



SHORT-RANGE PHOTOELECTRIC DETECTOR

# AX-100/200 PLUS AX-100/200 ALPHA



## **Photoelectric Detectors Improved with OPTEX Innovation to Provide Advanced Performance in Outdoor Detection.**

**OPTEX Photoelectric Detectors with Innovative Features for Easy Installation Provide Stable Performance against False Alarms for More Effective Outdoor Detection and Non Security Applications.**

The OPTEX AX-100/200 Photoelectric Detector Series is the next step in Outdoor Detection and will satisfy all the needs of both users and installers. OPTEX unique technology and design provide a wide range of functions that greatly simplify installation and maintain reliable performance even in many adverse weather or environmental conditions.

# Reliable Technology from OPTEX Provides All the Outdoor Security You Need

## STANDARD VERSION AX-100/200 PLUS

### 1. QUICK OPTICAL ALIGNMENT

#### Alarm Indication LED in Viewfinder

The alarm condition is visually displayed using an alarm indication LED which is visible on the front of the unit and can also be seen through the viewfinder.

#### LED is "ON"

↓ : Beam energy from the transmitter is not reaching the receiver.

#### LED is "OFF"

↓ : Beam energy from transmitter is reaching the receiver.

#### Fine Adjustment



(Note: Fine adjustment must always be done with a Volt Meter - See Installation Instructions.)

#### Clear Viewfinder Visibility

A conveniently placed viewfinder allows for easy alignment even in some of the most difficult mounting situations.

#### Fine Angle Adjustment for Alignment

The rotating dial allows the installer to finely adjust the beam easily either horizontally ( $180^\circ \pm 90^\circ$ ) or vertically ( $10^\circ \pm 5^\circ$ ) with or without the use of a screwdriver (finger adjustable).

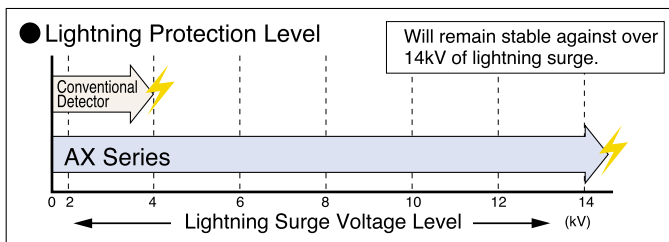


PHOTO: AX-200ALPHA

### 2. RELIABLE PERFORMANCE

#### Lightning & Surge Protection

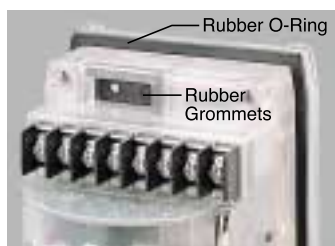
An improved EMI surge absorber and high surge resistiveness relay will maintain stable operation even in the most lightning prone areas.



#### Rain, Dust & Insect Protection

The Rubber O-Ring & Rubber Grommets used in the AX-100/200PLUS & ALPHA Series prevent rain, dust and tiny insects from adversely affecting performance. (IP55)

※Some product parts in the photo on the right appear transparent for photographic purposes.

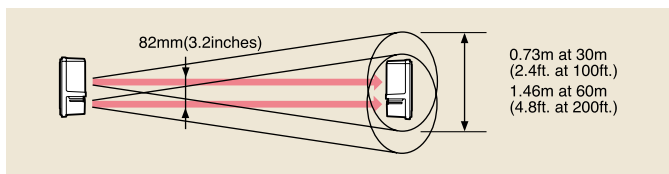


#### Frost & Dew Protection

An anti-frost and convex visor design is incorporated to protect the detector from effect of frost & dew.

#### High Grade Aspherical Lens

The high grade aspherical lens creates more sharply defined & precise infrared beams compared to ordinary fresnel lenses.



#### Twin Synchronized Pulsed Beams Designed for Greater Stability

"And Gate" dual beams require simultaneous interruption of both beams to trigger an activation. No activation is generated when a bird or falling leaves break just one beam.

#### 99.5% Beam Blocking Stability

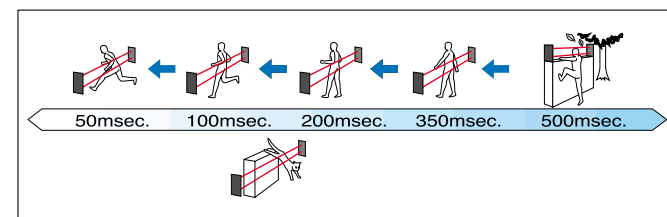
Enables stable operation with as much as 99.5% loss of beam energy caused by heavy rain, dust storms, fog or snow.

#### 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 adjusts the sensitivity accordingly to maintain the proper signal level for the current environmental conditions.

#### Adjustable Beam Interruption Period

The Beam Interruption Time (the amount of time a beam must be broken for an alarm to occur) can be adjusted to fit any application. For example, when protecting a wall or fence, a longer interruption time will catch intruders, but let jumping cats pass through without setting off an alarm.



#### Form C Relay Providing More Flexibility

## SUPERIOR VERSION AX-100/200 ALPHA

### 3 Step LED Indicator for Fast and Accurate Fine Beam Alignment

The alignment condition is visually displayed on the front and in the viewfinder of the receiver. Verification of alignment is achieved by using the 3-step process shown below.

#### LED is "ON"

↓ : Before alignment.

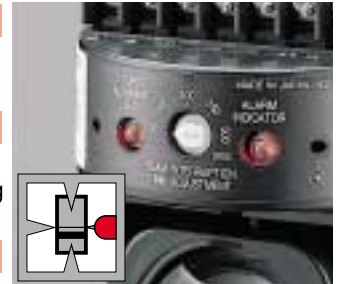
#### LED is "Flickering"

↓ : Beam energy from transmitter is reaching receiver.

#### LED is "OFF"

↓ : Ready for fine tuning.

#### Fine Adjustment

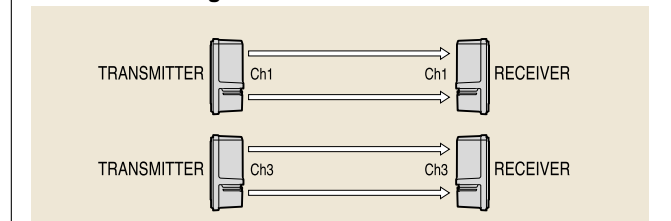


(Note: Fine adjustment must always be done with a Volt Meter - See Installation Instructions.)

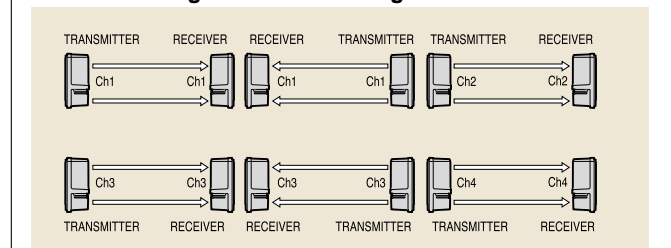
### Selectable 4-Channel Beam Frequencies

The selectable beam frequencies can be used to avoid unwanted cross talk that can occur when using multiple photobeams for long distance or beam stacking applications.

#### 1 Beam Stacking



#### 2 Beam Long Distance Stacking



### 3. DESIGN DURABILITY

#### Highly Durable & Heat-Resistant Housing Cover & Chassis

The housing cover & chassis provide higher durability against shocks, high temperatures and many other harsh environmental conditions.

#### Stainless Steel Screws & Back Plate

# RELIABILITY CHART FOR OUTDOOR PROTECTION

Specially designed to prevent various causes of outdoor false alarms.

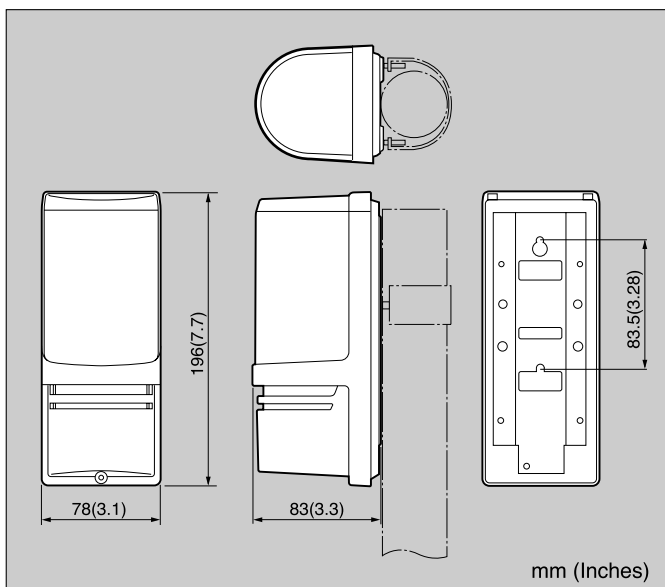
False Alarm Causes	Technology to Solve	AX Function & Features
Lighting & High EMI Disturbances	High EMI Resistance	High Surge Resistiveness Relay & EMI Surge Absorber
Insect Entering into Housing	Sealed Enclosure Housing	IP55
Dew Condensation Fog, Frost & Heavy Rain	High Sensitivity Tolerance Fine Optical Beam Alignment	Ultra High Power Beam Anti-Frost Mechanism Easy Optical Alignment Mechanism Course Alignment LED (AX-ALPHA Series Only) Automatic Gain Control
Birds or Flying Objects	Size Analysis	Twin Synchronization Pulsed Beams
Cross Talk of Beams	Beam Discrimination	Selectable Beam Frequencies (AX-ALPHA Series Only)

## SPECIFICATIONS

MODEL	AX-100PLUS	AX-200PLUS	AX-100ALPHA	AX-200ALPHA	
Detection Method	Infrared Photoelectric				
Coverage	Outdoor	30m ( 100ft. )	60m ( 200ft. )	30m ( 100ft. )	60m ( 200ft. )
	Indoor	60m ( 200ft. )	120m ( 400ft. )	60m ( 200ft. )	120m ( 400ft. )
Maximum Arrival Distance	300m ( 1000ft. )	600m ( 2000ft. )	300m ( 1000ft. )	600m ( 2000ft. )	
Beam Characteristics	Pulsed infrared				
Selectable Beam Frequency	_____		4 channel ( Automatic synchronization )		
Interruption Period	50 ~ 500msec. ( Selectable )				
Power Supply	10.5 ~ 28V DC				
Current Consumption (Transmitter+Receiver)	Normal operation	46mA max.	Normal operation	40mA	
			During optical alignment		46mA max.
Alarm Period	2sec. ( ±1 ) nominal				
Alarm Output	Form C Relay ( 28V DC 0.2A max. )				
Tamper Switch	N.C. opens when cover is removed (Receiver Only)				
Operating Temperature	-25°C~+55°C ( -13°F~+131°F )				
Operating Humidity	95% max.				
Alignment Angle	±5°Vertical, ±90° Horizontal				
Mounting	Wall or Pole				
Weight	1040g ( 36.7oz. ) ( Both Transmitter and Receiver )				

 LISTED : AX-100PLUS, AX-200PLUS, AX-100ALPHA, AX-200ALPHA

## DIMENSIONS



## OPTIONS

### ■ BC-2: Back Cover

Back Cover to conceal the Pole



### ■ HU-2: Heating Unit

Heating Unit for severe low temperature conditions



\*Specifications and design are subject to change without prior notice.

NOTE: This unit is designed to detect an intruder and activate an alarm control panel. Being only a part of a complete system, we cannot assume responsibility for theft or damages, should it occur.



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