

**HIGH PERFORMANCE  
TRIPLE MIRROR  
PIR SENSOR**

**PIR-T15WE  
PIR-T15AM<sup>(with ANTI-MASK)</sup>**

WIDE ANGLE PROTECTION  
UP TO 49' (15m) × 80°

**PIR-T40NAM<sup>(with ANTI-MASK)</sup>**

VERTICAL CURTAIN PROTECTION  
UP TO 135' (40m) × 10.5' (3.2m)

**FEATURES**

- 4 Selectable operation modes; low position, high position, pet (PIR-T15), middle (PIR-T40NAM) and high density
- Up to 49' (15m) × 80 degree coverage (PIR-T15WE/AM)
- Up to 135' (40m) × 10.5' (3.2m) coverage (PIR-T40NAM) (Normal operation)
- 6.6' (2m) to 20' (6m) Installation height (depending on operation mode)
- High performance triple mirror optical system
- Precise detection area adjustment function
- Anti-masking function (PIR-T15AM/40NAM)
- Lightning surge protection
- Suitable for indoor and outdoor use (IP55)
- Available in white (W) and grey/black (G) color (PIR-T15WE/AM : white and grey/black) (PIR-T40NAM : white)



PIR-T15WE/AM (W)  
PIR-T40NAM (W)

PIR-T15WE/AM (G)

**A unique triple mirror optical system with signal processing technology eliminates nuisance alarms from small animals**

**TRIPLE MIRROR OPTICAL SYSTEM**

The unique combination of triple mirrors and three twin pyros enable 4 selectable operation modes including low position, high position, pet (PIR-T15), middle (PIR-T40NAM) and high density; from a mounting height of 6.6' (2m) to 20' (6m).

**OPTIMISED DETECTION AREA**

The triple mirror optical system features a geared mirror array allowing detection patterns to be dynamically optimised for maximum performance depending on the chosen mounting height and operation mode.

**PET IMMUNITY**

Independently controlled pyro devices in each optical unit use intelligent signal processing to eliminate nuisance alarms from small animals, and a dedicated pet operation mode (PIR-T15) further enhances discrimination performance against medium-sized animals.

**PRECISE AREA ADJUSTMENT**

Precise detection area adjustment is made possible by projecting coloured LED's onto the surface of each mirror - visible only from inside the detection zone during the alignment process - allowing sensitive zones to be fine-tuned to individual site requirements as desired. Unnecessary areas can be cancelled using the supplied area-masking sheet.

**DESIGN CONSCIOUS**

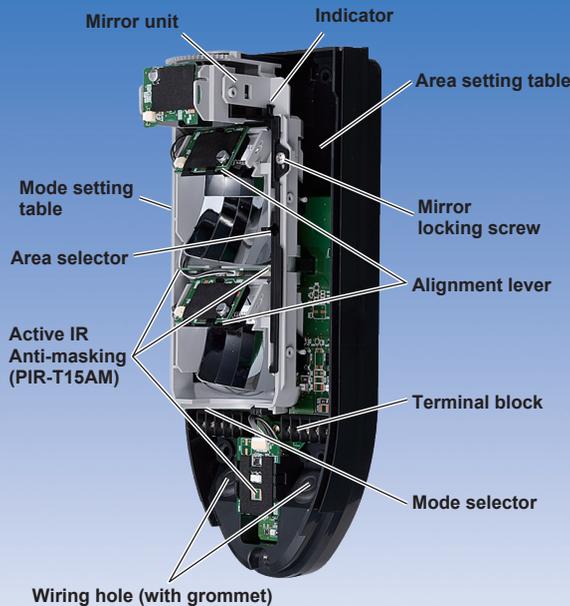
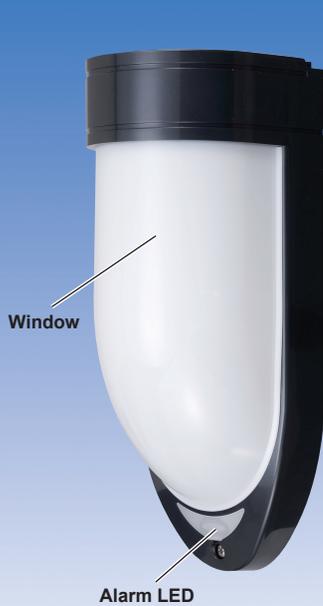
The PIR-T15's/40's unassuming design allows it to blend discreetly into any industrial, commercial or domestic environment, and the internally adjustable optic system helps to conceal the detection area and direction for more secure protection.

**OTHER FUNCTIONS**

Enhanced features including creep zone detection, near area cancellation, dual outputs, and lightning surge protection make the PIR-T15's/40's a key addition to the TAKEX family of high performance intrusion detection sensors.

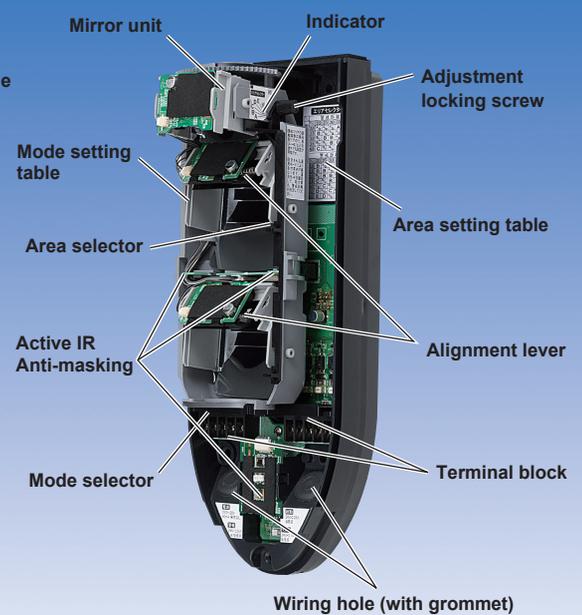
# 〈PARTS DESCRIPTION〉

## 〔Cover unit〕



**PIR-T15W/AM**

## 〔Sensor unit〕



**PIR-T40NAM**

### High performance

**3 Triple mirror optical system**  
Triple mirror optical units combined with fuzzy logic signal processing substantially reduce nuisance alarms and activations.

**Pet immunity**  
A dedicated pet operation mode(PIR-T15) further enhances discrimination performance against medium-sized animals in the detection area.

**Detection area checking function**  
The unit is equipped with an LED detection area checking function for precise area adjustment and control.

**Weather proof housing**  
The lid is designed to channel rain and snow away from the front surface of the sensor preventing nuisance alarms.

**Anti-masking (PIR-T15AM/PIR-T40NAM)**  
An anti-masking alarm output signals any attempt to shield or cover the unit.



**Lightning protection**  
Enhanced protection from induced lightning and other electrical surges.

### Enhanced features

**Varied installation height**  
Mounting height of 6.6' (2m) to 11.5' (3.5m : PIR-T15), 13'(4m : PIR-T40) in normal operation (max. 20' (6m) in specialised operation mode).

**Detection area adjustment**  
The mirror unit can be adjusted for optimal area setting.  
PIR-T15WE/AM : Horizontal  $\pm 45^\circ$ , Vertical  $17^\circ$   
PIR-T40NAM : Horizontal  $\pm 90^\circ$ , Vertical  $17^\circ$

**Pole/Ceiling mounting**  
Various pole attachment brackets are available (sold separately).

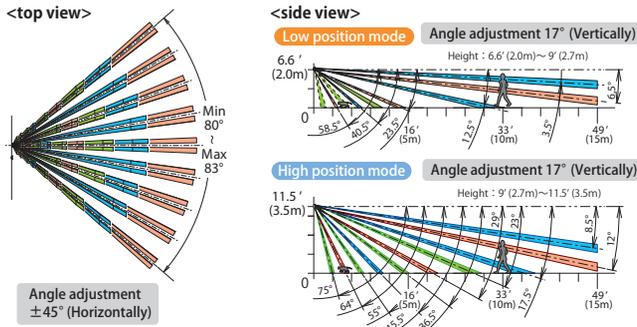
**Dual output**  
A second N.O. output is provided for signalling external devices.

**Insect/Water protection**  
Suitable for indoor and outdoor use (IP55).

### Eco friendly

**Environmental design**  
Certified RoHS compliant: free from Lead, Mercury, Cadmium, Hexavalent Chromium, Polybrominated biphenyl, Polybrominated diphenyl ether.

## PIR-T15WE/AM : Wide angle protection 15m



### Normal operation

**Low position mode**  
Height : 6.6' (2.0m)~9' (2.7m)

**High position mode**  
Height : 9' (2.7m)~11.5' (3.5m)



Signal CCTV, alarm, or lighting controllers in a wide range of intruder applications in the normal 'low position operation mode'.



Use to activate lighting systems for safety applications in warehouses, or for monitoring intrusion attempts from up to 11.5' (3.5m) mounting height.

### Specialised operation

**Pet mode**  
Height : 8' (2.5m)~9.9' (3.0m)

**High density mode**  
Height : 6.6' (2.0m)~20' (6.0m)



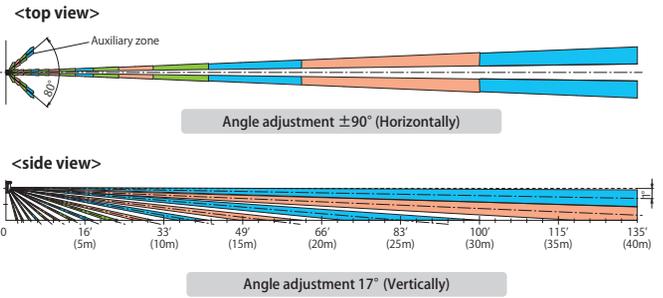
The dedicated 'Pet mode' further enhances discrimination performance against medium-sized animals moving within the detection area.



Mount up to 6m in height with a coverage of 49' (15m) x 80° 'high density mode', perfect for high installations such as open ceiling entrances.

※ Maximum detection distance : 49' (15m) in all operation modes of PIR-T15WE/AM.

## PIR-T40NAM : Vertical curtain protection 40m



### Normal operation

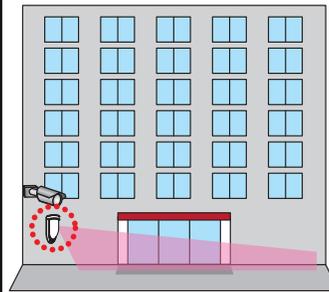
**Low position mode**  
Height : 6.6' (2.0m)~8.3' (2.5m)

**Middle position mode**  
Height : 8.3' (2.5m)~11.5' (3.5m)

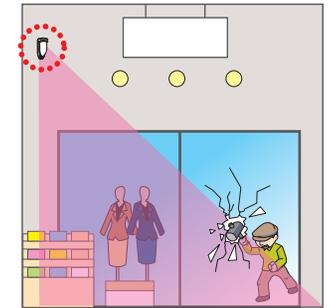
**High position mode**  
Height : 11.5' (3.5m)~13' (4.0m)

Maximum detection distance  
Low position mode : 135'(40m)  
Middle position mode : 115'(35m)

Maximum detection distance : 100'(30m)



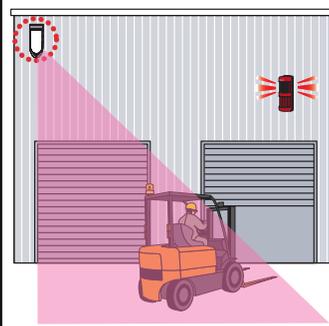
Rotating the mirrors horizontally by 90° allows intrusion detection along a wall.



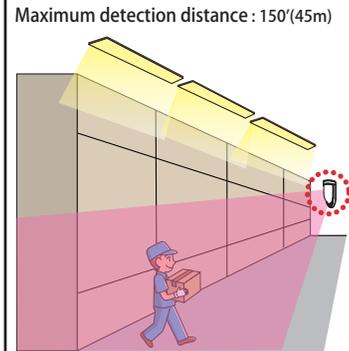
Installing in a high position can minimize the blind area

### Specialised operation

**High density mode**  
Height : 6.6' (2.0m)~20' (6.0m)



Installing the sensor in a high position will not obstruct the path of vehicles for traffic reminder systems.

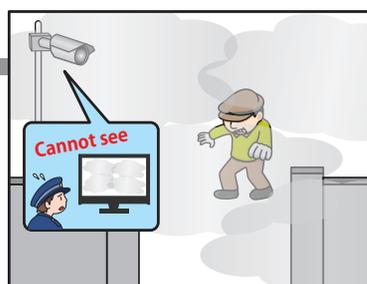


The long vertical curtain detection zone matches the lighting control for energy saving in factory or warehouse with tall shelving.

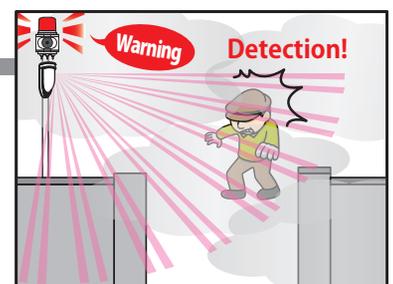
※ Maximum detection distance : 135' (40m) in normal operation modes of PIR-T40NAM. 150' (45m) can be achieved in high density mode, however Pet Immunity function is disabled.

## Feature of Passive sensor

Possible to detect human under fog.



Invisible by eye or CCTV



The passive sensor can detect.

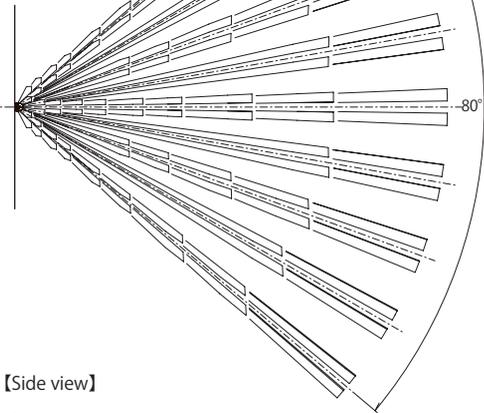
# TRIPLE MIRROR PASSIVE SENSOR

## Detection area

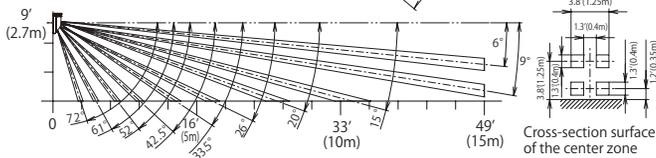
### PIR-T15WE/AM

In the setting of installation  
height : 9' (2.7m)  
distance : 50' (15m)

#### [Top view]



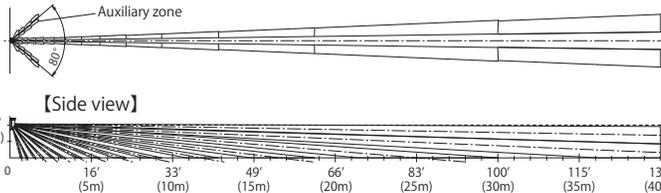
#### [Side view]



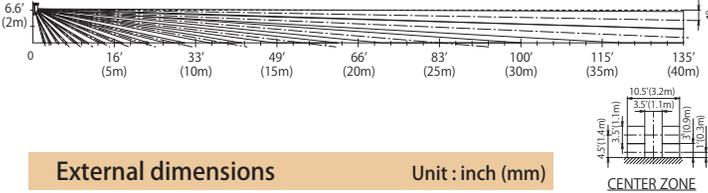
### PIR-T40NAM

In the setting of installation  
height : 6.6' (2.0m)  
distance : 135' (40m)

#### [Top view]

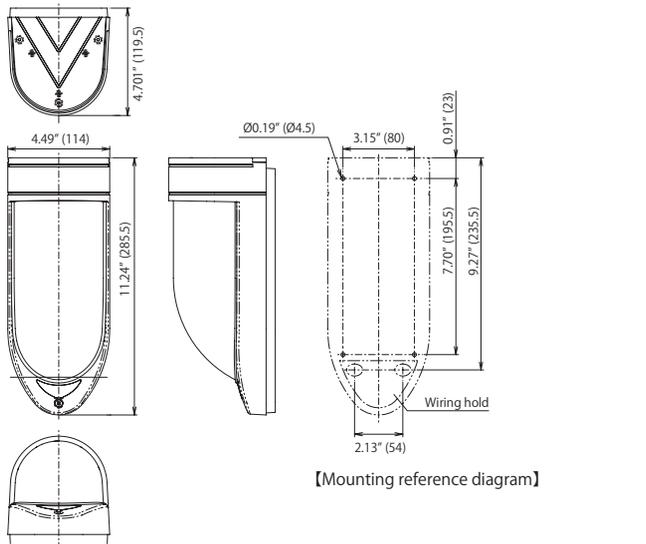


#### [Side view]

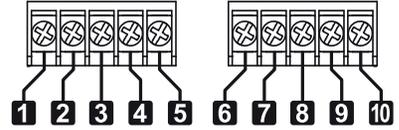


## External dimensions

Unit : inch (mm)



## Terminal configuration



- 1 2** Power input (non-polarity)  
9 to 28V DC/Max. 40mA
- 3 4** Alarm output - Contact method :  
Dry semi-conductor contact  
N.O./N.C. selectable
- 5** LED control input (L/C) - Control lighting on/off of the alarm LED
- 7 8** Tamper output - Contact method : Dry mechanical contact N.C.
- 9 10** Output for external device : Dry semi-conductor contact N.O.
- 6 7** Anti-masking output - Contact method : Dry semi-conductor contact N.C. (PIR-T15AM/40NAM)

## Specifications

Model	Triple mirror passive sensor		
	PIR-T15WE (W/G)	PIR-T15AM (W/G)	PIR-T40NAM
Detection system	Passive infrared		
Detection area	Wide angle (80°) detection Detection distance : 49' (15m), 108 rays (54 pairs)		Vertical curtain distance Detection distance: Max 150' (45m), 46 rays (23 pairs)
Power supply	9 to 28V DC (non-polarity)		
Current consumption	Max. 40mA		Max. 50mA
Alarm output	Contact method : Dry semi-conductor contact, N.C./N.O. selectable Contact operation : One-shot operation when detecting intrusion Continuous output in the event of cover monitor error Continuous output in the event of alignment position error Continuous output in the event of self diagnosis error Continuous output in the event of power voltage error Continuous output in the event of long-term diagnosis error (PIR-T15) Contact rating : 24V (AC/DC) 0.25A (resistive load) (built-in contact protective resistor 3.3Ω)		
External output	Contact method : Dry semi-conductor contact N.O. Contact operation : One-shot operation/Off delay operation selectable when detecting intrusion Contact rating : 24V (AC/DC) 0.25A (resistive load) (built-in contact protective resistor 3.3Ω)		
Tamper output	Contact method : Dry mechanical contact, N.C. Contact operation : Continuous output Contact rating : 24V (AC/DC) 0.1A (resistive load) (built-in contact protective resistor 3.3Ω)		
Anti-masking output	N/A	Contact method : Dry semi-conductor contact N.C. Contact operation : Continuously output when an object is placed in front of the lens (until normal recovery) Contact rating : 24V (AC/DC) 0.25A (resistive load) (built-in protective resistor 3.3Ω)	
Alarm LED	Red LED : Blinks* during warm up Lights up* when detecting intrusion Continuously blinks in the event of cover monitor error Continuously lit in the event of alignment position error Continuously blinks in the event of self diagnosis error Continuously lit in the event of power voltage error Continuously blinks in the event of long-term diagnosis error (PIR-T15) Continuously blinks in the event of Anti-masking error (PIR-T15AM/40NAM) (*ON/OFF selectable using the mode selector)		
Memory LED	Red LED : Blinks for 3 minutes during memory display, Auto reset operation either of continuous lighting for 47 minutes or blinking for 50 minutes selectable (Blinks to lights/blinks, ON/OFF selectable using the mode selector)		
Functions	Sensitivity selection, Operation mode selection, Alarm memory LED, Selfdiagnosis, Low voltage monitoring, Temperature compensation, Tamper, LED area checker, Environmental adjustment, Creep zone detection, Walk test mode, Near area cancellation, Long-term diagnosis (PIR-T15) Anti-masking (PIR-T15AM/40NAM)		
Mounting positions	6.6' to 20' (2.0 to 6.0m) (varies depending on the operation mode) • Low position mode : 6.6' to 9' (2.0 to 2.7m) • High position mode : 9' to 11.5' (2.7 to 3.5m) • Pet mode : 8.3' to 10' (2.5 to 3.0m) • High density mode : 6.6' to 20' (2.0 to 6.0m) • Low position mode : 6.6' to 8.3' (2.0 to 2.5m) Max detection distance : 135' (40m) • Middle position mode : 8.3' to 11.5' (2.5 to 3.5m) Max detection distance : 115' (35m) • High position mode : 11.5' to 13' (3.5 to 4.0m) Max detection distance : 100' (30m) • High density mode : 6.6' to 20' (2.0 to 6.0m) Max detection distance : 150' (45m)		
Area angle adjustment range	Horizontal direction : ±45° (by 5° pitch) Vertical direction : 17° (no stage adjustment)		±90° (in 5° steps) 17° (no stage adjustment)
Ambient temperature range	-25~+55°C (no condensation and freezing)		
Installation place	Indoor/outdoor wall surface *Can be mounted on poles and ceilings (or under eaves) using optional accessories		
IP rating	IP55		
Connections	Terminals (M2.6 self up terminal)		
Weight	Approx. 600g		
Appearance	Body, Window : resin		

## Options

- Pole attachment <BP-32>



- Pole attachment <BP-02>



- Ceiling attachment <KP-32>



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Please note:

This sensor is designed to detect intrusion and to initiate an alarm; it is not a burglary or a crime 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.