

# TMD-560 PG2

## Wireless PowerG Temperature Detector


**Visonic**

A Tyco International Company

## Installation Instructions

### 1. INTRODUCTION

The TMD-560 PG2 is a wireless PowerG detector used with the PowerMaster alarm system. The detector is designed to update the alarm system control panel upon any change of temperature. The control panel then generates an alarm message when the temperature has reached a certain temperature point. A restore message is generated when it crosses back the threshold temperature point. There are a number of selectable fixed temperature points at the control panel and the user can enable one or more temperature point. The TMD-560 PG2 can be used in instances where temperature detection is critical.

Other examples of detector usage are as follows:

- Activating and deactivating pipe heaters at locations where low temperatures may cause the water in pipes to freeze.
- Warn of possible electrical device malfunction due to high or low temperature levels.
- Alerting elderly people of a significant rise or drop in room temperature.

The TMD-560 PG2 detects both indoor and outdoor temperatures. The detector monitors room temperature using an internal sensor. For outdoor or refrigerator installations, a waterproof temperature probe (optional) is used.

When the probe is connected, the temperature measurement is performed only by the probe sensor. When the probe is not connected and its terminals are shorted, the temperature measurement is performed only by the detector's internal sensor.

Once the predefined temperature is reached, the alarm system control panel sends a notification to the central station or uses the PGM/X-10 controls to switch on a connected appliance, for example, a heater or air conditioner.

**Note:** When using the temperature probe to monitor refrigerator temperature, the temperature probe is installed inside the refrigerator, while the detector is installed on the wall or ceiling. For outdoor installations, the temperature probe is installed outdoors, while the detector is installed indoors.

Based on the unique PowerG technology, the TMD-560 PG2 includes a "smart" anti-collision transmission sequence mechanism that prevents collisions with transmitted messages from other PowerG devices.

For further reliability, the TMD-560 PG2 tamper switch is activated when the detector cover (see Figure 2) is removed.

Operating power is obtained from an on-board 3 V Lithium battery. A weak battery will result in a "low battery" message.

### Features

- The TMD-560 PG2 is compatible with PowerMaster control panels.
- Internal temperature sensor
- An external temperature optional probe (cat. no. 99-300890) enables outdoor and refrigerator temperature sensing
- Fully supervised PowerG detector
- Long battery life
- Low battery supervision
- Probe disconnected supervision
- Link quality indication

## 2. INSTALLATION, ENROLLING AND CONFIGURING

### 2.1. Mounting and Battery Insertion

#### 1. Installation:

The TMD-560 PG2 can be installed indoors on walls or on ceilings and in any direction. For installing outdoors or on refrigerators use the temperature probe (see Figures. 1 and 3).

Mount the bracket in the monitored area as close as possible to the control panel to ensure optimum reception of the RF signal.

If there is a short circuit between the two probe terminals (factory default) the detector measures the temperature using its internal sensor. If the probe terminals are not shorted, the internal sensor is disabled and the temperature is measured by the probe.

**Note:** Open probe terminals generate a "Probe Disconnected Trouble" transmission.

#### 2. Insert the battery between the battery clips (see Figure 2), at the correct polarity. **For proper operation, only a Lithium battery (type CR123 or equivalent) should be used.**

**Note:** When replacing a battery, it is necessary to wait 30 seconds between removing the used battery and inserting the new one.

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

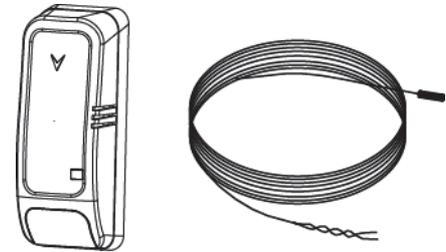


Figure 1. TMD-560 PG2 with Temperature Probe

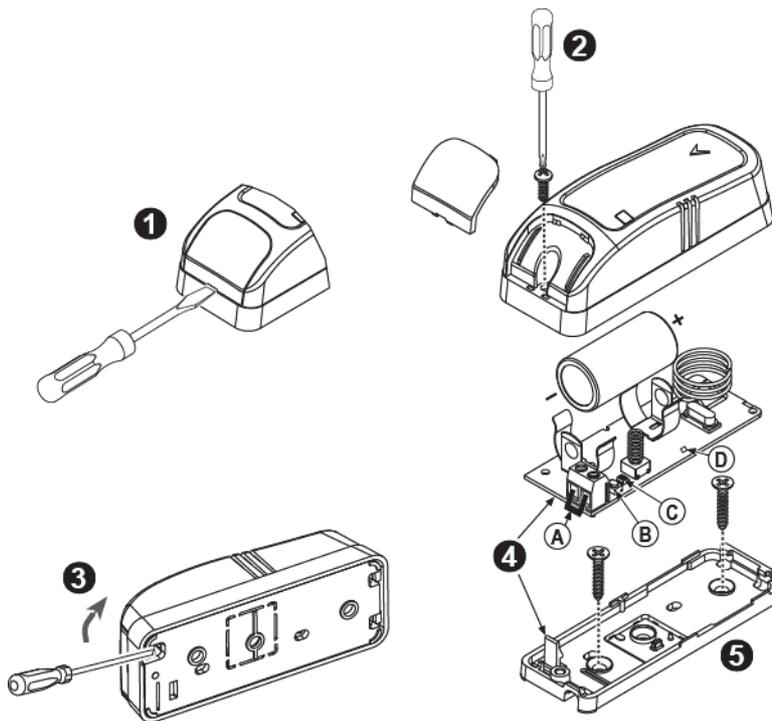


Figure 2. Mounting

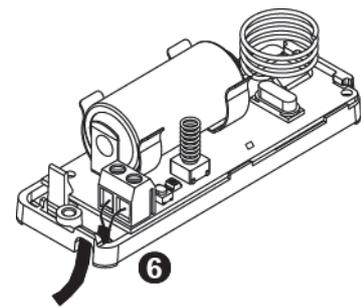


Figure 3. Temperature Probe Mounting

1. Insert a flat-edged screwdriver into the slot and push upward to remove cover.
2. Remove screw.
3. Separate base from cover.
4. Flex catch and remove P.C. board.
5. Mark and drill 2 holes in the mounting surface. Fasten base with 2 countersunk screws.
6. Reinsert P.C. board into base and connect the two wires of the probe to the terminal block.

- A. Terminal Jumper
- B. Enroll button
- C. LED
- D. Internal Temperature Sensor

## 2.2. Enrollment

Refer to the PowerMaster panel's 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
Enter the Installer menu and select "02:ZONES/DEVICES"	Select "ADD NEW DEVICE" See Note 1	Enroll the device or enter the device ID	Select the desired detector number for the new flood detector
<b>02:ZONES/DEVICES</b>	⇒ <b>ADD NEW DEVICES</b> ↓ <b>MODIFY DEVICES</b>	⇒ <b>ENROLL NOW</b> or <b>ENTR ID:XXX-XXXX</b>	⇒ <b>Z06:Temp. Sensor</b> ⇒ <b>ID No. 250-XXXX</b>
Step 5	Step 6	Step 7	Step 8
Configure Location parameter	Enter PARTITIONS. See Note 2	Assign partitions to the detector by pressing the <b>1</b> , <b>2</b> and <b>3</b> buttons on the panel	Continue to section 2.3
<b>Z06.LOCATION</b>	⇒ <b>Z06.PARTITIONS</b>	⇒ <b>Z06:P1</b> <b>P2</b> <b>P3</b>	⇒ <b>Z06.DEV SETTINGS</b>
⇒ means scroll <b>▶</b> and select <b>OK</b>			

### Notes:

- [1] If the temperature detector device is already enrolled you can configure the temperature detector device parameters via the "Modify Devices" option – see Step 2.
- [2] PARTITIONS will appear only if PARTITIONING was previously enabled in a panel that supports the Partitioning feature (for further details, see "Partitioning" in the PowerMaster Installer Guide).

## 2.3. Configuring the Temperature Device Parameters

Enter the **Z06:DEV SETTINGS** menu and follow the configuration instructions for the TMD-560 PG2 temperature detector device as described in the following table.

Option	Configuration Instructions
<b>TEMPERATURE °C/F</b>	Set the detector to detect temperatures in either Celsius or Fahrenheit. *  Options: Celsius °C (default) or Fahrenheit °F.
<b>VERY HOT &gt; 35°C</b>	Define whether or not the control panel will report a "very hot" alert when the temperature rises above 35°C (95°F) for at least 10 minutes. Alert restore will occur when the temperature drops below 34°C (93°F) for the duration of 10 minutes.

\* This option is available only through the DEFINE DEFAULTS settings, (for further details, see the PowerMaster Installer Guide).

Options: **Disabled** (default) or **Enabled**.

#### COLD < 19°C

Define whether or not the control panel will report a "cold" alert when the temperature drops below 19°C (66°F) for at least 10 minutes. Alert restore will occur when the temperature rises above 20°C (68°F) for the duration of 10 minutes.

Options: **Disabled** (default) or **Enabled**.

#### FREEZING <7°C

Define whether or not the control panel will report a "freezing" alert when the temperature drops below 7°C (45°F) for at least 10 minutes. Alert restore will occur when the temperature rises above 8°C (48°F) for the duration of 10 minutes.

Options: **Disabled** (default) or **Enabled**.

#### FREEZER >=-10°C

Define whether or not the control panel will report a "freezer" alert when the temperature rises above -10°C (14°F) for at least 30 minutes. Alert restore will occur when the temperature drops below -11°C (12°F) for the duration of 10 minutes.

Options: **Disabled** (default) or **Enabled**.

**Note:** The temperature must pass beyond the threshold for the required duration in order to generate an alarm or restore transmission.

## 2.4. Temperature Display

For instructions on displaying the temperature of zones on the control panel as measured by TMD-560 detectors, refer to the PowerMaster Installer Guide, section 4.2 "Conducting a Periodic Test".

## 3. LOCAL DIAGNOSTICS TEST

Before testing, separate the base from the cover (see Figure 2).

- A. Press the tamper switch once and release it.
- B. After 2 seconds the LED blinks 3 times.

The following table indicates received signal strength indication.

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

- C. Put back the cover to return the tamper switch to its normal (undisturbed) position, and then secure the front cover to the base with the case closure screw.

**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:** Since the cover is removed and power is applied, a tamper situation exists. Verify that the TMD-560 PG2 transmits (the LED lights briefly).

When you are satisfied that tamper alert is transmitted properly, close the TMD-560 PG2 front cover on to return the tamper switch to its normal position. Then, secure the front cover to the base with the case closure screw.

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

## 4. SPECIFICATIONS

Frequency Band (MHz)	Europe and rest of world: 433-434, 868-869 USA: 912-919
Communication Protocol	PowerG
RFI protection	>20 V/m 80 to 2000 MHz
Temperature measurement accuracy (internal sensor or optional probe)	±1.5°C (±2.7°F)
Probe cable length	3.5m
Battery type	3 V Lithium battery, CR123, Panasonic, Sanyo or GP only
Battery Life Expectancy	7 years (for typical use)
Low Battery Threshold	2.2 V
Battery Supervision	Automatic transmission of battery conditions data as part of any status report
Operating Temperature (indoor)	-20° to 50°C (-4°F to 122°F)
Probe Operating Temperature (outdoor)	-30° to 70°C (-22°F to 158°F)
Storage Temperature (indoor)	-20°C to 60°C (-4°F to 140°F)
Dimensions (LxWxD)	92 x 36.5 x 31 mm (3-5/8 x 1-7/16 x 1-1/4 in.)
Weight (excluding battery)	50 g (1.8 oz.)

## 5. COMPLIANCE WITH STANDARDS

Compliance with Standards



**Europe:** ICES-003:04, EN300220, EN301489, EN60950

The TMD-560 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*.

**USA:** CFR 47 (FCC) part 15

**Canada:** RSS 210

*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 Compliance 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.

### 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.

This device complies with Part 15 of the FCC Rules and RSS-210 of Industry and Science Canada. 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.

### WARNING!

Changes or modifications to this equipment not expressly approved by Visonic Ltd. could void the user's authority to operate the equipment.

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.: +44(0)845 0755800 FAX: +44(0)845 0755801



#### 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.

### 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 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.

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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