

INSTRUCTION BOOKLET

WARNINGS



“The text of this booklet has been drawn up by using the GUIDE TO THE DRAWING UP OF WARNINGS DESTINED TO ACCOMPANY ELECTRICAL AND NON ELECTRICAL EQUIPMENT”

This booklet is an integral and essential part of the product and should be handed over to the user.

Read the warnings contained in this booklet carefully as they give important indications regarding the safety of the installation, use and maintenance.

- Please preserve this booklet for any further consultation that may be necessary. Children should not be allowed in reach of the packaging elements (plastic bags, expanded polystyrene, nails, etc.) as they are potential sources of danger.

- **The installation must be carried out by qualified personnel, in accordance with current regulations, according to the maker's instructions.**

- **Before plugging in the equipment, make sure that the data on the plaque correspond to those of the electricity distribution network.**

The installation regulations can vary from country to country (*).

Incorrect installation can cause harm to people, animals of things, for which the maker cannot be held responsible.

The electrical safety of this equipment is achieved only if correctly connected to an effective earthed system carried out as foreseen by the current safety regulations. It is necessary to verify this fundamental safety requirement and, in the case of doubt, ask for an accurate checking of the system by professionally-qualified personnel. The maker cannot be held responsible for eventual damage caused by not earthing the system.

Check that the electrical capacity of the system is adequate for the maximum power of the equipment indicated on the plaque.

If in doubt, please ask a professionally-qualified person.

This person should, in particular, also ascertain that the section of the system cables is suitable for the power absorbed by the equipment.

It is forbidden to use adaptors, multiple plugs and/or extension wires.

- **This equipment should be destined only to the use for which it has been expressly conceived, i.e. to detect domestic gas (natural and butane/propane). Any other use should be considered improper and therefore dangerous.**

The maker cannot be held responsible for eventual damage caused by improper, incorrect and unreasonable use.

- The use of any electrical equipment involves the observance of some fundamental rules.

In particular:

- **do not touch the equipment with damp or humid hands or feet.**

DECLARATION OF CONFORMITY

(according to ISO/IEC Guide 22 and EN 45014)

- do not use the equipment when you have bare feet.
 - do not use extension wires in rooms used as bathrooms or showers.
 - do not pull the electricity supply wire in order to disconnect the equipment from the supply network.
 - **do not leave the equipment exposed to atmospherical agents** (rain, sun, etc.), unless expressly foreseen.
 - **do not allow the equipment to be used by small children or incapable persons.**
 - **Before carrying out any cleaning of maintenance operations, unplug the equipment from the electrical supply network** by turning off the system's switch.
 - **In the case of a breakdown and/or poor functioning of the equipment, switch it off, without making any attempt to repair it or intervene directly.**
 - Apply exclusively to professionally-qualified personnel.**
- The eventual repairs to the products should only be carried out by the maker or by an authorized assistance centre, exclusively using original spare parts.
- A lack of observance of that mentioned above could compromise the safety of the equipment.**

- An omnipower switch should be provided for the installation as foreseen by current safety regulations (**), with a contact opening distance of 3 mm or more.
 - In order to avoid dangerous overheating, the unwinding of the entire length of supply cable is recommended.
 - Do not block the suction or dissipation grids.
 - The user should not replace the supply cable of this equipment.
- Should the cable be damaged, turn off the equipment and, for the replacement of the cable, apply exclusively to professionally-qualified personnel.
- Should you decide not to use a piece of equipment of this kind any longer, it is advisable to render it inoperative by disconnecting the supply terminals from the electrical side, after having removed the cable from the supply network.
- We also advise you to render harmless those parts susceptible of causing a potential source of danger.
- Discharge: transformer and relays should be consigned to firms which recycle copper. All the rest should be discharged as special refuse non polluting.

(*) In Italy follow the EN 50194

(**) In Italy follow the DL81/2008 law

PARTICULAR POINTS TO NOTE

- **To guarantee the efficiency of the plant and its correct functioning, it is indispensable to observe the maker's indications and to have the periodical maintenance of the plant carried out by professionally-qualified personnel.**
- In particular, it is recommended to have the correct functioning of all the safety devices checked periodically.**
- **Learn to use the manual emergency control system according to the procedures foreseen in the instruction booklet.**

Manufacturer's Name: ALLTRONIC s.n.c.

Manufacturer's Address: Via Torino, 84
12041 Bene Vagienna (Cn)
Italy

DECLARES THAT THE FOLLOWING PRODUCT

Product Name: Gas Central

Model: GS200/A - GSI10/A - GSI20 - GSI22/A - GSI4/8
VU GAS METER

CONFORMS TO THE FOLLOWING SPECIFICATIONS BASED ON SAMPLE TESTING:

EN 55011		EN 61000-6-3 + A11
EN 55014-1		EN 60335-1
ENV 555014-2	EN 50194	
EN 61000-3-2		EN 50270
EN 61000-3-3		UNI CEI 70028

The product has been tested in the installation typical configuration and with peripherals which conform to EMC Directive.

The described sample fulfils the above mentioned EMC requirements, on the basis of the test results and their evaluation made by our factory with the following equipments:

SCHWARZBECK MOD. FCKL 1528
SCHWARZBECK MOD. NSLK 8126SN309
HILO TEST MOD. EFTG 4510 (Electrical Fast Transient Generator)
PMM 8010 Receiver S/N 0570 da 8 KHz a 30 Mhz
PMM L3-25 (LISN) Artificial Mains Network S/N 0336 N taratura 0161
COMPUTER OLIDATA Mod. 1451 CLR

supported by Tests of Competent Bodies: Report No. 242/95 Certified on 24/07/95 and Report No. 354/95 Certified on 11/01/96 - Body "SICURCONTROL" of Carugate (Milan), Accredited SINAL at No. 0046.

I the undersigned declare that the product herewith complies with the protection requirements of the EMC Directive 89/336/EEC, the Low Tension Directive 73/23/CEE (EN60335-1), the British Standard BS 7348 and the European Standard EN 50194.

Bene Vagienna, 10/04/2012

Allodi Francesco

Francesco Allodi

Owner

Installation of Gas detectors GSI

The sensor should be installed into the environment to be inspected according with law requirements and the following instructions:

- To detect light gases (methane): place it near the ceiling (10-30 cm).
- To detect heavy gases (GPL) : place it near the floor (10-30 cm).
- Do not place it up more than 4 meters far from the point to be inspected when it is fixed on the floor neither more than 8 meters when it is fixed on the ceiling (methane).
- Never place it less than 30 cm far from the ceiling or more than 30 cm from the floor.
- Never place it directly upon kitchen stoves.
- Never place it near fans, suction fans or refrigeration systems.
- Never place it near areas where there is much steam.
- Never place it in areas where there is splashing water.
- Install it in places safe from possible damage.
- Place it avoiding any impediment between the sensor and the environment to be inspected.
- Place it so as to permit easy handling and maintenance of the unit.
- Remember that the sensor can be affected by composed gas (alcohol, cigarette smoke, deodorizers, insecticides).
- Install the sensor taking care not to inadvertently disconnect it from other switches.
- Remember to periodically test its performances spraying some light gas (e.g. cigarette-lighter gas) on the sensor.

Gas Sensors type GSI - GSI/S - GSI/ADF

Gas sensors - detectors for industrial use, sensitive to light and stratified butane/propane gas in bottles, methane and other compound-gasses.

SENSOR CHARACTERISTICS:

- **GSI** Gas sensor with excited relay (positive safety)
- **GSI/S** Sensor similar to GSI, but mounted into a watertight container.
- **GSI/ADF** Sensor similar to GSI, but mounted into an explosion-proof container

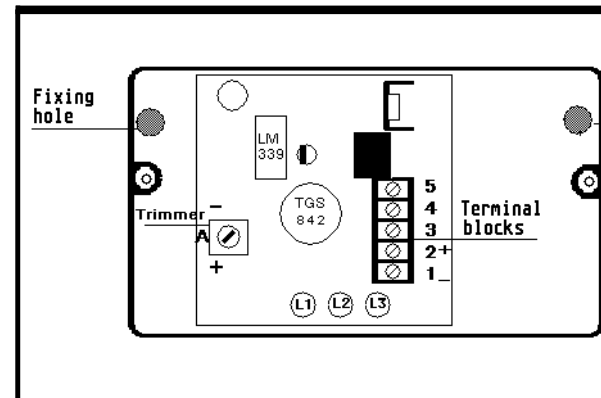


Fig. 1 - Upper side of the sensor type GSI with indication of terminal and adjusting arrangement.

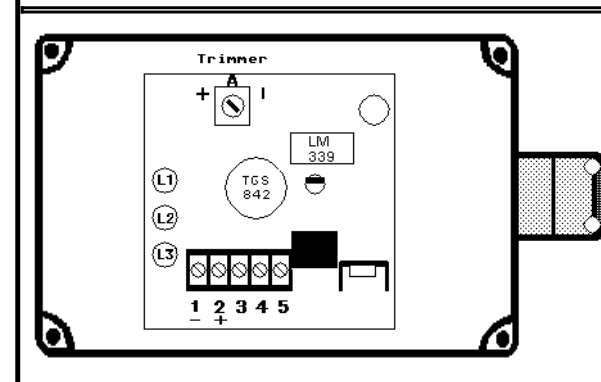


Fig. 2 - Upper side of the sensor type GSI/S. As you can see, the arrangement of components, adjustings and connections is the same as in type GSI.

Technical Characteristics :

- Gas detector powered at 12Vdc. (24Vdc. by request).
- Visualization of:
green led = power supply on
red led = alarm
yellow led = fault.
- Exit of contacts (1A - 30V max.) free from supply in exchange with normally excited relay (positive safety).
- 1 minute starting temporization (when supplying power) in order to allow sensor heating-up (FIGARO TGS 2611).
- Sensor control with electronic calibration system and alarm in case of gas losses, fault or sensor removal.
- The sensors type GSI/S and GSI/ADF have been designed in the same way as the sensor type GSI, but the former is mounted into a watertight container and the latter in a explosion-proof one with outside sensor and special protection and filters. These sensors are particularly suitable for moisty, dusty and/or explosive places.

Sensor connection diagram

Terminal block GSI



Relay contact position
in surveillance condition

Input 12Vdc.
(by request 24Vdc.)

Fig. 3

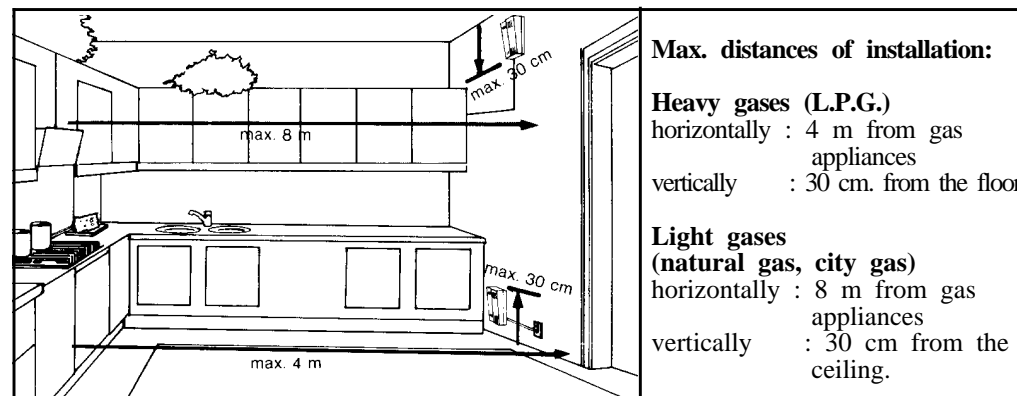
Connections of the GSI sensor terminal block :

- 1 = Power supply entrance 0 Vdc.
- 2 = Power supply entrance 12Vdc. (by request 24Vdc.).
- 3 = Normally Closed contact (when there is power supply).
- 4 = Relay Common contact.
- 5 = Normally Open contact (when there is power supply).

TECHNICAL CHARACTERISTICS :

- Sensor electrical input in stand-by : 210 mA (at 13.2Vdc.)
- Sensor electrical input in alarm : 180 mA (at 13.2Vdc.)
- Relay contact capacity (at 30Vdc.) : 1 A
- L1 = Green led signalling powered on unit.
- L2 = Red led signalling the presence of gas.
- L3 = Yellow led signalling "fault".

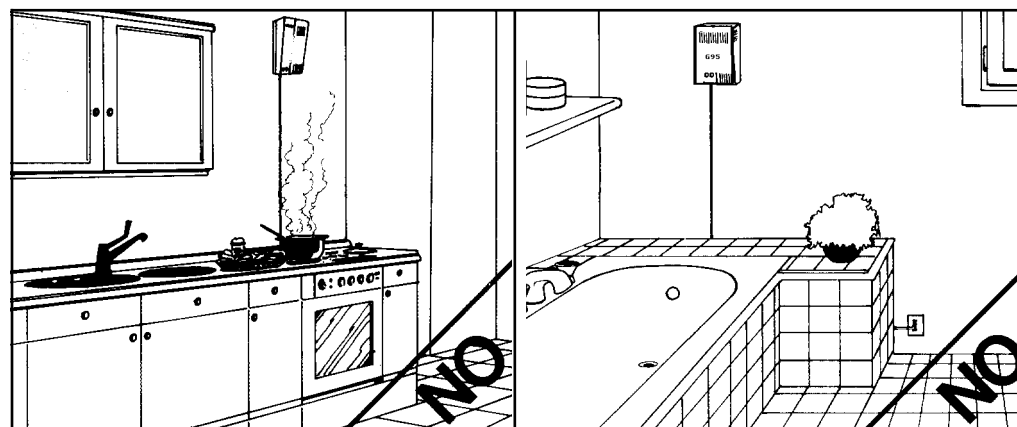
The ALLTRONIC snc reserves the right to change materials or/and technical details without notice.



Do not place the sensor :

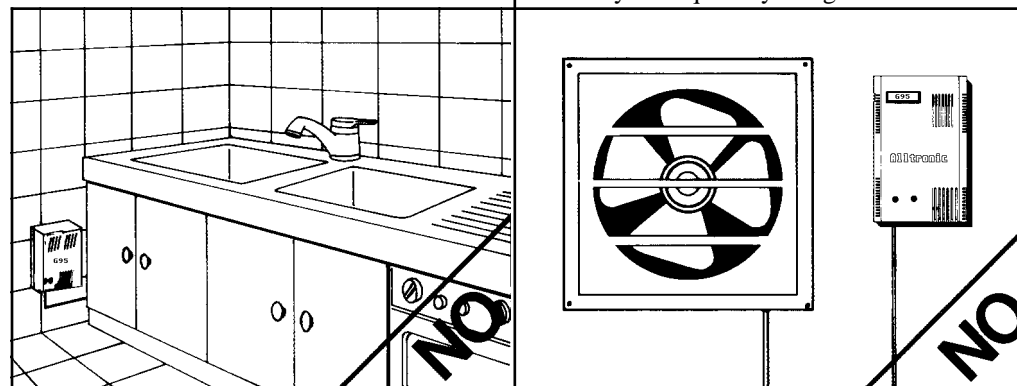
Upon kitchen stoves.

Near areas where there is much steam.



In areas where there is splashing water.

Near fans and/or suction fans which modify the quantity of gas in the air.



Gases that the sensing head TGS can detect

Hydrocarbons and their by-products	Formula	Explosion Limit in the air (vol.%)	Density (air=1)
Natural gas	CH ₄	5.0 ~ 15.0	0.6
Ethane	C ₂ H ₆	3.0 ~ 12.4	1.0
Propane	C ₃ H ₈	2.1 ~ 9.5	1.6
Butane	C ₄ H ₁₀	1.8 ~ 8.4	2.0
Pentane	C ₅ H ₁₂	1.4 ~ 7.8	2.5
Hexane	C ₆ H ₁₄	1.2 ~ 7.4	3.0
Petrol		1.3 ~ 7.6	3 ~ 4
Kerosene		0.6 ~ 6.0	4.5
Naphtha		0.9 ~ 6.0	3.8
Acetylene	C ₂ H ₂	2.5 ~ 81.0	0.9
Inorganic gases			
Ammonia	NH ₃	16.0 ~ 25.0	0.6
Carbon monoxide	CO	12.5 ~ 74.0	1.0

Sensor adjustments

SENSOR SENSITIVITY ADJUSTMENT

The range of sensitivity adjustment is from a minimum of 25% to a maximum of 5% of the Lower Limit of Explosion (with reference to methane gas and propane one).

Below the 30% of L.L.E. the yellow warning led ("Fault") and the red one ("Alarm") will come on indicating you have gone below the permitted safety limit.

NOTE: the sensor is delivered adjusted and tested for an intervention at a 20% of the L.L.E. - **Reference L.L.E. METHANE GAS** (Contingent adjustments for other types of gas can be supplied upon specific request).

Mishandlings of the sensor will cause an alarm condition. The unit works with excited relay in surveillance condition (Positive safety).

The ALLTRONIC snc is not responsible for wrong connections and/or mishandlings which will not be considered under guarantee.

Installation of Gas detectors GSI

The sensor should be installed into the environment to be inspected according with law requirements and the following instructions:

- To detect light gases (natural gas) - place it near the ceiling (10-30 cm).
- To detect heavy gases (LPG) - place it near the floor (10-30 cm).
- Do not place it more than 4 meters far from kitchen stoves when it is fixed on the floor (LPG) or more than 8 meters when it is fixed on the ceiling (natural gas).
- Never place it less than 30 cm far from the ceiling or more than 30 cm from the floor.
- Never place it directly upon kitchen stoves.
- Never place it near fans, suction fans or refrigeration systems.
- Never place it near areas where there is much steam.
- Never place it in areas where there is splashing water.
- Never place it in closed rooms
- Never place it near doors or windows.
- Never place it in areas where temperatures are different from the limits given by the manufacturer.
- Install it in places safe from possible damage.
- Place it avoiding any impediment between the sensor and the kitchen.
- Place it so as to permit easy handling and maintenance of the unit.
- Remember that the sensor can be affected by composed gas (alcohol, cigarette smoke, deodorizers, insecticides).
- Install the sensor taking care not to inadvertently disconnect it from other switches.
- Remember to periodically test its performances spraying some light gas on the sensor (e.g. cigarette-lighter gas).

SENSOR TO CONTROL AND DETECT GAS TYPE GSI - GSI/S - GSI/ADF

For users

Maintenance

The gas detectors type GSI have a working period guaranteed for 6 years (the guarantee of the unit covers the faults for 1 year) and are self-controlled: in case of fault of the detecting head or changing of the adjustment, the alarm will come on.

In any case the sensor should be tested at least every 3 months (with cigarette-lighter gas), checking the valve closing.

Operation

The equipment controls contingent gas leaks and, if they exceed the 20% of the Lower Limit of Explosion, it starts the control to which it is connected **In this case you should follow the instructions on page nearby.**

The alarm by means of a buzzer and the yellow and red warning leds indicates the sensor fault; in this case you should ask the manufacturer advice in order to restore the operation of the unit.

The user should be present during the final test made by the installer, in order to learn about the operation of the gas detector and control and to make sure that the following data are filled in:

Date of installation :

Expiry of guaranteed working period :

Installation room :

Serial number (on the bottom of the sensor) :

The installer : (stamp and signature)

Address :

DETECTABLE GAS : NATURAL GAS - L.P.G. (cross out that not detected)