



GAS DETECTORS RGCC Series

REV. : 1
DATA : 31 / 01 /11
PAG : 1 / 4



Conventional Gas Detector
RGC Series



Directive 2004/108/EC
Conform to the norm EN50270 : 2006
IP55 according to the norm EN60529/A1: 2000

I. PRESENTATION

Gas detectors of the **RGC** series are employed to detect the presence of combustible or toxic substances in an atmosphere mainly composed of air and were designed and developed to offer professional features of sensitivity and stability.

Detector calibration is done on factory with the appropriated devices and required gas for testing.

RGC series detectors, marketed in IP55 dust containers, are designed to easily connect to the conventional detection lines to current consumption.

II. INSTALLATION

The installation of the detector and execution of system must be performed in a workmanlike manner by qualified personnel and in compliance with directives and regulations.

In general, **in the absence of specific requirements**, install the detector in a vertical position with the sensing element always turned down the position indicated in the table below.

Codice	Tipo di gas	Posizione
RGC-CH4	Methane	about 30 cm from the ceiling
RGC-H2	H ₂ (Hydrogen)	about 30 cm from the ceiling
RGC-VB	Gasoline vapors	about 30 cm from the floor
RGC-GPL	GPL	about 30 cm from the floor
RGC-C3H8	Propane	about 30 cm from the floor
RGC-COEL	CO (Carbon monoxide)	about 150 cm from the floor
RGC-R134A	R134a	near the high-risk areas
RGC-C2H2	Acetylene	near the high-risk areas

II.1 INSTALLATION INSTRUCTIONS

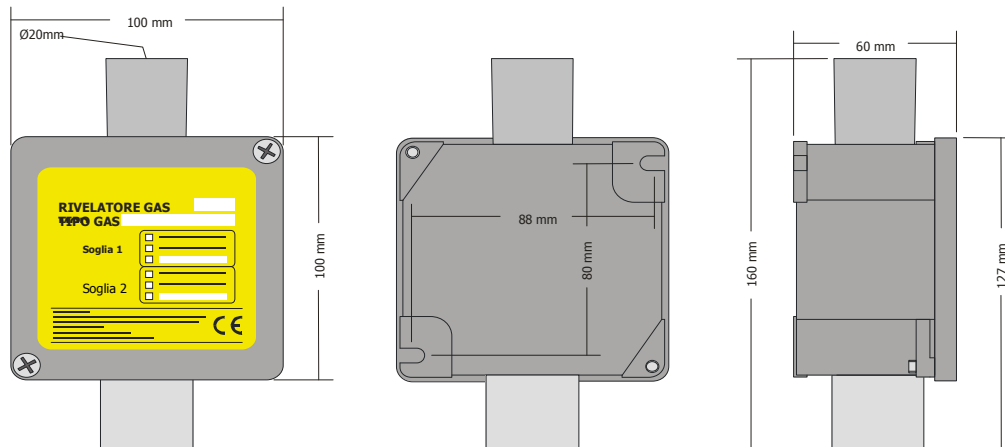
Do not install the detector near fans or air intakes which could dilute the concentration of gas and thereby reduce the efficiency of the detector.

Install the sensor using the special fins on the container in charge for this purpose.

Do not drill holes gathered into the detector.

The detector is equipped with plastic protection for the probe, it must be removed at the time of startup of the detector itself.

II.2 SIZE AND ASSEMBLY



III. TECHNICAL SPECIFICATIONS

PARAMETER	VALUE		
Supply	from 12Vcc to 28Vcc		
Nominal current (stand-by)	RGC-CO	25mA @ 12Vcc and 13mA @ 24Vcc	
	Other	55mA @ 12 Vcc and 28mA @ 24 Vcc	
Operating temperature	from 0°C to 45°C		
Weight	390 g		
Dimensions	H:160mm x L:100mm x P:60mm		
Tube-box connection	$\varnothing 20\text{ mm}$		
IP Protection	IP55		
Reset on preal./alarm/fault	Automatic at the decay of the condition		
Activation threshold (Programmable)	RGC-CO	prealarm = 15% LIE	alarm = 30% LIE
	Other	prealarm = 100ppm	alarm = 200 ppm
Life length of sensing element	5 years (within the nominal condition of use)		
Additional programmable functions With programming tool (TLC)	<ul style="list-style-type: none"> - pre alarm filter with programmable delay from 0 to 240 s - alarm filter with programmable delay from 0 to 240s - test of pre alarm and alarm output. 		
Consumption of detection line (@ 20Vcc)	standby = 40uA		
	prealarm = 30mA		
	alarm = 60mA		
	fault ^(**) = 0 (opening line of detection)		

IV. CONNECTIONS

All the connections must be done without supply.

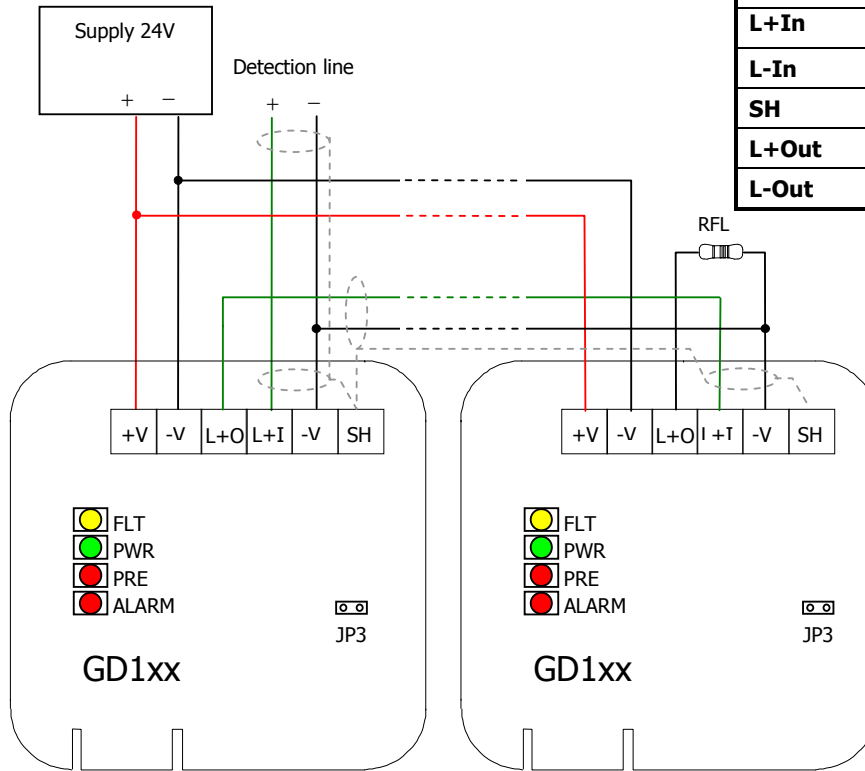
Open the cover of the detector, extract the connector before cabling.

The cable to use (type and section) to connect the detector to the panel must follow the recommendations on the panel manual (generally 0,8mm² section).

The cable to use (type and section) for connection of supply will depend on the quantity of gas detectors to connect and the distance from the power supply source.

The power supply source must have the (-) isolated from the ground.

Reference	Connection
+V	+V detector supply
-V	-V detector supply
L+In	+ detection line input
L-In	- Detection line input
SH	Shield
L+Out	+ detection line output
L-Out	- Detection line output



IV.1 LED STATUS INDICATORS

The detector is equipped with 4 LEDs indicate the status and the detector.
The meaning of these LEDs is as follows:

Reference	Color	Meaning
PWR	Green	Supply ok
FLT	Yellow	Fault
PRE	Red	Prealarm
ALARM	Red	Alarm

IV.2 LINK CONTROL

After doing links as described, power detectors on and check that:

- The green "PWR" LED is turned on.
- All other LED ("FLT", "PRE" and "ALARM") are turned off.

Using an ohmmeter measure the resistance between the + and - conductors of the detection line and verify that it is equal to the value ($\pm 10\%$) of end of line resistor (which must be connected to terminals connected to the last detector on the line).

V. SETTINGS AND MAINTENANCE

Detector calibration is done on factory with the appropriated devices and required gas for testing.

It is forbidden to try to change the calibration of the detector.

The detector alarm thresholds are configured in factory at a value of 15% LIE or 100 ppm for pre alarm and 30% LIE or 200 ppm for alarm.

The filter delays for prealarm and alarm are fixed to 15s as default value. The alarm and prealarm activation thresholds and filter delays can be modified using the TLC gas tool (optional).

The detectors should be checked periodically at the intervals required by regulations relating to the maintenance of security installations.

The efficiency of the detectors should still be checked at intervals not exceeding six months.

Both the functional verification of the installation that the periodic inspections of maintenance can be carried out through the proper kit consists of:

- Gas bottle league title (a concentration guaranteed)
- Short adapter detection head and valve with plug for gas bottle.
- Terminal TLC for viewing and verification of the detector

WARNING

⊗ The sensor in the detector cannot be exposed to acid substances or vapors, toxic gases and solvent vapors. These elements can damage the sensor in provisional or definitive way. This type of damages is not covered by producer warranty and involves the complete substitution of the sensitive element.