

Gas probe

SG580



The **SG580** is born from the elegance and prestige that has always distinguished **BEINAT S.r.l.** and from the home fitness concept. The device has the capacity of controlling, the presence of various types of gas "**explosive gas**", such as Methane, LPG.

The probe is managed by a microprocessor which not only supplies an alarm signal to the control unit connected to it, but also allows execution of a self-diagnosis and therefore an **AUTOMATIC CALIBRATION**, in order to always have the maximum detection accuracy. The self-calibration means the probe adapts in harsh and variable temperature environments, avoiding false alarms due to anomalous events. The probe has a 0 ÷ 20 % L.E.L. linear output conforming to the 4 ÷ 20mA standard, for which can be connected with one of BEINAT's industrial control units.

Note: This probe is not ATEX Certificate

Installation and user guide

Firmware Versione 1.0

CONFORMITY

**EN 50194
EMC EN50270**

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.

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.

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

TERMS and EXPECTATIONS: The installation of the **SG580** probe, 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 probe can be seriously damaged when immersed in water. Remember that the probe has an EEX protection degree.

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.

Technical Specifications

Power Supply **12÷24VDC** ± 10%
Power Demand 110 mA max @ 13.8V
Sensor Catalytic

Detector range of measurement 0 ÷ 20% of L.E.L.
Detection Gas Methane and/or LPG
Output 4mA - 20mA standard tolerance
Accuracy +/- 1%
Long term shift in clean air < ± 3 LEL

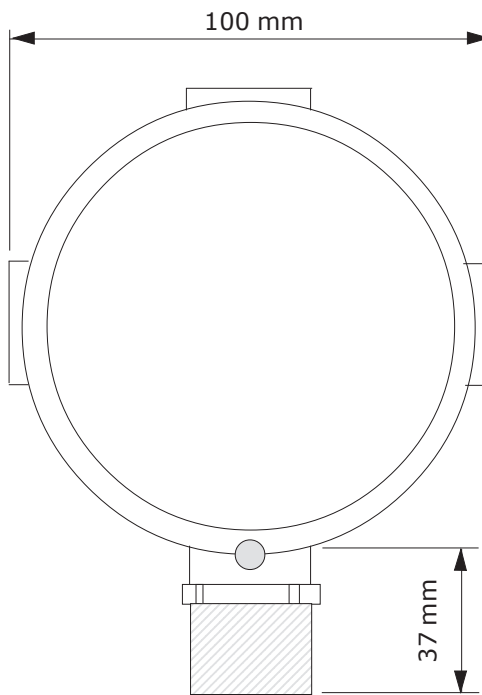
Control Units that can be used.....BX444-Mc, BX449F, GS100M, GS300M, BX150, BX180, BX280, BX308, BX316
Functioning Humidity 0-90% non condensed
Functioning Temperature From -10°C to +50°C
Max. distance between probe and unit 100 m
Connection cables diameter 1mm

Connection: The probe connection cables should be laid separate from the supply cables

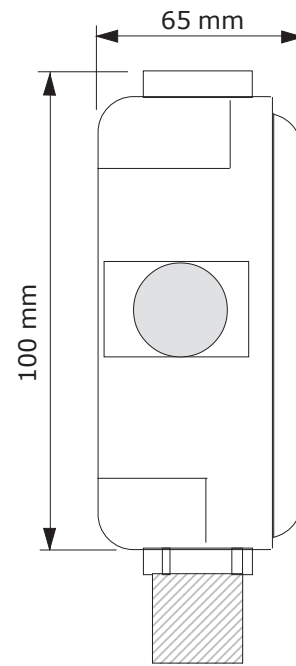
Probe's body material Die-Cast aluminium
Degree of external protection IP65
Electromagnetic compatibility "CE Reference Norms" EN 50270
Size100mm
Warranty 3 years

Dimensions

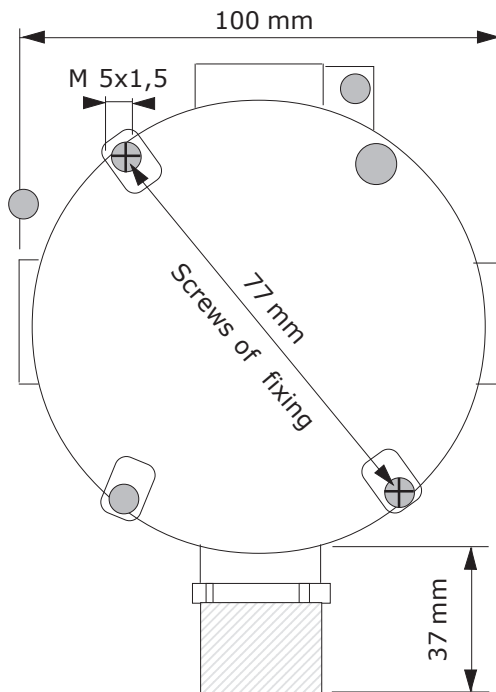
Front view



Side view



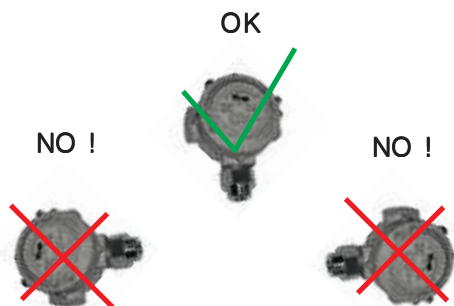
Rearward view



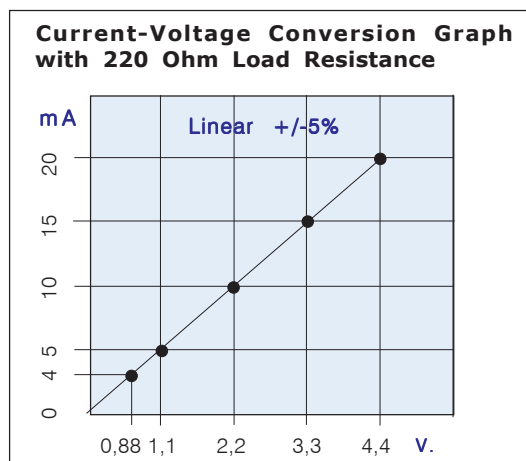
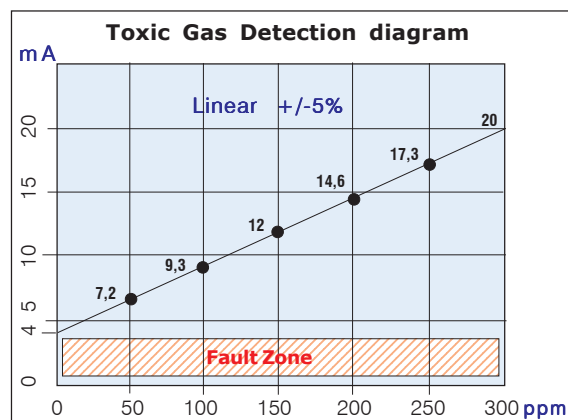
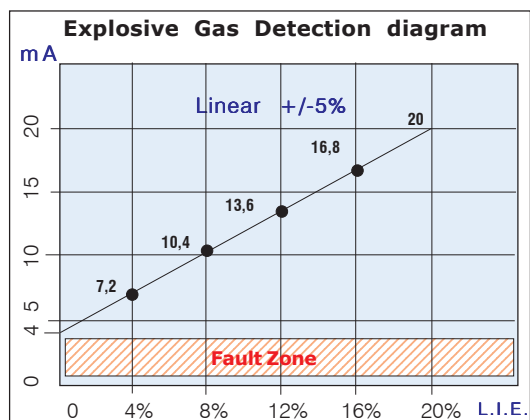
Positioning of the probe

The position of the probe is a crucial factor for its correct functioning. 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 remote probe must be located at different heights, according to the type of gas. These heights are:

- **30 cm** from the lowest point of the floor in order to detect **heavy gases: GPL**
- **30 cm** from the highest point of the ceiling in order to detect **light gases: Methane, Hydrogen**
- The probe **should not be installed** near the appliance to be controlled but on the opposite wall.
- The probe **should not be** affected by smoke, vapour, etc. as they could distort its measurement. It should be located away from sources of heat, ventilators or fans.



Detection diagrams data



Troubleshooting before calling a technician

If the device does not start up.

Check that the 12/24 Vdc power is present, and that positive and negative polarity has not been inverted.

If the Fault LED lights up.

If the fault signal reaches the control unit connected to the probe.

Check that the cables are connected according to the drawing, and that the wire isolation sheath has not been pinched.

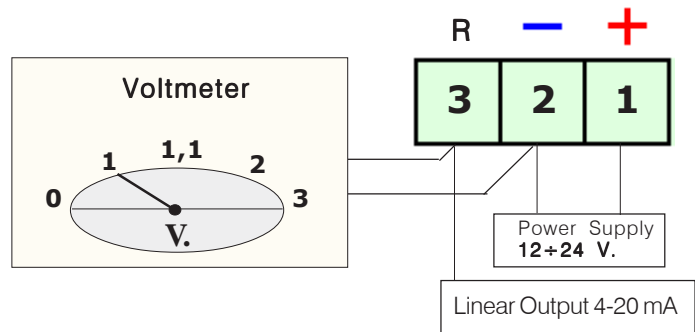
Check the voltage at the terminals 1-2. It must be higher than 10,80 Vdc and lesser than 26,4Vdc.

Check the voltage at the terminals 2-3. It must be from a minimum of 0.8 Vdc to a maximum of 1.1 Vdc.

WARNING.

These measurement should be performed in clean air.

Moreover, this test must be performed only with the probe connected to a control unit, or with a 220 Ohm resistance installed between terminal 2 and terminal 3.



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

WARNINGS and specifications of the sensor capsules

WARNING!

The **CATALYTIC** technology sensor has a duration that can vary from 5 to 6 years (in clean air).

The probe's functioning temperature ranges from **-10°C to +40°C**.

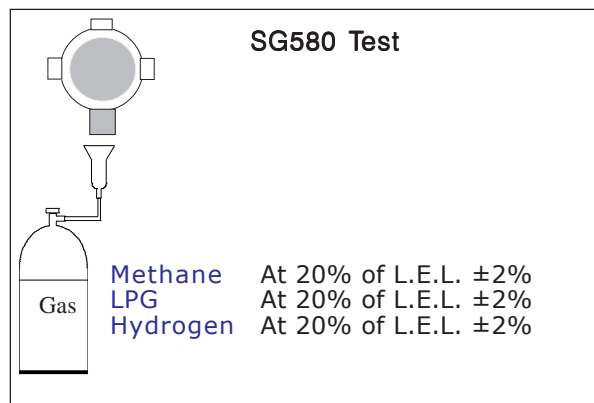
The **CATALYTIC** probe does not tolerate a gas detection exceeding **100% of L.E.L.**, with consequent natural death of the sensor.

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. Moreover, you can damage the sensor.

Gas Input Test



The installation of the **SG580** probe, 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 or specialized personnel.

The general test should be performed by issuing gas from a pre-calibrated aerosol within the percentages illustrated on the side. We recommended to carry out this test at least once a year.

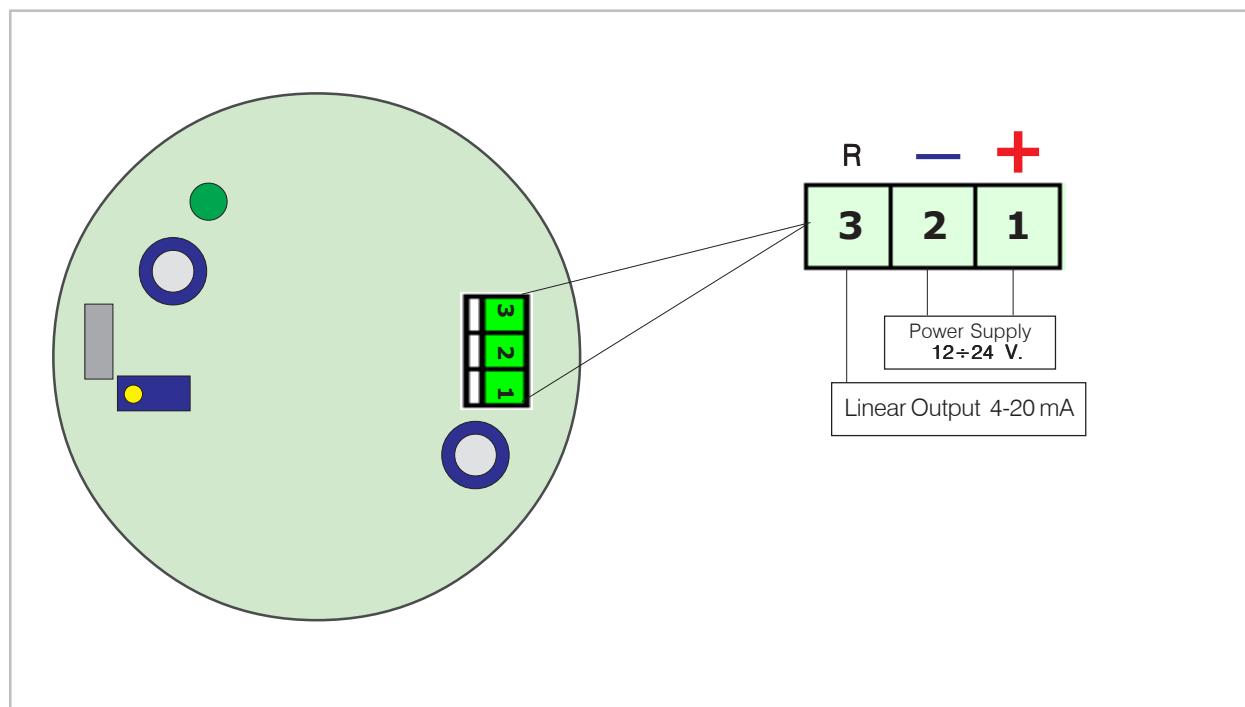
Electrical connections

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.

NOTE

Please remind that if you pierce the FLAMEPROOF container, it will completely lose its properties. Moreover, you should install a FLAMEPROOF cable-gland for the connection cables



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.)

Note

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.



SG580 Probe		Styling by b&b design	
Purchase date		Stamp and signature of the dealer	
Registration number			

In agreement with its continuous development policy, **BEINAT S.r.l.** reserves the right to modify its products without notice.

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