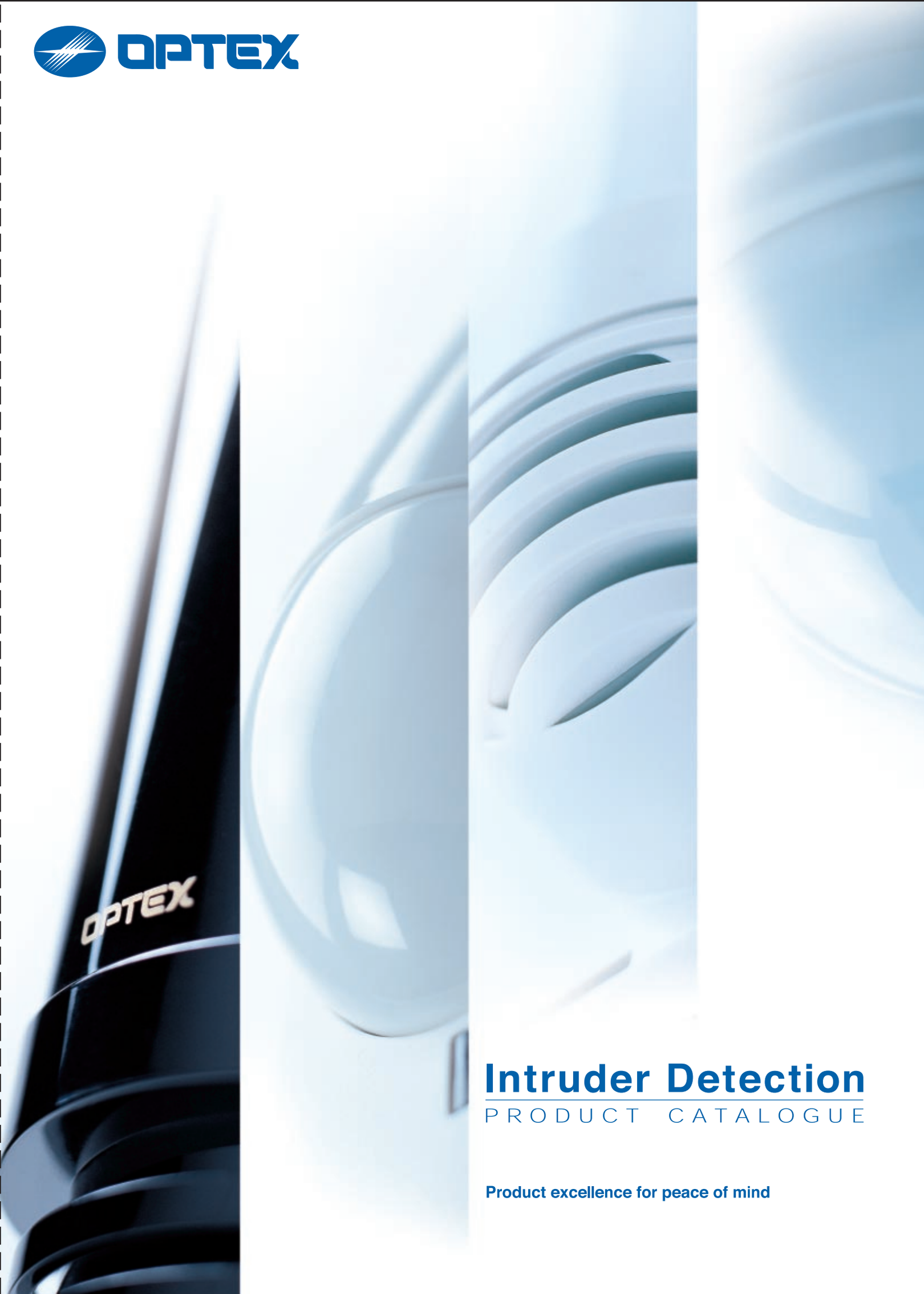


Intruder Detection

PRODUCT CATALOGUE

Product excellence for peace of mind

Welcome

Welcome to the Optex Intruder Detection Catalogue

Optex is one of the world's leading manufacturers of high performance intruder detectors. Our products are the most reliable on the market, they are easy to install and they are affordable. Combined with the excellent service we offer we believe that, when it comes to Intruder Detection, you need look no further.

'Peace of mind through product excellence' is our motto and this reflects our desire to design and manufacture the very best products so that you can rest assured that when you buy Optex you are buying peace of mind.

All our detectors are 100% tested before they leave our new, state-of-the-art factory and we are continually designing new technologies and improving existing ones to meet the needs of the security market. The new SQ Series of Sequential Confirmation Detectors on page 13 is just one of many examples of this philosophy at work.

We hope that you find this catalogue informative and easy to use and look forward to receiving your feedback on it.

The new state-of-the-art Optex factory.

CONTENTS

The new SEQUAD Sequential Confirmation Detector

The new VX-402REC PIR Detector with recordable voice announcement facility

MX-40QZ Combination Detector

DC-20 Visual Confirmation Detector

AX-130T Photobeams

"Peace of mind through product excellence."

Intruder Detection

PEACE OF MIND THROUGH PRODUCT EXCELLENCE

Peace of mind comes from knowing that when an alarm activates it is a real alarm not a false alarm. As the world's largest manufacturer of infrared security products we know this. We do all we can to design and deliver PIR Detectors that are easy to install and will give years of reliable trouble-free operation.

RELIABILITY

Tests show that Optex detectors are the most reliable on the market today. Don't take our word for it either:

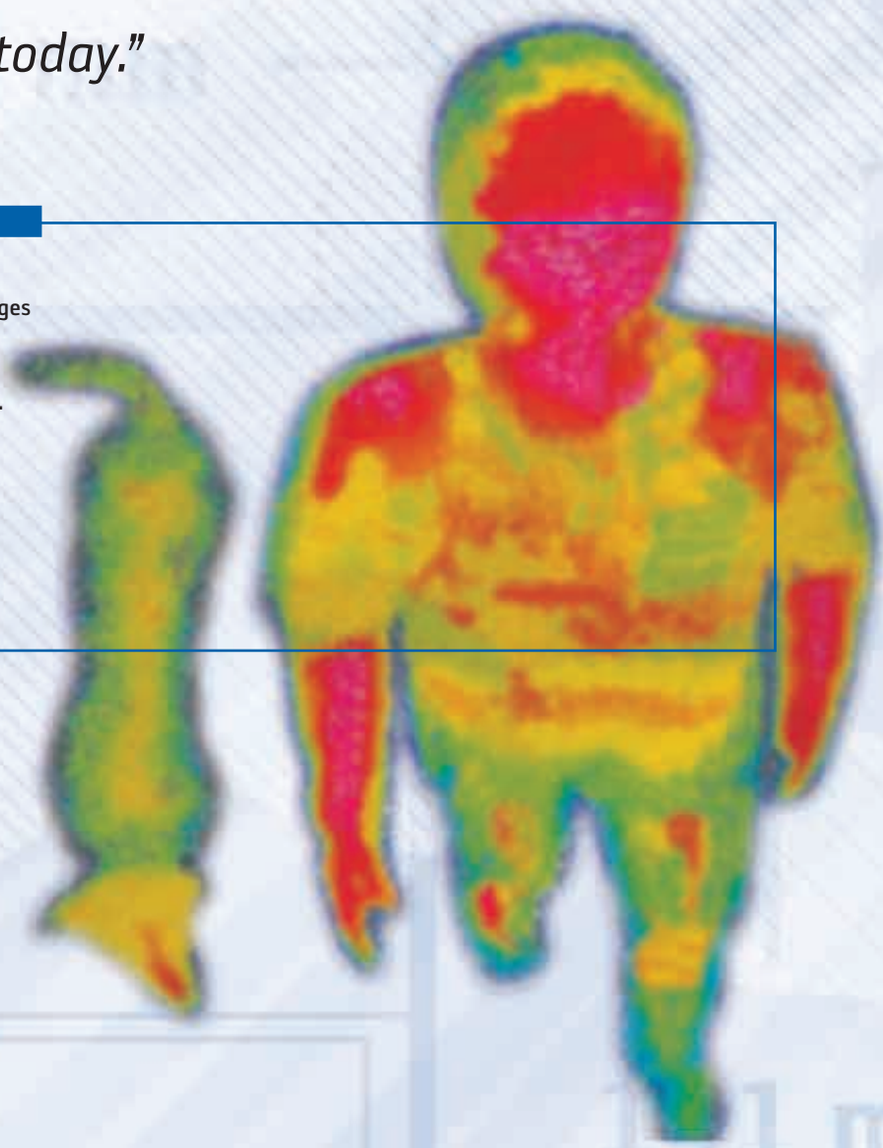
- Ask distributors which detectors have the lowest return rates
- Ask central monitoring stations which detectors give them the fewest false alarms
- Ask installers which detectors don't let them down.

They will tell you – 'Optex'.

"Tests show that Optex detectors are the most reliable on the market today."

HOW DO PIR DETECTORS WORK?

Passive Infrared (PIR) detection is achieved by monitoring changes of the far infrared levels in the sensor's field of view. All objects emit infrared radiation at or around a wavelength of 10 microns. The sensor activates when a human being moves against a background that is emitting more or less radiation. Effective detectors are able to discriminate between humans and other sources of infrared.



UNIQUE OPTEX TECHNOLOGIES

Using a number of unique technologies, many of which are patented, Optex detectors are able to discriminate between human and other sources of infrared such as moving curtains or blinds, radiators, office equipment, pets, sunlight and reflections. The aim of all the technologies is to reduce the incidence of false alarms.

Double Conductive Shielding*

CX-502/502AM, FX-50SQ/50SQL, LX-402/802N, VX-402/402REC

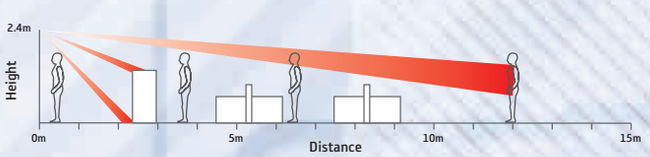
Double filtering and conductive metal shielding cover the pyro*, blocking and grounding out visible light and radio frequency interference (RFI). Only infrared energy passes through the filter, minimising false alarms from direct or reflected sunlight and car headlights.

Quad Zone Logic*
Super Quad Zone Logic *

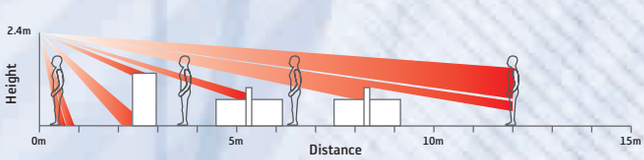
CX-502/502AM, FX-50QZ/50QZL/50SQ/50SQL, RX-40QZ/40PT

These create an extremely high vertical zone density, two or three times the size of that in conventional PIRs. These taller zones capture the entire body mass of a person and enable detection of the smallest temperature contrast between them and the background. In addition, the vertical detection density takes into account dead zones created by furniture or partitions.

Conventional Models



FX-50 Series



Multi-Focus Technology*

EX-35T/35V/35R, SX-360Z/360ZVP

Multi-Focus Technology creates zones with high vertical density, optimising detection sensitivity and enabling detection to remain stable even in high temperature conditions

Temperature Compensation

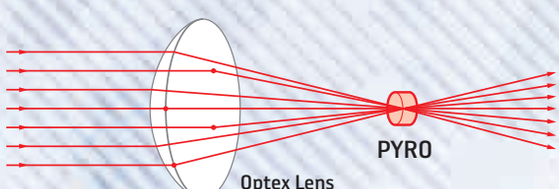
CX-502/502AM, FX-50QZ/50QZL/50SQ/50SQL, RX-40QZ/40PT

Temperature Compensation increases detection capability in high temperature conditions, where the background temperature is similar to that of the human body. It maintains a high level of false alarm protection and helps prevent valid alarms being missed by automatically adjusting sensitivity according to the environmental temperature.

Spherical Lens Design

EX-35T/35V/35R, FX-50QZ/50QZL/50SQ/50SQL, FX-360/360LP, RX-40QZ/40PT

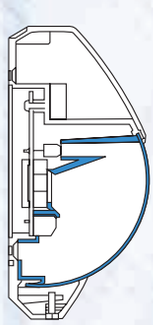
Traditional PIR detectors use a flat lens bent into a curve to focus infrared energy onto the pyro. This is not the most accurate method, because the distance between the lens and the pyro (the focal length) varies for each detection zone, creating distortion. The Optex spherical lens design eliminates distortion by providing a uniform focal length for every detection zone. Additionally, the sphere is one of the strongest geometrical structures, making spherical lenses superior both optically and mechanically.



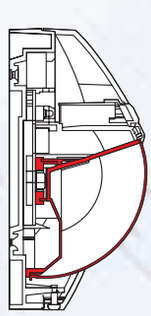
Sealed Optics

CX-502/502AM, FX-50QZ/50QZL/50SQ/50SQL, RX-40QZ/40PT

With conventional PIR detectors, small insects and draughts can cause false alarms by getting between the lens and the pyro. This is prevented by 'Sealed Optics', which make this space a separate sealed optical compartment ensuring that it remains empty and undisturbed at all times.



Conventional Structure



CX-702's Dual Structure

* Optex patented technologies

* The use of the word 'pyro' is used throughout this catalogue as an abbreviation for 'pyroelectric sensor'

EX-35T/35VP/35R

PASSIVE INFRARED DETECTORS

The EX Series provides low cost detection without compromising quality. It combines a unique dual-purpose lens, patented Multi-Focus Technology and Selectable Sensitivity to create four precise detection patterns - wide-angle or long-range and multi-level or pet alley. This makes the unit very versatile and ideal for many applications where the need is for reliable detection on a tight budget.

The unique spherical lens design makes the unit attractive yet robust and, combined with patented Multi-Focus Technology, it eliminates sensitivity problems frequently caused by changes in detection patterns.

FEATURES

- **Spherical Lens Design**
- **Wide-angle or long-range detection in Multi-Level or Pet Alley patterns**
- **High detection sensitivity**
- **Stable even in high temperature conditions**
- **Selectable pulse count: 2 or 4**
- **100% factory-tested for reliability**
- **Five year warranty**

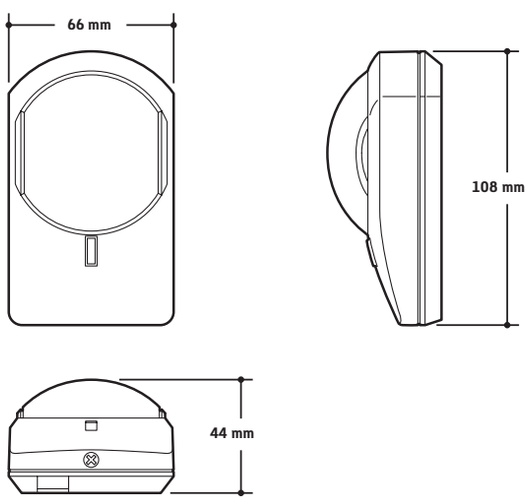
OPTIONS

- **EX-35T – standard model**
- **EX-35VP – standard model with alarm memory latch**
- **EX-35R – low current battery version for wireless applications**

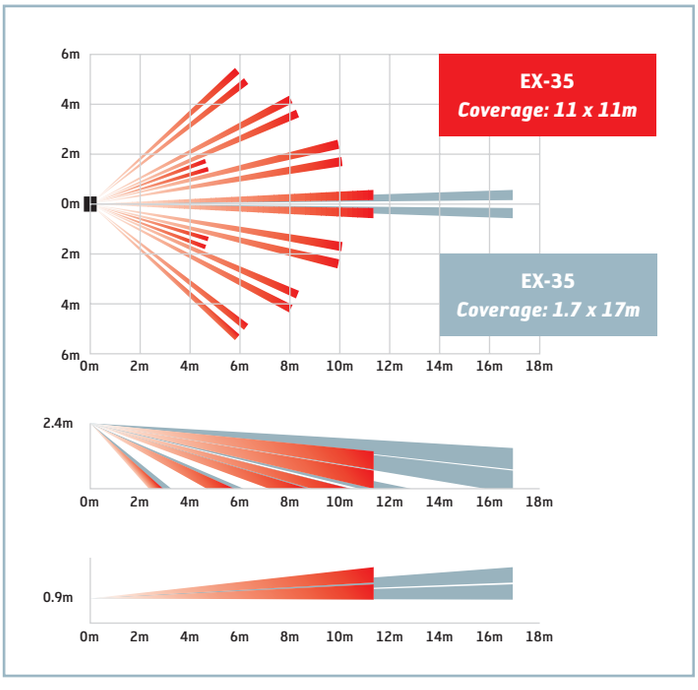
ACCESSORIES

- **FA-2C: Multi-angle ceiling mounting bracket**
- **EA-1W: Wall mounting bracket**

DIMENSIONS



COVERAGE



64 Wide (28 pet alley)
12 Long (4 pet alley)

EX-35T/35V - 9.5-14V DC
EX-35R - 2.3-10.0V DC
alkaline or lithium battery

EX-35T - 8mA Normal 11mA Max
EX-35V - 18mA Normal 25mA Max
EX-35R - 3.5mA Standby
10mA walk test, LED on

EX-35T/35V -20°C
EX-35R -10°C

+50°C

EX-35T/35V - 90g
EX-35R - 142g

Pulse Count
20 secs
2 or 4 (approx)

Alarm Output
EX-35T/35V - N.C. 28V, 0.2A Max
EX-35R - N.C./N.O. solid state switch
10V DC, 0.01A Max

Tamper
N.C.

For full specifications please refer to page 36.

RX-40QZ/40PT

PASSIVE INFRARED DETECTORS

The RX Series gives extremely high false alarm protection with excellent tolerance to spot temperature changes from curtains and small animals. Using patented Quad Zone Logic, it is able to accurately discriminate between humans and other sources of infrared, providing reliable detection in a diverse range of applications.

The attractive housing incorporates the unique Optex spherical lens design, which is not only robust, but also helps to maximise the performance of Quad Zone Logic by providing an accurate focal length for each detection zone.

The RX Series also includes Optical Quad Technology, which uses taller detection zones divided into upper and lower areas. By detecting infrared energy changes in both areas and then coupling them, it provides extremely accurate detection even in very hostile environments.

FEATURES

- **Patented Quad Zone Logic**
- **Spherical Lens Design**
- **Temperature Compensation**
- **Sealed Optics**
- **Selectable pulse count: 2 or 4**
- **100% factory-tested for reliability**
- **Five year warranty**

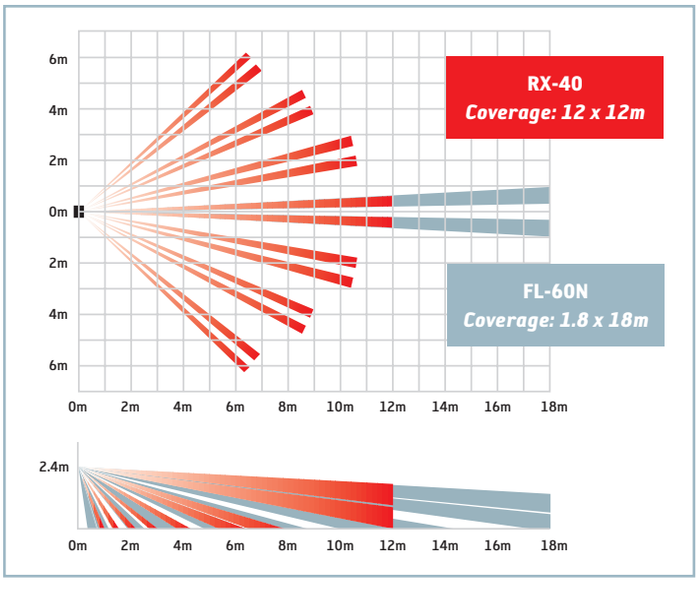
OPTIONS

- **RX-40QZ – standard model with Quad Zone Logic**
- **RX-40PT – RX-40QZ with Pet Tolerance**
- **RX-40QZ ID – RX-40QZ with ID programmable control system**

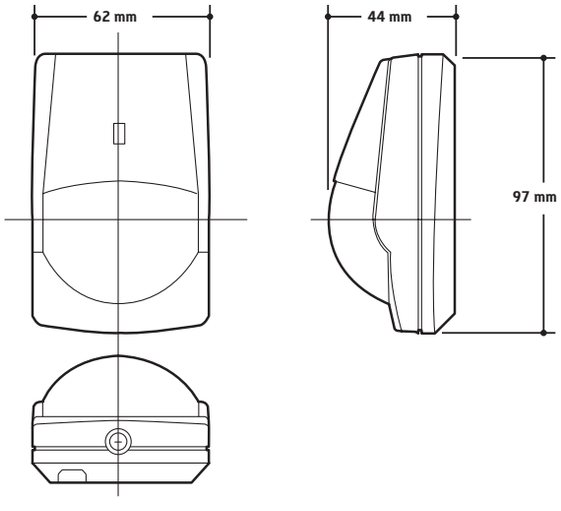
ACCESSORIES

- **FA-3: Wall and ceiling mounting bracket**
- **FL-60N: 18m long-range lens (pack of 5)**

COVERAGE



DIMENSIONS



78 Wide	9.5 -16V DC	8mA Normal 11mA Max at 12V DC	-20°C	+50°C	70g	Pulse Count 20 secs 2 or 4 (approx)	Alarm Output N.C. 28V - 0.2 amp	Tamper N.C.

For full specifications please refer to page 36.

CX-502/502AM

PASSIVE INFRARED DETECTORS

The CX-502 Series is designed to give extremely stable detection performance in a variety of commercial applications. With patented Super Quad Zone Logic, sensitivity is maintained through the entire coverage area, even in high temperature areas or in applications with low temperature contrast. Combined with Double Conductive Shielding and Temperature Compensation, a high level of false alarm protection is guaranteed.

The CX-502AM, with its unique Multi Anti-Masking Technology, is able to detect when it has been masked with either clear or opaque spray or with an object, such as a sticker or sticky tape, even when these are transparent. It can also detect the presence of black paper in front of it from a distance of 30cm. Add to this the unique Self-Check function, which regularly tests to ensure that the unit is functioning correctly, and you have a sensor of exceptional performance and reliability.

FEATURES

- **Patented Quad Zone Logic**
- **Patented Double Conductive Shielding**
- **Temperature Compensation**
- **Self Checking function (CX-502AM)**
- **Patented Multi Anti-Masking Technology (CX-502AM)**
- **Anti-magnet, silent Photo-Moss relays**
- **100% factory-tested for reliability**
- **Five year warranty**

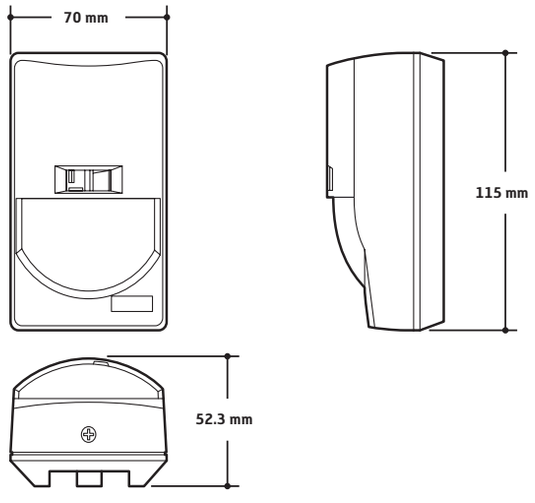
ACCESSORIES

- **EA-1W: Wall mounting bracket**
- **FA-1W: Multi-angle wall mounting bracket**
- **FA-2C: Multi-angle ceiling mounting bracket**
- **FA-3: Wall and ceiling mounting bracket**
- **CL-80N: Long-range lens (24m x 2.3m)**

OPTIONS

- **CX-502 – standard model**
- **CX-502AM – standard model with anti-masking functions**

DIMENSIONS



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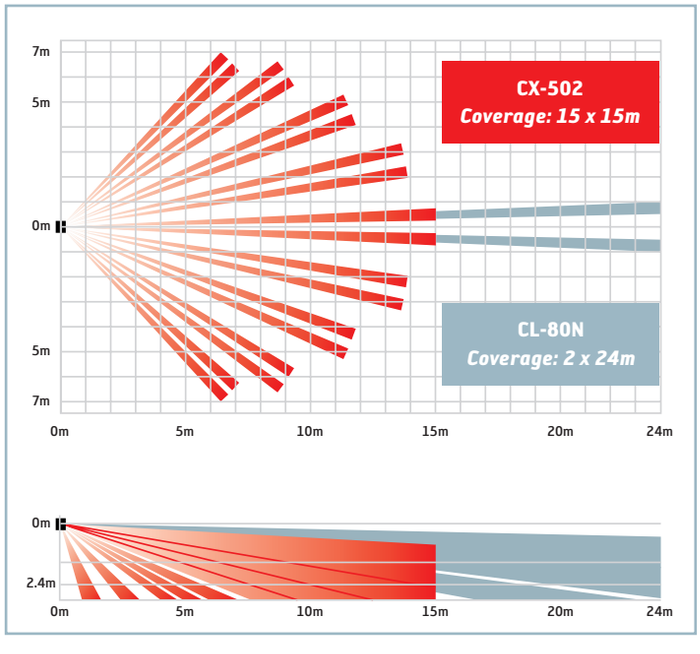


82 Wide

9-18V DC

CX-502 - 5mA Normal 12mA Max
CX-502AM - 7mA Normal 15mA Max at 12V DC

-20°C

+50°C

CX-502 - 120g
CX-502AM - 135g

Pulse Count
Standard mode: Pulse count 2, approx. 20 secs
Special mode: Pulse count 3, approx. 8 secs

Alarm Output N.C.
28V - 0.2 amp

Tamper N.C.

For full specifications please refer to page 36.

CX-702/702RS

PASSIVE INFRARED DETECTORS

The CX 702 Series is designed to give extremely stable long-range detection performance in a variety of internal commercial and industrial applications. With patented Multi-Focus Technology, sensitivity is maintained through the entire coverage area, even in high temperature areas or in applications with low temperature contrast. Combined with Double Conductive Shielding and Temperature Compensation, a high level of false alarm protection is guaranteed.

A number of design features combine to make installation particularly easy, including a dual-purpose lens for simple selection between wide-angle and long-range patterns and 'Double Easy-Knockout' enabling neat and accurate cable holes to be created for two different thicknesses of cable.

FEATURES

- **Patented Multi-Focus Technology**
- **Patented Double Conductive Shielding**
- **Temperature Compensation**
- **Sealed Optics**
- **Spherical Lens Design**
- **Dual Purpose Optics: Wide-angle or long-range**
- **100% factory-tested for reliability**
- **3-Step angle adjustment**
- **Five year warranty**

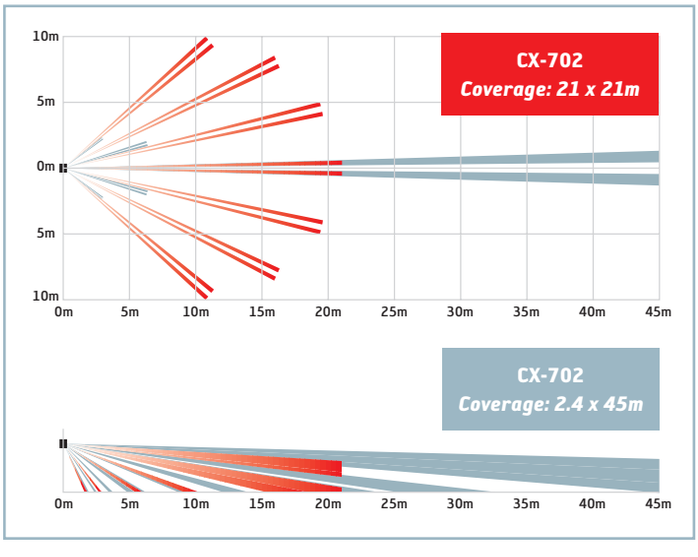
OPTIONS

- **CX-702 – standard model**
- **CX-702V - standard model with alarm memory latch**
- **CX-702RS – low current battery version for wireless applications**

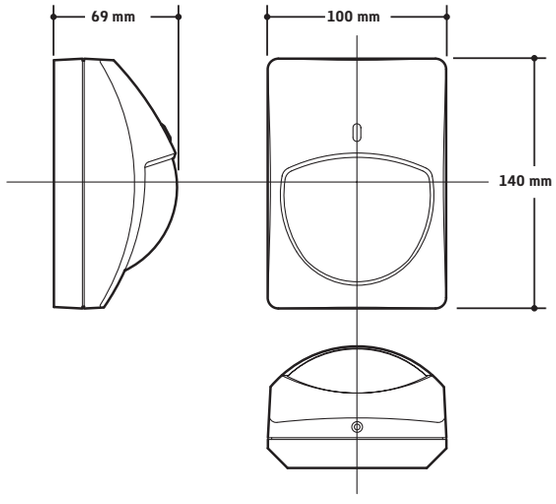
ACCESSORIES

- **CA-1W: Multi-angle wall mounting bracket**
- **CA-2C: Multi-angle ceiling mounting bracket**
- **BA-70: Back box for wireless transmitter**

COVERAGE



DIMENSIONS



68 Wide 22 Long

CX-702/702V - **9.5-16V DC**
CX-702RS - **3-9V DC**
alkaline or lithium battery

CX-702 - **8mA** Normal **11mA** Max
CX-702V - **8mA** Normal **16mA** Max
CX-702RS - **5mA** Standby
10mA walk test, LED on

CX-702/702V
-20° – +50°C
CX-702RS
-10° – +50°C

200g

Pulse Count
Selectable pulse count: 2 or 4

Alarm Output
CX-702/702V - **N.C.** 28V - 0.1A
CX-702RS - **N.C./N.O.**
10V DC, 0.01A max

Tamper
CX-702/702V - **N.C.**
CX-702RS - **N.C./N.O.**
28V DC, 0.1A max

Alarm memory
Selectable positive or negative control

For full specifications please refer to page 36.

FX-360/360LP

PASSIVE INFRARED DETECTORS

The FX-360 ceiling-mount detector with its unique, highly durable spherical lens offers unparalleled 360° detection performance. False alarm protection technologies, such as RFI Protection, Temperature Protection and Noise Reduction, come as standard, giving the FX-360 the most unbeatable reliability in its class.

The FX Series is extremely cost effective and its sleek and compact design suits all types of installation applications.

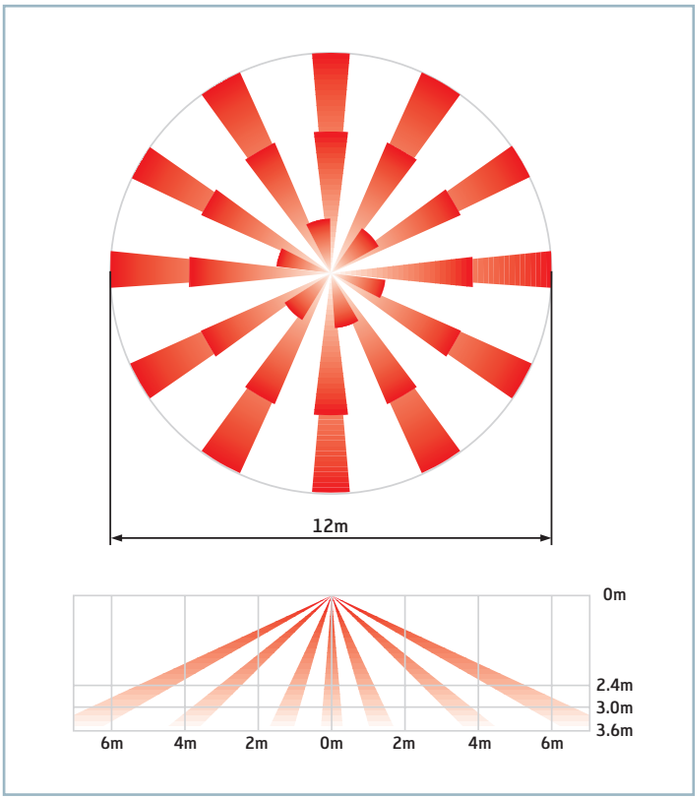
FEATURES

- **Spherical Lens Design**
- **RFI Protection**
- **Temperature Protection**
- **Noise Reduction Circuit**
- **Selectable pulse count: 2 or 4**
- **100% factory-tested for reliability**
- **Five year warranty**

OPTIONS

- **FX-360 – standard model**
- **FX-360LP – standard model with alarm memory latch**

COVERAGE



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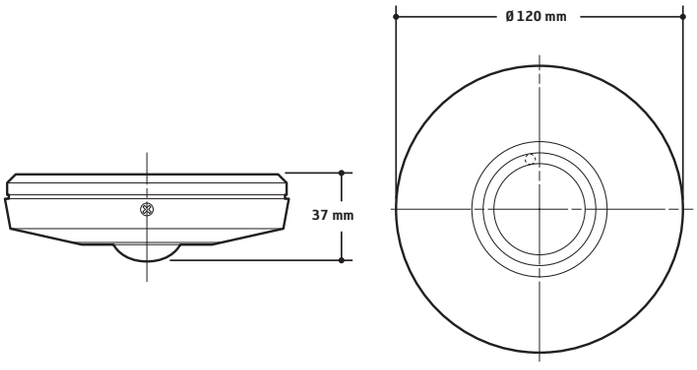


62	9.5-18V DC	FX-360 - 17mA Normal 18mA Max FX-360LP - 17mA Normal 25mA Max at 12V DC	-20°C	+50°C	140g	Pulse Count Selectable pulse count: 2 or 4	Alarm Output N.C. 28V - 0.2 amp	Tamper N.C.	Alarm memory System armed: +5 - 20V DC

For full specifications please refer to page 36.

SX-360Z/360ZVP

PASSIVE INFRARED DETECTORS

The SX-360 ceiling-mount detector, with its unique zoom function and highly dense, triple-element detection pattern, provides unsurpassed detection performance at any ceiling height up to 5 metres. By simply twisting the unit's domed lens, the detection pattern can be easily adjusted at any installation height, making it one of the most flexible ceiling detectors on the market. This, combined with its compact design, makes the SX-360 suitable for a variety of applications – large or small, residential or commercial.

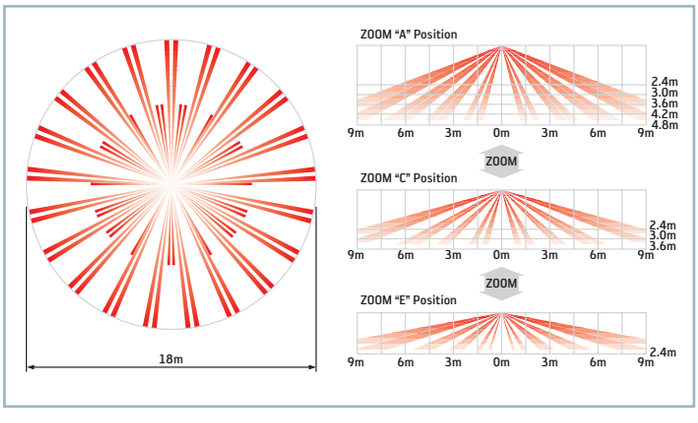
FEATURES

- **Patented Double Conductive Shielding (SX-360ZVP)**
- **Patented Multi-Focus Technology**
- **Highly dense coverage (276 zones)**
- **Zoom Function/ Pattern Adjustment**
- **Temperature Protection**
- **Noise Reduction Circuit**
- **100% factory-tested for reliability**
- **Five year warranty**

OPTIONS

- **SX-360Z – standard model**
- **SX-360ZVP – standard model with alarm memory latch and Double Conductive Shielding**

COVERAGE



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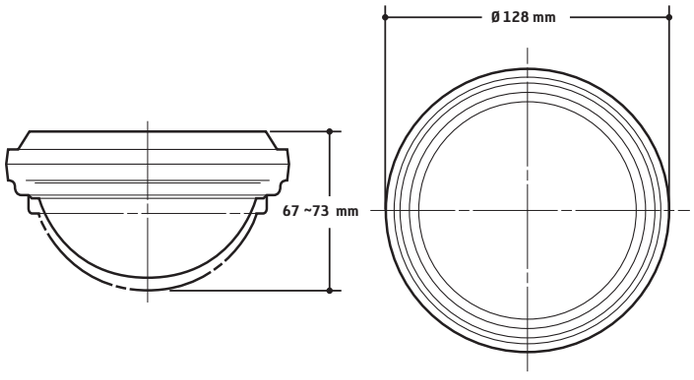


276

6-18V DC

SX-360Z - 13mA Normal 18mA Max
SX-360ZVP - 13mA Normal 25mA Max
at 12V DC

-20°C

+50°C

SX-360Z - 224g
SX-360ZVP - 227g

Pulse Count
Selectable pulse count: 1, 2 or 4

Alarm Output
N.C.
28V - 0.2 amp

Tamper
N.C.

Alarm memory
Armed: +5 - 20V DC

For full specifications please refer to page 36.

FX-50QZ/50QZL/50SQ/50SQL

PASSIVE INFRARED DETECTORS

The FX Series is designed to provide stable and reliable detection in the most hostile of environments, where many other detectors struggle to function. The highly accurate and reliable detection pattern maintains its sensitivity throughout the detection area even in high temperature or low contrast environments such as conservatories.

Using patented Quad Zone Logic, the FX Series is able to detect the smallest temperature contrast against the background temperature, enabling it to discriminate between humans and other sources of infrared.

The superior SQ versions are designed for the commercial market and utilise Super Quad Zone Logic for even greater reliability. They also incorporate Double Conductive Shielding, which helps minimise false alarms from direct or reflected sunlight and car headlights.

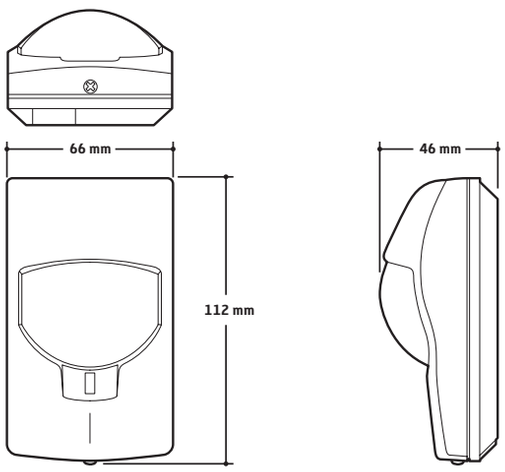
FEATURES

- **Patented Quad Zone Logic**
- **Patented Double Conductive Shielding (FX-50SQ/50SQL)**
- **Temperature Compensation**
- **Spherical Lens Design**
- **Sealed Optics**
- **Selectable alarm memory polarity (FX-50QZL/50SQL)**
- **100% factory-tested for reliability**
- **Five year warranty**

OPTIONS

- **FX-50QZ – standard model featuring Quad Zone Logic**
- **FX-50QZL – FX-50QZ with alarm memory latch**
- **FX-50SQ – superior model with additional Double Conductive Shielding**
- **FX-50SQL – FX-50SQ with alarm memory latch**

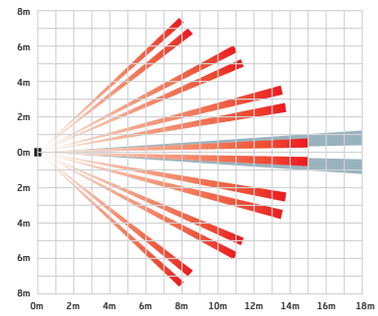
DIMENSIONS



ACCESSORIES

- **FA-3: Wall and ceiling mounting bracket:**
- **FL-60N: 18m long-range lens (pack of 5)**

COVERAGE



FX-50
Coverage: 15 x 15m

FL-60N
Coverage: 1.8 x 18m

78	9.5 - 16.0V DC	FX-50QZ/50SQ - 8mA Normal 11mA Max FX-50QZL/50SQL - 8mA Normal 16mA Max at 12V DC	-20°C	+50°C	90g	Pulse Count 20 secs 2 or 4 (approx)	Alarm Output N.C. 28V - 0.2 amp	Tamper N.C.

For full specifications please refer to page 36.

SQ-40/60

SEQUENTIAL CONFIRMATION DETECTORS

The new SEQUAD is unique in that **two** PIR Detectors are contained inside one housing, providing reliable sequential confirmation without the need to install two separate units. This saves time and money and, because SEQUAD detectors use proven PIR technology, false alarms are kept to a minimum.

SEQUAD sensors are designed to be mounted in the corner of a room, with one detector providing twin-zone coverage along each of the two walls and the other covering the central area of the room. When a door or window is opened, an alarm is generated by one of the side detection patterns. If an intruder then enters the room a second alarm is activated by the central detection pattern, providing a sequentially confirmed activation.

KEY BENEFITS

- **Uses proven PIR technology for proven reliability**
- **Sequential Confirmation is one of the most popular and reliable methods of providing confirmed activations**
- **The two detection areas of the SEQUAD do not overlap - as required by UK ACPO policy**
- **A non-confirmed alarm system can be upgraded to be sequentially confirmed using existing cabling**
- **Each SEQUAD only requires one cable run**

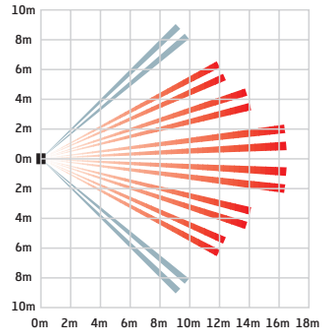
FEATURES

- **Separate Double-Area Configuration (Patent Pending)**
- **Patented Quad Zone Logic**
- **Advanced Temperature Compensation**
- **Noise Reduction Processing**
- **Spherical Lens Design**
- **Sealed Optics**
- **Five year warranty**

OPTIONS

- **SQ-40 – standard model, 12m x 12m coverage**
- **SQ-60 – long-range model, 18m x 18m coverage**

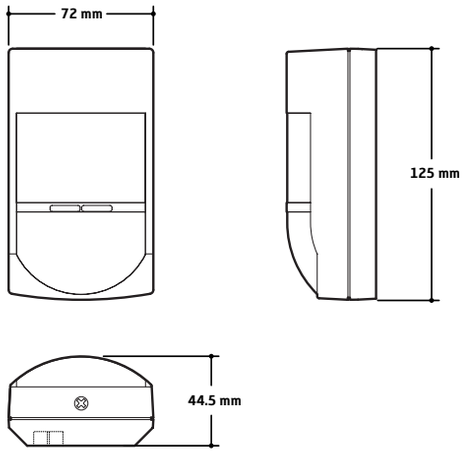
COVERAGE



SQ-40
Coverage: 12 x 12m

SQ-60
Coverage: 18 x 18m

DIMENSIONS



Side - 26
Centre - 44

9.5
-18V DC

17mA Normal
20mA Max
at 12V DC

-20°C

+55°C

120g

Pulse Count
Standard mode: Pulse count 2, approx. 20 secs
Special mode: Pulse count 3, approx. 8 secs

Alarm Output
Both N.C.
28V - 0.2 amp

Tamper
N.C.

For full specifications please refer to page 36.

LX-402/802N

OUTDOOR PASSIVE INFRARED DETECTORS

The LX Series is robust, weatherproof and specifically designed for short-range outdoor applications. With wide-angle and long-range options, advanced features such as sensitivity and range adjustment and a built-in light sensor providing day and night modes, the LX Series is highly versatile. An ingenious mirror assembly provides a pet alley configuration and Double Conductive Shielding ensures that the sensor is resistant to interference from foreign light sources such as the sun and car headlights.

FEATURES

- **Patented Double Conductive Shielding**
- **Selectable detection patterns (Pet Alley or Multi-Level)**
- **Area-masking strips (LX-402 only)**
- **Sensitivity selection switch (high, mid and low)**
- **Selectable pulse count (test or 2)**
- **Day & night modes**

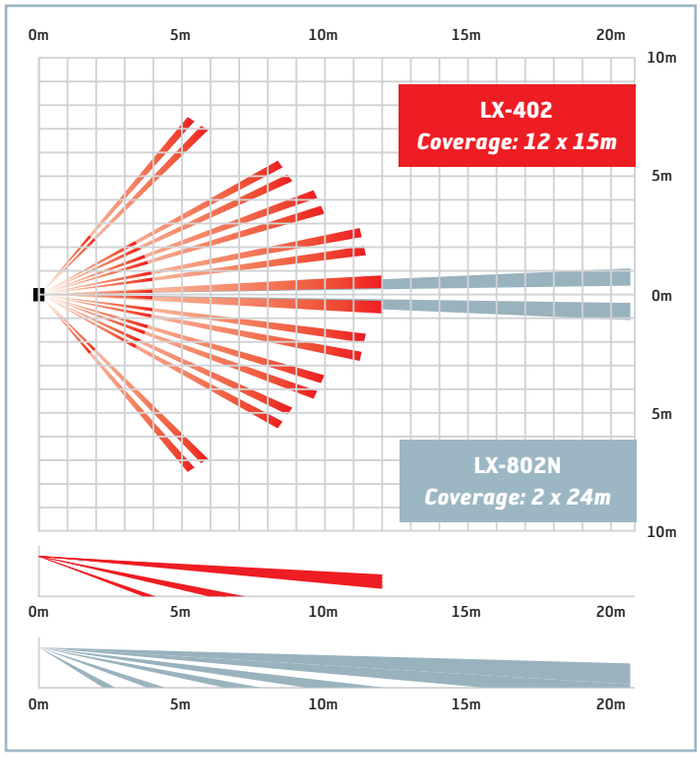
OPTIONS

- **LX-402 – standard model**
- **LX-802N – long-range model**

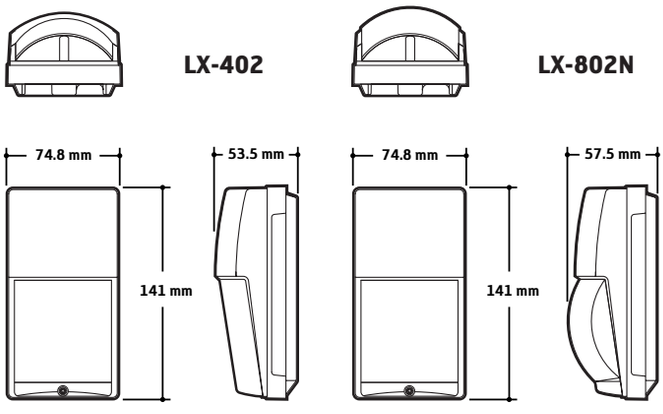
ACCESSORIES

- **CA-2C: Multi-angle ceiling mounting bracket**
- **CA-1W: Multi-angle wall mounting bracket**

COVERAGE



DIMENSIONS



LX 402 - 40 zones (18 Pet Alley)
LX 802N - 12 zones (4 Pet Alley)

10.8 -13.2V DC

25mA max at 12V DC

-20°C

+50°C

LX 402 - 170g
LX 802N - 190g

IP54

Alarm Output N.C./N.O. 28VDC - 2 amp

Tamper N.C.

For full specifications please refer to page 36.

BX-80N

OUTDOOR BUILDING PERIMETER DETECTOR

With long, narrow detection areas that extend from both its sides the BX-80N is specifically designed to be wall-mounted centrally on a building, covering the building perimeter with a multi-layered, horizontal barrier that detects intruders before they break in. To help reduce false activations, the range can be adjusted so that detection extends only to the end of the building. The unit also has a size-judging function, which helps it discriminate between large and small objects within the detection area.

The BX-80N is stylishly designed to blend in with any architecture and is simple to install and set up - there being no need to align transmitters and receivers.

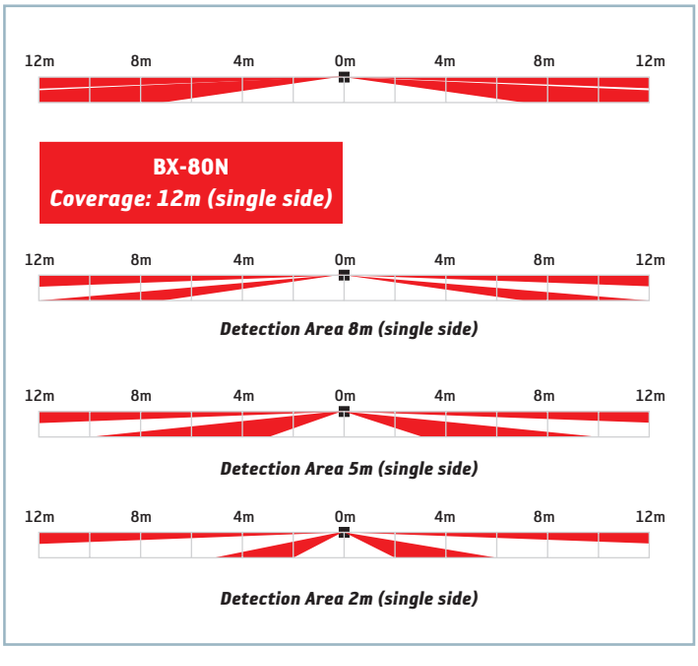
FEATURES

- **Variable detection range up to 24m (12m on each side)**
- **Size-judging function to avoid false alarms**
- **Audible alarm indicator to deter intruders**
- **Attractive, slender design**
- **100% factory-tested for reliability**
- **Five year warranty**

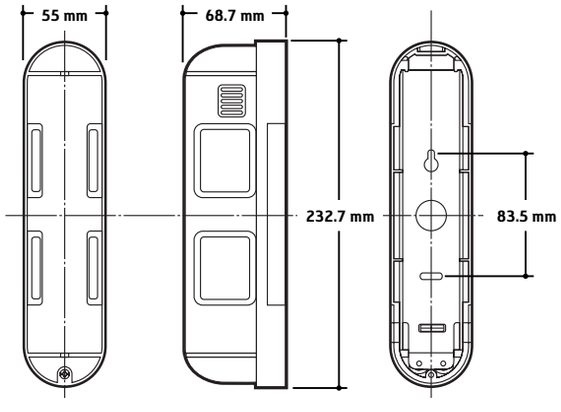
ACCESSORIES

- **MG-1: Vandal and tamper resistant metal guard**

COVERAGE



DIMENSIONS



4 zones (2 each side)

10-28V DC

28mA Normal
38mA Max at 12V DC

-20°C

+50°C

400g

IP55

Alarm Output
2 relay output (N.C. and N.O.)
28VDC - 0.2 amp

Tamper N.C.

For full specifications please refer to page 36.

VX-402

OUTDOOR PASSIVE INFRARED DETECTOR

The VX Series provides an innovative solution to external area detection. It employs a highly reliable dual detection method, which prevents false activations from small animals and birds. Two discrete detection areas are created and only when an intruder is detected in both areas is an alarm output provided. Double Conductive Shielding ensures that the sensor is resistant to interference from foreign light sources such as the sun and car headlights.

The VX Series is ideal for industrial, commercial and domestic applications and can be used to provide triggering into CCTV, lighting or warning systems.

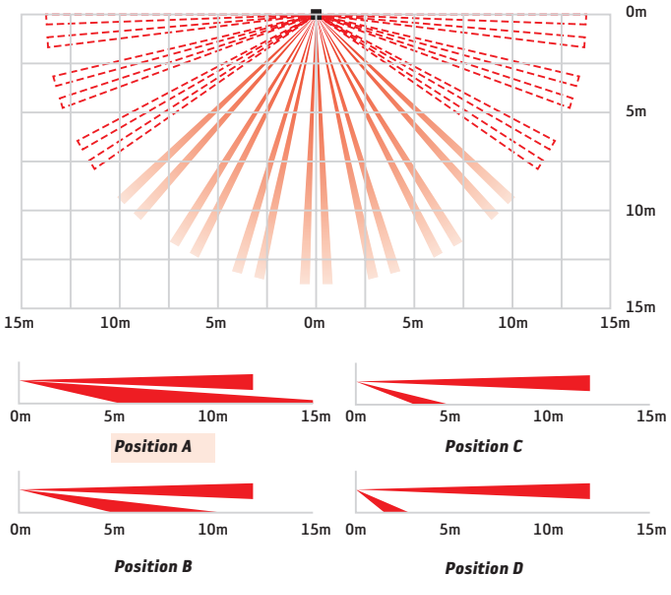
FEATURES

- **Patented Double Conductive Shielding**
- **Sensitivity selection switch**
- **Detection length adjustment switch**
- **Size judging function**
- **Selectable NC or NO alarm output**
- **Photocell for day and night operation**
- **100% factory-tested for reliability**

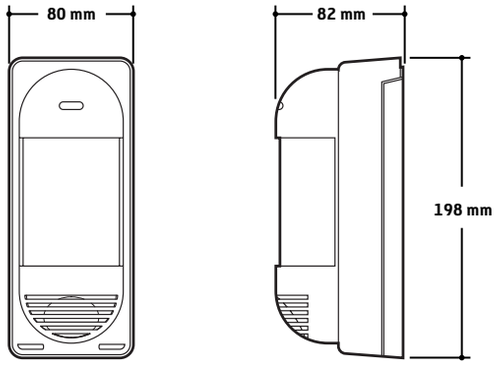
OPTIONS

- **VX-402 – standard model**
- **VX-402REC – standard model with voice warning facility**

COVERAGE



DIMENSIONS



Dual 14 zones	9.5 - 18.0V DC	N.C. - 25mA Normal 28mA Max N.O. - 10mA Normal 25mA Max at 12V DC	-20°C	+50°C	550g	IP54	Alarm Output Selectable: N.C. or N.O. 28VDC - 0.2 amp	Tamper N.C.

For full specifications please refer to page 36.

VX-402REC

OUTDOOR PASSIVE INFRARED DETECTOR

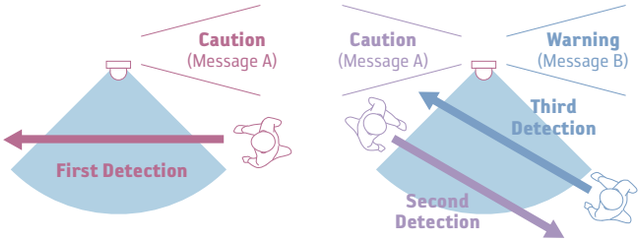
The VX-402REC has all the features of the VX-402, but, in addition, provides a detector-activated voice announcement facility.

The 'Easy Voice Recording' function enables two messages of up to eight seconds in length to be recorded, in any language, by using either the built-in microphone or external recording equipment such as a PC.

Once recorded, the 'Voice Warning' function enables the two messages to be delivered in one of four different playback sequences, depending on the application. Announcements can be replayed remotely from the detector by connecting an extension speaker (not supplied) into the unit's extension speaker socket.

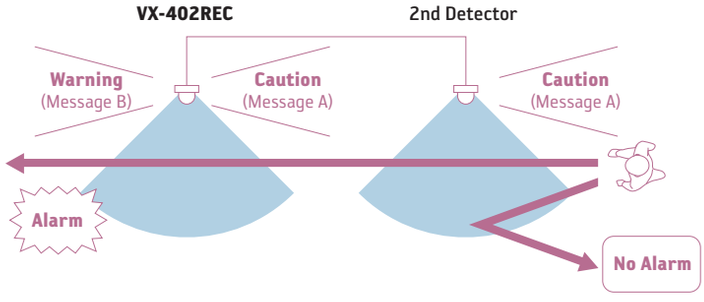
'VOICE WARNING' FUNCTION – PLAYBACK SEQUENCES

1. 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.

2. Directional Detection Playback



When used with another detection device, such as an outdoor PIR, active photobeam or 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.

3. Day/Night Message Playback

This sequence changes the message automatically when darkness falls, for example giving a welcome message during the day and an alert message at night.

4. Arm/Disarm Playback

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

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 premises.

EXTENSION SPEAKER

- **Impedance** **8ohm**
- **Max power** **Over 30W**
- **Cable length** **10m**
- **Output S.P.L.** **Over 80dB/m**

Dual 14 Zones	9.5 -18V DC	Form 1B - 25mA Normal 180mA Max N.O. - 12mA Normal 200mA Max at 12V DC	-20°C	+50°C	550g	IP54	Alarm Output Selectable: N.C. or N.O. 28VDC - 0.2 amp	Tamper N.C.

For full specifications please refer to page 36.

Intruder Detection

PEACE OF MIND THROUGH PRODUCT EXCELLENCE

At Optex we believe that peace of mind comes from knowing that when an alarm activates it is a real alarm not a false alarm. We do all we can to design and deliver detectors that will give years of reliable, trouble-free operation and that is why we have developed this range of Combination Detectors.

DX Series showing microwave detector (above) and PIR sensor (below)

HOW DO COMBINATION DETECTORS WORK?

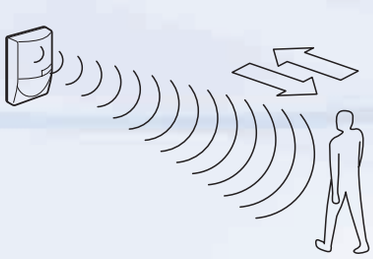
Combination Detectors use not one, but two high-quality, independent detection methods to sense human movement - PIR and Microwave. PIR Detectors monitor changes in passive infrared energy levels whilst microwave detectors monitor the difference in frequency between transmitted and reflected microwave signals.

By using the two technologies together the incidence of false alarms is dramatically reduced, because firstly, as the following table shows, the false alarm factors of the two technologies are different. Secondly, microwave detection works best when movement is towards or away from the detector, whilst optimal PIR detection is achieved when movement is across the detection zone (see below).

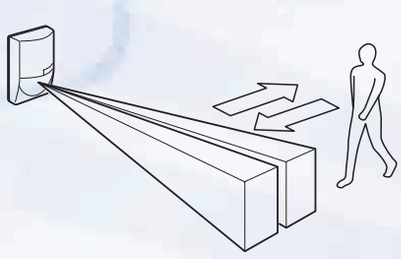
FALSE ALARM FACTORS - PIR AND MICROWAVE

	Temperature changes	Light disturbance	Vibration	Accuracy of detection area
PIR	Detectable	Detectable	Not affected	Clearly defines
MW	Not affected	Not affected	Detectable	Depends on target conditions

MICROWAVE AND PIR DETECTION PRINCIPLES



Microwave Detection Principles



PIR Detection Principles

"Peace of mind comes from knowing that when an alarm activates it is a real alarm not a false alarm."

Combination Detectors

UNIQUE OPTEX PIR TECHNOLOGIES

The PIR elements in our Combination Detectors utilise the following technologies, unique to Optex, which enable them to discriminate between humans and other sources of infrared that frequently cause false alarms, such as moving curtains or blinds, radiators, office equipment and pets.

- Quad Zone Logic
- Temperature Compensation
- Spherical Lens Design

For details of these technologies please refer to pages 4 and 5.

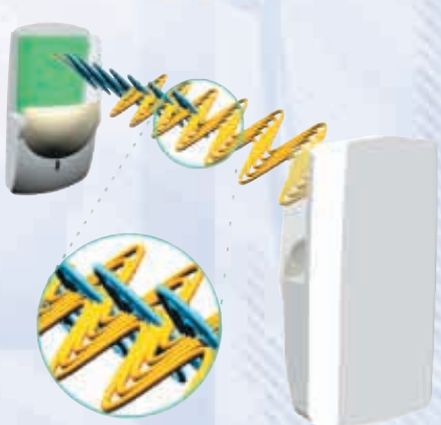
UNIQUE OPTEX MICROWAVE TECHNOLOGIES

These technologies have been developed to overcome the two main problems associated with microwave detection – interference from other microwaves and unwanted detection outside the coverage area.

Anti-Crosstalk Technology*

MX-40QZ/40PT/50QZ

When several microwave detectors are used in the same area, false alarms can occur because microwaves from the detectors interfere with one another. The Optex Anti-Crosstalk System prevents this interference using a unique new antenna design, which recognises microwaves emanating from other detectors and cancels them out.



Noise Reduction

DX-40E/60E/40 PLUS-E/60 PLUS-E, MX-40QZ/40PT/50QZ

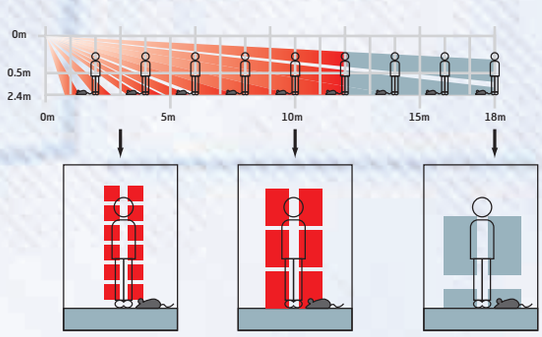
If, despite Anti-Crosstalk Technology, some noise does enter the antenna, the Noise Reduction circuit detects it and cancels it out, preventing false alarms.

Microwave Area Shaping*

DX-40E/60E/40 PLUS-E/60 PLUS-E

When microwave and PIR detection are used together, the detection areas of each must be the same. Traditionally this can be a problem because, firstly, microwaves are not always limited by objects such as walls, windows and partitions, whereas PIR detection is. Secondly, the distances at that which microwaves can detect movement tend to be far greater than that required by internal intruder detection applications.

Microwave Area Shaping overcomes these problems by matching the microwave detection area to that of the PIR and by limiting it to the room being covered. By doing this, false alarms from beyond the required coverage area or outside the room in question are avoided.



* Optex patented technologies

DX-40E/60E/40 PLUS-E/60 PLUS-E

PIR/MICROWAVE COMBINATION DETECTORS

Integrating PIR and microwave technology into attractive, easy-to-install units, the DX Series provides stable and reliable detection in the most hostile of environments, where simple PIR detectors struggle to function.

The PIR element incorporates Quad Zone Logic to detect the smallest temperature contrast against the background temperature, enabling it to discriminate between humans and other sources of infrared. Additionally, the microwave detector incorporates Microwave Area Shaping technology to prevent the unwanted detection of movement outside the coverage area. All in all, the DX Series offers unparalleled sensing performance.

FEATURES

- **Patented Quad Zone Logic**
- **Microwave Area Shaping (Patent Pending)**
- **Spherical Lens Design**
- **Self Checking function**
- **Anti-PIR Tamper Function (Patent Pending)**
- **Five year warranty**

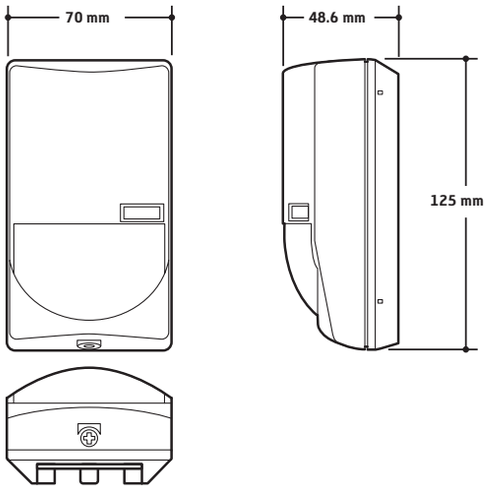
OPTIONS

- **DX-40E – standard model 12m x 12m coverage**
- **DX-60E – standard model 18m x 18m coverage**
- **DX-40 PLUS-E – enhanced model 12m x 12m coverage**
- **DX-60 PLUS-E – enhanced model 18m x 18m coverage**

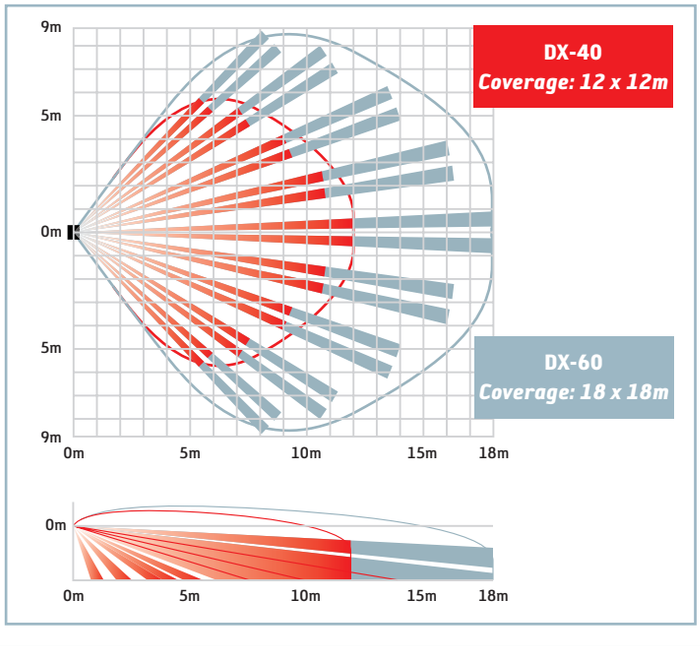
ACCESSORIES

- **FA-1W: Multi-angle wall mounting bracket**
- **FA-3: Wall and ceiling mounting bracket**

DIMENSIONS



COVERAGE



82 zones (PIR)

9.0-18.0V DC

DX-40E/60E - 12mA Normal 35mA Max
DX-40 PLUS-E/60 PLUS-E - 17mA Normal 40mA Max
at 12V DC

-10°C

+50°C

150g

Pulse Count
20 secs
2 or 4 (approx)

Alarm Output
N.C.
28VDC - 0.2A

Tamper
N.C.

Mounting height
DX-40E - 1.5 – 2.4m
DX-60E - 1.8 – 2.4m

For full specifications please refer to page 36.

MX-40QZ/40PT/50QZ

PIR/MICROWAVE COMBINATION DETECTORS

The MX Series combines state of the art microwave and PIR technologies in attractive, easy-to-install units and underlines Optex's absolute commitment to provide detectors with unprecedented reliability and detection performance at very reasonable prices.

Incorporating patented Anti-Crosstalk Technology, which prevents false alarms caused by microwave interference when several detectors are operating in the same area, and also Quad Zone Logic, which discriminates between humans and other sources of infrared, the MX Series is unparalleled in its performance.

FEATURES

- **Patented Quad Zone Logic**
- **Spherical Lens Design**
- **Anti-Crosstalk Technology (Patent Pending)**
- **Noise Reduction Circuit**
- **100% factory-tested for reliability**
- **Five year warranty**

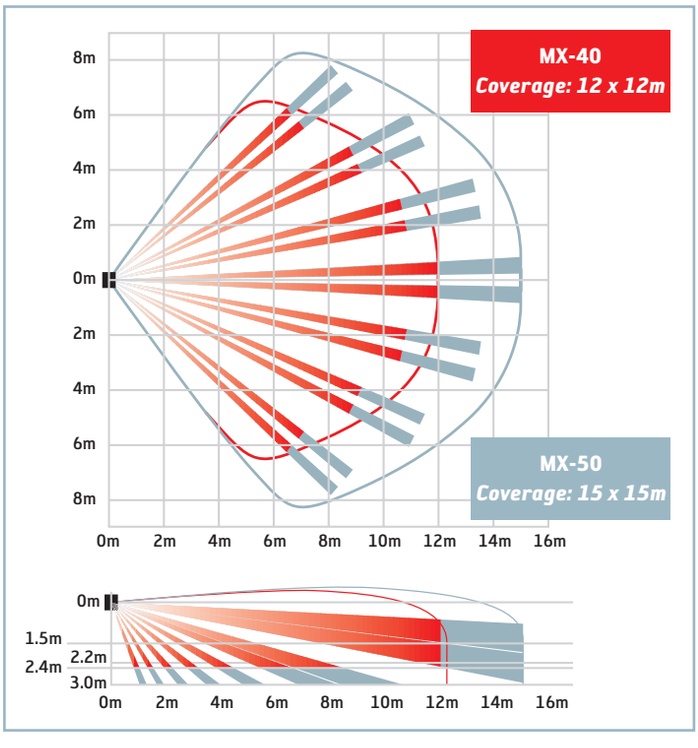
OPTIONS

- **MX-40QZ – standard model with Quad Zone Logic (12m range)**
- **MX-40PT – standard model with Pet Tolerance (12m range)**
- **MX-50QZ – standard model with Quad Zone Logic (15m range)**

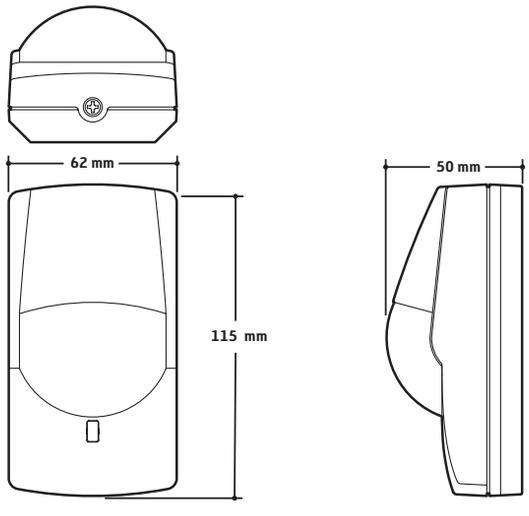
ACCESSORIES

- **FA-3: Wall and ceiling mounting bracket**

COVERAGE



DIMENSIONS



78 zones (PIR)

9.5-16V DC

MX-40QZ/40PT 18 mA Max at 12V DC
MX-50QZ 20 mA Max at 12V DC

-10°C

+50°C

110g

Pulse Count 20 secs 2 or 4 (approx)

Alarm Output N.C. 28VDC - 0.2A Max

Tamper N.C.

Mounting height MX-40QZ/40PT - 1.5 – 2.4m MX-50QZ - 2.2 – 3.0m

For full specifications please refer to page 36.

Intruder Detection

VISUAL CONFIRMATION

The ACPO* Security Systems Policy, which came into practice in July 2002, states that the Police will only offer an immediate first response to new alarm systems on the condition that they have the facility to signal 'confirmed activations'. The British Standards Institute recognises three methods of confirming alarm activations and these are outlined in their code of practice - DD243:2002. They are audio, sequential and visual confirmation.

Many would argue that visual confirmation is the most reliable and, as the name suggests, the Optex range of Visual Confirmation Detectors is specifically designed to conform to the code, the key points of which are:

- *'Visual confirmation can be carried out by an 'imaging device' which should be activated by a linked detector'*
  Optex Visual Confirmation Detectors combine a miniature CCTV camera with a detector in one housing.
- *'The imaging device must have the same area of view as the associated detector'*
  The camera viewing angles and detection areas of all Optex Visual Confirmation Detectors are matched, so that when an intruder enters the detection zone they are caught on camera.
- *'The system should transmit at least three images and the first must be from the time of the detector activation'*
  Optex Visual Confirmation Detectors contain a standard miniature CCTV camera, which continually generates a video signal - 25 frames per second. This is available for transmission at all times.

* The U.K. 'Association of Chief Police Officers'.

COVERT CCTV APPLICATIONS

Traditional CCTV cameras tend to have a deterrent effect because generally intruders don't want to be caught on camera. The main benefit of Visual Confirmation Detectors is that, because they are so discreet in appearance, intruders do not always realise that they are being watched, so they can be caught in the act more readily.

Visual Confirmation Detectors are frequently used in covert Event-Driven CCTV systems, often in business or retail applications, to record the wrongdoings of staff. The principle is simple – the detector activates as the crime occurs and the images are captured by the camera as evidence.

For more details please refer to pages 30 – 39 of the Optex Event-Driven CCTV Catalogue.

DC-20 showing miniature camera (above) and PIR sensor (below)

"Visual Confirmation Detectors reduce false alarms by capturing the images that matter."

DC SERIES

DC-20P/20CP

VISUAL CONFIRMATION DETECTORS

Integrating advanced camera technology with high quality intruder detection, these discreet units are designed to blend into any interior. The DC Series is perfect for the visual confirmation of alarms, because the camera and detector have the same field of view and the camera has excellent low light performance.

The units are easy to install and come with two independent alarm outputs – normally closed for alarm applications and normally open for use in a CCTV system, making them very versatile.

FEATURES

- **High sensitivity camera with auto-gain control**
- **Selectable NC or NO alarm output**
- **High quality PIR detector**
- **Adjustable pulse count (2 or 4)**
- **100% factory-tested for reliability**

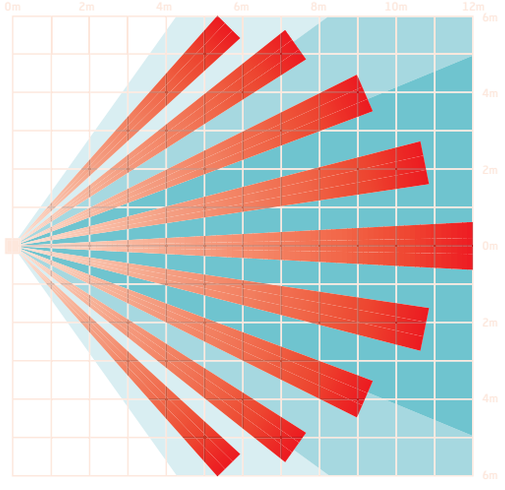
OPTIONS

- **DC-20P-25C – with black & white camera, 25˚ camera angle**
- **DC-20P-37C – with black & white camera, 37˚ camera angle**
- **DC-20P-60C – with black & white camera, 60˚ camera angle**
- **DC-20CP-43P – with colour camera, 43˚ camera angle**
- **DC-20CP-73P – with colour camera, 73˚ camera angle**

ACCESSORIES

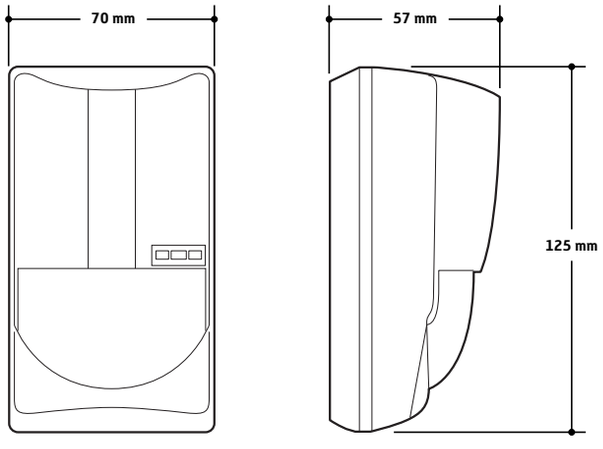
- **FA-1W: Multi-angle wall mounting bracket**
- **FA-3: Wall and ceiling mounting bracket**

COVERAGE



DC-20 *Coverage: 12m*	*Camera (6mm)*
Camera (Pin hole)	*Camera (2.5mm)*

DIMENSIONS



DC-20P - 380 TV lines (centre) DC-20CP - 330 TV lines (centre)	12V DC ±10%	DC-20P - 150mA DC-20CP - 125mA max	-10°C	+50°C	140g	Warm up Approx. 20 secs	Relay Output N.C. - 18V DC 0.2A max N.O./N.C. - 28V DC 0.2A max	Tamper N.C.

For full specifications please refer to page 36.

Intruder Detection

GLASSBREAK SENSORS

Glassbreak Sensors detect the common sounds of shattering glass and acoustical shock when a window is broken.

For businesses and homes, glass areas can be extremely vulnerable being an easy way to gain entry to the premises. A smashed window can also provide a large enough opening for valuable property to be removed through.

SHOCK SENSORS

Shock Sensors are designed to detect vibrations generated by attacks on windows and window frames, doors of wood or steel and walls made of wood, brick, concrete and other building materials.

BENEFITS

Most importantly, Glassbreak and Shock Sensors can detect potential intruders before they enter a premises, ensuring that damage to property, theft of valuables and threats to personnel inside the building are all limited.

Glassbreak and Shock Sensors also offer the benefit that they can be set when people are in the building, because they do not detect human movement.

DESIGN AND INSTALLATION TIPS

Glassbreak Sensors

Homes should protect the most vulnerable windows such as:

- Sliding glass doors
- Side windows next to the front door
- Windows not facing the street.

Businesses should protect vulnerable windows such as:

- Glass doors
- Side windows next to the main entrance
- Windows facing back alleys.

Care should be taken to match sensor range to room size. A sensor whose range extends well beyond the boundaries of the room is vulnerable to false alarms.

For protecting glass on more than one wall, ceiling mounting is most desirable. Make sure that all protected glass is within the radius coverage of the sensor and that the distance from the sensor to the bottom of any window to be protected is no more than the sensor's maximum range.

For protecting one wall of glass, mounting a Glassbreak Sensor on the opposite wall is best, providing that all the glass to be protected is within the sensor's range.

Shock Sensors

- Shock Sensors offer better false alarm immunity than Glassbreak Sensors in small, acoustically live rooms such as small kitchens, glass entry airlocks, stairwells, small glass offices, and utility rooms.
- Shock sensors tend to be more economical than Glassbreak Sensors if there is only one window to protect.

"Reliable detection is at the heart of every intruder alarm system."

GX-252T

GLASSBREAK SENSOR

Dimensions
74mm x 48mm
x 18.5mm

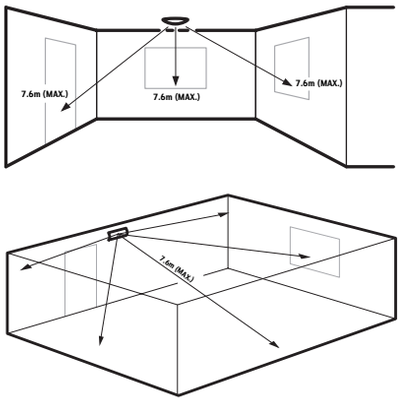
The GX-252T is a microprocessor-based glassbreak detector utilising dual frequency analysis to detect the common sounds of shattering glass and acoustical shock when a window is broken. The sensor only activates when specific frequency patterns continue for a fixed time period, making it highly immune to false alarms.

The GX-252T protects 3mm (1/8") plate glass and 6mm (1/4") plate, tempered and laminated glass at a range of up to 7.6m.

FEATURES

- **Dual-frequency analysis**
- **'Test Mode' to ensure detector is within range of glass at installation**
- **Selectable Alarm Memory**

COVERAGE



VIBRO

SHOCK SENSOR

Dimensions
93mm x 25mm x 24mm

VIBRO is an intelligent, microprocessor-controlled shock sensor suitable for a variety of internal applications. The unit is easy to install, featuring a unique 'Learn Mode' function, which automatically sets the sensitivity by 'learning' the level and number of impacts required to generate an alarm. Multiple impacts can be overridden using the 'Gross Attack' feature, which enables VIBRO to create an alarm from a single impact.

The unit has a wide dynamic range allowing it to be calibrated to suit quiet or noisy environments and a non-volatile memory retains all the programmed settings should the supply voltage be removed and subsequently restored.

FEATURES

- **'Learn Mode' automatic sensitivity setting**
- **high or low sensitivity**
- **'Gross Attack' feature**
- **Selectable walk test**
- **Optional 'Sequential Latching'**
- **Auto 'Self-Test' on start-up**

RANGES

Surface	Range	Surface	Range
Concrete	1.5m	Brick wall	2.5m
Breezeblock	1.5m	Steel	3.0m
UPVC	2.25m	Wood	3.5m

11.5 – 18.0V DC	20 – 30 mA	0°C	+55°C	60g	Alarm Output N.C./N.O. supervised relay output 24V DC, 1A max.

9.0 – 18.0V DC	Quiescent: 16.5 mA at 12V DC Alarm: 15.8 mA at 12V DC	-20°C	+50°C	35g	Alarm Output N.C. 24V DC, 150mA resistive

For full specifications please refer to page 36.

For full specifications please refer to page 36.

Intruder Detection

Photobeams are one of the best-established security solutions in the market place. They provide an invisible 'fence', which, when broken by an intruder, creates an alarm condition. This makes them particularly suitable for perimeter protection.

All photobeams in this section:

- Come as a transmitter and receiver pair
- Are easy to install and align
- Are designed to operate in all weather conditions

COMPLETE RANGE

Optex offers a comprehensive range of Photobeams suitable for a large variety of intruder alarm applications. From short-range dual detectors operating at a distance of up to 20m apart to long-range detectors operating at up to 200m separation, you're sure to find an Optex Photobeam suitable for your requirement.

RELIABILITY

Optex Photobeams are the most reliable on the market today. With reliable detection at the heart of any effective intruder alarm system, it doesn't make sense to compromise when specifying a job. Optex combines innovative design with unsurpassed manufacturing quality to produce detectors that you can rely on every time.

PEACE OF MIND THROUGH PRODUCT EXCELLENCE

Optex unique technologies and design provide a wide range of functions that greatly simplify installation and maintain reliable performance, even in adverse weather or poor environmental conditions. Features of the range include:

- One-man alignment capability
- Sealed optics to prevent ingress of insects or dust
- Adjustable beam interruption time
- Environmental Disqualification Circuit

AX-70T Receiver

AX-70T Transmitter

PHOTOBEAMS

HOW DO PHOTOBEAMS WORK?

The Photobeam operates by sending pulsed beams of infrared light between transmitters and receivers. An object breaking the beams will be monitored and an alarm created if the duration of the break falls within preset levels. Beams fitted with fog detection circuitry will provide a separate output for signals that deteriorate over a long period.

Optex Photobeams utilise dual beam configurations, where both beam paths need to be blocked simultaneously for an alarm to be generated. Spacing the beams apart results in a dramatic reduction in false alarms caused by birds, animals and blowing debris. Dual beams emit more infrared energy, making them more resistant to false activations caused by adverse weather conditions.

Transmitter **Receiver**

The falling leaf blocks only one beam, the other beam still reaches the receiver. Twin beams are effectively the same as or better than a large single beam.

- Multiple beams can be used in close proximity by selecting different frequencies for each beam pair.
- Beams should only be used over flat ground.
- Firm fixing and proper beam alignment at installation are important factors in the effectiveness of the beam's operation.
- Frequently Photobeams and PIR Detectors are used together to provide maximum protection.

"Optex photobeams combine high levels of intruder detection with a low potential for false alarms."

AX-70T/130T

INFRARED PHOTOELECTRIC BEAM

Twin beam photoelectric detectors, designed for short-range outdoor or long-range indoor applications.

Using twin beams of pulsed infrared energy, reliable operation is possible in the worst conditions – up to 99% of the emitted radiation can be blocked by rain, fog or falling snow and the beams will still operate.

By utilising an automatic gain control circuit, gradual changes in signal strength caused by weather conditions are continually monitored and the trigger level adjusted accordingly to compensate. In addition, the unique anti-frost design allows for trouble-free operation when the cover is completely frosted over.

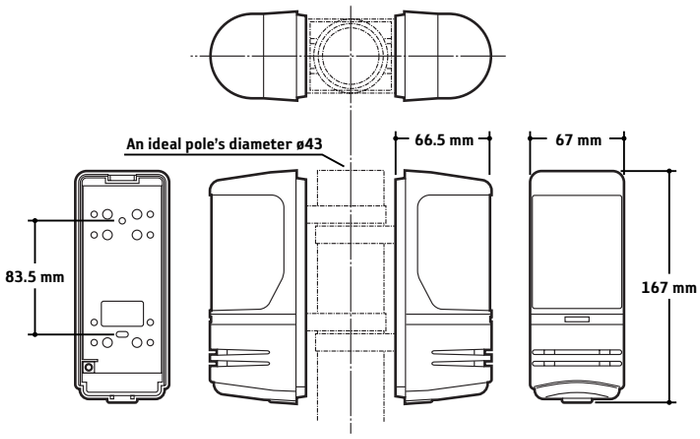
FEATURES

- **Adjustable beam interruption time - long interruption time catches an intruder but allows a small animal to pass through.**
- **Twin beams require simultaneous interruption to create activation.**
- **99.5% beam blocking stability**
- **Easy installation and alignment using viewfinder for rough alignment and voltage meter jacks for fine-tuning.**
- **Sealed optics to prevent ingress of insects and dust.**
- **Five year warranty**

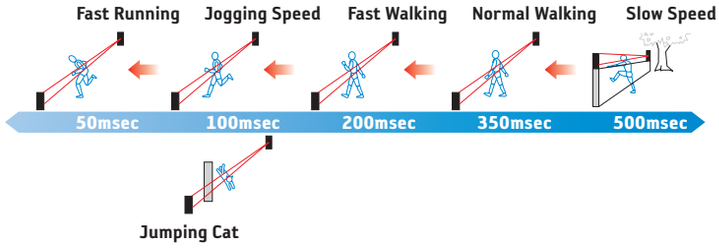
RANGES

	Indoors	Outdoors
AX-70T	50m	21m
AX-130T	100m	40m

DIMENSIONS



ADJUSTABLE TIMING



10-30V DC

AX-70T - 35mA
AX-130T - 30mA
at 10 - 30V DC

-25°C

+55°C

690g

Alarm Output N.C.
28V - 0.2 amp

Tamper N.C.

Pole Mount

Wall Mount

For full specifications please refer to page 36.

AX-100/200 PLUS/ALPHA

INFRARED PHOTOELECTRIC BEAM

The AX-100/200 PLUS/ALPHA Series of active infrared dual beams are designed to provide reliable detection at external distances up to 60m. Their rugged construction and five-year warranty ensure that these detectors will provide long and dependable service.

AX beams include automatic gain control (AGC) to help compensate for loss of signal caused by fog or heavy rain. This circuitry ensures that, even with 99% of signal lost, the beams will continue to function. To further ensure reliability, beams also feature an adjustable beam interruption timer that can be set to filter out alarms from small or fast moving objects. Add to this a frost resistant cover design and lightning protection and you have a beam suitable for installations in the harshest environments.

FEATURES

- **Lightning and surge protection**
- **Rain, dust and insect protection**
- **Frost and dew protection**
- **High grade aspherical lens**
- **Twin synchronized pulsed beam design for greater stability**
- **99.5% beam blocking stability**
- **A.G.C. circuit**
- **Adjustable beam interruption time**
- **3 step LED indicator (ALPHA versions)**
- **Selectable 4 channel beam frequencies (ALPHA versions)**
- **Five year warranty**

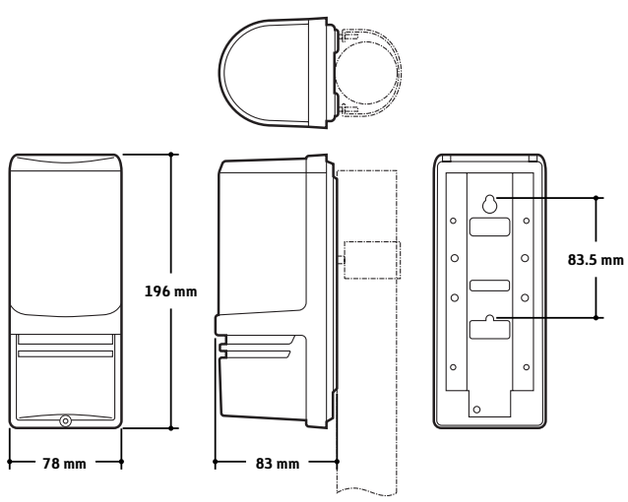
RANGES

	Indoors	Outdoors
AX-100 PLUS	60m	30m
AX-200 PLUS	120m	60m
AX-100 ALPHA	60m	30m
AX-200 ALPHA	120m	60m

ACCESSORIES

- **HU-2 Heating Unit**
- **BC-2 Back Cover**

DIMENSIONS



10.5-28V DC

46mA (PLUS) 40mA (ALPHA) at 10.5 - 28V DC

-25°C

+55°C

1040g

Alarm Output N.C./N.O. 28V - 0.2amp

Tamper N.C.

Pole Mount

Wall Mount

For full specifications please refer to page 36.

AX-250/500 PLUS

INFRARED PHOTELECTRIC BEAM

AX 250/500 PLUS Series Photobeams are cost-effective long-range dual beams for internal or external applications. The detectors are attractive in appearance and are simple to install and maintain.

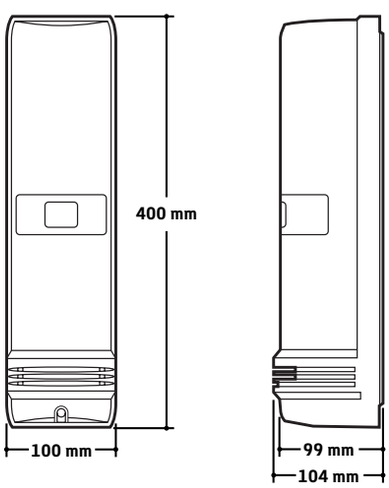
Suitable for external ranges up to 150m outdoors, the beams have twin infrared transmitters and receivers to reduce the potential for alarms from small animals, blowing debris and falling leaves. Beams operate by only triggering an alarm when both beams are broken simultaneously. Initial alignment can be carried out using the built in optical aiming device to roughly set the sensors and then fine-tuning can be carried out using a standard digital meter.

Flexible input voltages of between 10.5 and 30V DC result in a sensor that is easy to integrate into new or existing systems.

FEATURES

- **Lightning and surge protection**
- **99% beam blocking stability**
- **Adjustable beam interruption time - long interruption time catches an intruder but allows a small animal to pass through.**
- **Twin beams require simultaneous interruption to create activation.**
- **Easy installation and alignment using viewfinder for rough alignment and voltage meter jacks for fine-tuning.**
- **Sealed optics to prevent ingress of insects and dust**
- **Automatic gain control**
- **Anti-frost design**
- **Five year warranty**

DIMENSIONS



RANGES

	Indoors	Outdoors
AX-250 PLUS	150m	75m
AX-500 PLUS	300m	150m

ACCESSORIES

- **HU-1 Heating Unit**
- **BC-1 Back Cover**

10.5-30V DC

50mA at 10.5 - 30V DC

-25°C

+55°C

2.7Kg

Alarm Output N.C./N.O. 28V - 0.2 amp

Tamper N.C.

Pole Mount

Wall Mount

For full specifications please refer to page 36.

AX-350/650 MKII

INFRARED PHOTOELECTRIC BEAM

AX350/650 MKII Series Photobeams are dual beam long-range sensors with a host of sophisticated extra facilities. They are ideal for larger installations where they are capable of external ranges up to 200m.

The beams offer four site-selectable frequencies that allow them to be stacked one above another to provide a wall of coverage. To further increase security, their height and direction can be disguised by installing them inside the AX-BT beam tower (see page 32). To reduce set up and alignment to a minimum, AX-350/650 MKII units include a one-man alignment facility. A third infrared beam sends alignment information from the receiver to the transmitter and allows the installer to see the status of the received signal at the transmitter.

Input voltage is between 10.5 and 30V DC giving flexibility in system design, particularly where large sites have remote power supplies. The AX-350/650 MKII's dual beams reduce the potential for false activation from birds or blowing debris.

FEATURES

- **Dual beam configuration**
- **Up to 200m outdoor range**
- **Lightning and surge protection**
- **Environment Disqualification Circuit**
- **Patented Integrated Alignment Status Communication (I.A.S.C)**
- **Adjustable beam interruption time**
- **Automatic gain control**
- **Five year warranty**

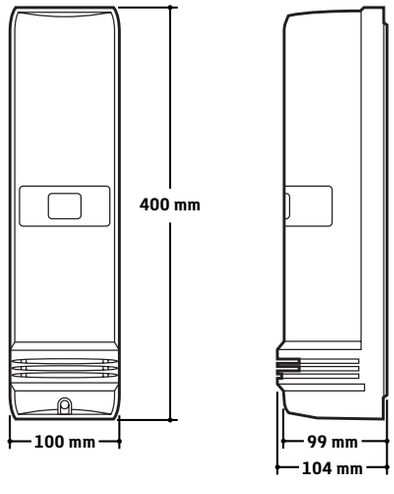
RANGES

	Indoors	Outdoors
AX-350 MKII	**200m**	**100m**
AX-650 MKII	**400m**	**200m**

ACCESSORIES

- **HU-1 Heating Unit**
- **BC-1 Back Cover**

DIMENSIONS



10.5 -30V DC

Normal - 75mA
During Alignment - 145mA
at 10.5 - 30V DC

-35°C

+55°C

2.8Kg

Alarm Output N.C./N.O.
28V - 0.2 amp

Tamper N.C.

Pole Mount

Wall Mount

For full specifications please refer to page 36.

AX-BT/WMT

PHOTOELECTRIC BEAM TOWER

AX-WMT, wall mount version

The AX-BT and AX-WMT are attractive, robust housings for the AX Series of photoelectric beams. The housings hide the height, direction and number of beams enclosed and greatly increase system security. The extruded aluminium frame and use of acrylic materials ensure that the housings will remain attractive over their installed lifetime. Towers can be fitted with heaters and thermostats and an optional anti-climb top tamper cap is available to detect attempts by intruders to climb over the tower.

FEATURES

- **Beams can be mounted at any height and direction in the tower**
- **Supplied with anti-tamper and full fixing kit**
- **Wall mounted or free standing options**
- **360° unobstructed view for beams**
- **Durable construction**
- **Five year warranty**

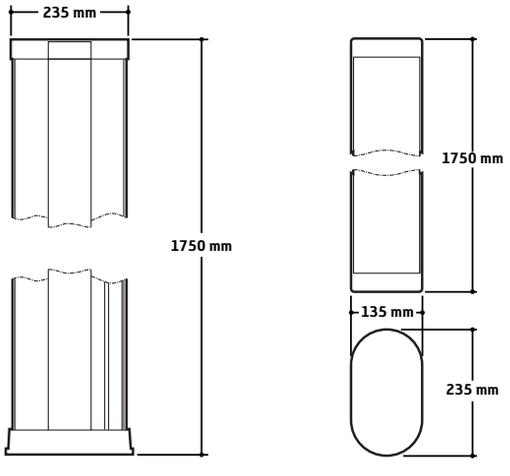
OPTIONS

- **AX-BT – floor mounting tower**
- **AX-WMT – wall mounting tower**

ACCESSORIES

- **TW-TTO: Anti-climb top tamper kit**
- **BT-F: Floor bracket to set into concrete**
- **BT-C: Replacement front cover**
- **BT-H: Heater**
- **BT-TC: Replacement top cover**
- **BT-TH: Thermostat**
- **BT-W: Wall bracket**

DIMENSIONS



AX-BT, floor mount version

INSTALLATION

The following Photobeams are suitable for installation in the AX-BT or AX-WMT beam towers:

- **AX-250 PLUS**
- **AX-500 PLUS**
- **AX-350 MKII**
- **AX-650 MKII**

The following Photobeams are suitable for installation in the AX-BT or AX-WMT beam towers using the AX-BTCP conversion plate:

- **AX-70T**
- **AX-130T**
- **AX-100 PLUS/ALPHA**
- **AX-200 PLUS/ALPHA**

BX-100 PLUS

BUILDING PERIMETER DETECTOR

The BX-100PLUS consists of a pair of small, discreet dual-infrared beams designed to protect the immediate perimeter of a building. The beams are particularly useful in providing coverage for windows, doors and roller shutter doors and can be used to activate an intruder alarm system, lights or CCTV before a break-in occurs, minimising damage to property and risk to on-site personnel.

FEATURES

- **Dual IR pulsed beam system**
- **Internal sounder**
- **Easy alignment with visual and audible indicator**
- **Light Reduction Filter**
- **99% beam blocking stability**
- **N.O. and N.C. relay outputs**
- **Active Infrared Technology**
- **Slim design**
- **Five year warranty**

RANGE

	Indoors	Outdoors
BX-100 PLUS	**60m**	**30m**

ACCESSORIES

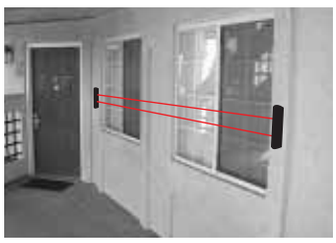
- **SP-1 Spacer unit**
- **MG-1 Vandal and tamper resistant metal guard**
- **WC-1 White decorative cover**

APPLICATIONS

Shops

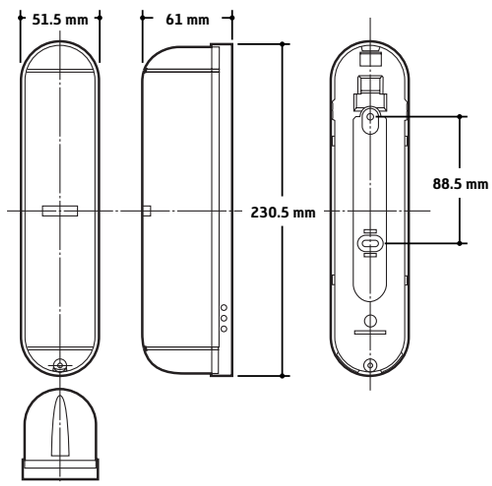
Offices

Residence



Warehouse

DIMENSIONS



10.5 -28V DC

55mA Standby 75mA Max

-35°C

+55°C

400g

Alarm Output 2 x Relay NO & NC

Tamper N.C.

Wall Mount

For full specifications please refer to page 36.

AX-100S/100SR

INFRARED PHOTOELECTRIC BEAM

AX-100 Series Photobeams are single beam, surface and flush mount photoelectric detectors designed for short-range indoor applications. They provide a high level of protection against sunlight, fluorescent and incandescent lamps by using crystal-oscillated dual-modulated pulsed beam technology. Installation and setup is made particularly easy - an LED visibly confirms proper alignment whilst Multi-Focus Optics eliminate the need for vertical alignment.

FEATURES

- **Multi-Focus Optics**
- **Crystal-oscillated dual-modulated pulsed beam technology**
- **LED alignment indicator**
- **Five year warranty**

RANGES

	Indoors
AX-100S	**30m**
AX-100SR	**30m**

OPTIONS

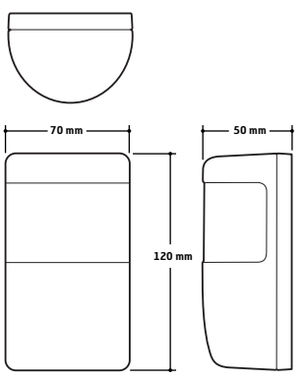
- **AX-100S – surface mount model**
- **AX-100SR – flush mount model**

ACCESSORIES

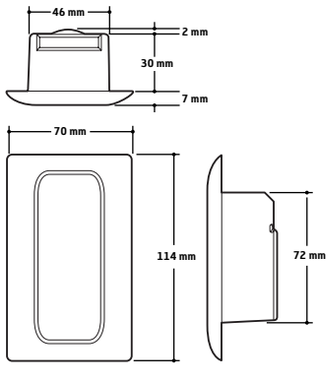
- **FR-100: Mounting hardware for AX-100SR**

DIMENSIONS

AX-100S



AX-100RS



8-180V DC	Transmitter - 27mA Receiver - 25mA	-20°C	+50°C	AX-100S - 240g AX-100SR - 160g	Output N.C. 28V - 0.2 amp	Tamper N.C.

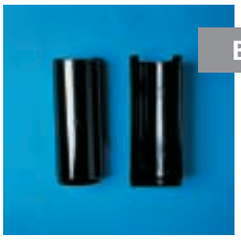
For full specifications please refer to page 36.

ACCESSORIES

PHOTOBEAM ACCESSORIES

BC-1 Back cover

For
- **AX-250/500 PLUS**
- **AX-350/650 MKII**

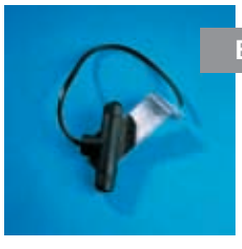


BC-2 Back cover

For
- **AX-100/200 PLUS/ALPHA**

BT-F Floor bracket to set into concrete

For
- **AX-BT/WMT**

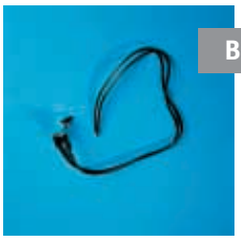


BT-H Heater

For
- **AX-BT/WMT**

BT-TC Replacement top cover

For
- **AX-BT/WMT**



BT-TH Thermostat

For
- **AX-BT/WMT**

BT-W Wall bracket

For
- **AX-BT/WMT**

TW-TTO Anti-climb top tamper kit

For
- **AX-BT/WMT**

BT-C Replacement front cover

For
- **AX-BT/WMT**

FR-100 Mounting hardware

For
- **AX-100SR**

HU-1 Heating unit

For
- **AX-250/500 PLUS**
- **AX-350/650 MKII**

HU-2 Heating unit

For
- **AX-100/200 PLUS/ALPHA**

MG-1 Vandal and tamper resistant metal guard

For
- **BX-80N**
- **BX-100PLUS**

SP-1 Spacer unit

For
- **BX-100PLUS**

WC-1 White decorative cover

For
- **BX-100PLUS**

Product Specifications

Indoor PIRs Detectors

	EX-35T	EX-35V(P)	EX-35R	RX-40QZ/40PT	CX-502	CX-502AM	CX-702	CX-702RS	FX-360	FX-360L(P)	SX-360Z
Detection Method	PIR	PIR	PIR	PIR	PIR	PIR	PIR	PIR	PIR	PIR	PIR
Detection range	11 x 11m	11 x 11m	11 x 11m	12 x 12m	15 x 15m	15 x 15m	21 x 21m	21 x 21m	Ø8 - 12m 360°	Ø8 - 12m 360°	Ø18m 360°
Dual purpose Lens / Long range	17 x 1.7m	17 x 1.7m	17 x 1.7m	-	-	-	45 x 2.4m	45 x 2.4m	-	-	-
Optional Lens / Detection range	-	-	-	FL-60N 18 x 1.8m	CL-80N 24 x 2.3m	CL-80N 24 x 2.3m	-	-	-	-	-
Detection Zones	Wide : 64 (28 Pet Alley) Long : 12 (4 Pet Alley)	Wide : 64 (28 Pet Alley) Long : 12 (4 Pet Alley)	Wide : 64 (28 Pet Alley) Long : 12 (4 Pet Alley)	78	82	82	Wide : 68 Long : 22	Wide : 68 Long : 22	62	62	276
Mounting height	1.2-2.4m 0.6-1.2m Pet Alley	1.2-2.4m 0.6-1.2m Pet Alley	1.2-2.4m 0.6-1.2m Pet Alley	1.5 - 2.4m	1.8 - 3.0m	1.8 - 3.0m	1.5 - 3.6m	1.5 - 3.6m	2.4 - 3.6m	2.4 - 3.6m	2.4 - 5m
Wall mount bracket	EA-1W	EA-1W	EA-1W	FA-3	EA-1W / FA-1W	EA-1W / FA-1W	CA-1W	CA-1W	-	-	-
Ceiling mount bracket	FA-2C	FA-2C	FA-2C	FA-3	FA-2C	FA-2C	CA-2C	CA-2C	-	-	-
Multi-focus Optics	✓	✓	✓	-	-	-	✓	✓	-	-	✓
Quad Zone Logic Optics	-	-	-	✓	✓	✓	-	-	-	-	-
Zoom function	-	-	-	-	-	-	-	-	-	-	✓
PIR Sensitivity adjustment	-	-	-	-	H / M / L	H / M / L	-	-	-	-	H / M / L
MW Sensitivity adjustment	-	-	-	-	-	-	-	-	-	-	-
Distance selector switch	-	-	-	-	-	-	-	-	-	-	-
Double Conductive Shielding	-	-	-	-	✓	✓	✓	✓	-	-	-
Temperature compensation circuit	✓	✓	-	✓	✓	✓	✓	-	-	-	-
Pulse count	2 / 4	2 / 4	2 / 4	2 / 4	STD/SP (2/3)	STD/SP (2/3)	2 / 4	2 / 4	2 / 4	2 / 4	1 / 2 / 4
Power Input	9.5 - 14.0V DC	9.5 - 14.0V DC	2.3 - 10.0V DC	9.5 - 16.0V DC	9.0 - 18.0V DC	9.0 - 18.0V DC	6 - 18V DC	2.3 - 10.0V DC	9.5 - 18V DC	9.5 - 18V DC	6 - 18V DC
Current Consumption	11mA max	16mA max	3.5uA (standby) 10mA (LED on)	11mA max	12mA max	19mA max	11mA max	5uA (standby) 10mA (LED on)	18mA max	25mA max	18mA max
Alarm output	N.C. 28V DC 0.2A max	N.C. 28V DC 0.2A max	Form C solid state switch 10V DC 0.01A max	N.C. 28V DC 0.2A max	N.C. (with silent relay) 28V DC 0.2A max	N.C. (with silent relay) 28V DC 0.2A max	N.C. 28V DC 0.2A max	Form C solid state switch 10V DC 0.01A max	N.C. 28V DC 0.2A max	N.C. 28V DC 0.2A max	N.C. 28V DC 0.2A max
Anti-masking function	-	-	-	-	-	✓ (*2)	-	-	-	-	-
Self check function	-	-	-	-	-	✓	-	-	-	-	-
Trouble output	-	-	-	-	-	N.C. (with silent relay) 28V DC 0.2A max	-	-	-	-	-
Tamper	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
D.L. terminal	-	-	-	-	-	✓	-	-	✓	✓	✓
Alarm memory	-	✓	-	-	-	✓	-	-	-	✓	-
Initial alarm memory	-	-	-	-	-	✓	-	-	-	-	-
Operating temperature	-20 - +50˚	-20 - +50˚	-10 - +50˚	-20 - +50˚	-20 - +50˚	-20 - +50˚	-20 - +50˚	-20 - +50˚	-20 - +50˚	-20 - +50˚	-20 - +50˚
For residential	✓	✓	✓	✓					✓	✓	✓
For light commercial	✓	✓	✓	✓					✓	✓	✓
For commercial					✓	✓	✓	✓			✓
For industrial					✓	✓	✓	✓			
For wiress sucurity system			✓					✓			

Brackets

	FA-3 (Wall & Ceiling Mount)	FA-1W (Wall Mount)	FA-2C (Ceiling Mount)	CA-1W (Wall Mount)	CA-2C (Ceiling Mount)	EA-1W (Wall Mount)
EX-35T/35V/35R	-	-	✓ ±45° / 0 - +20°	-	-	✓ ±20° / 0 - +15°
RX-40QZ/40PT	✓ ±45° / 0 - +15°	-	-	-	-	-
CX-502/502AM	✓ ±45° / 0 - +10°	✓ ±45° / 0 - +20°	✓ ±45° / 0 - +20°	-	-	✓ ±45° / 0 - +20°
CX-702/702RS	-	-	-	✓ ±45° / 0 - +20°	✓ ±45° / 0 - +20°	-
FX-50QZ/50QZL/50SQ/50SQL	✓ ±45° / 0 - +15°	-	-	-	-	-
SQ-40/60	✓ ±45° / 0 - +15°	-	-	-	-	-
DX-40E/40PLUS-E	✓ ±45° / 0 - +10°	✓ ±45° / 0 - +20°	-	-	-	-
DX-60E/60PLUS-E	✓ ±45° / 0 - +10°	✓ ±45° / 0 - +20°	-	-	-	-
MX-40QZ/40PT/50QZ	✓ ±45° / 0 - +10°	-	-	-	-	-

SX-360ZV(P)	FX-50QZ	FX-50SQ	FX-50QZL	FX-50SQL	SQ-40	SQ-60	DX-40E	DX-40PLUS-E	DX-60E	DX-60PLUS-E	MX-40QZ/40PT	MX-50QZ
PIR	PIR	PIR	PIR	PIR	PIR	PIR	PIR&MW	PIR&MW	PIR&MW	PIR&MW	PIR&MW	PIR&MW
Ø18m 360°	15 x 15m	15 x 15m	15 x 15m	15 x 15m	12 x 12m	18 x 18m	12 x 12m	12 x 12m	18 x 18m	18 x 18m	12 x 12m	15 x 15m
-	-	-	-	-	-	-	-	-	-	-	-	-
-	FL-60N 18 x 1.8m	FL-60N 18 x 1.8m	FL-60N 18 x 1.8m	FL-60N 18 x 1.8m	-	-	-	-	-	-	-	-
276	Wide : 78 Long : 20	Wide : 78 Long : 20	Wide : 78 Long : 20	Wide : 78 Long : 20	Side area: 26 Centre area: 44	Side area: 26 Centre area: 44	82	82	82	82	78	78
2.4 - 5m	1.5 - 2.4m	1.5 - 2.4m	1.5 - 2.4m	1.5 - 2.4m	1.5 - 2.4m	1.8 - 2.4m	1.5 - 2.4m	1.5 - 2.4m	1.8 - 2.4m	1.8 - 2.4m	1.5 - 2.4m	2.2 - 3.0m
-	FA-3	FA-3	FA-3	FA-3	FA-3	FA-3	FA-1W / FA-3	FA-1W / FA-3	FA-1W / FA-3	FA-1W / FA-3	FA-3	FA-3
-	FA-3	FA-3	FA-3	FA-3	FA-3	FA-3	FA-3	FA-3	FA-3	FA-3	FA-3	FA-3
✓	-	-	-	-	-	-	-	-	-	-	-	-
-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	-	-	-	-	-	-	-	-	-	-	-	-
H / M / L	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	H / M / L	H / M / L	H / M / L	H / M / L	-	-
-	-	-	-	-	-	-	Short/Long	Short/Long	Short/Long	Short/Long	Short/Long	Short/Long
✓	-	✓	-	✓	-	-	-	-	-	-	-	-
-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1 / 2 / 4	2 / 4	2 / 4	2 / 4	2 / 4	STD/SP (2/3)	STD/SP (2/3)	2 / 4	2 / 4	2 / 4	2 / 4	2 / 4	2 / 4
6 - 18V DC	9.5 - 16V DC	9.5 - 16V DC	9.5 - 16V DC	9.5 - 16V DC	9.5 - 18V DC	9.5 - 18V DC	9 - 18V DC	9 - 18V DC	9 - 18V DC	9 - 18V DC	9.5 - 16VDC	9.5 - 16VDC
25mA max	11mA max	11mA max	16mA max	16mA max	20mA max	20mA max	35mA max	40mA max	35mA max	40mA max	18mA max	20mA max
N.C. 28V DC 0.2A max	N.C. 28V DC 0.2A max	N.C. 28V DC 0.2A max	N.C. 28V DC 0.2A max	N.C. 28V DC 0.2A max	2 x N.C. 28V DC 0.2A max	2 x N.C. 28V DC 0.2A max	(*1) N.C. 28V DC 0.2A max	N.C. 28V DC 0.2A max	(*1) N.C. 28V DC 0.2A max	N.C. 28V DC 0.2A max	N.C. 28V DC 0.2A max	N.C. 28V DC 0.2A max
-	-		-		-	-	✓	✓	✓	✓	-	-
-	-	-	-	-	-	-	✓	✓	✓	✓	-	-
-	-	-	-	-	-	-	-	N.C. 28V DC 0.2A max	-	N.C. 28V DC 0.2A max	-	-
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	-	-	-	-	✓	✓	-	✓	-	✓	-	-
✓	-	-	✓	✓	-	-	-	✓	-	✓	-	-
✓	-	-	-	-	-	-	-	-	-	-	-	-
-20 - +50˚	-20 - +50˚	-20 - +50˚	-20 - +50˚	-20 - +50˚	-20 - +55˚	-20 - +55˚	-10 - +50˚	-10 - +50˚	-10 - +50˚	-10 - +50˚	-10 - +55˚	-10 - +55˚
✓	✓	✓	✓	✓	✓	✓					✓	✓
✓	✓	✓	✓	✓	✓	✓					✓	✓
✓					✓	✓	✓	✓	✓	✓		✓
							✓	✓	✓	✓		

PHOTOBEAMS

	AX-100S	AX-100SR	BX-100PLUS	AX-70T	AX-130T	AX-100PLUS	AX-200PLUS	AX-100ALPHA	AX-200ALPHA	AX-250PLUS	AX-500PLUS	AX-350MKII	AX-650MKII
Detection Method	AIR	AIR	AIR	AIR	AIR	AIR	AIR	AIR	AIR	AIR	AIR	AIR	AIR
Detection range Outdoor	-	-	30m	21m	40m	30m	60m	30m	60m	75m	150m	100m	200m
Detection range Indoor	30m	30m	60m	50m	100m	60m	120m	60m	120m	150m	300m	200m	400m
Beam	Single	Single	Twin	Twin	Twin	Twin	Twin	Twin	Twin	Twin	Twin	Twin	Twin
Beam characteristics	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared
Beam Blocking ratio	75%	75%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
4 Ch. Selectable Beam Frequency	-	-	-	-	-	-	-	✓	✓	-	-	✓	✓
Interruption Period	50msec	50msec	50msec	50-500msec	50-500msec	50-500msec	50-500msec	50-500msec	50-500msec	50-500msec	50-500msec	50-500msec	50-500msec
Mounting	Wall	Flush	Wall	Wall / Pole	Wall / Pole	Wall / Pole	Wall / Pole	Wall / Pole	Wall / Pole	Wall / Pole	Wall / Pole	Wall / Pole	Wall / Pole
Alignment Angle	+/- 90º Horizontal	+/- 15º Horizontal	+/- 92º Horizontal	+/- 90º Horizontal	+/- 90º Horizontal	+/- 90º Horizontal	+/- 90º Horizontal	+/- 90º Horizontal	+/- 90º Horizontal	+/- 90º Horizontal	+/- 90º Horizontal	+/- 90º Horizontal	+/- 90º Horizontal
				+/- 5º Vertical	+/- 5º Vertical	+/- 5º Vertical	+/- 5º Vertical	+/- 5º Vertical	+/- 5º Vertical	+/- 10º Vertical	+/- 10º Vertical	+/- 10º Vertical	+/- 10º Vertical
View finder	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3step / 16step LED Indicator	-	-	-	-	-	-	-	✓ 3steps	✓ 3steps	-	-	✓ 16steps	✓ 16steps
Monitor jack for alignment	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Audible indicator for alignment	-	-	✓	-	-	-	-	-	-	-	-	-	-
Integrated Alignment Status Communication (I.A.S.C.)	-	-	-	-	-	-	-	-	-	-	-	✓	✓
Alignment sheet (accessaries)	✓	✓	-	-	-	-	-	-	-	-	-	-	-
Audible alarm indicator for threat	-	-	✓	-	-	-	-	-	-	-	-	-	-
Automatic Gain Control	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lightning Protection	✓ 4kV	✓ 4kV	✓ 6kV	✓ 4kV	✓ 4kV	✓ over14kV	✓ over14kV	✓ over14kV	✓ over14kV	✓ over14kV	✓ over14kV	✓ over14kV	✓ over14kV
Environmental Disqualification Circuit	-	-	-	-	-	-	-	-	-	-	-	✓	✓
Re-Transmission Capability	-	-	-	-	-	-	-	-	-	-	-	✓	✓
Power Input	8 - 18VDC	8 - 18VDC	10.5 -28VDC	10 - 30VDC	10 - 30VDC	10.5 - 28VDC	10.5 - 28VDC	10.5 - 28VDC	10.5 - 28VDC	10.5 - 30VDC	10.5 - 30VDC	10.5 - 30VDC	10.5 - 30VDC
Current Consumption	52mA max	52mA max	75mA max	35mA max	39mA max	46mA max	46mA max	40mA max	40mA max	50mA max	50mA max	75mA max	75mA max
Alarm output	N.C.	N.C.	2 outs NO/NC	N.C.	N.C.	FormC	FormC	FormC	FormC	FormC	FormC	FormC	FormC
Alarm Indication LED	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tamper	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Alarm Memory	-	-	-	-	-	-	-	-	-	-	-	✓	✓
Anti-frost design	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Optional hood (Optional white cover)	-	-	✓ WC-1	-	-	-	-	-	-	-	-	-	-
Optional Heating Unit	-	-	-	-	-	HU-2	HU-2	HU-2	HU-2	HU-1	HU-1	HU-1	HU-1
IP rating	N/A	N/A	IP54	IP44	IP44	IP55	IP55	IP55	IP55	IP54	IP54	IP54	IP54
Operating temperature	-20 - +50ºC	-20 - +50ºC	-35 - +55ºC	-25 - +55ºC	-25 - +55ºC	-25 - +55ºC	-25 - +55ºC	-35 - +55ºC	-35 - +55ºC	-25 - +55ºC	-25 - +55ºC	-35 - +55ºC	-35 - +55ºC
Operating Humidity	95% max	95% max	95% max	95% max	95% max	95% max	95% max	95% max	95% max	95% max	95% max	95% max	95% max
Dimenstions (W x H x D , mm)	70 x 120 x 50	70 x 114 x 39	51.5 x 230.5 x 61	67 x 167 x 66.5	67 x 167 x 66.5	78 x 196 x 83	78 x 196 x 83	78 x 196 x 83	78 x 196 x 83	100 x 400 x 104	100 x 400 x 104	100 x 400 x 104	100 x 400 x 104
For residential	✓	✓	✓	✓	✓								
For light commercial	✓	✓	✓	✓	✓	✓	✓	✓	✓				
For commercial				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
For industrial						✓	✓	✓	✓	✓	✓	✓	✓

Outdoor PIR Detectors

	LX-402	LX-802N	VX-402	VX-402REC	BX-80N
Detection Method	PIR	PIR	PIR	PIR	PIR
Detection range	12 x 15m	24 x 2m	12m 90°wide	12m 90°wide	24m Narrow (12m on each side)
Detection Zones	Multi-Level : 40 Pet Alley : 18	Multi-Level : 12 Pet Alley : 4	14	14	4 zones (2 on each side)
Mounting height	Multi-Level:2.5m max Pet Alley : 1.2-1.5m	Multi-Level:2.5m max Pet Alley : 1.2-1.5m	0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m
Mounting	Wall & Ceiling	Wall & Ceiling	Wall, Pole, Conduit and Electrical Box	Wall, Pole, Conduit and Electrical Box	Wall
Limited detection range function	-	-	✓	✓	✓
Size judging function	-	-	✓	✓	✓
Pet alley area	✓	✓	✓ (Pet Immunity)	✓ (Pet Immunity)	✓ (Pet Immunity)
Masking Plate(Strip)	✓	-	✓	✓	-
Double Conduct Shielding	✓	✓	✓	✓	✓
Sensitivity Adjustment	H / M / L	H / M / L	H / M / L	H / M / L	H / M / L
Temperature compensation circuit	✓	✓	✓	✓	✓
Pulse count	TEST (1) / 2	TEST (1) / 2	2 / 4	2 / 4	1
Power Input	10.8 - 13.2V DC	10.8 - 13.2V DC	9.5 - 18V DC	9.5 - 18V DC	10 - 28V DC
Current Consumption	25mA max	25mA max	NC : 28mA max NO : 35mA max	NC : 180mA max NO : 200mA max	38mA max
Alarm output	Form C 28V DC 0.2A max	Form C 28V DC 0.2A max	Selectable N.C./N.O. 28V DC 0.2A max	Selectable N.C./N.O. 28V DC 0.2A max	2 Outs: N.O./ N.C.
Tamper output	N.C.	N.C.	N.C.	N.C.	N.C.
Alarm Indicator (Sounder) (LED)	- ✓	- ✓	- ✓	- ✓	✓ ✓
Voice warning function	-	-	-	✓	-
Detection Area Extension function	-	-	✓	✓	-
Directional Detection Function	-	-	✓	✓	-
Day/Night mode	✓	✓	✓	✓	-
IP rating	IP54	IP54	IP54	IP54	IP55
Operating Temperature	-20 - +50˚	-20 - +50˚	-20 - +50˚	-20 - +50˚	-20 - +50˚
For residential	✓	✓	✓	✓	✓
For light commercial	✓	✓	✓	✓	✓
For commercial	-	✓	✓	✓	✓
For industrial	-	-	✓	✓	✓
For CCTV Camera	✓	✓	✓	✓	-

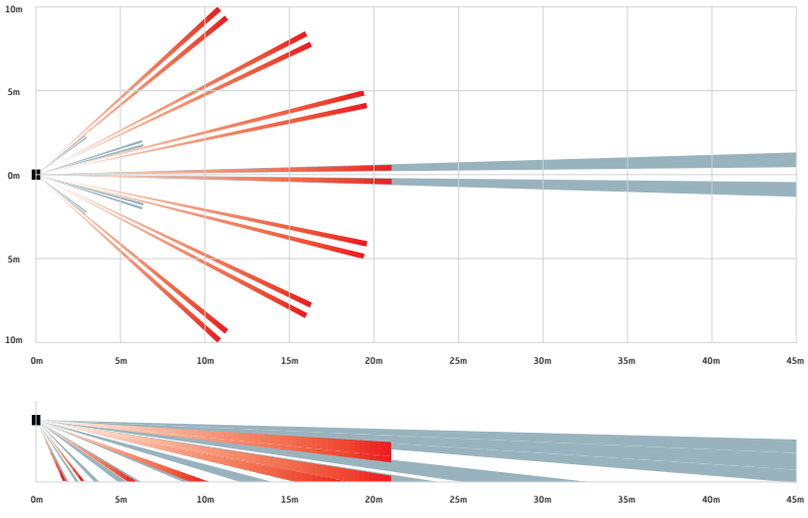
Visual Confirmation Detectors

	DC-20P	DC-20CP
Detection Method	PIR with B/W interline CCD camera	PIR with Colour interline CCD camera
Detection range	12m	12m
Dual purpose Lens / Long range	-	-
Optional Lens / Detection range	-	-
Detection Zones	-	-
Mounting height	1.5 - 2.4m	1.5 - 2.4m
Wall mount bracket	FA-3	FA-3
Ceiling mount bracket	FA-3	FA-3
Multi-focus Optics	-	-
Quad Zone Logic Optics	✓	✓
Zoom function	-	-
PIR Sensitivity adjustment	✓	✓
MW Sensitivity adjustment	-	-
Distance selector switch	-	-
Double Conductive Shielding	-	-
Temperature compensation circuit	-	-
Pulse count	2 / 4	2 / 4
Power Input	12V DC ±10%	12V DC ±10%
Current Consumption	150mA (max.)	125mA (max.)
Alarm output	Relay output 1: N.C. 28V DC, 0.2A max Relay output 2: N.O./N.C. 28V DC, 0.2A max	Relay output 1: N.C. 28V DC, 0.2A max Relay output 2: N.O./N.C. 28V DC, 0.2A max
Anti-masking function	-	
Self check function	-	-
Trouble output	-	-
Tamper	✓	✓
D.L. terminal	-	-
Alarm memory	-	-
Initial alarm memory	-	-
Operating temperature	-10 - +50˚	-10 - +50˚
For residential	✓	✓
For light commercial	✓	✓
For commercial		
For industrial		
For wiress sucurity system		

Index of coverage patterns

To specify the correct detector for your application, simply select the appropriate coverage pattern and refer to the product page in the catalogue.

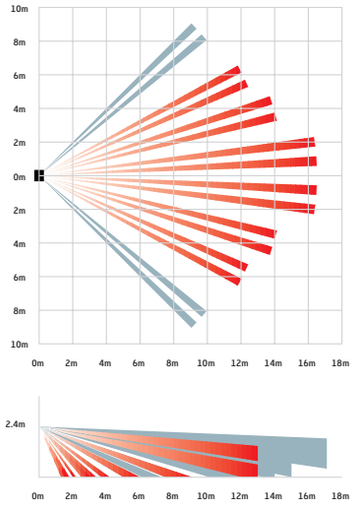
PIR DETECTORS



CX-702
Coverage: 21 x 21m

CX-702
Coverage: 2.4 x 45m

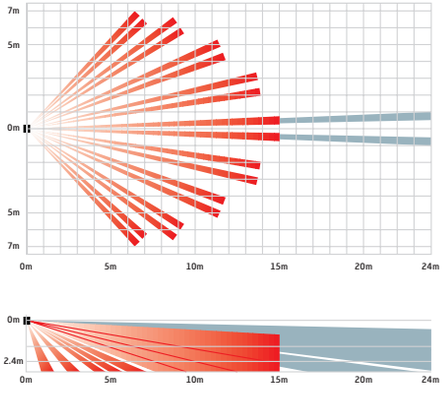
See page 9



SQ-40
Coverage: 12 x 12m

SQ-60
Coverage: 18 x 18m

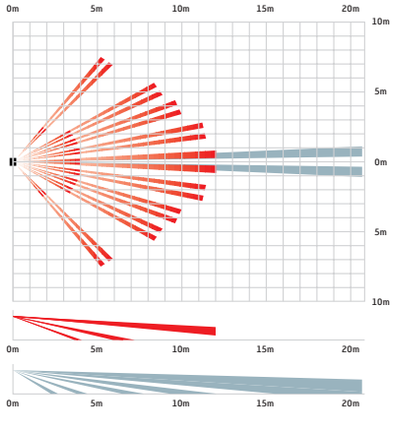
See page 13



CX-502
Coverage: 15 x 15m

CL-80N
Coverage: 2 x 24m

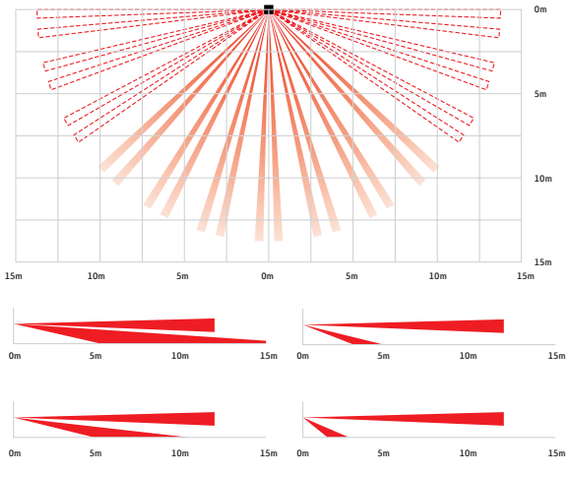
See page 8



LX-402
Coverage: 12 x 15m

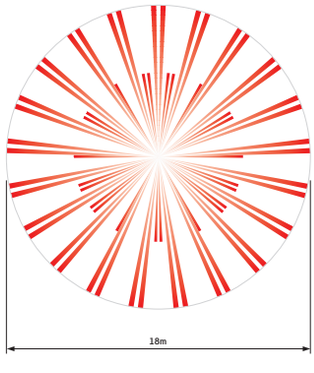
LX-802N
Coverage: 2 x 24m

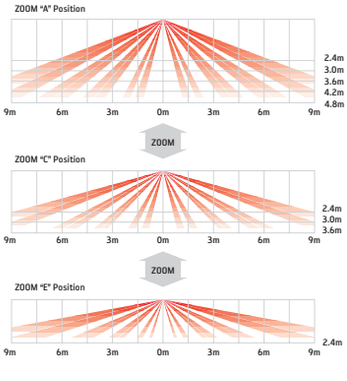
See page 14



VX-402/402REC
Coverage: 12 x 24m

See page 16-17

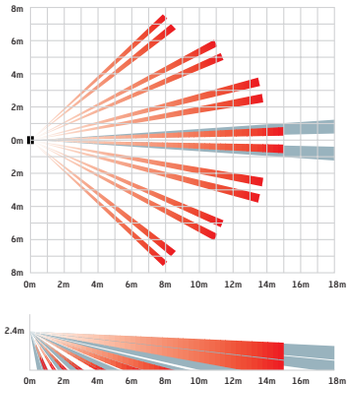




SX-360
Coverage: 18 x 18m

See page 11

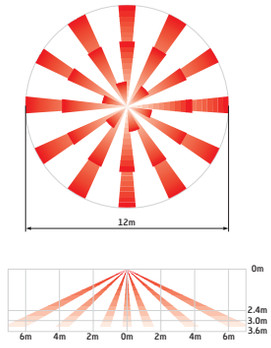
COMBINATION DETECTORS



FX-50
Coverage: 15 x 15m

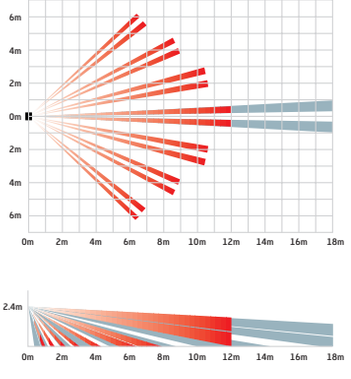
FL-60N
Coverage: 1.8 x 18m

See page 12



FX-360
Coverage: 12 x 12m

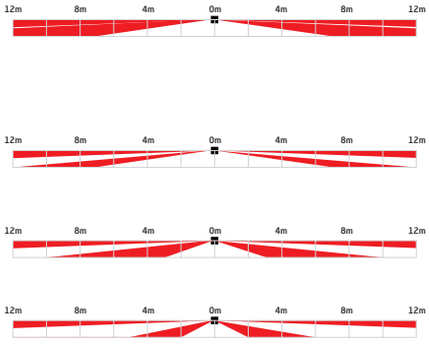
See page 10



RX-40
Coverage: 12 x 12m

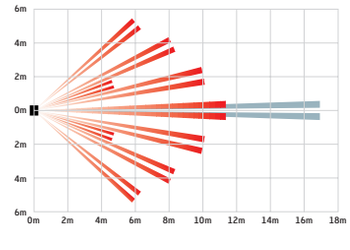
FL-60N
Coverage: 1.8 x 18m

See page 7

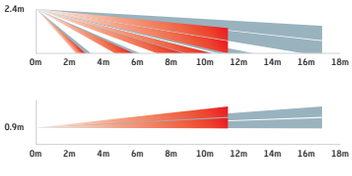


BX-80N
Coverage: 12m (single side)

See page 15

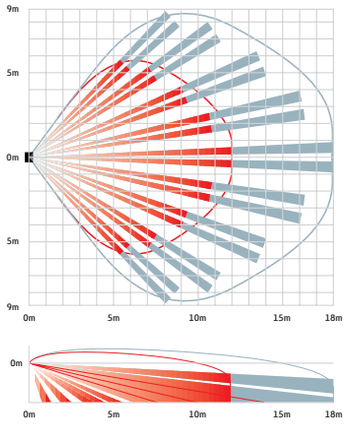


EX-35
Coverage: 11 x 11m



EX-35
Coverage: 1.7 x 17m

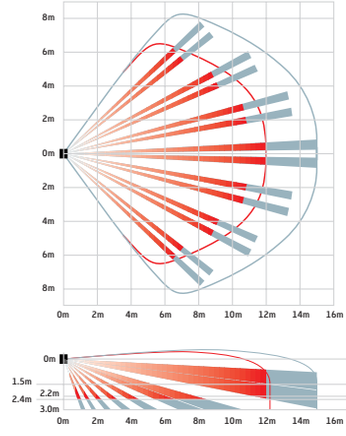
See page 6



DX-40
Coverage: 12 x 12m

See page 20

DX-60
Coverage: 18 x 18m

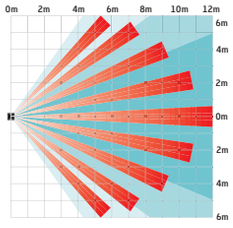


MX-40
Coverage: 12 x 12m

See page 21

MX-50
Coverage: 15 x 15m

VISUAL CONFIRMATION DETECTORS



See page 21

DC-20
Coverage: 12 x 12m

Camera (6mm)

Camera (Pin hole)

Camera (2.5mm)

Alphabetical index by product code

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	AX-200 ALPHA	29
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Key

- PIR Detectors
- Combination Detectors
- Visual Confirmation Detectors
- Glassbreak and Shock Sensors
- Photobeams

Due to continual improvement, the specifications and design of all products in this catalogue are subject to change without prior notice. Sensors in this catalogue are designed to detect intrusion and initiate a signal to control equipment. They are not burglar/theft prevention devices and Optex cannot accept liability for any losses should they occur.

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Optex (Europe) Ltd.
Unit 9, Four Seasons Crescent
Sutton, Surrey SM3 9QR
United Kingdom

Telephone: +44 (0) 208 254 2222
Fax: +44 (0) 208 641 0017
Web: www.optex-europe.com
Email: sales@optex-europe.com