

## INSTALLATION CERTIFICATE

The undersigned qualified installer attests to have personally fitted the here described detector on the following vehicle, according to the manufacturer's instructions.

By:

Sold on :

Type of device :  911

Vehicle :

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# Narcotic Gas and Explosive Gas Detector 911

## INSTALLATION AND USE MANUAL



For all EU Countries



AC 2782UK Rev. 00 - 12/09

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Dear Customer,

Thank you for purchasing a Gemini product.

The present manual has been written to help you understand and use the narcotic and LPG detector 911, specifically designed for recreational vehicles. Read the supplied instructions thoroughly and keep them handy.

## **USER MANUAL**

Should gas be sprayed into your vehicle, the 911 sensor is able to detect it and set off an alarm in a few seconds, long before the gas can have any effect on the occupants.

The 911 detector also activates the output relay which actuates other devices (ex. cabin lights, vehicle horn, etc.) to discourage anyone trying to break in your motorhome.

**N.B. In compliance with European standard En50194, the detector can signal the presence of explosive gas (LP), when its concentration is higher than 10% of the LEL (Lower Explosive Limit, the minimum concentration which can cause an explosion).**

## **2.0 - OPERATION DESCRIPTION**

We recommend operating the detector **only when the vehicle is parked at bedtime.**

If the detector is switched on uselessly (ex. While driving, when the vehicle is stowed away, etc.), the detecting probe may exhaust.

### **2.1 - STARTING AND WARMING UP**

When power is applied to the detector, it will go through a warm-up period and will be inhibited for at least 3 minutes; during this so-called "warm-up" phase, the yellow LED will blink.

This phase is necessary to allow the sensible element to warm-up and stabilize itself in order to ensure proper operation conditions.

After this time delay, the yellow LED turns off and the detector is ready to work.



The 911 detector does not detect Carbon Monoxide (CO).

## 3.0 - ALARM SIGNALS

### 3.1 - NARCOTIC GAS

The detector continuously monitors the narcotic gas concentration level in the cabin by carrying out calculations to self-adapt to the different air quality conditions (use in urban areas is different from use in country places).

If a sudden increase in the concentration level is detected due to narcotic gases being sprayed in the vehicle, the detector immediately activates the siren and the output relay.

The alarm state remains ON until the conditions which have triggered it are present.

To deactivate the alarm, simply disconnect it.

### 3.2 - EXPLOSIVE GAS LPG

The detector continuously monitors the LPG concentration level in the cabin; if its concentration exceeds 10% of the LEL (Lower Explosive Limit), the detector immediately activates the siren and the output relay.

The alarm state stays on until the conditions which have generated it are present.

**Important Note:** for LPG detection, the sensor must be installed according to the installation instructions (see chap. 13.0).

## 4.0 - POWER SUPPLY

The detector can operate both at 12V or 24V, by setting the voltage switch SI1.



By default, the detector is set at 12Volt.

The 911 is equipped with a relay that actuates other devices (ex. cabin lights or vehicle horn or any other alarm device).

The relay supplies the contacts NC - C - NO on the terminal block M1 (see connection example in par. 11).

## 5.0 - SELF-DIAGNOSIS

The detector is provided with an accurate and reliable self-diagnosis system which continuously checks its performance and efficiency; any failure or the exhaustion of the probe, after a life cycle of more than 11,000hrs, is signaled by the yellow LED turning ON and by a warning alert signal.



When the probe is exhausted, contact an authorized dealer for replacement or reconditioning of the detector.

## 6.0 - SENSITIVITY LEVEL SELECTION

By default, the detector is set to "normal" sensitivity; in case of particular environmental conditions, the sensitivity can be set to "low" by opening or interrupting jumper P1.

Jumper P1: closed = normal sensitivity

Jumper P1: opened = low sensitivity



Changing the sensitivity setting will not modify the alarm threshold level for explosive gas LPG, 10% of the LEL.

## 7.0 - IMPORTANT CAUTIONS

- Use only a damp cloth to clean the detector; do not use thinners (alcohol, detergents, etc.) which could irreparably damage the detector.
- Alcohol based cleaning agents, perfumes, deodorants, varnish thinner fumes, insecticides and other sprays can interfere with the correct operation of the sensor and create improper alarms and/or alter the device sensitivity.
- Silicone vapors in the cabin can deteriorate the detector sensing element.

## 8.0 - SIGNAL SYMBOLS

SYMBOL	COLOR	DESCRIPTION
	Green	Supply voltage present
	Yellow	Signaling of specific functional conditions (see table 8.1)
	Red	Power ON - alarm ON

### 8.1 - YELLOW LED SIGNAL INDICATIONS

YELLOW LED	ACOUSTIC ALERT	DETECTOR CONDITION
Consecutive flashings	None	Starting and warming up
On steady	Short beep every 5 minutes	Out of order due to exhaustion of probe (after 11,000 working hrs)
On steady	None	Faulty

## 9.0 - WARRANTY CONDITIONS

This product is guaranteed to be free from defects in workmanship for a period of 24 months from the date of installation reported on the present warranty, in compliance with the 1999/44/CE Warranty Directive (L.D. N° 24 - 02/02/2002).

Please fill-in entirely the guarantee certificate included in this manual and **DO NOT REMOVE** the guarantee label affixed to the device.

The warranty will become void if labels are missing or torn, if the installation certificate is not fully compiled or if the enclosed sale document is missing.

The warranty is valid exclusively at authorized Gemini Technologies centers.

The manufacturer declines any responsibility for eventual malfunctions of the detector or any damage to the vehicle electrical system due to improper installation, use or tampering.

## INSTALLER MANUAL

### 10.0 - INSTALLATION

The 911 detector is intended for a permanent installation.

The device must be positioned at about 20-40 cm from the vehicle cabin floor to be protected.

The detector must be installed at least 1-1,5m away from any air supply register; if there is an air intake vent, install the detector near it.

#### 10.1 - FITTING OF DETECTOR

- Remove the detector cover by prying lightly with a screwdriver inserted in the release slot on the right side of the casing.
- The two screw holes (FF) can be used to mount the detector to a wall or onto a base (fig.1); the electronic card must first be removed by unscrewing the screw on the bottom right corner. (see par. 13).

#### 10.2 - ELECTRICAL CONNECTIONS

- The pre-drilled holes (FC) are used to run the power wiring (see par.12.0).
- Connect the wires that supply 12 or 24V to the terminal block M2 (see par. 12); depress the supply terminal block to introduce the cables which must have a section comprised between 0,5 and 1,5 mm<sup>2</sup>.
- Remove 9mm of sleeve from the cable before inserting it in the terminal block; release the push-button and pull on the cable to make sure it is well secured.
- The auxiliary devices conductors intended to manage the alarm must be connected to terminal block M1; the maximum rating of the relay contacts is 2A at 28Vdc (refer to par. 13). To actuate devices having a higher absorption rate, an auxiliary relay must be provided.

#### 10.3 - MOUNTING DIAGRAM

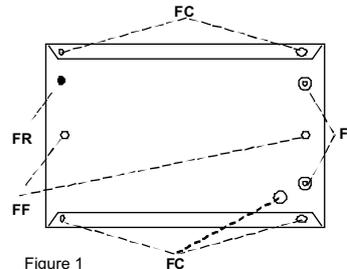


Figure 1

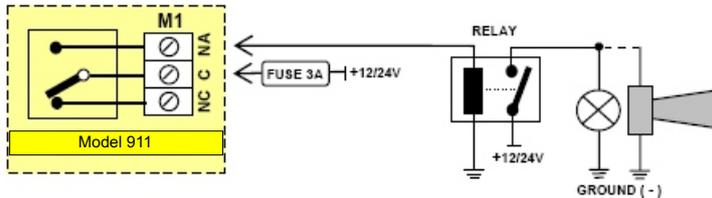
**FF** - Pre-drilled mounting holes, use the ones to the far ends.  
**FC** - Pre-drilled holes to run the cables, use the ones on the left for the power cable.  
**FR** - Power supply cable holder.

## 11.0 - RELAY OUTPUT CONNECTIONS

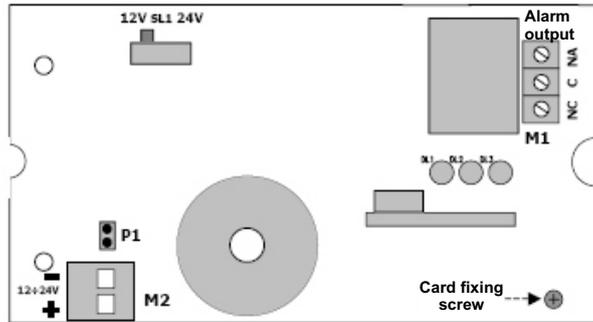
The maximum relay contact capacity is 2A at 28Vdc; to actuate devices having a higher absorption rate, an auxiliary relay must be provided.



For safety reasons, always insert a protection fuse (3-4A max.) between the device to be managed and the detector contacts.



## 12.0 - CIRCUIT DIAGRAM



**M1** - Screw-type terminal block to connect alarm output contact.

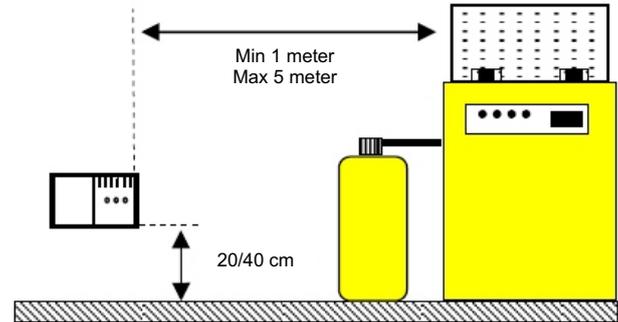
**M2** - Push-button type terminal block for 12V or 24V.

**SL1**- Voltage switch 12 or 24V.

**P1** - Sensitivity level selector.

## 13.0 - CORRECT POSITION FOR LPG DETECTION

The detector must be installed at about 20-40cm from the floor as illustrated here below.



## 14.0 - TECHNICAL SPECIFICATIONS

Power supply selectable via the SL1 switch	12Vcc (10 to 14Vcc) 24Vcc (20 to 28Vcc)
Maximum absorption	100mA
Alarm sound pressure level	90dB at 30 cm
Working temperature	Da +5°C a +45°C
Dimensions	117 x 68 x 35 mm
Protection level	Ip40
Plastic casing and inflammability class	PC - Polycarbonate V2 - GW 750
Approximate weight	200gr
Relay contact rating	2A max. at 28Vdc

## 15.0 - WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT DIRECTIVE (WEEE)

In the European Union, this label indicates that, this product, must not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling (Directives 2002/95/CE, 2002/96/CE and 2003/108/CE).

For information on how to recycle this product in your country visit: [www.eur-lex.europa.eu](http://www.eur-lex.europa.eu).



APPROPRIATE  
CONTAINERS  
ONLY