Belongin to

ANIE CONFINDUSTRIA

Firmware.
Versione V 1.0

Gas probe

HCF100

Refrigerant FREON 410A, R134A, 407C

The new **HCF100** is born from the elegance and prestige that has always distinguished **BEINAT S.r.l.** and from the home fitness concept.
The probe is a Catalytic gas detection unit with IP55 protection that, together with one of BEINAT's industrial type Control Units, detects the presence of **TOXIC GASES** such as: Refrigerant FREON.

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 ÷ 999 ppm linear output, conforming to the 4 ÷ 20mA standard.

Instrument of testing MS222
Using the **MS222** instrument created for the event, and supplied to the technicians, it is possible to see how many calibration corrections were made, read the gas concentration detected, check how many times it issued an alarm, check the number of voltage failures, and see the out of service removal date.
Furthermore, being provided with serial transmission, its plant control and verification report can be printed, thus **certifying your own work.**

Istallation and user guide

Firmware

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CONFORMITY

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 container, it will lose its properties and its conformity to REGULATIONS.
TERMS and EXPECTATIONS: The installation of the **HCF100** 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 IP55 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

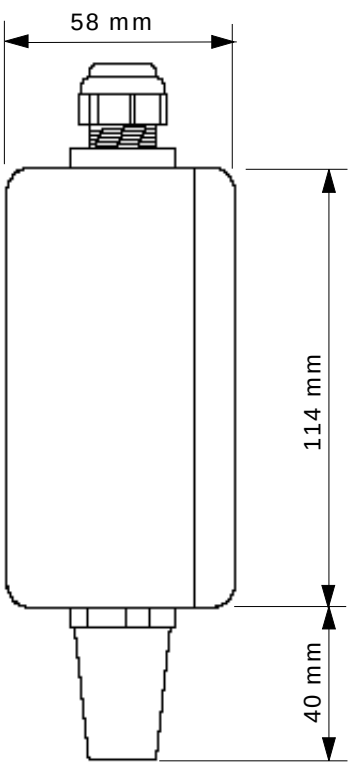
Power supply ..... **12÷24 VDC** ± 10%
Power demand ..... 120 mA Max @ 13.8V

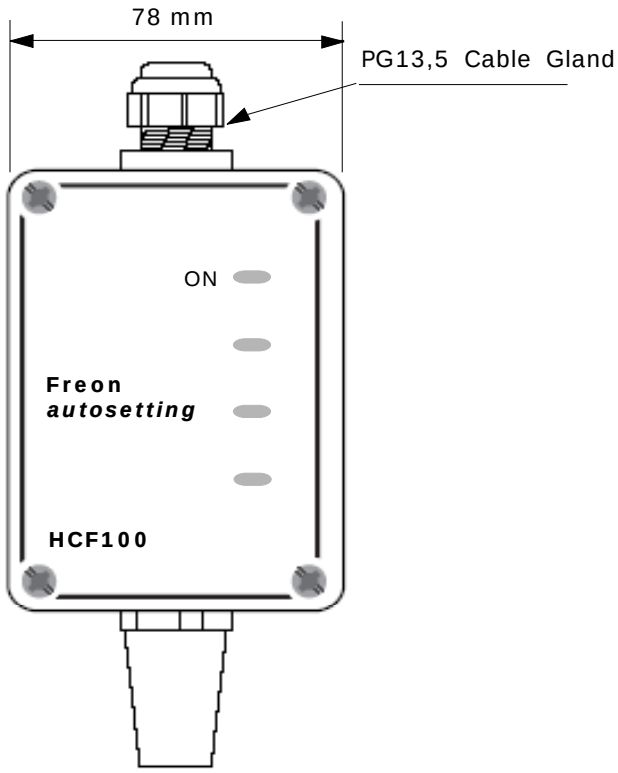
Sensor ..... Semiconductor
Sensor according to the type of gas, ... Refrigerant FREON 410A, R134A, 407C
Measuring range ..... 0 ÷ 999 ppm
Detector accuracy ..... 1% FS
Response Time ..... < 2”
Calibrated using ..... SIAD Test gases
Auto zero procedure ..... Included in the software algorithms

Analog output signal ..... 4÷20 mA standard tolerance
Functioning humidity ..... 0-90% non condensed
Functioning temperature ..... -10°C to +60°C
Control units that can be used :
BX444-Mc, BX449/F, GS100M, BX180, BX280, BX150, GS300M, BX216, BX208
Max. distance between probe and unit ..... 100 m
Cable diameter for connecting probe ..... 1 mm
Connection: The probe connection cables should not be laid with the supply cables

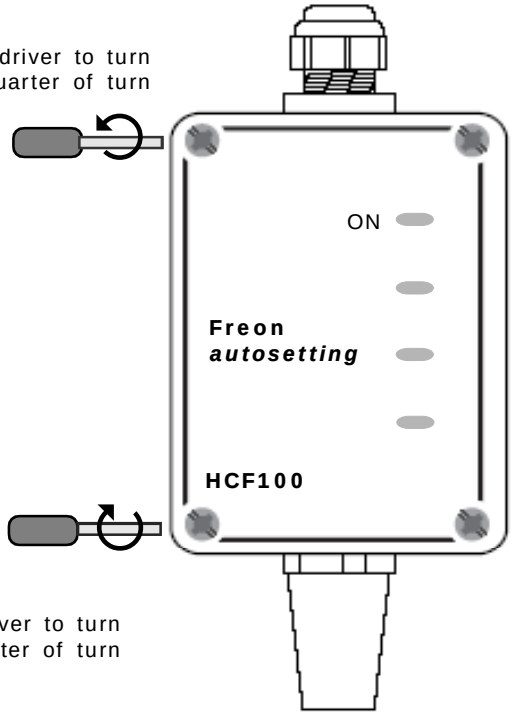
Electromagnetic compatibility Reference Norms ..... **EN 50270**
Probe’s body material ..... ABS self-extinguishing
Size 75x58x58
External degree of protection IP55

Overall Dimensions





Opening of the Cover.
With the help of a screwdriver to turn counterclockwise for a quarter of turn

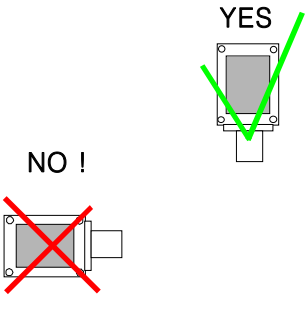


Closeof the Cover.
With the help of a screwdriver to turn counterclockwise for a quarter of turn

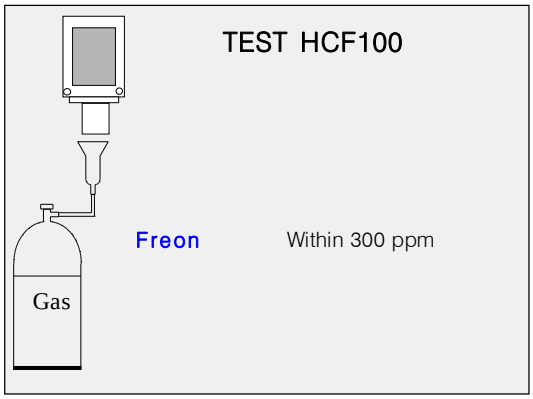
Positioning of the Probe

The position of the probe is a crucial factor for a gas detection unit correct functioning.
In order to obtain the maximum results from an appliance and minimize the probabilities of false alarms, we recommend to follow this diagram and to keep in mind the following general rules.
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 : FREON, LPG, etc.**

The probe must not be invested by smoke, vapours, etc, that can false sensing, and it must be positioned away from heat and away from aspirators or fans.
Instrument operation: when the device is powered the green Led illuminates.
The detector needs a time of preliminary heating of about 100 seconds.
After this period, the sensor is able to detect gas even if it attains the optimum stability conditions after about 5 days continual functioning.
Therefore, possible checks with sample gases must be carried out after this time.



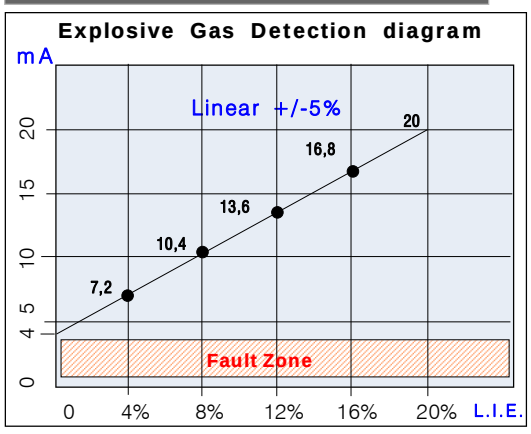
Gas Input Test

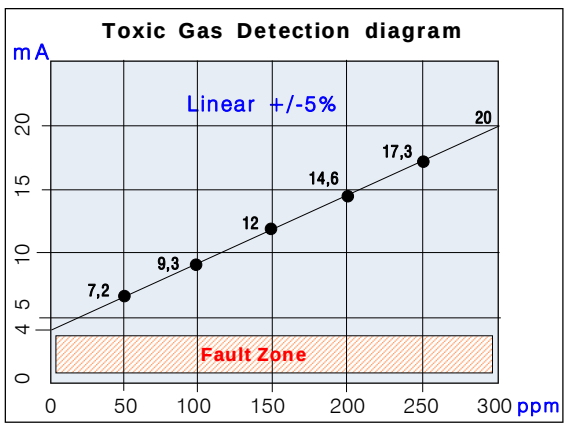


The installation of the **HCF100** probe, its ordinary and extraordinary maintenance, and its out of service removal at the end of the functional life guaranteed by the manufacturer, must be carried out by authorized or specialized personnel.

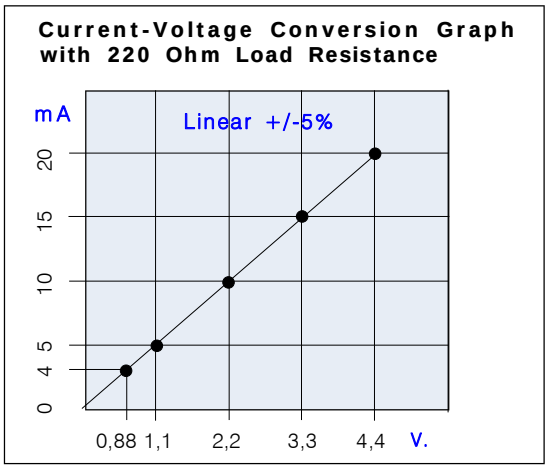
The general test should be performed by issuing gas from a pre-calibrated aerosol within the percentages illustrated on the side.
We recommended to carry out this test at least once a year.

Detection diagrams data





mA – Volt Conversion Diagrams



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 11Vdc and lesser than 25Vdc.

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.
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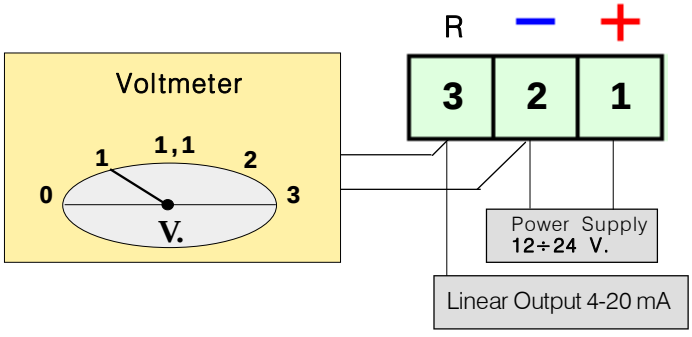


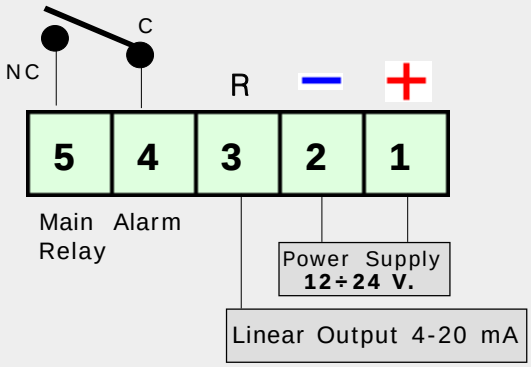
If other problems arise, a specialised and/or authorised technician and/or the Distributor of **BEINAT S.r.l.** should be contacted directly.

Electrical connections

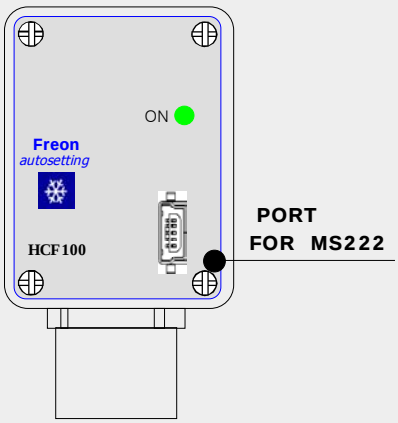
WARNING

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.

Connections HCF100



The relay is free of voltage
Current of contacts 10A resistive.



WARNING! Actions to be taken in case of alarm

1) Close the tap of gases or of the bomb.
2) Open the doors and windows to increase aeration.

If the alarm stops it is necessary to find the cause and act consequently.
If the alarm continues and you can't find the cause and cancel it, abandon the building.
If you have symptoms of vomit, drowsiness or other, go to a first-aid place and tell the doctor that the cause can be **Refrigerant Freon**

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.

BEINAT

Made in Italy

HCF100 Probe *Styling by b&b design*

TO BE FILLED AFTER INSTALLATION

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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