



GB-502 PG2

Wireless PowerG Two-Way Acoustic Glass-break Detector

Introducing GB-502 PG2

The GB-502 PG2 is a wireless PowerG Two-way acoustic glass-break detector designed to detect the breaking of framed glass mounted in an outside wall. This detector is wall/ceiling mountable and suitable for most types of window/door glass: plate, tempered, laminated, wired, coated and sheet insulating glass. No adjustment is necessary during installation – the detector is fully pre-calibrated.

The coverage range also depends on the angle between the detector and the glass – for a higher angle, the maximum range is reduced. For the complete GB-502 PG2 Installer Guide, go to <http://www.visonic.com/download-center>.

Alternatively, contact us at info@visonic.com to request the complete version of the installation guide.

1. Inserting the Battery

1. Press in the snap and separate the cover from the base.
2. Insert the battery into the battery clips.

Observe Polarity!

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

2. Mounting the Device

1. Fasten the breakaway segment to the wall.

Attention! The GB-502 PG2 has a back tamper switch under the PCB. As long as the PCB is seated firmly within the base, the switch is pressed against a special break-away base segment that is loosely connected to the base. Be sure to fasten, using screw C, the break-away segment to the wall. If the detector unit is forcibly removed from the wall, this segment will break away from the base, causing the tamper switch to open!

2. Put back the cover on the base and secure with screw.

For mounting the device with a bracket, refer to the BR-1, BR-2, or BR-3 Installation Instructions.

3. Enrollment of the Device

Refer to the PowerMaster panels Installer Guide and follow this procedure under the "02:ZONES/DEVICES" option of the Installer Menu.

02:ZONES/DEVICES ↴

ADD NEW DEVICES ↴

ENROLL NOW or

ENTR ID:XXX-XXXX

Z04:Glass Break

ID No. 160-XXXX ↴(with panels PowerG V.19.1 & lower)

ID No. 161-XXXX ↴(with panels PowerG V.19.2 & higher)

Z06:LOCATION

Z06:ZONE TYPE

4. Local Diagnostics Test

Procedure

Before testing, separate the base from the cover.

The following table indicates the received signal strength.

LED response	Reception
Green LED blinks	Strong
Orange LED blinks	Good
RED LED blinks	Poor
No blinks	No communication

IMPORTANT! Reliable reception must be assured. Therefore, "poor" signal strength is not acceptable. If you receive a "poor" signal from the device, relocate it and re-test until a "good" or "strong" signal strength is received.

Note: For detailed Diagnostics Test instructions refer to the control panel Installer Guide.

5. Testing Procedures

Switching the Sensor to the Test Mode

After power-up or closing the cover, the detector will automatically enter a 15 minute test mode. For remote switching of the detector to test mode (via User or Installer Code), refer to the PowerMaster Installer Guide, Chapter 6, Periodic Test.

Testing the Sensor

A. Basic Test

Test the detector's low frequency (FLEX) response by thumping the protected glass with a cushioned object. The green LED will light for 2 seconds. Repeat the test if necessary.

B. Extended Glassbreak Simulation Test (optional)

See the complete installation guide for details.

6. Installation Tips

- The GB-502 PG2 detects the shattering of framed glass mounted on an outside wall. Testing the sensor with unframed glass, broken bottles, etc. might not trip the sensor. False alarms such as glass breaking in the middle of a room will not activate the sensor.
- False alarms are most likely to occur when installed on a 24-hour loop, in glass airlocks, and glass vestibule areas. Similarly, when mounted above sinks, residential garages, and in other small acoustic live rooms, false alarms can be generated. In rooms where multiple sounds can reflect and eventually duplicate the glass break frequency pattern, use shock sensors.
- Installing the GB-502 PG2 on 24-hour loops will increase false alarms. Install the GB-502 PG2 on a perimeter loop, which is armed whenever the door and window contacts are armed. For occupied areas, GB-502 PG2 false alarm immunity is best in rooms with only moderate noise levels.
- GB-502 PG2 detects the shattering of glass. Like all glass-break sensors, the detector might not consistently detect cracks in glass, or bullets that break through or break out the glass. Glass-break sensors should always be backed up by interior protection.

7. Event Indications

LED Indications and Events

LED Response	Description
Red LED blinks	Stabilization (warm-up 8 sec)
Red LED ON 0.2 sec.	Tamper open / close
Red LED ON 2 sec.	Glass break alarm
Green LED ON 2 sec.	Low frequency detection – Test mode
Green and red LED blink alternately	Self-test failure – Test mode
Green and red LED blink alternately slowly	Self-test failure – Normal mode

8. Compliance With Standards



The GB-502 PG2 complies with the following standards:
Europe: EN 300220, EN 301489, EN50130-4, EN60950, EN50130-5, EN 50131-2-7-1, EN 50131-1 Grade 2 Class II

This device complies with the essential requirements and provisions of Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio and telecommunications terminal equipment.

USA: CFR 47 Part 15 (FCC)
Canada: RSS 210



USA: UL639
Canada: ULC-S306

WARNING! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

To comply with FCC Section 1.1310 for human exposure to radio frequency electromagnetic fields and IC requirements, implement the following instruction:

A distance of at least 20cm, between the equipment and all persons should be maintained during the operation of the equipment.



WEEE 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.

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.

Specifications

Frequency Band (MHz) Europe and rest of world: 433-434, 868-869
USA: 912-919

Current Consumption 23µA average quiescent, maximum 150mA

Power Supply 3 V Lithium CR-123 type battery, Panasonic or GP only

Battery Life 5 years (for typical use)

Operating Temperature -10°C to 50°C (14°F to 120°F) indoors

Humidity 5 % to 95 % with no condensation

Maximum Detection Range 7.6 m (25 ft) if glass size is minimum 40 x 40 cm (15 1/2" x 15 1/2").
6 m (20 ft) if glass size is 30 x 30 cm (12" x 12") to 40 x 40 cm (15 1/2" x 15 1/2")

Glass Types UL tested on: Plate, tempered, wired, laminated, covered, and sealed insulated

UL tested on: Plate and wired

Minimum Glass Size EN tested on: 40 x 40 cm (15 1/2" x 15 1/2")

Room Size Not larger than 12 x 12 m (36 x 36 ft);

Not smaller than 3 x 3 m (10 x 10 ft)

Min. Distance from Glass 1.5 m (5 ft)

Brackets BR-1: Surface mounted swivel bracket, adjustable 30° down and 45° left/45° right.

BR-2: BR-1 with a corner adapter

BR-3: BR-1 with a ceiling adapter



Abbreviated Installation Instructions

Dimensions 88 x 62 x 30 mm (3.5 x 2.4 x 1.2 in.)

Weight (not includ- 74 g (2.6 oz)
ing battery)

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, wilful damage, misuse or vandalism, accidental damage, alteration or tampering, or repair by anyone other than the manufacturer, are not covered by this Warranty.

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- damage caused by unauthorized attachment, alterations, modifications or foreign objects being used with or in conjunction with the Products;
- damage caused by peripherals (unless such peripherals were supplied by the Seller);
- defects caused by failure to provide a suitable installation environment for the products;
- damage caused by use of the Products for purposes other than those for which they were designed;
- damage from improper maintenance;
- damage arising out of any other abuse, mishandling or improper application of the Products.

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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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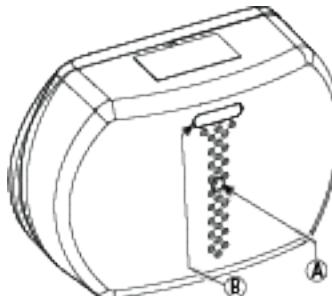
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Introducing GB-502 PG2

Overview

The GB-502 PG2 is a wireless PowerG Two-way acoustic glass-break detector designed to detect the breaking of framed glass mounted in an outside wall. This detector is wall/ceiling mountable and suitable for most types of window/door glass: plate, tempered, laminated, wired, coated and sealed insulating glass. No adjustment is necessary during installation – the detector is fully pre-calibrated.



A. Microphone
B. Detection indicator

Figure 1. General View

The acoustic sensor of the GB-502 PG2 is omni-directional, providing full coverage. Coverage is measured from the sensor to the point on the glass farthest from the sensor. The sensor can be mounted as close as 1.5 m (5 ft) from the glass.

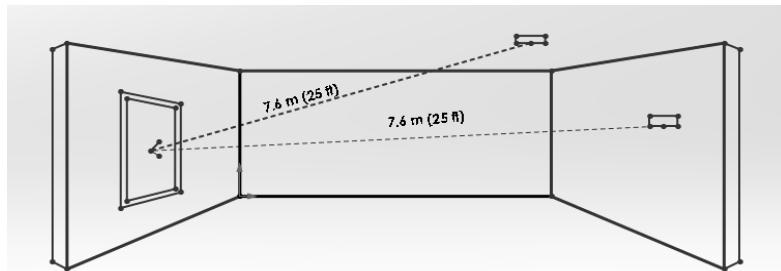


Figure 2. Typical Range Measurement

When mounted on opposite walls, on adjoining walls or on the ceiling, the range is 7.6 m (25 ft) for plate, tempered, laminated, wired, coated, and sealed insulating glass. The coverage range also depends on the angle between the detector and the glass – for a higher angle, the maximum range is reduced, see the following table for details.

Angle (degrees)	0	30	45	60	75	90
Maximum range m (ft)	7.6 (25)	7 (23)	5.5 (18)	4 (13)	2.5 (8)	0

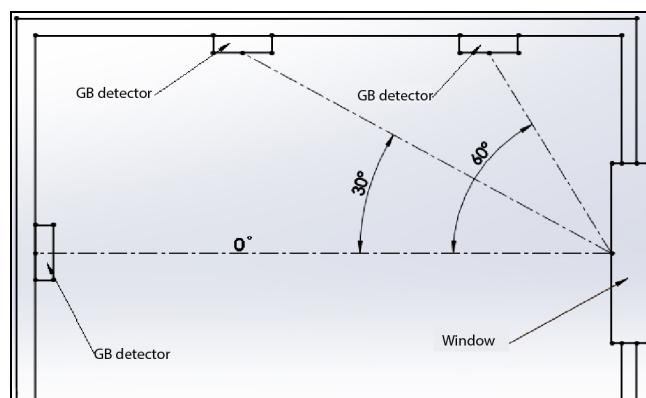


Figure 3. Angle between detector and window

PowerG Transmitter

Upon alarm (glass break detection), a digital message is transmitted, composed of the PowerG ID followed by various status and message-type markers. Alarm and other data are thus forwarded to the wireless alarm control panel.

The GB-502 PG2 is protected by a back tamper switch that is activated when the cover is removed or when the base is forcibly detached from the wall. In a tamper situation, a message is transmitted with the "tamper alert" marker ON.

A periodic supervision message, distinguished by a specific marker, is transmitted automatically. The wireless control panel is thus informed, at regular intervals, of the sensor's active participation in the system.

A bicolor LED lights whenever events are reported. The LED does not light while a supervision message is being transmitted.

Installation

Optimizing Detection and Avoiding False Alarms

For best detection, avoid installing in:

- Rooms with lined, insulating, or sound deadening drapes.
- Rooms with closed wooden window shutters inside.

For best false alarm immunity:

- Avoid 24-hour loop applications (perimeter loop OK).
- Don't use where white noise, such as air compressor noise, is present (a blast of compressed air may cause a false alarm)
- Avoid rooms smaller than 3 x 3 m (10 x 10 ft) and rooms with multiple noise sources such as small kitchens, glass booths noisy areas, garages, small bathrooms, etc.

Areas to avoid:

- Glass airlocks and glass vestibule areas
- Noisy kitchens
- Residential car garages
- Small utility rooms
- Stairwells
- Small bathrooms
- For glass break protection in such applications, use shock sensors on the windows or window frames.

Do Not Install In Humid Rooms

The Wireless GB-502 PG2 is not hermetically sealed. Excess moisture on the circuit board can eventually cause a short and a false alarm.

Avoid 24-Hour Loop Applications

The GB-502 PG2 is recommended for perimeter loops and is designed to function in an occupied area. In 24-hour loop applications, where the sensor is armed all day and all night, the false alarm prevention technology will be pushed to its limit. Some sounds can duplicate the glass break pattern the acoustic sensor detects.

Install the GB-502 PG2 on a perimeter loop which is armed whenever the door and window contacts are armed.

NOTE: GB-502 PG2 shall be installed in accordance with the Standard for Installation and Classification of Burglar and Holdup Alarm Systems, UL 681

Protecting Occupied Areas

The false alarm immunity is best in rooms with only moderate noise. For 24-hour occupied area protection, use shock sensors.

Proper Testing

The GB-502 PG2 is designed to detect the breaking of framed glass mounted in an outside wall. Testing the sensor with unframed glass, broken bottles, etc., may not trip the sensor. The sensor typically does not trip to glass breaking in the middle of the room. No burglar breaks glass in the middle of a room, so such "breaks" are false alarms.

NOTE: GB-502 PG2 may not consistently detect cracks in glass, or bullets which break through the glass. Glass-break sensors should always be backed up by interior protection.

For best false alarm immunity the sensor should be located at least 1.2 m (4 ft) away from noise sources (televisions, speakers, sinks, doors, etc.). The sensor must always be in direct line of sight of all protected windows. It cannot consistently detect glass breaking around corners, in other rooms, etc. Front or back, up or down orientation is not necessary.

Sound Travel Considerations

Since the sound of breaking glass travels directionally out from the broken window, the best location for mounting the sensor is on the opposite wall - assuming the glass to be protected is within the sensor's range and line of sight. When mounted on the opposite wall, the detector should be mounted at least 1.8 m (6 ft) off the floor, but not less than 30 cm (12") from the ceiling. The ceiling also has good sensor locations. A ceiling mounted sensor will have better detection if positioned 2 - 4 m (6 - 12 ft) away from the protected glass into the room. Corner and adjoining (side) wall mounting is

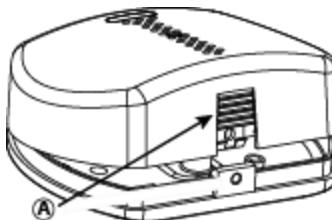
permitted but range versus angle limitations should be taken into consideration.

There should be no obstructions between the detector and the protected glass. Curtains, blinds and sound absorbing materials in the protected room may reduce the effective range.

As with all glass-break sensors, mounting on the same wall as the protected glass is less effective and strictly not recommended - optimum detection is partially dependent on sound reflection off the opposite wall.

Inserting the Battery

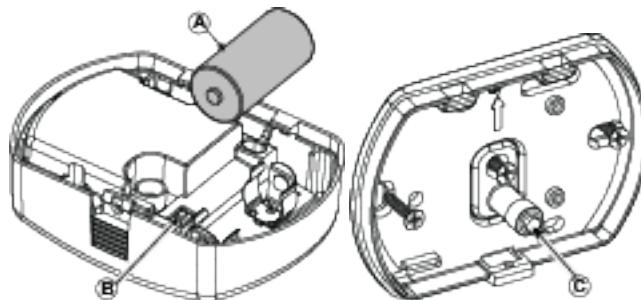
1. Press in the snap and separate the cover from the base.



A. Snap

Figure 4. Opening the Unit

2. Get to know the items indicated in Figure 5 - they are all relevant to the steps you will have to take in the course of installation.



A. Battery

B. Enroll button

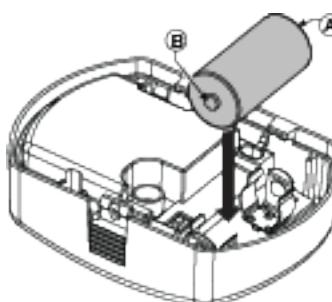
C. Tamper contact

Figure 5. Inside View

3. Insert the battery into the battery clips.

Observe Polarity!

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



A. Negative terminal

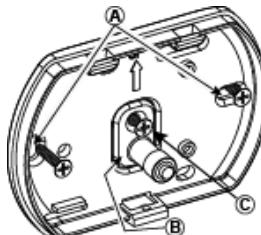
B. Positive terminal

Figure 6. Battery Insertion

Mounting the Device

For mounting the device with a bracket, refer to the BR-1, BR-2 or BR-3 Installation Instructions. Note that you can also mount the device without a BR bracket.

1. Fasten the breakaway segment to the wall.



A. Mounting holes
B. Break-away base segment
C. Fastening screw

Figure 7. GB-502 PG2 Internal View

Attention! The GB-502 PG2 has a back tamper switch under the PCB. As long as the PCB is seated firmly within the base, the switch is pressed against a special break-away base segment that is loosely connected to the base. Be sure to fasten, using screw C, the break-away segment to the wall. If the detector unit is forcibly removed from the wall, this segment will break away from the base, causing the tamper switch to open!

2. Put back the cover on the base and secure with screw.



Figure 8. Closing the Cover

Enrollment of the Device

Refer to the PowerMaster panel's Installer Guide and follow this procedure under the "02:ZONES/DEVICES" option of the Installer Menu.

1. Enter the Installer menu and select "02:ZONES/DEVICES".

02.ZONES/DEVICES ↴

2. Select "ADD NEW DEVICE". Option.

ADD NEW DEVICES ↴

3. Enroll the device or Enter the device ID.

ENROLL NOW or

ENTR ID:XXX-XXXX ↴

4. Select the desired Zone Number.

Z04:Glass Break

ID No. 160-XXXX ↴ (with panels PowerG V.19.1 & lower)

ID No. 161-XXXX ↴ (with panels PowerG V.19.2 & higher)

5. Configure Location & Zone Type Parameters.

Z06.LOCATION

Z06.ZONE TYPE

⇒ means scroll ▶▶ and select **OK**.

Local Diagnostics Test

Procedure

Before testing, separate the base from the cover.

The following table indicates the received signal strength.

LED response	Reception
Green LED blinks	Strong
Orange LED blinks	Good
RED LED blinks	Poor
No blinks	No communication

IMPORTANT! Reliable reception must be assured. Therefore, "poor" signal strength is not acceptable. If you receive a "poor" signal from the device, re-locate it and re-test until a "good" or "strong" signal strength is received.

Note: For detailed Diagnostics Test instructions refer to the control panel Installer Guide.

Testing Procedures

Switching the Sensor to the Test Mode

After power-up or closing the cover, the detector will automatically enter a 15 minute test mode. For remote switching of the detector to test mode (via User or Installer Code), refer to the PowerMaster Installer Guide, Chapter 6, Periodic Test.

Testing the Sensor

A. Basic Test

Test the detector's low frequency (FLEX) respons by thumping the protected glass with a cushioned object. The green LED will light for 2 seconds. Repeat the test if necessary.

B. Extended Glassbreak Simulation Test (optional)

This optional test activates the detector with Flex and audio sounds, that simulate the glass breaking sound of a window. Take care not to shatter the glass during testing.

Procedure

To test complete the following steps:

1. Switch the detector to Test Mode (see "Switching the Sensor to the Test Mode" above).
2. Generate a flex signal and simulate a glass breaking sound by using one of the following methods:
 - Simulator in manual mode
Hold the simulator close to the protected glass. Thump the glass and immediately start the simulator manually to create the sound of breaking glass. Examples of such simulators are AFT-100 or 5709C.
 - Simulator with automatic activation
Hold the simulator close to the protected glass. Thump the glass, the simulator creates the sound of breaking glass automatically. Examples of automatic simulators using flex signals are FG-700/ FG-701 or GT-2.
 - Hand clap
Thump the glass and immediately clap hands firmly three times. This method is best used in relatively small rooms with a maximum distance up to 5 or 6 m (16 ft or 20 ft).

Note

The instructions for some simulators instruct you to switch the glass break detector to Test mode by sounding a special signal. The GB-502

PG2 detector has an inbuilt Test mode therefore it is not necessary to use that switch.

Use a glass pane with dimensions of at least 0.5 x 0.5 m (1.5 x 1.5 ft) to assure success of the simulator test.

Always aim the simulator at the detector being tested.

3. The detector will alarm, the red LED lights for 2 seconds.
4. Repeat the test if necessary.

IMPORTANT! Room acoustics can artificially extend the range of a glass-break sensor. The specified range of the GB-502 PG2 has been established for worst-case conditions. While the sensor is likely to function at additional range, it may miss a "minimum output" break, or room acoustics may be changed at some future time, restoring sensor coverage back to the normal range of 6 m (20 ft).

Do not exceed the rated range of the sensor, regardless of what the tester shows.

Installation Tips

- The GB-502 PG2 detects the shattering of framed glass mounted on an outside wall. Testing the sensor with unframed glass, broken bottles, etc. might not trip the sensor. False alarms such as glass breaking in the middle of a room will not activate the sensor.
- False alarms are most likely to occur when installed on a 24-hour loop, in glass airlocks, and glass vestibule areas. Similarly, when mounted above sinks, residential garages, and in other small acoustic live rooms, false alarms can be generated. In rooms where multiple sounds can reflect and eventually duplicate the glass break frequency pattern, use shock sensors.
- Installing the GB-502 PG2 on 24-hour loops will increase false alarms. Install the GB-502 PG2 on a perimeter loop, which is armed whenever the door and window contacts are armed. For occupied areas, GB-502 PG2 false alarm immunity is best in rooms with only moderate noise levels.
- GB-502 PG2 detects the shattering of glass. Like all glass-break sensors, the detector might not consistently detect cracks in glass, or bullets that break through or break out the glass. Glass-break sensors should always be backed up by interior protection.

Event Indications

LED Indications and Events

LED Response	Description
Red LED blinks	Stabilization (warm-up 8 sec)
Red LED ON 0.2 sec.	Tamper open / close
Red LED ON 2 sec.	Glass break alarm
Green LED ON 2 sec.	Low frequency detection – Test mode
Green and red LED blink alternately (0.2 sec Green, 0.2 sec Red, 0.4 sec OFF)	Self-test failure – Test mode
Green and red LED blink alternately slowly (0.2 sec Green, 0.2 sec Red, 30 sec OFF)	Self-test failure – Normal mode

Compliance With Standards



The GB-502 PG2 complies with the following standards:

Europe: EN 300220, EN 301489, EN50130-4, EN60950, EN50130-5, EN 50131-2-7-1, EN 50131-1 Grade 2 Class II

This device complies with the essential requirements and provisions of Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio and telecommunications terminal equipment.

USA: CFR 47 Part 15 (FCC)

Canada: RSS 210



USA: UL639

Canada: ULC-S306

WARNING! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

To comply with FCC Section 1.1310 for human exposure to radio frequency electromagnetic fields and IC requirements, implement the following instruction:

A distance of at least 20cm. between the equipment and all persons should be maintained during the operation of the equipment.



W.E.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.

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.

Specifications

POWERG TRANSMITTER	
Frequency Band (MHz)	Europe and rest of world: 433-434, 868-869 USA: 912-919
Communication Protocol	PowerG
Supervision	Signaling at 4-minute intervals
Tamper Alert	Reported when a tamper event occurs
POWER SUPPLY	
Current Consumption	23µA average quiescent, maximum 150mA
Power Supply	3 V Lithium CR-123 type battery, Panasonic or GP only
Nominal Battery Capacity	1.45 Ah
Battery Life Expectancy	5 years for typical use
Battery Supervision	Automatic transmission of battery condition data as part of periodic status report
Low Battery Threshold	2.6 V
ENVIRONMENTAL	
RF Immunity	20 V/m up to 1000 MHz, 10 V/m up to 2700 MHz
Operating Temperature	-10°C to 50°C (14°F to 120°F) indoors
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Humidity	5 % to 95 % with no condensation
ACOUSTIC SENSOR	
Microphone	Omni-directional
Maximum Detection Range	7.6 m (25 ft) if glass size is minimum 40 x 40 cm (15 ¾" x 15 ¾") 6 m (20 ft) if glass size is 30 x 30 cm (12" x 12") to 40 x 40 cm (15 ¾" x 15 ¾")
Glass Types	UL tested on: Plate, tempered, wired, laminated, covered, and sealed insulated EN tested on: Plate and wired
Minimum Glass Size	UL tested on: 30 x 30 cm (12" x 12") EN tested on: 40 x 40 cm (15 ¾" x 15 ¾")
Glass Thickness	UL tested on: <ul style="list-style-type: none"> Plate: 3.2 to 6.4 mm (1/8" to ¼") Tempered: 3.2 to 6.4 mm (1/8" to ¼") Wired: 6.4 mm (¼") Coated: 3.2 to 6.4 mm (1/8" to ¼") Laminated: 6.4 mm (¼") Sealed Insulating: 3.2 to 6.4 mm (1/8" to ¼") EN tested on: <ul style="list-style-type: none"> Plate: 4 to 6 mm (3/16" to ¼") Wired: 6 mm (¼") <p><i>Note: Laminated and Sealed Insulating glass types are protected only if both plates of the unit are broken.</i></p>
Room Size	Not larger than 12 x 12 m (36 x 36 ft) Not smaller than 3 x 3 m (10 x 10 ft)
Min. Distance from Glass	1.5 m (5 ft)
ACCESSORIES	
Brackets	BR-1: Surface mounted swivel bracket, adjustable 30° down and 45° left/45° right BR-2: BR-1 with a corner adapter BR-3: BR-1 with a ceiling adapter
PHYSICAL	
Dimensions	88 x 62 x 30 mm (3.5 x 2.4 x 1.2 in)
Weight (not including battery)	74 g (2.6 oz)
Housing Material and Color	Flame retardant PC-ABS, white

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.

There is absolutely no warranty on software, and all software products are sold as a user license under the terms of the software license agreement included with such Product."

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.

Conditions to Void Warranty: This warranty applies only to defects in parts and workmanship relating to normal use of the Products. It does not cover:

- * damage incurred in shipping or handling;
- * damage caused by disaster such as fire, flood, wind, earthquake or lightning;
- * damage due to causes beyond the control of the Seller such as excessive voltage, mechanical shock or water damage;
- * damage caused by unauthorized attachment, alterations, modifications or foreign objects being used with or in conjunction with the Products;
- * damage caused by peripherals (unless such peripherals were supplied by the Seller);
- * defects caused by failure to provide a suitable installation environment for the products;
- * damage caused by use of the Products for purposes other than those for which they were designed;
- * damage from improper maintenance;
- * damage arising out of any other abuse, mishandling or improper application of the Products.

Items Not Covered by Warranty: In addition to the items which void the Warranty, the following items shall not be covered by Warranty: (i) freight cost to the repair centre; (ii) customs fees, taxes, or VAT that may be due; (iii) Products which are not identified with the Seller's product label and lot number or serial number; (iv) Products disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection or testing to verify any warranty claim. Access cards or tags returned for replacement under warranty will be credited or replaced at the Seller's option.

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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.

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 Manufacturers 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.

For sales in Israel only:

The Purchaser shall comply with the provisions of the Israeli Consumer Protection Law – 1981("Consumer Protection Law") related regulations, including the Israeli Consumer Protection Regulations (Warranty Sticker), 5772-2012) ("Regulations"), including, without limitation (i) providing its customers with at least the minimum warranty required by the Consumer Protection Law, and (ii) ensuring that a warranty certificate and a warranty sticker (as defined in the Regulations) ("Warranty Sticker") shall be attached to any sold Products and the date of the sale of the Product to the consumer or the end-user shall be added in a readable manner on the Warranty Sticker.

In no event shall the Purchaser's compliance with the Consumer Protection Law and Regulations expand any of the Manufacturer's warranty obligations under this warranty, and the Purchaser shall be responsible for any warranty that it provides with respect to the Products which exceeds or is different from 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.

Governing Law: This disclaimer of warranties and limited warranty are governed by the domestic laws of Israel.

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.

* In case of a conflict, contradiction or interpretation between the English version of the warranty and other versions, the English version shall prevail.

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