

180° Panoramic Outdoor Detector

# WX Shield Series

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180° detection area, with anti-masking  
Up to 40ft detection per side, 80ft total  
High & low mounting options available



## Comprehensive Exterior Sensing Solution

The WX Shield (WXS) Series is a family of 180° external sensors comprised of 4 PIR and 2 PIR & microwave models utilizing both analog and digital technologies to detect approaching intruders before they gain access into the protected areas. With its wide and comprehensive field of view and the ability to tailor its settings to meet the environment around your premise, the WXS Series will provide an effective solution for new & existing security systems.



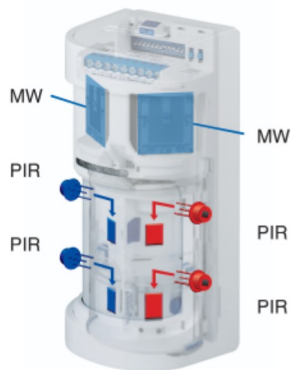
# SHIELD: The New Shape of Security

**INTEGRATION OF 4 PIR & 2 MICROWAVE SENSORS & THE SHIELD CONCEPT DESIGN**



**Reliable**

180° Complete Coverage & Flexibility



## 4 PIR & 2 MW Technology

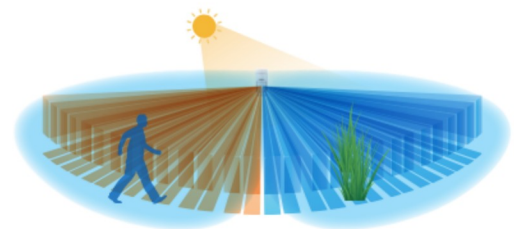
**(WXS-DAM & WXS-DRAM only)**

The PIR & microwave detection range, sensitivity, and alarm output, can be set separately for the left & right detection areas, providing more flexible detection area settings, with great reliability against false alarms.

## Stability Against Light Disturbance

**(WXS-DAM and WXS-DRAM only)**

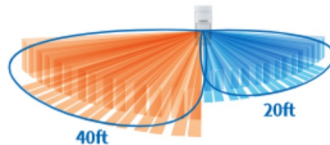
WXS series integrated algorithm of both PIR and Microwave provides the ultimate stability in detection performance. In a field where strong sun hits the land or facing direct light beams from traffic.



## Individual Detection Area Size

**(WXS-DAM and WXS-DRAM only)**

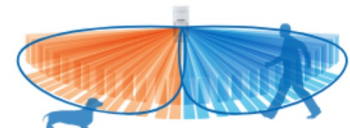
Detection distance can be easily adjusted between 2.5m (8ft) and 12m (40ft) by left and right sliding lower PIR units and DIP switch setting of MW sensitivity individually.



## Panoramic Triple Layer Detection

**(WXS-DAM and WXS-DRAM only)**

WXS series triggers an alarm signal only when all of upper & lower PIR sensors and microwave sensor detect a movement.



No detection

Detection

## Individual Sensitivity Setting

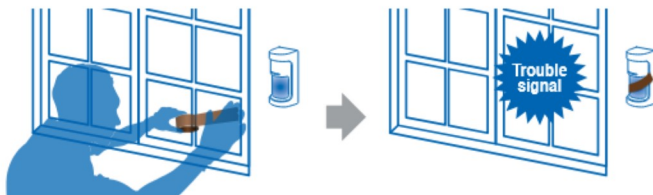
Detection sensitivity can be set to High, Medium and Low by left and right switches individually.

## Individual Alarm Outputs

WXS triggers alarm signals both left and right side individually and it's useful for PTZ activation, direction recognition and changing detection pattern by day and night with a CP.

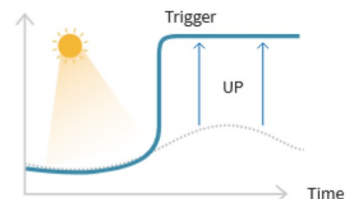
## Self-Learning IR Digital Anti-Masking Function

WXS series detect covering objects on lens surface. IR digital anti-masking function optimizes trigger level of trouble outputs generated by masking depends on status of lens surface. A well-calibrated adjustment for both of emitting and receiving level of IR LED fluctuating by temperature contributes to stable anti-masking.



## Sunlight Canceling

The trigger level of anti-masking is automatically adjusted when sunlight is too strong.



## Rainwater & Insect Canceling

Small objects such as a spider or rainwater can be cancelled.

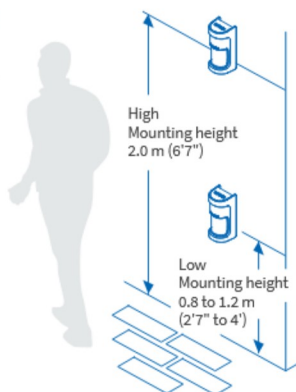
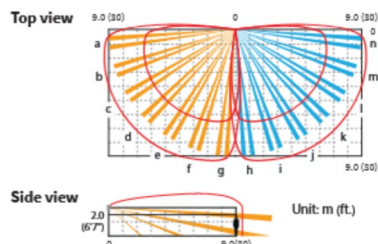




# Convenient

## Selectable Mounting Height

WXS series can be installed at 2.0m (6'7") high, it's effective to avoid vandalism or masking of lens. In this case, PIR detection distance is fixed as max. 9 m (30').



## Blue Touch™

All accessible parts are colored in blue, making an installation a more friendly procedure.



All the components needed for the sensor's adjustment and settings are in blue.

Easy to adjust the detection area



## Day / Night Mode

Night mode is selectable if alarm outputs are required only when ambient luminance becomes dark. For example, it can be used for lighting control.

## Screw-Free Design

You can open / close the front cover and remove / put main unit without any screws. It contributes to reduction of installation time



Easy open



Remove



Put main unit



Auto lock

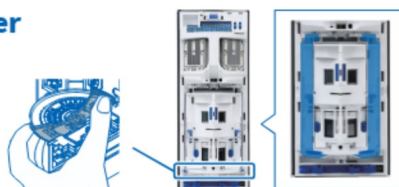
### Automatic Walk Test:

Automatically begins when you close front cover and ends after 3 minutes.

## Easy & Flexible Detection Area Settings

### Area Masking Shutter

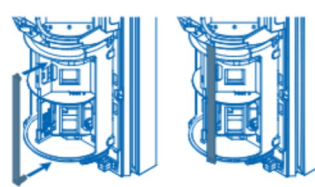
By rotary sliding area masking shutter, the size of detection areas can be changed.



When the area masking shutter position's left is d & right is k, detection area a-d & k-n are masked.

### Area Masking Plate

Unwanted detection areas can be masked by included area masking plate.



When a area masking plate is set on position h, detection area h is masked.



# Secure

A Sense of Security, Designed For You

### EOL module socket (WXS-AM, DAM only)

Optional EOL (end of line) resistor modules are available.

### Wide LED Window

Wide and bright LED for a recognition from a distance.

### Cover Tamper

A tamper output is generated when front cover is open.



### Pole Mount (option PMP-01)

Not only wall mount, pole mount is available with optional pole mount plate (PMP-01) and a metal band up to 23 mm (1 inch) in width.

### Back Tamper

A tamper output will be generated when unit is removed from the wall.

### Level Indicator

WXS series features a level indicator to ease the installation process.



Web based manual  
for wired models

<http://navi.optex.net/manual/50276>



Web based manual  
for battery operated models

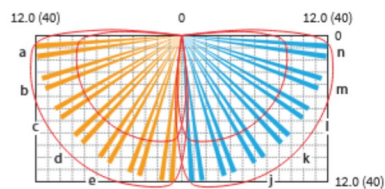
<http://navi.optex.net/manual/50278>



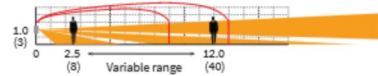
## Coverage (Low Mount)

Top view

Unit: m (ft.)



Side view



## Options



Plug-in EOL (PEU)



Pole mount plate (PMP-01)



Battery holder (BH-01)



Back box (WXI-BB)



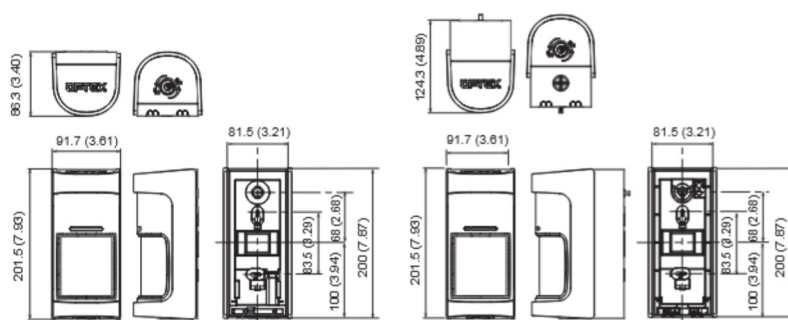
Area masking plate x 10 (MKP-01)  
5 pcs of area masking plates are included.

## Dimensions

Wired Model

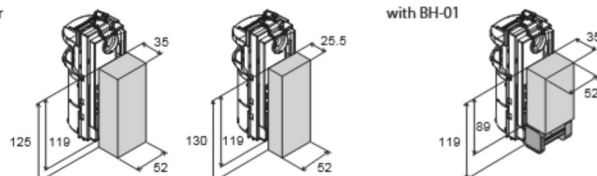
Battery Operated Model

Unit: mm (inch)



Wireless transmitter and battery

with BH-01



Unit: years (approx.)

|              |                             | Model           | WXS-RAM |     | WXS-RDAM |     |
|--------------|-----------------------------|-----------------|---------|-----|----------|-----|
|              |                             | Interval (sec.) | 120     | 5   | 120      | 5   |
| Battery type | CR123A (3 V DC, 1 300 mAh)  |                 | 5       | 3.5 | 3.5      | 1   |
|              | CR2 (3 V DC, 750 mAh)       |                 | 3       | 2   | 2        | 0.5 |
|              | 1/2AA (3.6 V DC, 1 000 mAh) |                 | 4       | 2.5 | 2.5      | 0.8 |

## Specifications

| Model                                    | WXS-AM                                                                                               | WXS-DAM                                                                                                                                              | WXS-RAM                                                                                                                                                                                               | WXS-RDAM                                                                                                                                             |
|------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Detection method                         | Passive infrared                                                                                     | Passive infrared & Microwave                                                                                                                         | Passive infrared                                                                                                                                                                                      | Passive infrared & Microwave                                                                                                                         |
| PIR coverage                             | High mount: 9.0 m (30') 180°wide Low mount: 12.0 m (40') 180°wide                                    |                                                                                                                                                      |                                                                                                                                                                                                       |                                                                                                                                                      |
| PIR zones                                | High mount: Horizontal 14 pairs, vertical 4 layers Low mount: Horizontal 14 pairs, vertical 2 layers |                                                                                                                                                      |                                                                                                                                                                                                       |                                                                                                                                                      |
| 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 to 18 V DC                                                                                       |                                                                                                                                                      | 3.0 to 3.6 V DC lithium battery                                                                                                                                                                       |                                                                                                                                                      |
| Current draw (except walk test)          | 23 mA max. at 12 V DC                                                                                | 24 mA max. at 12 V DC                                                                                                                                | 19 µA stand-by<br>4 mA max. at 3 V DC                                                                                                                                                                 | 24 µA stand-by<br>6 mA max. at 3 V DC                                                                                                                |
| Alarm period                             | 2.0 ± 1.0 sec.                                                                                       |                                                                                                                                                      |                                                                                                                                                                                                       |                                                                                                                                                      |
| Warm-up period                           | 60 sec. or less (LED blinks)                                                                         |                                                                                                                                                      |                                                                                                                                                                                                       |                                                                                                                                                      |
| Alarm (R) output                         | 28 V DC 0.1 A max.<br>[Individual; Right or General], [N.O. or N.C.] are selectable                  |                                                                                                                                                      | Solidstate switch, 10 V DC 0.01 A max.<br>[Individual; Right or General], [N.O. or N.C.] are selectable                                                                                               |                                                                                                                                                      |
| Alarm (L) output                         | 28 V DC 0.1 A max.<br>[Individual; Left or General], [N.O. or N.C.] are selectable                   |                                                                                                                                                      | Solidstate switch, 10 V DC 0.01 A max.<br>[Individual; Left or General], [N.O. or N.C.] are selectable                                                                                                |                                                                                                                                                      |
| Trouble output                           | N.C. 28 V DC 0.1 A max.                                                                              |                                                                                                                                                      | (with tamper)<br>Solidstate switch, 10 V DC 0.01 A max.<br>[N.O. or N.C.] are selectable                                                                                                              |                                                                                                                                                      |
| Tamper output                            | N.C. 28 V DC 0.1 A max.<br>Open when either the cover, main or base unit is removed                  |                                                                                                                                                      | -                                                                                                                                                                                                     |                                                                                                                                                      |
| LED indicator                            | Red                                                                                                  | 1. Warm-up 2. Alarm 3. Masking detection<br>4. "High mount" setting (When the tamper switch is activated, LED blinks if it is "High mount" setting.) |                                                                                                                                                                                                       | 1. Warm-up 2. Alarm 3. Masking detection<br>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                                                                                                                           |
| Operation temperature (except batteries) | -30°C to +60°C (-22°F to +140°F)                                                                     | -20°C to +45°C (-4°F to +113°F)                                                                                                                      | -30°C to +60°C (-22°F to +140°F)                                                                                                                                                                      | -20°C to +45°C (-4°F to +113°F)                                                                                                                      |
| Environment humidity                     | 95% max.                                                                                             |                                                                                                                                                      |                                                                                                                                                                                                       |                                                                                                                                                      |
| Interference protection                  | IP 55                                                                                                |                                                                                                                                                      |                                                                                                                                                                                                       |                                                                                                                                                      |
| 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)                                                                                                                                      | 730 g (25.8 oz)                                                                                                                                                                                       | 770 g (27.2 oz)                                                                                                                                      |
| Accessories                              | [1] Area masking plate x 5 [2] Mounting screw (4 x 20 mm) x 2<br>[3] Lock screw x 1                  |                                                                                                                                                      | [1] Connector for POWER and ALARM (R)<br>[2] Connector for ALARM (L) [3] Connector for TROUBLE<br>[4] Velcro tape [5] Area masking plate x 5<br>[6] Mounting screw (4 x 20 mm) x 2 [7] Lock screw x 1 |                                                                                                                                                      |

• Specifications and designs are subject to change without prior notice.

• These units are designed to detect an intruder and activate an alarm control panel.

Being only a part of a complete system, we cannot accept responsibility for any damages or other consequences resulting from an intrusion.