OPTEX

MULTI STABILIZED OUTDOOR DETECTOR

VX-402REC/402/402R

(voice recording & warning model) (standard model) (battery operated model)

Warning, you have entered an unauthorised area

- Reliable Short-Range Detection for External Areas

- Ideal for Event Driven CCTV Applications

- Two Detection Zones for Superior Stability

- Any Message Recordable for Each Application in Any Language (VX-402REC)

- Simple wire free installation, with battery operation (VX-402R)

The VX-402 Series
— New Solutions for Outdoor Protection —

Warning!
You are being watched.
Please leave at once!

Voice Recording / Warning Functions (VX-402REC only)

The VX-402REC provides great flexibility in detector-activated voice applications. As well as the ability to record any message in any language, with its superior playback settings, it allows the right message to be played in every situation.
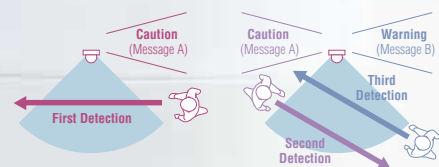
Easy Voice Recording ● REC

By using either the built-in microphone or external recording equipment such as a PC, the VX-402REC allows two messages of up to eight seconds to in length to be recorded.

Voice Warning Function ► PLAY

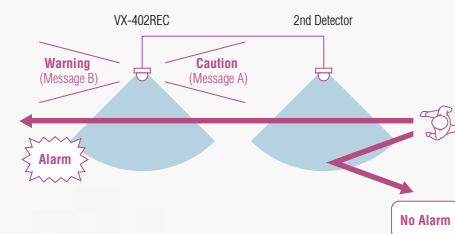Once recorded, the two messages can be delivered in one of four different playback sequences.

■ Sequential Playback

When the VX-402REC first detects someone in the area, it delivers a caution message. If someone is detected in the same area a second time within 30 seconds of the first message being given, it is repeated. On a third detection within 30 seconds, the caution message automatically changes into a warning message.

■ Directional Detection Playback

When the VX-402REC is used with another detection device such as an outdoor PIR, active photobeam or a magnetic contact, different messages can be set to make double sure intruders are deterred. The caution message is generated at the first detection, and the warning message generated at the second detection.

■ Day/Night Message Playback

Changes the message automatically in daytime and nighttime, for example giving a welcome message in daytime and an alert message at night.

■ Arm/Disarm Playback

Provides a caution alert when the Arm Mode is on, for example when deterrence is intended, and gives a different message when disarmed.

Caution (Message A) Caution (Message A) Warning (Message B)
First Detection Second Detection Third Detection

VX-402REC 2nd Detector
Warning (Message B) Caution (Message A)
Alarm No Alarm

External Speaker Terminal

The VX-402REC has a voice output terminal allowing an external speaker to be connected. The most common applications for this are either when a high-volume announcement is needed or when the best position for the speaker is away from the detector unit.

A Variety of Applications

■ Intruder Prevention: An alarm is activated when an intruder enters the property or prohibited area.

■ Warning Alert: A safety warning is activated. For example, when children go near a dangerous area such as a swimming pool.

■ Shop Entrance: A welcome message is given when customers enter a premises.

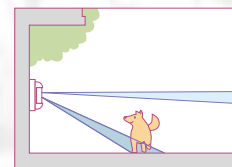## Improved False Alarm Protection for Stable Reliability

The VX-402 Series utilises Multiple Detection Pattern Technology — two double-layered detection patterns (upper and lower) both have to be activated to generate an alarm condition. This reduces false alarms, particularly those caused by temperature changes, light reflection and small animals.
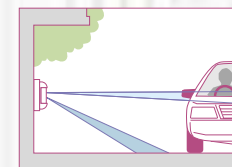
Flexible Detection Range Function

By limiting the detection range, false alarms due to unwanted movement, e.g., cars, people or animals outside the protected area can be reduced.
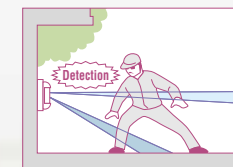
Size Judging Function

The size judgment function virtually eliminates false alarms due to small animals.

Detection

When only the lower zone detects a moving object, the unit is not activated.

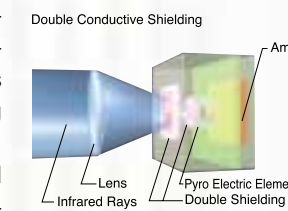When only the upper zone detects a moving object, the unit is not activated.

When both the upper & lower zones detect a moving object, the unit is activated.

Advanced Temperature Compensation

At higher ambient temperatures, the difference between the background temperature and that of a human body is reduced. In such cases an ordinary PIR might fail to accurately detect the human body. The VX-402 uses advanced temperature compensation to automatically increase the detector's sensitivity under high temperature conditions, especially where the background temperature ranges from 35-37°C, close to that of the human body.

Double Conductive Shielding

Patented Double Conductive Shielding Technology utilises a special conductive filter to cover the element window, allowing infrared energy to pass through, while blocking and grounding out unwanted light and RFI sources. This helps reduce false alarms caused by car headlights and reflected sunlight in particular.

Double Conductive Shielding
Amp
Lens
Infrared Rays
Pyro Electric Element
Double Shielding

DESCRIPTION AND OPERATION (VX-402REC)

Cover
Lens

Sensitivity Select Switch
Recording Start Switch
Voice Mode Switch
Voice Volume
Detection Length Adjustment
Speaker (VX-402REC only)

LED Indicator
Double Conductive Shielding
Recording Level Indicator
Microphone
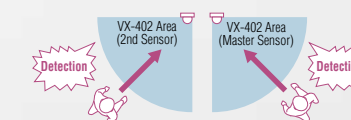Recording Level Volume
External Input Jack

Multiple Detectors for Improved Functionality

For advanced functionality and reliability without the need for a control panel, the VX-402 can be connected to another detector, e.g. PIR, photobeam or magnetic contact. Various configurations are possible.

■ Detection Area Extension Function

Wiring two VX-402 series sensors together and selecting the "OR" Mode enables the detection pattern to be effectively doubled.
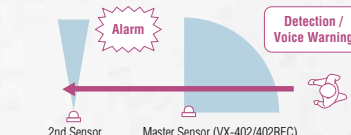
• Application Example 1

VX-402 Area (2nd Sensor) VX-402 Area (Master Sensor)
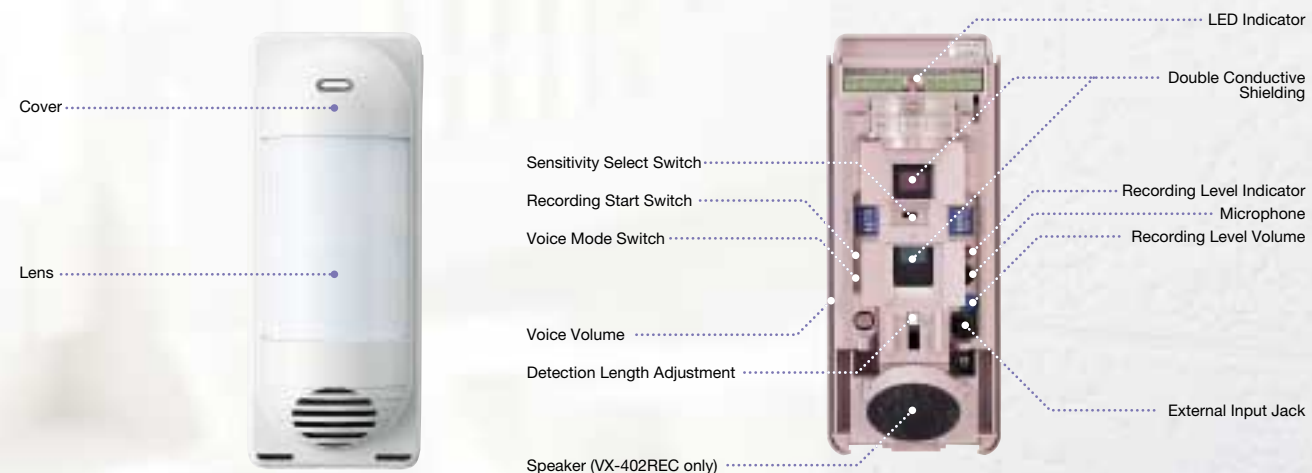Detection Detection

■ Directional Detection Function

By selecting the "AND" Mode and programming which sensor should be activated first (using DIP Switch Programming), the VX-402 Series can sense direction and will only be activated if motion is in a specified direction.

• Application Example 2

Alarm Detection / Voice Warning
2nd Sensor Master Sensor (VX-402/402REC)
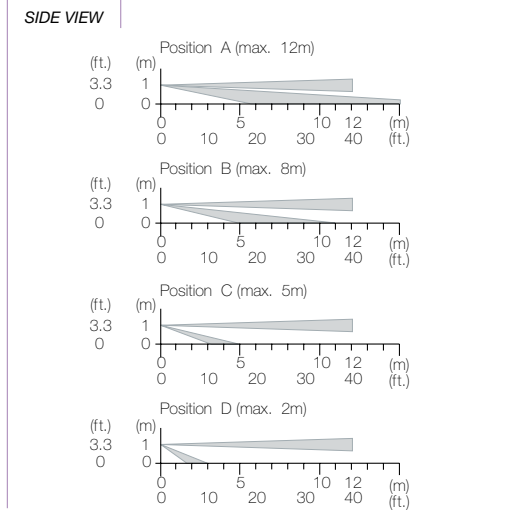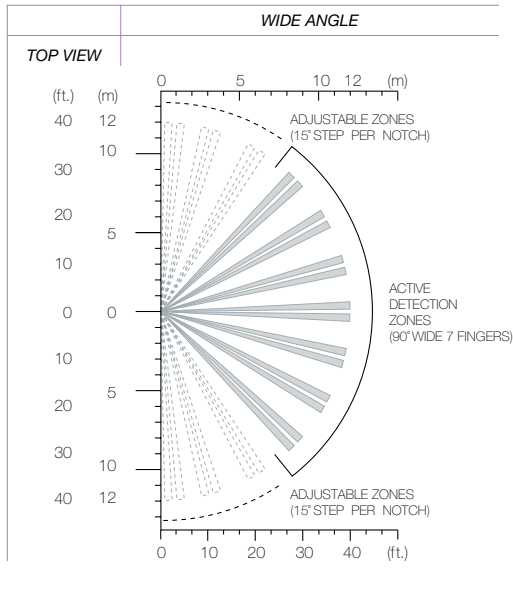
Battery Operated   (VX-402R)

The battery operated VX-402R allows for low cost simple outdoor installation, whilst providing exceptional detection capability.

Battery Saving Circuit

Temperature Compensation

Form C Alarm Output and Tamper Output

Low Current Draw

* Transmitter is not included. Use the commercially available transmitter.

● DETECTION PATTERNS

WIDE ANGLE

TOP VIEW

ADJUSTABLE ZONES (15˚STEP PER NOTCH)

ACTIVE DETECTION ZONES (90˚WIDE 7 FINGERS)

ADJUSTABLE ZONES (15˚STEP PER NOTCH)

SIDE VIEW

Position A (max. 12m)
Position B (max. 8m)
Position C (max. 5m)
Position D (max. 2m)

*Specifications and design are subject to change without prior notice.
NOTE: This unit is designed to detect movement of an intruder and activate an alarm control panel. Being only a part of a complete system, we cannot accept responsibility for any damages or other consequences resulting from an intrusion. This product conforms to the category "Residential, Commercial and Light Industry" of EMC Directive 89/336 EEC.
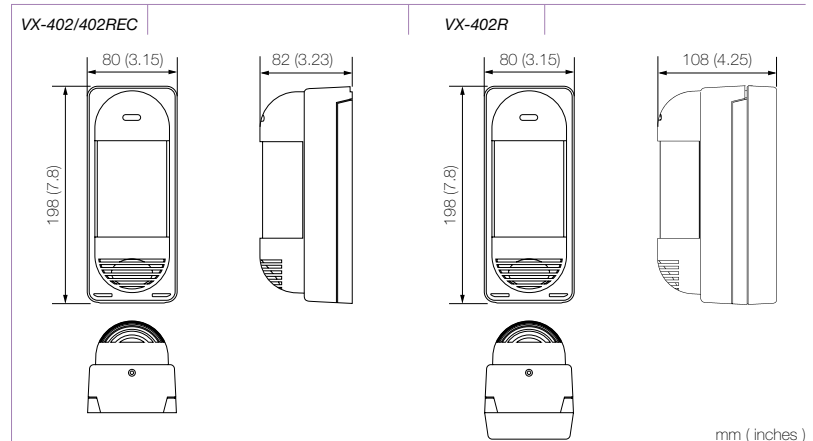
● SPECIFICATIONS

MODEL	VX‑402REC	VX‑402	VX‑402R
Detection Method	Passive Infrared		
Coverage	12m (40ft.) 90˚wide		
Detection Zones	14 zones		
Mounting Height	0.8~1.2m (2.7~4ft.)		
Sensitivity	2.0˚C (3.6˚F) at 0.6m/s		
Detectable Speed	0.3~1.5m/s (1~5ft./s)		
Power Supply	9.5~18V DC		3~9V DC Alkaline or Lithium Battery
Current Consumption	Normal 25mA max. 180mA (N.C.) Normal 12mA max. 200mA (N.O.)	Normal 25mA max. 28mA (N.C.) Normal 10mA max. 35mA (N.O.)	Max 3mA (Walktest, LED on) 10uA (Standby)
Alarm Period	2±1sec.		Approx. 2.5sec.
Alarm Output	Selectable N.C./N.O.:28V DC 0.2A max.		Form C-Solid State Switch:10V DC 0.01A
Tamper Switch	N.C. Opens when cover removed		Form C
Pulse Count	20±5sec. 2 or 4		Approx. 20sec. 2 or 4
Warm-up Period	Approx. 30sec. (LED blinks)		Approx. 2min
Volume of Audible	75dB		
LED Indicator	LED is blinking during warm-up period Alarm condition Recording condition		Disable during normal operation Enable during walk test
Weatherproof	IP54		
Operating Temperature	−20~+50˚C (−4~+122˚F)		
Operating Humidity	95% max.		
RF Interference	No Alarm 30V/m		
Mounting	Wall, Pole, Conduit and Electrical Box		Wall, Pole
Weight	550g (19.4oz.)		480g (16.9oz.)
Standard Accessories	Pole Mount Kit, Screw Kit, Area Masking Plate		

Recommended external speaker

Impedance	8 ohm	
Max. Power	over 30W	
Output S.P.L.	over 80dB/m	
Wiring Length	10m	

* Speaker with amplifer can not be used   * Only one external speaker can be connected

● DIMENSIONS

VX-402/402REC   VX-402R

80 (3.15)   82 (3.23)   80 (3.15)   108 (4.25)
198 (7.8)   198 (7.8)

mm (inches)