

# SECURITY

## PRODUCT CATALOG

Jan.2020

[www.optex.co.jp/e](http://www.optex.co.jp/e)





SECURITY

Creating a safe and  
comfortable world with  
sensing technology.

Sensing Innovation.

In recent years, violent attacks of terrorism and crime, information leakage by internal stakeholders, etc. have become a social problem, and the security measures of facilities are very important themes.

OPTEX proposes to construct an optimum security system for every field by combining our intrusion detectors and access control systems.

We are aiming to provide safe, secure and comfortable living with high precision and reliable sensing technology recognized in the world.

# Application examples



Perimeter protection X Laser scan / Photoelectric detectors

## Intrusion detection for solar power plant

Power cables of solar power plants are tend to be stolen by metal thefts and perimeter protections are very effective.



Perimeter protection X Laser scan / Outdoor PIR detectors

## Intrusion detection for power plant / substation

Optex's detectors are suitable for power plant / substation requiring high security level.



Automatic tracking X Laser scan / Outdoor PIR detectors

## PTZ camera control

Detectors can output detection signals to a control panel and which helps to move control PTZ cameras' preset position.



Wall protection X Laser scan detectors

## Art protection

Form of detection area by laser scan detectors can be easily changed by your PC with dedicated software.



Access control X Anti-tailgating

## Anti-tailgating for data center

The access control system which prevents unauthorized persons tailgating at gates and doors makes security level higher at data center.



Access control X Reverse detection

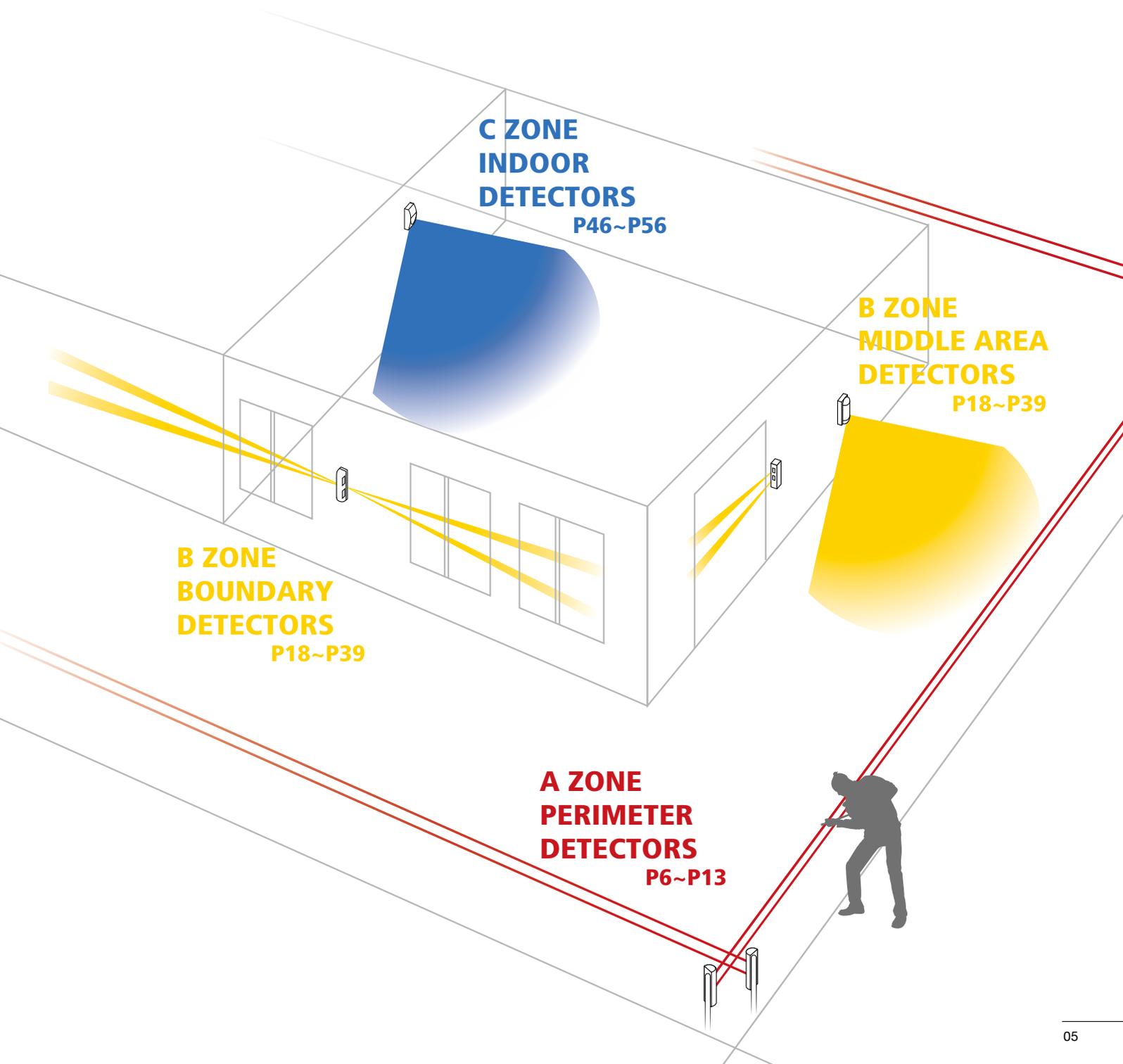
## Reverse detection for airport

Pedestrians who walk backward at one-way area in airport can be detected.

# CONCEPT FOR LEVEL SURVEILLANCE [KEY POINT TO ACHIEVE ADVANCED SECURITY]

When a general-purpose mechanical security system is installed, detectors are located inside a building and a monitoring station is notified if an intruder is detected within.

In order to increase the effectiveness of such a security system, Optex recommends not only securing the inside of the building but also adding surveillance to the perimeter area and boundary of the property. Optex has developed a system of enhanced outdoor surveillance that is capable of forestalling unauthorized entry into a building. By integrating outdoor and indoor surveillance, this system creates a defense line incorporating three warning levels targeting the perimeter of the property, the boundary of the building, and the indoor area. As a result, we can greatly strengthen and improve crime prevention.



# SL-200QDM/350QDM/650QDM

A-ZONE

ADVANCED LONG RANGE PHOTOELECTRIC DETECTOR

Smart Line™ series



SL-200QDM/350QDM/650QDM series is the most advanced long range photoelectric detector. In addition to quad beam and double modulation, our unique technology automatic transmit power control decreases false and missed alarms. LED Indicator and sound assist and upper/lower beam selection button lighten your workload while achieving perfect alignment.

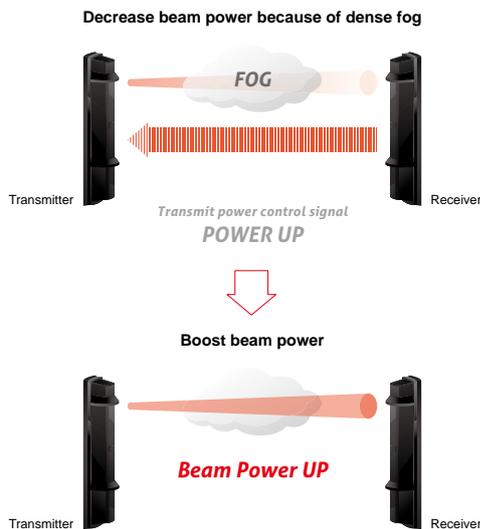
- SL-200QDM – detection range 60m
- SL-350QDM – detection range 100m
- SL-650QDM – detection range 200m

## FEATURES

- High power quad beam
- Double modulation
- A.T.P.C.-Automatic transmit power control
- I.A.S.C.- Integrated alignment status communication
- Upper/lower beam selection button
- Beam power control selector
- LED indicator and sound assist
- Sniper viewfinder with 2X magnification lens
- International protection IP65

## A.T.P.C.-AUTOMATIC TRANSMIT POWER CONTROL

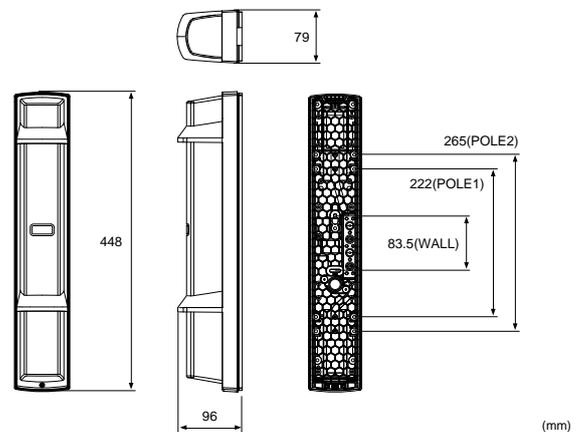
Automatically controls, adjusts and optimizes the power of the beam and maintains optimal performance. It decreases false and missed alarms caused by fog, frost, cross talk, signal saturation.



## OPTIONS

- ABC-4 : Anti Bird Cap
- BC-4 : Back Cover
- PSC-4 : Pole Side Cover
- BAU-4 : Beam Alignment Unit
- HU-3 : Heating Unit
- CBR-4 : Conduit Bracket

## DIMENSIONS



## SPECIFICATIONS

Model		SL-200QDM	SL-350QDM	SL-650QDM
Maximum detection range		60m	100m	200m
Maximum arrival distance		600m	1000m	2000m
Detection method		Quad infrared beam interruption detection		
Selectable beam frequency		4 channels		
Interruption period		Variable between 50/100/250/500 ms (4 steps)		
Power source		Normal: 10.5 to 30 VDC		
Current draw (MAX)	Normal	10.5 - 30 VDC	26 mA (T:11 mA, R:15 mA)	30 mA (T:15 mA, R:15 mA)
	Optical alignment	10.5 - 30 VDC	36 mA (T:16 mA, R:20 mA)	43 mA (T:20 mA, R:23 mA)
Output	Alarm output	Form C relay: 30 VDC, 0.2 A		
	Alarm period	2 sec (±1) (Nominal)		
	D.Q. output	Form C relay: 30 VDC, 0.2 A (D.Q. and Low battery can be switched.)		
	Low battery output	Form C relay: 30 VDC, 0.2 A (D.Q. and Low battery can be switched.)		
	Tamper output	N.C. (contact output): 30 VDC, 0.1 A Opens when the cover removed.		
Operating temperature		-35 to +60°C		
Operating humidity		95% (max.)		
Alignment angle		±90° Horizontal, ±10° Vertical		
Dimension(H x W x D)		448mm x 79mm x 96mm		
Weight		2500 g (Total weight of the transmitter + receiver, excluding accessories)		
International protection		IP65		

Specifications and design are subject to change without prior notice.

# SL-200QDP/350QDP/650QDP

A-ZONE

STANDARD LONG RANGE PHOTOELECTRIC DETECTOR

Smart Line™ series



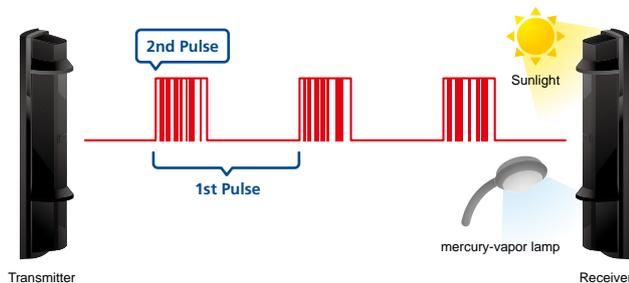
SL-200QDP/350QDP/650QDP series is standard long range photoelectric detector. In addition to basic feature such as quad beam /double modulation, sunshine protection technology and beam power control selector decreases false and missed alarms. LED Indicator and sound assist(receiver only) and upper/lower beam selection button lighten your workload while achieving perfect alignment.

- SL-200QDP – detection range 60m
- SL-350QDP – detection range 100m
- SL-650QDP – detection range 200m

## FEATURES

- High power quad beam
- Double modulation
- Upper/lower beam selection button
- Beam power control selector
- LED indicator and sound assist (receiver only)
- Sniper viewfinder with 2X magnification lens
- International protection IP65

## Double Modulation Beam



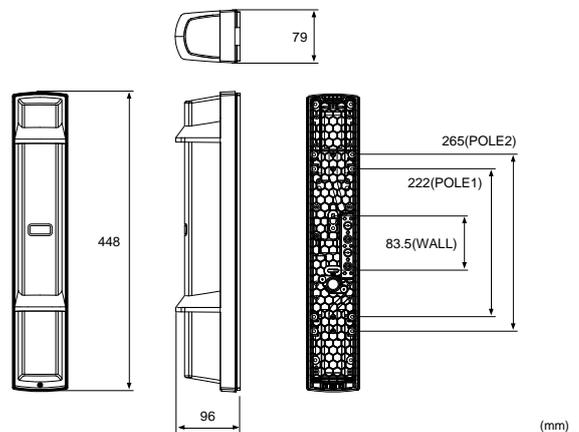
The SL-QDM and SL-QDP offer double modulation beams that differ in pulse patterns. This can enhance signal discrimination against potential noise interference such as sunlight or other external light sources, resulting in a reduction of missed alarms.

Together with OPTEX triple layered sunshine protection technology, it ensures high reliability under the severe outdoor security environment.

## OPTIONS

- ABC-4 : Anti Bird Cap
- BC-4 : Back Cover
- PSC-4 : Pole Side Cover
- BAU-4 : Beam Alignment Unit
- HU-3 : Heating Unit
- CBR-4 : Conduit Bracket

## DIMENSIONS



## SPECIFICATIONS

Model		SL-200QDP	SL-350QDP	SL-650QDP
Maximum detection range		60m	100m	200m
Maximum arrival distance		600m	1000m	2000m
Detection method		Quad infrared beam interruption detection		
Selectable beam frequency		4 channels		
Interruption period		Variable between 50/100/250/500 ms (4 steps)		
Power source		10.5 to 30 VDC		
Current draw (MAX)	Normal	10.5 - 30 VDC		17 mA (T:6 mA, R:11 mA)
	Optical alignment	10.5 - 30 VDC		21 mA (T:7 mA, R:14 mA)
Output	Alarm output	Form C relay: 30 VDC, 0.2 A		
	Alarm period	2 sec (±1) (Nominal)		
	D.Q. output	Form C relay: 30 VDC, 0.2 A		
	Tamper output	N.C. (contact output): 30 VDC, 0.1 A Opens when the cover removed.		
Operating temperature		-35 to +60°C		
Operating humidity		95% (max.)		
Alignment angle		±90° Horizontal, ±10° Vertical		
Dimension(H x W x D)		448mm x 79mm x 96mm		
Weight		2400 g (Total weight of the transmitter + receiver, excluding accessories)		
International protection		IP65		

Specifications and design are subject to change without prior notice.

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# SL-200QN/350QN/650QN

A-ZONE

BASIC LONG RANGE PHOTOELECTRIC DETECTOR

Smart Line™ series



SL-200QN/350QN/650QN series is basic long range photoelectric detector. It has IP65 structure and quad beam. Sniper viewfinder and beam alignment unit: BAU-4(option) helps you achieve perfect alignment.

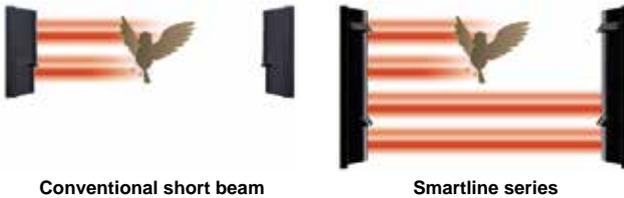
- SL-200QN – detection range 60m
- SL-350QN – detection range 100m
- SL-650QN – detection range 200m

## FEATURES

- High power quad beam
- Smart design - slim body
  - vivid interior color
- Sniper viewfinder with 2X magnification lens
- International protection IP65

## QUAD BEAM & UNITED APPEARANCE

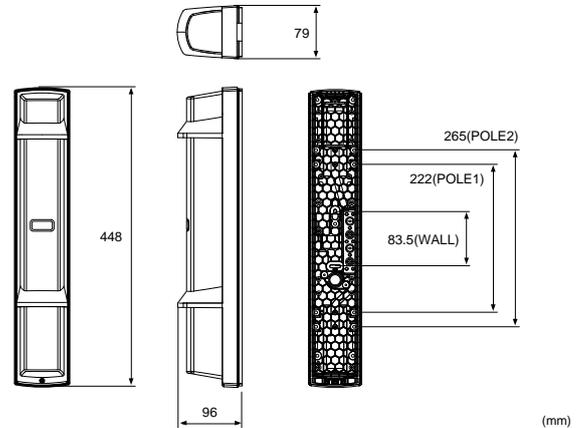
By employing quad beam, it dramatically reduces false alarm caused by birds and falling leaves. Moreover, it is also important that the housing design of both long and short beams are united. 60m (200ft.) range models, SL-200QN/SL-200QDP/SL-200QDM with a wide beam pitch is now available.



Conventional short beam

Smartline series

## DIMENSIONS



## OPTIONS

- ABC-4 : Anti Bird Cap
- BC-4 : Back Cover
- PSC-4 : Pole Side Cover
- BAU-4 : Beam Alignment Unit
- HU-3 : Heating Unit
- CBR-4 : Conduit Bracket

## SPECIFICATIONS

Model	SL-200QN	SL-350QN	SL-650QN
Maximum detection range	60m	100m	200m
Maximum arrival distance	600m	1000m	2000m
Detection method	Quad infrared beam interruption detection		
Interruption time	Variable between 50/100/250/500 ms (4 steps)		
Power source	10.5 to 30 VDC		
Current draw	38mA (Transmitter:8mA Receiver:30mA)	39mA (Transmitter:9mA Receiver:30mA)	40mA (Transmitter:10mA Receiver:30mA)
Output	Form C relay : 30 VDC, 0.2 A		
Alarm period	2sec (±1) (Nominal)		
Tamper output	N.C. (contact output) : 30 VDC, 0.1A Opens when cover removed.		
Operating temperature	-25 to +60°C		
Operating humidity	95% (max.)		
Alignment angle	±90° Horizontal, ±10° Vertical		
Dimension(H x W x D)	448mm x 79mm x 96mm		
Weight	2400g (Total weight of Transmitter + Receiver, excluding accessories)		
International protection	IP65		

Specifications and design are subject to change without prior notice.

# SL-100TNR/200TNR

A-ZONE

SHORT RANGE BATTERY OPERATED PHOTOELECTRIC DETECTOR

Smart Line™ series

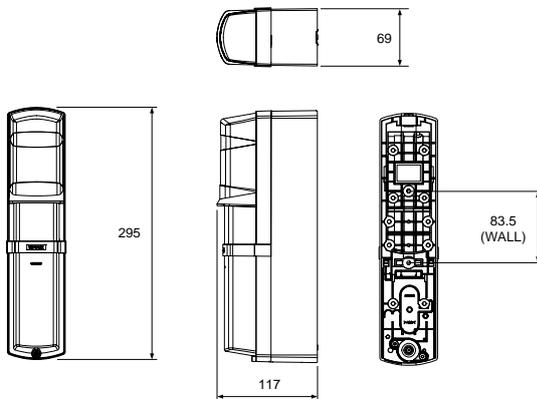
- SL-100TNR – detection range 30m
- SL-200TNR – detection range 60m



## OPTIONS

- BCU-5 : Battery common Unit
- CRH-5 : CR123 Battery Holder
- PCU-5 : Power Convert Unit

## DIMENSIONS



(mm)

## FEATURES

- Universal powered operation  
D size lithium battery x 4pcs  
CR123A lithium battery x 16 pcs (OPTION CRH-5)
- 12-24VDC hardwired operation of the detector.  
(OPTION PCU-5)
- Versatile alarm signal operation
- IR signal technology transmits the low battery status to the receiver.
- Simplified battery replacement
- Easy to access the battery holder and change batteries.

## SPECIFICATIONS

Model		SL-100TNR	SL-200TNR
Maximum detection range		30 m	60 m
Maximum arrival distance		265 m	530 m
Detection method Twin infrared beam interruption detection			
Interruption time Variable between 50/100/250/500 ms (4 steps)			
Power source 3.6 to 3.9VDC D size lithium batteries Each Transmitter and Receiver: 2 units (SB-D02HP manufactured by VITZROCELL) Each Transmitter and Receiver: 8 units 3.0VDC CR123A lithium batteries (OPTION CRH-5: 2unit)			
Current draw (stand by/ at 25°C)	3.9 VDC	Total: Approx. 500 µA Transmitter: Approx. 200 µA Receiver: Approx. 300 µA	Total: Approx. 600 µA Transmitter: Approx. 300 µA Receiver: Approx. 300 µA
	3.0 VDC	Total: Approx. 600 µA Transmitter: Approx. 200 µA Receiver: Approx. 400 µA	Total: Approx. 700 µA Transmitter: Approx. 300 µA Receiver: Approx. 400 µA
Battery life**	SB-D02HP by VITZROCELL	Transmitter: Approx. 6 years Receiver: Approx. 5 years	Transmitter: Approx. 5 years Receiver: Approx. 5 years
	CRH-5 (CR123A by Panasonic)	Transmitter: Approx. 1.5 years Receiver: Approx. 1 year	Transmitter: Approx. 1 year Receiver: Approx. 1 year
Alarm output		Form C-Solid State Switch: 3.6VDC, 0.01 A	
Alarm period		2 s (±1)	
Low battery output		N.C. (Solid State Switch): 3.6VDC, 0.01 A	
Cover tamper output (Receiver)		N.C. (Solid State Switch): 3.6VDC, 0.01 A Opens when the battery cover removed.	
Indicator LED	Alarm/ Level indicator (Receiver)	ON:Beam not received Blinking:Beam not received sufficiently OFF:Beam received	
	Power/ Low battery indicator (Transmitter and Receiver)	ON:Power ON Blinking:Voltage reduction OFF:Power OFF	
Operating temperature		-20°C to +60°C	
Operating humidity		95 % (max.)	
Alignment angle		±90° Horizontal, ±5° Vertical	
Dimension		H x W x D mm : 295 x 69 x 117	
Weight		1200 g (Total weight of Transmitter + Receiver, excluding accessories)	
International protection		IP65	

Specifications and design are subject to change without prior notice.

\* The value is based on the condition that it is used within the ambient temperature range of 20 to 25°C.

\*\* Using batteries other than those recommended may shorten the battery life.

# SL-350QFR/350QNR

A-ZONE

BATTERY OPERATED PHOTOELECTRIC DETECTOR

Smart Line™ series

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION



## WIRELESS-READY

The SL-350QFR and SL-350QNR, our wireless ready, battery operated photoelectric detectors are designed to work with most manufacturer's wireless transmitters, and the back box has enough space to accommodate them. They are easy deployable and adaptable to any control systems currently installed.



## LONG BATTERY LIFE

Approx. 4 years Max. 8 years

Low current consumption  
 Transmitter 420µA (0.42mA)  
 Receiver 325µA (0.325mA)

When using LSH20 (3.6V,13Ah) batteries manufactured by SAFT.



	Transmitter	Receiver
4 pcs	Approx. 8 years	Approx. 10 years
2 pcs	Approx. 4 years	Approx. 5 years

## OPTIONS

- ABC-4 : Anti Bird Cap
- BC-4 : Back Cover
- PSC-4 : Pole Side Cover
- BAU-4 : Beam Alignment Unit
- EC-4 : Extension Cable with Connector
- BCU-5 : Battery Common Unit

Optex offers a less expensive and more efficient solution with SL-350QFR/SL-350QNR.

Typical perimeter systems require expensive trenching or much time for installation.

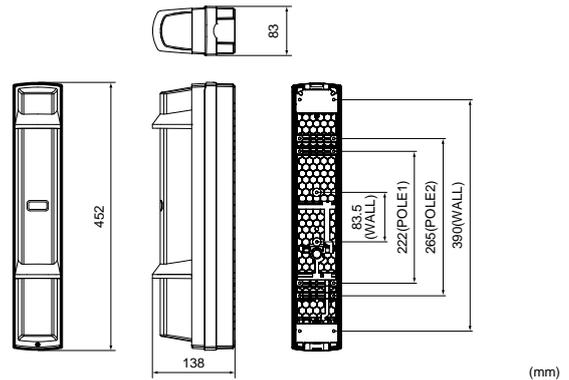
Expensive wire conduit runs and concrete works are unnecessary, allowing installers to save time and money.

- SL-350QFR – 4ch. beam frequencies selectable model
- SL-350QNR – standard model

## FEATURES

- Long distance 100m
- Long battery life 4 to 8 years
- Wireless ready
- Sniper viewfinder with 2X magnification lens
- International protection IP65
- Spacious back box

## DIMENSIONS



## SPECIFICATIONS

Model	SL-350QFR	SL-350QNR
Maximum detection range	100m	
Maximum arrival distance	1000m	
Detection method	Quad infrared beam interruption detection	
Selectable beam frequency	4 channels	–
Interruption period	Variable between 50/100/250/500 ms (4 steps)	
Power source	Recommend: 3.6 V, 13.0Ah LSH20 lithium batteries manufactured by SAFT Operating range: 3.2 V to 4.0 V lithium batteries Transmitter: 2 or 4 units, Receiver: 2 or 4 units	
Current draw	745µA Transmitter: 420µA + Receiver: 325µA (at 25°C, 3.6 VDC)	
Battery life **	Transmitter: Approx. 4 years Receiver: Approx. 5 years	
Output	Alarm output	Form C-Solid State Switch: 3.6 VDC, 0.01 A
	Alarm period	2 sec (±1) (Nominal)
	D.Q output	Form C-Solid State Switch: 3.6 VDC, 0.01 A (Receiver only)
	Low battery output	N.C. (solid state switch): 3.6 VDC, 0.01 A
Indicator	Alarm (Receiver)	Alarm: ON Light receiving: OFF
	Level (Receiver)	Not Light receiving: OFF Light receiving: Flickering or OFF
	Power (Transmitter)	Power ON: ON Power OFF: OFF
	Low battery	Voltage reduction: Flickering
Operating temperature	-20 to +60°C	
Environmental humidity	95 % (max.)	
Alignment angle	±90° Horizontal, ±10° Vertical	
Dimensions (H x W x D)	452mm x 83mm x 138mm	
Weight	3300 g (Total weight of Transmitter + Receiver, excluding accessories)	
International protection	IP65	

Specifications and design are subject to change without prior notice.

\* The value is based on the condition that it is used within the ambient temperature range of 20 to 25°C. (LSH-20 x2 pcs)

\*\* Using batteries other than those recommended may shorten the battery life. Batteries and wireless transmitters are not included in these products.

# AX-100TFR/200TFR

A-ZONE

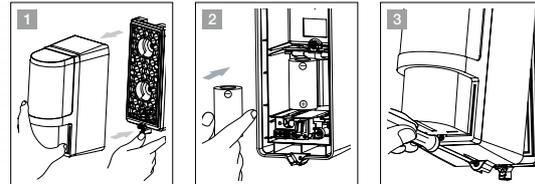
## BATTERY OPERATED PHOTOELECTRIC DETECTOR



The AX-100/200TFR series are "REVOLUTION" in the perimeter security industry, offering significant cost saving alternatives to traditional hardwired system.

- AX-100TFR – detection range 30m
- AX-200TFR – detection range 60m

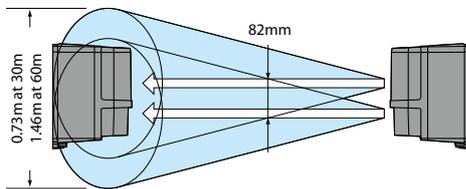
### Easy battery replacement



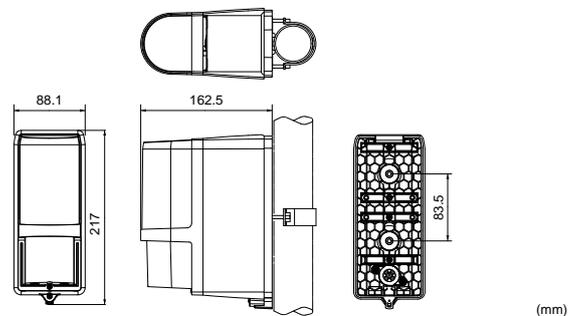
### FEATURES

- Long battery life AX-100TFR: approx. 5 years  
AX-200TFR: approx. 3 years(transmitter)  
approx. 5 years(receiver)
- Easy battery replacement
- Triple tamper functions
- Low battery output and LED indication
- Intermittent output function
- Compatible with numerous wireless transmitters
- Battery saving timer function for wireless transmitters

### RANGES



### DIMENSIONS



### OPTIONS

- MP-4 : Main unit mounting bracket set (for tower mounting)
- BCU-5 : Battery Common Unit

### SPECIFICATIONS

Model	AX-100TFR	AX-200TFR	
Maximum detection range	30m	60m	
Maximum arrival distance	265m	530m	
Detection method	Infrared beam interruption detection		
Selectable beam frequency	4 channels		
Interruption period	Variable between 50, 100, 250, 500msec (4 steps)		
Power source	3.6V 13.0Ah : LSH20 lithium batteries manufactured by SAFT (not included) Transmitter : 2 units Receiver : 2 units		
Current draw	620µA T:300µA + R:320µA (at 25°C, 3.6 VDC)	810µA T:490µA + R:320µA (at 25°C, 3.6 VDC)	
Battery life	5 years	Transmitter 3 years Receiver 5 years	
Output	Alarm output	Form C-Solid State Switch : 3.6 VDC, 0.01A	
	Alarm period	2 sec (±1) nominal	
	D.Q. output	Form A/B-Solid State Switch : 3.6 VDC, 0.01A	
	Low battery output	Form A/B-Solid State Switch: 3.6 VDC, 0.01A (Transmitter & Receiver)	
	Tamper output for Front cover	Form C: 3.6 VDC, 0.01 A activates when cover removed. (Receiver only)	
Tamper output for Back box	Form C: 3.6 VDC, 0.01 A activates when either back box or chassis is removed from the installment.		
Indicator	Alarm (Receiver)	(1) Light on - IR Beam not received. (2) Flickering Light - IR Beams not received sufficiently. (3) Light off - IR Beams received.	
	Power (Transmitter)	Power ON : ON, Power OFF : OFF	
	Low battery	Voltage Reduction : flicker	
Operating temperature	-20 to +60°C		
Environmental humidity	95%(Max.)		
Alignment angle	± 90° Horizontal, ± 5° Vertical		
Mounting	Indoor/Outdoor, Wall/Pole/Tower mounting (Optional main unit mounting brackets are required, when the units mount in the tower.)		
Weight	1600 g (Total weight of transmitter + receiver, excluding accessories)		
International protection	IP55		

Specifications and design are subject to change without prior notice.  
Batteries and wireless transmitters are not included in these products.

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# AX-100TF/200TF

A-ZONE

## SELECTABLE BEAM FREQUENCY SHORT RANGE PHOTOELECTRIC DETECTOR

OUTDOOR PROTECTION

INDOOR PROTECTION

RED WALL

ACCESS CONTROL

TECHNICAL INFORMATION



The AX-100/200TF series of short range photoelectric detectors are compact in design with selectable beam frequencies.

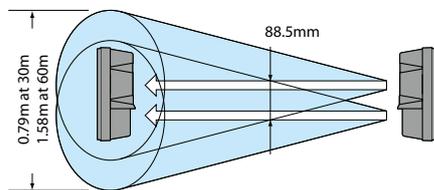
Also the AX-100TF/200TF series carries the IP65 high durable structure which prevents water, dust or bugs from getting into the unit.

- AX-100TF – detection range 30m
- AX-200TF – detection range 60m

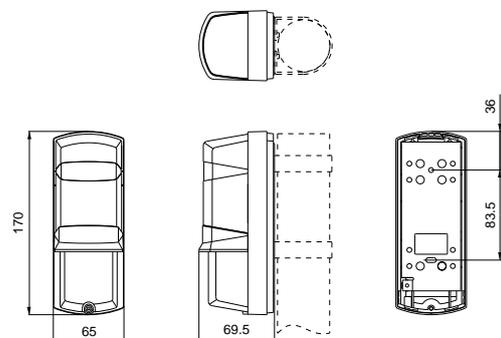
### FEATURES

- Selectable 4 channels beam frequency
- 4 step alarm indicator LED
- Environmental disqualification circuit
- International protection IP65
- Lightning and surge protection
- Anti-frost hood cover
- 99% beam blocking stability
- A.G.C. (Automatic Gain Control) circuit
- Adjustable beam interruption time

### RANGES



### DIMENSIONS



(mm)

### OPTIONS

- HU-3 : Heating Unit  
24V DC/AC, 420mA max.
- BC-3 : Back Cover
- PSC-3 : Pole Side Cover  
Cover for installing 2 units to 1 pole

### SPECIFICATIONS

Model	AX-100TF	AX-200TF
Maximum detection range	30m	60m
Maximum arrival distance	300m	600m
Selectable beam frequency	4 channels	
Interruption period	Selectable between 50, 100, 250, and 500 msec.	
Power supply	10.5 to 28 VDC	
Current consumption (transmitter + receiver)	44mA (max.)	48mA (max.)
Alarm period	2 sec. (±1) nominal	
Alarm output	N.C./N.O. 28 VDC 0.2A max.	
Tamper switch	N.C. opens when cover is removed at 28 VDC, 0.1A max.	
Operating temperature	-35 to +60°C Use the optional heating unit (HU-3) under the environment of -25°C or less minus.	
Environmental humidity	95% max.	
Alignment angle	±90° Horizontal, ±5° Vertical	
Mounting	Wall and pole mounting	
Weight (transmitter+receiver)	700 g	
Dimensions (H x W x D)	170 mm x 65 mm x 69.5 mm	
International protection	IP65	

Specifications and design are subject to change without prior notice.

# AX-70TN/130TN/200TN

A-ZONE

## SHORT RANGE PHOTOELECTRIC DETECTOR



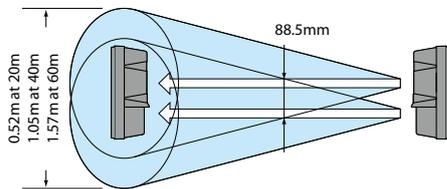
The AX-70/130/200TN series of short range photoelectric detectors are compact in design with IP65 high durable structure.

- AX-70TN – detection range 20m
- AX-130TN – detection range 40m
- AX-200TN – detection range 60m

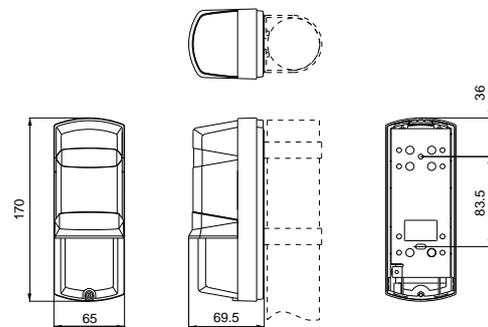
### FEATURES

- International protection IP65
- Lightning and surge protection
- Anti-frost hood cover
- 99% beam blocking stability
- A.G.C. (Automatic Gain Control) circuit
- Adjustable interruption time

### RANGES



### DIMENSIONS



(mm)

### OPTIONS

- HU-3 : Heating Unit  
24V DC/AC, 420mA max.
- BC-3 : Back Cover
- PSC-3 : Pole Side Cover  
Cover for installing 2 units to 1 pole

### SPECIFICATIONS

Model	AX-70TN	AX-130TN	AX-200TN
Maximum detection range	20m	40m	60m
Maximum arrival distance	200m	400m	600m
Interruption period	Selectable between 50, 100, 250, and 500 msec.		
Power supply	10.5 to 28 VDC		
Current consumption (transmitter + receiver)	38mA (max.)	41mA (max.)	45mA (max.)
Alarm period	2 sec. (±1) nominal		
Alarm output	N.C. 28 VDC 0.2A max.		
Tamper switch	N.C. opens when cover is removed at 28 VDC, 0.1A max.		
Operating temperature	-35 to +60°C Use the optional heating unit (HU-3) under the environment of -25°C or less minus.		
Environmental humidity	95% max.		
Alignment angle	±90° Horizontal, ±5° Vertical		
Mounting	Wall and pole mounting		
Weight (transmitter+receiver)	650 g		
Dimensions (H x W x D)	170 mm x 65 mm x 69.5 mm		
International protection	IP65		

Specifications and design are subject to change without prior notice.

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

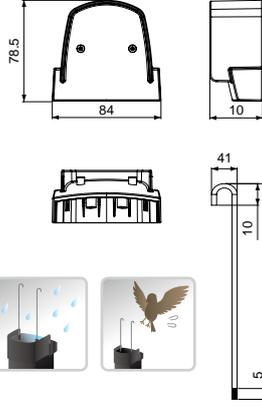
TECHNICAL INFORMATION

# OPTIONS

## ABC-4



1 set (2 units)



(mm)

### Anti Bird Cap for

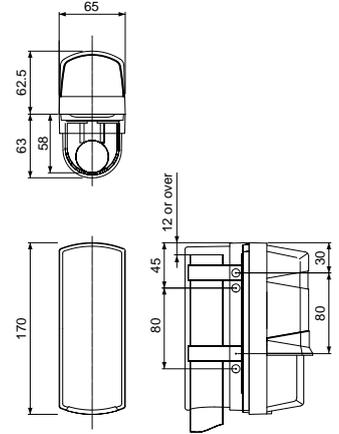
- SL-200QDM/350QDM/650QDM
- SL-200QDP/350QDP/650QDP
- SL-200QN/350QN/650QN
- SL-350QFR/SL-350QNR



## BC-3



1 set (2 units)

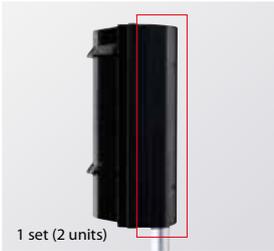


(mm)

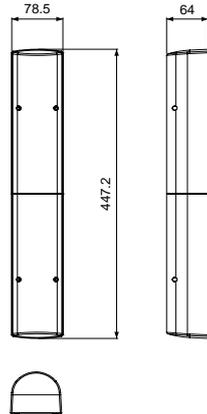
### Back Cover for

- AX-100TF/200TF
- AX-70TN/130TN/200TN

## BC-4



1 set (2 units)



(mm)

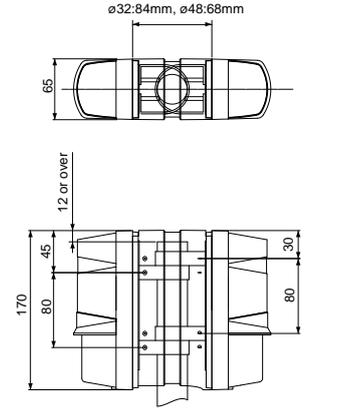
### Back cover for

- SL-200QDM/350QDM/650QDM
- SL-200QDP/350QDP/650QDP
- SL-200QN/350QN/650QN
- SL-350QFR/350QNR

## PSC-3



1 unit



(mm)

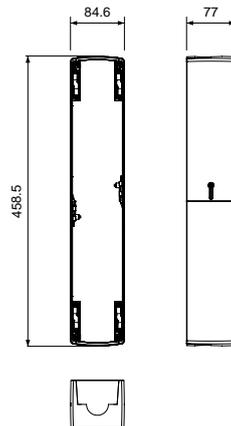
### Pole Side Cover for

- AX-100TF/200TF
- AX-70TN/130TN/200TN

## PSC-4



1 unit

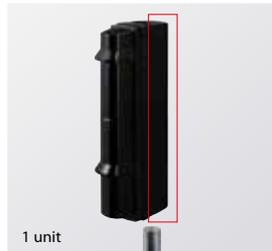


(mm)

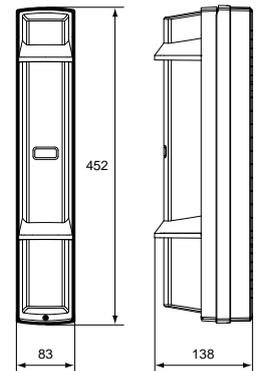
### Pole Side Cover for

- SL-200QDM/350QDM/650QDM
- SL-200QDP/350QDP/650QDP
- SL-200QN/350QN/650QN
- SL-350QFR/350QNR

## CBR-4



1 unit



(mm)

### Conduit Bracket for

- SL-200QDM/350QDM/650QDM
- SL-200QDP/350QDP/650QDP
- SL-200QN/350QN/650QN

## HU-3

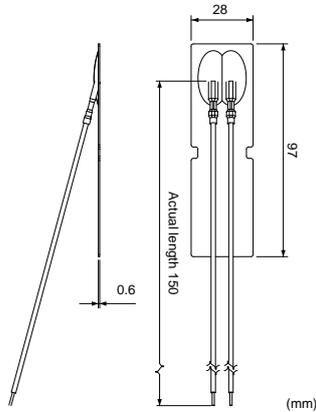


1 set (2 units)

### Heating Unit for

- SL-200QDM/350QDM/650QDM
- SL-200QDP/350QDP/650QDP
- SL-200QN/350QN/650QN
- AX-100TF/200TF
- AX-70TN/130TN/200TN

\*2sets (4 units) are used for SL series.



Power input	24VAC/DC
Current draw	420mA(max.) (Per 1 unit)
Thermo switch	60°C (140°F)

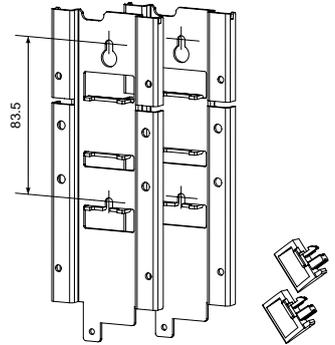
## MP-4



1 set (2 units)

### Main Unit Mounting Bracket Set (for Tower Mounting) for

- AX-100TFR/200TFR



Main unit mounting bracket Tamper bushing

(mm)

## BCU-5



1 unit

Share power source and low battery signals between the main unit and the wireless transmitter.

for

- SL-100TNR/200TNR
- AX-100TFR/200TFR
- SL-350QFR/350QNR

Input voltage	3.2 - 4.0 VDC	
Current draw	Approx. 5 $\mu$ A at 3.6 VDC (no load)	
Output voltage	Normal	Approx. 2.3 - 3.6 VDC
	Low battery	Approx. 2.0 - 2.6 VDC
Output current	100 mA (max.)	
Operating temperature	-20°C - +60°C (-4°F - +140°F)	
Operating humidity	95% (max.)	

### Package contents

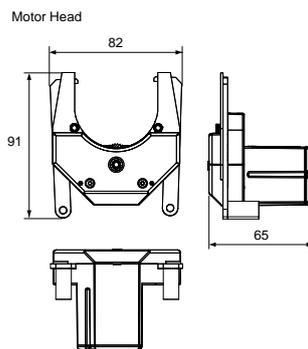
- 1 X PC board
- 2 X Dummy battery
- 3 X Power cable

## BAU-4 (Sales ends when all the stock is sold out)



1 unit

Aligns optical axis automatically. (SL-QDP/QN/QFR/QNR: applicable to receiver only)



Controller  
Dimensions (HxWxD): 180mm x 120mm x 45mm

## CRH-5



1 set (2 units)

Battery holder when using CR123A as a power source.  
CR123A: Transmitter x 8pcs,  
Receiver x 8pcs  
Battery life: Approx. 1year



Only for SL-100TNR/200TNR

## PCU-5

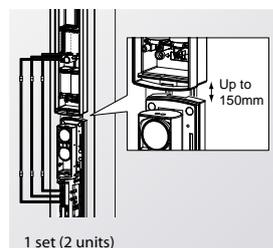


1 unit

Voltage converter unit used to enable wired operation of the detector.

Power input	10.5 - 30 VDC
Current draw	80 mA (max.)
Output voltage	Approx. 3.9 VDC
Output current	10 mA (max.)
Alarm output	Form C relay: 30 VDC, 0.2 A
D.Q. output	Unused (Form C relay: 30 VDC, 0.2 A)
Low battery output	N.C. relay: 30 VDC, 0.2 A
Tamper output	N.C. relay: 30 VDC, 0.2 A
Operating temperature	-20°C - +60°C (-4°F - +140°F)
Operating humidity	95% (max.)

## EC-4



1 set (2 units)

### Extension Cable with Connector for

- SL-350QFR/SL-350QNR

(mm)

# PRODUCT SPECIFICATIONS

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

	SL-200QDM	SL-350QDM	SL-650QDM	SL-200QDP	SL-350QDP	SL-650QDP
						
	P06	P06	P06	P07	P07	P07
Detection method	Infrared beam interruption detection					
Maximum detection range	60m	100m	200m	60m	100m	200m
Maximum arrival range	600m	1000m	2000m	600m	1000m	2000m
Number of beams	Quad	Quad	Quad	Quad	Quad	Quad
Beam characteristics	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared
Double Modulation	✓	✓	✓	✓	✓	✓
Beam blocking ratio	99%	99%	99%	99%	99%	99%
4 Ch. Selectable beam frequency	✓	✓	✓	✓	✓	✓
Interruption period	50,100,250,500msec.	50,100,250,500msec.	50,100,250,500msec.	50,100,250,500msec.	50,100,250,500msec.	50,100,250,500msec.
Mounting	Wall / Pole/Tower	Wall / Pole/Tower	Wall / Pole/Tower	Wall / Pole/Tower	Wall / Pole/Tower	Wall / Pole/Tower
Alignment angle	+/- 90° Horizontal	+/- 90° Horizontal	+/- 90° Horizontal	+/- 90° Horizontal	+/- 90° Horizontal	+/- 90° Horizontal
	+/- 10° Vertical	+/- 10° Vertical	+/- 10° Vertical	+/- 10° Vertical	+/- 10° Vertical	+/- 10° Vertical
LED Indicator	✓ 16 steps & Sound assist	✓ 16 steps & Sound assist	✓ 16 steps & Sound assist			
Monitor jack for alignment	✓	✓	✓	✓	✓	✓
Beam alignment method	Sniper viewfinder™					
Lightning protection	✓	✓	✓	✓	✓	✓
Environmental disqualification output	✓	✓	✓	✓	✓	✓
Integrated alignment status communication (I.A.S.C.)	✓	✓	✓	—	—	—
Power supply	Normal: 10.5 - 30 VDC	Normal: 10.5 - 30 VDC	Normal: 10.5 - 30 VDC	10.5 - 30 VDC	10.5 - 30 VDC	10.5 - 30 VDC
Current consumption	40 mA max.	40 mA max.	43mA max.	24 mA max.	24 mA max.	33 mA max.
Alarm output	FormC	FormC	FormC	FormC	FormC	FormC
Tamper	✓	✓	✓	✓	✓	✓
Alarm memory	✓	✓	✓	✓	✓	✓
Anti-frost design	✓	✓	✓	✓	✓	✓
Optional heating unit	HU-3	HU-3	HU-3	HU-3	HU-3	HU-3
International protection	IP65	IP65	IP65	IP65	IP65	IP65
Operating temperature	-35 to +60°C	-35 to +60°C	-35 to +60°C	-35 to +60°C	-35 to +60°C	-35 to +60°C
Operating humidity	95% max	95% max	95% max	95% max	95% max	95% max
Dimensions (H x W x D mm)	448 x 79 x 96	448 x 79 x 96	448 x 79 x 96			

# PRODUCT SPECIFICATIONS

SL-200QN/350QN/ 650QN	SL-100TNR/200TNR	SL-350QFR/QNR	AX-100TFR/200TFR	AX-100TF/AX-200TF	AX-70TN/130TN/200TN	BX-100PLUS
						
P08	P09	P10	P11	P12	P13	P39
Infrared beam interruption detection						
60m/100m/200m	30m/60m	100m	30m/60m	20m/40m/60m	20m/40m/60m	30m
600m/1000m/2000m	256m/530m	1000m	265m/530m	200m/400m/600m	200m/400m/600m	300m
Quad	Twin	Quad	Twin	Twin	Twin	Twin
Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared	Pulsed infrared
—	—	—	—	—	—	—
99%	99%	99%	99%	99%	99%	99%
—	—	✓ (SL-350QFR)	✓	✓	—	—
50,100,250,500msec.	50,100,250,500msec.	50,100,250,500msec.	50,100,250,500msec.	50,100,250,500msec.	50,100,250,500msec.	50msec
Wall / Pole/Tower	Wall/Pole	Wall / Pole/Tower	Wall / Pole/Tower	Wall / Pole	Wall / Pole	Wall
+/- 90° Horizontal	+/- 90° Horizontal	+/- 90° Horizontal	+/- 90° Horizontal	+/- 90° Horizontal	+/- 90° Horizontal	+/- 92° Horizontal
+/- 10° Vertical	+/- 5° Vertical	+/- 10° Vertical	+/- 5° Vertical	+/- 5° Vertical	+/- 5° Vertical	
—	✓	✓4steps	✓4steps	✓4steps	—	—
✓	✓	✓	✓	✓	✓	—
Sniper viewfinder™			View finder	View finder	View finder	Audible indicator
✓	—	—	—	✓ over 14kV	✓ over 14kV	✓ over 6kv
—	✓	✓	✓	✓	—	—
—	—	—	—	—	—	—
10.5 - 30 VDC	3.6 to 3.9V DC D size (SB-D02HP) / 3.0V DC CR123A (option CRH-5) Lithium batteries	3.6V 13.0Ah LSH20 Lithium batteries	3.6V 13.0Ah LSH20 Lithium batteries	10.5 - 28 VDC	10 - 28 VDC	10.5 - 28 VDC
38mA max/39mA max/40mA max	Max. 600µA/Max. 700µA	745µA max	620µA max/810µA max	44 mA max./48mA max.	35mA max	75mA max
FormC	FormC-solid state switch	FormC	FormC	N.C.	N.C.	2 outs N.O./N.C.
✓	N.C.-solid state switch (receiver)	✓	✓	✓	✓	✓
—	—	—	—	✓	—	—
✓	✓	✓	✓	✓	✓	—
HU-3	—	—	—	HU-3	HU-3	—
IP65	IP65	IP65	IP55	IP65	IP65	IP54
-25 to +60°C	-20 to +60°C	-20 to +60°C	-20 to +60°C	-35 to +65°C	-35 to +65°C	-35 to +55°C
95% max	95% max	95% max	95% max	95% max	95% max	95% max
448 x 79 x 96	295 x 69 x 117	452 x 83 x 138	217 x 88.1 x 162.5	170 x 65 x 69.5	170 x 65 x 69.5	230.5x 51.5x 61

OUTDOOR PROTECTION

INDOOR PROTECTION

RED WALL

ACCESS CONTROL

TECHNICAL INFORMATION

# WXS-AM/DAM

B-ZONE

## 180 DEGREE PANORAMIC OUTDOOR PIR DETECTOR



Part of the Shield family, the WXS series is OPTEX's latest 180° outdoor intrusion detection sensors with flexible range detection and settings, as well as a selectable low (0.8 - 1.2m) or high mount (2m) option and self-learning IR digital anti-masking.

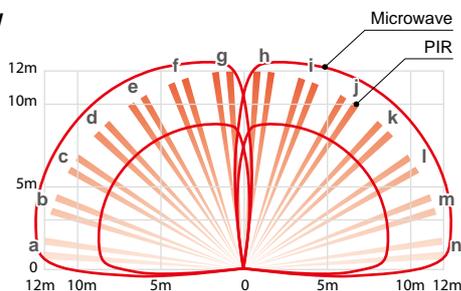
- WXS-AM – active IR anti-masking model
- WXS-DAM – dual technology model with active IR anti-masking

### FEATURES

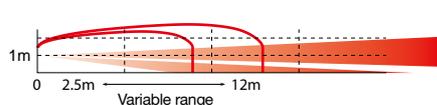
- Selectable mounting height
- 4PIR + 2MW technology (WXS-DAM only)
- Stability against light disturbance (WXS-DAM only)
- Individual detection area size (WXS-DAM only)
- Panoramic triple layer detection (WXS-DAM only)
- Individual sensitivity setting
- Individual alarm outputs
- Self-learning IR digital anti-masking function
- Blue Touch
- Day /night mode
- Area masking shutter
- Area masking plate
- SMDA (Super Multidimensional Analysis) logic
- Cover / Back tamper

### COVERAGE

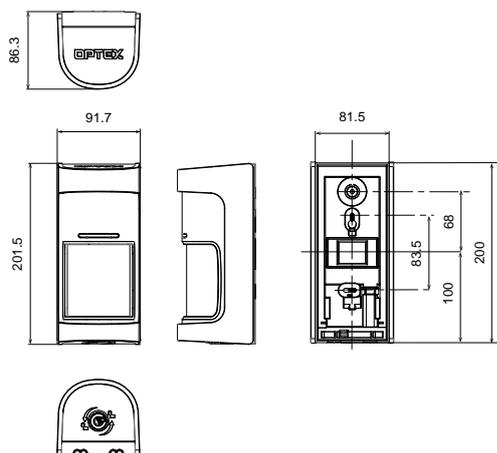
#### TOP VIEW



#### SIDE VIEW



### DIMENSIONS



### SPECIFICATIONS

Model	WXS-AM	WXS-DAM
Detection method	Passive infrared	Passive infrared & Microwave
PIR coverage	High mount : 9.0 m (30') 180°wide Low mount : 12.0 m (40') 180°wide	
PIR distance limit	High mount : 9.0 m (fixed) Low mount : 2.5 to 12.0 m (Stepless adjustment)	
Detectable speed	0.3 to 2.0 m/s (1' to 6'7"/s)	
Sensitivity	2.0 °C (3.6°F) at 0.6 m/s Selectable for each side individually	
Power input	9.5 – 18 VDC	
Current draw	23 mA max. at 12 VDC	24 mA max. at 12 VDC
Alarm period	2.0 ± 1 sec.	
Warm-up period	Approx. 60 sec. (LED blinks)	
Alarm output	Alarm output (Right) 28 VDC 0.1 A max. [Individual : Right or General], [N.O. or N.C.] are selectable Alarm output (Left) 28 VDC 0.1 A max. [Individual : Left or General], [N.O. or N.C.] are selectable	
Trouble output	N.C. 28 VDC 0.1 A max.	
Tamper output	N.C. 28 VDC 0.1 A max. Open when either the cover, main or base unit is removed	
LED indicator	Red 1. Warm-up 2. Alarm 3. Masking detection 4. "High mount" setting (When the tamper switch is activated, LED blinks if it is "High mount" setting.) Yellow 1. Warm-up 2. MW detection	
Operating temperature	-30°C to +60°C (-22°F to +140°F)	20°C to +45°C (-4°F to +113°F)
Environment humidity	95% max.	
International protection	IP55	
Mounting	Wall, Pole (Outdoor, Indoor)	
Mounting height	High mount : 2.0 m (6' 7") Low mount : 0.8 to 1.2 m (2' 7" to 4')	
Weight	585 g (20.7 oz)	625 g (22.1 oz)
Accessories	[1] Area masking plate x 5 [2] Mounting screw (4 x 20 mm) x 2 [3] Lock screw x 1	

Specifications and designs are subject to change without prior notice.

### OPTIONS

- PEU-B/C/D/E/F/G/H/I/J/K : Selectable plug-in end of line unit
- PMP-01 : Pole mount plate
- BH-01 : Battery holder
- WXI-BB : Back box
- MKP-01 : Area masking plate

(mm)

# WXS-RAM/RDAM

B-ZONE

## BATTERY OPERATED 180 DEGREE PANORAMIC OUTDOOR PIR DETECTOR



The WX Shield "R" models are battery operated products. Sharing the same design and performance with WXS-AM/DAM, "R" models have the most up-to-date outdoor protection capabilities.

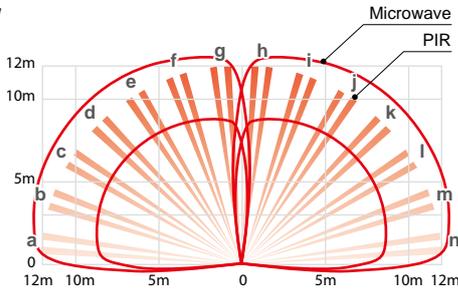
- WXS-RAM – battery operated model
- WXS-RDAM – battery operated dual technology model with active IR anti-masking

### FEATURES

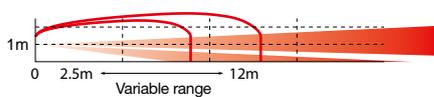
- Selectable mounting height
- 4PIR + 2MW technology (WXS-RDAM only)
- Stability against light disturbance (WXS-RDAM only)
- Individual detection area size (WXS-RDAM only)
- Panoramic triple layer detection (WXS-RDAM only)
- Individual sensitivity setting
- Individual alarm outputs
- Self-learning IR digital anti-masking function
- Blue Touch
- Day /night mode
- Area masking shutter
- Area masking plate
- SMDA (Super Multidimensional Analysis) logic
- Cover / Back tamper

### COVERAGE

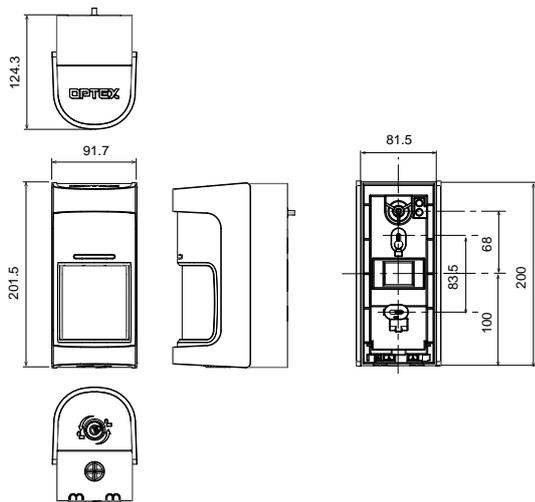
#### TOP VIEW



#### SIDE VIEW



### DIMENSIONS



### SPECIFICATIONS

Model	WXS-RAM	WXS-RDAM
Detection method	Passive infrared	Passive infrared & Microwave
PIR coverage	High mount : 9.0 m (30') 180°wide Low mount : 12.0 m (40') 180°wide	
PIR distance limit	High mount : 9.0 m (fixed) Low mount : 2.5 to 12.0 m (Stepless adjustment)	
Detectable speed	0.3 to 2.0 m/s (1' to 6'7"/s)	
Sensitivity	2.0 °C (3.6°F) at 0.6 m/s Selectable for each side individually	
Power input	3 to 3.6 VDC lithium batteries	
Current draw	19 µA stand-by 4 mA max. at 3 VDC	24 µA stand-by 6 mA max. at 3 VDC
Alarm period	2.0 ± 1 sec.	
Warm-up period	Approx. 60 sec. (LED blinks)	
Alarm output	Alarm output (Right) Solid State switch, 10 VDC 0.01 A max. [Individual : Right or General], [N.O. or N.C.] are selectable Alarm output (Left) Solid State switch, 10 VDC 0.01 A max. [Individual : Left or General], [N.O. or N.C.] are selectable	
Trouble output	Solid State switch, 10 VDC 0.01 A max. [N.O. or N.C.] are selectable (with tamper)	
Tamper output	Tamper output is shared with trouble output.	
LED indicator	Red 1. Warm-up 2. Alarm 3. Masking detection 4. "High mount" setting (When the tamper switch is activated, LED blinks if it is "High mount" setting.) Yellow 1. Warm-up 2. MW detection	
Operating temperature	-30°C to +60°C (-22°F to +140°F)	20°C to +45°C (-4°F to +113°F)
Environment humidity	95% max.	
International protection	IP55	
Mounting	Wall, Pole (Outdoor, Indoor)	
Mounting height	High mount : 2.0 m (6' 7") Low mount : 0.8 to 1.2 m (2' 7" to 4')	
Weight	730 g (25.8 oz.)	770 g (27.2 oz.)
Accessories	[1] Connector for POWER and ALARM (R) [2] Connector for ALARM (L) [3] Connector for TROUBLE [4] Velcro tape [5] Area masking plate x 5 [6] Mounting screw (4 x 20 mm) x 2 [7] Lock screw x 1	

Specifications and designs are subject to change without prior notice.

### OPTIONS

- PMP-01 : Pole mount plate
- BH-01 : Battery holder
- WXI-BB : Back box
- MKP-01 : Area masking plate

(mm)

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# WXI-ST/AM

B-ZONE

## 180 DEGREE PANORAMIC OUTDOOR DETECTOR



With its comprehensive 180° field of view and capabilities to tailor its setting to meet the environment around your premise, the WX Infinity series will provide an effective solution for new and existing security systems.

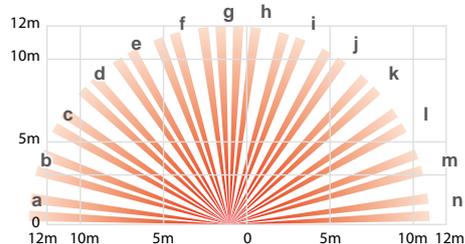
- WXI-ST – standard model
- WXI-AM – active IR anti-masking model

### FEATURES

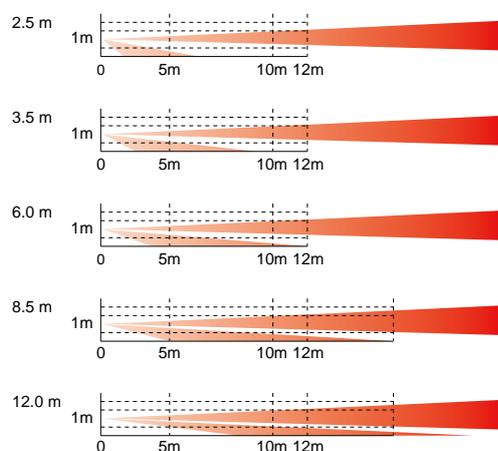
- Individual alarm outputs
- Individual sensitivity setting
- Individual detection area size
- Area masking shutter
- Area masking plate
- Self-learning IR digital anti-masking function
- SMDA (Super Multidimensional Analysis) logic
- Double conductive shielding
- Intelligent AND detection logic
- Active IR digital anti-masking (WXI-AM)
- Cover / Back tamper

### COVERAGE

#### TOP VIEW



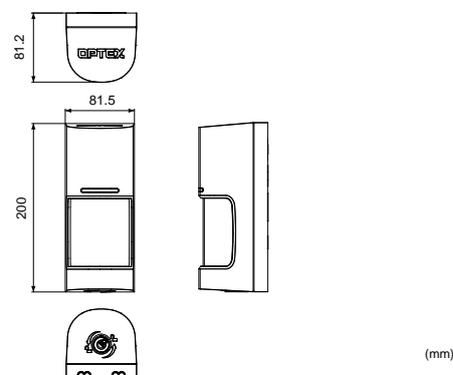
#### SIDE VIEW



### OPTIONS

- PEU-B/C/D/E/F/G/H/I/J/K : Selectable plug-in end of line unit
- PMP-01 : Pole mount plate
- MKP-01 : Area masking plate
- WXI-BB : Back box

### DIMENSIONS



### SPECIFICATIONS

Model	WXI-ST	WXI-AM
Detection method	Passive infrared	
PIR coverage	180° wide	
PIR distance limit	2.5 to 12 m (Stepless adjustment)	
Detectable speed	0.3 to 2.0 m/s (1' to 6'7"/s)	
Sensitivity	2.0 °C (3.6°F) at 0.6 m/s Selectable for each side individually	
Power input	9.5 to 18 VDC	
Current draw	21 mA max. at 12 VDC	23 mA max. at 12 VDC
Alarm period	2.0 ± 1 sec.	
Warm-up period	60 sec. or less (LED blinks)	
Alarm output	28 VDC 0.1 A max. [Individual; Right/Left or General], [N.O. or N.C.] are selectable	
Trouble output	-	N.C. 28 VDC 0.1 A max.
Tamper output	N.C. 28 VDC 0.1 A max. Open when either the cover, main or base unit is removed	
LED indicator	Red LED ; 1. Warm-up 2. Alarm	Red LED ; 1. Warm-up 2. Alarm 3. Masking detection
Operating temperature	-30 °C to +60 °C (-22°F to +140°F)	
Environment humidity	95% max.	
International protection	IP55	
Mounting	Wall, Pole (Outdoor, Indoor)	
Mounting height	0.8 to 1.2 m (2'7" to 4')	
Weight	420 g	440 g
Accessories	Mounting screw (4 x 20 mm) x 2, lock screw x 1	

Specifications and designs are subject to change without prior notice.

# WXI-R/RAM

B-ZONE

## BATTERY OPERATED 180 DEGREE PANORAMIC OUTDOOR DETECTOR



The WX Infinity "R" models are battery operated products. Sharing the same design and performance with WXI-ST/AM, "R" models have the most up-to-date outdoor protection capabilities.

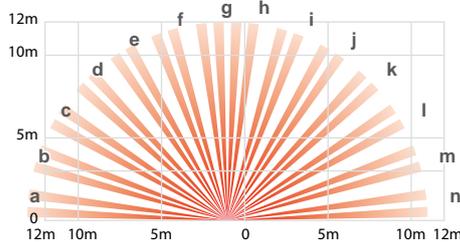
- WXI-R – battery operated model
- WXI-RAM – with active IR anti-masking

### FEATURES

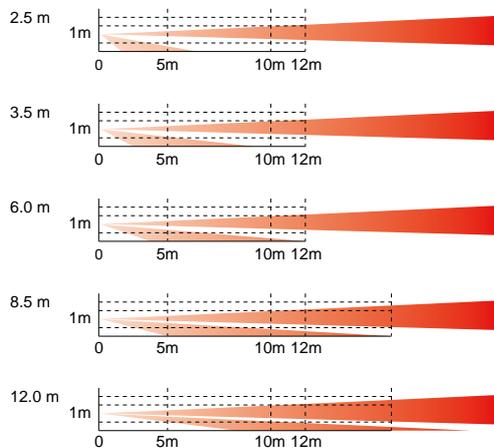
- Long battery life
- Individual alarm outputs
- Individual sensitivity setting
- Individual detection area size
- Area masking shutter
- Area masking plate
- Self-learning IR digital anti-masking function
- SMDA (Super Multidimensional Analysis) logic
- Double conductive shielding
- Intelligent AND detection logic
- Active IR digital anti-masking (WXI-RAM)
- Cover / Back tamper

### COVERAGE

#### TOP VIEW



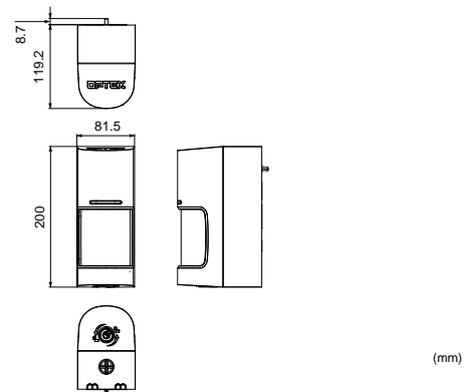
#### SIDE VIEW



### OPTIONS

- PMP-01 : Pole mount plate
- BH-01 : Battery holder
- WXI-BB : Back box
- MKP-01 : Area masking plate

### DIMENSIONS



### SPECIFICATIONS

Model	WXI-R	WXI-RAM
Detection method	Passive infrared	
PIR coverage	180° wide	
PIR distance limit	2.5 to 12 m (Stepless adjustment)	
Detectable speed	0.3 to 2.0 m/s (1' to 6'7"/s)	
Sensitivity	2.0 °C (3.6°F) at 0.6 m/s Selectable for each side individually	
Power input	3 to 3.6 V DC lithium batteries	
Current draw	15 µA stand-by 4 mA max. at 3 V DC except walk test	16 µA stand-by 4 mA max. at 3 V DC except walk test
Alarm period	2.0 ±1 sec.	
Warm-up period	60 sec. or less (LED blinks)	
Alarm output	Solidstate switch, 10 V DC 0.01 A max. [Individual; Right/Left or General], [N.O. or N.C.] are selectable	
Trouble output	Solidstate switch, 10 V DC 0.01 A max. [N.O. or N.C.] is selectable	
Tamper output	Tamper output is shared with trouble output.	
LED indicator	Red LED ; 1. Warm-up 2. Alarm	Red LED ; 1. Warm-up 2. Alarm 3. Masking detection
Operating temperature	-30 °C to +60 °C (-22°F to +140°F) except batteries	
Environment humidity	95% max.	
International protection	IP55	
Mounting	Wall, Pole (Outdoor, Indoor)	
Mounting height	0.8 to 1.2 m (2'7" to 4')	
Weight	600 g	
Accessories	Connector for POWER and ALARM (R), Connector for ALARM (L) Connector for TROUBLE, Velcro tape Mounting screw (4 x 20 mm) x 2, Lock screw x 1	

Specifications and design are subject to change without prior notice.

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# VXS-AM/DAM

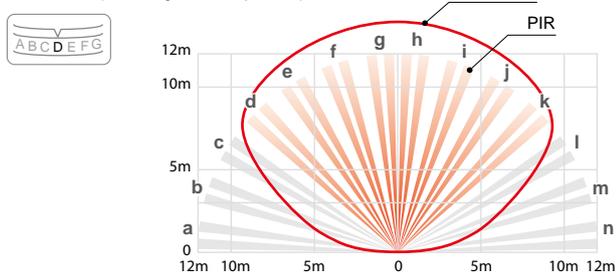
B-ZONE

## WIDE ANGLE OUTDOOR PIR DETECTOR

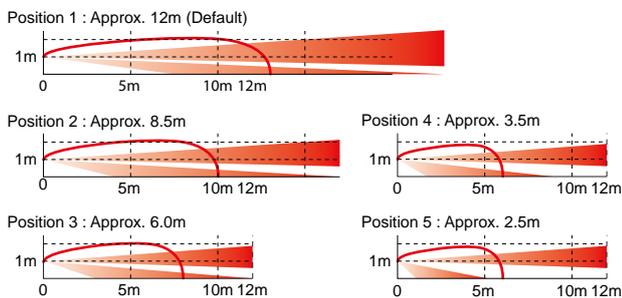


### COVERAGE

TOP VIEW (Area diagram for D position)



SIDE VIEW (Detection Distance by Positions)



### OPTIONS

- PEU-B/C/D/E/F/G/H/I/J/K : Selectable plug-in end of line unit
- VXS face cover (White / Silver / Black)
- VXS option cover unit (Black / white)

### COLOR



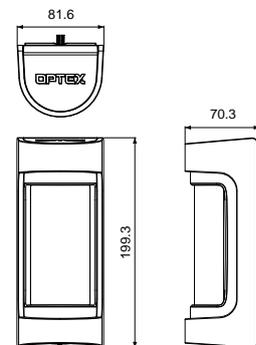
The VX Shield is a series of outdoor sensors providing 12 m by 90 degree detection coverage. Anti-masking and dual technology models are available in a lineup.

- VXS-AM – active IR anti-masking model
- VXS-DAM – dual technology model with active IR anti-masking

### FEATURES

- Active IR anti-masking
- SMDA (Super Multidimensional Analysis) logic
- Easy masking for over spill prevention
- Double conductive shielding
- Back tamper
- Automatic walk test mode

### DIMENSIONS



(mm)

### SPECIFICATIONS

Model	VXS-AM	VXS-DAM
Detection method	Passive infrared	Passive infrared & Microwave
PIR coverage	12 m (40 ft) 90° wide / 16 zones	
PIR distance limit	2.5 to 12 m (5 levels)	
Detectable speed	0.3 to 2.0 m / s (1.0 to 5.0 ft. / s)	
Sensitivity	2.0 °C (3.6 °F) at 0.6 m / s	
Power input	9.5 to 18 V DC	
Current draw	24 mA max. at 12 VDC	35 mA max. at 12 VDC
Alarm period	2.0 ± 0.1 sec.	
Warm-up period	Approx. 60 sec. (LED blinks)	
Alarm output	N.C. / N.O. Selectable 28 VDC 0.1 A max.	
Trouble output	N.C. 28 VDC 0.1 A max.	
Tamper output	N.C. 28 VDC 0.1 A max, open when cover removed	
LED indicator	Red LED ; 1. Warm-up 2. Alarm 3. Masking detection (DIP switch ON or Walk test)	Red LED ; 1. Warm-up 2. Alarm 3. Masking detection Yellow LED ; 1. Warm-up 2. MW detection (DIP switch ON or Walk test)
Operating temperature	-20°C to +60°C (-4°F to +140°F)	-20°C to +45°C (-4°F to +113°F)
Environment humidity	95 % max.	
International protection	IP55	
Mounting	Wall, Pole (Outdoor, Indoor)	
Mounting height	0.8 to 1.2 m (2.7 to 4.0 ft.)	
Weight	400 g (14.1 oz.)	450 g (15.9 oz.)
Accessories	Screw (4 x 20 mm) x 2, Wiring sponge x 3, Masking seal x 3	

Specifications and designs are subject to change without prior notice.

# VXS-RAM/RDAM

B-ZONE

## BATTERY OPERATED WIDE ANGLE OUTDOOR PIR DETECTOR



The VX Shield "R" models are battery operated products. Sharing the same design and performance with VXS-AM/DAM, "R" models have the most up-to-date outdoor protection capabilities.

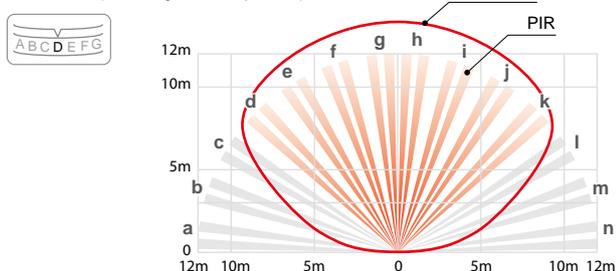
- VXS-RAM – battery operated model with active IR anti-masking
- VXS-RDAM – battery operated dual technology model with active IR anti-masking

### FEATURES

- Long battery life
- Active IR anti-masking
- SMDA (Super Multidimensional Analysis) logic
- Easy masking for over spill prevention
- Double conductive shielding
- Back tamper
- Automatic walk test mode

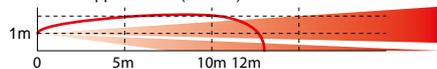
### COVERAGE

TOP VIEW (Area diagram for D position)

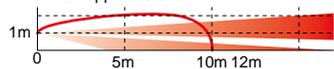


SIDE VIEW (Detection Distance by Positions)

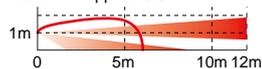
Position 1 : Approx. 12m (Default)



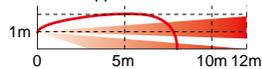
Position 2 : Approx. 8.5m



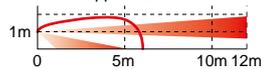
Position 4 : Approx. 3.5m



Position 3 : Approx. 6.0m



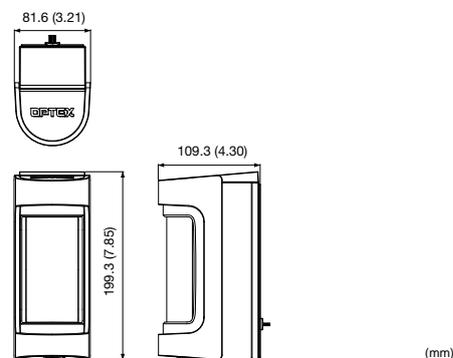
Position 5 : Approx. 2.5m



### OPTIONS

- VXS face cover (White / Silver / Black)
- VXS option cover unit (Black / white)
- VXS battery box (Black/White)
- RBB-01 : Battery box

### DIMENSIONS



### SPECIFICATIONS

Model	VXS-RAM	VXS-RDAM
Detection method	Passive infrared	Passive infrared & Microwave
PIR coverage	12 m (40 ft) 90° wide / 16 zones	
PIR distance limit	2.5 to 12 m (5 levels)	
Detectable speed	0.3 to 2.0 m / s (1.0 to 5.0 ft. / s)	
Sensitivity	2.0 °C ( 3.6 °F) at 0.6 m / s	
Power input	3 to 9 V DC Lithium or Alkaline Battery	
Current draw	10 μ A standby / 4 mA max. at 3 V DC	18 μ A standby / 8 mA max. at 3 V DC
Alarm period	2.0 ± 0.1 sec.	
Warm-up period	Approx. 60 sec. (LED blinks)	
Alarm output	N.C. / N.O. Selectable-Solid State Switch 10 V DC 0.01 A max.	
Trouble output	N.C. / N.O. Selectable-Solid State Switch 10 V DC 0.01 A max.	
LED indicator	Red LED ; 1. Warm-up 2. Alarm 3. Masking detection (DIP switch ON or Walk test)	Red LED ; 1. Warm-up 2. Alarm 3. Masking detection Yellow LED ; 1. Warm-up 2. MW detection (DIP switch ON or Walk test)
Operating temperature	-20°C to +60°C (-4°F to +140°F)	-20°C to +45°C (-4°F to +113°F)
Environment humidity	95 % max.	
International protection	IP55	
Mounting	Wall, Pole (Outdoor,Indoor)	
Mounting height	0.8 to 1.2 m (2.7 to 4.0 ft.)	
Weight	500 g (17.6 oz.)	550 g (19.4 oz.)
Accessories	Connector for POWER and ALARM, Connector for TROUBLE, Screw (4 x 20 mm) x 2, Masking seal x 3	

Specifications and designs are subject to change without prior notice.

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# VXI-ST/AM/DAM

B-ZONE

## OUTDOOR PIR DETECTOR



The VX Infinity series provide reliable intrusion detection in severe outdoor environment. Built with a top industry detection algorithm, its performance always remain optimal despite changes of day/night and seasonal environment. Newly added features and mechanism made VX Infinity more versatile and invulnerable in outdoor security system. Anti-masking and dual technology models are available in a lineup.

- VXI-ST – standard model
- VXI-AM – active IR anti-masking model
- VXI-DAM – dual technology model with active IR anti-masking
  - VXI-DAM-X5 : 10.525 GHz
  - VXI-DAM-X8 : 10.587 GHz

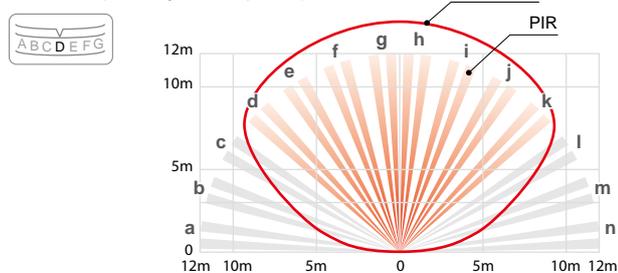
### FEATURES

- 12 m by 90 degree flexible detection pattern adjustable to 5 ranges
- SMDA (Super Multidimensional Analysis) logic
- Easy masking for over spill prevention
- Double conductive shielding
- Conduit/TX-battery case
- Active IR digital anti-masking (VXI-AM, VXI-DAM)
- Tough mod™ dual technology based on OPTEX gold-plated microwave module (VXI-DAM)

### COVERAGE

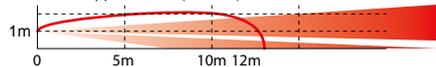
The actual detection distance is dependent on the thermal conditions within the given environment.

**TOP VIEW** (Area diagram for D position)

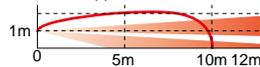


**SIDE VIEW** (Detection Distance by Positions)

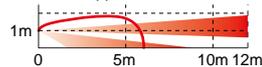
Position 1 : Approx. 12m (Default)



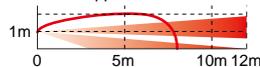
Position 2 : Approx. 8.5m



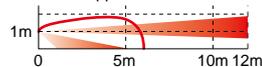
Position 4 : Approx. 3.5m



Position 3 : Approx. 6.0m



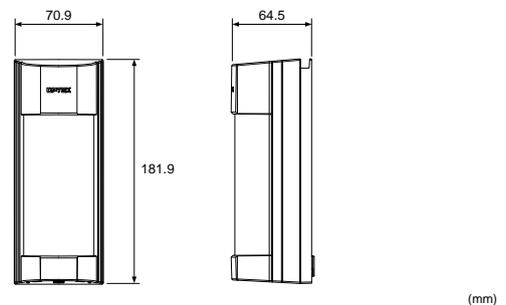
Position 5 : Approx. 2.5m



### OPTIONS

- PEU-B/C/D/E/F/G/H/I/J/K : Selectable plug-in end of line unit
- VXI-T-Bracket
- WRS-02 : Wall tamper

### DIMENSIONS



### SPECIFICATIONS

Model	VXI-ST	VXI-AM	VXI-DAM
Detection method	Passive infrared		
PIR coverage	12.0 m 90° wide / 16 zones		
PIR distance limit	12 to 2.5 m (5 levels)		
Detectable speed	0.3 to 1.5 m/s		
Sensitivity	2.0°C (3.6°F) at 0.6 m/s		
Power input	9.5 to 18 VDC		
Current draw	20 mA (max) at 12 VDC	24 mA (max) at 12 VDC	35 mA (max) at 12 VDC
Alarm period	2.0 ± 1 sec.		
Warm-up period	Approx. 60 sec. (LED blinks)		
Alarm output	N.C. / N.O. Selectable 28 VDC 0.1 A (max)		
Trouble output	N.C. 28 VDC 0.1 A (max)		
Tamper output	N.C. 28 VDC 0.1 A (max) open when cover removed.		
LED indicator	Red: Warm-up, alarm, masking detection (VXI-AM only)		Red: Warm-up, alarm, masking detection. Yellow: Warm-up, MW detect.
RF interference	No alarm 10 V/m		
Operating temperature	-30 to +60°C		-20 to +45°C
Environment humidity	95% max.		
International protection	IP55		
Mounting	Wall, Pole		
Mounting height	0.8 to 1.2 m		
Weight	500 g		600 g
Accessories	Screw (4x20 mm) x2, Wiring sponge x3, Masking seal x3		

Specifications and design are subject to change without prior notice.

# VXI-R/-RAM/-RDAM

B-ZONE

## BATTERY OPERATED OUTDOOR PIR DETECTOR



The VX Infinity "R" models are battery operated products. Sharing the same design and performance with VXI-ST, AM, DAM, "R" models have the most up-to-date outdoor protection capabilities. Utilizing transmitters from various major brands, "R" models enable easy wireless integration of outdoor protection into new and pre-existing security system. Anti-masking and dual technology models are available in a lineup.

- VXI-R – battery operated model
- VXI-RAM – battery operated model with active IR anti-masking
- VXI-RDAM – battery operated dual technology model with active IR anti-masking
  - VXI-RDAM-X5 : 10.525 GHz
  - VXI-RDAM-X8 : 10.587 GHz

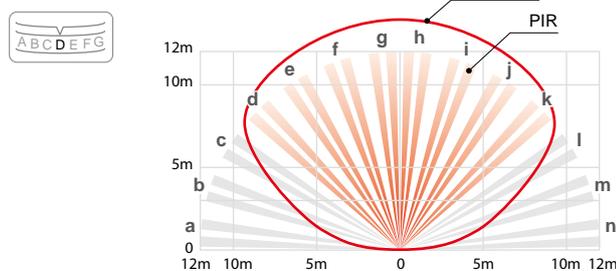
### FEATURES

- 12 m by 90 degree flexible detection pattern adjustable to 5 ranges
- SMDA (Super Multidimensional Analysis) logic
- Easy masking for over spill prevention
- Double conductive shielding
- Conduit/TX-battery case for both wired and wireless-ready models
- Active IR digital anti-masking(VXI-RAM, VXI-RDAM)
- Tough mod™ dual technology based on OPTEX gold-plated microwave module (VXI-RDAM)

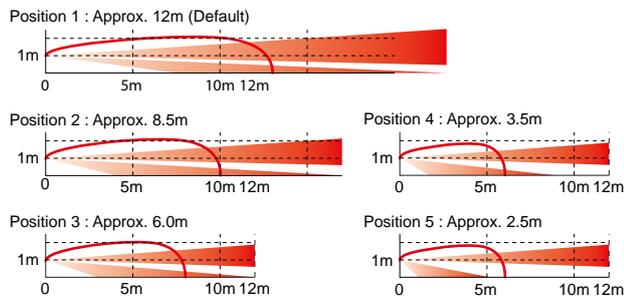
### COVERAGE

The actual detection distance is dependent on the thermal conditions within the given environment.

**TOP VIEW** (Area diagram for D position)



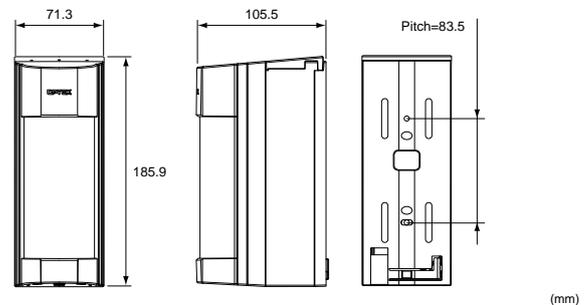
**SIDE VIEW** (Detection Distance by Positions)



### OPTIONS

- VXI-T-Bracket
- WRS-04 : Wall tamper
- RBB-01 : Battery box

### DIMENSIONS



### SPECIFICATIONS

Model	VXI-R	VXI-RAM	VXI-RDAM
Detection method	Passive infrared		Passive infrared & Microwave
PIR coverage	12.0 m wide / 16 zones		
PIR distance limit	12 to 2.5 m (5 levels)		
Detectable speed	0.3 to 1.5 m/s		
Sensitivity	2.0°C at 0.6 m/s		
Power input	3 to 9 VDC(Lithium or Alkaline Battery)		
Current draw	9µA (standby) / 4 mA (max) at 3 VDC	10µA (standby) / 4 mA (max) at 3 VDC	18µA (standby) / 8 mA (max) at 3 VDC
Alarm period	2.0 ±1 sec.		
Warm-up period	Approx. 60 sec. (LED blinks)		
Alarm output	N.C. / N.O. Selectable-Solid State Switch 10 VDC 0.01 A (max)		
Trouble output	N.C. / N.O. Selectable-Solid State Switch 10 VDC 0.01 A (max)		
LED indicator	Disable: During normal operation. Enable: During WALK TEST or LED SW on. Red: Warm-up, alarm, masking detection (VXI-RAM only)		Disable: During normal operation. Enable: During WALK TEST or LED SW on. Red: Warm-up, alarm, masking detection. Yellow: Warm-up, MW detect.
RF interference	No alarm 10 V/m		
Operating temperature	-20 to +60°C		-20 to +45°C
Environment humidity	95% max.		
International protection	IP55		
Mounting	Wall, Pole		
Mounting height	0.8 to 1.2 m		
Weight	500 g	600 g	
Accessories	Connector for POWER and ALARM, Connector for TROUBLE, Screw (4x20mm) x2, Masking seal x3		

Specifications and design are subject to change without prior notice.  
Batteries and wireless transmitters are not included in these products.

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

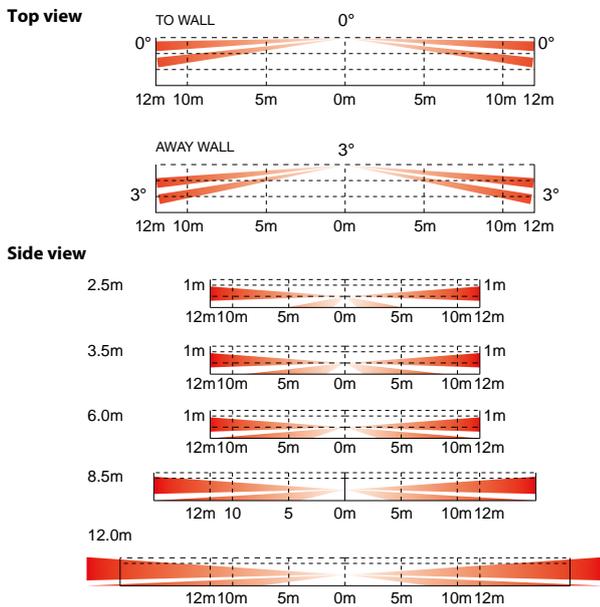
# BXS-ST/AM

**B-ZONE**

## BOUNDARY OUTDOOR PIR DETECTOR



### COVERAGE



### OPTIONS

- PEU-B/C/D/E/F/G/H/I/J/K : Selectable plug-in end of line unit
- BXS face cover (White / Silver / Black)
- BXS back box (Black / white)
- BXS back box cap (Black / white)
- PMP-01 : Pole mount plate

### COLLAR


 Black cover /  
Black body

 White cover /  
black body

 Silver cover /  
black body

 White cover /  
white body

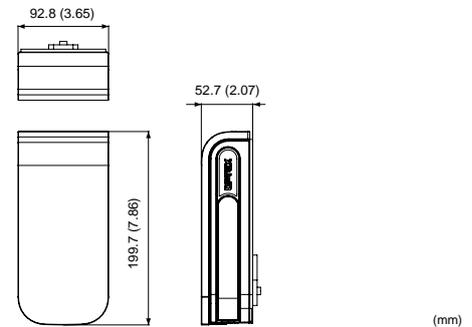
The BX SHIELD is a series of either side detectors providing 12 m side by side (total 24 m / 80 ft) coverage. Anti-masking model is also available in a lineup.

- BXS-ST – standard model
- BXS-AM – active IR anti-masking model

### FEATURES

- 4 PIR technology 24m (80 ft.) 12 m (40 ft.) on each
- side adjustable to 5 ranges (2.5m, 3.5m, 6.0m, 8.5m, 12.0m)
- Individual detection area and sensitivity setting
- Extreme high detection mode
- SMDA (Super Multidimensional Analysis) logic for advanced temperature compensation Individual signal outputs (right / left)
- Double conductive shielding against bright light disturbance
- Back tamper
- Automatic walk test mode

### DIMENSIONS



### SPECIFICATIONS

Model	BXS-ST	BXS-AM
Detection method	Passive infrared	
PIR coverage	24 m (80') ; 12 m (40') on each side, 4 zones ; 2 zones on each side, 180° narrow	
PIR distance limit	list the possible range 2.5, 3.5, 6, 8.5, 12 m	
Detectable speed	0.3 to 2.0 m/s (1' to 6'7"/s)	
Sensitivity	Normal ; 2.0°C (3.6°F) at 0.6 m/s Extreme high : 1.0°C (1.8°F) at 0.6 m/s selectable for each side individually	
Power input	9.5 to 18 V DC	
Current draw	31 mA max.at 12 V DC	34 mA max.at 12 V DC
Alarm period	2.0 ± 1 sec.	
Warm-up period	60 sec. or less (LED blinks)	
Alarm output	28 V DC 0.1 A max. [Individual; Right or General], [N.O. or N.C.] are selectable	
Trouble output	-	N.C. 28 V DC 0.1 A max.
Tamper output	N.C. 28 V DC 0.1 A max. open when face cover, main unit or base unit is removed	
LED indicator	Red LED ; 1. Warm-up 2. Alarm (DIP switch ON or Walk test)	Red LED ; 1. Warm-up 2. Alarm , 3. Masking detection (DIP switch ON or Walk test)
Operating temperature	-30°C to + 60°C (-22°F to +140°F)	
Environment humidity	95% max.	
International protection	IP 55	
Mounting	Wall, pole (outdoor, indoor)	
Mounting height	0.8 to 1.2 m (2'7" to 4')	
Weight	430 g (15.2 oz.)	
Accessories	Screw (4 x 20 mm) x 2	

Specifications and designs are subject to change without prior notice.

# BXS-R/RAM

B-ZONE

## BATTERY OPERATED BOUNDARY OUTDOOR PIR DETECTOR



The BX Shield "R" models are battery operated products. Sharing the same design and performance with BXS-ST/AM, "R" models have the most up-to-date outdoor protection capabilities.

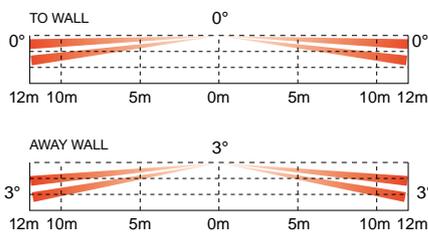
- BXS-R – battery operated model
- BXS-RAM – with active IR anti-masking

### FEATURES

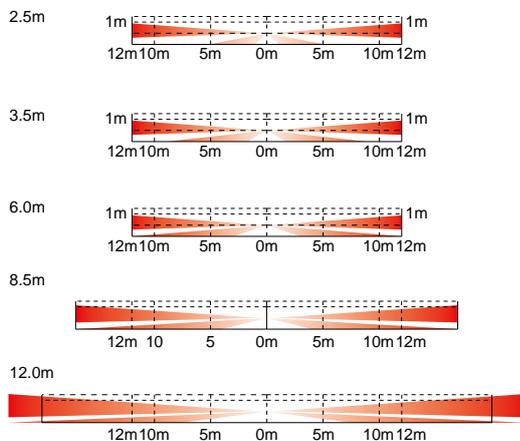
- Long battery life
- 4 PIR technology 24m (80 ft.) 12 m (40 ft.) on each side adjustable to 5 ranges (2.5m, 3.5m, 6.0m, 8.5m, 12.0m)
- Individual detection area and sensitivity setting
- Extreme high detection mode
- SMDA (Super Multidimensional Analysis) logic for advanced temperature compensation Individual signal outputs (right / left)
- Double conductive shielding against bright light disturbance
- Back tamper
- Automatic walk test mode

### COVERAGE

#### Top view



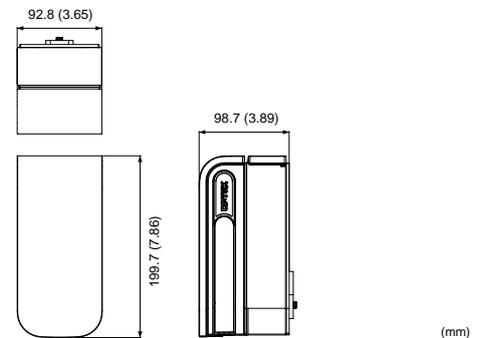
#### Side view



### OPTIONS

- BXS face cover (White / Silver / Black)
- BXS back box (Black / white)
- BXS back box cap (Black / white)
- PMP-01 : Pole mount plate
- RBB-01 : Battery box
- BH-01 : Battery holder

### DIMENSIONS



### SPECIFICATIONS

Model	BXS-R	BXS-RAM
Detection method	Passive infrared	
PIR coverage	24 m (80') ; 12 m (40') on each side, 4 zones ; 2 zones on each side, 180° narrow	
PIR distance limit	2.5 to 12 m (5 levels)	
Detectable speed	0.3 to 2.0 m/s (1' to 6'7"/s)	
Sensitivity	Normal ; 2.0°C (3.6°F) at 0.6 m/s Extreme high : 1.0°C (1.8°F) at 0.6 m/s selectable for each side individually	
Power input	3 to 9 V DC Lithium or Alkaline batteries	
Current draw	15 µA stand-by / 8 mA max. at 3 V DC	16 µA stand-by / 8 mA max. at 3 V DC
Alarm period	2.0 ± 1 sec.	
Warm-up period	60 sec. or less (LED blinks)	
Alarm output	Solidstate switch, 10 V DC 0.01 A max. [Individual; Right or General], [N.O. or N.C.] are selectable	
Trouble output	Solidstate switch, 10 V DC 0.01 A max. [N.O. or N.C.] is selectable	
Tamper output	Tamper output is shared with trouble output.	
LED indicator	Red LED ; 1. Warm-up 2. Alarm (DIP switch ON or Walk test)	Red LED ; 1. Warm-up 2. Alarm , 3. Masking detection (DIP switch ON or Walk test)
Operating temperature	-30°C to + 60°C (-22°F to +140°F)	
Environment humidity	95% max	
International protection	IP 55	
Mounting	Wall, pole (outdoor, indoor)	
Mounting height	0.8 to 1.2 m (2'7" to 4')	
Weight	550 g (19.4 oz.)	
Accessories	[1] Connector for POWER and ALARM (R), [2] Connector for ALARM (L), [3] Connector for TROUBLE, [4] Velcro tape, [5] Screw (4x20 mm) x 2	

Specifications and designs are subject to change without prior notice.

# BX-80N

**B-ZONE**

## OUTDOOR PIR DETECTOR FOR BUILDING PERIMETER



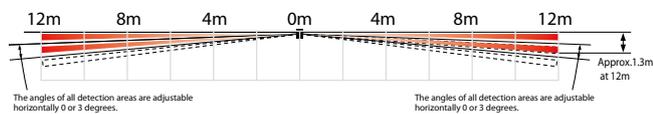
The BX-80N is stylishly designed to blend in with any architecture and is simple to install and set up.

### FEATURES

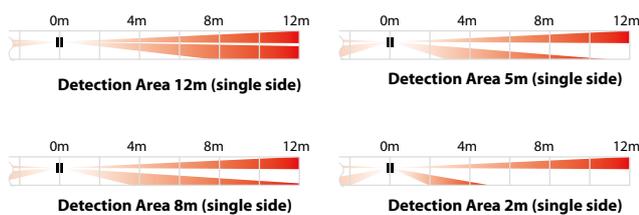
- Double conductive shielding
- Advanced temperature compensation
- Limited detection range function
- Size judging function to avoid false alarms
- Variable detection range up to 24m (12m on each side)
- Audible alarm function
- Attractive, slender design

### COVERAGE

#### TOP VIEW



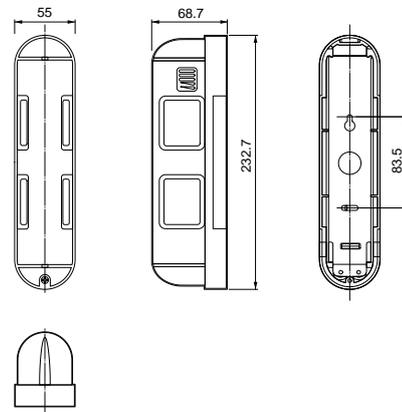
#### SIDE VIEW



### OPTIONS

- MG-1 : Vandal and tamper resistant metal guard
- SP-2 : Spacer unit
- BA-1W : Multi angle wall mount bracket

### DIMENSIONS



(mm)

### SPECIFICATIONS

Model	BX-80N
PIR coverage	24m (12m on each side)
Detection zones	4 zones (2 zones on each side)
Sensitivity	1.6°C at 0.6m/s
Detectable speed	0.3 to 2.0m/s
Power supply	10 to 28 VDC
Current consumption	38mA (max.)
Alarm period	2 ± 1 sec.
Alarm output	2 relay outputs N.O. and N.C. 28 VDC 0.2A (max.) each
Tamper switch	N.C. opens when cover is removed
Warm-up period	Approx. 45 sec. (LED blinks)
Volume of audible alarm	Approx. 70dB (at 1 meter distance)
LED indicator	LED is blinking during warm-up period
Operating temperature	Alarm condition -20 to +50°C
Environmental humidity	95% max.
RF interference	No Alarm 20V/m
Mounting height	0.8 to 1.2 m
Mounting	Wall
Weight	400 g
Dimensions (H x W x D)	232.7 mm x 55 mm x 68.7 mm
International protection	IP55

Specifications and design are subject to change without prior notice.

# BX-80NR

B-ZONE

## BATTERY OPERATED OUTDOOR PIR DETECTOR FOR BUILDING PERIMETER



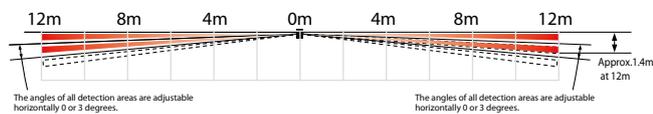
The BX-80NR is quick and easy to install. This unit requires no complicated wiring as it is a battery operated PIR detector. Not only does one save on installation time and cost, but an added benefit of the unit is its slick design that blends in with any architecture.

### FEATURES

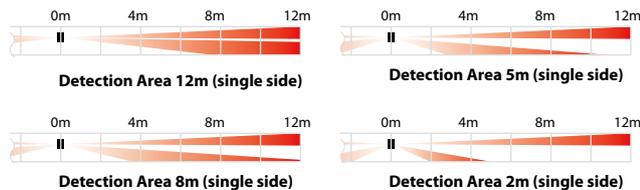
- Battery saving circuit
- Form C alarm output and tamper output
- Low current draw
- Double conductive shielding
- Advanced temperature compensation
- Limited detection range function
- Size judging function to avoid false alarms
- Variable detection range up to 24m (12m on each side)
- Compatible with numerous wireless transmitters

### COVERAGE

#### TOP VIEW



#### SIDE VIEW



### Back box for wireless transmitters and batteries

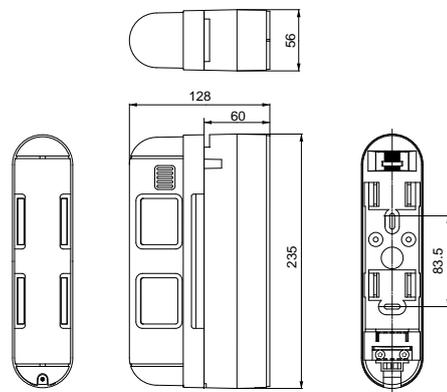


Batteries are not included with this unit.

### OPTIONS

- BA-1W : Multi angle wall mount bracket

### DIMENSIONS



(mm)

### SPECIFICATIONS

Model	BX-80NR
PIR coverage	24m (12m on each side)
Detection zones	4 zones (2 zones on each side)
Sensitivity	2.0°C at 0.6m/s
Detectable speed	0.3 to 1.5m/s
Power supply	3 - 9 VDC lithium or alkaline Battery
Current consumption	3mA(Walktest, LED on) 15uA(Standby)
Alarm period	2 ± 1 sec.
Alarm output	Form C-Solid state switch: 10 VDC 0.01A
Battery saving time	Approx. 120 sec. or 5 sec.
Tamper swith	Form C activates when cover is removed
Warm-up period	Approx. 2 min.
LED indicator	Disable during normal operation Enable during walktest or LED switch on
Operating temperature	-20 to +50°C
Environmental humidity	95% max.
RF interference	No Alarm 20V/m
Mounting height	0.8 to 1.2 m
Mounting	Wall
Weight	520 g
Dimensions (H x W x D)	235 mm x 56 mm x 128 mm
International protection	IP55

Specifications and design are subject to change without prior notice. Batteries and wireless transmitters are not included in these products.

# FTN-ST/AM

B-ZONE

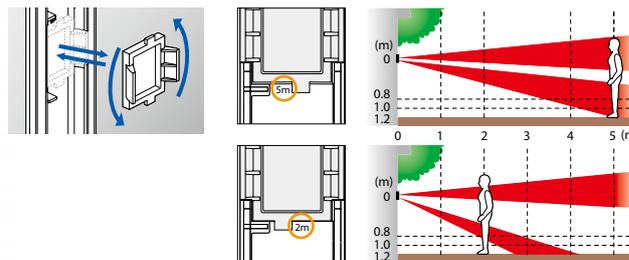
## COMPACT OUTDOOR PIR DETECTOR



FTN series offers the perfect solution for those outdoor areas where environmental disturbances and small animals may cause false alarms.

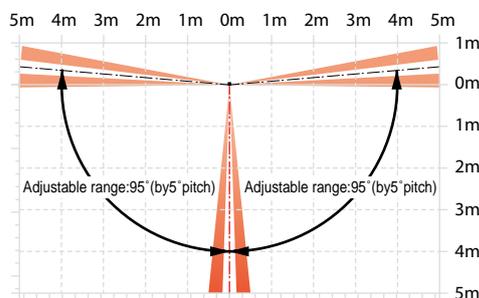
- FTN-ST – standard model
- FTN-AM – active IR anti-masking model

### 5m/2m switchable lens

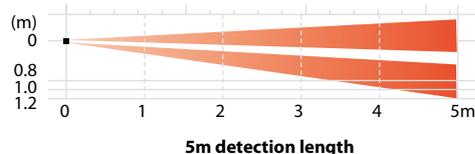
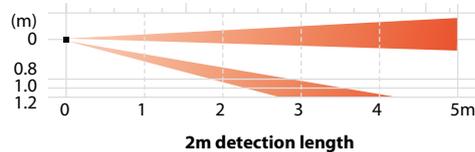


### COVERAGE

#### TOP VIEW



#### SIDE VIEW



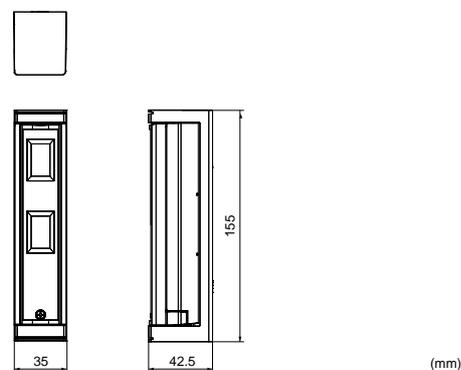
### OPTIONS

- WRS-02 : Wall tamper

### FEATURES

- Built in bracket (190° horizontal)
- 5m/2m switchable lens
- SMDA (Super Multidimensional Analysis) logic
- Intelligent AND detection logic
- Active IR digital anti-masking (FTN-AM)
- Wall tamper (options)

### DIMENSIONS



### SPECIFICATIONS

Model	FTN-ST	FTN-AM
Detection method	Passive infrared	
PIR coverage	5 x 1m	
Detection length limit	2 m, 5 m	
Detectable speed	0.3 to 1.5 m/s	
Sensitivity	2.0°C (at 0.6 m/s)	
Operation voltage	9.5 to 18 VDC	
Current draw	17mA(max.) (at 12 VDC)	20mA(max.) (at 12 VDC)
Alarm period	2.0 ± 1.0sec.	
Warm-up period	Approx. 60 sec. (LED blinks)	
Alarm output	N.C./N.O. Selectable 28 VDC 0.1 A (max.)	
Trouble output	N.C. 28 VDC 0.1 A (max.), opens when the cover is removed.	
LED indicator	Light/Blink: Warm-up, alarm, masking detection (FTN-AM only)	
Operation temperature	-20 to +60°C	
Environmental humidity	95% max.	
International protection	IP55	
Mounting	Wall (Outdoor, Indoor)	
Mounting height	0.8 to 1.2 m	
Weight	100 g	
Accessories	screw (3 x 20 mm) x 2	

Specifications and design are subject to change without prior notice.

# FTN-R/RAM/R-PT/RAM-PT

B-ZONE

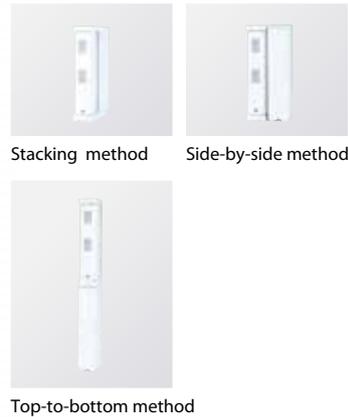
## BATTERY OPERATED COMPACT OUTDOOR PIR DETECTOR



FTN-R/RAM are battery operated outdoor PIR detector and therefore requires no complicated wiring. It saves installation time and cost.

- FTN-R – battery operated model
- FTN-RAM – battery operated model with active IR anti-masking function

### Multi fixing separate box



### FTN-R-PT/RAM-PT

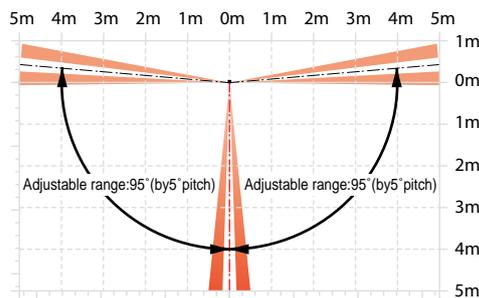


### FEATURES

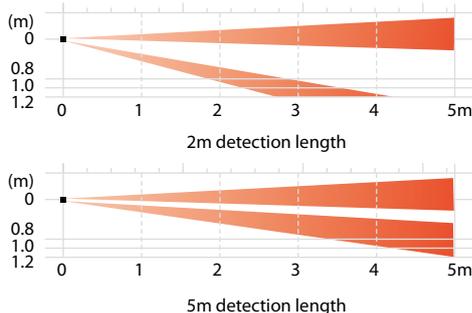
- Long battery life
- Built in bracket (190° horizontal)
- Active IR digital anti-masking (FTN-RAM)
- Wall tamper (options)

### COVERAGE

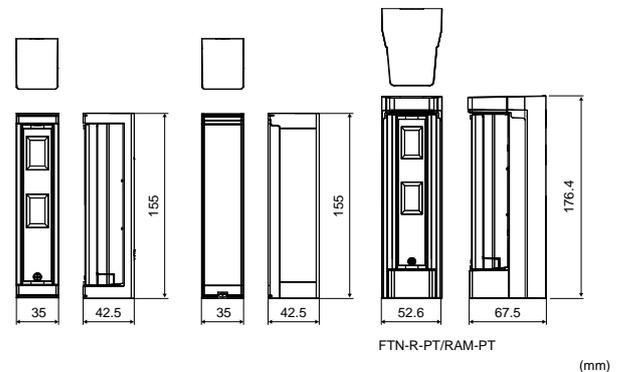
#### TOP VIEW



#### SIDE VIEW



### DIMENSIONS



### SPECIFICATIONS

Model	FTN-R	FTN-RAM
Detection method	Passive infrared	
PIR coverage	5 x 1m	
Detection length limit	2 m, 5 m	
Detectable speed	0.3 to 1.5 m/s	
Sensitivity	2.0°C (at 0.6 m/s)	
Operation voltage	2.5 to 10 VDC	
Power input	3 - 9 VDC (Lithium or Alkaline Battery)	
Current draw	9µA(at stand-by) / 3mA(max.)(at 3 VDC)	10µA(at stand-by) / 3mA(max.)(at 3 VDC)
Alarm period	2.0 ± 1.0sec.	
Warm-up period	Approx. 120 sec. (LED blinks)	
Alarm output	N.C./N.O. Selectable-Solid State Switch 10 VDC 0.01 A(max.)	
Trouble output	N.C./N.O. Selectable-Solid State Switch 10 VDC 0.01 A(max.)	
LED indicator	Enable: During DIP switch 1 (WALK TEST MODE) or DIP switch 4 (LED) ON Disable: During normal operation Light/Blink: Warm-up, alarm, masking detection (FTN-RAM only)	
Operation temperature	-20 to +60°C	
Environmental humidity	95% max.	
International protection	IP55	
Mounting	Wall (Outdoor, Indoor)	
Mounting height	0.8 to 1.2 m	
Weight	190 g (FTN-R-PT 180g)	190 g (FTN-RAM-PT 180g)
Accessories	Connector for POWER and ALARM, connector for TROUBLE, plate nut x 2, screw (M3 x 10 mm) x 2, screw (3 x 20 mm) x 4, sponge for transmitter	

Specifications and design are subject to change without prior notice. Batteries and wireless transmitters are not included in these products.

### OPTIONS

- WRS-03 : Wall tamper

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# HX-80N/NAM

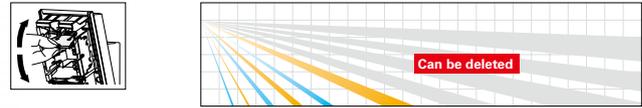
B-ZONE

## 24M LONG AND NARROW RANGE HIGH MOUNT OUTDOOR PIR DETECTOR

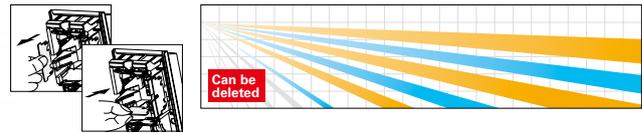


HX-80N's coverage can be adjusted by means of built-in flaps and plates.

### Flaps for long distance limit



### Plates for short range masking

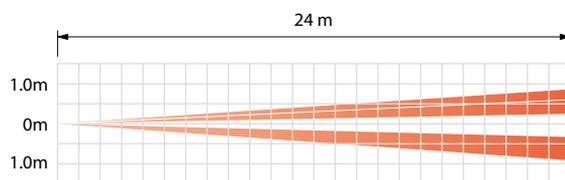


### FEATURES

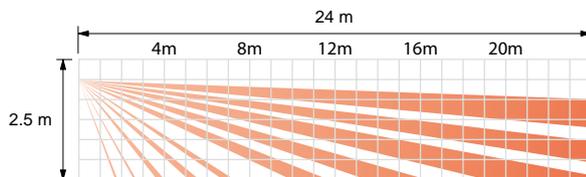
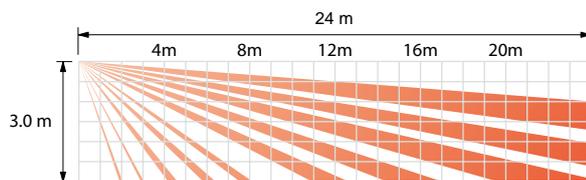
- Mounting height 2.5-3.0m
- Intelligent AND detection logic
- Double conductive shielding
- Advanced temperature compensation logic
- Summer night compensation logic
- Vegetation sway analysis logic
- Active IR digital anti-masking (HX-80NAM)

### COVERAGE

#### TOP VIEW



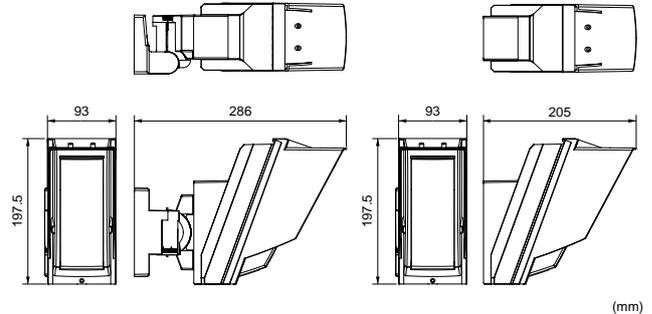
#### SIDE VIEW



### DIMENSIONS

Using bracket

Without bracket



### SPECIFICATIONS

Model	HX-80N	HX-80NAM
Detection method	Passive infrared	
Anti-masking	-	Active IR
PIR coverage	24.0 m x 2.0 m narrow / 20 zones	
PIR distance limit	6.5 m, 10.0 m, 13.0 m, 18.0 m	
Detectable speed	0.3 to 1.5 m/s	
Sensitivity	2.0° C at 0.6 m/s	
Power input	9.5 to 18 VDC	
Current draw	35 mA (max.) at 12 VDC	40 mA (max.) at 12 VDC
Alarm period	2.0 ± 1 sec.	
Warm-up period	Approx. 60 sec. (LED blinks)	
Alarm output	Form C 28 VDC 0.2 A (max.)	
Tamper output	N.C. 28 VDC, 0.1 A (max.) N.C. opens when cover removed.	
Trouble output	-	N.C. 28 VDC, 0.1 A (max.)
Aux input	N.C. 28 VDC, 0.1 A (max.)	
LED indicator	Red: Warm-up, Alarm	Red: Warm-up, Alarm, Trouble
RF interference	No alarm 10 V/m	
Operating temperature	-20 to +60° C	
Environmental humidity	95% max.	
International protection	IP55	
Mounting	Wall	
Mounting height	2.5 to 3.0 m	
Bracket adjust angle	Vertical: ± 20° Horizontal: ± 95°	
Weight	720 g	
Accessories	Bracket, Screw (4 x 20 mm) x 4	

Specifications and designs are subject to change without prior notice.

# HX-80NRAM

B-ZONE

BATTERY OPERATED 24M LONG AND NARROW RANGE HIGH MOUNT OUTDOOR PIR DETECTOR



The HX-80NRAM, a battery operated outdoor PIR detector allows for long distance outdoor installation, providing while exceptional detection capabilities.



Battery box for numerous battery types

CR123A x 3  
(3.0VDC)



CR2 x 3  
(3.0VDC)



1/2AA x 3  
(3.6VDC)



1/2AA x 6  
(7.2VDC x 3)\*



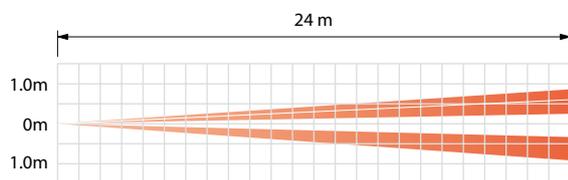
\*3.6 VDC 1/2 AA battery in series.

## FEATURES

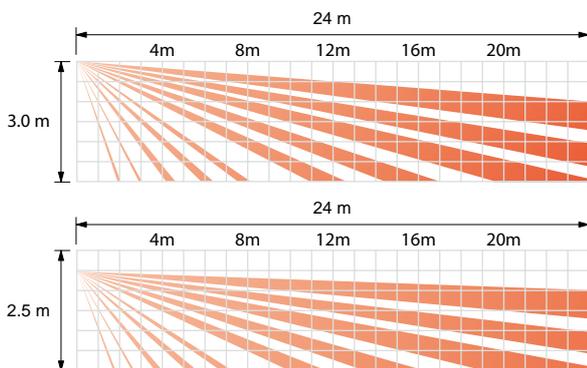
- Long battery life
- Active IR digital anti-masking
- Mounting height 2.5-3.0m
- Intelligent AND detection logic
- Double conductive shielding
- Advanced temperature compensation logic
- Summer night compensation logic
- Vegetation sway analysis logic

## COVERAGE

### TOP VIEW

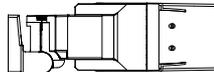


### SIDE VIEW

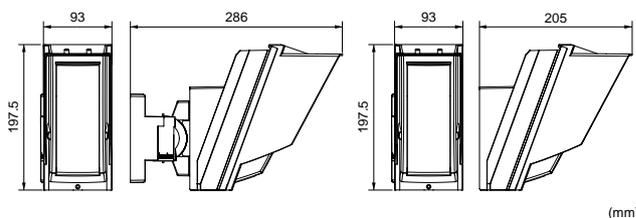
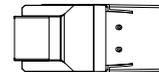


## DIMENSIONS

Using bracket



Without bracket



## SPECIFICATIONS

Model	HX-80NRAM
Detection method	Passive infrared
Anti-masking	Active IR
PIR coverage	24.0 m x 2.0 m narrow / 20 zones
PIR distance limit	6.5 m, 10.0 m, 13.0 m, 18.0 m
Detectable speed	0.3 to 1.5 m/s
Sensitivity	2.0°C at 0.6 m/s
Power input	3 - 7.2 VDC Lithium Battery (CR123A x 3, CR2 x 3, 1/2AA x 3, 1/2AA x 6)
Operating voltage	2.5 to 9VDC
Current draw	30µA (standby) / 4 mA (max.) at 3 VDC
Alarm period	2.0 ± 1 sec.
Warm-up period	Approx. 90 sec. (LED blinks)
Alarm output	Form C -Solid State Switch- 10 VDC 0.01 A max.
Trouble output	N.C./N.O. Selectable -Solid State Switch- 10 VDC 0.01 A max.
Tamper output	Form C. 28 VDC, 0.1 A max. activates when cover removed.
LED indicator	Disable: During normal operation. Enable: During WALK TEST or LED SW on. Red: Warm-up, Alarm, Trouble, Low battery
RF interference	No alarm 10 V/m
Operating temperature	-20 to +60°C
Environmental humidity	95% max.
International protection	IP55
Mounting	Wall
Mounting height	2.5 to 3.0 m
Bracket adjust angle	Vertical: ±20° Horizontal: ±95°
Weight	780 g
Accessories	Bracket, Screw (4 x 20 mm) x 4, Velcro tape x 2, Alarm cable, Battery lead x 2, Dummy battery kit

Specifications and designs are subject to change without prior notice. Batteries and wireless transmitters are not included in these products.

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# HX-40/AM/DAM

B-ZONE

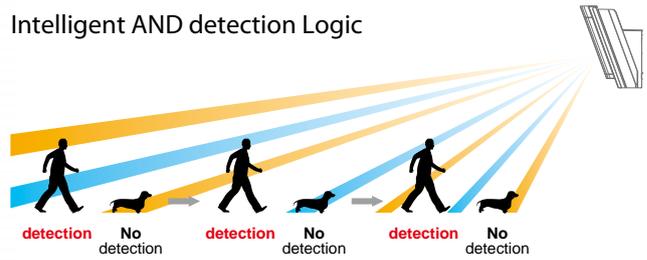
## HIGH MOUNT OUTDOOR PIR DETECTOR



HX-40 series offers high detection performance against missed alarms in a hostile environment.

- HX-40 : standard model
- HX-40AM : active IR anti-masking model
- HX-40DAM : dual technology model with active IR anti-masking
  - HX-40DAM-X5 : 10.525 GHz
  - HX-40DAM-X8 : 10.587 GHz

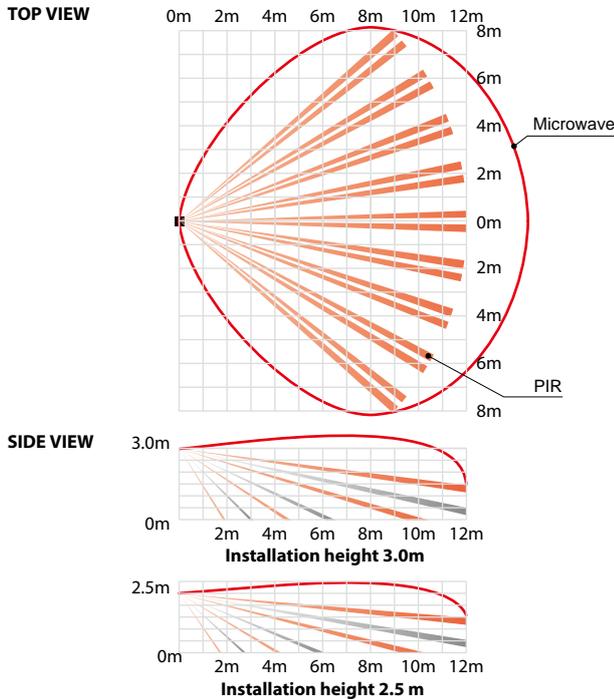
### Intelligent AND detection Logic



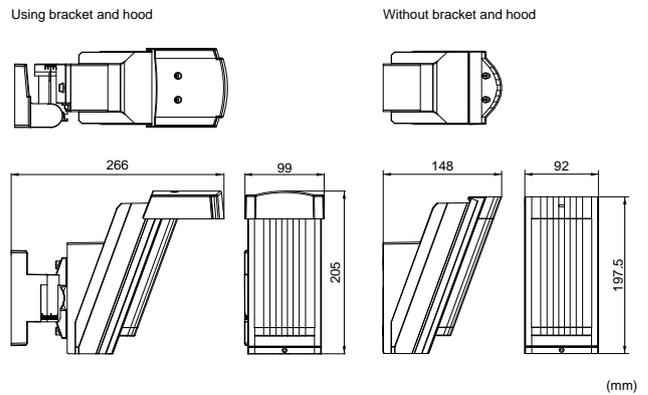
### FEATURES

- Active IR digital anti-masking (HX-40AM/DAM only)
- Microwave Intelligent quantification logic (HX-40DAM only)
- Microwave range selector (HX-40DAM only)
- Mounting height 2.5-3m
- Intelligent AND detection logic
- Dual signal processing circuit
- Vegetation sway analysis logic
- Double conductive shielding
- Ideal detection area setting

### COVERAGE



### DIMENSIONS



### SPECIFICATIONS

Model	HX-40	HX-40 AM	HX-40 DAM
Detection method	Passive infrared		Passive infrared & Microwave
Anti-masking	-	Active IR	
PIR coverage	12 m 85° wide / 94 zones		
PIR distance limit	4 m, 5.5 m, 9 m		
Detectable speed	0.3 to 1.5 m/s		
Sensitivity	2.0°C at 0.6 m/s		
Power input	9.5 to 18 VDC		
Current draw	35 mA (max) at 12 VDC	40 mA (max) at 12 VDC	50 mA (max.) at 12 VDC
Alarm period	2.0 ± 1 sec		
Warm-up period	Approx. 60 sec(LED blinks)		
Alarm output	Form C 28 VDC 0.2A max		
Tamper output	N.C. 28 VDC, 0.1A max. N.C. opens when cover is removed.		
Trouble output	N.C. 28 VDC, 0.1A max		
Aux input	-	N.C. 28 VDC, 0.1A max	
LED indicator	Red:Warm-up, Alarm		Red:Warm-up, Alarm, Trouble Green:Warm-up, PIR detect, Trouble Yellow:Warm-up, MW detect
RF interference	No alarm 10 V/m		
Operating temperature	-20 to +60°C		
Environmental humidity	95% max		
International protection	IP55		
Mounting	Wall		
Mounting height	2.5 to 3.0 m		
Bracket adjust angle	Vertical: ±20° Horizontal: ± 95°		
Weight	600 g		700 g
Accessories	Bracket, Hood, Area masking seal, Screw kit (3 x 10-2, 4 x 20-4)		

Specifications and design are subject to change without prior notice.

Microwave ranges are for HX-40DAM.

# HX-40RAM

B-ZONE

## BATTERY OPERATED HIGH MOUNT OUTDOOR PIR DETECTOR WITH ANTI-MASKING FUNCTION



The HX-40RAM, a battery operated outdoor PIR detector allows for economical and effortless outdoor installation, providing while exceptional detection capabilities.

### Battery box for numerous battery types

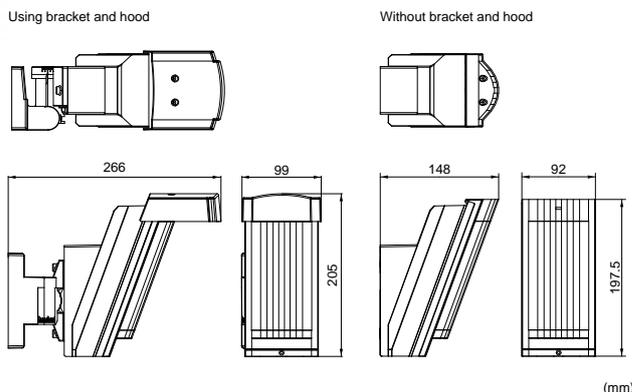


\*3.6 VDC 1/2 AA battery in series.

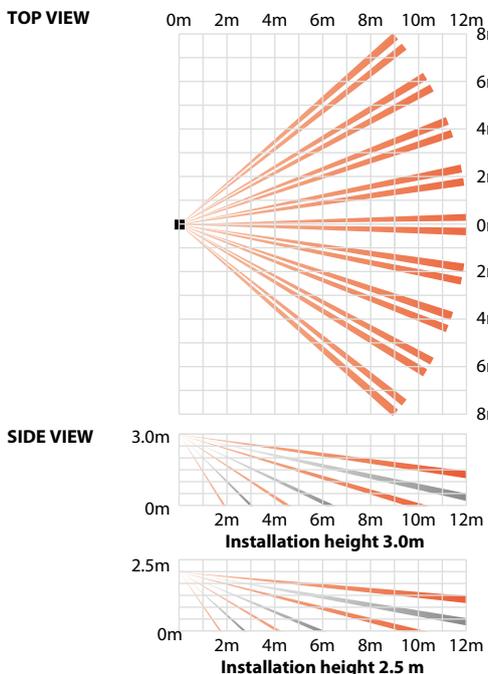
### FEATURES

- Long battery life
- Form C alarm output and tamper output
- Battery saving timer function
- Active IR digital anti-masking
- Mounting height 2.5-3m
- Intelligent AND detection logic
- Dual signal processing circuit
- Vegetation sway analysis logic
- Double conductive shielding
- Ideal detection area setting

### DIMENSIONS



### COVERAGE



### SPECIFICATIONS

Model	HX-40 RAM
Detection method	Passive infrared
Anti-masking	Active IR
PIR coverage	12 m 85° wide / 94 zones
Distance limit	4 m, 5.5 m, 9 m
Detectable speed	0.3 to 1.5 m/s
Sensitivity	2.0°C at 0.6 m/s
Power input	3 to 7.2 VDC Lithium Battery (CR123A x 3, CR2 x 3, 1/2AA x 3, 1-2AA x 6)
Operating Voltage	2.5 to 9 VDC
Current draw	30 µA (standby) / 4mA (max) at 3 VDC
Alarm period	2.0 ± 1 sec
Warm-up period	Approx. 90 sec(LED blinks)
Alarm output	Form C - Solid State Switch - 10 VDC 0.01A max.
Trouble output	N.C./N.O. Selectable - Solid State Switch - 10 VDC 0.01A
Tamper output	Form C. 28 VDC, 0.1A max. changes when cover is removed
Aux input	-
LED indicator	Disable : During normal operation. Enable : During WALK TEST or LED SW on. Red : Warm-up, Alarm, Trouble, Low battery
RF Interference	No alarm 10 V/m
Operating temperature	-20 to +60°C
Environmental humidity	95% max
International protection	IP55
Mounting	Wall
Mounting height	2.5 to 3.0 m
Bracket adjust angle	Vertical: ± 20° Horizontal: ± 95°
Weight	600 g
Accessories	Bracket, Hood, Area masking seal, Screw kit (3 x 10-2, 4 x 20-4) Velcro tape x 2, Alarm cable, Battery lead x 2, Dummy battery kit

Specifications and design are subject to change without prior notice. Batteries and wireless transmitters are not included in these products.

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# QXI-ST/DT

**B-ZONE**

## WIDE ANGLE OUTDOOR PIR DETECTOR



The QXI series is a family of outdoor detectors providing 120 degree wide and 12 m (40 ft.) detection area. With its sleek and compact housing, the QX Infinity series fits any residential and commercial buildings without ruining its appearance.

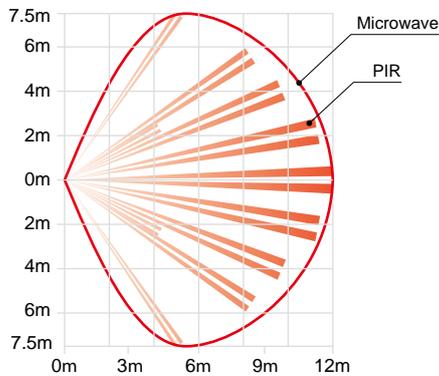
- QXI-ST - standard model
- QXI-DT - dual technology model

### FEATURES

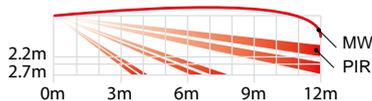
- Sleek & Compact design
- Selectable Mounting Height & Pattern
- Anti-blocking Function (QXI-DT only)
- Easy Open and Close Front Cover
- Double Conductive Shielding
- SMDA (Super Multi Dimension Analysis) logic
- Operating Temperature:  
QXI-ST/R:-40 to +60°C (-40 to +140°F) /  
QXI-DT/RDT:-40 to +45°C (-40°F to +113°F)
- UV Resistant ASA body
- Automatic Walk Test Mode
- Tough MOD : super tough microwave module (QXI-DT only)
- Cover / Back tamper

### COVERAGE

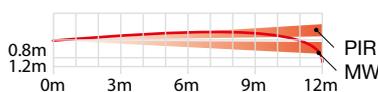
#### TOP VIEW



#### SIDE VIEW (Multi Level)



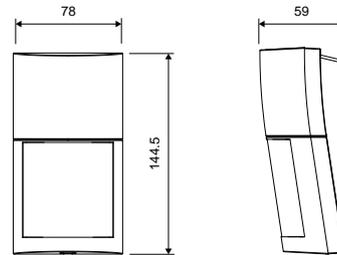
#### SIDE VIEW (Pet Alley)



### OPTIONS

- CA-2C(W) : Multi angle ceiling mount bracket
- CA-1W(W) : Multi angle wall mount bracket

### DIMENSIONS



(mm)

### SPECIFICATIONS

Model	QXI-ST	QXI-DT
Detection method	Passive infrared	
PIR coverage	12.0 m (40') 120° wide	
Detectable speed	0.3 to 2.0 m/s (1' to 6'7"/s)	
Sensitivity	2.0°C ( 3.6°F) at 0.6 m/s	
Power input	9.5 to 16 VDC	
Current draw	20 mA max. at 12 VDC	30 mA max. at 12 VDC
Alarm period	2.0 ± 0.5 sec. (delay timer)	
Warm-up period	Approx. 60 sec. (LED blinks)	
Alarm output	N.C./N.O. switchable, 28 VDC 0.1 A max.	
Trouble output	-	N.C. 28 V DC 0.1 A max.
Tamper output	N.C. 28 VDC 0.1 A max. Open when the cover is opened	
LED indicator	[1] Warm-up [2] Alarm [3] Walk test end	[1] Warm-up [2] Alarm [3] Walk test end [4] Blocking detection
Operating temperature	-40°C to +60°C (-40°F to +140°F)	-40°C to +45°C (-40°F to +113°F)
Environment humidity	95% max.	
International protection	IP54	
Mounting	Wall, Ceiling (Outdoor, Indoor)	
Mounting height	Multi level : 2.2 to 2.7 m (7' 3" to 8'11") / Pet alley : 0.8 to 1.2 m (2' 7" to 4')	
Weight	180 g (6.35 oz)	195 g (6.88 oz)
Accessories	[1] Mounting screw (4 x 12 mm) x 2 [2] Lock screw (3 x 12 mm) x 1 [3] Area masking strips	

Specifications and design are subject to change without prior notice.

# QXI-R/RDT

B-ZONE

## BATTERY OPERATED WIDE ANGLE OUTDOOR PIR DETECTOR



The QX Infinity "R" models are battery operated products. Sharing the same design and performance with QXI-ST/DT, "R" models have the most up-to-date outdoor protection capabilities.

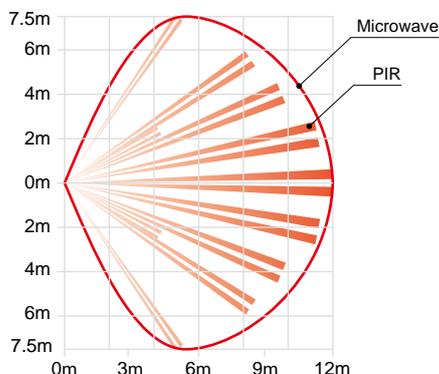
- QXI-R – battery operated model
- QXI-RDT – battery operated dual technology model

### FEATURES

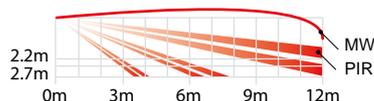
- Sleek & Compact design
- Selectable Mounting Height & Pattern
- Anti-blocking Function
- Easy Open and Close Front Cover
- Double Conductive Shielding
- SMDA (Super Multi Dimension Analysis) logic
- Operating Temperature: QXI-ST/R: -40 to +60°C (-40 to +140°F) / QXI-DT/RDT: -40 to +45°C (-40°F to +113°F)
- UV Resistant ASA body
- Automatic Walk Test Mode
- Battery Common Use
- Tough MOD : super tough microwave module (QXI-RDT only)
- Cover / Back tamper

### COVERAGE

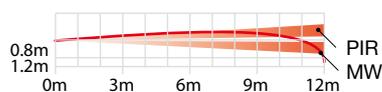
#### TOP VIEW



#### SIDE VIEW (Multi Level)



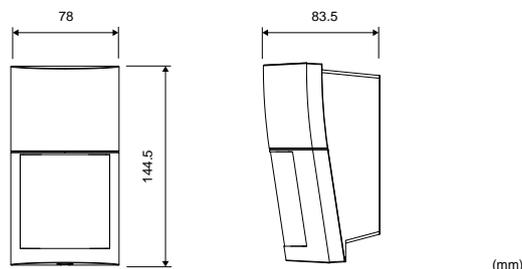
#### SIDE VIEW (Pet Alley)



### OPTIONS

- CA-2C(W) : Multi angle ceiling mount bracket
- CA-1W(W) : Multi angle wall mount bracket

### DIMENSIONS



### SPECIFICATIONS

Model	QXI-R	QXI-RDT
Detection method	Passive infrared & Microwave	
PIR coverage	12.0 m (40') 120°wide	
Detectable speed	0.3 to 2.0 m/s (1' to 6'7"/s)	
Sensitivity	2.0°C (3.6°F) at 0.6 m/s	
Power input	CR123A (3 V DC) *Not included	
Current draw	9 µA stand-by 11 mA max. at 3 V DC	16µA stand-by 11 mA max. at 3 V DC
Alarm period	2.0 ± 0.5 sec. (delay timer)	
Warm-up period	Approx. 60 sec. (LED blinks)	
Alarm output	N.C/N.O. switchable solidstate switch, 3 V DC 0.01 A max.	
Trouble output (with tamper)	N.C/N.O. switchable solidstate switch, 3 V DC 0.01 A max. (with tamper)	
LED indicator	[1] Warm-up [2] Alarm [3] Walk test end	
Operating temperature	-40°C to +60°C (-40°F to +140°F)	-40°C to +45°C (-40°F to +113°F)
Environment humidity	95% max.	
International protection	IP54	
Mounting	Wall, Ceiling (Outdoor, Indoor)	
Mounting height	Multi level : 2.2 to 2.7 m (7' 3" to 8'11") / Pet alley : 0.8 to 1.2 m (2' 7" to 4')	
Weight	215 g (7.58 oz)	230 g (8.11 oz)
Accessories	[1] Dummy battery and connector for ALARM [2] Connector for TROUBLE [3] Mounting screw (4 x 12 mm) x 3 [4] Lock screw (3 x 12 mm) x 1 [5] Area masking strips	

Specifications and design are subject to change without prior notice.

# LX-402/802N

B-ZONE

## OUTDOOR PIR DETECTOR



The LX series is robust, weatherproof and specifically designed for short-range outdoor applications with wide angle and long range options.

- LX-402 – 120° wide angle model
- LX-802N – long and narrow range model



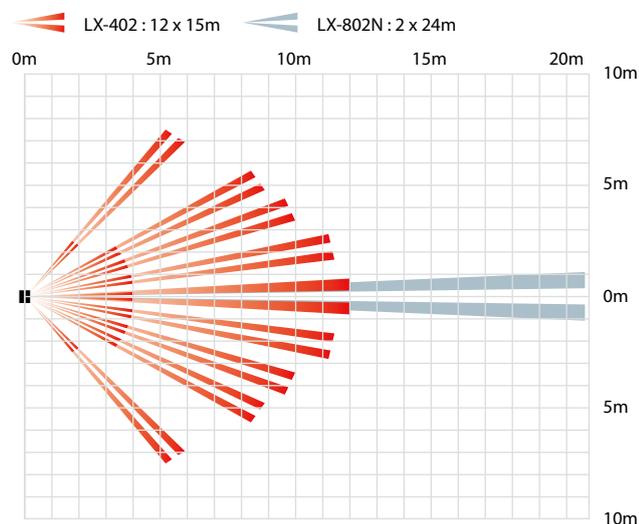
LX-802N

### FEATURES

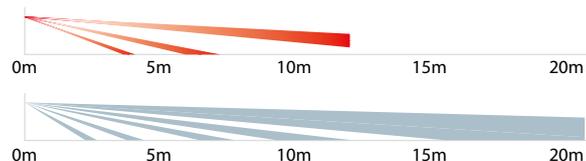
- Double conductive shielding
- Selectable detection patterns (pet alley or multi-level)
- Area-masking strips (LX-402)
- Sensitivity selection switch (high, mid and low)
- Selectable pulse count (test or 2)
- Day & night modes

### COVERAGE

#### TOP VIEW



#### SIDE VIEW



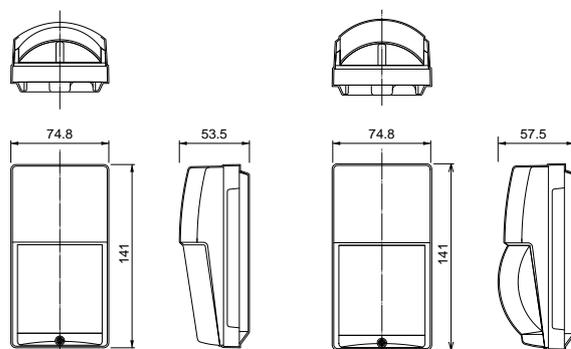
### OPTIONS

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

### DIMENSIONS

LX-402

LX-802N



(mm)

### SPECIFICATIONS

Model	LX-402	LX-802N
PIR coverage	12m x 15m 120° wide	24m x 2m long range
Detection zones	Multi-level area	40 zones
	Pet alley area	18 zones
Sensitivity	Selectable 3 position (High / Middle / Low)	
	Detectable speed	0.3 to 1.0m/sec.
Power supply	10.8 to 13.2 VDC	
Current consumption	25mA max.	
Alarm period	2 ± 1 sec. (delay timer)	
Alarm output	N.C. N.O. 28 VDC 0.2A max.	
Tamper switch	N.C. opens when cover is removed	
Pulse count	2 (20 ± 5 sec.) or TEST (1 pulse)	
Warm-up period	Approx. 60 sec.	
LED indicator	LED lights during detection	
Operating temperature	-20 to +50°C	
Environmental humidity	95% max.	
Mounting height	Multi-level area	2.5 m max.
	Pet alley area	1.2 to 1.5 m
Mounting	Wall	
Weight	170 g	190 g
Dimensions (H x W x D)	141 mm x 74.8 mm x 53.5 mm	141 mm x 74.8 mm x 57.5 mm
International protection	IP54	

Specifications and design are subject to change without prior notice.

# BX-100PLUS

B-ZONE

## PHOTOELECTRIC DETECTOR FOR BUILDING PERIMETER



The BX-100PLUS consists of a pair of small, discreet dual infrared beams designed to protect the immediate perimeter of a building.



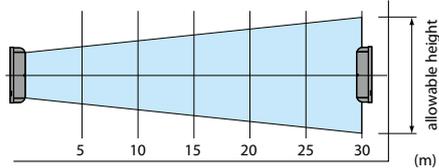
White decorative cover  
WC-1 (Option)

### 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

### RANGES

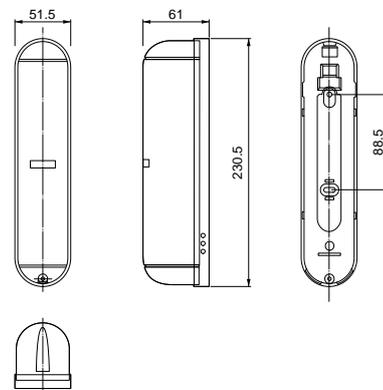
detection range	5	10	15	20	25	30	m
allowable height	30	40	50	50	50	50	cm



### OPTIONS

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

### DIMENSIONS



(mm)

### APPLICATIONS

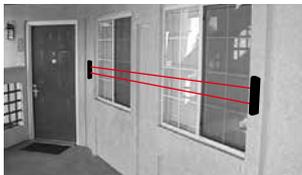
#### Retail



#### Business



#### Residential



#### Industrial



### SPECIFICATIONS

Model	BX-100PLUS
Maximum detection range	30m
Maximum arrival distance	300m
Interruption period	50 msec.
Power supply	10.5 to 28 VDC
Current consumption (transmitter + receiver)	55mA (stand by) / 75mA (max.)
Alarm period	2 ± 1 sec. (delay)
Relay output	2 relay outputs N.O. and N.C. 28 VDC 0.2A (max.) each
Beeping period	15 ± 1 sec. (delay)
Volume of audible alarm indicator	Approx. 70dB (at 1 meter distance)
Tamper switch	N.C. opens when cover is removed
Operating temperature	-35 to +55°C
Environmental humidity	95% max.
Alignment angle	± 92° Horizontal
Mounting	Wall
Weight (transmitter+receiver)	400 g
Dimensions (H x W x D)	230.5 mm x 51.5 mm x 61 mm
International protection	IP54

Specifications and design are subject to change without prior notice.

# OPTIONS

OUTDOOR PROTECTION

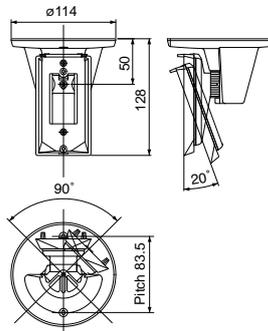
INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

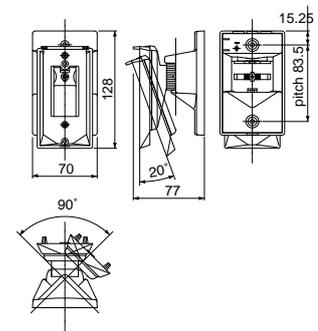
## CA-2C



Multi Angle Ceiling Mount Bracket for  
 • LX-402/802N  
 • QXI-ST/DT/R/RDT

(mm)

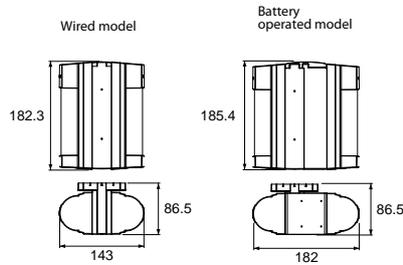
## CA-1W



Multi Angle Wall Mount Bracket for  
 • LX-402/802N  
 • QXI-ST/DT/R/RDT

(mm)

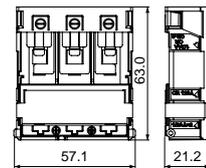
## VXI-T-BRACKET



T-bracket for  
 • VXI-ST/AM  
 • VXI-R/RAM

(mm)

## RBB-01



Battery Box for  
 • VXI-R/RAM/RDAM  
 • BXS-R/RAM

(mm)

## WRS-02



Wall Tamper for  
 • FTN-ST/AM  
 • VXI-ST/AM/DAM

## WRS-03



Wall Tamper for  
 • FTN-R/RAM/R-PT/RAM-PT

## WRS-04



Wall Tamper for  
 • VXI-R/RAM/RDAM

## PMP-01



Pole mount plate for  
 • WXI-ST/AM  
 • WXI-R/RAM  
 • BXS-ST/AM  
 • BXS-R/RAM

## BH-01



Battery holder for  
 • WXI-R/RAM  
 • VXI-RAM/RDAM  
 • BXS-R/RAM

## WXI-BB



Back box for  
 • WXI-ST/AM  
 • WXI-R/RAM

## MKP-01



Area masking plate for  
 • WXI-ST/AM  
 • WXI-R/RAM

## BXS Face cover



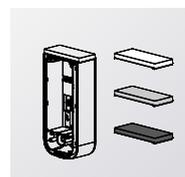
White / Silver / Black for  
 • BXS-ST/AM  
 • BXS-R/RAM

## BXS Back box



White / Black for  
 • BXS-ST/AM  
 • BXS-R/RAM

## BXS Back box Cap

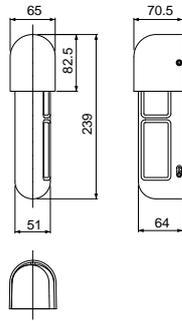


White / Silver / Black for  
 • BXS-ST/AM  
 • BXS-R/RAM

### WC-1



White Decorative Cover  
for  
• BX-100PLUS

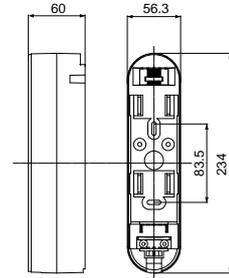


(mm)

### SP-2



Spacer Unit  
for  
• BX-80N

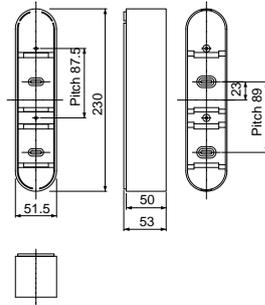


(mm)

### SP-1



Spacer Unit  
for  
• BX-100PLUS

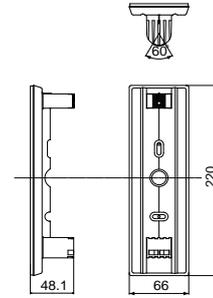


(mm)

### BA-1W



Multi Angle Wall Mount  
Bracket  
for  
• BX-80N\*  
• BX-80NR



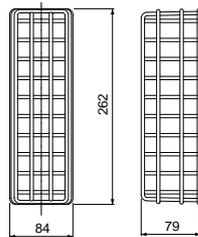
(mm)

\*SP-2 spacer is required when BA-1W is used

### MG-1



Vandal and Tamper Resistant  
Metal Guard  
for  
• BX-80N  
• BX-100PLUS



(mm)

### PEU-B/C/D/E/F/G/H/I/J/K



Selectable Plug-in End of  
Line Unit  
for  
• WXI-ST/AM  
• VXS-AM/DAM  
• VXI-ST/AM/DAM  
• BXS-ST/AM  
• WXS-AM/DAM/RAM/RDAM

Item	Trouble	Alarm	Tamper	Panels
PEU-B	6.8K	4.7K	4.7K	Old GE/Artech
PEU-C	12.0K	1.0K	1.0K	Honeywell Galaxy (U.K.)
PEU-D	3.0K	1.0K	1.0K	Honeywell Galaxy (Benelux)
PEU-E	15.0K	1.1K	1.1K	Satel
PEU-F	5.6K	5.6K	5.6K	DSC
PEU-G	8.2K	8.2K	8.2K	Guardall
PEU-H	2.2K	4.7K	2.2K	Old Texecom, Cooper, Scantronics etc.
PEU-I	1.0K	3.3K	3.3K	New Texecom, NetworX, Inim
PEU-J	12.0K	6.8K	4.7K	Risco ProSYS
PEU-K	2.2K	1.0K	1.0K	Siemens SPC

No warranty is given as to the fitness of this option with noted above manufacture's product.  
Please check on specifications of a control panel before you buy this option.  
Some models do not have a trouble output.

# PRODUCT SPECIFICATIONS

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

	WXS-AM/DAM	WXS-RAM/RDAM	WXI-ST	WXI-AM
				
	P18	P19	P20	P20
Detection method	WXS-AM : PIR WXS-DAM : PIR & MW	WXS-RAM : PIR WXS-RDAM : PIR & MW	PIR	PIR
Anti-Masking	✓	✓	—	✓
Coverage	180° wide	180° wide	180° wide	180° wide
Detection zones	Horizontal 14 pairs, vertical 2 layers	Horizontal 14 pairs, vertical 2 layers	Horizontal 14 pairs, vertical 2 layers	Horizontal 14 pairs, vertical 2 layers
Mounting height	0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m
Double-layered detection patterns	✓	✓	✓	✓
Intelligent AND detection logic	✓	✓	✓	✓
Pet immunity	✓	✓	✓	✓
SMDA logic	✓	✓	✓	✓
Immunity switch	—	—	—	—
Area masking method	Shutter / Plate	Shutter / Plate	Shutter / Plate	Shutter / Plate
Double conductive shielding	✓	✓	✓	✓
Sensitivity adjustment	H / M / L	H / M / L	H / M / L	H / M / L
Advanced temperature compensation logic	✓	✓	✓	✓
Pulse Count	1 / 2	1 / 2	1 / 2	1 / 2
Power supply	9.5 - 18VDC	9.5 - 18VDC	9.5 - 18VDC	9.5 - 18VDC
Current consumption	23 mA max. at 12 VDC 24 mA max. at 12 VDC	19 µA standby by 4 mA max. at 3 VDC 24 µA standby by 6 mA max. at 3 VDC	21 mA max. at 12 VDC	23 mA max. at 12 VDC
Alarm output	28 VDC 0.1 A max. [Individual;Right/Left or General], [N.O. or N.C.] are selectable	10 VDC 0.01 A max. [Individual;Right/Left or General], [N.O. or N.C.] are selectable	28 VDC 0.1 A max. [Individual;Right/Left or General], [N.O. or N.C.] are selectable	28 VDC 0.1 A max. [Individual;Right/Left or General], [N.O. or N.C.] are selectable
Alarm indication LED	✓	✓	✓	✓
Tamper output	N.C.	N.C.	N.C.	N.C.
Day/night mode	—	—	—	—
International protection	IP55	IP55	IP55	IP55
Operating temperature	-30 to +60°C / -20 to +45°C	-30 to +60°C / -20 to +45°C	-30 to +60°C	-30 to +60°C
Environmental humidity	95% max.	95% max.	95% max.	95% max.
Dimensions (H x W x D mm)	201.5 x 91.7 x 86.3	201.5 x 91.7 x 86.3	200 x 81.5 x 81.2	200 x 81.5 x 81.2

	VXS-RAM	VXS-RDAM	VXI-ST	VXI-AM
				
	P23	P23	P24	P24
Detection method	PIR	PIR & MW	PIR	PIR
Anti-Masking	✓	✓	—	✓
Coverage	12m 90° wide	12m 90° wide	12m 90° wide	12m 90° wide
Detection zones	Horizontal 8pairs, vertical 2 layers	Horizontal 8pairs, vertical 2 layers	Horizontal 8 pairs, vertical 2 layers	Horizontal 8 pairs, vertical 2 layers
Mounting height	0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m
Double-layered detection patterns	✓	✓	✓	✓
Intelligent AND detection logic	✓	✓	✓	✓
Pet immunity	✓	✓	✓	✓
SMDA logic	✓	✓	✓	✓
Immunity switch	—	—	—	—
Area masking method	Seal	Seal	Seal	Seal
Double conductive shielding	✓	✓	✓	✓
Sensitivity adjustment	H / M / L	H / M / L	H / M / L	H / M / L
Advanced temperature compensation logic	✓	✓	✓	✓
Pulse Count	2	2	2	2
Power supply	3 to 9 V DC Lithium or Alkaline Battery	3 to 9 V DC Lithium or Alkaline Battery	9.5 - 18VDC	9.5 - 18VDC
Current consumption	10 µA standby / 4 mA max. at 3 V DC	18 µA standby / 8 mA max. at 3 V DC	20mA (max.)	20mA (max.)
Alarm output	N.C. / N.O. Selectable-Solid State Switch 10 V DC 0.01 A max.	N.C. / N.O. Selectable-Solid State Switch 10 V DC 0.01 A max.	Selectable N.C./N.O. 28 VDC 0.1A (max)	Selectable N.C./N.O. 28 VDC 0.1A (max)
Alarm indication LED	✓	✓	✓	✓
Tamper output	N.C.	N.C.	N.C.	N.C.
Day/night mode	—	—	—	—
International protection	IP55	IP55	IP55	IP55
Operating temperature	-20 to +60°C	-20 to +45°C	-30 to +60°C	-30 to +60°C
Environmental humidity	95% max.	95% max.	95% max.	95% max.
Dimensions (H x W x D mm)	199.3 x 81.6 x 109.3	199.3 x 81.6 x 109.3	181.9 x 70.9 x 64.5	181.9 x 70.9 x 64.5

WXI-R	WXI-RAM	VXS-AM	VXS-DAM
			
P21	P21	P22	P22
PIR	PIR	PIR	PIR & MW
—	✓	✓	✓
180° wide	180° wide	12m 90° wide	12m 90° wide
Horizontal 14 pairs, vertical 2 layers	Horizontal 14 pairs, vertical 2 layers	Horizontal 8pairs, vertical 2 layers	Horizontal 8pairs, vertical 2 layers
0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
—	—	—	—
Shutter / Plate	Shutter / Plate	Seal	Seal
✓	✓	✓	✓
H / M / L	H / M / L	H / M / L	H / M / L
✓	✓	✓	✓
1 / 2	1 / 2	2	2
3 to 3.6 V DC lithium batteries	3 to 3.6 V DC lithium batteries	9.5 - 18 VDC	9.5 - 18 VDC
15 µA stand-by 4 mA max. at 3 V DC except walk test	16 µA stand-by 4 max. at 3 V DC except walk test	24 mA max. at 12 VDC	35 mA max. at 12 VDC
Solidstate switch, 10 V DC 0.01 A max. [Individual;Right/Left or General], [N.O. or N.C.] are selectable	Solidstate switch, 10 V DC 0.01 A max. [Individual;Right/Left or General], [N.O. or N.C.] are selectable	N.C. / N.O. Selectable 28 VDC 0.1 A max.	N.C. / N.O. Selectable 28 VDC 0.1 A max.
✓	✓	✓	✓
N.C.	N.C.	N.C.	N.C.
—	—	—	—
IP55	IP55	IP55	IP55
-30 to +60°C	-30 to +60°C	-20 to +60°C	-20 to +45°C
95% max.	95% max.	95% max.	95% max.
200 x 81.5 x 119.2	200 x 81.5 x 119.2	199.3 x 81.6 x 70.3	199.3 x 81.6 x 70.3

VXI-DAM	VXI-R	VXI-RAM	VXI-RDAM
			
P24	P25	P25	P25
PIR & MW	PIR	PIR	PIR & MW
✓	—	✓	✓
12m 90° wide	12m 90° wide	12m 90° wide	12m 90° wide
Horizontal 8 pairs, vertical 2 layers			
0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
STD/Immunity (microwave)	—	—	STD/Immunity (microwave)
Seal	Seal	Seal	Seal
✓	✓	✓	✓
H / M / L	H / M / L	H / M / L	H / M / L
✓	✓	✓	✓
2	2	2	2
9.5 - 18 VDC	3 - 9 VDC (Lithium or Alkaline battery)	3 - 9 VDC (Lithium or Alkaline battery)	3 - 9 VDC (Lithium or Alkaline battery)
20mA (max.)	9µA (at stand-by) 4mA (max.)	9µA (at stand-by) 4mA (max.)	18µA (at stand-by) 8mA (max.)
Selectable N.C./N.O. 28 VDC 0.1A (max)	Selectable-Solid N.C./N.O. State Switch 10 VDC 0.01A (max)	Selectable-Solid N.C./N.O. State Switch 10 VDC 0.01A (max)	Selectable-Solid N.C./N.O. State Switch 10 VDC 0.01A (max)
✓	✓	✓	✓
N.C.	N.C.	N.C.	N.C.
—	—	—	—
IP55	IP55	IP55	IP55
-30 to +60°C	-20 to +60°C	-20 to +60°C	-20 to +60°C
95% max.	95% max.	95% max.	95% max.
181.9 x 70.9 x 64.5	185.9 x 71.3 x 105.5	185.9 x 71.3 x 105.5	185.9 x 71.3 x 105.5

OUTDOOR PROTECTION

INDOOR PROTECTION

RED WALL

ACCESS CONTROL

TECHNICAL INFORMATION

# PRODUCT SPECIFICATIONS

OUTDOOR PROTECTION

	BXS-ST	BXS-AM	BXS-R	BXS-RAM
				
	P26	P26	P27	P27
Detection method	PIR	PIR	PIR	PIR
Anti-Masking	—	✓	—	✓
Coverage	24m ; 12m 180° narrow	24m ; 12m 180° narrow	24m ; 12m 180° narrow	24m ; 12m 180° narrow
Detection zones	4 zones ; 2 zones on each side	4 zones ; 2 zones on each side	4 zones ; 2 zones on each side	4 zones ; 2 zones on each side
Mounting height	0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m
Double-layerd detection patterns	✓	✓	✓	✓
Intelligent AND detection logic	✓	✓	✓	✓
Pet immunity	✓	✓	✓	✓
SMDA logic	✓	✓	✓	✓
Immunity switch	—	—	—	—
Area masking method	—	—	—	—
Double conductive shielding	✓	✓	✓	✓
Sensitivity adjustment	H / M / L	H / M / L	H / M / L	H / M / L
Advanced temperature compensation logic	✓	✓	✓	✓
Pulse Count	1 / 2	1 / 2	1 / 2	1 / 2
Power supply	9.5 - 18VDC	9.5 - 18VDC	3 to 9V DC Lithium or Alkaline batteries	3 to 9V DC Lithium or Alkaline batteries
Current consumption	31mA (max.)	31mA (max.)	15 µA stand-by / 8 mA max. at 3V DC	15 µA stand-by / 8 mA max. at 3V DC
Alarm output	28V DC 0.1 A max. [Individual;Right or General], [N.O. or N.C.] are selectable	28V DC 0.1 A max. [Individual;Right or General], [N.O. or N.C.] are selectable	Solidstate switch, 10V DC 0.01 A max. [Individual;Right or General], [N.O. or N.C.] are selectable	Solidstate switch, 10V DC 0.01 A max. [Individual;Right or General], [N.O. or N.C.] are selectable
Alarm indication LED	✓	✓	✓	✓
Tamper output	N.C. 28V DC 0.1 A max. open when face cover, main unit or base unit is removed	N.C. 28V DC 0.1 A max. open when face cover, main unit or base unit is removed	Tamper output is shared with trouble output.	Tamper output is shared with trouble output.
Day/night mode	—	—	—	—
International protection	IP55	IP55	IP55	IP55
Operating temperature	-30 to +60°C	-30 to +60°C	-30 to +60°C	-30 to +60°C
Environmental humidity	95% max.	95% max.	95% max.	95% max.
Dimensions (H x W x D mm)	199.7 x 92.8 x 52.7	199.7 x 92.8 x 52.7	199.7 x 92.8 x 98.7	199.7 x 92.8 x 98.7

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

	HX-80NRAM	HX-40	HX-40AM	HX-40DAM
				
	P33	P34	P34	P34
Detection method	PIR	PIR	PIR	PIR
Anti-Masking	✓	—	✓	✓
Coverage	24 x 2m narrow	12m 85° wide	12m 85° wide	12m 85° wide
Detection zones	20	94	94	94
Mounting height	2.5 - 3.0m	2.5 - 3.0m	2.5 - 3.0m	2.5 - 3.0m
Double-layerd detection patterns	—	—	—	—
Intelligent AND detection logic	✓	✓	✓	✓
Pet immunity	✓	✓	✓	✓
SMDA logic	—	—	—	—
Immunity switch	STD/Immunity	STD/Immunity	STD/Immunity	STD/Immunity
Area masking method	Plate and Flap	Seal	Seal	Seal
Double conductive shielding	✓	✓	✓	✓
Sensitivity adjustment	H / M / L	H / M / L	H / M / L	H / M / L
Advanced temperature compensation logic	✓	✓	✓	✓
Pulse Count	2	2	2	2
Power supply	3-7 VDC (Lithium battery)	9.5 - 18VDC	9.5 - 18VDC	9.5 - 18VDC (Lithium battery)
Current consumption	30µA (at stand-by) 4mA (max.)	35mA max.	40mA max.	50mA max. at 12VDC
Alarm output	Selectable-Solid N.C./N.O. State Switch 10VDC 0.01A (max)	Form C 28VDC 0.2A max.	Form C 28VDC 0.2A max.	Form C 28VDC 0.2A max.
Alarm indication LED	✓	✓	✓	✓
Tamper output	Form C	N.C.	N.C.	N.C.
Day/night mode	—	—	—	—
International protection	IP55	IP55	IP55	IP55
Operating temperature	-20 to +60°C	-20 to +60°C	-20 to +60°C	-20 to +60°C
Environmental humidity	95% max.	95% max.	95% max.	95% max.
Dimensions (H x W x D mm)	197.5 x 93 x 286	205 x 99 x 266	205 x 99 x 266	205 x 99 x 266

# PRODUCT SPECIFICATIONS

BX-80N	BX-80NR	FTN-ST/AM	FTN-R/RAM/R-PT/RAM-PT	HX-80N	HX-80NAM
					
P28	P29	P30	P31	P32	P32
PIR	PIR	PIR	PIR	PIR	PIR
—	—	FTN-AM : ✓	FTN-RAM : ✓ FTN-RAM-PT : ✓	—	✓
24m Narrow (12m on each side)	24m Narrow (12m on each side)	5 x 1m	5 x 1m	24 x 2m narrow	24 x 2m narrow
4 zones (2 on each side)	4 zones (2 on each side)	2	2	20	20
0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m	0.8 - 1.2m	2.5 - 3.0m	2.5 - 3.0m
✓	✓	—	—	—	—
—	—	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓
—	—	✓	✓	—	—
—	—	—	—	STD/Immunity Plate and Flap	STD/Immunity Plate and Flap
✓	✓	—	—	✓	✓
H / M / L	H / M / L	STD/LOW	STD/LOW	H / M / L	H / M / L
✓	✓	✓	✓	✓	✓
2	2	2	2	2	2
10 - 28 VDC	3 - 9 VDC (Lithium or Alkaline battery)	9.5 - 18 VDC	3 - 9 VDC	3 - 9 VDC	3 - 9 VDC
38mA max.	3mA max. (walktest, LED on) 15µA (standby)	FTN-ST : 17 mA max. FTN-AM : 20mA max.	10µA (at stand-by) 3mA (max.)	35mA max.	35mA max.
2 Outs : N.O./ N.C. 28 VDC 0.2A max.	Form C solid state switch 10 VDC 0.01A max.	Selectable N.C./N.O. 28 VDC 0.1A (max)	Selectable-Solid N.C./N.O. State Switch 10 VDC 0.01A (max)	Selectable-Solid N.C./N.O. State Switch 10 VDC 0.01A (max)	Selectable-Solid N.C./N.O. State Switch 10 VDC 0.01A (max)
✓	✓	✓	✓	✓	✓
N.C.	Form C	N.C.	N.C.	N.C.	N.C.
—	—	—	—	—	—
IP55	IP55	IP55	IP55	IP55	IP55
-20 to +50°C	-20 to +50°C	-20 to +60°C	-20 to +60°C	-20 to +60°C	-20 to +60°C
95% max.	95% max.				
232.7 x 55 x 68.7	235 x 56 x 128	155 x 35 x 42.5	155 x 70 x 425.5	197.5 x 93 x 286	197.5 x 93 x 286

HX-40RAM	QXI-ST/DT	QXI-R/RDT	LX-402	LX-802N
				
P35	P36	P37	P38	P38
PIR	QXI-ST : PIR QXI- DT : PIR & MW	QXI-R : PIR QXI- RDT : PIR & MW	PIR	PIR
✓	—	—	—	—
12m 85° wide	12m 120° wide	12m 120° wide	12 x 15m	24 x 2m
94	Multi level: 40 zones Pet alley: 18 zones	Multi level: 40 zones Pet alley: 18 zones	Multi-Level : 40 Pet Alley : 18	Multi-Level : 12 Pet Alley : 4
2.5 - 3.0m	2.2 - 2.7m	2.2 - 2.7m	Multi-Level:2.5m max Pet Alley : 1.2-1.5m	Multi-Level:2.5m max Pet Alley : 1.2-1.5m
—	—	—	—	—
✓	✓	✓	—	—
✓	✓	✓	Pet alley	Pet alley
—	—	—	—	—
STD/Immunity Seal	STD/Immunity Seal	STD/Immunity Seal	Seal	—
✓	✓	✓	✓	✓
H / M / L	H / M / L	H / M / L	H / M / L	H / M / L
✓	✓	✓	—	—
2	2	2	TEST (1) / 2	TEST (1) / 2
3 - 7.2 VDC	9.5 - 16VDC	CR123A (3 V DC)	10.8 - 13.2 VDC	10.8 - 13.2 VDC
Lithium batteries 4mA (max.) 30µA (stand by)	20 mA max. at 12 VDC 30 mA max. at 12 VDC	9µA stand-by 11 mA max. at 3VDC 16µA stand-by 11 mA max. at 3VDC	25mA max.	25mA max.
Form C solid state switch 10 VDC 0.01A max.	Form C 28 VDC 0.1A max.	Form C 3 VDC 0.01A max.	Form C 28 VDC 0.2A max.	Form C 28 VDC 0.2A max.
✓	✓	✓	✓	✓
Form C	N.C.	N.C.	N.C.	N.C.
—	—	—	✓	✓
IP55	IP54	IP54	IP54	IP54
-20 to +60°C	-40 to +60°C / -40 to +45°C	-40 to +60°C / -40 to +45°C	-20 to +50°C	-20 to +50°C
95% max.				
205 x 99 x 266	144.5 x 78 x 59	144.5 x 78 x 83.5	141 x 74.8 x 53.5	141 x 74.8 x 57.5

OUTDOOR PROTECTION

INDOOR PROTECTION

RED WALL

ACCESS CONTROL

TECHNICAL INFORMATION

# CDX-AM/DAM

C-ZONE

PIR DETECTOR COMPLIES WITH EN50131-2



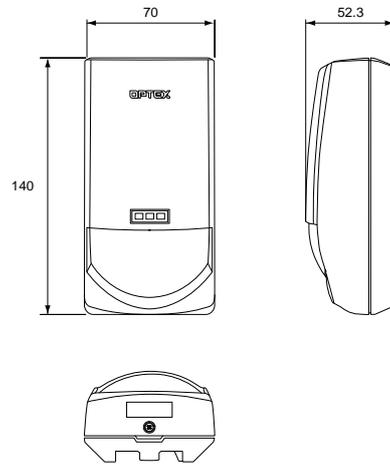
CDX series is a flagship Optex product and carries on typical features such as quad zone logic, microwave area shaping technology (CDX-DAM only) and digital anti-masking technology.

- CDX-AM – active IR anti-masking model
- CDX-DAM – dual technology model with active IR anti-masking
  - CDX-DAM-X5 : 10.525 GHz
  - CDX-DAM-X8 : 10.587 GHz

## FEATURES

- Complies with EN50131-2-2 (CDX-AM only)
- Complies with EN50131-2-4 (CDX-DAM only)
- Digital quad zone logic
- Active IR digital anti-masking
- Tough microwave module (CDX-DAM only)
- Sharply-directed microwave technology
- Interchangeable main unit

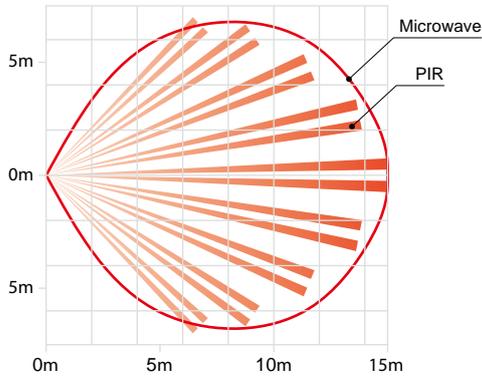
## DIMENSIONS



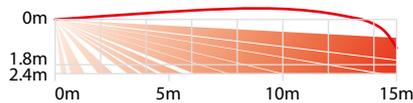
(mm)

## COVERAGE

### TOP VIEW



### SIDE VIEW



Microwave ranges are for CDX-DAM.

## OPTIONS

- PEU-B/C/D/E/F/G/H/I/J/K : Selectable plug-in end of line unit
- FA-1W : Multi angle wall mounting bracket
- FA-3 : wall & ceiling mounting bracket

## SPECIFICATIONS

Model	CDX-AM	CDX-DAM
Detection method	Passive infrared	Passive infrared & Microwave
Detector standard	EN50131-2-2 (Grade 3)	EN50131-2-4 (Grade 3)
Masking detection method	AIR type	
PIR Coverage	15m x 15m	
(Detection zones)	85° wide (82 zones)	
Power supply	9 to 18 VDC	
Current consumption	17mA (normal) / 20mA (max.) at 12 VDC	19mA (normal) / 26mA (max.) at 12 VDC
Alarm output	N.C. 28 VDC 0.2A max.	
Tamper switch	N.C. Opens when cover is removed or the wall tamper switch operates. 28 VDC 0.1A max.	
Trouble output	N.C. 28 VDC 0.2A max.	
Operating temperature	-10 to +50°C	
Environmental humidity	95% max.	
RF interference	No alarm 10V/m	
Mounting height	1.8 to 2.4m	
Weight	150g	180g
Dimensions (HxWxD)	140 mm x 70 mm x 52.3 mm	

Specifications and design are subject to change without prior notice.

# CDX-NAM

C-ZONE

PIR DETECTOR COMPLIES WITH EN50131-2-2



CDX-NAM is a Grade 3 narrow-focus PIR with a range of 2 x 24 meters. Both include many of the Optex tried-and-trusted features such as double conductive shielding and digital anti-masking technologies. Newly, it can support plug-in EoL(PEU) unit. This option can be compatible with a wide variety of control panels.

- CDX-NAM – long range model with anti-mask

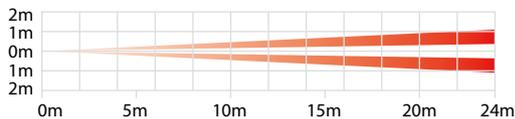
## FEATURES

- Complies with EN50131-2-2
- Digital quad zone logic
- Active IR digital anti-masking
- Double conductive shielding
- Interchangeable main unit

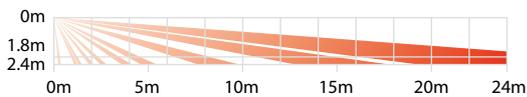
## COVERAGE

### LONG RANGE (CDX-NAM)

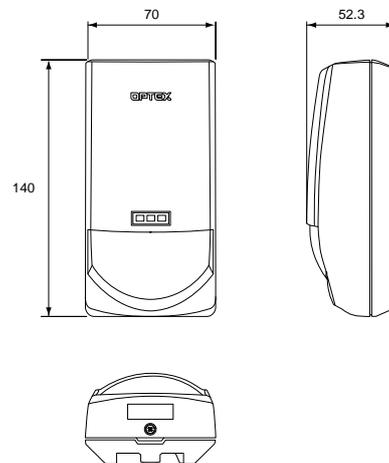
#### TOP VIEW



#### SIDE VIEW



## DIMENSIONS



(mm)

## OPTIONS

- PEU-B/C/D/E/F/G/H/I/J/K : Selectable plug-in end of line unit
- FA-1W : Multi angle wall mounting bracket
- FA-3 : wall & ceiling mounting bracket

## SPECIFICATIONS

Model	CDX-NAM
Detection method	Passive infrared
Detector standard	EN50131-2-2 (Grade 3)
Masking detection method	AIR type
PIR Coverage	24m x 2m
(Detection zones)	narrow (20 zones)
Power supply	9 to 18 VDC
Current consumption	17mA (normal) / 20mA (max.) at 12 VDC
Alarm output	N.C. 28 VDC 0.2A max.
Tamper switch	N.C. Opens when cover is removed or the wall tamper switch operates. 28 VDC 0.1A max.
Trouble output	N.C. 28 VDC 0.2A max.
Operating temperature	-10 to +50°C
Environmental humidity	95% max.
RF interference	No alarm 10V/m
Mounting height	1.8 to 2.4m
Weight	150g
Dimensions (HxWxD)	140 mm x 70 mm x 52.3 mm

Specifications and design are subject to change without prior notice.

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# CX-702/702MKII

C-ZONE

## LONG RANGE PIR DETECTOR



The CX-702 series is designed to give extremely stable long-range detection performance in a variety of internal commercial and industrial applications.

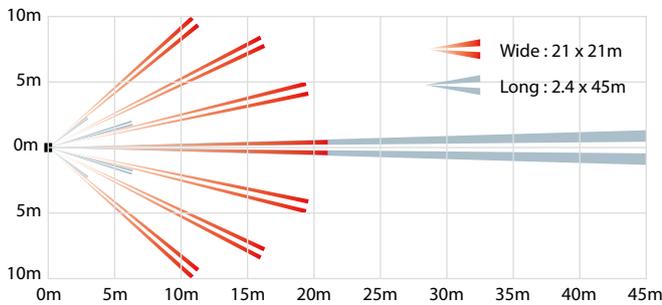
- CX-702 – standard model
- CX-702MKII – double detection zones model

### FEATURES

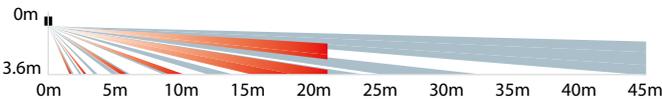
- Multi-focus technology
- Double conductive shielding
- Temperature compensation
- Sealed optics
- Spherical lens design
- Dual purpose optics: wide-angle or long-range
- 3-step lens angle adjustment

### COVERAGES

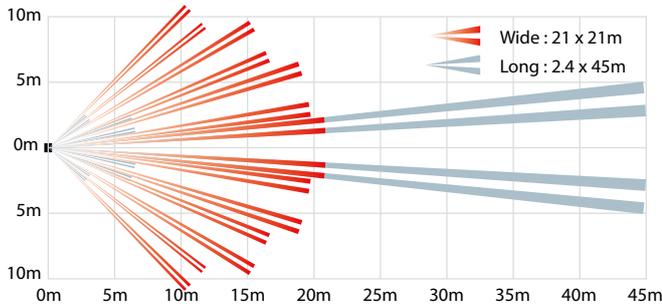
TOP VIEW CX-702



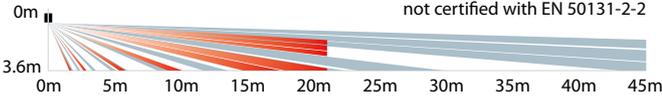
SIDE VIEW CX-702



TOP VIEW CX-702MKII



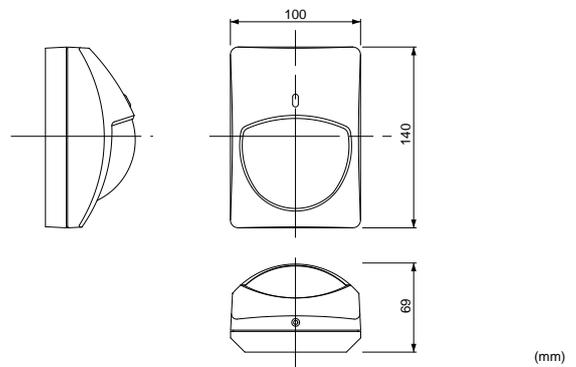
SIDE VIEW CX-702MKII



### OPTIONS

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

### DIMENSIONS



### SPECIFICATIONS

Model	CX-702	CX-702MKII
PIR coverage	Wide : 21m x 21m 85° 68 zones Long : 2.4m x 45m 22 zones	
Detection zones	Wide : 68 zones, Long : 22 zones   Wide : 136 zones, Long : 44 zones	
Sensitivity	1.6°C at 0.6m/sec. at 2.4m mounting height	
Detectable speed	0.3 to 1.5m/sec.	
Power supply	9.5 to 16 VDC	
Current consumption	11mA (max.) at 12 VDC	
Alarm period	Approx. 2.5 sec.	
Alarm output	N.C. 28 VDC 0.2A max.	
Alarm interval	—	
Tamper switch	N.C, opens when cover is removed. 28 VDC 0.1A max.	
Pulse count	Approx. 20 sec. 2 or 4	
Warm-up period	Approx. 60 sec.	
LED indicator	Alarm condition	
Operating temperature	-20 to +50°C	
Environmental humidity	95% max.	
RF interference	No Alarm 30V/m	
Mounting height	1.5 to 3.6 m	
Weight	200 g	
Dimensions (H x W x D)	140 mm x 100 mm x 69 mm	

Specifications and design are subject to change without prior notice.

# CX-702RS

C-ZONE

## BATTERY OPERATED LONG RANGE PIR DETECTOR



The CX-702 series is designed to give extremely stable long-range detection performance in a variety of internal commercial and industrial applications.

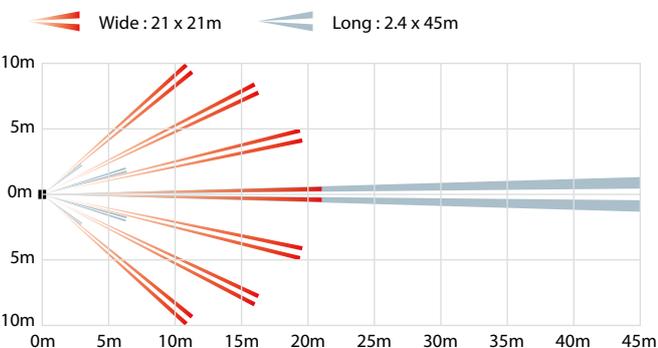
- CX-702RS – low current battery operated model

### FEATURES

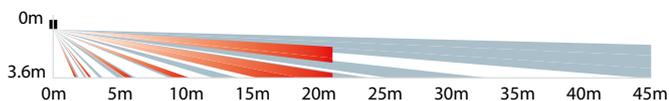
- Multi-focus technology
- Double conductive shielding
- Temperature compensation
- Sealed optics
- Spherical lens design
- Dual purpose optics: wide-angle or long-range
- 3-step lens angle adjustment

### COVERAGES

#### TOP VIEW



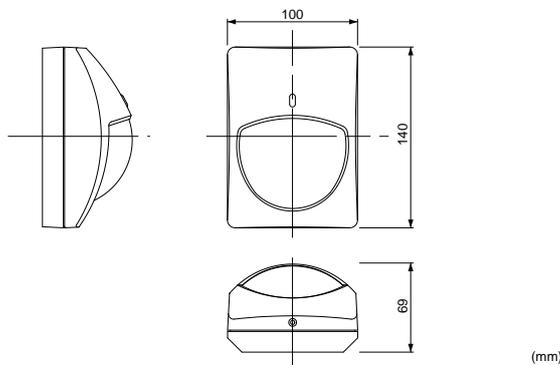
#### SIDE VIEW



### OPTIONS

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

### DIMENSIONS



### SPECIFICATIONS

Model	CX-702RS
PIR coverage	Wide : 21m x 21m 85° 68 zones Long : 2.4m x 45m 22 zones
Detection zones	Wide : 68 zones, Long : 22 zones
Sensitivity	1.6°C at 0.6m/sec. at 2.4m mounting height
Detectable speed	0.3 to 1.5m/sec.
Power supply	3 to 9 VDC alkaline battery or lithium battery
Current consumption	5µA (standby) 10mA (walktest, LED on)
Alarm period	Approx. 2.5 sec.
Alarm output	Form C 10 VDC 0.01A max.
Alarm interval	Succeeding signals are not output even though detection occurs within 2 min. after the first alarm.
Tamper switch	Form C 28 VDC 0.1A max.
Pulse count	Approx. 20 sec. 2 or 4
Warm-up period	Approx. 90 sec.
LED indicator	Alarm condition
Operating temperature	-10 to +50°C
Environmental humidity	95% max.
RF interference	No Alarm 20V/m
Mounting height	1.5 to 3.6 m
Weight	200 g
Dimensions (H x W x D)	140 mm x 100 mm x 69 mm

Specifications and design are subject to change without prior notice.  
Batteries and wireless transmitters are not included in these products.

# MX-40QZ/40PT/50QZ

C-ZONE

## PIR/MICRO-WAVE COMBINATION DETECTOR

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

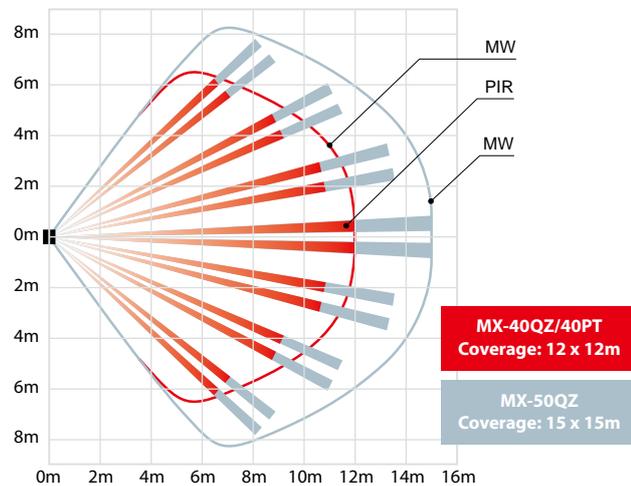
TECHNICAL INFORMATION



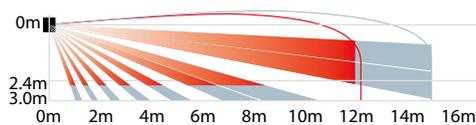
The MX series combines state of the art micro-wave and PIR technologies in attractive, easy-to-install units and underlines Optex's absolute commitment to provide detectors with unprecedented reliability and detection performance at very reasonable prices.

### COVERAGE

#### TOP VIEW



#### SIDE VIEW



### OPTIONS

- FA-3: Wall and ceiling mounting bracket

### FEATURES

- Quad zone logic
- Spherical lens design
- Anti-crosstalk technology (micro-wave)
- Noise reduction circuit

### SPECIFICATIONS

Model	MX-40QZ/40PT	MX-50QZ
Coverage	12m x 12m 85° wide	15m x 15m 85° wide
Detection zones	78 zones (PIR)	
Sensitivity	2°C at 0.6m/sec.	
Detectable speed	0.3m - 1.5m/sec.	
Power supply	9.5 - 16V DC	
Current consumption	18mA (max.) at 12V DC	20mA (max.) at 12V DC
Alarm period	Approx. 2.5 sec.	
Alarm output	N.C. 28V DC 0.2A max.	
Tamper switch	N.C, opens when cover is removed: N.C., 28V DC 0.1A max.	
Pulse count	Approx 20 sec. 2 or 4	
Warm-up period	Approx. 60 sec.	
LED indicator	Alarm condition	
Operating temperature	-10 - +55°C	
Environmental humidity	95% max.	
Micro-wave frequency	2.45GHz (FCC, IC, ETS300-440 approval)	
RF interference	No Alarm 20V/m	
Mounting height	1.5 m - 2.4 m	1.8 m - 2.4 m
Weight	110 g	
Dimensions (H x W x D)	115 mm x 62 mm x 50 mm	

Specifications and design are subject to change without prior notice.

# FMX-ST/DST/DT

C-ZONE

PIR DETECTOR COMPLIES WITH EN50131-2



FMX series is high performance PIR indoor detector for high-end residential and light commercial installation. OPTEX new plug-in end of line unit (PEU) helps you for easy and quick installation.

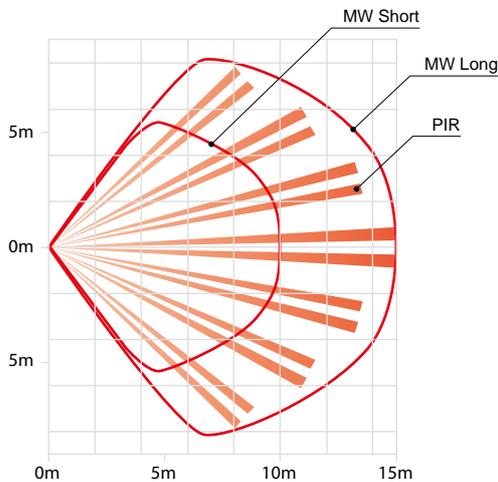
- FMX-ST – standard model (Grade 2)
- FMX-DST – standard model with double conductive filter (Grade 2)
- FMX-DT – dual technology model (Grade 2)
  - FMX-DT-X5 – 10.525 GHz
  - FMX-DT-X8 – 10.587 GHz

## FEATURES

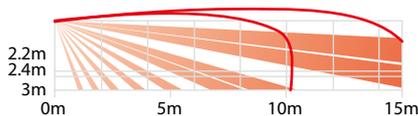
- Complies with EN50131-2-2 (FMX-ST/DST only)
- Complies with EN50131-2-4 (FMX-DT only)
- Double conductive filter (FMX-DST only)
- Digital quad zone logic
- Silent output
- Advanced sealed optics
- Advanced temperature compensation logic
- Remote LED control
- Selectable plug-in end of line unit (option)
- Microwave area shaping technology

## COVERAGE

### TOP VIEW



### SIDE VIEW

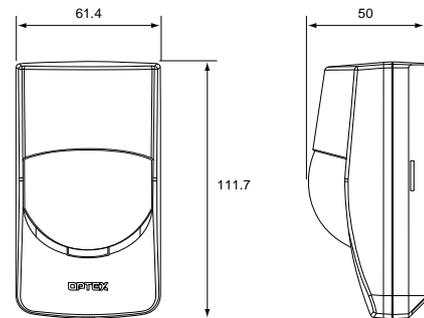


Microwave ranges are for CDX-DAM.

## OPTIONS

- PEU-B/C/D/E/F/G/H/I/J/K Selectable plug-in end of line unit
- FA-3 : wall & ceiling mounting bracket

## DIMENSIONS



(mm)

## SPECIFICATIONS

Model	FMX-ST/DST	FMX-DT
Detection method	Passive infrared	Passive Infrared + Microwave
Detector standard	EN50131-2-2 (Grade 2)	EN50131-2-4 (Grade 2)
Coverage	15 m x 15 m 85°wide	
Detection zones	78 zones	
Mounting height	2.2 to 3.0 m	
LED alarm indicator	Switchable ON/OFF	
Alarm period	Approx. 2.5 sec	
Alarm output	N.C., 24 VDC 0.2 A max.	
Tamper switch	N.C., Open when cover is removed.	
Tamper output	28 VDC 0.1 A max.	
PIR Sensitivity/range	Switchable LOW/MID/HI	Switchable LOW/MID/HI
Microwave sensitivity/range	-	Switchable LONG/SHORT
Warm up period	Approx. 60 sec (LED blinks.)	
Power input	9.5 to 16 VDC	
Current draw	8 mA (normal), 11 mA (max.) at 12 VDC	12 mA (normal), 15 mA (max.) at 12 VDC
Dimensions(H x W x D)	111.7 mm x 61.4 mm x 50.0 mm	
Weight	100 g	120 g
Operating temperature	-20 to +50°C	-20 to +45°C
Environmental humidity	95% max.	
RF interference	No alarm 10 V/m	

Specifications and design are subject to change without prior notice.

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# RXC-ST/DT

C-ZONE

PIR DETECTOR COMPLIES WITH EN50131-2



RX-CORE series successfully take over a leadership position built by authentic RX-40 series and is now with newly implemented technologies in pursuit of higher satisfaction.

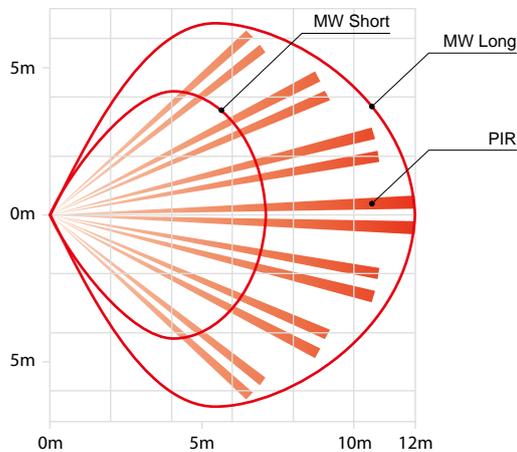
- RXC-ST – standard model (Grade 2)
- RXC-DT – dual technology model (Grade 2)
  - RXC-DT-X5 : 10.525 GHz
  - RXC-DT-X8 : 10.587 GHz

## FEATURES

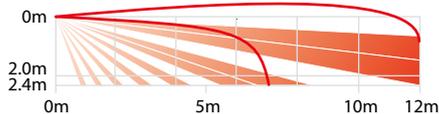
- Complies with EN50131-2-2 (RXC-ST only)
- Complies with EN50131-2-4 (RXC-DT only)
- Digital quad zone logic
- Silent output
- Multi angle bracket
- Advanced sealed optics
- Spherical lens design
- Advanced temperature compensation logic

## COVERAGE

### TOP VIEW



### SIDE VIEW

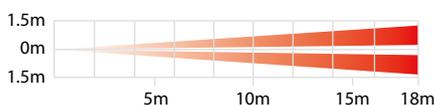


## OPTIONS

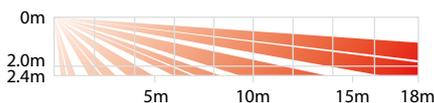
- FL-60N: 18m long-range lens

Microwave ranges are for RXC-DT.

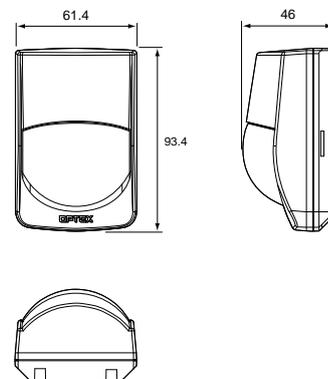
### TOP VIEW



### SIDE VIEW



## DIMENSIONS



(mm)

## SPECIFICATIONS

Model	RXC-ST	RXC-DT
Detection method	Passive infrared	Passive infrared & Microwave
Coverage	12m x 12m 85° wide	
Detection zones	78 zones	
Mounting height	1.5 to 2.4m	
LED alarm indicator	Switchable ON/OFF	
Alarm period	Approx. 2.5 sec	
Alarm output	N.C., 24 VDC 0.2A max.	N.C., 28 VDC 0.2A max.
Tamper switch	N.C., opens when cover is removed.	N.C., Open when cover is removed.
Tamper output	-	24 VDC 0.1A max.
PIR sensitivity/range	Switchable LOW/MID/HI	
Microwave sensitivity/range	-	Switchable LONG/SHORT
Warm up period	Approx. 30 sec	Approx. 60 sec
Power input	9.5 to 16 VDC	
Current draw	8mA(normal), 11mA(max.) at 12 VDC	12mA (normal), 15mA (max.) at 12 VDC
Current consumption	12mA (normal), 15mA (max.) at 12 VDC	
Dimensions(H x W x D)	93.4mm x 61.4mm x 46.0mm	
Weight	Approx. 70g (with bracket: 90g)	Approx. 90 g (with bracket: 110 g)
Operating temperature	-20 to +50°C	-20 to +45°C
Environmental humidity	95% max.	
RF interference	No alarm 10V/m	

Specifications and design are subject to change without prior notice.

# RXC-RST/RDT

C-ZONE

## BATTERY OPERATED INDOOR PIR DETECTOR



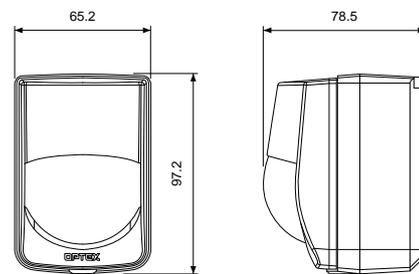
RXC-R series is designed for wireless peripheral device adapting to wireless network. This series is unequipped for transmitters. You utilized this motion sensing solution once you put an existing radio transmitter into RXC-R series.

- RXC-RST – battery operated model
- RXC-RDT – battery operated dual technology model
- RXC-RDT-X5 : 10.525 GHz

### FEATURES

- Can accommodate most wireless transmitters available on the market
- Digital quad zone logic
- Tough MW module (RXC-RDT only)
- Long battery life CR123A (3 VDC, 1300mAh)
- Approx. 5 years
- Can accommodate most wireless transmitters available on the market

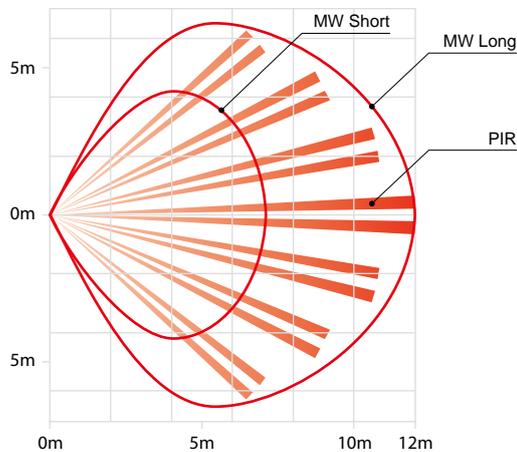
### DIMENSIONS



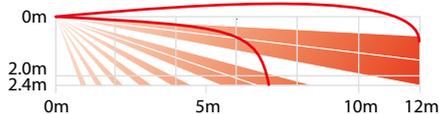
(mm)

### COVERAGE

#### TOP VIEW



#### SIDE VIEW



Microwave ranges are for RXC-RDT.

### SPECIFICATIONS

Model	RXC-RST	RXC-RDT
Detection method	Passive Infrared	Passive Infrared and Micro Wave
Coverage	12 m x 12 m (40 ft x 40 ft) 85°wide	
Detection zones	78 zones	
Mounting height	1.5 to 2.4 m (5 to 8 ft)	
LED alarm indicator	Switchable ON/OFF	
Alarm period	Approx. 2.5 sec	
Alarm output	0.01 A max. (Operating voltage)	
Trouble output	0.01 A max. (Operating voltage)	
Sensitivity/range	Switchable LOW/MID/HI/SuperHI	
MW sensitivity/range	-	Switchable LONG/SHORT
Warm up period	Approx. 60 sec. (LED blinks.)	
Power input	3 to 3.6 V	
Current draw	6 µA (In Stand by), 3 mA (In Walktest,LED on)	14 µA (In Stand by), 3 mA (In Walktest,LED on)
Dimensions	97.2 mm x 65.2 mm x 78.5 mm <HxWxD>	
Weight	Approx.145 g	
Operating temperature	-10 to +50°C	-10°C to +45°C (+14°F to +113°F)
Environment humidity	95% max.	
RF interference	No alarm 10V/m	

Specifications and design are subject to change without prior notice.

### OPTIONS

- FA-3 : wall & ceiling mounting bracket
- FL-60N : 18m long-range lens

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# RX-40QZ/PT

C-ZONE

## SMALL ANIMAL IMMUNITY

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION



The RX series gives extremely high false alarm protection with excellent tolerance to spot temperature changes from curtains, small animals, and pet.

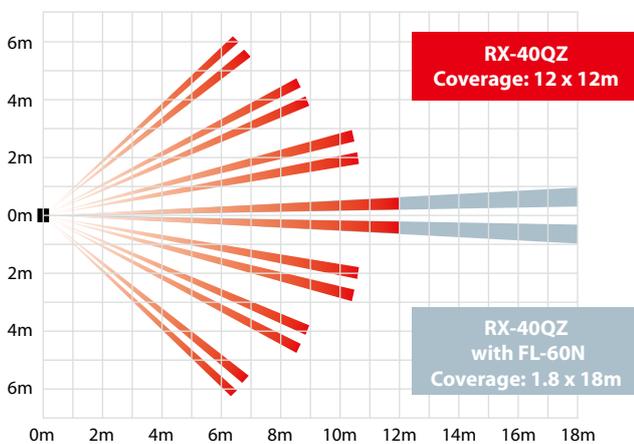
- RX-40QZ – small animal immunity model
- RX-40PT – Pet Tolerance model

### FEATURES

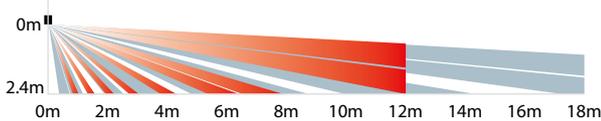
- Quad zone logic
- Spherical lens design
- Temperature compensation
- Sealed optics
- Selectable pulse count (2 or 4)

### COVERAGE

#### TOP VIEW



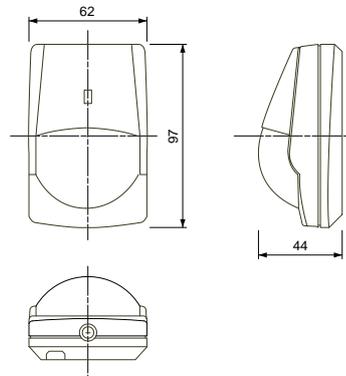
#### SIDE VIEW



### OPTIONS

- FA-3: Wall and ceiling mounting bracket
- FL-60N: 18m long-range lens

### DIMENSIONS



(mm)

### SPECIFICATIONS

Model	RX-40QZ/PT
PIR coverage	12m x 12m 85° wide
Detection zones	78 zones
Sensitivity	2°C at 0.6m/sec.
Detectable speed	0.3m - 1.5m/sec.
Power supply	9.5 - 16 VDC
Current consumption	11mA (max.) at 12 VDC
Alarm period	Approx. 2.5 sec.
Alarm output	N.C. 28 VDC 0.2A max.
Tamper switch	N.C. opens when cover is removed
Pulse count	Approx. 20 sec. 2 or 4
Warm-up period	Approx. 30 sec.
LED indicator	Alarm condition
Operating temperature	-20°C to +50°C
Environmental humidity	95% max.
RF interference	No Alarm 20V/m
Mounting height	1.5 m - 2.4 m
Weight	70 g
Dimensions (H x W x D)	97 mm x 62 mm x 44 mm
FL-60N (Optional lens for long range curtain pattern)	
Coverage	18 m x 1.8 m long range
Detection zones	20 zones

Specifications and design are subject to change without prior notice.

# SX-360Z

C-ZONE

## 360° CEILING-MOUNT PIR DETECTOR WITH 276 HIGH DENSITY DETECTION ZONES



The SX-360 series 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 meters.

- SX-360Z – standard model with double conductive shielding

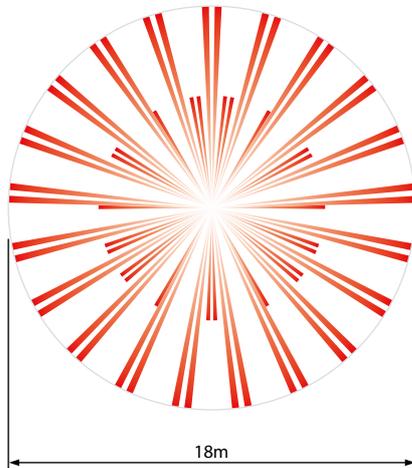
### FEATURES

- Double conductive shielding
- Multi-focus optics
- Highly dense coverage (276 zones)
- Zoom function/ pattern adjustment
- Temperature protection
- Noise reduction circuit
- LED remote control terminal

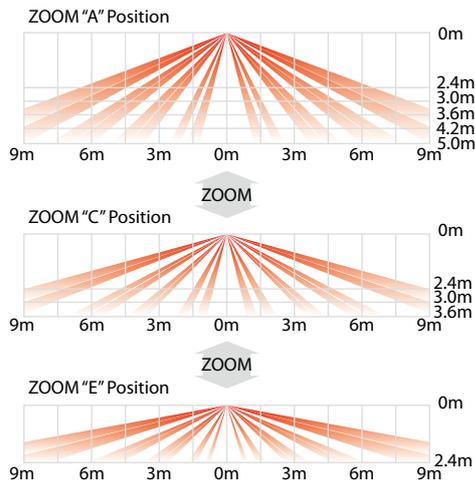
N.B. For ceiling mounting only

### COVERAGE

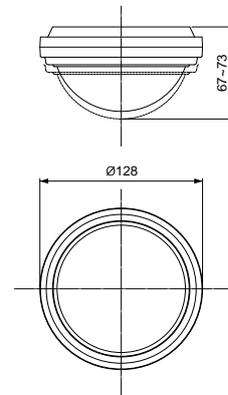
#### TOP VIEW



#### SIDE VIEW



### DIMENSIONS



(mm)

### SPECIFICATIONS

Model	SX-360Z
PIR coverage	Ø18m 360° zoom
Detection zones	276 zones
Sensitivity	1.6°C at 0.6m/sec. at 2.4m mounting height
Detectable speed	0.3 to 1.8m/sec.
Power supply	6 to 18 VDC
Current consumption	18mA (max.)
Alarm period	2.0 ± 0.5 sec.
Alarm output	N.C. 28 VDC 0.2A max.
Tamper switch	N.C, opens when cover is removed: 30 VDC 0.1A max.
Pulse count	20 ± 5 sec. 1, 2 or 4
Warm-up period	Approx. 20 sec. (LED blinks)
LED indicator	LED blinks during warm-up period
	Alarm condition
Operating temperature	-20 to +50°C
Environmental humidity	95% max.
RF interference	No Alarm 30V/m
Mounting height	2.4 to 5.0m
Weight	224 g
Dimensions (H x W x D)	Ø128mm x 67 - 73mm

Specifications and design are subject to change without prior notice.

# FX-360

C-ZONE

## 360° CEILING-MOUNT PIR DETECTOR

OUTDOOR PROTECTION

INDOOR PROTECTION

RED WALL

ACCESS CONTROL

TECHNICAL INFORMATION

The FX-360 ceiling-mount detector with its unique, highly durable spherical lens offers unparalleled 360° detection performance.



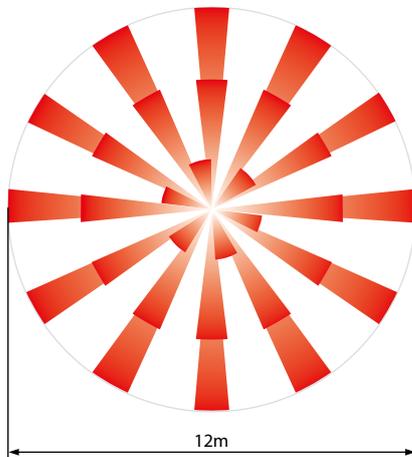
### FEATURES

- Spherical Lens design
- RFI protection
- Temperature protection
- Noise reduction circuit
- Selectable pulse count (2 or 4)
- LED remote control terminal

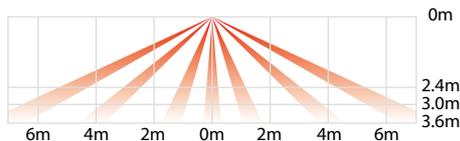
N.B. For ceiling mounting only

### COVERAGE

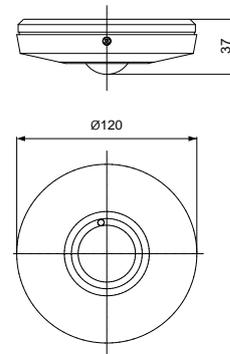
#### TOP VIEW



#### SIDE VIEW



### DIMENSIONS



(mm)

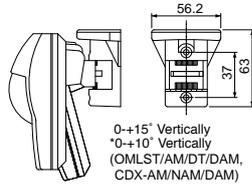
### SPECIFICATIONS

Model	FX-360
Detection method	Passive Infrared
Detection zones	62 zones
Mounting location	Ceiling
Coverage / Mounting height	ø8 to ø12 m at 2.4 to 3.6 m
LED indicator	LED is blinking during warm-up period. Alarm indicator optional
Alarm period	2.0 ±0.5 sec.
Alarm output	N.C., 28 VDC 0.2 A (max.)
Tamper switch	N.C., Opens when cover removed.
Tamper output	30 V DC 0.1 A (max.)
Pulse Count	2.0 ±5 sec. 2 or 4
Warm up period	Approx. 30 sec. (LED blinks.)
Power input	9.5 to 18 VDC
Current draw	17 mA/(normal), 18 mA/(max.)
Weight	140 g (4.9 oz)
Operating temperature	-20°C to +50°C (-4°F to +122°F)
Environment humidity	95% (max.)
RF interference	No Alarm 20 V/m

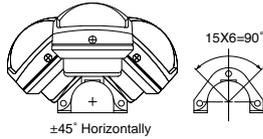
Specifications and design are subject to change without prior notice.

# OPTIONS

## FA-3

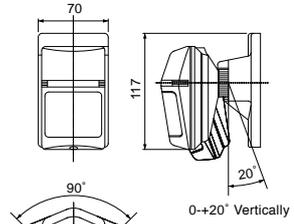


Multi Angle Wall & Ceiling Mount Bracket for  
 • CDX-DAM/NAM/AM  
 • FMX-DT • FMX-ST/DST  
 • RXC-RST • RXC-RDT  
 • RX-40QZ • MX-40QZ  
 • MX-40PT • MX-50QZ



(mm)

## FA-1W

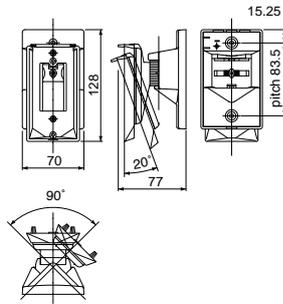


Multi Angle Wall Mount Bracket for  
 • CDX-DAM/NAM/AM



(mm)

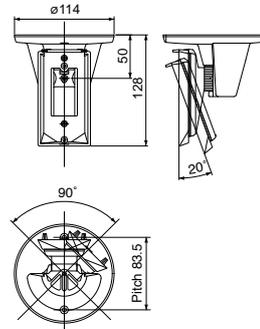
## CA-1W



Multi Angle Wall Mount Bracket for  
 • CX-702/702RS/702MKII

(mm)

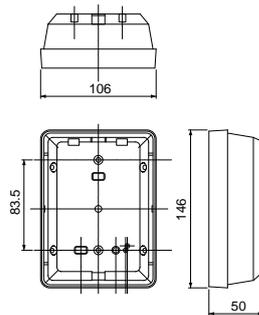
## CA-2C



Multi Angle Ceiling Mount Bracket for  
 • CX-702/702RS/702MKII

(mm)

## BA-70



Transmitter Backbox for  
 • CX-702RS

(mm)

## FL-60N LENS



Long-range Lens for  
 • RXC-ST  
 • RXC-RST  
 • RX-40QZ

## PEU-B/C/D/E/F/G/H/I/J/K



Selectable plug-in end of line unit for  
 • CDX-DAM/AM/NAM  
 • FMX-ST/DST  
 • FMX-DT

Item	Trouble	Alarm	Tamper	Panels
PEU-B	6.8K	4.7K	4.7K	Old GE/Aritech
PEU-C	12.0K	1.0K	1.0K	Honeywell Galaxy (U.K.)
PEU-D	3.0K	1.0K	1.0K	Honeywell Galaxy (Benelux)
PEU-E	15.0K	1.1K	1.1K	Satel
PEU-F	5.6K	5.6K	5.6K	DSC
PEU-G	8.2K	8.2K	8.2K	Guardall
PEU-H	2.2K	4.7K	2.2K	Old Texecom, Cooper, Scantronics etc.
PEU-I	1.0K	3.3K	3.3K	New Texecom, NetworX, Inim
PEU-J	12.0K	6.8K	4.7K	Risco ProSYS
PEU-K	2.2K	1.0K	1.0K	Siemens SPC

No warranty is given as to the fitness of this option with noted above manufacture's product. Please check on specifications of a control panel before you buy this option. Some models do not have a trouble output.

# PRODUCT SPECIFICATIONS

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

	CDX-DAM	CDX-AM	CDX-NAM	CX-702	CX-702MKII	CX-702RS	MX-40QZ	MX-40PT
								
	P46	P46	P47	P48	P48	P49	P50	P50
Detection method	PIR & MW	PIR	PIR	PIR	PIR	PIR	PIR&MW	PIR&MW
Coverage	15 x 15m	15 x 15m	24 x 2m	21 x 21m	21 x 21m	21 x 21m	12 x 12m	12 x 12m
Dual purpose lens / long range	—	—	—	45 x 2.4m	45 x 10m	45 x 2.4m	—	—
Optional lens / Detection range	—	—	—	—	—	—	—	—
Detection zones	82	82	20	Wide : 68 Long : 22	Wide : 136 Long : 44	Wide : 68 Long : 22	78	78
Mounting height	1.8 to 2.4m	1.8 to 2.4m	1.8 to 2.4m	1.5 to 3.6m	1.5 to 3.6m	1.5 to 3.6m	1.5 - 2.4m	1.5 - 2.4m
Wall mount bracket	FA-3 / FA-1W	FA-3 / FA-1W	FA-3 / FA-1W	CA-1W	CA-1W	CA-1W	FA-3	FA-3
Ceiling mount bracket	FA-3	FA-3	FA-3	CA-2C	CA-2C	CA-2C	FA-3	FA-3
Multi-focus optics	—	—	—	✓	✓	✓	—	—
Quad zone logic optics	✓ Digital	✓ Digital	✓ Digital	—	—	—	3	3
Zoom function	—	—	—	—	—	—	—	—
PIR sensitivity adjustment	H / ST	H / ST	H / ST	—	—	—	—	—
MW sensitivity adjustment	H / M / L	—	—	—	—	—	—	—
Distance selector switch	Short/Long	—	—	—	—	—	Short/Long	Short/Long
Double conductive shielding	—	✓	✓	✓	✓	✓	—	—
Temperature compensation circuit	✓ Advanced	✓	✓	✓	✓	✓	3	3
Pulse count	STD / SP	STD / SP	STD / SP	2 / 4	2 / 4	2 / 4	2 / 4	2 / 4
Power supply	9 to 18 VDC	9 to 18 VDC	9 to 18 VDC	9.5 to 16 VDC	9.5 to 16 VDC	3 to 9V alkaline or lithium battery	9.5 - 16V DC	9.5 - 16V DC
Current consumption	26mA max.	20mA max.	20mA max.	11 mA (max.) at 12 VDC	11 mA (max.) at 12 VDC	5 µA (standby) 10 mA (walktest, LED on)	18mA max.	18mA max.
Alarm output	N.C. 28 VDC 0.2A max.	N.C. 28 VDC 0.2A max.	N.C. 28 VDC 0.2A max.	N.C. 28 VDC 0.1 A max.	N.C. 28 VDC 0.1 A max.	Form C 28 VDC 0.1 A max.	N.C. 28 VDC 0.2A max.	N.C. 28 VDC 0.2A max.
Anti-masking function	✓	✓	✓	—	—	—	—	—
Self test	✓	✓	✓	—	—	—	—	—
Trouble output	N.C. 28 VDC 0.2A max.	N.C. 28 VDC 0.2A max.	N.C. 28 VDC 0.2A max.	—	—	—	—	—
Tamper	✓	✓	✓	✓	✓	✓	3	3
Remote LED control	✓	✓	✓	—	—	—	—	—
Alarm memory	—	—	—	—	—	—	—	—
Initial alarm memory	—	—	—	—	—	—	—	—
Operating Temperature	-10 to +50°C	-10 to +50°C	-10 to +50°C	-20 to +50°C	-20 to +50°C	-10 to +50°C	-10 to +55°C	-10 to +55°C
Environmental humidity	95% max.	95% max.	95% max.					
Dimensions (H x W x D mm)	140 x 70 x 52.3	140 x 70 x 52.3	140 x 70 x 52.3	140 x 100 x 69	140 x 100 x 69	140 x 100 x 69	115 x 62 x 50	115 x 62 x 50
For residential	✓	✓	✓				3	3
For light commercial	✓	✓	✓				3	3
For commercial	✓	✓	✓	✓	✓	✓	—	—
For industrial	✓	✓	✓	✓	✓	✓	—	—
For wireless security system						✓	—	—

# PRODUCT SPECIFICATIONS

MX-50QZ	FMX-ST/DST	FMX-DT	RXC-ST	RXC-DT	RXC-RST	RXC-RDT	RX-40QZ/PT	SX-360Z	FX-360
									
P50	P51	P51	P52	P52	P53	P53	P54	P55	P56
PIR&MW	PIR	PIR & MW	PIR	PIR & MW	PIR	PIR & MW	PIR	PIR	PIR
15 x 15m	15m x 15m	15m x 15m	12 x 12m	Ø18m 360°	Ø8m - 12m 360°				
—	—	—	—	—	—	—	—	—	—
—	—	—	FL-60N 18m x 2.4m	—	FL-60N 18m x 2.4m	FL-60N 18m x 2.4m	FL-60N 18m x 1.8m	—	—
78	78	78/62	78	78	78	78	78	276	62
2.2 - 3.0m	2.2 to 3.0m	2.2 to 3.0m	1.5 to 2.4m	1.5 to 2.4m	1.5 to 2.4m	1.5 to 2.4m	1.5 - 2.4m	2.4 to 5.0m	2.4 to 3.6m
FA-3	FA-3	FA-3	included	included	FA-3	—	FA-3	—	—
FA-3	FA-3	FA-3	included	included	FA-3	—	FA-3	—	—
—	—	—	—	—	—	—	—	✓	—
3	3 Digital	3 Digital	✓	—	—				
—	—	—	—	—	—	—	—	✓	—
—	H / M / L	H / M / L	H / M / L	H / M / L	H / M / L / SuperHI	H / M / L / SuperHI	—	H / M / L	—
—	—	Long/Short	—	Long/Short	—	Long/Short	—	—	—
Short/Long	—	—	—	—	—	—	—	—	—
—	3 (FMX-DST only)	—	—	—	—	—	—	✓	—
3	3 Advanced	3 Advanced	✓	—	—				
2 / 4	—	—	—	—	—	—	2 / 4	1 / 2 / 4	20 +/-0.5 sec. 2 or 4
9.5 - 16VDC	9.5 to 16 VDC	9.5 to 16VDC	9.5 to 16VDC	9.5 to 16 VDC	3 to 3.6 V	3 to 3.6 V	9.5 - 16VDC	6 to 18 VDC	9.5 to 18 VDC
18mA max.	11mA max.	15mA max.	11mA max.	15mA max.	3mA max.	3mA max.	11mA max.	18mA max.	18mA max.
N.C. 28 VDC 0.2A max.	N.C. 28 VDC 0.2A max.	N.C. 28 VDC 0.2A max.	N.C. 24 VDC 0.2A max.	N.C. 28 VDC 0.2A max.	0.01A max.	0.01A max.	N.C. 28 VDC 0.2A max.	N.C. 28 VDC 0.2A max.	N.C. 28 VDC 0.2A max.
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	0.01 A max.	0.01 A max.	—	—	—
3	3	3	✓	✓	—	—	✓	✓	✓
—	3	3	—	—	—	—	—	✓	—
—	—	—	—	—	—	—	—	✓	—
—	—	—	—	—	—	—	—	—	—
-10 to +55°C	-20 to +45°C	-20 to +45°C	-20 to +50°C	-20 to +45°C	-10 to +50°C	-10 to +45°C	-20 to +50°C	-20 to +50°C	-20 to +50°C
95% max.	95% max.	95% max.							
115 x 62 x 50	111.7 x 61.4 x 50	111.7 x 61.4 x 50	93.4 x 61.4 x 46	93.4 x 61.4 x 46	97.2 x 65.2 x 78.5	97.2 x 65.2 x 78.5	97 x 62 x 44	Ø128 X 67-73	Ø120 X 37
3	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	—	—	—	—	—	—	—	✓	—
—	—	—	—	—	—	—	—	✓	—
—	—	—	—	—	✓	✓	—	—	—

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

# SIP-3020/4010/404

SYNTHESIZED INTELLIGENT PIR



OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION



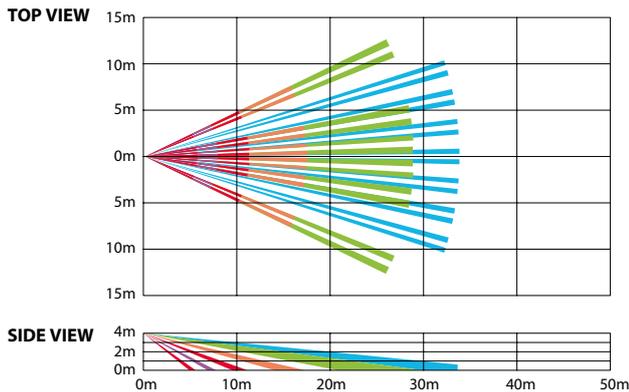
The SIP-3020, SIP-4010, and SIP-404 detectors in the REDWALL-V Series are designed for use in small and mid-sized outdoor areas. They have an intelligent detection system that uses data on the ambient environment, such as temperature and illuminance conditions, to automatically adjust the sensitivity.

## FEATURES

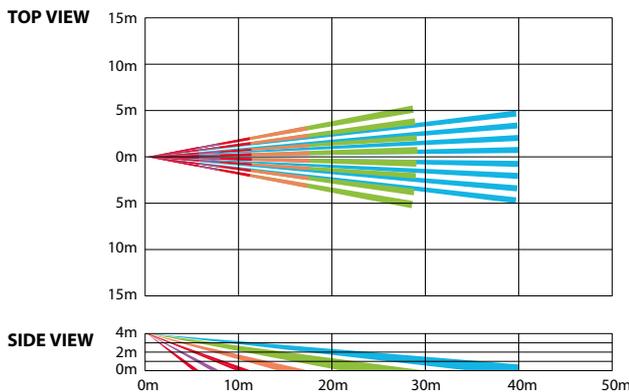
- Intelligent PIR Detection System
  - Detection of ambient temperature and illuminance for automatic sensitivity management
  - Advanced detection algorithm
  - Three dual pyro-elements with Double Conductive Shielding
- Anti-vandalism functions
  - Anti-rotation function with 3-axis accelerometer
  - Anti-masking function with photo-beam
  - Reinforced polycarbonate housing
  - Max. 4m (13ft.) installation height
- Independent sensitivity selector for near/far areas
- Detection logic selector
- Detection range selector
- Independent N.C. and N.O. outputs
- Adjustable alarm interval time

## COVERAGE

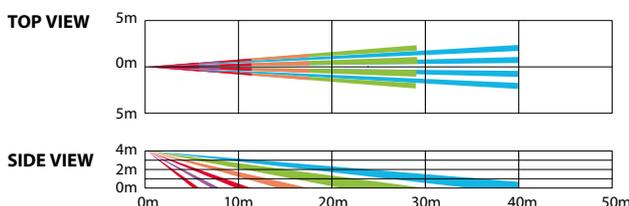
### SIP-3020



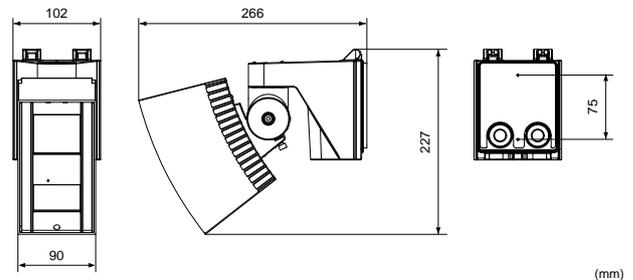
### SIP-4010



### SIP-404



## DIMENSIONS



## SPECIFICATIONS

Model	SIP-3020	SIP-4010	SIP-404
Detection method	Passive infrared		
PIR coverage (main area)	30 x 20 m	40 x 10 m	40 x 4 m
PIR coverage (creep zone)	-	-	-
Sensitivity selector	Far: SH/H/M/L Near: SH/H/M/L		
Range selector	Far: On/Off		
Detection logic selector	AND / OR		
Alarm interval period	Off/15, 30, 60 sec.		
Power input	11-26VDC 22-26VAC, 22-26VDC/AC with optional heating unit		
Current draw	40mA max. (12VDC) 75mA max. (24VAC), 415mA max. (24VAC) with optional heating unit		
Alarm period	Off/15, 30, 60 sec.		
Warm-up period	Approx. 60 sec.		
Alarm output	N.O., N.C., 28 VDC 0.2A max.		
Trouble output	N.C., 28 VDC 0.2 A max.		
Tamper output	N.C., 28 VDC 0.1 A max.		
Operating temperature	-25 to +60°C, -40 to +60°C with optional heating unit (-13 to +140°F, -40 to +140°F with optional heating unit)		
International protection	Main unit : IP65 Chassis : IP55		
Mounting height	2.3 to 4 m (7.6 to 13 ft.)		
Weight	1.2 kg (42 oz)		

Specifications and design are subject to change without prior notice.

## OPTIONS

- AWT-3 : Area walk tester
- AVF-1 : Area view finder
- SIP-HU : Heating unit
- SIP-AT : SIP adjustment tools (AWT-3 + AVF-1)
- SIP-MINIHOOD : Sun/Snow shield

# SIP-3020WF/4010WF/404WF

LOW CURRENT SYNTHESIZED INTELLIGENT PIR



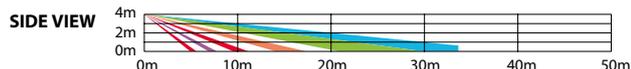
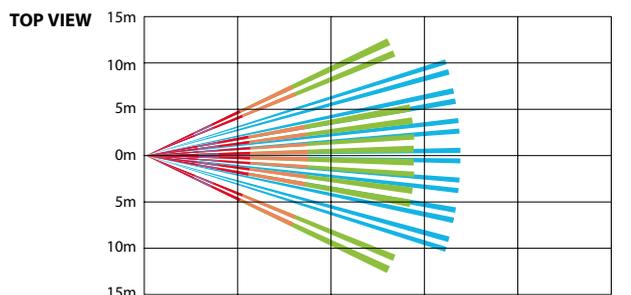
The SIP-3020WF, SIP-4010WF and SIP-404WF are designed for use where a reliable low current detector is required.

## FEATURES

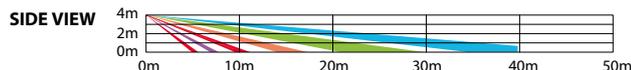
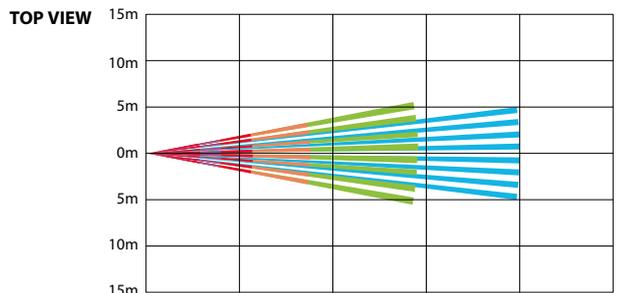
- Low power consumption (3-9VDC, 40 A(standby) 5mA max.)
- Low battery signal
- Intelligent PIR Detection System
  - Detection of ambient temperature and illuminance for automatic sensitivity management
  - Advanced detection algorithm
  - Three dual pyro-elements with Double Conductive Shielding
- Anti-vandalism functions
  - Anti-rotation function with accelerometer
  - Anti-masking function with photo-beam
  - Reinforced polycarbonate housing
  - Max.4m (13 ft.) installation height
- Independent sensitivity selector for near/far areas
- Detection logic selector
- Detection range selector
- Independent N.C. and N.O. ALARM output
- Adjustable alarm interval time

## COVERAGE

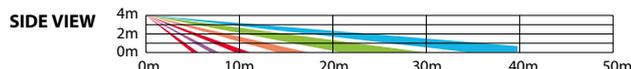
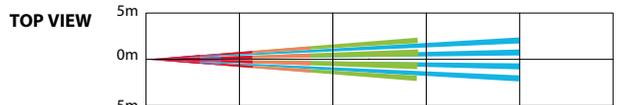
### SIP-3020



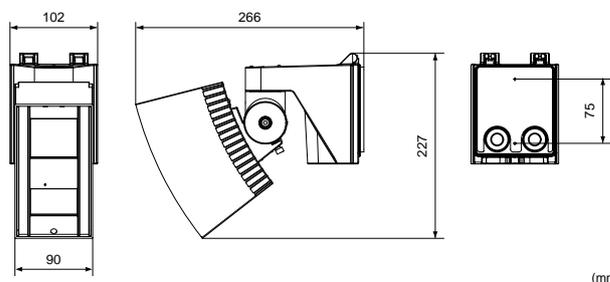
### SIP-4010



### SIP-404



## DIMENSIONS



## SPECIFICATIONS

Model	SIP-3020WF	SIP-4010WF	SIP-404WF
Detection method	Passive infrared		
PIR coverage (main area)	30 x 20 m	40 x 10 m	40 x 4 m
PIR coverage (creep zone)	-	-	-
Sensitivity selector	Far: SH/H/M/L Near: SH/H/M/L		
Range selector	Far: On/Off		
Detection logic selector	AND / OR		
Alarm interval period	Off/5, 60, 150 sec.		
Power input	3 to 9VDC Alkaline or lithium battery		
Current draw	40µA(Standby) 5mA max. (Operating LED ON)		
Alarm period	N.C. 10VDC, 0.01A max. N.O. 10VDC, 0.01A max.		
Warm-up period	Approx. 120 sec.		
Alarm output	Approx. 2 sec.		
Trouble output	N.C. 10VDC, 0.01A max.		
Tamper output	N.C. 10VDC, 0.01A max.		
Operating temperature	-25 to +60°C (-13°to +140°F)		
International protection	Main unit : IP65 Chassis : IP55		
Mounting height	2.3 to 4 m (7.6 to 13 ft.)		
Weight	1.2 kg (42 oz)		

Specifications and design are subject to change without prior notice.

## OPTIONS

- AWT-3 : Area walk tester
- AVF-1 : Area view finder
- SIP-HU : Heating unit
- SIP-AT : SIP adjustment tools (AWT-3 + AVF-1)
- SIP-MINIHOOD : Sun/Snow shield

# SIP-3020/5 SIP-4010/5 SIP-404/5

SYNTHESIZED INTELLIGENT PIR WITH CREEP ZONE



OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION



The SIP-3020/5, SIP-4010/5 and SIP-404/5 are designed for detection applications outdoors to trigger video transmission systems and PTZ camera control.

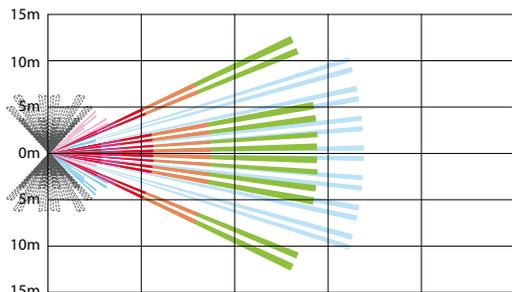
## FEATURES

- Intelligent PIR Detection System
  - Detection of ambient temperature and illuminance for automatic sensitivity management
  - Advanced detection algorithm
  - Three dual pyro-elements with Double Conductive Shielding for main area
- Built-in creep zone detector (Double dual pyro-elements)
- Anti-vandalism functions
  - Anti-rotation function with 3-axis accelerometer
  - Anti-masking function with photo-beam
  - Reinforced polycarbonate housing
  - Max. 4m (13ft.) installation height
- Independent sensitivity selector for creep/near/far areas
- Detection logic selector
- Detection range selector
- Independent N.C. and N.O. outputs
- Adjustable alarm interval time

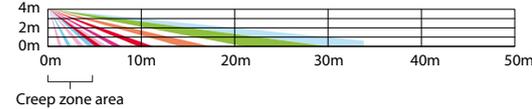
## COVERAGE

### SIP-3020/5

#### TOP VIEW

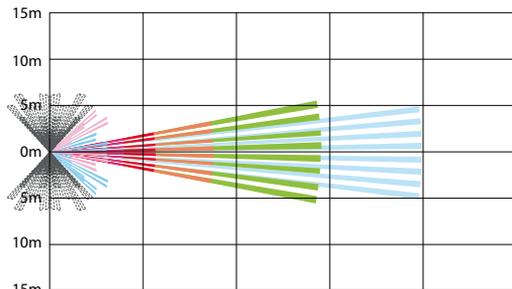


#### SIDE VIEW

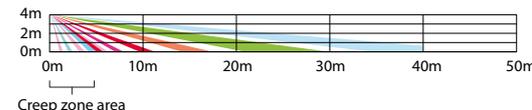


### SIP-4010/5

#### TOP VIEW

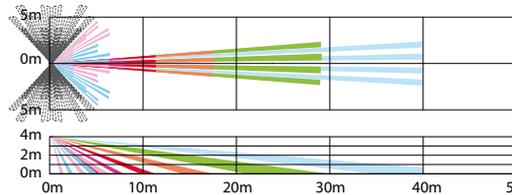


#### SIDE VIEW

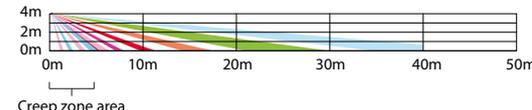


### SIP-404/5

#### TOP VIEW

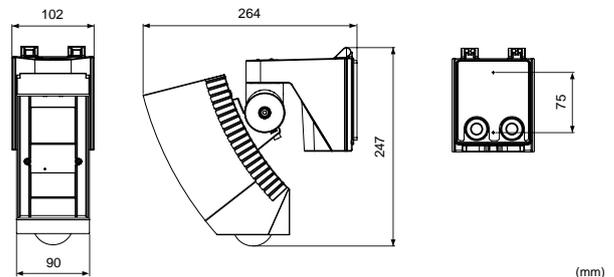


#### SIDE VIEW



The detection angle of the creep zone can be adjusted  $\pm 135^\circ$  horizontally as shown in gray.

## DIMENSIONS



## SPECIFICATIONS

Model	SIP-3020/5	SIP-4010/5	SIP-404/5
Detection method	Passive infrared		
PIR coverage (main area)	30 x 20 m	40 x 10 m	40 x 4 m
PIR coverage (creep zone)	3x 5m (10 x 16 ft.) installed at 2.3m (7.6 ft.) height, 6 x 9m (20 x 30 ft.) installed at 4m (13 ft.) height		
Sensitivity selector	Far: SH/H/M/L Near: SH/H/M/L Creep zone: SH/H/M/L		
Range selector	Far area: On/Off		
Detection logic selector	AND / OR		
Alarm interval period	Off/15, 30, 60 sec.		
Power input	11-26VDC 22-26VAC, 22-26VAC with optional heating unit		
Current draw	45mA max. (12VDC) 85mA max. (24VAC), 425mA max. (24VAC) with optional heating unit		
Alarm period	Approx. 2 sec.		
Warm-up period	Approx. 60 sec.		
Alarm output	(main area)N.O., N.C. 28VDC 0.2A max. (creep zone)N.O., N.C. 28VDC 0.2A max.		
Trouble output	N.C., 28 VDC 0.2 A max.		
Tamper output	N.C., 28 VDC 0.1 A max.		
Operating temperature	-25 to +60°C, -40 to +60°C with optional heating unit (-13 to +140°F, -40 to +140°F with optional heating unit)		
International protection	Main unit: IP65 Chassis: IP55		
Mounting height	2.3 to 4 m (7.6 to 13 ft.)		
Weight	1.4 kg (48 oz)		

Specifications and design are subject to change without prior notice.

## OPTIONS

- AWT-3 : Area walk tester
- AVF-1 : Area view finder
- SIP-HU : Heating unit
- SIP-AT : SIP adjustment tools (AWT-3 + AVF-1)
- SIP-MINIHOOD : Sun/Snow shield

# SIP-5030/100

SYNTHESIZED INTELLIGENT PIR WITH CREEP ZONE



## FEATURES

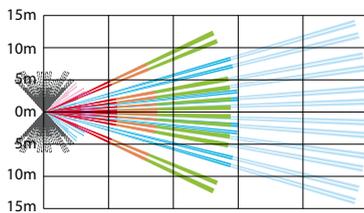
- Intelligent PIR detection system
  - Detection of ambient temperature and illuminance for automatic sensitivity management
  - Advanced detection algorithm
  - Double Dual/One Quad pyro-elements with Double Conductive Shielding for main area SIP-5030
  - Double Quad pyro-elements with Double Conductive Shielding for main area SIP-100
- Built-in creep zone detector (Double dual pyro-elements)
- Anti-vandalism functions
  - Anti-rotation function with 3-axis accelerometer
  - Anti-masking function with photo-beam
  - Reinforced polycarbonate housing
  - Max. 4m (13ft.) installation height
- Independent sensitivity selector for creep/near/far areas
- Independent N.C. and N.O. output for main area SIP-5030
- 2 x N.C. and N.O. independent output for main areas (Near and Far areas) SIP-100
- Adjustable alarm interval time

The SIP-5030 offers wide angle-detection for large areas outside. It has an intelligent detection system that uses data from the ambient environment, such as temperature and illuminance conditions, to automatically adjust the sensitivity.

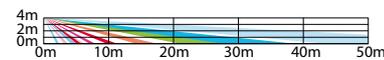
## COVERAGE

### SIP-5030

#### TOP VIEW

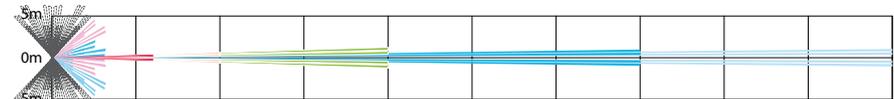


#### SIDE VIEW

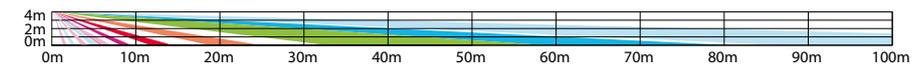


### SIP-100

#### TOP VIEW

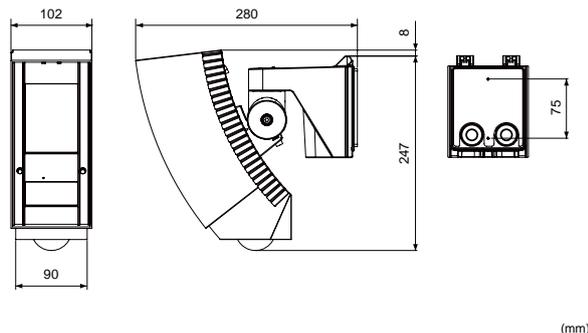


#### SIDE VIEW



The detection angle of the creep zone can be adjusted  $\pm 135^\circ$  horizontally as shown in gray.

## DIMENSIONS



## OPTIONS

- AWT-3 : Area walk tester
- AVF-1 : Area view finder
- SIP-HU : Heating unit
- SIP-AT : SIP adjustment tools (AWT-3 + AVF-1)
- SIP-MIDIHOOD : Sun/Snow shield

## SPECIFICATIONS

Model	SIP-5030	SIP-100
Detection method	Passive infrared	
PIR coverage (main area)	50 x 30 m	100 x 3 m
PIR coverage (creep zone)	3x 5m (10 x 16 ft.) installed at 2.3m (7.6 ft.) height, 6 x 9m (20 x 30 ft.) installed at 4m (13 ft.) height	
Sensitivity selector	Far: SH/H/M/L Near: SH/H/M/L Creep zone: SH/H/M/L	
Range selector	-	
Detection logic selector	AND / OR	
Alarm interval period	Off/15, 30, 60 sec.	
Power input	11-26VDC 22-26 VAC, 22-26VDC/AC with optional heating unit	
Current draw	45mA max. (12VDC) 85mA max. (24VAC) 425mA max. (24VAC) with optional heating unit	50mA max. (12VDC) 90mA max. (24VAC) 430mA max. (24VAC) with optional heating unit
Alarm period	Approx. 2 sec.	
Warm-up period	Approx. 60 sec.	
Alarm output	(main area)N.O., N.C. 28VDC 0.2A max. (creep zone)N.O., N.C. 28VDC 0.2A max.	(main area)Far area:N.O., N.C. 28VDC 0.2A max. Near area:N.O., N.C. 28VDC 0.2A max. (creep zone)N.O., N.C. 28VDC 0.2A max.
Trouble output	N.C., 28 VDC 0.2 A max.	
Tamper output	N.C., 28 VDC 0.1 A max.	
Operating temperature	-25 to +60°C, -40 to +60°C with optional heating unit (-13 to +140°F, -40 to +140°F with optional heating unit)	
International protection	Main unit : IP65 Chassis : IP55	
Mounting height	2.3 to 4 m (7.6 to 13 ft.)	
Weight	1.6kg (56 oz)	

Specifications and design are subject to change without prior notice.

# RLS-3060L/SH

## LASER SCAN DETECTOR

**REDSCAN®**


The RLS-3060 series is a laser scan detector that identifies a moving object's size, speed and distance from the detector. It processes that information with a unique algorithm, resulting in a highly reliable detection system with minimal false alarms.

### FEATURES

- 30m radius for 190 degrees range
- Vertical and horizontal mounting
- Unique detection algorithm
- Automatic area setting function
- 4 independently adjustable detection areas and 4 dry contact outputs for PTZ control or
- 8 independently adjustable detection areas and REDWALL Event Code for Network
- Integration to external devices and applications with REDWALL Event Code
- Changeable Dry-contact Alarm Output type N.O. to N.C.
- Fog cancellation algorithm (Patent listed)

### COVERAGE

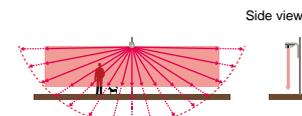
Image of horizontal detection area



Side view



Image of horizontal detection area



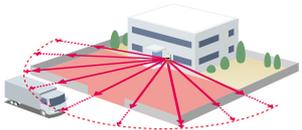
Side view



Vertical detection area example



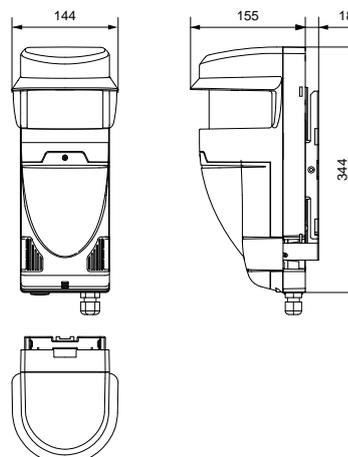
Horizontal detection area example



### OPTIONS

- RLS-PB : Pole mount bracket
- RLS-SB : Adjustable angle mounting bracket
- LAC-1 : Laser Area Checker

### DIMENSIONS



Unit:mm

### SPECIFICATIONS

Model		RLS-3060L	RLS-3060SH
Detection method		Infrared Laser Scan	
Laser protection class		Class 1	
Coverage	Vertical area	Max. 60 m (Approx. 200 ft.) at 10% reflectivity	Max. 60 m (Approx. 200 ft.) at 10% reflectivity / Detection range expansion enable max. 100 m (Approx. 330 ft.).
	Horizontal area	Radius:30m (Approx. 100 ft.), Arc:190° at 10% reflectivity	Radius:30 m (Approx. 100 ft.), Arc:190° at 10% reflectivity / Detection range expansion enable radius:50 m (Approx. 165 ft.), Arc:190°.
Detection resolution		0.25°	
Communication port		Ethernet ,RJ-45 ,10BASE-T/100BASE-TX	
Protocol		UDP, TCP/IP *Redwall Event Code	
Power input		24 VDC 24 VAC	
Current draw		400mA max. (24VDC) 600mA max. (24VAC)	
Heater power input		-	24 VDC, 24 VAC
Heater current draw		-	400mA max. (24 V DC/AC)
Mounting height	Vertical area	15m (50ft.) max.	
	Horizontal area	0.7m (28in.) (recommended)	
Target object selector		S / M / L	
Sensitivity selector		H / M / L	
Camera control output		N.O. 28 VDC, 0.2 A x 4 outputs / Can be changeable to N.C. with RSM ver.8.	
Master alarm output		Form C, 28 VDC, 0.2 A max.	
Trouble output		Form C, 28 VDC, 0.2 A max.	
Tamper output		N.C. 28 VDC, 0.1 A max.	
Environmental disqualification circuit		Form C, 28 VDC, 0.2 A max.	
Alarm period		Approx. 2 sec., Off delay timer	
Operating temperature		-20 to 60 °C (-4 to 140 °F)	
Operating temperature with heater		-40 to 60 °C (-40 to 140° F)	
IP rating		IP66	
Dimensions (H x W x D)		334 x 144 x 155 mm (13.2 x 5.7 x 6.1 in.)	
Weight		2.4kg (85 oz.)	

Specifications and design are subject to change without prior notice.

# RLS-2020I/S

LASER SCAN DETECTOR

REDFSCAN mini™



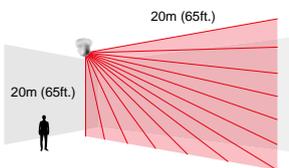
The RLS-2020 series is a compact and highly customizable laser scan detector that helps protect in an unobstructed way, houses, buildings, flat roofs, controlled areas and assets by creating an invisible laser wall or plane and detecting any intrusion breaching it.

## FEATURES

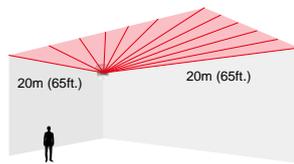
- 20m x 20m (65ft. x 65ft.), 95 degree detection area
- Vertical and Horizontal detection modes
- Multi-angle Adjustment Shell Structure (M.A.S.S.)
- Unique detection algorithm
- Automatic area setting function
- Advanced area setting
- 4 adjustable detection areas on IP connection
- Total 3 outputs can be assigned for analog connection
- Integration to external devices and applications with REDWALL Event Code.
- Supporting multiple network protocols, e. g. TCP/IP, UDP/IP, DHCP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP.

## COVERAGE

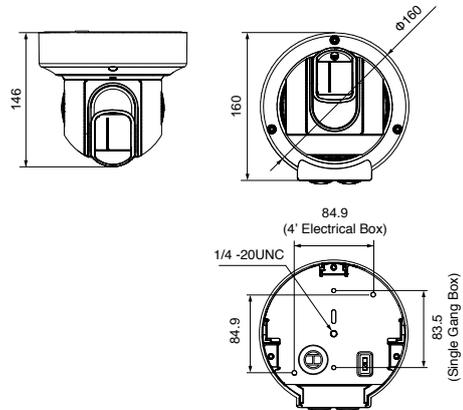
Vertical



Horizontal



## DIMENSIONS



Unit:mm

## OPTIONS

- RLS-AT : RLS area Adjustment Tool Kit
- LAC-1 : Laser Area Checker
- RLS-PB : Pole mount Bracket
- RLS-RB : Recess mount bracket
- RLS-LW : Laser Window

## SPECIFICATIONS

Model	RLS-2020I	RLS-2020S
Installation location	Indoor	Indoor/Outdoor
Detection method	Infrared Laser Scan	
Laser protection class	Class 1	
Power input	10.5 to 30 VDC, PoE (IEEE802.3 af/at compliant)	
Current draw	500 mA max. (12 VDC), 250 mA max. (24 VDC), 6W max. (PoE)	
Mounting method	Ceiling mount, Wall mount, Tripod mount, Pole mount (Option), Recess mount (Option)	
Detection area	20 x 20 m, (approx. 65 x 65 ft.), 95 degrees	
Detection range	Radius 1 to 21m (approx. 3.3 to 68 ft.) at 10% reflectivity	
Detection resolution/Response time	0.25 degrees / within 75 ms to 15 minute	0.25 degree / within 75msec to 15 minutes (for indoor mode and outdoor mode) 0.25 degree / within 25msec (for indoor throw-in mode), 0.125 degree / within 100msec to 15 minutes (for Indoor high resolution mode)
Mounting height(Vertical mode)	2 m (6.7 ft.) or higher	Indoor: 2 m (6.7 ft.) or higher Outdoor: 4 m (13 ft.) or higher (Recommended)
Communication port	Ethernet RJ-45 10BASE-T/100BASE-TX (Auto negotiation)	
Network protocol	TCP/IP, UDP/IP, DHCP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP	
Output	3 outputs, 28 VDC 0.2 A max. N.O./N.C. Selectable (3 from Master alarm, Zone outputs, Trouble, Tamper)	3 outputs, 28 VDC 0.2 A max. N.O./N.C. Selectable (3 from Master alarm, Zone outputs, Trouble, Tamper, D.Q.)
Input	1 Non-voltage contact input	
Alarm period	Approx. 2 sec delay timer	
Operating temperature	-40 to 50 C degrees (-40 to 122 F degrees)	-40 to 60 C degrees (-40 to 140 F degrees)
IP rating	IP66	
Dimensions (HxWxD)	146 x 160 x 160 mm (5.8 x 6.3 x 6.3 inch)	
Weight	1.0 kg (2.2 lb)	

Specifications and design are subject to change without prior notice.

# PIE-1

## PoE IP ENCODER

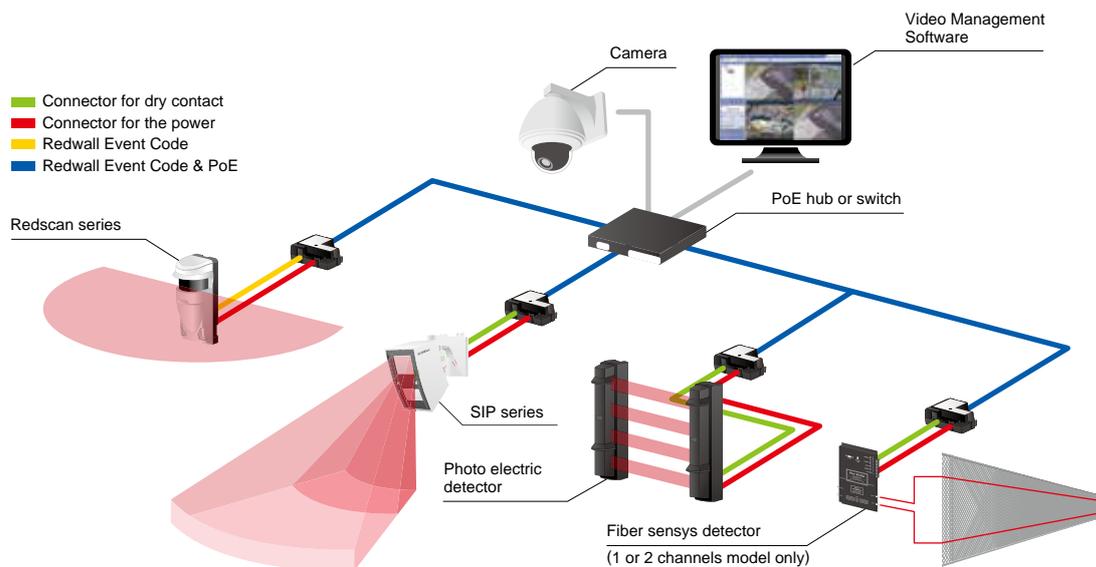


PIE-1 is an encoder that converts analog relay outputs to original ASCII code (Redwall Event Code) for Redwall and Fiber SenSys detectors. Detectors can be connected to Video Management Software platforms with PIE-1 and control IP cameras.

PIE-1 is generating Redwall Event Code using the analog alarm inputs from the Redwall and Fiber SenSys detectors. Video Management Software receives the event code and sends a command to reposition to a pre-set and/or start recording with a camera.

PIE-1 is compatible with Power over Ethernet (PoE). IEEE802.3 af/at making it possible to supply power using a PoE hub or switch.

Only one LAN cable is needed to connect PIE-1 to a PoE hub or switch reducing your installation time and cost.

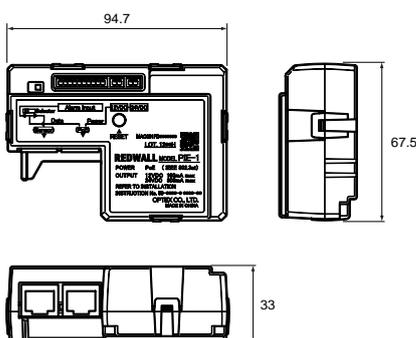


### FEATURES

- Change Analog to IP
- PIE-1 changes analog relay output signals (N.C.) to original ASCII code.

- Compatible with Power over Ethernet
- PIE-1 can supply power to detector using a PoE hub or switch.

### DIMENSIONS



(mm)

### SPECIFICATIONS

Model	PIE-1
Power supply	PoE (IEEE802.3af/at compliant)
Power output	24 VDC 800 mA max, 12 VDC 50 mA max
Signal input	5 input for dry contacts (N.C. only)
Place of use	Outdoor (Inside of the waterproof case)
Alarm output	Redwall Event Code (UDP / TCP)
Operating temperature	-40 to +60 (-40 to +140 )
Operating humidity	95%RH. max
Operation LED (Normal)	Green light is ON when the power is supplied by PoE
Operation LED (When communicating)	Yellow light blinks during communication
Switch	Ethernet converter / LAN through
Function setting	Use web browser
Dimension	67.5 mm x 94.7 mm x 33 mm (3.66" x 3.73" x 1.30")
Weight	270 g (8.8 oz: including all parts) Main unit: 90 g (3.2 oz)
Supported protocols	IPv4, ARP, UDP, TCP, ICMP, HTTP
Accessories	Power output cable x2, Alarm input cable x3, Installation instruction, Mounting plate for a Double Gang Box, Gasket sheet for Gang Box, Mounting Screws x6

Specifications and design are subject to change without prior notice.

# OPTIONS

## REDWALL

### AWT-3



Area walk tester for SIP series

### AVF-1



Area view finder for SIP series

### SIP-HU



Heating unit for SIP series

### SIP-AT



SIP adjustment tools (AWT-3 + AVF-1) for SIP series

### SIP-MINIHOOD



Sun/Snow shield for SIP-3020/4010/404

### SIP-MIDIHOOD



Sun/Snow shield for SIP-5030/100

## REDFWALL

### RLS-PB



Pole mount bracket for all SIP series and all RLS series

### RLS-SB



Adjustable angle mounting bracket for RLS-3060 series

### RLS-LW



Laser Window for RLS-2020 series

### LAC-1



Laser Area Checker for RLS-2020/3060

### RLS-RB



Recess mount bracket for RLS-2020

# PRODUCT SPECIFICATIONS

OUTDOOR PROTECTION

	SIP-3020	SIP-4010	SIP-404	SIP-3020WF	SIP-4010WF
					
	P60	P60	P60	P61	P61
Detection method	Passive infrared			Passive infrared	
PIR coverage (main area)	30 x 20 m	40 x 10 m	40 x 4 m	30 x 20 m	40 x 10 m
PIR coverage (creep zone)	—	—	—	—	—
Sensitivity selector	Far: SH/H/M/L Near: SH/H/M/L			Far: SH/H/M/L Near: SH/H/M/L	
Range selector	Far: On/Off			Far: On/Off	
Detection logic selector	AND / OR			AND / OR	
Alarm interval period	Off/15, 30, 60 sec.			Off/5, 60, 150 sec.	
Power input	11-26VDC 22-26VAC, 22-26VDC/AC with optional heating unit			3 to 9VDC Alkaline or lithium battery	
Current draw	40mA max. (12VDC) 75mA max. (24VAC), 415mA max. (24VAC) with optional heating unit			40µA(Standby) 5mA max. (Operating LED ON) N.C. 10VDC, 0.01A max. N.O. 10VDC, 0.01A max.	
Alarm period	Off/15, 30, 60 sec.			Approx. 2 sec.	
Warm-up period	Approx. 60 sec.			Approx. 120 sec.	
Alarm output	N.O., N.C., 28 VDC 0.2A max.				
Trouble output	N.C., 28 VDC 0.2 A max.			N.C. 10VDC, 0.01A max.	
Tamper output	N.C., 28 VDC 0.1 A max.			N.C. 10VDC, 0.01A max.	
Operating temperature	-25 to +60°C, -40 to +60°C with optional heating unit (-13 to +140°F, -40 to +140°F with optional heating unit)			-25 to +60°C (-13°to +140°F)	
International protection	Main unit : IP65 Chassis : IP55			Main unit : IP65 Chassis : IP55	
Mounting height	2.3 to 4 m (7.6 to 13 ft.)			2.3 to 4 m (7.6 to 13 ft.)	
Weight	1.2 kg (42 oz)			1.2 kg (42 oz)	

INDOOR PROTECTION

REDWALL/REDSAN

	RLS-3060L	RLS-3060SH
		
	P64	P64
Detection method	Infrared Laser Scan	
Laser protection class	Class 1	
Coverage	Vertical area	Max. 60 m (Approx. 200 ft.) at 10% reflectivity / Detection range expansion enable max. 100 m (Approx. 330 ft.).
	Horizontal area	Radius:30m (Approx. 100 ft.), Arc:190° at 10% reflectivity / Detection range expansion enable radius:50 m (Approx. 165 ft.), Arc:190°.
Detection resolution	0.25°	
Communication port	Ethernet ,RJ-45 ,10BASE-T/100BASE-TX	
Protocol	UDP, TCP/IP *Redwall Event Code	
Power input	24 VDC 24 VAC	
Current draw	400mA max. (24VDC) 600mA max. (24VAC)	
Heater power input	24 VDC, 24 VAC	
Heater current draw	400mA max. (24 V DC/AC)	
Mounting height	Vertical area	15m (50ft.) max.
	Horizontal area	0.7m (28in.) (recommended)
Target object selector	S / M / L	
Sensitivity selector	H / M / L	
Camera control output	N.O. 28 VDC, 0.2 A x 4 outputs / Can be changeable to N.C. with RSM ver.8.	
Master alarm output	Form C, 28 VDC, 0.2 A max.	
Trouble output	Form C, 28 VDC, 0.2 A max.	
Tamper output	N.C. 28VDC, 0.1 A max.	
Environmental disqualification circuit	Form C, 28 VDC, 0.2 A max.	
Alarm period	Approx. 2 sec., Off delay timer	
Operating temperature	-20 to 60 °C (-4 to 140 °F)	
Operating temperature with heater	-40 to 60 °C (-40 to 140 °F)	
IP rating	IP66	
Dimensions (H x W x D)	334 x 144 x 155 mm (13.2 x 5.7 x 6.1 in.)	
Weight	2.4kg (85 oz.)	

ACCESS CONTROL

TECHNICAL INFORMATION

# PRODUCT SPECIFICATIONS

SIP-404WF	SIP-3020/5	SIP-4010/5	SIP-404/5	SIP-5030	SIP-100
					
P61	P62	P62	P62	P63	P63
40 x 4 m	Passive infrared		40 x 4 m	Passive infrared	
—	30 x 20 m	40 x 10 m	40 x 4 m	50 x 30 m	100 x 3 m
—	3x 5m (10 x 16 ft.) installed at 2.3m (7.6 ft.) height, 6 x 9m (20 x 30 ft.) installed at 4m (13 ft.) height		—	3x 5m (10 x 16 ft.) installed at 2.3m (7.6 ft.) height, 6 x 9m (20 x 30 ft.) installed at 4m (13 ft.) height	
Far: SH/H/M/L Near: SH/H/M/L	Far: SH/H/M/L Near: SH/H/M/L Creep zone: SH/H/M/L		—	Far: SH/H/M/L Near: SH/H/M/L Creep zone: SH/H/M/L	
Far: On/Off	Far area: On/Off		—	—	
AND / OR	AND / OR		—	AND / OR	
Off/5, 60, 150 sec.	Off/15, 30, 60 sec.		—	Off/15, 30, 60 sec.	
3 to 9VDC Alkaline or lithium battery	11-26VDC 22-26VAC, 22-26VAC with optional heating unit		—	11-26VDC 22-26VAC, 22-26VDC/AC with optional heating unit	
40µA(Standby) 5mA max. (Operating LED ON) N.C. 10VDC, 0.01A max. N.O. 10VDC, 0.01A max.	45mA max. (12VDC) 85mA max. (24VAC), 425mA max. (24VAC) with optional heating unit		—	45mA max. (12VDC) 85mA max. (24VAC), 425mA max. (24VAC) with optional heating unit	50mA max. (12VDC) 90mA max. (24VAC), 430mA max. (24VAC) with optional heating unit
Approx. 2 sec.	Approx. 2 sec.		—	Approx. 2 sec.	
Approx. 120 sec.	Approx. 60 sec.		—	Approx. 60 sec.	
—	(main area)N.O., N.C. 28VDC 0.2A max. (creep zone)N.O., N.C. 28VDC 0.2A max.		—	(main area) N.O., N.C. 28VDC 0.2A max. (creep zone) N.O., N.C. 28VDC 0.2A max.	(main area) Far area: N.O., N.C. 28VDC 0.2A max. Near area: N.O., N.C. 28VDC 0.2A max (creep zone) N.O., N.C. 28VDC 0.2A max.
N.C. 10VDC, 0.01A max.	N.C., 28VDC 0.2 A max.		—	N.C., 28VDC 0.2 A max.	
N.C. 10VDC, 0.01A max.	N.C., 28VDC 0.1 A max.		—	N.C., 28VDC 0.1 A max.	
-25 to +60°C (-13° to +140°F)	-25 to +60°C, -40 to +60°C with optional heating unit (-13 to +140°F, -40 to +140°F with optional heating unit)		—	-25 to +60°C, -40 to +60°C with optional heating unit (-13 to +140°F, -40 to +140°F with optional heating unit)	
Main unit : IP65 Chassis : IP55	Main unit : IP65 Chassis : IP55		—	Main unit : IP65 Chassis : IP55	
2.3 to 4 m (7.6 to 13 ft.)	2.3 to 4 m (7.6 to 13 ft.)		—	2.3 to 4 m (7.6 to 13 ft.)	
1.2 kg (42 oz)	1.4 kg (48 oz)		—	1.6kg (56 oz)	

	RLS-2020I	RLS-2020S
		
	P65	P65
Installation location	Indoor	Indoor/Outdoor
Detection method	Infrared Laser Scan	
Laser protection class	Class 1	
Power input	10.5 to 30 VDC, PoE (IEEE802.3 af/at compliant)	
Current draw	500 mA max. (12 VDC), 250 mA max. (24 VDC), 6W max. (PoE)	
Mounting method	Ceiling mount, Wall mount, Tripod mount, Pole mount (Option), Recess mount (Option)	
Detection area	20 x 20 m, (approx. 65 x 65 ft.), 95 degrees	
Detection range	Radius 1 to 21m (approx. 3.3 to 68 ft.) at 10% reflectivity	
Detection resolution/ Response time	0.25 degrees / within 75 ms to 15 minute	0.25 degree / within 75msec to 15 minutes (for indoor mode and outdoor mode) 0.25 degree / within 25msec (for indoor throw-in mode), 0.125 degree / within 100msec to 15 minutes (for Indoor high resolution mode)
Mounting height (Vertical mode)	2 m (6.7 ft.) or higher	Indoor: 2 m (6.7 ft.) or higher Outdoor: 4 m (13 ft.) or higher (Recommended)
Communication port	Ethernet RJ-45 10BASE-T/100BASE-TX (Auto negotiation)	
Network protocol	TCP/IP, UDP/IP, DHCP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP	
Output	3 outputs, 28VDC 0.2 A max. N.O./N.C. Selectable (3 from Master alarm, Zone outputs, Trouble, Tamper)	3 outputs, 28VDC 0.2A max. N.O./N.C. Selectable (3 from Master alarm, Zone outputs, Trouble, Tamper, D.Q.)
Input	-	1 Non-voltage contact input
Alarm period	Approx. 2 sec delay timer	
Operating temperature	-40 to 50 C degrees (-40 to 122 F degrees)	-40 to 60 C degrees (-40 to 140 F degrees)
IP rating	IP66	
Dimensions (HxWxD)	146 x 160 x 160 mm (5.8 x 6.3 x 6.3 inch)	
Weight	1.0 kg (2.2 lb)	

	PIE-1
	
	P66
Power supply	PoE (IEEE802.3af/at compliant)
Power output	24 VDC 800 mA max, 12 VDC 50 mA max
Signal input	5 input for dry contacts (N.C. only)
Alarm output	Redwall Event Code (UDP / TCP)
Operating temperature	-40 to +60°C (-40 to +140 °F)
Operating humidity	95%RH. max
Operation LED (Normal)	Green light is ON when the power is supplied by PoE
Operation LED (When communicating)	Yellow light blinks during communication
Switch	Ethernet converter / LAN through
Function setting	Use web browser
Dimension	67.5 mm x 94.7 mm x 33 mm (3.66" x 3.73" x 1.30")
Weight	270 g (8.8 oz: including all parts) Main unit: 90 g (3.2 oz)
Supported protocols	IPv4, ARP, UDP, TCP, ICMP, HTTP
Accessories	Power output cable x2, Alarm input cable x3, Installation instruction, Mounting plate for a Double Gang Box, Gasket sheet for Gang Box, Mounting Screws x6

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL/REDSAN

ACCESS CONTROL

TECHNICAL INFORMATION

# CONCEPT FOR ACCESS SECURITY [Secured Entry]

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

The security of a site can be compromised if an unauthorised person manages to access a secured area either by ignoring a "no entry" sign or by following an authorised individual without his or her knowledge. OPTEX offers a range of solutions that add a layer of security to access control systems. The first one detects people walking in the wrong direction, the second one identifies tailgating situations and the others combine our LiDAR technology together with access control and security systems to detect people jumping over turnstiles or accessing controlled areas from the ceiling.

## Application Examples



Reverse Detection

In airports, and other applications where one-way systems need to be enforced. It is critical to detect the individuals walking in the opposite direction. Refer to p.72, reverse detection system.



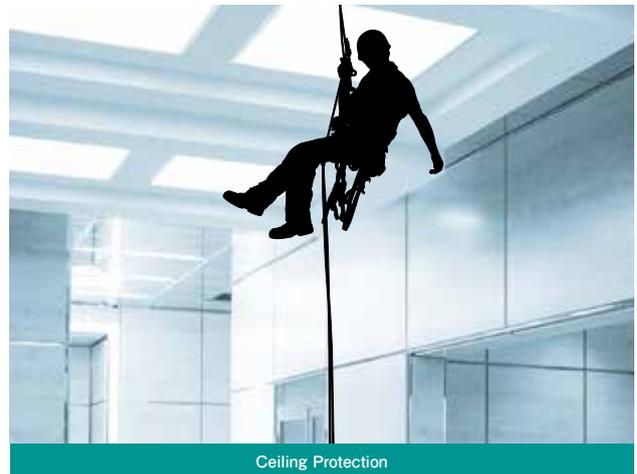
Tailgating Detection

An unauthorised person can follow an authorised individual without being noticed. The breach cannot not be identified by the access control system alone, it requires a tailgating detection system. Refer to p.71, anti-tailgating system.



Turnstile Security

Our LiDAR sensor can be connected to an access control system to detect a person going through a turnstile without swiping his/her access card. This solution is perfectly suited for large office buildings. Refer to p.65, RLS-2020 Series.



Ceiling Protection

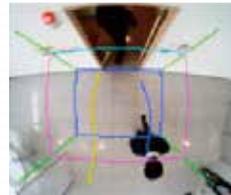
Ceilings and skylights can be used as intrusion access points into a building. Our LiDAR technology can create a customisable virtual plane to protect ceilings, and detect any intrusion from above. Refer to p.65, RLS-2020 Series.

# OV-102S(E) [Detection unit] / OV-102CB(E) [Control box]

ANTI-TAILGATING SYSTEM



Unique algorithm for anti-tailgating detection [Vector focal method]  
 The Accurance OV-102 grasps and tracks a shape of human sterically by a unique image sensing technology. The system can recognize complicated movement and the number of people at high rate and accuracy.



## FEATURES

- Door cancel function  
Ignore door movement on installation side of detection unit.
- Workability  
Install on existing door
- Detection area adjustability  
Detection area can be adjusted after installation of detection unit.
- Sensitivity adjustability  
Sensitivity can be adjusted after installation

## SPECIFICATIONS

Items	Specifications		Remarks
Detection Method	Vector Focusing Method		
Detection Accuracy	> 95% (by own criteria)		
Supply Voltage	Power over Ethernet IEEE 802.3 af		
Warm-up time	Approx. 45 sec.		
Power Consumption	Control box	10 W max.	
	Detection unit	10 W max.	
Indicator	Control box	Green	Power, Authorization, Normal entry (lit)
		Red	Tailgating (lit) / Multiple detections (blinking)
		Green / Red	Warm-up (lit) / Trouble (blinking)
	Detection unit	Green	Communication trouble (alternative blinking)
		Red	Power (lit) / Normal entry (blinking)
		Orange	Tailgating (lit) / Multiple detections (blinking)
Dimensions	Control box	265 × 135 × 31 mm	(W × H × D)
	Detection unit	193 × 85 × 34 mm	(W × H × D)
Weight	Control box	800 g	
	Detection unit	220 g	
Operating Temperature	0 to 50°C		
Operating Humidity only under no condensation	< 80% RH		only under no condensation
Operating Illuminance only the outline of an object is shown	100 to 20,000 lux *1		only the outline of an object is shown
Applicable Door Type	Manual Swing Door/Automatic Slide Door		
Installation location	Control box	Wall / stationary	Indoor
	Detection unit	Ceiling	Indoor
Mounting Height	Detection unit	2.5 to 4.0 m *2	It may be limited by environmental conditions.
LAN wiring	CAT5e or larger		100 m max. in length
Ethernet	100Base-T(X)		Protocol: TCP/UDP(IPv4), ARP, ICMP or HTTP
Input terminal *3	Authorization	N.O./N.C. no voltage Wiegand	26/37bit
	Door open	N.O./N.C. no voltage	Use supplied magnet switch when disable to get
	Door locked		
	Disable output *4		
	Output reset		
Output terminal *3	Tailgating①	MOS FET relay N.O./N.C. no voltage 30 V DC 0.2 A or less (Resistibility load)	Variable timer 0.2 to infinity
	Tailgating②		Pulse output for every entry
	Normal entry		One shot/Timer switching
	Number of pass		Pulse output for authorization
	Unlock command		Pulse output for authorization
	Authorization number		Continuous output during multiple detections *5
	Multiple detections		Output when disable to detect
	Error		

\*1 OV-102 always requires 100 lux or more.

\*2 Maximum width of door opening is 2 m when mounting at 2.5 m high.

\*3 Input/output relays can be selected N.O./N.C. by the dipswitch.

\*4 "Disable output" is recommended to use for an entrance with carriage or luggage. They may make a false detection.

\*5 Multiple detections must be ON by the dipswitch settings.

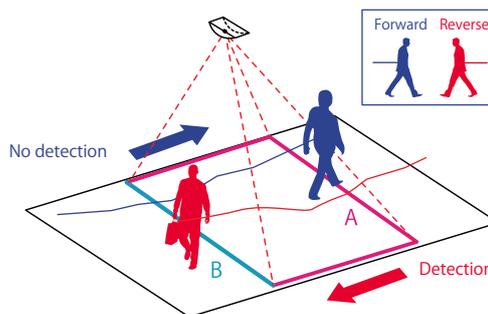
Specifications and design are subject to change without prior notice.

# R1002S(E) [Detection unit] / R1002CB(E) [Control box]

## REVERSE DETECTION SYSTEM



Reverse Detection System R1002 with an unique detection algorithm [ Vector Focal Method ] is designed to detect backward movement of human(s) in a specific area. The system are suitable for applications to catch a suspicious individual such as airports for an efficient facility management or security.



### FEATURES

- **Accurate detection**  
An unique detection method [Vector Focal Method] grasps and tracks a shape of human sterically.
- **Reverse detection**  
Grasp all human movements and detect only backward movement
- **System corporation**  
Enable to be connected with an upper layer system by using no-voltage output from the control box.

### SPECIFICATIONS

Items	Specifications		Remarks
Detection Method	Vector Focusing Method		
Detection Accuracy	> 95% (by own criteria)		
Supply Voltage	Power over Ethernet IEEE 802.3 af		
Warm-up time	Approx. 45 sec.		
Power Consumption	Control box	10 W max.	
	Detection unit	10 W max.	
Indicator	Control box	Green	Power (lit)
		Red	Reverse detection (lit)
		Green / Red	Warm-up (lit) / Trouble (blinking)
			Communication trouble (alternative blinking)
	Detection unit	Green	Power (lit)
		Red	Reverse detection (lit)
Dimensions	Control box	265 × 135 × 31 mm	(W × H × D)
	Detection unit	193 × 85 × 34 mm	(W × H × D)
	Control box	800 g	
	Detection unit	220 g	
Operating Temperature	0 to 50°C		
Operating Humidity only under no condensation	< 80% RH		only under no condensation
Operating Illuminance only the outline of an object is shown	100 to 20,000 lux *1		only the outline of an object is shown
Installation location	Control box	Wall / stationary	Indoor
	Detection unit	Ceiling	Indoor
Mounting Height	Detection unit		2.5 to 4.0 m
LAN wiring	CAT5e or larger		It may be limited by environmental conditions.
Ethernet	100Base-T(X)		100 m max. in length Protocol : TCP/UDP(IPv4), ARP, ICMP or HTTP
Input terminal *2	Disable output Disable reverse detection [1] and [2]		
	Output reset Stop the outputs of reverse detection [1] and [2]		
Output terminal *2	Reverse detection [1]		Variable timer 0.2 to infinity
	Reverse detection [2]		
	Unit [1] detects Pulse output for reverse detection by unit [1]		
	Unit [2] detects Pulse output for reverse detection by unit [2]		
	Unit [3] detects Pulse output for reverse detection by unit [3]		
	Number of reverse detections		
Error		MOS FET relay N.O./N.C. no voltage 30 V DC 0.2 A or less (Resistibility load)	
			Pulse output for the number of reverse detection by unit [1]
			Pulse output for the number of reverse detection by unit [2]
			Pulse output for the number of reverse detection by unit [3]
			Pulse output for the number of reverse detection
			Output when disable to detect

\*1 R1002 always requires 100 lux or more.

\*2 Input/output relays can be selected N.O./N.C. by the dipswitch.  
Specifications and design are subject to change without prior notice.

By utilizing our unique detection logic and optical technique, OPTEX provides high performance against false and missed alarms.



<b>Sunshine Protection Technology &amp; Double Modulation Beam</b>	74
<b>Automatic Transmit Power Control</b>	74
<b>Quad Beam &amp; United Appearance</b>	75
<b>Lightning &amp; Surge Protection</b>	75
<b>Sniper Viewfinder™</b>	76
<b>Beam Alignment Unit</b>	76
<b>LED Indicator and Sound Assist</b>	76
<b>Beam Power Control Selector</b>	77
<b>Maximum Arrival Distance, Maximum Detection Range &amp; Sensitivity Tolerance</b>	77
<b>Adjustable Beam Interruption Time</b>	78
<b>Against Environmental Changes</b>	78
<b>Battery Operated Technology</b>	79
<b>Advanced Temperature Compensation</b>	80
<b>Summer Night Compensation Logic</b>	80
<b>Double-Layered Detection Patterns</b>	81
<b>Intelligent AND detection Logic</b>	81
<b>Digital Quad Zone Logic &amp; Multi-Focus Optics</b>	82
<b>Spherical Fresnel Lens Design</b>	83
<b>Double Conductive Shielding</b>	84
<b>Digital Anti-Masking Technology</b>	84
<b>Sealed Optics</b>	85
<b>Microwave Area Shaping Technology</b>	85
<b>IP (International Protection) Code</b>	86

## Sunshine Protection Technology & Double Modulation Beam

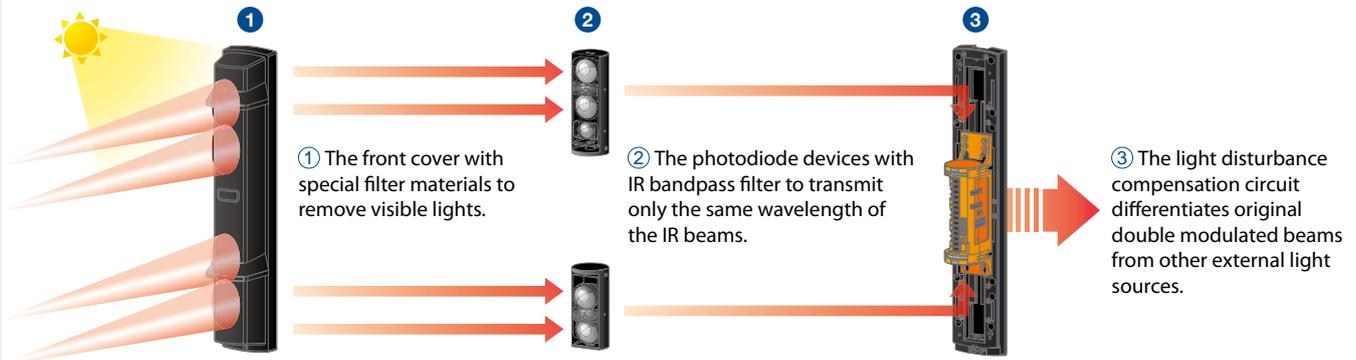
**A-ZONE**

**Appropriate models**

SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP

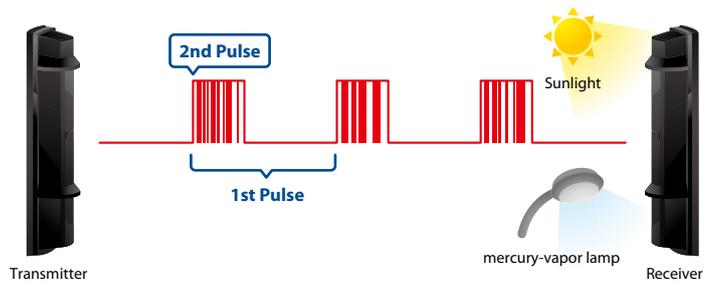
### Sunshine Protection Technology

The sunshine protection technology has a triple layer construction to give better performance against external light sources (e.g. the sun, mercury-vapor lamps, and fluorescent lights).



### Double Modulation Beam

The SL-QDM and SL-QDP offer double modulation beams that differ in pulse patterns. This can enhance signal discrimination against potential noise interference such as sunlight or other external light sources, resulting in a reduction of missed alarms. Together with OPTEX triple layered sunshine protection technology, it ensures high reliability under the severe outdoor security environment.



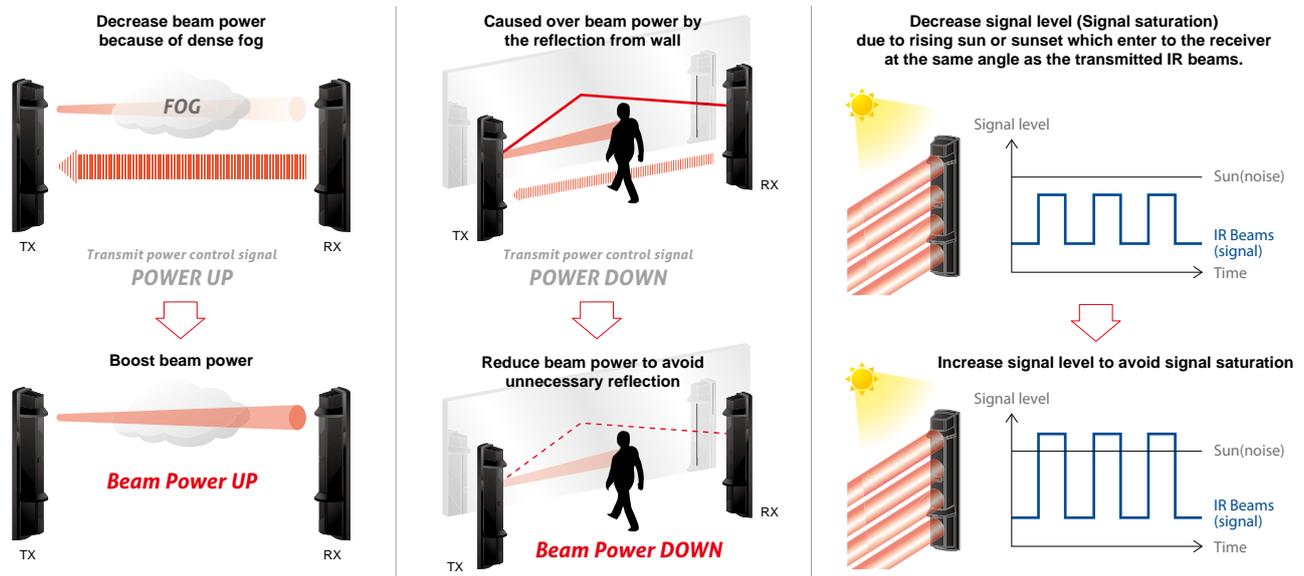
## Automatic Transmit Power Control

**A-ZONE**

**Appropriate models**

SL-200QDM/350QDM/650QDM

Automatically controls, adjusts and optimizes the power of the beam and maintains optimal performance. It decreases false and missed alarms caused by fog, frost, cross talk, signal saturation.



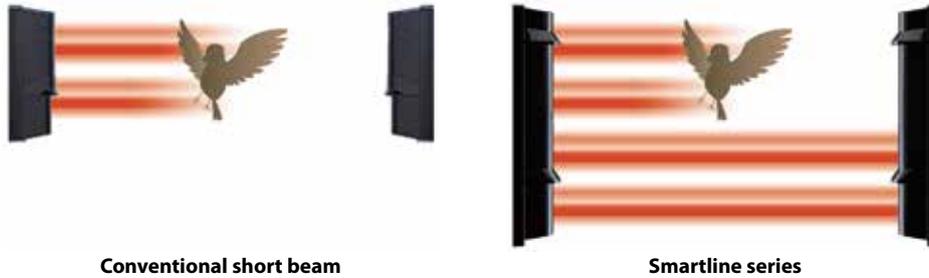
## Quad Beam & United Appearance

A-ZONE

**Appropriate models**

SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP, SL-200QN/350QN/650QN, SL-350QFR/350QNR

By employing quad beam, it dramatically reduces false alarm caused by birds and falling leaves. Moreover, it is also important that the housing design of both long and short beams are united. 60m (200ft.) range models, SL-200QN/SL-200QDP/SL-200QDM with a wide beam pitch is now available.



Conventional short beam

Smartline series

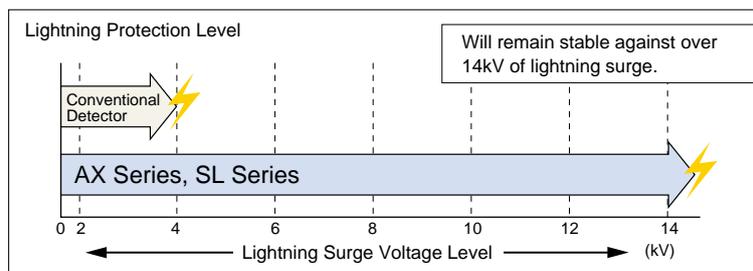
## Lightning & Surge Protection

A-ZONE

**Appropriate models**

SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP, SL-200QN/350QN/650QN, AX-70TN/130TN/200TN, AX-100TF/200TF

Lightning surges are a constant source of problems for electronic equipment that is used outdoors. There are two types of lightning surge: 1) direct strike and 2) induced surge. In a direct lightning strike, the amount of energy dissipated is so great that there is currently no means of protecting electrical equipment from damage. A lightning induced surge may be caused by the movement of charged clouds or a nearby lightning strike. Either of these causes can induced surge voltages in electrical wiring. It is possible to provide some degree of protection against lightning induced surges by installing surge absorbers at appropriate locations as shown in the diagram. Our Smartline series and AX series can withstand a lightning surge up to 14kV without damage resulting in faulty operation (IEC801-5 lightning surge noise is the maximum level of our test).



## Sniper Viewfinder

**A-ZONE**

**Appropriate models**

SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP, SL-200QN/350QN/650QN, SL-350QFR/350QNR

### X2 MAGNIFICATION LENS

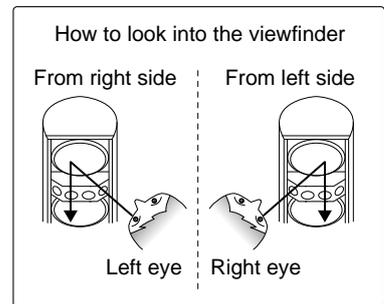
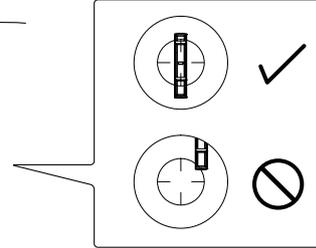
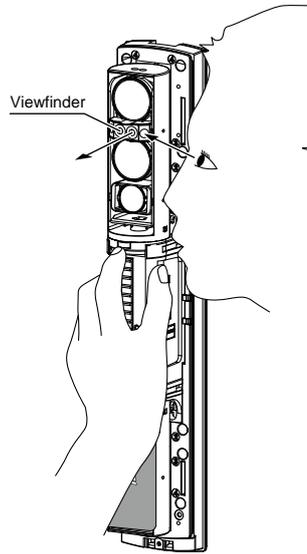
The new telescope lens has a high level of visibility for optical alignment work. Even over long distances, a perfect installation and stable performance can be achieved in a short period.



Conventional model



X2 magnification lens



## Beam Alignment Unit : BAU-4 (Option)

**A-ZONE**

**Appropriate models**

SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP, SL-200QN/350QN/650QN, SL-350QFR/350QNR

The BAU-4 beam alignment unit automatically and accurately adjust the optical axis. This allows peak performance and gives one technician the ability to install the 200 m (650 ft.) Smartline detector by himself.



## LED Indicator and Sound Assist

**A-ZONE**

**Appropriate models**

SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP

The alignment level indicators have 5 LEDs, each LED represents the level of alignment, ranging from poor to excellent. The optical alignment level can also be checked by sound.



TRANSMITTER



RECEIVER

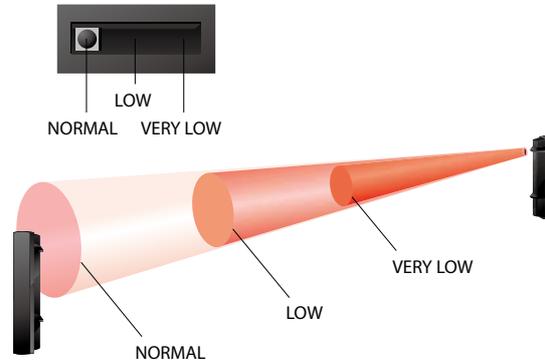
## Beam Power Control Selector

A-ZONE

**Appropriate models** SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP

The beam power control selector allows you to manually adjust beam power from NORMAL to LOW or VERY LOW. This function is effective for the following purposes:

- For countermeasure against crosstalk due to reflection of wall or floor by reducing beam power.
- For countermeasure against interference due to unstable S/N (signal / noise) ratio when using multiple photo beams for long distance or beam stacking applications.
- To reduce beam power when using the detector for a distance shorter than the rated distance.
- To search the peak value when making optical alignment to support perfect alignment.



## Maximum Arrival Distance, Maximum Detection Range & Sensitivity Tolerance

A-ZONE

**Appropriate models** SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP, SL-200QN/350QN/650QN, SL-350QFR/350QNR, AX-100TFR/200TFR, AX-100TF/200TF, AX-70TN/130TN/200TN, BX-100PLUS

### — Maximum Arrival Distance & Maximum Detection range

Maximum arrival distance means theoretical distance which the beam arrives without counting external factor as a product specification. Maximum detection range is rating distance of detection range in use.

### — Sensitivity Tolerance

Sensitivity tolerance can be calculated from maximum arrival distance and detection range. Distance tolerance is a distance allowance value against the reduction of the beam by external factor.

$$\text{Distance tolerance} = (\text{Maximum arrival distance} / \text{Detection range})$$

$$\text{Sensitivity tolerance} = (\text{Distance tolerance})^2$$

e.g.) In case of using SL-350QFR at the distance of 100m  
 ( Maximum arrival distance: 1000m )  
 Distance Tolerance = 10 times  
 Sensitivity Tolerance = 100 times

A certain amount of sensitivity tolerance is required for the stable operations of outdoor photoelectric detectors without false alarms, because the beam power is reduced under severe outdoor environments, e.g. dense fog, rain, snow or dust storms. The following figure is the general indications. All Optex outdoor photoelectric detectors have sensitivity tolerance of 100 times at a rating distance.



Dense fog



Rain



Snow

### General recommended indication

Type of photoelectric detector	Sensitivity tolerance
Indoor photoelectric detector	4 to 25 times
Outdoor photoelectric detector (up to 50 m)	25 to 100 times
Outdoor photoelectric detector (upward of 50 m)	More than 100 times

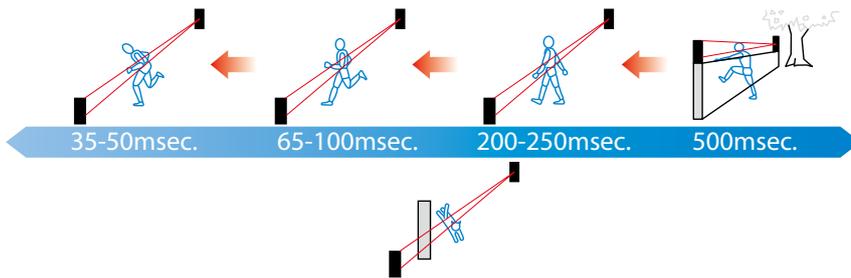
## Adjustable Beam Interruption Time

A-ZONE

**Appropriate models**

SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP, SL-200QN/350QN/650QN, SL-350QFR/350QNR, AX-100TFR/200TFR, AX-100TFR/200TFR, AX-70TN/130TN/200TN, AX-100TF/200TF

By using the beam interruption time potentiometer, it is possible to increase the time the beam must be broken in order to generate an alarm. This will reduce the chance of false alarms being caused by falling leaves, blowing debris or animal or bird movement within the protected area. Refer to the diagram before making any adjustments. If you make the beam Interruption time too long, quickly moving intruders may be able to pass through the beams undetected. After performing this adjustment be certain to do a walk-thru test and confirm that the detector will provide a satisfactory level of protection.



## Against Environmental Changes

A-ZONE

**Appropriate models**

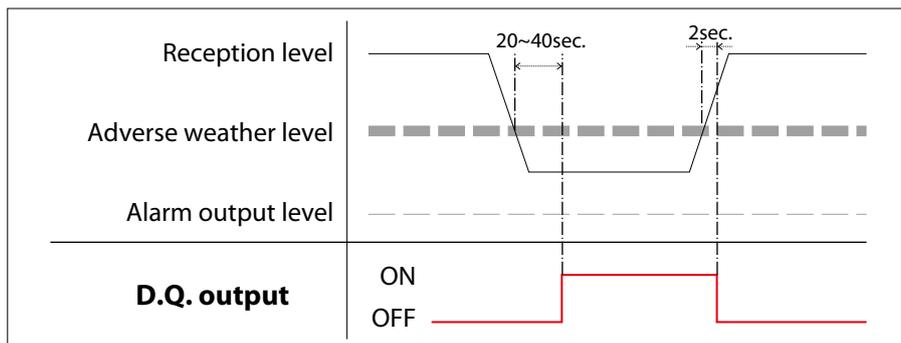
[A.G.C.Circuit] AX-100TFR/200TFR, AX-70TN/130TN/200TN, AX-100TF/200TF, BX-100PLUS  
 [D.Q.Output] SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP, SL-350QFR/350QNR, AX-100TFR/200TFR, AX-100TF/200TF

**A.G.C. (Automatic Gain Control) circuit**

The A.G.C. circuit continually monitors for gradual changes in the signal's strength caused by changing weather conditions. It gains the sensitivity accordingly to maintain weather conditions.

**D.Q. output (environmental disqualification)**

D.Q. output will send a trouble signal when the beam strength is below acceptable levels, for more than 20-40 seconds, due to rain, snow, or heavy rain.



## Battery Operated Technology

A-ZONE

B-ZONE

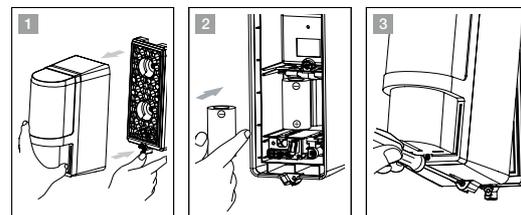
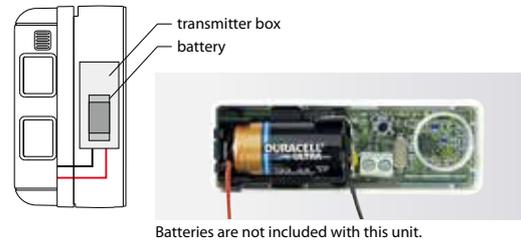
### Appropriate models

SL-100TNR/200TNR, SL-350QFR/350QNR, FTN-R/RAM, AX-100TFR/AX-200TFR, HX-80NRAM, HX-40RAM, VXI-R/RAM/RDAM, BX-80NR

### Back box for wireless transmitters and batteries

**Appropriate models** | SL-350QFR/350QNR, FTN-R/RAM, AX-100TFR/AX-200TFR, HX-80NRAM, HX-40RAM, VXI-R/RAM/RDAM, BX-80NR

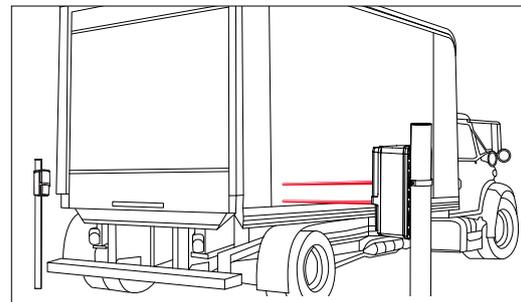
Back box can conceal wireless transmitter. Especially, AX-100/200TFR allows you to easily replace the batteries without opening the front cover. Not necessary to do the optical alignment.



### Intermittent output function

**Appropriate models** | SL-100TNR/200TNR, SL-350QFR/350QNR, AX-100TFR/200TFR

Alarm signals are sent periodically to avoid missed alarm while the beam is broken. Its function is effective for wireless systems which do not recognize "Restore" status.



### Battery saving timer function

**Appropriate models** | SL-100TNR/200TNR, SL-350QFR/350QNR, AX-100TFR/200TFR, HX-40RAM, VXI-R/RAM/RDAM, HX-80NRAM, BX-80NR

Alarm output activation are limited by a timer to 5 to 120 seconds. Even if there are continuous alarm events, the alarm output operates only once in the timer period. It prolongs the battery life of a wireless transmitter

### Low Battery Output and LED

**Appropriate models** | SL-100TNR/200TNR, SL-350QFR/350QNR, AX-100/200TFR, HX-40RAM, HX-80NRAM

When the battery capacity becomes low, the unit automatically outputs fixed time transmission to call attention. When low battery signal is output, Anti-masking function will be canceled in order to extend the battery life.

When low battery signals is output, replace all the batteries with new ones.



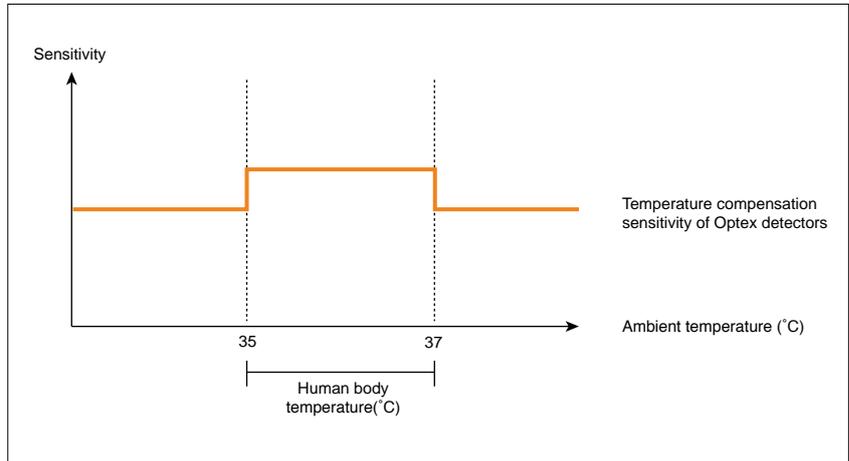
## Advanced Temperature Compensation

B-ZONE

**Appropriate models**

HX-80N/80NAM/80NRAM, HX-40/40AM/40DAM/40RAM, BX-80N/80NR, VXI-ST/AM/DAM/R/RAM/RDAM

At a higher ambient temperature, the temperature difference between the background and a human body will be reduced. In this case the PIR could fail to readily detect a human body. With conventional temperature compensation functions, the sensitivity of detector must be set higher at 35°C than the sensitivity at 25°C (normal temperature) in order for the detector to offer a stable performance. However, with this setting, the sensitivity of the detector is excessively high at 40°C or over, which could lead to various problems. To overcome this drawback, Optex's advanced temperature compensation function allows the detector's sensitivity to automatically drop at 40°C or higher so that the detector can perform more reliably within a wider ambient temperature range.



## Summer Night Compensation Logic

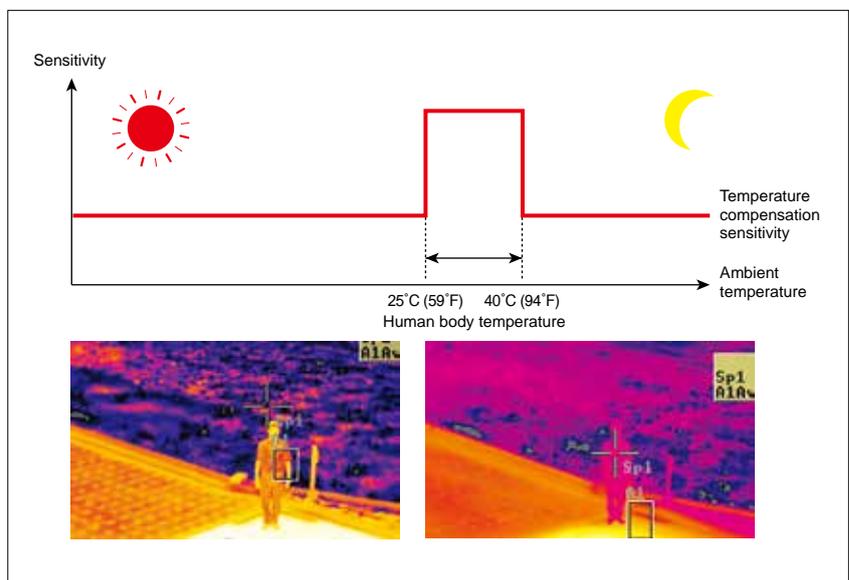
B-ZONE

**Appropriate models**

HX-80N/80NAM/80NRAM, HX-40/40AM/40DAM/40RAM

During summer evenings and nights, areas which are in shade can create an environment where the difference between human body and the surrounding ambient temperature can be at its lowest point. This logic addresses this issue by measuring the luminance levels and the changes in the environment.

The integration of temperature and additional luminance analysis provides the product the ability to more accurately assess true environmental conditions and sharpens the sensitivity as the environmental conditions require. This combination greatly reduces the potential for missed alarms, while maintaining stability.



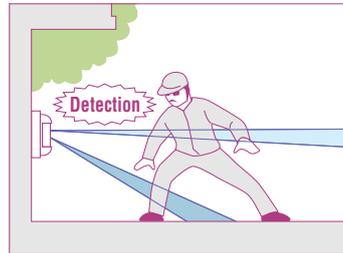
## Double-Layered Detection Patterns

B-ZONE

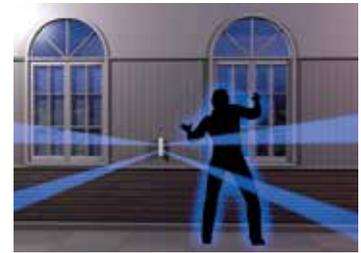
Appropriate models

FTN-ST/AM/R/RAM, BX-80N/80NR, VXI-ST/AM/DAM/R/RAM/RDAM, WXS-AM/DAM/RAM/RDAM, WXI-ST/AM/R

OPEX's outdoor PIR detectors utilize the 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.



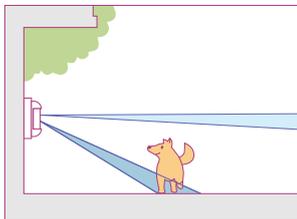
Multiple Detection Pattern of VXI-ST/AM/DAM/R/RAM/RDAM



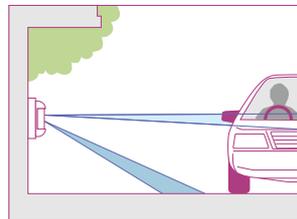
Multiple Detection Pattern of BX-80N/80NR

### — Size Judging function

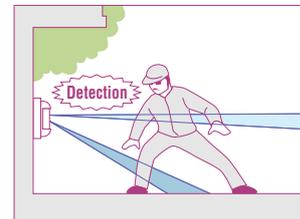
The size judging function virtually eliminates false alarms due to small animals and other moving objects like car.



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.

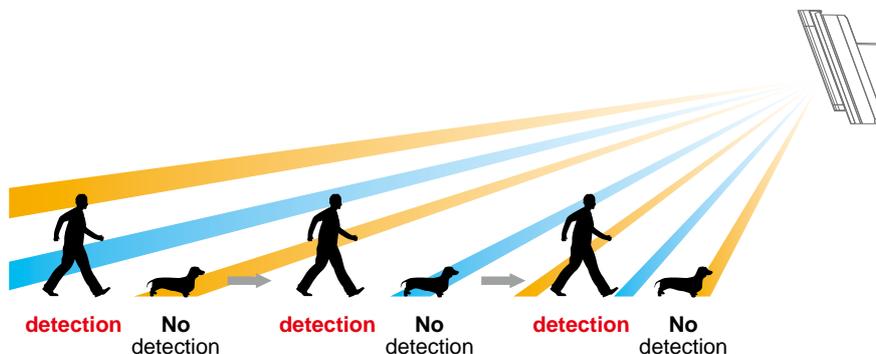
## Intelligent AND detection Logic

B-ZONE

Appropriate models

HX-80N/80NAM/80NRAM, HX-40/40AM/40RAM/40DAM

By utilizing originally developed pyro-elements, it creates a configuration area consisting of 94 high density detection zones. Also the AND detection pattern technology requires both detection areas have to be activated in order to generate an alarm condition making it more tolerant to false alarms caused by small animals or pets.



## Digital Quad Zone Logic & Multi-Focus Optics

C-ZONE

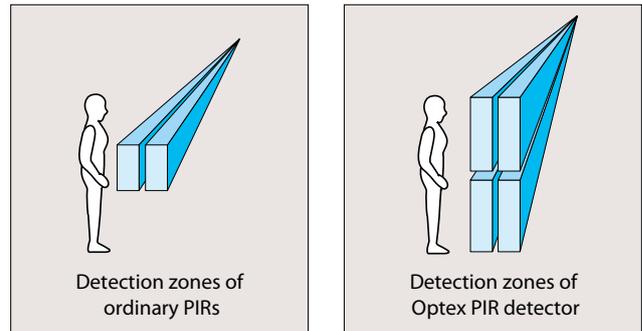
Appropriate models

[Digital Quad Zone Logic] CDX-AM/NAM, FMX-DT/ST/DST, RXC-DT/ST/RST/RDT  
 [Multi-Focus Optics] CX-702/702RS, SX-360Z

OPTEX has 2 different detection logics, digital quad zone logic and multi-focus optics. Each logic creates high vertical density detection zones by original optical technology to prevent false alarms.

### High Vertical Density Detection Zones of Quad Zone Logic and Multi-Focus Optics

Normally, a detector uses twin elements create two detection zones but Optex's detectors 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.



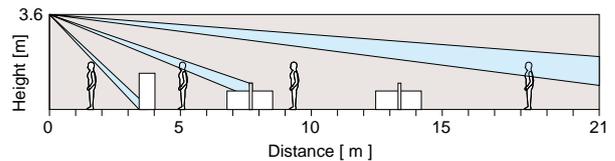
### Detection Logics

#### — Multi-Focus Optics

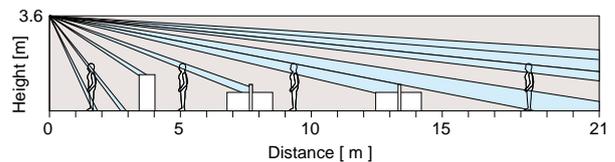
If a person is hidden from the PIR detector, he or she is not detected. In ordinary residences and offices, there are desks, shelves and other furniture. When these objects hide a part of the body, it may make detection difficult.

Multi-focus optics provides taller detection areas, which can be raised 1.5 to 2.0 times than ordinary optics and improve the detection ability to eliminate most dead spots regardless of the presence of furniture or other obstacles.

Ordinary optics

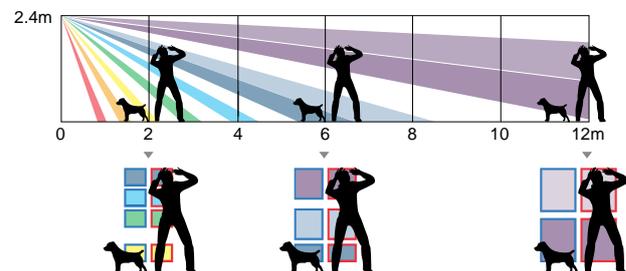


Optex optics



#### — Digital Quad Zone Logic

OPTEX's indoor detectors have from 78 to 82 zones to cover the hole detection area. At any spot within the detection area more than 4(quad) zones are utilized to verify if it should generate alarm or not. Also the CORE platform enables the quad zone logic to evolve to the next step. Providing digital quantification of infrared energy. digital quad zone logic enhanced accuracy in both human detectability and pet immunity.



# Spherical Fresnel Lens Design

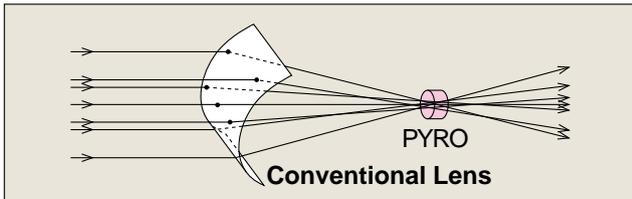
C-ZONE

Appropriate models

CDX-AM/NAM, FMX-DT/ST/DST, RXC-DT/ST/RST/RDT, CX-702/702RS, SX-360Z

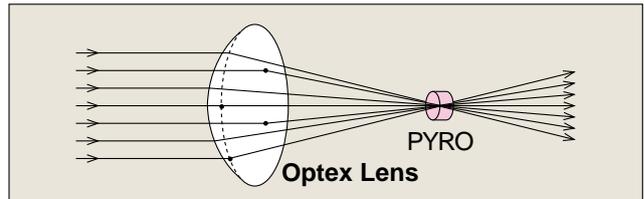
Spherical lens provides a precise focal length to each of the multiple lens segments (uniform distance between each lens segment and the pyroelectric elements). This enables each lens segment to face precisely towards its detection area, and creates detection zones without distortion, achieving a new level in lens design precision.

Conventional flat lens

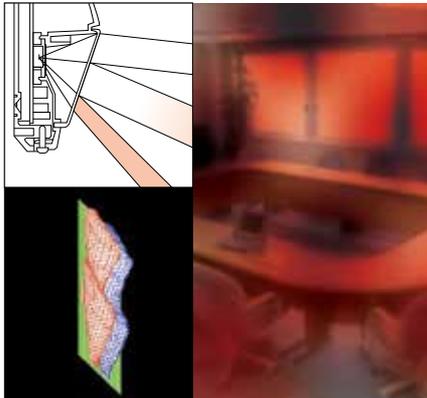


Conventional flat lenses inevitably create sensitivity distortion problems when they are bent to fit a curved housing. Optex's spherically designed lens will obtain sharp detection because no bending is required.

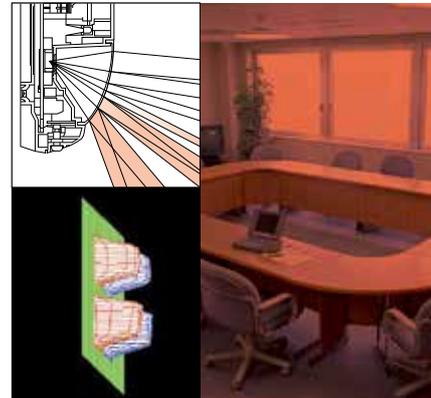
Optex spherical lens



The spherical fresnel lens differs from the conventional flat fresnel lens in that the distance between the lens and the pyro-electric elements is the same across the entire lens (the focal length is always the same). It therefore collects infrared rays more efficiently.



Each focused image (detection zone) has poorly defined borders (=Inaccurate sensitivity) and does not produce sufficient contrast against the background (=low detection performance). Because the IR energy is poorly focused, objects entering these low contrast border areas produce weak, poorly defined electrical signals within the detector.



Each focused image (detection zone) has sharply defined edges (=accurate sensitivity) and it produces the maximum signal contrast against the background area (=high detection performance). This sharp focus provides the maximum signal power to the detector, compared to a weak, sluggish signal created by a poorly focused zone.

## Double Conductive Shielding

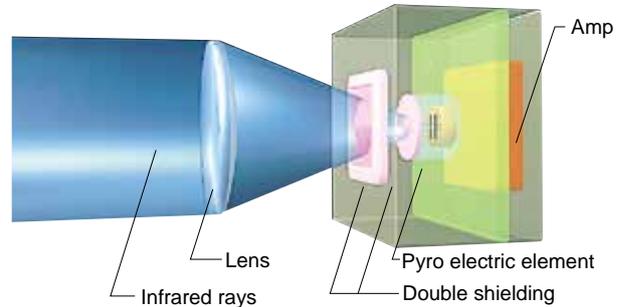
B-ZONE

C-ZONE

**Appropriate models**

VXS-AM/DAM/RAM/RDAM, VXI-ST/AM/DAM, VXI-R/RAM/RDAM, HX-80N/NAM/NRAM, HX-40/AM/RAM/DAM, BXS-ST/AM/R/RAM, BX-80N/NR, LX-402/802N, FMX-DST, CX-702/702RS, SX-360Z, WXS-AM/DAM/RAM/RDAM, WXI-ST/AM/R

By using our double conductive shielding, the visible light disturbance and RFI can be blocked.



### Visible Light Protection

Visible light disturbance protection will prevent a false alarm when a 60W halogen lamp is turned on close to the detector. No false alarm is triggered even when a car flashes its headlights at the detector at a distance of 30cm (If a car passes through the detector range, of course, the exhaust heat of the car will trigger the alarm).

Also no false alarm will be triggered by sunlight up to an illumination of 100,000 lux. False alarms are most likely caused when early morning or evening sunlight pours into the room, and enters the field of view of the PIR either directly or by reflection. In such a case, however, the illumination reaches only about 50,000 lux. This prevents false alarm, due to double conductive shielding.

### RFI Protection

RFI protection has been improved to 20V/m and 30V/m or more by utilizing the double conductive shielding. A field strength of 20V/m means that even if a 10W transmitter is placed within 1 meter of the detector and interference is produced, it will not cause false alarm. With a field strength of 30V/m, a 10W transmitter can be placed within 30-35cm of the detector and not cause a false alarm.

## Digital Anti-Masking Technology

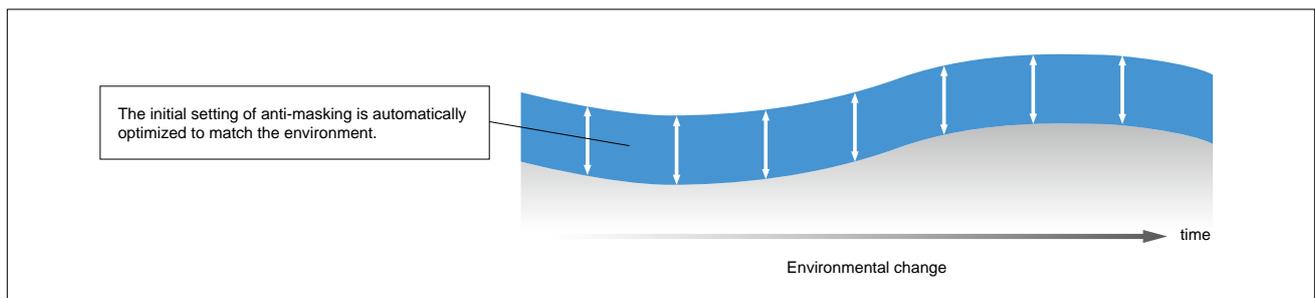
B-ZONE

C-ZONE

**Appropriate models**

HX-40AM/40RAM/40DAM, CDX-AM/NAM/DAM, HX-80AM/80NAM/80NRAM, VXI-AM/DAM/RAM/RDAM, WXS-AM/DAM/RAM/RDAM, WXI-ST/AM/R

Digital processing circuit guarantees reliability in a practical way by adapting to any changes detected in the environment.



## Sealed Optics

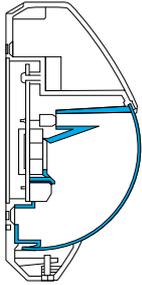
C-ZONE

Appropriate models

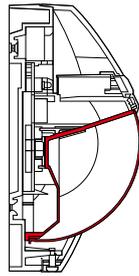
[Sealed Optics] CX-702/702RS  
[Advanced Sealed Optics] RXC-ST/DT, FMX-DST, RXC-RST/RDT

The pyroelectric element's field of view is fully enclosed by the sealed optics mechanism of the lens, cover and the sealed optics foam. This mechanism prevents insects from crossing in front of the pyroelectric element. The sealed optics also protect against draft through wiring holes. Easy knockouts reduce extra space between holes and cables, further enhancing the sealing of the entire housing.

### Sealed Optics



Conventional Structure



OTEX Sealed Optics Structure

### Advanced Sealed Optics



Anti-insect design



Pick-proof design

## Microwave Area Shaping Technology

C-ZONE

Appropriate models

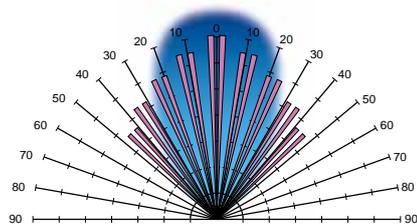
FMX-DT, RXC-DT, CDX-DAM

When microwave and PIR detection are used together, the detection areas of each must be the same in order to make accurate detection. But traditionally this can be a problem because...

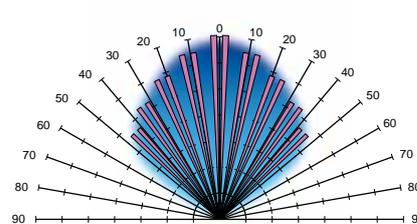
- Firstly, microwaves are not always limited by objects such as wall, windows and partitions, whereas PIR detection is.
- Secondly, the distances at which microwaves can detect movement tend to be far greater than those required by internal intruder detection applications.

Microwave area shaping technology overcomes these problems by matching the microwave detection area to that of the PIR and by limiting it to the room being covered. Long or short distance can be set roughly, by selecting the range using the switch and more precise adjustment is obtained. By doing this, false alarms from beyond the required coverage area or outside the room in question are avoided.

Since the detection area has uniform sensitivity, which minimizes false activation's caused by spot movement in the detection area e.g. small animals.



Detection area shape of PIR and microwave are not the same



Ideal detection area of Optex combination detector

## IP (International Protection) Code

A-ZONE

B-ZONE

Optex uses parts that meet various requirements of international standards in order to meet strict rules for putting safety markings on our products. These standards often require that devices meet or surpass certain ratings specified by **IP (International Protection)** code.

IP tests have been done based on the standard, IEC529 which is required for our all products. IP codes are often required even for parts or partially assembled products.

Following is a brief explanation on the meaning of each number of the IP code.

### Arrangement of the IP code

# IP65

#### Degree of protection against solid object

- 0** Non-protected
- 1** Solid object such as human fist (diameter of 50mm or more) shall not penetrate into product.
- 2** Solid object such as human fingers (diameter of 12.5mm) shall not penetrate into product.
- 3** Solid object such as tool (diameter of more than 2.5mm) shall not penetrate into product.
- 4** Solid object such as wire (diameter of more than 1.0mm) shall not penetrate into product.
- 5** Ingress of dust shall not deteriorate performance and safety of product.
- 6** Dust-tight, No ingress of dust

#### Degree of protection against water

- 0** Non-protected
- 1** Vertically falling water drops shall have no harmful effect on installed product.
- 2** Vertically dripping water on installed product that is tilted up to an angle of 15° shall have no harmful effect.
- 3** Sprayed water to installed product at any angle up to 60° from the vertical shall have no harmful effect.
- 4** Water splashing against the enclosure from any direction shall have no harmful effect.
- 5** Water protected by a nozzle against enclosure from any direction shall have no harmful effect.
- 6** Water protected in powerful jets against enclosure from any direction shall have no harmful effect.
- 7** Water protected. Protected against the effect of temporary immersion in water.
- 8** Waterproof. Protected against the effect of continuous immersion in water.

# OPTEX Company Introduction

The Japanese manufacturer Optex was founded in 1979 and is now becoming a world-leading company in the area of security detectors with its unique infrared detection technology.

In addition to providing highly reliable detectors developed with our unique technology, Optex also upholds environmental policies that strive to make eco-friendly products through the entire process from design and development. In 1997, Optex was certified for complying with ISO 14001 international environmental management standards amid the growing interest in environmental protection on the global level.

Product procurement in over 80 countries worldwide led Optex to implement strategies for achieving global standards for quality at an early stage. The company has also received certification for ISO 9001.

As a pioneer in infrared technology, Optex will continue to meet the needs of customers worldwide by further striving to advance quality control with precision and efficiency along with building systems for global-standard quality.

## CONCEPT FOR LEVEL SURVEILLANCE

KEY POINT TO ACHIEVE ADVANCED SECURITY..... P05

### A-ZONE | PERIMETER OUTDOOR DETECTORS

SL-200QDM/350QDM/650QDM .....	P06
SL-200QDP/350QDP/650QDP .....	P07
SL-200QN/350QN/650QN .....	P08
SL-100TNR/200TNR .....	P09
SL-350QFR/350QNR .....	P10
AX-100TFR/200TFR .....	P11
AX-100TF/200TF .....	P12
AX-70TN/130TN/200TN .....	P13
OPTIONS .....	P14
PRODUCT SPECIFICATIONS .....	P16

### B-ZONE | MIDDLE AREA DETECTORS

WXS-AM/DAM .....	P18
WXS-RAM/RDAM .....	P19
WXI-ST/AM .....	P20
WXI-R/RAM .....	P21
VXS-AM/DAM .....	P22
VXS-RAM/RDAM .....	P23
VXI-ST/AM/DAM .....	P24
VXI-R/RAM/RDAM .....	P25
BXS-ST/AM .....	P26
BXS-R/RAM .....	P27
BX-80N .....	P28
BX-80NR .....	P29
FTN-ST/AM .....	P30
FTN-R/RAM/R-PT/RAM-PT .....	P31
HX-80N/NAM .....	P32
HX-80NRAM .....	P33
HX-40/AM/DAM .....	P34
HX-40RAM .....	P35
QXI-ST/DT .....	P36
QXI-R/RDT .....	P37
LX-402/802N .....	P38
BX-100PLUS .....	P39
OPTIONS .....	P40
PRODUCT SPECIFICATIONS .....	P42

### C-ZONE | INDOOR DETECTORS

CDX-DAM/AM .....	P46
CDX-NAM .....	P47
CX-702/702MKII .....	P48
CX-702RS .....	P49
MX-40QZ/40PT/50QZ .....	P50
FMX-ST/DST/DT .....	P51
RXC-ST/DT .....	P52

RXC-RDT/RST .....	P53
RX-40QZ/PT .....	P54
SX-360Z .....	P55
FX-360 .....	P56
OPTIONS .....	P57
PRODUCT SPECIFICATIONS .....	P58

### REDWALL/REDFSCAN

SIP-3020/4010/404 .....	P60
SIP-3020WF/4010WF/404WF .....	P61
SIP-3020/5 SIP-4010/5 SIP-404/5 .....	P62
SIP-5030/100 .....	P63
RLS-3060L/SH .....	P64
RLS-2020I/S .....	P65
PIE-1 .....	P66
OPTIONS .....	P67
PRODUCT SPECIFICATIONS .....	P68

### ACCESS CONTROL

Concept for Access Security .....	P70
OV-102 .....	P71
R1002 .....	P72

### TECHNICAL INFORMATION

Sunshine Protection Technology	
&Double Modulation Beam .....	P74
Automatic Transmit Power Control .....	P74
Quad Beam & United appearance .....	P75
Lightning & Surge Protection .....	P75
Sniper Viewfinder .....	P76
Beam Alignment Unit .....	P76
LED Indicator and Sound Assist .....	P76
Beam Power Control Selector .....	P77
Maximum arrival distance, Maximum	
Detection Range & Sensitivity Tolerance .....	P77
Adjustable Beam Interruption Time .....	P78
Against Environmental Changes .....	P78
Battery Operated Technology .....	P79
Advanced Temperature Compensation .....	P80
Summer Night Compensation Logic .....	P80
Double-layered Detection Patterns .....	P81
Intelligent AND detection Logic .....	P81
Digital Quad Zone Logic & Multi-Focus Optics .....	P82
Spherical Fresnel Lens Design .....	P83
Double Conductive Shielding .....	P84
Digital Anti-masking Technology .....	P84
Sealed Optics .....	P85
Microwave Area Shaping Technology .....	P85
IP (International Protection) Code .....	P86

# Optex aims to usher in a brighter future with a focus on safety, security, and comfort through the use of sensing technology.

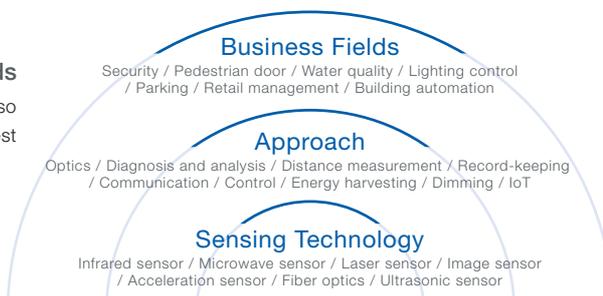
## OPTEX Overview

As of January 1, 2020

Company Name	OPTEX CO., LTD.
Official website	www.optex.co.jp/e
Address [Headquarters]	5-8-12, Ogoto Otsu, Shiga, 520-0101 Japan
Representative	President / CEO Toru Kamimura
Capital	350 million yen
Description of business	Development, manufacture, and sales of various sensors, and development of new business areas including IoT
Parent Company	OPTEX GROUP CO., LTD.

## Proprietary Technologies for a Wide Range of Business Fields

Using not only various reliable sensing and communication technologies but also solution-based proprietary ideas, Optex helps customers realize the best solutions to improve business activities.



## OPTEX Sensing Technologies



### Reliable Sensing Technology

Even in environments with numerous factors—including sunlight, small animals, and radio waves—that may interfere with sensor-based detection, Optex utilizes proprietary sensing algorithms to ensure reliable, stable detection.



### Application-Based Sensor Equipment Development

Optex introduces sensors capable of accurate detection by incorporating not only knowledge of various sensor features found throughout the globe but also a comprehensive understanding of factors such as detection targets, installation environments, and applications.



### Smart Data

Optex sensors work as a type of edge computing device that transmits only the necessary data (smart data), which is created by filtering out unnecessary data from large amounts of sensor data to ensure only the essential data is transmitted.

## Global Expansion

Taking advantage of a global network that includes more than 20 bases, Optex provides products and services in 80 countries and regions around the world.



## Global Niche Market Leader

Optex is dedicated to meeting the needs of niche markets for special-application sensors and currently boasts the leading share of the global niche market.



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