

# GSD-441 PG2

PowerG Wireless Natural Gas (Methane) Detector



**Visonic**

A Tyco International Company

## Installation Instructions

### 1. INTRODUCTION

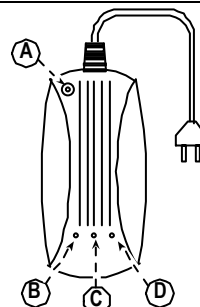
The GSD-441 PG2 is a wireless PowerG two-way natural gas (Methane) detector. The GSD-441 PG2 is a natural gas detector designed to send an alarm when Methane gas is detected. The detectors can be used in a house, apartment, caravan, mobile home or yacht.

The detectors are powered by 220 VAC. An internal Lithium battery is used for AC power failure reporting only (the battery does not power the detector).

The detector can send the following messages to the alarm system control panel: Gas alarm, gas sensor failure, AC power failure and low battery voltage.

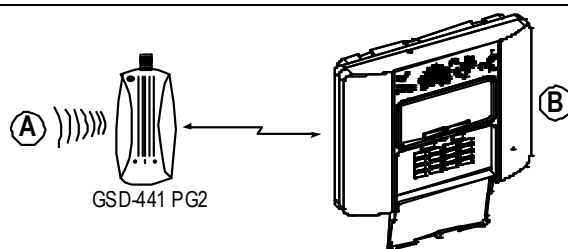
The GSD-441 PG2 is designed for wall mounting and should be placed in a location where gas presence, for example leakage, is probable.

Upon gas detection, an audible buzzer is sounded and the built-in transmitter transmits a digital message, composed of the detector's PowerG ID followed by status messages. Alarm and other data are thus forwarded to the alarm system. A periodic supervision message is transmitted automatically (see specifications) to inform the alarm system at regular intervals, of the unit's active participation in the system.



- A. Test / Mute button
- B. Red LED
- C. Orange LED
- D. Green LED

**Figure 1 –**  
External View



- A. Gas leak from gas cooker, boiler room, gas connection chamber, etc.
- B. PowerMaster control panel

**Figure 2 –** Integration with the Alarm System

### 2. INSTALLATION

#### 2.1 Preparing the Installation

A. The GSD-441 PG2 gas detector plugs directly into a standard 220VAC household switchable outlet (by a switch or circuit breaker).

**Note:** The installation must comply with the local authority electrical standards.

B. The ventilation slots must not be blocked and the unit must be kept free of dust.

C. A proper airflow must be maintained through the unit to obtain an air sampling of that area of the house where the sensor is situated.

**D. The unit must be installed at least three feet from any gas appliance to eliminate false alarms but should not be placed over 20 feet from such appliances.**

E. Install the unit away from any sources of vapor such as alcohol, liquor, vehicle exhaust, hair spray, cleaning agents, deodorants, paint, fluorocarbons, or industrial solvents because vapors from these substances will trigger false alarms.

F. Do not install the unit directly above cooking appliances, directly above a sink, or adjacent to extractor fans.

#### **Important!**

- When the alarm sounds, immediately find out the cause and remedy it or evacuate the building
- Ventilate the area by opening doors and windows
- Immediately extinguish any flames or pilot lights
- Do not operate any electrical devices
- Determine the source of the gas. Seek a qualified technician or call your local gas company

## 2.2 Installing the GSD-441 PG2

**Warning:** Installation must be performed by a professional person.

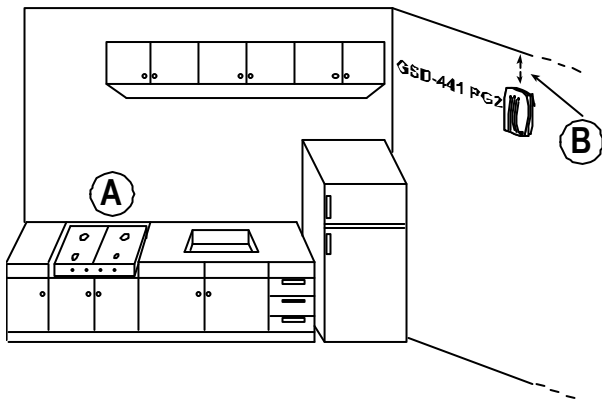


Figure 3. Alarm System Integration

- A. Gas Cooker
- B. For **Methane** gas (CH<sub>4</sub>) detection, mount the GSD-441 PG2 approx. 30 cm **below the ceiling** and **above the highest window or door opening**.

## 2.3 Enrollment

Refer to the PowerMaster Installer Guide and follow the procedure under the "**02:ZONES/DEVICES**" option of the Installer Menu. A general description of the procedure is provided in the following flow chart.

Step 1	Step 2	Step 3	Step 4	Step 5
Enter the Installer menu and select "02:ZONES/DEVICES"	Select "ADD NEW DEVICE" Option	Enroll the device or Enter the device ID <b>See Note</b>	Select the desired Zone Number	Configure the Location Parameter
02.ZONES/DEVICES	ADD NEW DEVICES	ENROLL NOW or ENTR ID:XXX-XXXX	Z07:GAS Sensor ID No. 220-XXXX	Z07.LOCATION

⇒ means scroll ▶ and select **OK**

### Note:

- i) Insert the battery (see Figure 4) to enroll the gas detector.  
-or-
- ii) Key in the device ID of the gas detector and at a later stage, when the installation makes possible, insert the battery.

## 2.4 Inserting Battery

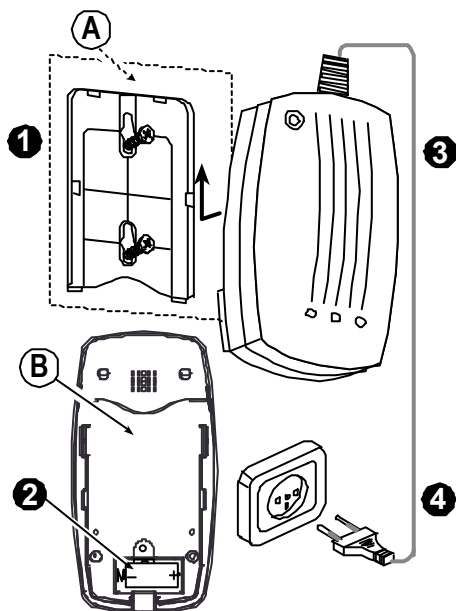


Figure 4 – Installing the GSD-441 PG2

1. Fasten the bracket to the mounting surface with 2 screws.
2. Insert battery (verify proper polarity).
3. Locate the detector on the bracket, and slide it up as shown.
4. Connect to 220VAC

- A. Mounting surface
- B. Rear side

**Caution!** Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the manufacturer's instructions.

## 3. PREPARATION FOR USE

### 3.1 The LED Functions

Once the unit is plugged into the wall outlet, the green power indicator flashes indicating that power is present and the unit is working. After an initial ten minute warm-up period, the unit will start the process of continually sampling the air around it.

Table 1. LED functions

LED	Function
Green	<b>Flashing:</b> During the first ten minutes (after power connection) the green LED flashes (stabilization time). <b>Constant light:</b> The equipment is ready for operation: "Power ON".
Orange	Illuminates in the event of trouble and emits a lengthy buzzer sound.
Red (alarm)	Flashes and a supplementary acoustic signal generator (transducer) sounds intermittently in the event of an alarm.

### 3.2 Test Button and Muting Switch

Press down on the Test / Silent button (see Figure 2) to test the operation of the indicators. The red and orange LEDs will flash and an acoustic signal tone will sound intermittently. This action should be performed once a **week**. Use the Test / Silent button (see Figure 2) to switch off the acoustic alarm tone in the event of an alarm. The red LED will continue to flash and a short signal tone will sound approximately every 45 seconds.

**Note:** Do not test the GSD-441 PG2 using a gas lighter.

**Note:** In the event of a gas leakage, the smell of the gas may be in the air before the detector activates the alarm.

## 4. MISCELLANEOUS COMMENTS

Visonic Ltd. wireless systems are very reliable and are tested to high standards. However, due to low transmitting power and limited range (required by FCC and other regulatory authorities), there are some limitations to be considered:

- A. Receivers may be blocked by radio signals occurring on or near their operating frequencies, regardless of the digital code used.
- B. A receiver responds only to one transmitted signal at a time.
- C. Wireless devices should be tested regularly to determine whether there are sources of interference and to protect against faults.
- D. It is recommended to unplug the detector from the electricity mains before cleaning. Clean only using a dry cloth. Do not clean using a liquid substance. Clean externally surfaces only.

The user is cautioned that changes or modifications to the unit, not expressly approved by Visonic Ltd., could void the user's FCC or other authority to operate the equipment.

## 5. COMPLIANCE WITH STANDARDS

### Compliance with Standards



Meets requirements of EN 50194, EN 60950, EN 61010-1, EN 50270, EN 300220, EN 301489  
The GSD-441 PG2 is compatible with the RTTE requirements - Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 and EN50131-1 Grade 2 Class II.

Certified by the Dutch testing and certification body *Telefication BV*.

*The Power G peripheral devices have two- way communication functionality, providing additional benefits as described in the technical brochure. This functionality has not been tested to comply with the respective technical requirements and should therefore be considered outside the scope of the product's certification.*

### EN 50131-1 Security Grade

Grade 2

### EN 50131-1 Environmental Class

Class 2

### FCC part 15 statement:

The digital circuit of this device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### IC statement:

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

### WARNING!

To comply with FCC and IC RF exposure compliance requirements, the device should be located at a distance of at least 20 cm from all persons during normal operation. The antennas used for this product must not be co-located or operated in conjunction with any other antenna or transmitter.

The technical documentation as required by the European Conformity Assessment procedure is kept at: UNIT 6 MADINGLEY COURT CHIPPENHAM DRIVE KINGSTON MILTON KEYNES MK10 0BZ. TEL: (0845) 0755800 FAX: (0845) 0755801



### W.E.E. Product Recycling Declaration

For information regarding the recycling of this product you must contact the company from which you originally purchased it. If you are discarding this product and not returning it for repair then you must ensure that it is returned as identified by your supplier. **This product is not to be thrown away with everyday waste.**  
Directive 2002/96/EC Waste Electrical and Electronic Equipment.

## APPENDIX: SPECIFICATONS

Gas Type	Methane (CH4)
Audible Signal Volume	At least 85 dB at a distance of 3 m.
Sensitivity	8% ± 3% of the gas Lower Explosion Limit (LEL).
Supervision	Signaling at 15 minute intervals or according to local standards

**Important:** *The detector will not operate without 220V power connection. In the event of a power failure or where the detector is not connected to a power source, an AC failure message is sent to the control panel (will be received by the PowerMaster control panel version 13 and above only)*

### ALARM REPORTS

#### Gas alarm

Every 20 sec. for the first 3 minutes.

Every 3 min. for the next 27 minutes.

Alarm stops after 30 min. or if the detector goes into "alarm restore".

#### AC failure

20 seconds after an AC failure occurrence, the AC failure will be reported – will be received by the PowerMaster control panel. The report will be repeated every 20 seconds for 3 minutes.

#### Trouble message

When gas sensor fails, failure message will be received only the PowerMaster control panel.

### Communication Protocol

#### Power Source

220-240V ~ 50 Hz

#### Battery

3V lithium battery, type CR123A, Panasonic, Sanyo or GP.

#### Battery Life Expectancy

5 years (for typical use, in room temperature)

#### Low Battery Threshold

2.7 V

#### Operating Temperatures

0°C to 45°C (32°F to 113°F)

#### Dimensions

155 mm (6-1/8 in.) x 80 mm (3-1/6 in.) x 58 (2-5/16 in.)

#### Weight (with battery)

370 g (13 oz.)

### WARRANTY

Visonic Limited (the "Manufacturer") warrants this product only (the "Product") to the original purchaser only (the "Purchaser") against defective workmanship and materials under normal use of the Product for a period of twelve (12) months from the date of shipment by the Manufacturer.

This Warranty is absolutely conditional upon the Product having been properly installed, maintained and operated under conditions of normal use in accordance with the Manufacturers recommended installation and operation instructions. Products which have become defective for any other reason, according to the Manufacturers discretion, such as improper installation, failure to follow recommended installation and operational instructions, neglect, willful damage, misuse or vandalism, accidental damage, alteration or tampering, or repair by anyone other than the manufacturer, are not covered by this Warranty.

The Manufacturer does not represent that this Product may not be compromised and/or circumvented or that the Product will prevent any death and/or personal injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. The Product, properly installed and maintained, only reduces the risk of such events without warning and it is not a guarantee or insurance that such events will not occur.

**THIS WARRANTY IS EXCLUSIVE AND EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, OBLIGATIONS OR LIABILITIES, WHETHER WRITTEN, ORAL, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE. IN NO CASE SHALL THE MANUFACTURER BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS WARRANTY OR ANY OTHER WARRANTIES WHATSOEVER, AS AFORESAID.**

**THE MANUFACTURER SHALL IN NO EVENT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES OR FOR LOSS, DAMAGE, OR EXPENSE, INCLUDING LOSS OF USE, PROFITS, REVENUE, OR GOODWILL, DIRECTLY OR INDIRECTLY ARISING FROM PURCHASER'S USE OR INABILITY TO USE THE PRODUCT, OR FOR LOSS OR DESTRUCTION OF OTHER PROPERTY OR FROM ANY OTHER CAUSE, EVEN IF MANUFACTURER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.**

**THE MANUFACTURER SHALL HAVE NO LIABILITY FOR ANY DEATH, PERSONAL AND/OR BODILY INJURY AND/OR DAMAGE TO PROPERTY OR OTHER LOSS WHETHER DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR OTHERWISE, BASED ON A CLAIM THAT THE PRODUCT FAILED TO FUNCTION.**

However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty, **THE MANUFACTURER'S MAXIMUM LIABILITY (IF ANY) SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE OF THE PRODUCT**, which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.

When accepting the delivery of the Product, the Purchaser agrees to the said conditions of sale and warranty and he recognizes having been informed of.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so these limitations may not apply under certain circumstances.

The Manufacturer shall be under no liability whatsoever arising out of the corruption and/or malfunctioning of any telecommunication or electronic equipment or any programs.

The Manufacturer's obligations under this Warranty are limited solely to repair and/or replace at the Manufacturer's discretion any Product or part thereof that may prove defective. Any repair and/or replacement shall not extend the original Warranty period. The Manufacturer shall not be responsible for dismantling and/or reinstallation costs. To exercise this Warranty the Product must be returned to the Manufacturer freight pre-paid and insured. All freight and insurance costs are the responsibility of the Purchaser and are not included in this Warranty.

This warranty shall not be modified, varied or extended, and the Manufacturer does not authorize any person to act on its behalf in the modification, variation or extension of this warranty. This warranty shall apply to the Product only. All products, accessories or attachments of others used in conjunction with the Product, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products. This Warranty is exclusive to the original Purchaser and is not assignable.

This Warranty is in addition to and does not affect your legal rights. Any provision in this warranty which is contrary to the Law in the state or country where the Product is supplied shall not apply.

**Warning:** The user must follow the Manufacturer's installation and operational instructions including testing the Product and its whole system at least once a week and to take all necessary precautions for his/her safety and the protection of his/her property.

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www.visonic-iberica.es

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