

# TAKEX PASSIVE INFRARED SENSOR

Wide angle protection : PA-6412PI (40 lbs PET IMMUNE)

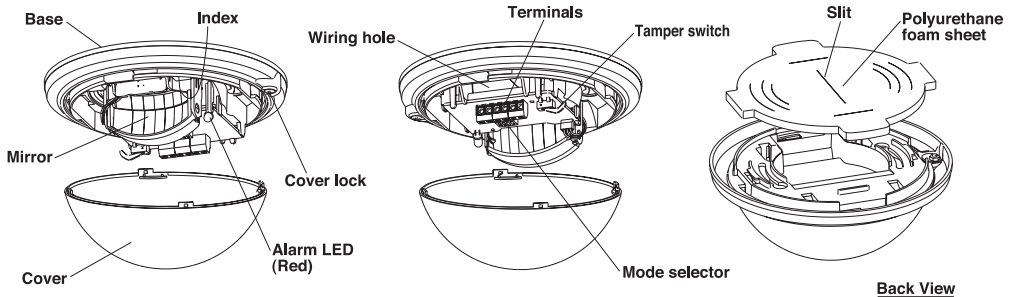
## Instruction Manual

We appreciate your purchase of a TAKEX passive infrared sensor. This sensor will provide long and dependable service when properly installed. Please read this Instruction Manual carefully for correct and effective use.

Please Note : This sensor is designed to detect intrusion and to initiate an alarm ; it is not a burglary-preventing device.

TAKEX is not responsible for damage, injury or losses caused by accident, theft, Acts of God ( including inductive surge by lightning ), abuse, misuse, abnormal usage, faulty installation or improper maintenance.

### 1. PARTS DESCRIPTION



### 2. DO'S AND DON'T'S

- Install the sensor in a location such that intruders are more likely to cross the protection zones, rather than approach head on.
- Do not install in a site which is subject to electrical noise or intense vibration.
- Avoid direct sunlight, spot light or intense reflections on the sensor or the protection zone.
- Do not install the sensor outdoors (indoor use only).
- Do not install the sensor directly on the wall. (When installed on wall, use optional attachment BCW-401.)

- The passive infrared sensor is designed to detect infrared energy variations caused by the presence of a human body. Therefore, note that similar variations in conditions in protection area, due to other reasons, may cause the sensor to create an alarm as it is unable to distinguish between sources.

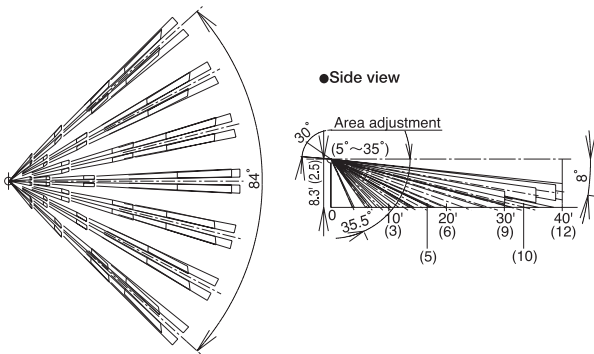
#### [MAINTENANCE]

- When the unit is soiled, clean the cover with a soft cloth moistened with a small amount of cleansing solution. Do not use chemicals such as thinners or alcohol.
- Check operation once a week. Do not fail to check operation whenever furniture in coverage area is moved.

### 3. COVERAGE RANGE AND PET IMMUNITY

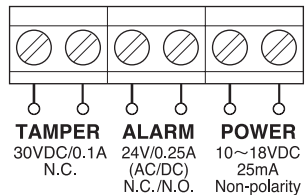
[PA-6412PI]

unit : ft (m)



- The sensor is designed not to detect animals under 40lbs. (18kg).
- To maintain maximum pet immunity, the sensor is required to be installed 8.2ft (2.5m) from the floor vertically without changing the set up as it comes.
- The sensor may detect multiple animals in the protection area even that are smaller than 40lbs.
- Area adjustment by mirror will decrease the pet immunity.

### 4. WIRING



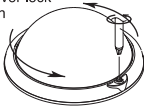
#### [ Allowable wiring distance between sensor ] and power source

Size of wire used	Distance at 12VDC
AWG 22 (Dia. 0.65mm)	830 ft. (250m)
AWG 20 (Dia. 0.80mm)	1470 ft. (450m)
AWG 18 (Dia. 1.00mm)	2300 ft. (700m)

- The maximum wire length, when two or more units are connected, is the above distance divided by the number of units.
- The protection circuit can be wired to a distance of 3,300 ft (1,000m) with AWG 22 (0.65mm dia.) wire.
- All wiring should be in accordance with the national electric code NFPA-70.
- The power supply used with this unit must have a minimum 4 hours standby power capability.

## 5. INSTALLATION

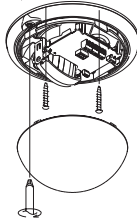
1. Loosen cover lock and detach cover.



2. Put the wires to through polyurethane foam sheet.  
3. Mount the base on the ceiling with screws. Fix so that front mark is pointing to the center of protection area.



4. Connect wires to terminals (Refer to 4. WIRING)  
5. Set protection area refering to 6. PATTERN SETTING.  
6. Attach the cover, and tighten cover lock.

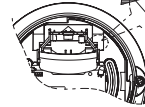
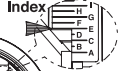


## 6. PATTERN SETTING

[Vertically]

AREA SET CHART

DISTANCE ft : m	10	13	16	20	23	26	30	33	36	40
	3.0	4.0	4.9	6.0	7.0	7.9	9.0	10.0	11.0	12.0
HEIGHT ft	6.5	2.0	G	E	D	C	B	B	A	A
	8.5	2.6	I	F	F	E	D	C	C	B
	10	3.0	K	I	G	F	E	D	D	C
	13	4.0	—	J	H	G	F	E	E	D
	16	4.9	—	—	J	I	H	G	F	E



The protection area can be set depending on installation height and max. protection distance by the mirror, referring to the area set chart.

[Horizontally]

Make use of mounting hole for horizontal adjustment. (35° adjustable)

## 7. OPERATION

- Turn the power ON, and wait for 1 minute until the alarm LED stops blinking.
- Walk test in the protection area to check if an alarm is activated. Check on both of the alarm LED and control panel.
- It is important to check operation whenever the area of protection or mode setting is changed.
- After correct operation has been confirmed, turn the alarm LED OFF with mode selector on PWB unit. (When set at OFF, the alarm LED does not light even if an alarm is activated.)

## 8. MODE SETTING

Sensor operation can be changed by mode selector on PWB unit.

- Pulse count : 1 4 : Least sensitive, prevents false alarms caused by temperature fluctuation.  
2 : Normally set to this position. (※)
- Alarm LED : 2 ON : Lights at alarm (※)  
OFF : LED disabled
- Selection of alarm contact : 3 N.O. : Close at alarm  
N.C. : Open at alarm (※)
- Sensitivity : 4 STD : Normally set to this position. (※)  
FINE : Most sensitive.



Factory Set (※)

NOTE : STD is recommended for PET IMMUNE applications.

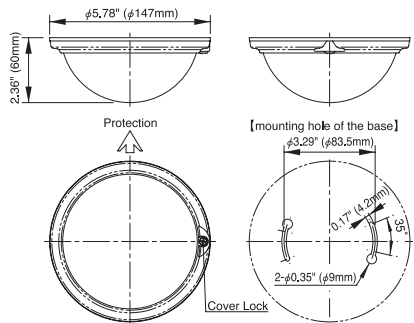
## 9. SPECIFICATIONS

Model	PA-6412PI
Detection system	Passive infrared
Coverage	Wide angle 40° (12m) / 84° MAX
Sensitive zone	62 (31pairs)
Supply voltage	10 to 18VDC (non-polarity)
Current consumption	25mA MAX
Alarm output	Dry-contact (Semi-Conductor) N.O./N.C.selectable Reset : Approx.2sec Rating : 24V, 0.25A MAX Protective resistance : 3.3Ω
Alarm LED (Red)	Blinking at warming up Lighting at alarm
Feature	Pulse count/ 2/4 selectable Alarm LED disable/ Selectable Alarm contact/ N.O./N.C.selectable Sensitivity/ STD/FINE selectable Area adjustment/ Vertical : 30° Horizontal : 35° (on mounting hole of the base) Low voltage notice/ Dry contact alarm
Ambient temperature range	-15°C to +55°C (+5°F to +131°F) without condensation
Mounting position	Indoor ceiling
Wiring connection	Terminal
Dimension	φ 5.79" × 2.36" (φ 147 × 60mm)
Weight	160g (5.6oz)
Appearance	Body : ABS resin Cover : PE resin

The specifications are subject to change without notice.

## 10. EXTERNAL DIMENSIONS

unit : inch(mm)



### Limited Warranty :

TAKEX products are warranted to be free from defects in material and workmanship for 12 months from original date of shipment. Our warranty does not cover damage or failure caused by Acts of God, abuse misuse, abnormal usage, faulty installation, improper maintenance or any repairs other than those provided by TAKEX. All implied warranties with respect to TAKEX, including implied warranties for merchantability and implied warranties for fitness, are limited in duration to 12 months from original date of shipment. During the Warranty Period, TAKEX will repair or replace, at its sole option/free of charge, any defective parts returned prepaid. Please provide the model number of the products, original date of shipment and nature of difficulty being experienced. There will be charges rendered for product repairs made after our Warranty Period has expired.



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