

CLIP SMA

Wireless Curtain-Type Infrared Detector



Installation Instructions

1. INTRODUCTION

The CLIP SMA is the smallest and most elegant wireless curtain-pattern PIR detector for indoor use and designed for easy installation. Its function is based on new and sophisticated, patented FM data acquisition and digital signal processing.

Modern technology is used to include 3 different detectors in a single case, each programmable for optimized performance at the specific mounting location. This results in better catch performance and virtually no false alarms.

The superiority in performance of this detector is achieved by applying an improved version of the patented **True Motion Recognition™ (TMR)** algorithm. This advanced motion analysis method allows the CLIP SMA to distinguish between the true motion of the human body and any other disturbances that cause false alarms.

After detection, the detector disarms itself to save battery power. It rearms (reverts to the ready state) if there is no subsequent detection throughout the following 2-minute period.

The CLIP SMA includes the following features:

- Very low current consumption
- Microprocessor-controlled temperature compensation
- Sealed chamber protects the optical system
- Front cover tamper switch
- White light protection
- Elegantly styled, sturdy case

Detailed coverage patterns and mounting alternatives are illustrated in Figures 2 through 6.

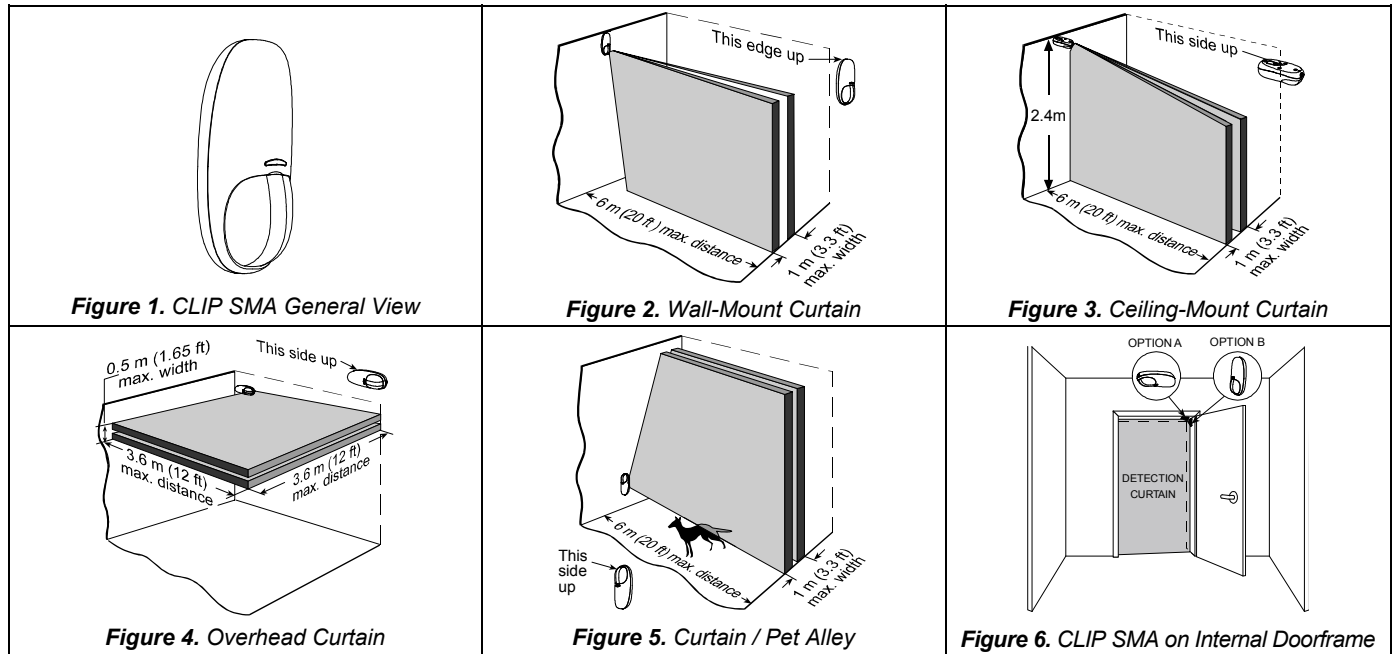


Figure 1. CLIP SMA General View

Figure 2. Wall-Mount Curtain

Figure 3. Ceiling-Mount Curtain

Figure 4. Overhead Curtain

Figure 5. Curtain / Pet Alley

Figure 6. CLIP SMA on Internal Doorframe

2. SPECIFICATIONS

OPTICAL

Detector Type: Dual-element low noise pyroelectric sensor.

Number of Curtain Beams: 2

Mounting Positions: See Figures 2 through 6.

Range Settings: Long (6 m/18 ft), Medium (4 m/12 ft) and Short (1.2 - 2m/6 ft) (Jumper-selected).

ELECTRICAL

Internal Battery: 3V Lithium battery, type CR123A. For UL installations, use Panasonic, GP or Sanyo only.

Nominal Battery Capacity: 1450 mAh.

Battery Life: 3 years (for typical use).

Note: Inability to connect with wireless network, or wireless link quality no higher than 20% may significantly reduce the expected battery life.

Battery Power Test: Performed immediately upon battery insertion and periodically every several hours.

Microprocessor: 8-bit, low power CMOS.

FUNCTIONAL

Visual Indications (red LED):

- **LED lights** for about 3 seconds upon transmission of alarm & tamper messages and upon motion detection in the walk test mode.
- **LED flashes** during the power-up stabilization period (approx. 2 min), or after restoring the cover (by pressing the tamper switch).
- **LED does not light** upon transmission of supervision messages.

Alarm Period: Approx. 3 seconds.

Rearm Timer: Rearms the detector 2 minutes after the last alarm.

WIRELESS

Frequency: 2.4 Ghz as per IEEE 802.15.4

Tamper Alert: Reported when a tamper event occurs and in any subsequent message, until the tamper switch is restored.

Supervision Message: Signaling at 24-minute intervals.

MOUNTING

Height: 1.8 - 2.4 m (6 - 8 ft). See Figures 2 - 6.

Installation Options: See Figures 2 - 6.

ENVIRONMENTAL

Operating Temperature: -10°C to 50°C (14°F to 122°F).

Storage Temperature: -20°C to 60°C (-4°F to 140°F).

RFI Protection: > 20 V/m to 1000 MHz.

Compliance with standards:

USA: CFR 47 part 15, Canada: RSS 210.

ANSI/UL 639, ULC - S306

PHYSICAL

Dimensions (H x W x D): 105 x 35 x 30 mm (4-1/8 x 1-3/8 x 1-3/16 in.).

Weight (with battery): 60 g (2.1 oz).

Color: White.

PATENTS U.S. Patent 5,693,943 (other patents pending)

3. INSTALLATION

3.1 General Guidelines

<p>Do not install near sources of heating/cooling.</p>	<p>Do not aim at windows.</p>	<p>Do not install outdoors.</p>	<p>Do not install where direct sunlight can strike the unit.</p>	<p>Do not install near high-voltage electrical lines.</p>	<p>Do not install behind any obstruction.</p>	<p>Do not mount on unstable surfaces.</p>

3.2 Regular Mounting

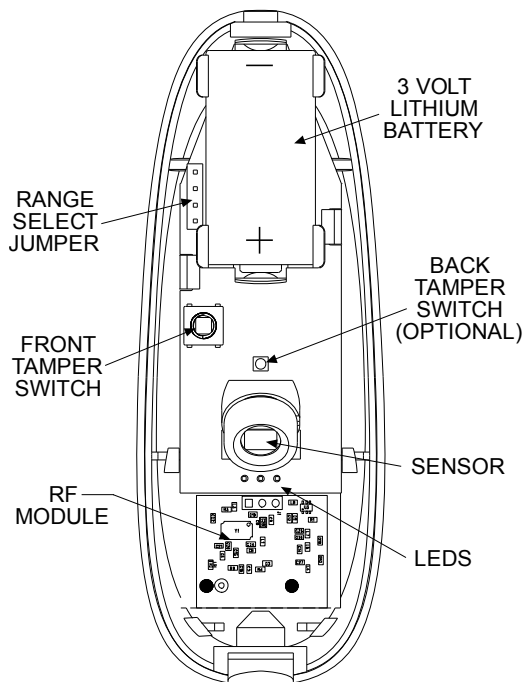


Figure 7. Internal View

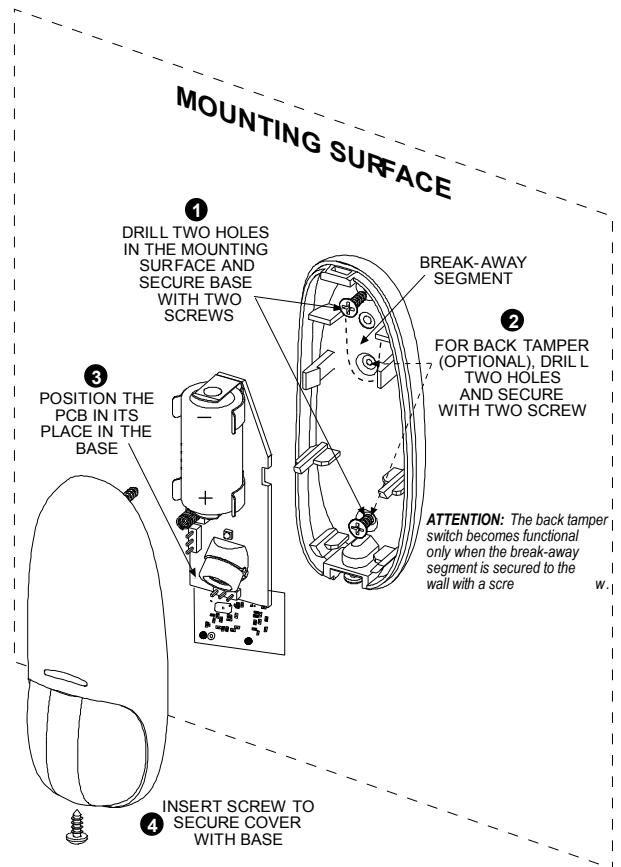


Figure 8. Surface Mounting

Notes:

- 1) After mounting, be sure that no gaps remain in the detector housing, for example, in the area around the screw holes.
- 2) Remove the battery using your fingers, and not with a screwdriver.

3.3 Bracket Mounting

Note: When mounting using the bracket, the back tamper is not functional.

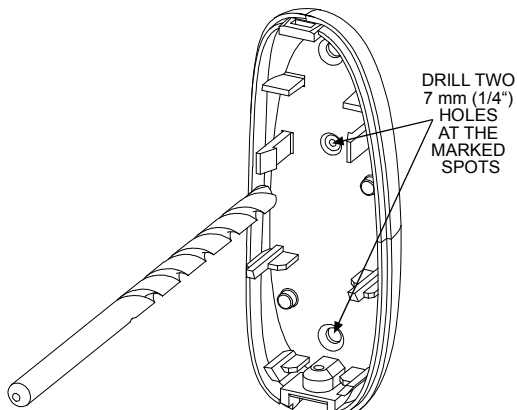


Figure 9. Drilling Holes

NOTE: THE BRACKET PROVIDES TWO MOUNTING OPTIONS FOR OPTIMUM ANGLE COVERAGE.

* USE THESE TWO HOLES TO INCREASE THE COVERAGE RANGE BY 5°

** USE THESE TWO HOLES TO INCREASE THE COVERAGE RANGE BY 10°

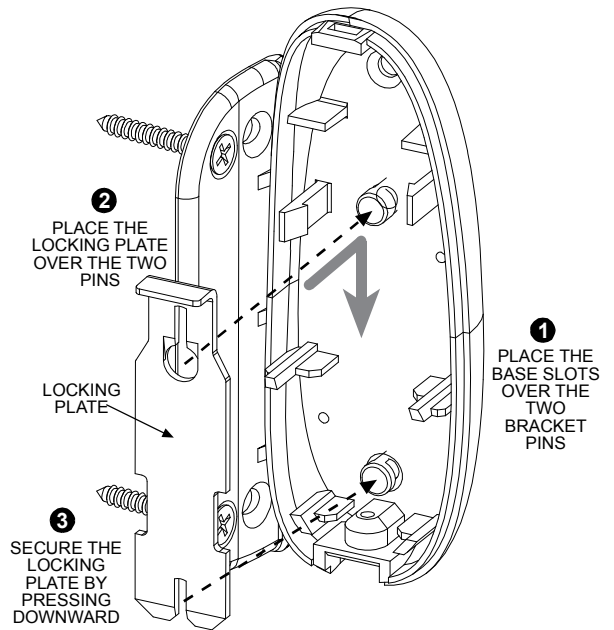


Figure 11. Securing Locking Plate to Base

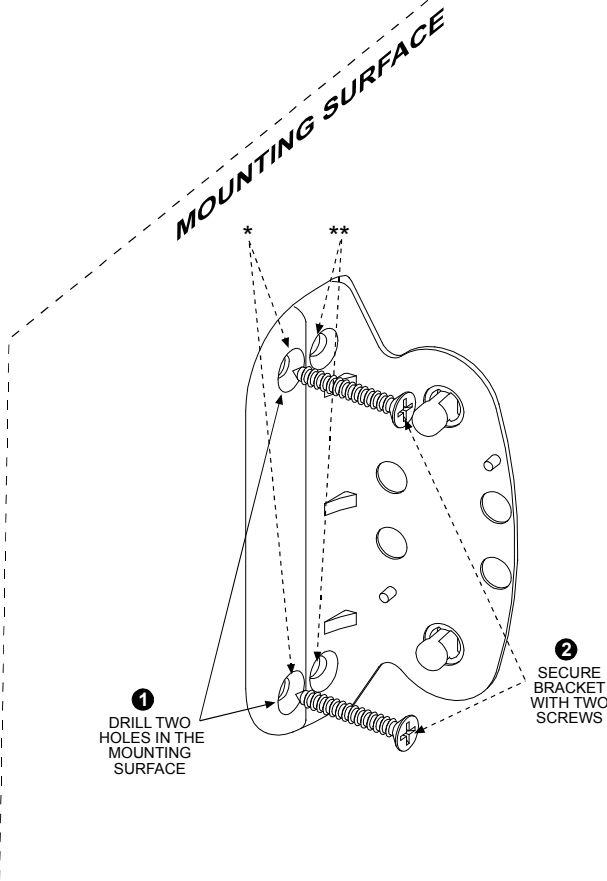


Figure 10. Mounting Bracket to Surface

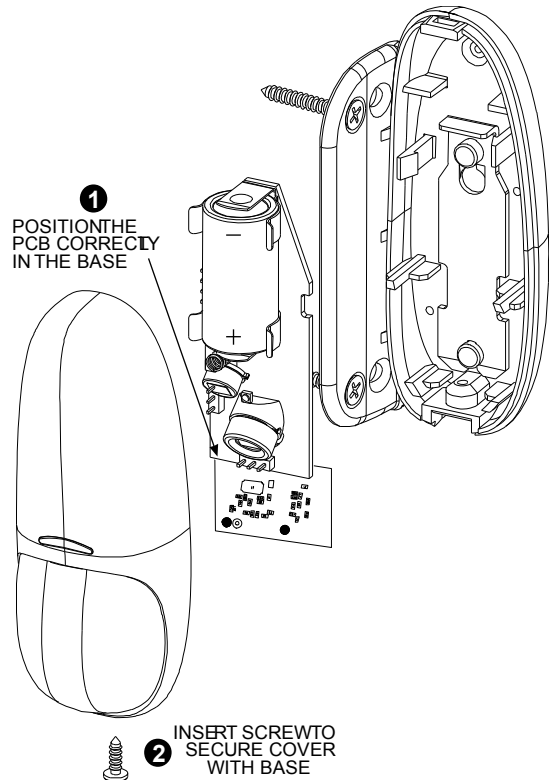
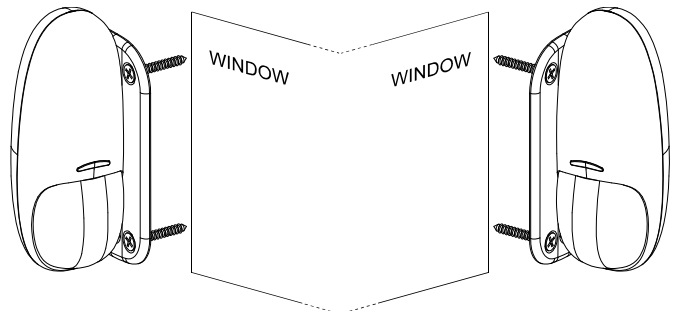


Figure 12. Mounting Cover to Base



Note: The CLIP SMA can be mounted on either side of a window.

Figure 13. Mounting on Both Sides of a Window

3.4 Setting the Coverage Range

A 4-pin jumper is used to select 3 ranges, according to the type of installation, for the curtain beams (see Figures 2-6 and 15).

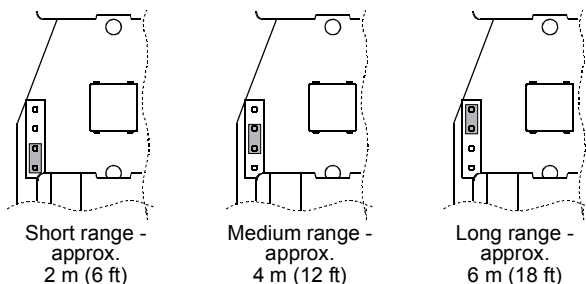


Figure 14. Range Jumper Settings

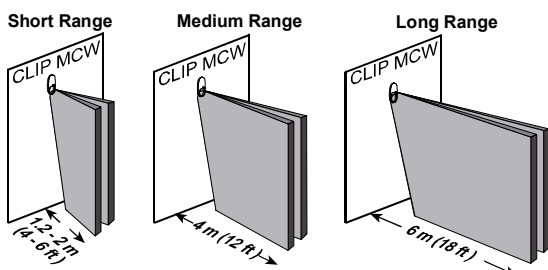


Figure 15. Range Setting Diagram

The purpose of the range setting is to ensure optimal signal processing and high immunity against false alarms.

Mount the range jumper in the desired position and make sure that the protected area is within the selected coverage range (see figure 15). Carry out a walk test (see Para. 3.7) to verify proper performance.

3.5 Activating the Detector

To activate, pull the strip that protrudes from the battery compartment.

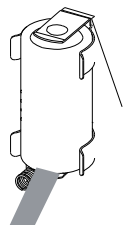


Figure 16. Activation Strip

3.6 Pairing/Defaulting the Detector

To pair the detector to the control panel, you must set it to pairing mode.

- Press and hold down the detector's tamper switch.
- Insert the battery into the detector. Wait for the RF module's green LED to light.
- Release the tamper switch and press it again within 4 seconds. When the detector is in pairing mode, the green LED starts to blink.
- Complete the pairing procedure on the control panel (see the pairing instructions in the control panel's installation guide).

3.7 Walk Testing

- Mount the cover and tighten the screw. Wait for the detector to stabilize (the LED stops flashing approx. two minutes after the cover is closed).
- Walk slowly across the far end of the curtain pattern (in opposite directions). The LED indicator lights for approx. 3 seconds whenever you enter or exit a curtain beam.

Important: Perform walk test at least once a week to assure proper function of the detector.

Note: After closing the cover the detector enters a 15 minute walk-test mode. In this mode the LED will flash each time a detection occurs, regardless of LED jumper settings, and the detector will transmit on the occurrence of each detection event.

4. TROUBLESHOOTING

If you encounter one of the following problems with the CLIP SMA, perform the suggested remedy:

Problem	Remedy
Attempt to pair the sensor is unsuccessful.	Make sure that the sensor has been defaulted and is set to pairing mode (see section 3.6).
The sensor and the panel do not communicate.	Perform the signal strength testing procedure described in the control panel installation manual. Make sure that the signal is sufficient. If necessary, replace the sensor's battery.
The sensor sends a Low Battery indication.	To ensure continuous proper operation, replace the battery within two weeks of the first Low Battery indication.

Problem	Remedy
Panel does not arm because of an unrecognized sensor malfunction	Consult with your installer or system provider before you disable a zone. Disable the sensor zone (see the control panel user manual). Note that disabling a sensor zone lowers the overall security level of your system.

5. SPECIAL COMMENTS

5.1 Product Limitations

Visonic Ltd. wireless systems are very reliable and are tested to high standards. However, due to their 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 on or near their operating frequencies, regardless of the code selected.
- B. A receiver can only respond to one signal at a time.
- C. Wireless equipment should be tested regularly to determine whether there are sources of interference and to protect against faults.

5.2 Compliance with Standards

FCC

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.

This device complies 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! 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.

- D. Even the most sophisticated detectors can sometimes be defeated or may fail to warn due to: DC power failure / improper connection, malicious masking of the lens, tampering with the optical system, decreased sensitivity in ambient temperatures near that of the human body and unexpected failure of a component part.

The above list includes the most common reasons for failure to detect intrusion, but is by no means comprehensive. It is therefore recommended that the detector and the entire alarm system be checked weekly, to ensure proper performance.

- E. An alarm system should not be regarded as a substitute for insurance. Home and property owners or renters should be prudent enough to continue insuring their lives and property, even though they are protected by an alarm system.

The digital circuit of this device has been submitted for testing in order 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 residential installations. 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 and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit different from the one which supplies power to the receiver.
- Consult the dealer or an experienced radio/TV technician.

Visonic Ltd, M/N: E203826
FCC ID: WP3ZBT
IC: 1467C-ZBT

ANSI/UL

Complies with ANSI/UL 639, ULC – S306

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.

1/08



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.



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MCT-302 SMA

Magnetic Contact Wireless Sensor



Installation Instructions

1. INTRODUCTION

The MCT-302 SMA is a fully supervised, wireless magnetic contact sensor. The sensor includes a built-in reed switch (that opens upon removal of a magnet placed near it) and an auxiliary hard-wired input, programmable as either N.C. or E.O.L., for use with additional sensors - pushbuttons, detectors, door contacts etc. An on-board DIP switch allows the installer to disable the magnet-operated reed switch if only the auxiliary input is needed.

The reed switch and the auxiliary input behave as separate transmitters, although they trigger the same RF transmitter. Each input has a unique ID. The MCT-302 SMA tamper switch is activated when the cover is removed. A periodic supervision message is transmitted automatically. The target receiver is thus informed, at regular intervals, of the unit's active participation in the system.

2. SPECIFICATIONS

Frequency: 2.4 GHz as per IEEE 802.15.4
Alarm Inputs: 2, one internal and one external, with a separate sensor ID each.
Auxiliary Input Circuit Type: N.C. / E.O.L., selected with DIP switch
E.O.L. Resistor Required: 47 kΩ
Message Repetition: Repetitive transmission (once every 3 minutes) or one-shot, as selected with on-board DIP switch.
Supervision: Signaling at 24-min. intervals.
Response to Tamper Event: Tamper report every 3 minutes (until the tamper switch is restored).
Power Source: 3 V Lithium CR-2 type battery, Panasonic, Sanyo or GP only.

3. INSTALLATION

3.1 Mounting (Fig. 2)

It is highly recommended to attach the sensor to the top of the door/window on the fixed frame and the magnet to the movable part (door or window). Make sure that the magnet is located not more than 6 mm (0.25 in.) from the sensor's marked side.
Note: Once the cover is removed, a tamper message is transmitted to the receiver. Subsequent removal of the battery prevents transmission of "TAMPER RESTORE", leaving the receiver in permanent alert. To avoid this, during the enrolling process, press the tamper switch while you remove the battery.

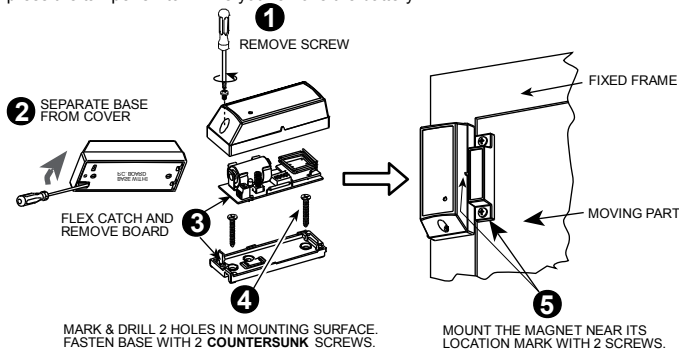


Figure 2 – Mounting the Sensor

4. PREPARATION FOR USE

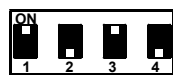
4.1 The Function Switches

A. Switch Tasks

The MCT-302 SMA has a 4-position DIP switch function selector. Each switch lever allows you to select one of two options.

B. Setting the Switches

Set the function switches as desired prior to applying power. Use a ball point pen or another pointed object to shift the switch levers. The ON position is indicated by the arrow on the switch body.



Function Selector

An LED lights whenever alarm or tamper events are reported. The LED does not light while a supervision message is being transmitted. Operating power is obtained from an on-board 3V Lithium battery. When the battery voltage is low, a "low battery" message is sent to the receiver.

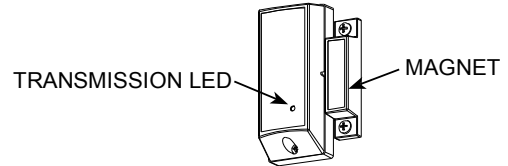


Fig. 1 - MCT-302 SMA

Battery Life Expectancy: 3 years (for typical use)
Note: Inability to connect with wireless network, or wireless link quality no higher than 20% may significantly reduce the expected battery life.
Battery Supervision: Automatic transmission of battery condition data as part of any status report.
Operating Temperature: 0°C to 49°C (32°F to 120°F).
Dimensions: 81 x 32 x 25 mm (3-3/16 x 1-1/4 x 1 in.)
Weight: 53g (1.9 oz)
Standards: USA: CFR 47 part 15, Canada: RSS 210, ANSI/UL 639, ULC – S306

3.2 Auxiliary Input Wiring (Fig. 3)

Remember! If your application does not require the auxiliary input, be sure to set DIP switch SW2 to OFF and to short the input terminals together with a piece of jumper wire.

- A. Connect the auxiliary sensor contacts across the MCT-302 SMA auxiliary input terminals.
- B. If the auxiliary input of the MCT-302 SMA is defined as a Normally Closed (N.C.) type (SW2 set to OFF), series connected N.C. sensor contacts must be used exclusively. An E.O.L. resistor will not be required.
- C. For E.O.L. supervision, set SW2 to ON. Normally Closed (N.C.) as well as Normally Open (N.O.) sensor contacts can be used, as show in figure 3. A 47kΩ E.O.L. resistor must be wired at the far end of the zone loop.

Note: For UL installations, the device connected to the initiating circuit must be located in the same room as the sensor.

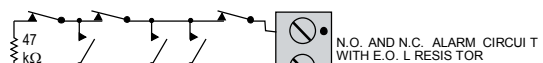


Figure 3 - E.O.L. Wiring Example

NOTE - An alarm message is transmitted once the loop is opened or short circuited.

Table 1. Getting acquainted with the function selector

Sw-	Function	Pos.	Selected Option	Default
SW1	Reed switch input enable/disable	ON	Reed switch input is enabled	ON
		OFF	Reed switch input is disabled	
SW2	Aux. input type selector	ON	Aux. input is E.O.L. (47 kΩ)	OFF
		OFF	Aux. input is N.C.	
SW3	Restore reports enable/disable	ON	Restore events reported	ON
		OFF	Restore events not reported	
SW4	Transmit mode selector	ON	Alarms reported every 3 min.	OFF
		OFF	Alarms reported only once	

SWITCH SW1: Determines whether the reed switch input will be active or inactive.
SWITCH SW2: Determines whether the auxiliary input will behave as an end-of-line (E.O.L.) input or as a normally closed (N.C.) input.
SWITCH SW3: Determines whether the sensor will report a restore event when an input restores from an alarm condition.

Note: Selecting the ON position enables you to find out whether the door or window under surveillance are open or closed.

Note: For UL installations, SW3 must be set to On position.

SWITCH SW4: In non-supervised systems, it is sometimes required to report an alarm repeatedly at short intervals, until the disturbed input reverts to its normal (undisturbed) state. SW4 is used to select between repetitive and one-shot transmission.

Note: Transmissions initiated by "tamper" events will be repeated once every 3 minutes, regardless of SW4 setting.

When done, install the battery as directed in Para. 4.4.

4.2 Activating the Sensor

To activate, pull the strip that protrudes from the back of the sensor.

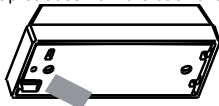


Fig. 4 – Activation Strip

4.3 Pairing/Defaulting the Sensor

To pair the sensor to the control panel, you must set it to pairing mode.

1. Press and hold down the sensor's tamper switch.
2. Insert the battery into the sensor. Wait for the RF module's green LED to light.
3. Release the tamper switch and press it again within 4 seconds. When the sensor is in pairing mode, the green LED starts to blink.
4. Complete the pairing procedure on the control panel (see the pairing instructions in the control panel's installation guide).

4.4 Testing the Unit

Before testing, set DIP switches SW1 through SW4 as required for the particular application (Para. 4.1).

A. Insert the battery between the battery clips, at the correct polarity. For proper operation, only Lithium battery (Panasonic, Sanyo, or GP type CR2) should be used.

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

B. Press the tamper switch once and release it.

Note: Since the cover is removed and power is applied, a tamper situation exists. Verify that the MCT-302 SMA transmits (the LED lights briefly) once every 3 minutes.

C. When you are satisfied that tamper signals are transmitted properly, put the cover on to return the tamper switch to its normal (undisturbed) position. Wait slightly over 3 minutes to verify that tamper transmissions cease. If operation is normal, secure the front cover to the base with the case closure screw.

D. Momentarily open the door or window and verify that the sensor LED lights, indicating that transmission is in progress.

If SW4 is ON, wait 3 minutes to verify that the transmission is repeated at 3-minute intervals.

E. Close the door or window, thus restoring it to the undisturbed state and watch the LED. If SW3 is set to ON, a "restore" transmission will now take place.

F. If the auxiliary input is used, momentarily activate the detector connected to it and check for a response similar to that described in D above. Then restore the input loop to its undisturbed state. The response should be as in E above.

Note Regarding Tamper Message Transmission:

- If the reed switch input is enabled (SW1 is ON), the tamper message will be sent with the reed switch's ID.

- If the reed switch input is disabled (SW1 is OFF), the tamper message will be sent with the auxiliary input's ID.

5. TROUBLESHOOTING

If you encounter one of the following problems with the MCT-302 SMA, perform the suggested remedy:

Problem	Remedy
Attempt to pair the sensor is unsuccessful.	Make sure that the sensor has been defaulted and is set to pairing mode (see para 4.3).
The sensor and the panel do not communicate.	Perform the signal strength testing procedure described in the control panel installation manual. Make sure that the signal is sufficient. If necessary, replace the sensor's battery.
The sensor sends a Low Battery indication.	To ensure continuous proper operation, replace the battery within two weeks of the first Low Battery indication.

Problem	Remedy
Panel does not arm because of an unrecognized sensor malfunction	Consult with your installer or system provider before you disable a zone. Disable the sensor zone (see the control panel user manual). Note that disabling a sensor zone lowers the overall security level of your system.

6. COMPLIANCE WITH STANDARDS

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FCC ID: WP3ZBT
IC: 1467C-ZBT

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.

ANSI/UL

Complies with ANSI/UL 639, ULC – S306

7. 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:

- Receivers may be blocked by radio signals occurring on or near their operating frequencies, regardless of the digital code used.
- A receiver responds only to one transmitted signal at a time.
- Wireless devices should be tested regularly to determine whether there are sources of interference and to protect against faults.

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.



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.**

European Directive 2002/96/EC Waste Electrical and Electronic Equipment.



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MCT-427 SMA

Supervised Wireless Smoke / Heat Detector



Visonic®

Installation Instructions

1. DESCRIPTION AND APPLICATIONS

MCT-427 SMA (heat and smoke detector) are automatic fire detectors with integral audible signal for open area protection, designed to sense heat or smoke (not flame) and fitted with an iControl compliant wireless transceiver.

MCT-427 SMA provides early warning of developing fire by sounding an alarm with its built-in alarm horn, and by transmitting a coded alarm signal to an iControl compliant control panel.

MCT-427 SMA will activate a fire alarm upon either smoke or heat (temperature rate-of-rise) condition. With two fire sensors (heat and smoke), the MCT-427 SMA detector may shorten the time to fire alarm activation.

It must be borne in mind, though that effective prewarning of fire accidents is only possible if the detector is located, installed and maintained as described here.

In alarm condition, the buzzer sound can be stopped for 12 minutes by pressing the TEST/MUTE switch. It will not restore the alarm condition, but will temporarily silence the buzzer while you correct the condition. After 12 minutes, the detector restarts the alarm buzzer sound.

Note: The TEST/MUTE switch functions as TEST switch (in normal operation) or as MUTE switch (in alarm condition).

The tamper switch actuator (Fig. 3a/3b) is pressed against the bracket when the unit is attached to the bracket. Removal of the unit from the bracket causes the switch contacts to open, creating a tamper event, which is reported by the transmitter to the alarm system control panel.

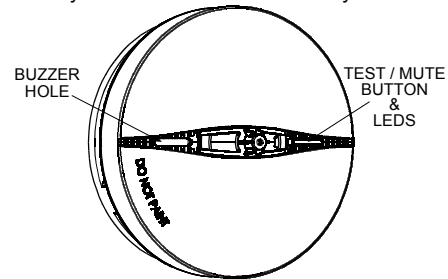


Figure 1. General View (MCT-427)

2. SPECIFICATIONS

Alarm Sound Level: 85 dB at 3 m (10 feet)

TRANSMITTER AND CODING

Operating Frequency: 2.4 GHz as per IEEE 802.15.4

Supervision: Automatic signaling at 24-minute intervals.

Tamper Alerts: Tamper event (removal of the unit from its bracket) is reported once. Tamper restore is reported when the tamper switch is restored.

Transmission Indicator: Yellow LED lights upon transmission (visible only when LED function is pre-defined, see par. 3.7).

ALARM REPORT:

Every 20 seconds for the first 3 minutes. Then, every 3 minutes until 30 minutes have elapsed.

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

After 30 minutes, an alarm bit will be sent as part of the supervision message.

ELECTRICAL DATA

Power Source: 3 Volt CR123A / CR17450 lithium.

Panasonic/GP/Sanyo recommended

Operation Voltage: From 2.7 V to 3 V.

Current Drain: 18 µA standby, 70 mA max. in operation

Smoke Density: 1.44%/ft to 2.74%/ft

Cover Range: 50 – 100 cubic meters (1770 – 3530 cubic ft.)

Battery Supervision: Automatic transmission of battery status data as part of any transmitted message.

Battery Life Expectancy: Battery life exceeds the minimum life required by UL 268. Visonic warrants the life of the battery for 5 years for typical use.

Note: Inability to connect with wireless network, or wireless link quality no higher than 20% may significantly reduce the expected battery life.

Audible and Visual Low Battery Warning: Built-in horn beeps every 30 seconds simultaneously with red LED flashing (for up to 30 days when the battery voltage drops).

Audible and Visual Degraded Chamber Sensitivity Warning: Built-in horn beeps every 30 seconds in the middle of red LED flashing intervals – indicates that the detector must be replaced.

Clean Warning Transmission: A clean (maintenance) signal is transmitted when the detector's chamber becomes stained, causing the detector to operate at high sensitivity.

PHYSICAL DATA

Operating Temperature: -10°C to 50°C (14°F to 122°F).

Relative Humidity: 10% to 85%

Dimensions: 120 mm (4.7") x 63 mm (2.5")

Weight (including battery): 165 g (5.8 oz)

Compliance with Standards:

USA: CFR 47 part 15, Canada: RSS 210.

ANSI/UL 639, ULC – S306

3. INSTALLATION

3.1 Disassembly

Separate the unit from its mounting bracket as shown in Figure 2.

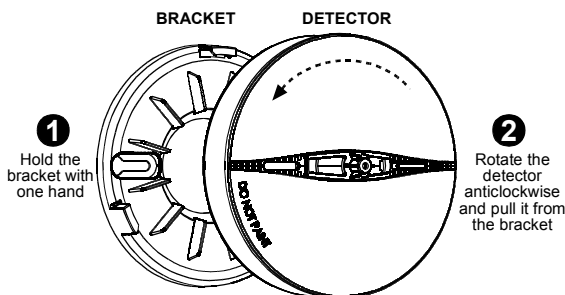


Figure 2. Separating the Detector from Its Bracket

3.2 Audible and Visual Indications

The dual color LED and buzzer are used to signal various alarm and trouble messages as shown in Table 1 below:

Table 1. Visual and Audible Indications

Condition	Visual Indication (LEDs)		Audio Indication
	Red	Yellow	
Smoke alarm	Flash every 500ms	-	3 long beeps every 4 sec.
Heat alarm(***)	Flash every 500ms	-	Long beep every 2 sec.
Tamper alarm(*)	-	-	Long beep every 2 sec.
Standby	Flash every 30 sec.	-	-
Low battery	Flash every 30 sec.	-	Short beep every 30 sec.
Smoke sensor trouble	Flash every 60 sec.	3 Flashes every 60 sec.	Short beep every 60 sec.
Low sensitivity alarm	Flash every 30 sec.(**)	-	Short beep every 30 sec.

Condition	Visual Indication (LEDs)		Audio Indication
	Red	Yellow	
Heat sensor trouble	Flash every 60 sec.	5 Flashes every 60 sec.	Short beep every 60 sec.
Need to clean	2 flashes every 30 sec.	-	2 short beeps every 30 sec.
Test	See par. 3.6		

* The tamper alarm will mute for 3 minutes at first power on, and will revert to normal mode when the tamper switch condition is changed.

** Delay of 15 sec. between buzzer beep and LED operation

3.3 Battery Connection and Initial Test

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

Attention: The detector battery cover is fitted with a red button that prevents the detector from locking onto bracket if there is no battery inside.

The smoke detector is supplied with a 3V CR123A / CR17450 battery. Battery connection for both types of batteries is illustrated in Figure 3a and 3b below.

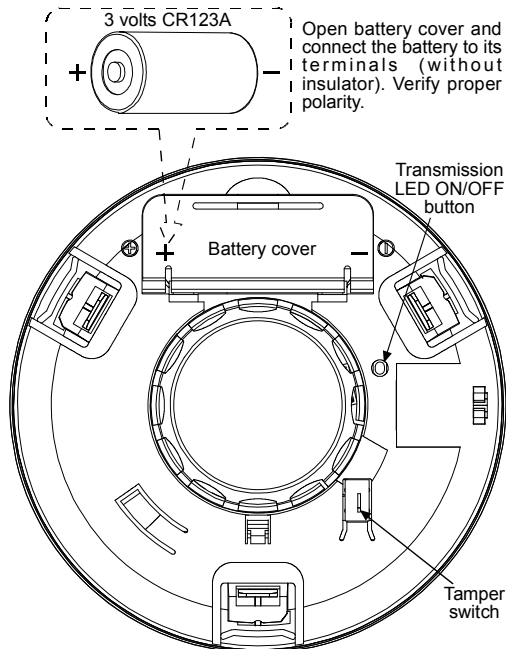
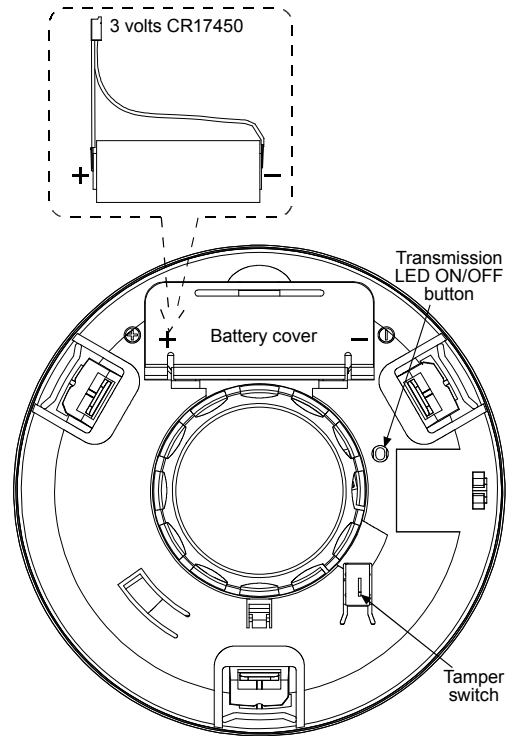


Figure 3a. Battery Connection for CR123A



Open battery cover and connect the battery to its terminals.

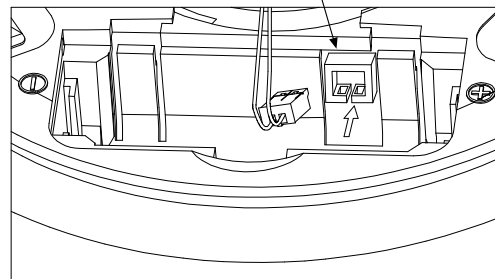


Figure 3b. Battery Connection for CR17450

Note: When the battery first makes contact, the alarm horn may sound for one second. This indicates that the battery is connected properly.

Close the cover, then press the test button (see fig. 1) for about 5 seconds, (for further details see par. 3.6)

3.4 Pairing/Defaulting the Detector

Note: It is much easier to carry out this operation while holding the MCT-427 in your hand, close to the control panel.

To pair the detector to the control panel, you must set it to pairing mode.

- Press and hold down the detector's tamper switch.
- Insert the battery into the detector. Wait for the RF module's green LED to light.
- Release the tamper switch within 4 seconds and press it again. When the detector is in pairing mode, the green LED starts to blink.
- Complete the pairing procedure on the control panel (see the pairing instructions in the control panel's installation guide).

Notes

- A battery must be inserted into the detector before the detector can be mounted onto the bracket.
- Unauthorized removal of the unit from the bracket will initiate a tamper alert!

3.5 Mounting

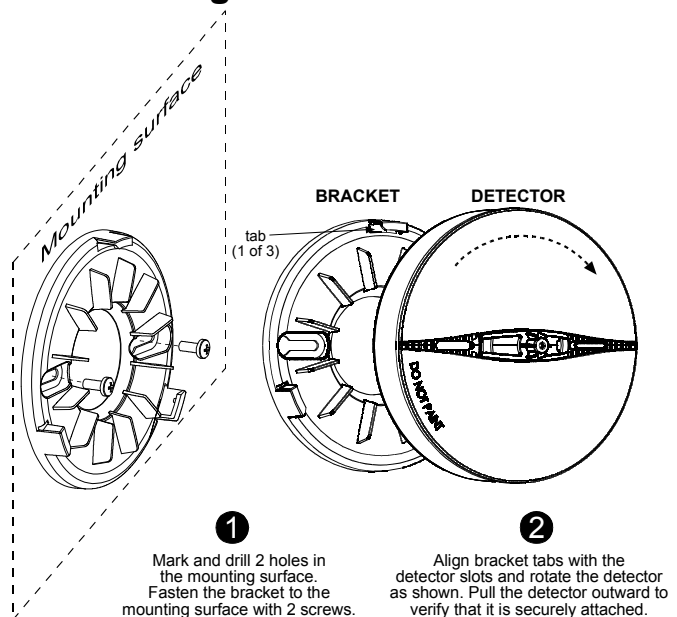


Figure 4. Mounting the Detector

3.6 Test

Enter the test mode by pressing the test button. In this mode, the detector will test smoke, heat and battery functions. If all functions are good, the red LED lights 0.5s, off 0.5s, the yellow LED lights 0.5s, off 0.5s followed by a loud 3-beep alarm and the red LED flashes simultaneously. Otherwise, the detector produces the warning signals as detailed in Table 1.

3.7 LED Transmission Procedure

The yellow LED can be set to ON or OFF by pressing the Transmission LED (yellow) ON/OFF button (see Figure 3a), as indicated in Table 2 below.

Table 2. Interpreting the Transmission ON/OFF Button

Transmission LED ON/OFF button (yellow) press	LED (yellow) Status during transmission
Press and release, flashes once	ON
Press and release, flashes twice	OFF

4. SMOKE DETECTOR INSTALLATION OVERVIEW

4.1 Where to Install Smoke Detectors

Smoke detectors should be installed in accordance with the NFPA Standard 74 (National Fire Protection Association, Batterymarch Park, Quincy, MA 02169). For complete coverage in residential units, smoke detectors should be installed in all rooms, halls, storage areas, basements and attics in each family living unit. Minimum coverage is one detector on each floor and one in each sleeping area and attics in each family living unit. For maximum protection, a smoke detector should be located outside primary sleeping areas or on each level of your home. Here are a few useful tips for you:

- Install a smoke detector in the hallway outside every separate bedroom area, as in Figure 5. Two detectors are required in homes with two bedroom areas, as in Figure 6.
- Install a smoke detector on every floor of a multi-floor home or apartment, as shown in Figure 7.
- Install a minimum of two detectors in any household.
- Install a smoke detector inside every bedroom.
- Install smoke detectors at both ends of a bedroom hallway if the hallway is more than 12 meters (40 feet) long.

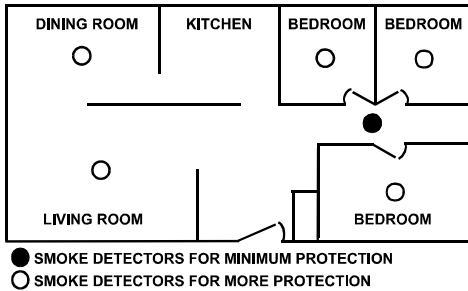


Figure 5. Locations for Placing Smoke Detectors in a Single Residence with only One Sleeping Area

- Install a smoke detector inside every room where one sleeps with the door partly or completely closed, since smoke could be blocked by the closed door and a hallway alarm may not wake up the sleeper if the door is closed.

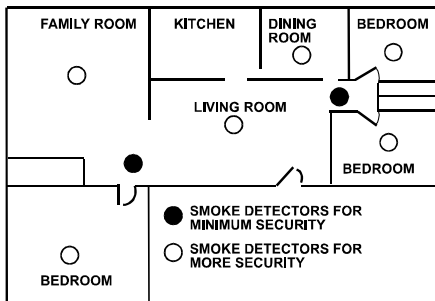


Figure 6. Locations for Placing Smoke Detectors in Single-Floor Residence with More than One Sleeping Area.

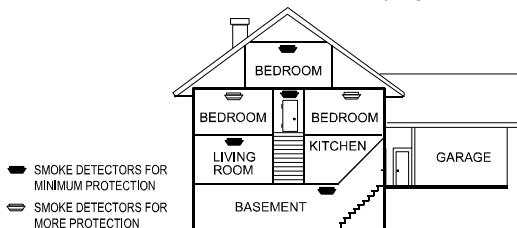


Figure 7. Placing Smoke Detectors in a Multi-Floor Residence

- Install basement detectors at the bottom of the basement stairwell.
- Install second-floor detectors at the top of the first-to-second floor stairwell.
- Be sure no door or other obstruction blocks the path of smoke to the detector.
- Install additional detectors in your living room, dining room, family room, attic, utility and storage rooms.
- Install smoke detectors as close to the center of the ceiling as possible. If this is not practical, put the detector on the ceiling, at least 10 cm (4 inches) away from any wall or corner, as shown in Figure 8.
- If ceiling mounting is not possible and wall mounting is permitted by your local and state codes, locate the detectors between 10 - 15 cm (4 - 6 inches) from the ceiling, also see Figure 8.
- If some of your rooms have sloped, peaked, or gabled ceilings, try to mount detectors 0.9 meter (3 feet) measured horizontally from the highest point of the ceiling as shown in Figure 9.

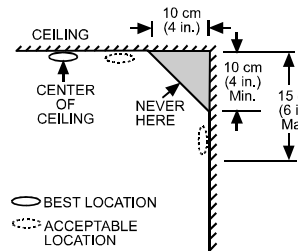


Figure 8. Recommended Best and Acceptable Locations to Mount Smoke Detectors

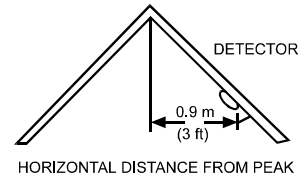


Figure 9. Recommended Location to Mount Smoke Detectors in Rooms with Sloped, Gabled or Peaked Ceiling



CAUTION (As required by the California State Fire Marshall)

"Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows:

- (1) A smoke detector installed in each separate sleeping area (in the vicinity, but outside the bedrooms), and (2) Heat or smoke detectors in the living rooms, dining rooms, bedrooms, kitchens, hallways, attics, furnace rooms, closets, utility and storage rooms, basements and attached garages."

4.2 Where Not to Install Smoke Detectors

False alarms occur when smoke detectors are installed where they will not work properly. To avoid false alarms, do not install smoke detectors in the following situations:

- Combustion particles are by-products of something burning. Do not install smoke detectors in or near areas where combustion particles are present, such as kitchens with few windows or poor ventilation, garages where there may be vehicle exhaust, near furnaces, hot water heaters and space heaters.
- Do not install smoke detectors less than 6 meters (20 feet) away from places where combustion particles are normally present, like kitchens. If a 20-foot distance is not possible, try to install the detector as far away from the combustion particles as possible, preferably on the wall. To prevent false alarms, provide good ventilation in such places.

IMPORTANT: Never try to avoid false alarms by disabling the detector.

- Do not mount smoke detectors in the path of fresh air intake. The flow of fresh air in and out can drive smoke away from the smoke detector; thus reducing its efficiency. Figure 10 indicates the correct and incorrect locations concerning this problem.
- Near pain thinner fumes.
- In close proximity to an automobile exhaust pipe; this will damage the detector.
- In damp or very humid areas or near bathrooms with showers. Moisture in humid air can enter the sensing chamber, then turns into droplets upon cooling, which can cause false alarms. Install smoke detectors at least 3 meters (10 feet) away from bathrooms.
- In very cold or very hot areas, including unheated buildings or outdoor rooms. If the temperature goes above or below the operating range of smoke detector, it will not work properly. Verify that the temperature range of the detector falls within the Operating Temperature, (see chapter 2. Specifications).
- In very dusty or dirty areas, dirt and dust can build up on the detector's sensing chamber, to make it overly sensitive.
- Additionally, dust or dirt can block openings to the sensing chamber and keep the detector from sensing smoke.
- Near fresh air vents or very drafty areas like air conditioners, heaters or fans. Fresh air vents and drafts can drive smoke away from smoke detectors.
- Dead air spaces are often at the top of a peaked roof, or in the corners between ceilings and walls. Dead air may prevent smoke from reaching a detector. See Figures 8 and 9 for recommended mounting locations.
- In insect-infested areas. If insects enter a detector's sensing chamber, they may cause a false alarm. Where bugs are a problem, get rid of them before putting up a detector.
- Near fluorescent lights, electrical "noise" from fluorescent lights may cause false alarms. Install smoke detectors at least 1.5 meters (5 feet) from such lights.
- **Smoke detection depends on the smoke density present in a room. Smoke density is greater in small rooms, for the same amount of smoke, than in large rooms.**

In small rooms less than 25 cubic meters (883 cubic ft.) in size, a small amount of smoke may activate a smoke alert. For example, smoking or bathroom steam may activate a smoke alert.

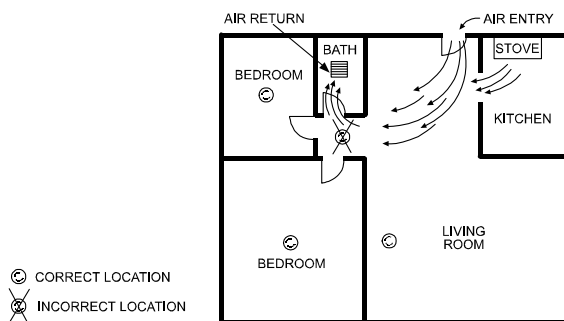


Figure 10. Recommended Smoke Detector Locations to Avoid Air Streams with Combustion Particles

WARNING: Never remove batteries to stop a false alarm. Open a window or fan the air around the detector to get rid of the smoke. The alarm will turn itself off when the smoke is gone. If false alarms persist, attempt to clean the detector as described in this manual.

WARNING: Do not stand close to the detector when the alarm is sounding. The alarm is loud in order to wake you in an emergency. Too much exposure to the horn at close range may be harmful to your hearing.

5. TAKING CARE OF THE MCT-427 SMA

5.1 Battery Replacement

The MCT-427 SMA was designed to be as maintenance-free as possible. To keep the smoke detector in good working order, you must test it weekly, as instructed in Para. 6.1 below.

Make it a rule to replace the detector's battery (lithium) once every 8 years even if there is no indication that the battery is weak. Also be sure to replace it immediately upon reception of a low battery message via your control panel.

If you disregard this message, an audible reminder in the form of

4

4.3 Smoke Detector Limitations

- This smoke detector is designed for use in a single residential unit or offices, which means that it should be used inside a single family home or apartment or office.*
- Please refer to NFPA 101, the Life Safety Code, NFPA72 for smoke detector requirements for fire protection in buildings not defined as "households".*
- The smoke detector will not sense a fire if the smoke does not reach the sensor.** In order for a smoke detector to sense smoke, it must be installed in the immediate vicinity of the fire.*
*In addition, smoke from fires in chimneys, in walls, on roofs, in remote parts of the building, or on another level from where the smoke detector is located, may not reach the smoke detector quickly enough for occupants to escape unharmed. **For this reason, installer shall install smoke detectors on every level, in every sleeping area and in every bedroom of the household.***
- Smoke detector may not be heard.** The alarm horn in this smoke detector meets or exceeds current Underwriter's Laboratories standards. However, if the smoke detector is not located in the same room as the occupant or if it is blocked by a closed door or normal noise, the alarm horn may not be heard. In addition, sound sleepers, or persons who are under the influence of drugs or alcohol may not hear the alarm or be able to react to it. **Therefore, locate this smoke detector, which has a sounder rated at 85 dB at 10 feet, on every level, in every sleeping area and in every bedroom of the household.***
- This detector, if used as a stand-alone unit, will not alert people who are hard of hearing.*
- In general, detectors may not always warn you about fires caused by carelessness and safety hazards like smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches or arson.***
- Smoke detectors are not fool-proof. Like all electronic devices, smoke detectors have limitations. No type of smoke detector can sense every kind of fire every time. In addition, smoke from slow, smoldering fires rises slowly and may not reach the smoke detector until actual flame breaks out. This type of smoke may not reach the smoke detector in time for occupants to escape unharmed.*
- Smoke detectors are not a substitute for life or property insurance.** Though smoke detectors have been responsible for saving many lives, they are not warranted or implied to protect lives or property in the event of fire.*
- These wireless systems are very reliable and are tested to high standards. However, due to their low transmitting power and limited range (required by the regulatory authorities), there are some limitations to be considered:*
 - Receivers may be blocked by radio signals on or near their operating frequencies, regardless of the code selected.*
 - A receiver can only respond to one transmitted signal at a time.*
 - Wireless equipment should be tested regularly to determine whether there are sources of interference and to protect against faults*

once-per-minute "beep" will sound after a few days. The low-battery "beep" should last at least 30 days before the battery dies out completely.

NOTE: For best performance, use only lithium batteries as replacement batteries (see specifications). Carbon zinc batteries are not acceptable.

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

- Separate the detector from its bracket (see figure 2).

B. Replace battery (see Figure 3a or Figure 3b according to the battery used).

5.2 Maintenance

It is necessary to maintain the detector frequently to ensure it working properly. Follow these tips for taking care of your detector:

- Use a vacuum cleaner to clean the air vents occasionally to keep them free of dust. When a "Clean Warning" transmission is received, the detector should be cleaned. When a trouble event is received, the detector should be removed (see Table 1 for visual

and audible indications).

- Perform detector functional test (see par. 3.6) weekly.
- A clean (maintenance) signal is transmitted when the detector's chamber sensitivity becomes degraded.

Note: This transmission applies to the PowerMax+ control panel only.

Note: If false alarms keep occurring, check whether the detector's location is adequate (see Para. 4.1 and 4.2). Relocate the unit if it is not located properly. Clean as described above.

6. ADDITIONAL ADVICE

6.1 Routine Testing

The detector should be tested weekly and also whenever you suspect that it does not go into alarm. Push the test button firmly with your finger until the horn sounds (it may take up to 20 seconds, for further details see par. 3.6). Also verify that the control panel responds to the transmitted fire alarm. If the detector fails, have it repaired or replaced immediately, to ensure that it works properly.

Every 3 months the smoke detector must be checked by using smoke detectors test sprayer.

WARNING: Never use an open flame of any kind to test your detector. You may set fire to damage the detector as well as your home. The built-in test switch accurately tests all detector functions, as required by Underwriters' Laboratories. This is the only correct way to test the unit.

NOTE: If the alarm horn produces a loud continuous sound and the red LED flashes when you are not testing the unit, this means the detector has sensed smoke or combustion particles in the air. Verify that the alarm is a result of a possible serious situation, which requires your immediate attention.

- The alarm could be caused by a false situation. Cooking smoke or a dusty furnace, sometimes called "friendly fires" can cause the alarm to sound. If this happens, open a window or fan the air away to remove the smoke or dust. The alarm will turn off as soon as the air is completely clear.

CAUTION: Do not disconnect the battery from the detector. This will remove your protection from fires.

- If there is any question as to the cause of an alarm, it should be assumed that the alarm is due to an actual fire and the residence should be evacuated immediately.
- If the alarm horn begins to beep once every 30 sec (for further details, see par. 3.2), this signal means that the detector's battery is weak. Install a new battery immediately. Keep fresh batteries on hand for this purpose.

6.2 Tips to Enhance Your Protection From Fires

Putting up smoke detectors is only one step in protecting your family from fires. You must also reduce the chances of fires starting in your home. You must also increase your chances of escaping safely if one does start. To have a good fire safety program you must apply the following tips to enhance your family's protection from fires:

- A. Install smoke detectors properly. Carefully follow all the instructions in this manual. Keep your smoke detectors clean and test them every week.
- B. Remember that detectors that do not work will not alert you. Replace your smoke detectors immediately if they are not working properly.
- C. Follow fire **safety** rules, and prevent hazardous situations:
 - Use smoking materials properly. Never smoke in bed.
 - Keep matches and cigarette lighters away from children.
 - Store flammable materials in proper containers. Never use them near open flame or sparks.
 - Keep electrical appliances in good condition. Do not overload electrical circuits.

- Keep stoves, fireplaces, chimneys, and barbecue grills grease free. Make sure they are properly installed and away from any combustible materials.
- Keep portable heaters and open flames such as candles away from combustible materials.
- Do not allow rubbish to accumulate.
- Keep a supply of extra batteries on hand for your battery powered smoke detectors.

D. Develop a family escape plan and practice it with your entire family. Be sure to include small children in your practice.

- Draw a floor plan of your home, and find two ways to exit from each room. There should be one way to get out of each bedroom without opening the door.
- Explain to children what the smoke detector alarm signal means. Teach them that they must be prepared to leave the home by themselves if necessary. Show them how to check to see if doors are hot before opening them. Show them how to stay close to the floor and crawl if necessary. Show them how to use the alternate exit if the door is hot and should not be opened.
- Decide on a meeting place which has a safe distance from your house. Make sure that all your children understand that they should go and wait for you there if there is a fire.
- Hold fire drills at least every 6 months, making sure that everyone, even small children, knows what to do to escape safely.
- Know where to go to call the Fire Department outside your home.
- Provide emergency equipment, such as fire extinguishers, and teach your family to use this equipment properly.

6.3 More Tips on How to Face a Fire at Home

If you have made an escape plan and practiced it with your family, their chances of escaping safely are increased. Go over the following rules with your children when you have fire drills. This will help everyone remember the rules in a real emergency.

- A. Don't panic and stay calm. Your safe escape may depend on thinking clearly and remembering what you have practiced.
- B. Get out of the house as quickly as possible. Follow a planned escape route. Do not stop to collect anything or to get dressed.
- C. Feel the doors to see if they are hot. If they are not, open them carefully. Do not open a door if it is hot. Use an alternate escape route.
- D. Stay close to the floor. Smoke and hot gases rise.
- E. Cover your nose and mouth with a wet or damp cloth. Take short, shallow breaths.
- F. Keep doors and windows closed. Open them only if you have to in order to escape.
- G. Meet at your planned meeting place after leaving the house.
- H. Call the Fire Department as soon as possible from outside your house. Give the address and your name.
- I. Never go back inside a burning building. Contact your local Fire Department. They will give you more ideas about how to make your home safer from fires and how to plan your family's escape.

7. TROUBLESHOOTING

If you encounter one of the following problems with the MCT-427 SMA, perform the suggested remedy:

Problem	Remedy
Attempt to pair the sensor is unsuccessful.	Make sure that the sensor has been defaulted and is set to pairing mode (see section 3.4).
The sensor and the panel do not communicate.	Perform the signal strength testing procedure described in the control panel installation manual. Make sure that the signal is sufficient. If necessary, replace the sensor's battery.

The sensor sends a Low Battery indication.	To ensure continuous proper operation, replace the battery within two weeks of the first Low Battery indication.
Panel does not arm because of an unrecognized sensor malfunction	Consult with your installer or system provider before you disable a zone. Disable the sensor zone (see the control panel user manual). Note that disabling a sensor zone lowers the overall security level of your system.

8. STATEMENTS OF COMPLIANCE

FCC

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.

This device complies 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! 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

Visonic Ltd, M/N: E203826
FCC ID: WP3ZBT
IC: 1467C-ZBT

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 residential installations. 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 and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit different from the one which supplies power to the receiver.
- Consult the dealer or an experienced radio/TV technician.

ANSI/UL

Complies with ANSI/UL 639, ULC – S306

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.

1/08



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.

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. Telephone number: 0870 7300800, Fax number: 0870 7300801



VISONIC LTD. (ISRAEL): P.O.B 22020 TEL-AVIV 61220 ISRAEL. PHONE: (972-3) 645-6789, FAX: (972-3) 645-6788

VISONIC INC. (U.S.A.): 65 WEST DUDLEY TOWN ROAD, BLOOMFIELD CT. 06002-1376. PHONE: (860) 243-0833, (800) 223-0020. FAX: (860) 242-8094

VISONIC LTD. (UK): UNIT 6 MADINGLEY COURT CHIPPENHAM DRIVE KINGSTON MILTON KEYNES MK10 0BZ. TEL.: +44(0)845 0755800 FAX: +44(0)845 0755801

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FAX (34) 91663-8468. www.visonic-iberica.es

INTERNET: www.visonic.com

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MCT-442 SMA

Supervised Indoor Wireless CO Gas Detector



Visonic®

Installation Instructions

1. INTRODUCTION

The carbon monoxide (CO) detector is designed to monitor the CO gas level in residential dwellings and give early warning before potentially dangerous levels exist. The CO alarm is transmitted to the iControl control panel.

The CO gas is considered to be a highly dangerous poisonous gas because it is colorless, odorless, tasteless and very toxic. Presence of CO gas inhibits the blood's capacity to transport oxygen throughout the body, which can eventually lead to brain damage. CO gas is produced by incomplete combustion of fuels (such as natural gas, propane, heating oil, kerosene, coal, charcoal, gasoline or wood) that can occur in any device that depends on burning for energy and heat (such as furnaces, boilers, room heaters, hot water heaters, stoves, grills and in any gasoline powered vehicle or engine).

Before CO harmful level is reached, the detector's internal buzzer beeps sound periodically and the detector's red LED flashes. In this condition, the buzzer sound can be stopped for 6 minutes by pressing the TEST/MUTE switch. It will not correct the CO gas problem, but will temporarily silence the buzzer while you correct the problem. After 6 minutes, the detector restarts alarm if the CO level remains high.

The detector provides low battery and detector end-of-life indications.

Caution: The detector expiry date is stamped on the detector. After the expiry date, the detector should not be used - do not wait for end-of-life indication!!

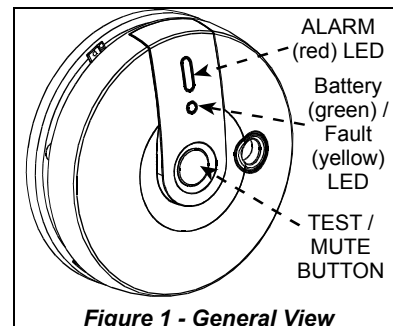


Figure 1 - General View

The detector is continuously self-tested and has a TEST button that enables the user to test the detector anytime.

Note: The TEST/MUTE switch functions as TEST switch (in normal operation) or as MUTE switch (in alarm condition).

The tamper switch actuator (fig. 3), is pressed against the bracket when the unit is attached to the bracket. Removal of the unit from the bracket causes the switch contacts to open, creating a tamper event, which is reported by the transmitter to the alarm system control panel.

2. SPECIFICATIONS

CO DETECTION

Detection principle: Electrochemical cell

Detector Active Life: 5 years

Selectable Sensitivity:

DIP switch in EN Mode

No warning at 30 ppm for 120 minutes, 50 ppm for 60 minutes, 100 ppm for 10 minutes.

Warning at 50 ppm between 60-90 minutes, 100 ppm for 10-40 minutes, 150 ppm within 3 minutes.

DIP switch in UL Mode

No warning at 30 ppm for 30 days, 70 ppm for 60 minutes, 150 ppm for 10 minutes, 400 ppm for 4 minutes.

Warning at 70 ppm between 60-240 minutes, 150 ppm for 10-50 minutes, 400 ppm between 4-15 minutes.

Audible Alarm Volume: >85db at a distance of 3m (10 ft.).

TRANSMITTER AND CODING

Operating Frequency: 2.4 GHz as per IEEE 802.15.4.

Supervision: Automatic signaling at 24-minute intervals.

Transmitted Messages: CO gas alarm, low battery, tamper, sensor end of life, sensor trouble, supervision.

Tamper Alerts: Tamper message is transmitted to the PowerMax+ / PowerMax Pro control panel when the detector is removed from its bracket.

ELECTRICAL DATA

Power Source: 9 volt Lithium battery (Ultra Life #U9VL, U9VL-J), or Alkaline battery, Energizer #522.

Battery Life Expectancy: At least 1 year (for typical use)

Note: Inability to connect with wireless network, or wireless link quality no higher than 20% may significantly reduce the expected battery life.

Battery Supervision: Automatic transmission of battery status data as part of any transmitted message.

Visual and Audible Indications:

Condition	Visual Indication (LEDs)			Audio Indication
	Red	Yellow	Green	
Alarm	4 flashes (*)	-	-	4 beeps (*)
End of Life / Fault	-	3 flashes every 60 sec.	-	one beep every 60 sec.
Battery OK	-	-	Flashes once every minute	-
Low battery	-	1 flash every 60 sec.	-	one beep every 60 sec.
MUTE button is pressed (to silent the alarm for 6 minutes)	4 flashes (*)	-	-	OFF for 6 minutes (**)
TEST button is pressed	1 flash (the 1st LED)	1 flash (the 2nd LED)	Flashes (the 3rd LED) If CO circuit test and battery are OK - lights during 2 sec.	1 beep

* Every 5 seconds during the first 4 minutes, every 60 sec. after the first 4 minutes.

** After 6 minutes, the detector restarts alarm if the CO level remains high.

Note: Long period of low battery condition may cause improper function. In case of End-of-Life/Fault indication, replace the battery and check if the End-of-Life/Fault indication still exists. If it still exists, stop using the detector.

PHYSICAL DATA

Operating Temperature: 0°C to 40°C (32°F to 104°F).

Relative Humidity: 10-93% ± 2% RH

Dimensions: 127 mm (5 in.) x 40 mm (1-9/16 in.)

Weight (without battery): 180g (6.35 oz)

Compliance with Standards:

USA: CFR 47 part 15, Canada: RSS 210.

ANSI/UL 639, ULC – S306

3. PREPARATIONS

3.1 Disassembly

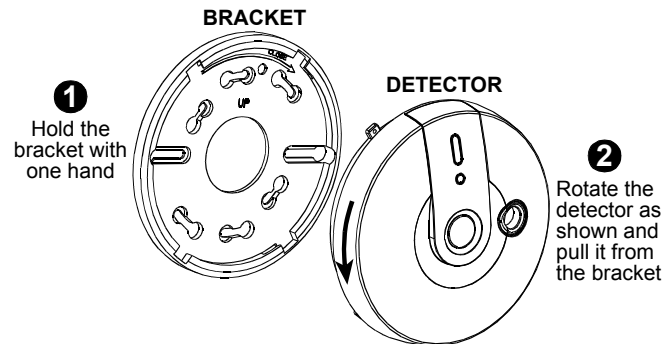


Figure 2. Separating the Detector from Its Bracket

3.2 Communication Format Selection

Verify that the function selector switch 1 is set to ON (UL communication format). (see figure 3). **Note:** Switch 2 is not used.

3.3 Pairing/Defaulting the Detector

Note: It is much easier to carry out this operation while holding the detector in your hand, close to the control panel.

To pair the detector to the control panel, you must set it to pairing mode.

- A. Press and hold down the detector's tamper switch.

- B. Insert the battery into the sensor. Wait for the RF module's green LED to light.
- C. Release the tamper switch and press it again within 4 seconds. When the sensor is in pairing mode, the green LED starts to blink.
- D. Complete the pairing procedure on the control panel (see the pairing instructions in the control panel's installation guide).

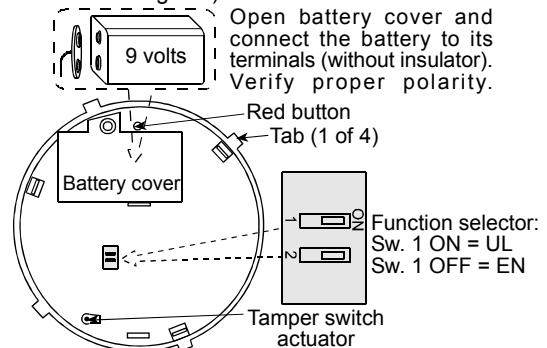


Figure 3. Detector Rear Side

4. INSTALLATION

4.1 Mounting

The detector can be mounted on a wall or ceiling. It must be mounted with its bracket (when it is attached to its bracket the tamper switch is pressed and the detector automatic reset is performed).

⚠ Warnings

- Installation must be performed by a qualified individual. Failure to properly install, test and maintain a CO detector may cause it to fail, resulting in loss of life!
- Installation of the CO detector should not be used as a substitute for proper installation, use and maintenance of fuel burning appliances, including appropriate ventilation and exhaust systems.
- Unauthorized removal of the unit from the bracket will initiate a tamper alert!
- The battery must be inserted into the detector otherwise you will not be able to close the detector.

4.2 Test

A. Local Test

Press the test button (see fig. 1) until the built-in buzzer sounds 1 beep and the red, green and yellow LEDs flash sequentially (see section 2 - SPECIFICATION). This means that the local test is successful. If additional or other signals exist, refer to section 2 - SPECIFICATION.

⚠ WARNING: The test switch is the only proper way to test the CO detector. Never use vehicle exhaust! Exhaust may cause permanent damage and void your warranty.

B. Communication Test

Create a tamper alarm at the installation location and verify that tamper message is received by the control panel / receiver.

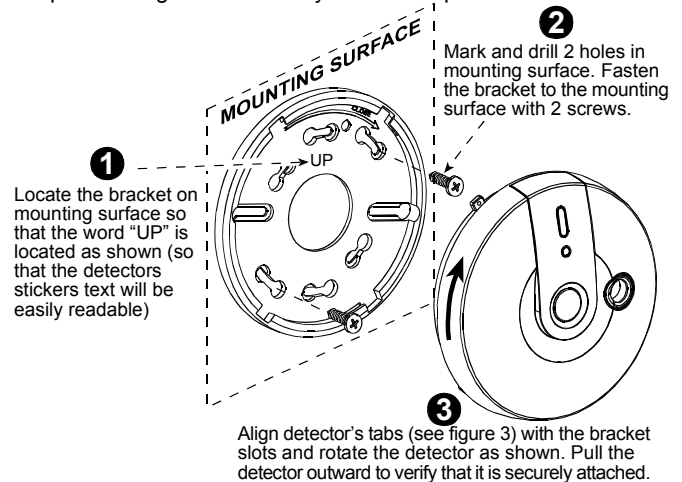


Figure 4. Mounting the MCT-442 SMA

5. MAINTENANCE

⚠ Warning: Press the detector's TEST button once every week to ensure proper operation of the detector.

When low battery alarm exists (see specifications) immediately replace the battery (see figure 3). Once a month, use vacuum cleaner to clean the air vents occasionally, to keep them free of dust.

6. TROUBLESHOOTING

If you encounter one of the following problems with the MCT-442 SMA, perform the suggested remedy:

Problem	Remedy
Attempt to pair the detector is unsuccessful.	Make sure that the detector has been defaulted and is set to pairing mode (see section 3.3).
The detector and the panel do not communicate.	Perform the signal strength testing procedure described in the control panel installation manual. Make sure that the signal is sufficient. If necessary, replace the detector's battery.

Problem	Remedy
The detector sends a Low Battery indication.	To ensure continuous proper operation, replace the battery within two weeks of the first Low Battery indication.
Panel does not arm because of an unrecognized detector malfunction	Consult with your installer or system provider before you disable a zone. Disable the sensor zone (see the control panel user manual). Note that disabling a detector zone lowers the overall security level of your system.

7. COMPLIANCE WITH STANDARDS

FCC

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.

This device complies 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.

Visonic Ltd, M/N: E203826
FCC ID: WP3ZBT
IC: 1467C-ZBT

ANSI/UL

Complies with ANSI/UL 639, ULC – S306

APPENDICES

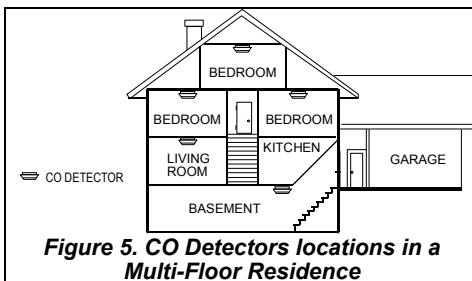
Appendix A - CO Detector Installation Overview

A-1. Selecting Installation Location

Selecting a suitable location is critical for the CO detector. The Consumer Product Safety Commission (CPSC) recommends to use at least one CO detector per household, located near as possible to sleeping area of the home, because the human body is most vulnerable to the CO gas effect during sleeping hours.

For added protection, install additional CO detector in every separate bedroom and on every level of your home. If your bedroom hallway is longer than 14 meters (40 feet), install a CO detector at BOTH ends of the hallway. Install an additional detector 6 meters (20 feet) away from the furnace or fuel burning heat source.

For maximum protection, the detector should be also located outside primary sleeping areas or at each level of your home. Mount the detector on a firm wall or ceiling (see par. 4.1).



A-2. Where Not to Install CO Detectors

1. In location where temperature may be below -10°C (14°F) or above 40°C (104°F).
2. In locations where humidity is below 10% or above 93% RH.
3. Near paint thinner fumes.
4. Near air conditioners, furnaces, stoves, fireplaces and any other ventilation source that may interfere with the CO gas entering the detector.
5. In locations where furniture or draperies may obstruct the air flow.
6. In exhaust streams from gas engines, vents, flues or chimneys.
7. Where dirt or dust could collect and block the sensor and stop its working.
8. In locations that can be reached by children.
9. In turbulent air from ceiling fans.
10. In close proximity to an automobile exhaust pipe - this will damage the detector.

Appendix B - CO Gas Health Effects

B-1. Toxic Effects

Carbon monoxide (CO) is a colorless, odorless non-irritating gas which is classified as a chemical asphyxiate whose toxic action is a direct result of the hypoxia produced by a given exposure.

CO is rapidly absorbed through the lungs, diffuses across the alveolar capillary membrane and is reversibly bound with hemoglobin as carboxyhemoglobin (COHb), however a minute amount is present in the plasma. The affinity of hemoglobin for CO is over 200 times its affinity for oxygen. This reduces the oxygen carrying of the blood and also has an effect on dissociation of oxyhemoglobin which further reduces the oxygen supply to the tissues. CO is chemically unchanged in the body and is eliminated in the expired air. The elimination is determined by the same factors that applied during absorption.

If the CO level in the inhaled air is constant, the level of COHb in the blood will approach an equilibrium state after several hours. However, the rate at which the equilibrium is reached depends on many factors, e.g. lung ventilation rate (physical activity) and alveolar capillary transfer, cardiac parameters, blood hemoglobin concentration, barometric pressure, oxygen and carbon dioxide concentration in the inhaled air, but the two most important factors in determining the COHb level are the CO concentration and the duration of exposure.

The effects of different saturation blood COHb levels on healthy adults are shown in table A1.

Table 1 - Health effects of COHb blood levels on healthy adults

% COHb	Effects
0.3 - 0.7	Normal range in non-smokers due to endogenous production
0.7 - 2.9	No proven physiological changes
2.9 - 4.5	Cardio-vascular changes in cardiac patients
4 - 6	Usual values observed in smokers, impairment in psychomotor tests
7 - 10	Cardio-vascular changes in non-cardiac patients (increased cardiac output and coronary blood flow)
10 - 20	Slight headache, weakness, potential burden on fetus
20 - 30	Severe headache, nausea, impairment in limb movements
30 - 40	Severe headache, irritability, confusion, impairment in visual acuity, nausea, muscular weakness, dizziness
40 - 50	Convulsions and unconsciousness
60 - 70	Coma, collapse, death

Source: US Environmental Protection Agency 1984

The following symptoms are related to CO poisoning and are to be discussed with ALL members of the household:

1. Mild Exposure: Slight headache, nausea, vomiting, fatigue (often described as "Flu-like" symptoms).
2. Medium Exposure: Severe throbbing headache, drowsiness, fast heart rate.
3. Extreme Exposure: Unconsciousness, convulsions, cardio respiratory failure, death.
4. Many cases of reported CO poisoning indicate that while victims are aware they are not well, they become so disoriented they are unable to save themselves by either exiting the building or calling for assistance. Young children and household pets are typically first affected.

B-2. Chronic Effects on High Risk Group

Individuals with coronary artery disease exposed to low levels of CO showed reduced ability to exercise. The time of onset of exercise-induced angina pectoris in such patients exposed to low levels of CO is reduced. Carbon monoxide readily crosses the placental barrier and may endanger the normal development of the fetus.

A number of high risk groups are particularly sensitive to the effects of CO because of various organ impairments or specific changes, mainly:

- a. Those whose oxygen carrying capacity is decreased due to anemia or other hemoglobin disorders.
- b. Those with increased oxygen needs such as those encountered in fever, hyperthyroidism or pregnancy.
- c. Those with systematic hypoxia due to respiratory insufficiency.
- d. Those with heart disease and any vascular insufficiency, such as cerebral ischaemia and peripheral vascular diseases.

B-3. Normal COHb levels


Under normal conditions all humans have low levels of COHb of between 0.3% and 0.7% present within the body. These levels are considered neither beneficial nor harmful.

B-4. Tobacco Smoking


Tobacco smokers are exposed to significant concentration of CO. In cigarette smokers the COHb concentration varies between 5% - 9% while heavy smokers it may exceed 10%.

Appendix C - Action to Take When Alarm Sounds

In case of harmful levels of CO gas is detected, your detector will go into continuous full alarm. Try to take the following necessary actions immediately:

1. Push the detector TEST switch to silence the alarm.
 **Warning: Never remove the battery to silence the alarm. Removing the battery removes your protection!**
2. Call your emergency service (tel. No.), or fire department (tel. No.). (Please write the telephone numbers).
3. **Immediately move to fresh air** - outdoors or by opening door/window. Do a head count to check that all persons are accounted for. Do not reenter the premises nor move away from the open door/window until the emergency services responders have arrived, the premises have been aired out, and your alarm remains in normal condition.
4. After following steps 1 - 3, if your alarm reactivates within 24 hours period, repeat steps 1 - 3 and call qualified technician (Tel. No.) to investigate for sources of CO gas from fuel burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection, have

the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturer instructions, or contact the manufacturers directly, for more information about CO safety and this equipment. Make sure that motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

 **Warning: Normally an activation of the detector indicates the presence of CO gas. However, the CO gas can be extremely fatal, if it is not detected. The source of the CO gas may come from several possible situations.**

Caution: This detector will only indicate the presence of CO gas at the sensor. However, you have to be aware that the CO gas may be present in other areas in the premises.

Action to be taken after the problem has been corrected

Once the problem about the CO gas presence in the premises has been corrected, the detector's alarm should be off. After waiting for 10 minutes, push the Test button, to verify that the detector is properly working again.

Appendix D - Warnings and Limitations

This product is intended for use in ordinary indoor locations of family living units. It is not designed to measure compliance with Occupational Safety and Health Administration (OSHA) commercial or industrial standards.

Caution: The detector will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas. Individuals with medical problems may consider using warning devices which provide audible and visual signals for carbon monoxide concentrations under 30 ppm.

The alarm, including the sensor, is not to be located within 1.5m (5 feet) of any cooking appliance.

The detector may not alarm at low carbon monoxide levels. The Occupational Safety and Health Association (OSHA) has established that continuous exposure levels of 50 ppm should not be exceeded in an 8 hours period. Individuals with medical problem may consider more sensitive detection devices.

The CO gas detector is not suitable as a smoke detector or fire detector. This detector is not suitable to install in a hazardous location as defined in National Electrical Code.

Carbon monoxide must reach the detector for proper performance of CO gas detection. The detector may not protect people who are at special risk from carbon monoxide exposure by reason of age, pregnancy or medical condition. In doubt, consult your medical practitioner.

CO detectors may wear out because they contain electronic parts that fail at any time. Test your detector at least every week.

Instruct children never to play with the detector.

Never use detergents or other solvents to clean the detector.

Avoid spraying air fresheners, hair spray, paint or other aerosols near the detector.

Do not paint the detector. Paint will seal the detectors vents and interfere detecting CO gas.

Detailed information on conditions which can result in transient CO situations:

1. Excessive spillage or reverse venting of fuel burning appliances caused by:
 - a. Outdoor ambient conditions such as wind direction and/or velocity, including high gusts of wind; heavy air in the vent pipes (cold/humid air with extended periods between cycles).
 - b. Negative pressure differential resulting from the use of exhaust fans.
 - c. Simultaneous operation of several fuel burning appliances competing for limited internal air.
 - d. Vent pipe connection vibrating loose from clothes dryers, furnaces, or water heaters.
 - e. Obstructions in or unconventional vent pipe designs which amplify the above situations.
2. Extended operation of unvented fuel burning devices (range, oven, fireplace, etc.).
3. Temperature inversions which can trap exhaust gasses near the ground.
4. Car idling in an open or closed attached garage, or near a home.

Appendix E - Trouble-shooting

Problem	This means...	You should...
Every 60 seconds, the yellow LED flashes once and 1 beep is heard.	Low battery warning	Replace battery (see SPECIFICATIONS).
When TEST/MUTE button is pressed, the green LED flashes instead of lighting during 2 seconds.	Detector fault or the battery is not OK.	Replace battery (see SPECIFICATIONS). If the problem still exists, replace detector.
Every 60 seconds, there are 3 flashes of the yellow LED and 1 beep is heard.	Detector end of life/ fault.	Replace battery (see SPECIFICATIONS). If the problem still exists, replace detector.
CO detector goes back into alarm 6 minutes after the TEST/MUTE button is pressed.	CO level indicates a potentially dangerous situation.	If you are feeling symptoms of CO poisoning, evacuate your home and call your emergency service.
CO detector alarms frequently even though no high levels of CO are revealed in an investigation.	The CO detector may be improperly located.	Relocate the detector - see appendix A. If frequent alarms continue, have home rechecked for potential CO problems. You may experiencing an intermittent CO problem.

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

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 residential installations. 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 and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit different from the one which supplies power to the receiver.
- Consult the dealer or an experienced radio/TV technician.

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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.

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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.

1/08



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.



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Product
Certificate Number 512e/01



MCT-550 SMA

Supervised Wireless Flood Detector



Installation Instructions

1. INTRODUCTION

The MCT-550 SMA is a fully supervised indoor wireless flood detector, used to detect the presence of **water based fluids** at any desired location.

The MCT-550 SMA transmitter is designed for wall mounting. The flood sensor is placed in a location where the presence of water based fluids, as a result of leakage or flooding, is probable.

Upon flood detection, a digital message is transmitted, composed of the detectors' ID followed by various status and other messages. Alarm and other data are thus forwarded to the alarm system.

An on-board tamper switch is opened when the cover is removed. In a tamper situation, a tamper message is transmitted.

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.

2. SPECIFICATIONS

Frequency: 2.4 Ghz as per IEEE 802.15.4

Message Repetition: One-shot transmission (default) or once every 3 minutes (selectable).

Supervision: Signaling at 24-minute intervals.

Response to Tamper Event: Tamper report every 3 minutes (until the tamper switch is restored).

Power Source: 3V Lithium battery, Panasonic/GP/Sanyo type CR2 or equivalent.

Note: Dispose of used batteries according to the manufacturer's instructions.

Nominal Battery Capacity: 750 mAh

Current Drain: 6µA STBY, Maximum 100mA during transmission

Battery Life with LED on: 3 years (for typical use)

Note: Inability to connect with wireless network, or wireless link quality no higher than 20% may significantly reduce the expected battery life.

3. INSTALLATION

- A. Attach the flood sensor near the floor.
- B. Secure the flood sensor and its cable to the wall using the three wire clamps. One clamp should be fastened immediately above the flood sensor. The flood sensor should be installed only in a **vertical position, and facing downward**. The remaining two clamps can be used as required (Figures 2 and 3).
Note: To provide better protection against rats, it is recommended that the flood sensor cable be placed inside a metal/plastic pipe.
- C. Attach the transmitter to the wall. The transmitter should be placed as high up as possible on the wall to improve communication and to prevent the transmitter itself from coming into contact with water in the event of flooding.
- D. Remove the case closure screw (Figure 4), then remove the unit's cover (Figure 5).
- E. Flex out the circuit board retainer (Figure 6) and detach the

An LED lights whenever alarm or tamper events are reported. The LED does not light while a supervision message is being transmitted.

Operating power is obtained from an on-board 3 V Lithium battery. A weak battery will cause a "low battery" report to be added to any message transmitted.

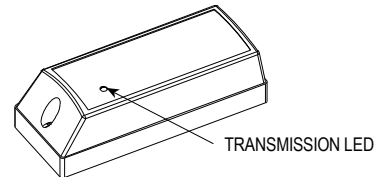


Fig. 1 - MCT-550 SMA

Battery Supervision: Automatic reporting of battery condition data as part of any transmission.

ALARM REPORT:

- Every 20 sec. for the first 3 minutes.
- Every 3 min. for the next 27 minutes.
- After this period the supervision message will include alarm signal until the event comes to an end.

Length of Flood Sensor Cable: 3 meters (10 ft)

Weight of Flood Sensor Cable: Approx. 60 gr.

Operating Temperature: 0°C to 49°C (32°F to 120°F).

Dimensions: 81 x 22 x 23.5 mm (3-3/16 x 7/8 x 15/16 in.).

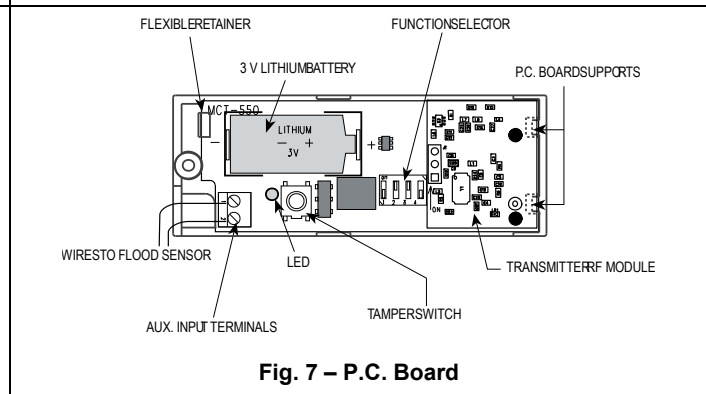
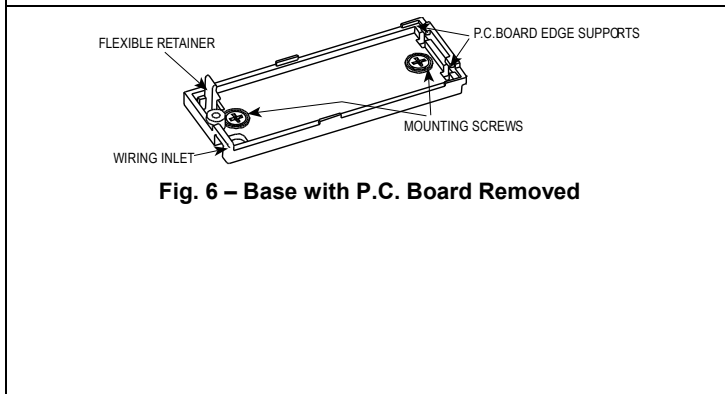
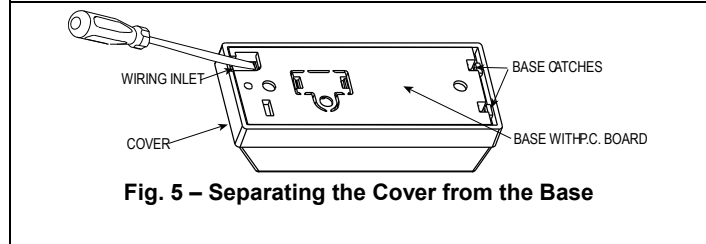
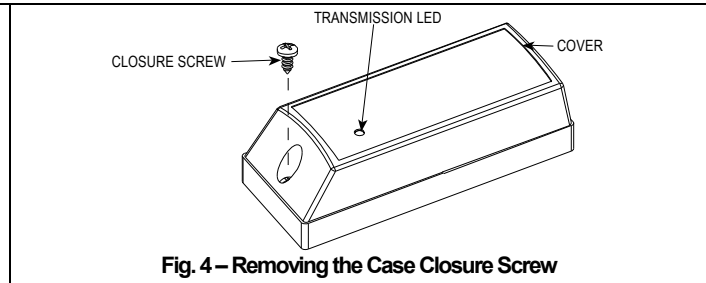
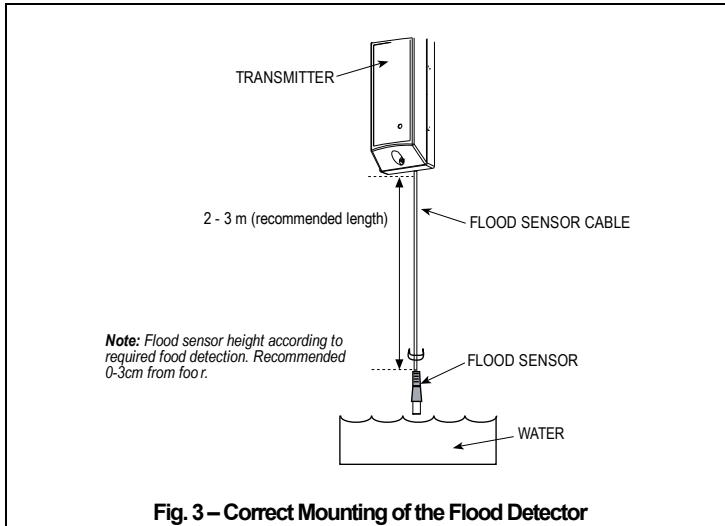
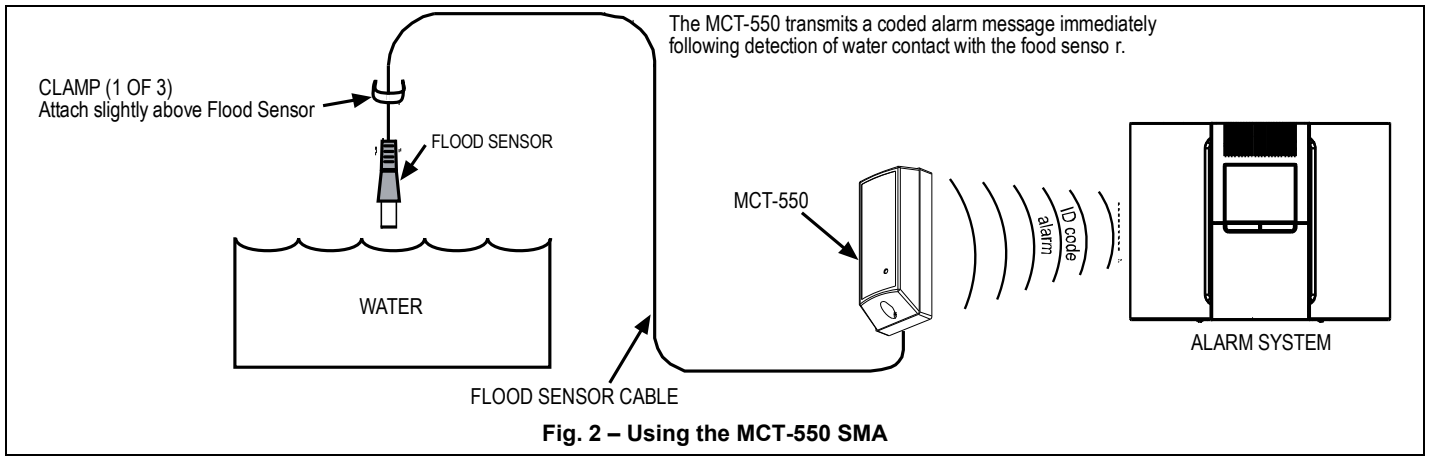
Weight (including battery, without cable): 45 g (1.6 oz)

Standards: USA: CFR 47 part 15, Canada: RSS 210.

ANSI/UL 639, ULC – S306

circuit board from the base.

- F. Hold the base against the mounting surface and mark the 2 drilling points through the mounting holes.
- G. Drill the holes and fix the base to the wall using the 2 screws with countersunk heads supplied in the package.
CAUTION! Screws with other type or size of head may short circuit the bottom side of the printed circuit board.
- H. Insert the edge of the P.C. board with the RF module into the edge supports, and press the other edge against the flexible retainer until it snaps home with a click.
- I. Clamp the two wires of the flood sensor cable into the auxiliary input terminals, as shown in Figure 7 (the wires can be inserted in any order).



4. PREPARATION FOR USE

4.1 The Function Switches

A. Switch Functions

The MCT-550 SMA has a 4-position DIP switch function selector (see Figure 8).

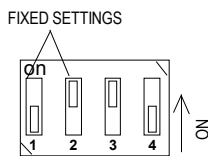


Fig. 8 – Function Selector

B. Setting the Switches

Set the function switches as desired prior to applying power. Use a ball point pen or other pointed object to shift the switch levers. The **ON position is indicated by the arrow on the switch body.**

Table 1. Getting acquainted with the function selector

Sw-	Function	Pos.	Selected Option	Default
SW1	-	-	SW1 should remain always in OFF position	OFF
SW2	-	-	SW2 should remain always in ON position	ON
SW3	Restore reports enable/disable	ON OFF	Restore events reported Restore events not reported	ON
SW4	-	-	-	-

4.2 Activating the Detector

To activate, pull the strip that protrudes from the back of the detector.

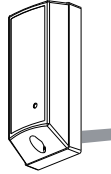


Fig. 9 – Activation Strip

4.3 Pairing/Defaulting the Detector

To pair the detector to the control panel, you must set it to pairing mode.

- Press and hold down the detector's tamper switch.
- Insert the battery into the detector. Wait for the RF module's green LED to light.
- Release the tamper switch and press it again within 4 seconds. When the detector is in pairing mode, the green LED starts to blink.
- Complete the pairing procedure on the control panel (see the pairing instructions in the control panel's installation guide).

4.4 Testing the Unit

Before testing, set DIP switches **SW3** and **SW4** as required for the particular application (see Para. 4.1).

- Insert the battery between the battery clips, at the correct polarity. **For proper operation, only Lithium battery (Panasonic type CR-2 or equivalent) should be used.**
- Press the tamper switch once and release it.

Note: Since the cover is removed and power is applied, a tamper situation exists. Verify that the MCT-550 SMA transmits (the LED lights briefly) once every 3 minutes, regardless of SW4 setting.

- When you are satisfied that tamper alerts are transmitted properly, put the cover on to return the tamper switch to its normal (undisturbed) position. Wait slightly over 3 minutes to verify that tamper transmissions cease. If all went well, secure the front cover to the base with the case closure screw.
- Clean the flood sensor thoroughly with a rag. Bring the flood sensor into contact with water and verify that the transmitter LED lights, indicating that transmission is in progress. If SW4 is ON, wait 3 minutes to verify that the transmission is repeated at 3-minute intervals.
- Dry the flood sensor using either blotting paper or a rag, thus restoring it to the undisturbed state and observe the LED. If SW3 is set to ON, a "restore" transmission will now take place.
- Refer to the target receiver's installation instructions, and let the receiver "learn" the ID code associated with the detector.

4.5 Maintenance

To ensure proper detector's operation, clean the flood sensor thoroughly with a rag once a month and perform test.

5. TROUBLESHOOTING

If you encounter one of the following problems with the MCT-550 SMA, perform the suggested remedy:

Problem	Remedy
Attempt to pair the detector is unsuccessful.	Make sure that the detector has been defaulted and is set to pairing mode (see section 4.3).
The detector and the panel do not communicate.	Perform the signal strength testing procedure described in the control panel installation manual. Make sure that the signal is sufficient. If necessary, replace the detector's battery.
The detector sends a Low Battery indication.	To ensure continuous proper operation, replace the battery within two weeks of the first Low Battery indication.

Problem	Remedy
Panel does not arm because of an unrecognized detector malfunction	Consult with your installer or system provider before you disable a zone. Disable the detector zone (see the control panel user manual). Note that disabling a sensor zone lowers the overall security level of your system.

6. COMPLIANCE WITH STANDARDS

FCC

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.

This device complies 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.

Visonic Ltd, M/N: E203826
FCC ID: WP3ZBT
IC: 1467C-ZBT

ANSI/UL


Complies with ANSI/UL 639, ULC – S306

7. 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.

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.

	<p>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. <u>This product is not to be thrown away with everyday waste.</u> European Directive 2002/96/EC Waste Electrical and Electronic Equipment.</p>
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WARRANTY

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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.

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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.

1/08



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MCT-550 SMA D-303362 (REV. 3, 10/11)



NEXT® PLUS K9-85 SMA

Wireless Digital Pet Immune PIR Detector



Installation Instructions

1. INTRODUCTION

The NEXT® PLUS K9-85 SMA (pet immune) is a microprocessor-controlled wireless digital PIR detector.

The detector's features are as follows:

- Cylindrical lens with uniform detection sensitivity throughout its operating range, up to 15 meters (49 ft).
- Target Specific Imaging™ (TSI) technology is used for distinction between humans and pets weighing up to 38 kg (85lb).
- Incorporates an iControl-compatible wireless transceiver.
- The advanced True Motion Recognition™ algorithm (patented) allows distinguishing between the true motion of an intruder and any other disturbances which may cause false alarms.
- Sophisticated frequency domain digital signal processing.
- No vertical adjustment is needed.
- An on-board motion event jumper determines whether 1 or 2 consecutive motion events trigger an alarm.
- After detection, the detector disarms itself to save battery power. It rearms (reverts to the ready state) if there is no subsequent detection throughout the following 2-minute period.
- Very low current consumption.
- Microprocessor-controlled temperature compensation.

2. SPECIFICATIONS

Detector Type: Dual element low-noise pyro-electric sensor.

Lens Data

No. of Curtain Beams: 18 far, 18 mid, 18 close

Max. Coverage: 15 x 15 m, (49 x 49 ft) / 90°

Pet Immunity: Up to 38 kg (85 lb).

ELECTRICAL

Internal Battery: 3V Lithium battery, type CR-123A. For UL installations, use Panasonic, Sanyo and GP only.

Nominal Battery Capacity: 1450 mAh.

Battery Life (with LED on): Typically over 3 years.

Note: Inability to connect with wireless network, or wireless link quality no higher than 20% may significantly reduce the expected battery life.

Battery Power Test: Performed immediately upon battery insertion and periodically after every several hours.

FUNCTIONAL

True Motion Event Verification: 2 position selector - 1 (OFF) or 2 (ON) motion events.

Alarm Period: 3 seconds

Visual Indications:

- **LED Lights** for about 3 seconds upon transmission of alarm & tamper messages and upon motion detection in the walk test mode.
- **LED Flashes** during the power-up stabilization period, or after restoring (pressing) the tamper switch.
- **LED Does not light** upon transmission of supervision messages.

Rearm Timer: Rearms the detector 2 minutes after the last alarm. Timer disabled in the walk test mode.

- Sealed chamber protects the optical system.
- Front cover tamper switch.
- White light protection.
- Elegantly styled, sturdy case.

For UL installations: The detector is for use with UL listed control unit only. Pet immunity has not been evaluated by UL.

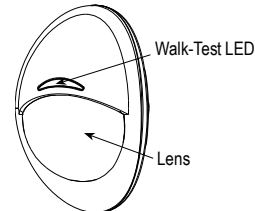


Fig. 1 - NEXT PLUS K9-85 SMA

WIRELESS

Frequency: 2.4 Ghz as per IEEE 802.15.4.

Tamper Alert: Reported when a tamper event occurs and in any subsequent message, until the tamper switch is restored.

Supervision Message: Signaling at 24 minutes interval.

MOUNTING

Height: Up to 2.1 m (7 ft)

Installation Options: Surface or corner.

ACCESSORIES:

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

ENVIRONMENTAL

RFI Protection: >20 V/m up to 1000 MHz.

Operating Temperatures: -10°C to 50°C (14°F to 122°F)

Storage Temperatures: -20°C to 60°C (-4°F to 140°F).

COMPLIANCE WITH STANDARDS

USA: CFR 47 part 15, Canada: RSS 210.

ANSI/UL 639, ULC – S306

PHYSICAL

Size (H x W x D): 94.5 x 63.5 x 53.0 mm (3-11/16 x 2-1/2 x 2-1/16").

Weight (with battery): 70 g (2.5 oz).

Color: White.

PATENTS: U.S. Patents 5,693,943 • 6,211,522 • D445,709 (another patent pending).

3. INSTALLATION

3.1 General Guidance

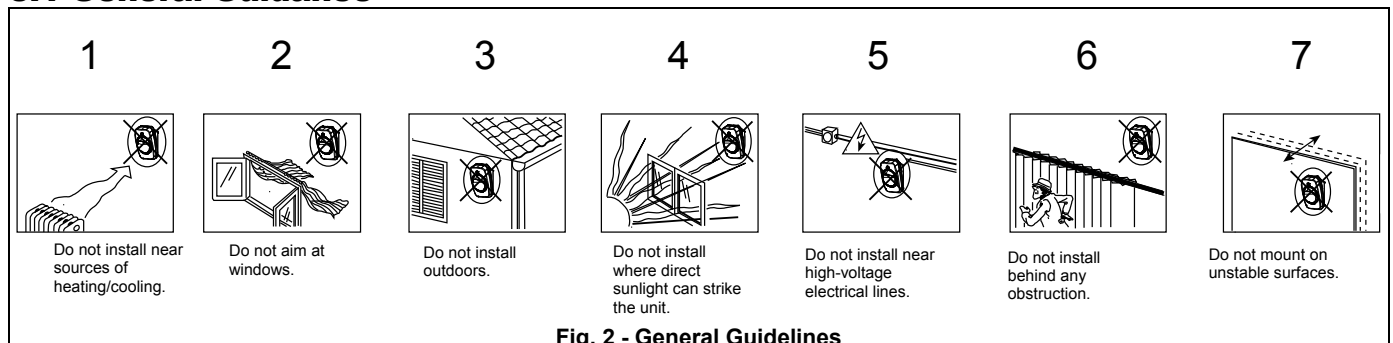


Fig. 2 - General Guidelines

3.2 Installation Procedure

1. For battery installation, see steps 1-3 below.

2. For mounting the detector, see step 4 below.

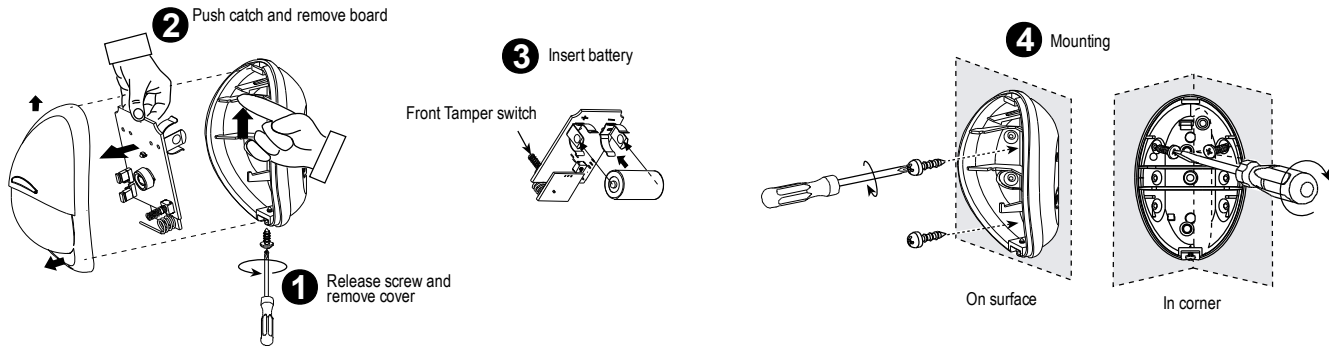


Fig. 3 – Battery Installation and Mounting

Note: The detector transmits a low battery signal upon detection of low voltage. It is recommended to wait about 1 minute after battery removal, before inserting the new battery.

3.3 Activating the Detector

To activate, pull the strip that protrudes from the back of the detector. Then, close the opening by pasting the supplied sticker over it.

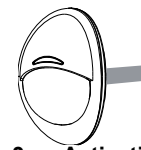


Fig. 3a – Activation Strip

3.3 Pairing the Detector

To pair the detector to the control panel, you must set it to pairing mode.

1. Press and hold down the detector's tamper switch.
2. Insert the battery into the detector.

3. Release the tamper switch and press it again within 4 seconds.
4. Complete the pairing procedure on the control panel (see the pairing instructions in the control panel's installation guide).

3.4 Jumper Settings

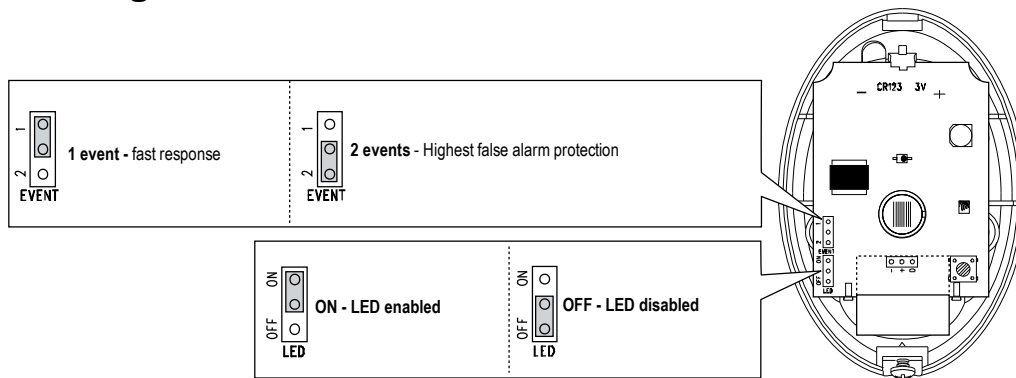


Fig. 4 - Jumper Settings

3.5 Walk Testing

Walk across the far end of coverage pattern in both directions. The LED should light for 2-3 seconds each time your motion is detected.

Important! Instruct the user to walk test at least once a week to verify proper function of the detector.

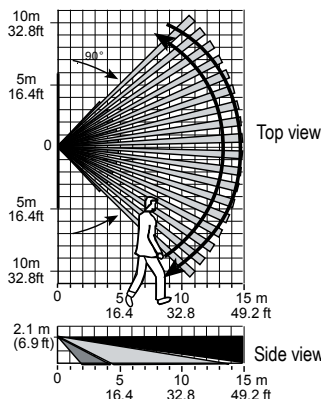


Fig. 5 - Coverage Pattern Walk-Test

4. TROUBLESHOOTING

If you encounter one of the following problems with the NEXT PLUS K9-85 SMA, perform the suggested remedy:

Problem	Remedy
Attempt to pair the sensor is unsuccessful.	Make sure that the sensor has been defaulted and is set to pairing mode (see section 3.5).
The sensor and the panel do not communicate.	Perform the signal strength testing procedure described in the control panel installation manual. Make sure that the signal is sufficient. If necessary, replace the sensor's battery.

Problem	Remedy
The sensor sends a Low Battery indication.	To ensure continuous proper operation, replace the battery within two weeks of the first Low Battery indication.
Panel does not arm because of an unrecognized sensor malfunction	Consult with your installer or system provider before you disable a zone. Disable the sensor zone (see the control panel user manual). Note that disabling a sensor zone lowers the overall security level of your system.

5. SPECIAL COMMENTS

Even the most sophisticated detectors can sometimes be defeated or may fail to warn due to: DC power failure / improper connection, malicious masking of the lens, tampering with the optical system, decreased sensitivity in ambient temperatures close to that of the human body and unexpected failure of a component part.

The above list includes the most common reasons for failure to detect intrusion, but is by no means comprehensive. It is therefore recommended that the detector and the entire alarm system be checked weekly, to ensure proper performance.

An alarm system should not be regarded as a substitute for insurance. Home and property owners or renters should be prudent enough to continue insuring their lives and property, even though they are protected by an alarm system.

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 residential installations. 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 and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit different from the one that supplies power to the receiver.
- Consult the dealer or an experienced radio/TV technician.

Even the most sophisticated detectors can sometimes be defeated or may fail to warn due to: DC power failure / improper connection, malicious masking of the lens, tampering with the optical system, decreased sensitivity in ambient temperatures close to that of the human body and unexpected failure of a component part.

6. COMPLIANCE WITH STANDARDS

FCC

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.

This device complies 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.

Visonic Ltd, M/N: E203826
FCC ID: WP3ZBT
IC: 1467C-ZBT

ANSI/UL

Complies with ANSI/UL 639, 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.



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.

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.

1/08



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