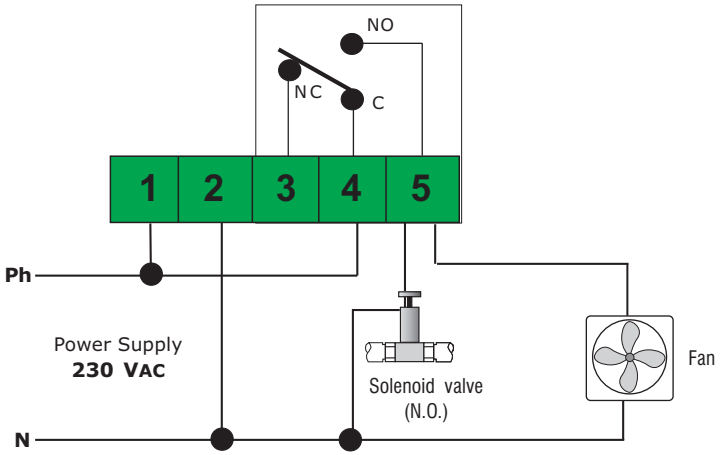
Connection Scheme of the Detector



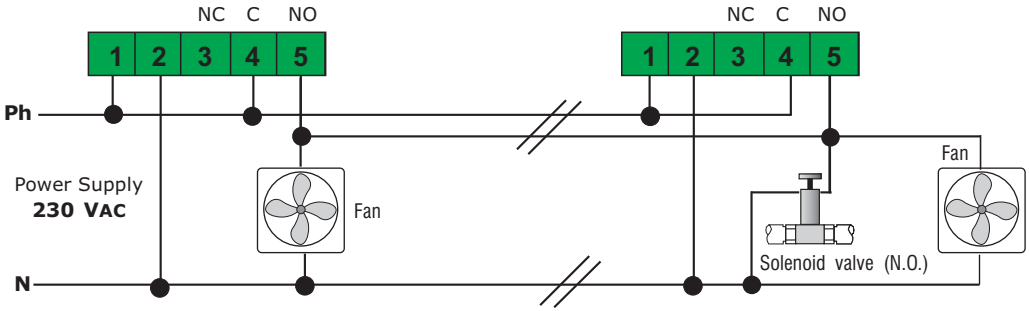
Connection Scheme <u>normally close</u> valve 230VAC



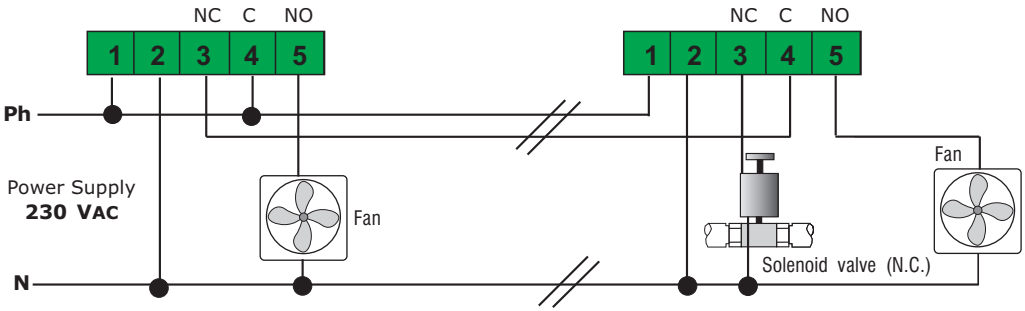
Connection Scheme <u>normally open</u> valve 230VAC



One or more detectors with a <u>normally open</u> valve 230VAC



One or more detectors with a <u>normally close</u> valve 230VAC

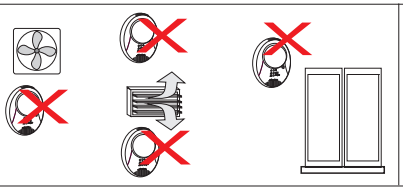


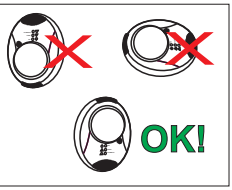
INSTALLATION MEASURES AND POSITIONING

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 CO detector is an equipment adapted to be mounted externally 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.

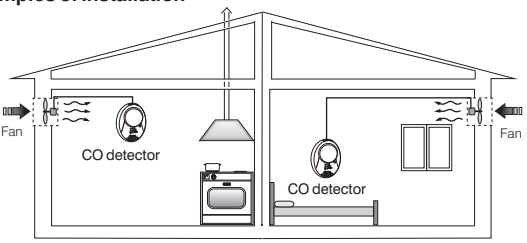
The detector must not be installed behind the barriers that hinder the prompt detection of gas near of aspirators or fans and in areas where the temperature falls below 10 °C or rises above 40 °C.

Caution! do not install the CO detectors near: sink, air vents, HVAC appliances or windows.





Examples of installation



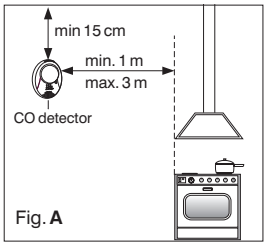


Fig. **A**

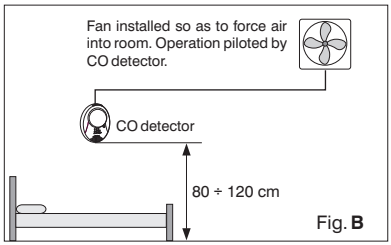


Fig. **B**

INSTALLATION IN ROOMS WITH FUEL-BURNING APPLIANCES (E.G.: KITCHEN)

- Install the CO detector min 15 cm from ceiling (fig. **A**)
- Install the CO detector between 1 m and 3 m from fuel burning appliances

INSTALLATION IN ROOMS WHERE THERE ARE NO FUEL-BURNING APPLIANCES (E.G.: BEDROOMS)

- Install the CO detector between 80 cm and 120 cm max from the floor (fig. **B**).

Note: when installing CO detectors within multi-storey, interconnected real-estate units, additional gas detectors should be installed on each level and / or in each bedroom.

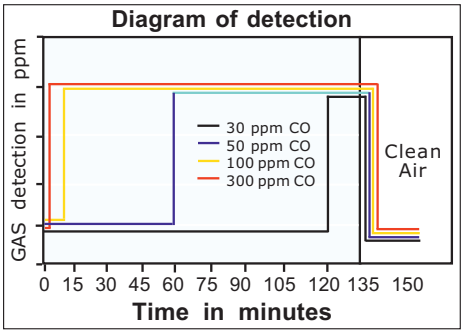
TURN ON AND TESTING

1) When powering on the CO, you will see that the MAINS LED lights up and starts blinking for about 90 seconds. Afterward the green LED stays on without blinking, the CO 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 CO (carbon monoxide) from a pre-calibrated bottle from 30 to 300 ppm, in the grey sensor (see item 4 of page 3).
Using other types of gas could damage the sensor.
N.B.: this test is recommended to be performed once a year.

Table n° 2 of EN 50291-1	
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 CO detection capsule status: they may faulty or to have exhausted: after 5 years must be replaced.

If the detector is repeatedly issuing an alarm.
Check that there is not a persistent low concentration of CO (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 (as per examples on page 4 and 5).
***Note:** we advise that all relays are tension free.*
Check the drawing of the connections.

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 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 continues and the cause of gas presence cannot be found or removed, abandon the building and call the emergency services when outside, without using the home phone.

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	SYMPTOMS
150	HEADACHE within 3 hours
250	HEADACHE within 2 hours
450	STRONG HEADACHE
800	CONVULSIONS within 30 minutes
1500	DEATH within 2 hours
5000	DEATH within 20 minutes

This equipment is designed to protect individuals from the acute effects of carbon monoxide exposure. This equipment will not completely protect individuals with specific medical conditions. In doubt, consult a practitioner.

ENTER THE INDICATED DATA

Serial number

Construction date

Installation date

Replacement date

Installation area

Contractor stamp and signature

DISPOSAL OF ELECTRICAL & ELECTRONIC EQUIPMENT

This symbol on the product or its packaging to 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 centre, 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 house hold waste disposal service or the shop where you purchased the product..

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