

# PHOTOELECTRIC BEAM SENSOR

*The award of the Director General of Japanese Technological Agency*

**PXB- 50HF** OUTDOOR 165ft ( 50m)

**PXB-100HF** OUTDOOR 330ft (100m)

**PXB-200HF** OUTDOOR 660ft (200m)



**Factory**



**Airport**



**Residential**



**Parking**



**Power plant**

# PXB

## The Choice of Professionals

Photoelectric Beam Sensors that combine stability and reliability

**PXB- 50HF** OUTDOOR 165ft ( 50m)

**PXB-100HF** OUTDOOR 330ft (100m)

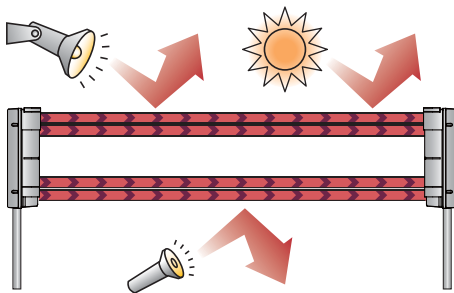
**PXB-200HF** OUTDOOR 660ft (200m)

### High Performance with Reliability and Stability



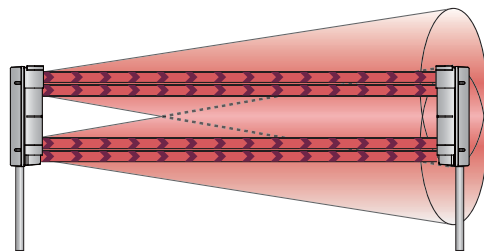
#### DOUBLE MODULATION

Double modulated beams are designed to distinguish the external lights. It increases the reliability in the outdoor security system. (50,000 lux light immunity)



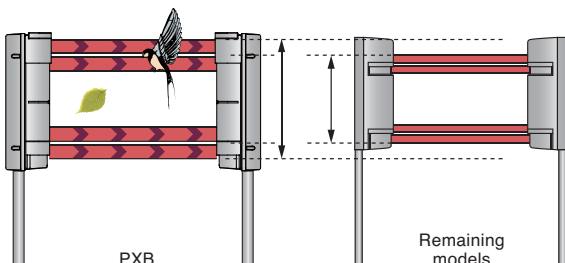
#### QUAD HIGH POWER BEAM

The beam power is 100 times of the minimum requirement. The beam distance is 10 times of the described specification. This high power beam maintains the ability to operate reliably in inclement weather.



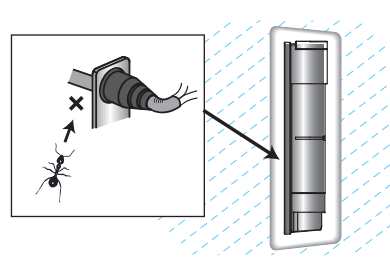
#### WIDE BEAM

The pitch between upper and lower beam is wider than previous models; drastically reducing False alarms initiated by birds and falling leaves.



#### IP65 HIGHEST RATING IN THE INDUSTRY

Water tight bushings and seals maintain device integrity from water, insects, and dust; further inclusion of a breathable membrane prevents internal condensation from affecting performance.





Receiver



### ANTI-BIRD SPIKE

Keeps birds and small animals from roosting on the sensor, maintaining a clear detection path for increased reliability.

Anti-Bird spike



### DRIP-PROOF HOUSING

Channels the elements (rain and snow melt) away from the optical surfaces of the sensor, avoiding false alarms caused by beam attenuation.

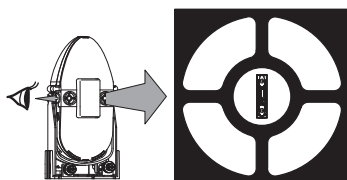


## Enhanced features for faster and simpler installations



### ADVANCED RETICLE SIGHTING SYSTEM

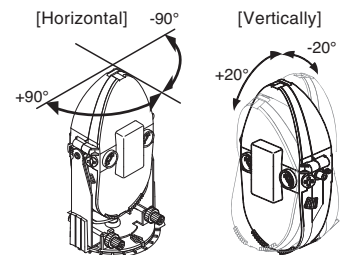
Enables a faster and easier alignment process.



### INCREASED VERTICAL ANGLE ADJUSTMENT

The horizontal is still  $\pm 90^\circ$

$\pm 20^\circ$  Better accommodates alignment on uneven terrain, when compared to existing models ( $\pm 10^\circ$ ).



### TARGET COLOR

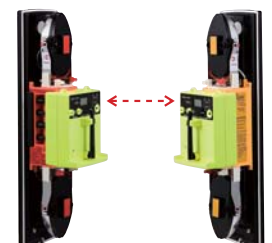
Structure colors are tuned to the Peak Wavelengths of the Human Eye Response (Photopic eye response), to be easily targeted in the beam alignment process.

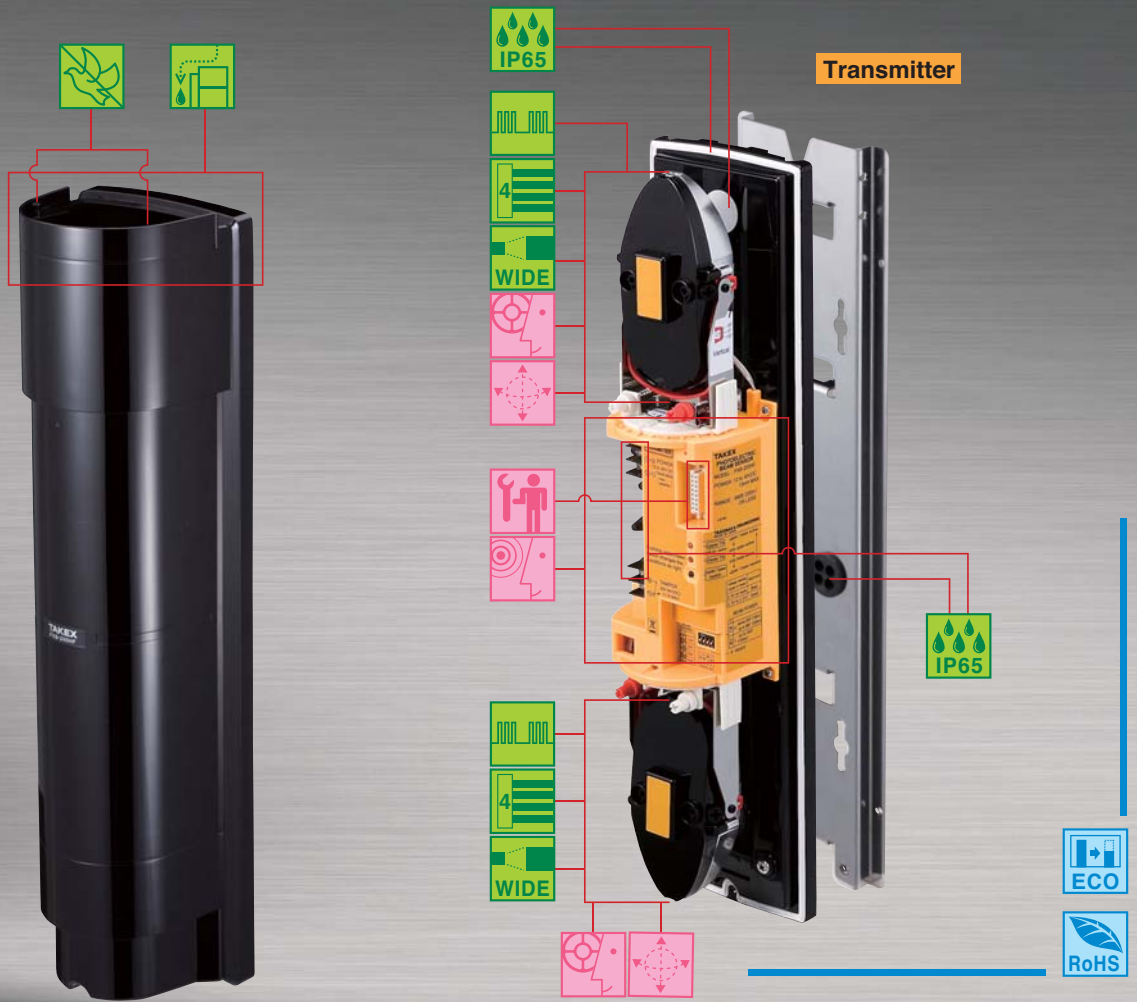


### BI-DIRECTIONAL WIRELESS ALIGNMENT CHECKER

One person can accomplish system alignment in a fraction of the time; for dramatic savings on labor costs. (sold separately)

Bi-Directional communication distance is max 200m.





## Designed for environmental adjustment



### LOW CURRENT CONSUMPTION

50% reduction in current consumption allows cost savings upfront (by reducing the required wire gauge on installation), and continues the savings for years to come with lower electrical consumption.



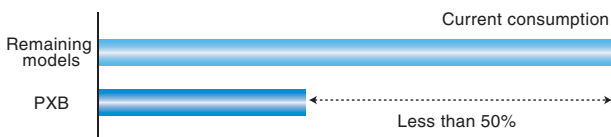
### ECO-FRIENDLY

RoHS certified compliant: free from Lead, Mercury, Cadmium, Hexavalent Chromium, Polybrominated biphenyl, and Polybrominated biphenyl ether.



### LIGHTENING PROTECTION

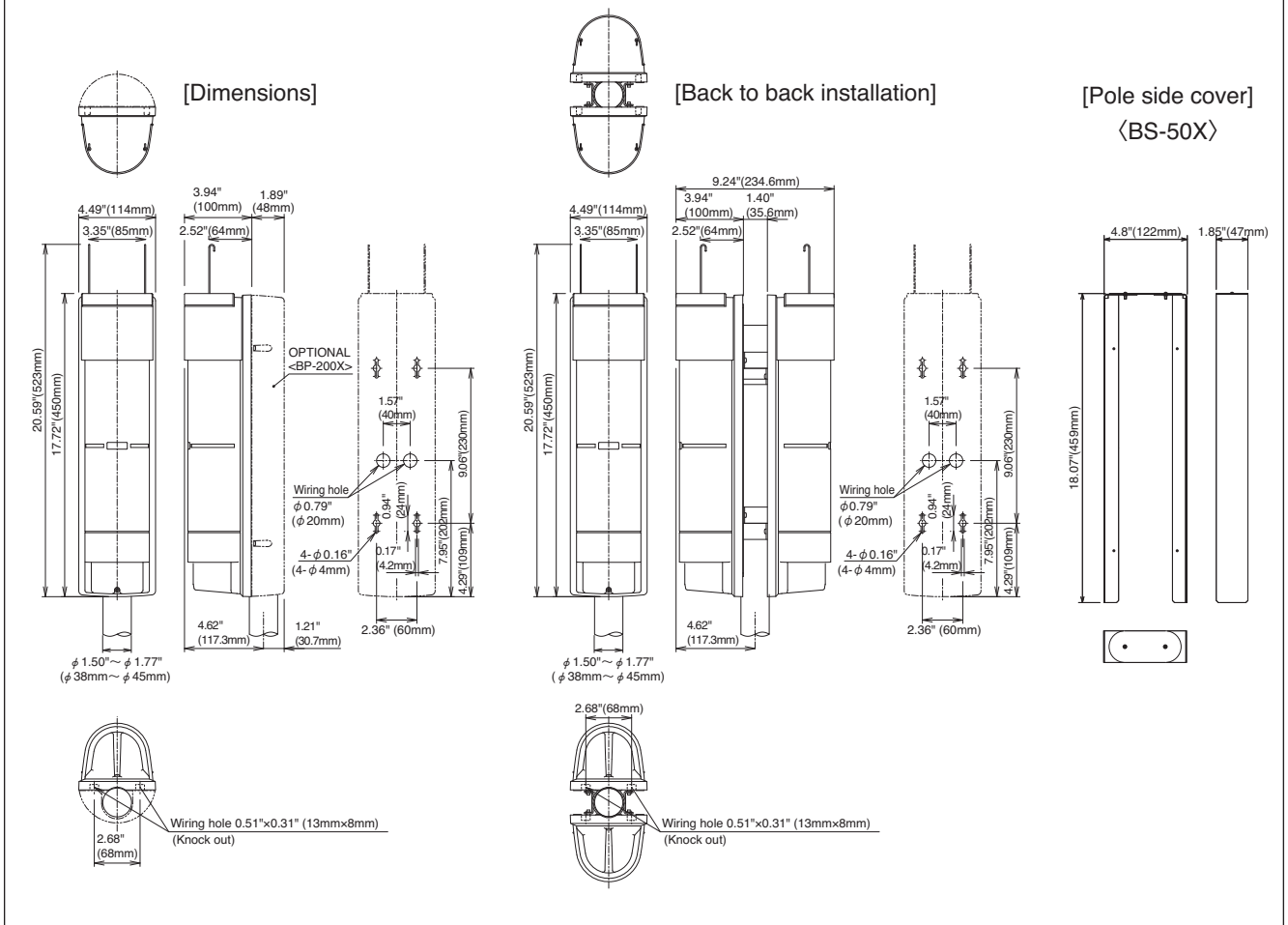
Maximum Lightning induced surge protection to 10,000VDC (normal mode) and 15,000VDC (common mode).



## Optional accessories

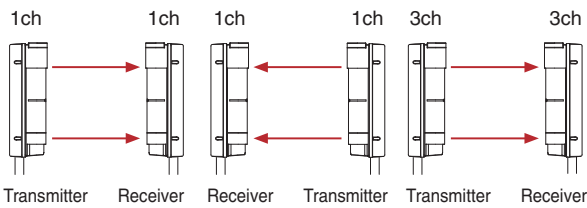
- Housing case  
<KH-160VS>  
φ8.66"(φ22cm)×H63.11"(160.3cm)
  - Pole (2 pieces)  
<KP-100/KP-100B>H39.37"(100cm)  
<KP-150/KP-150B>H59.06"(150cm)
  - L Pole (1 piece)  
<KP-80LS/KP-80LSB>  
H31.50"(80cm)×D5.91"(15cm)  
<KP-80LL/KP-80LLB>  
H31.50"(80cm)×D11.81"(30cm)
  - Alignment wireless checker(2 pieces)  
<ER-02>
  - Pole side cover (1 piece)  
<BS-50X>
  - Pole cover <BP-200X>
- 
- Pole (2 pieces)  
<KP-48L>  
H18.90"  
(48cm)
  - Pole (2 pieces)  
<KP-90L>  
H35.43"  
(90cm)
  - Heater(2 pieces)  
<HTF-24A>  
24V DC / 430mA

## EXTERNAL DIMENTIONS

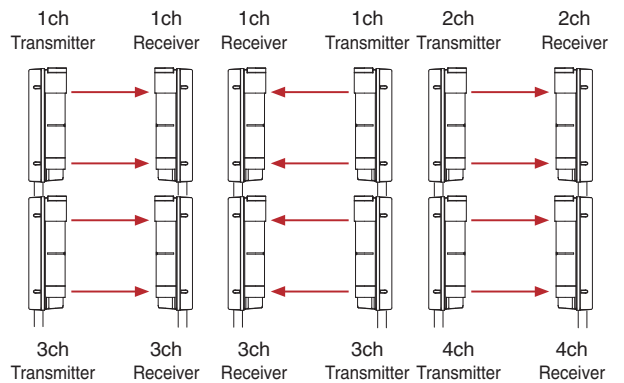


## SYSTEM OPERATION

### ● Single stacking

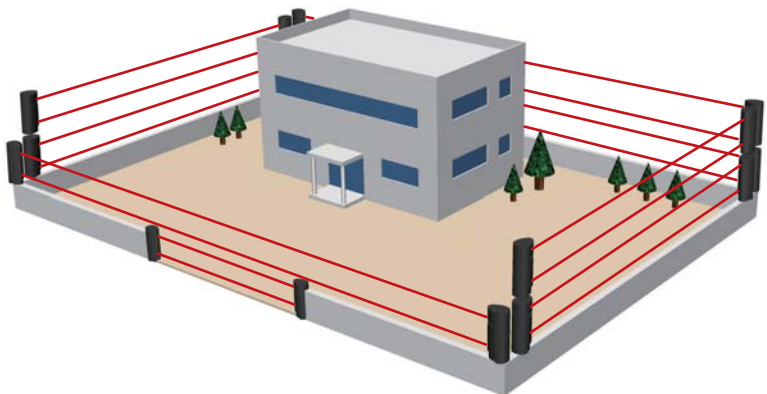


### ● Double stacking



### [Installation example]

Photoelectric Beam perimeter protection offers the most reliable and cost effective method of protecting critical infrastructure and valuable property.



## SPECIFICATIONS

| Model                     | PXB-50HF   | PXB-100HF                   | PXB-200HF                   |
|---------------------------|--|-----------------------------|-----------------------------|
| Detection system          | Near infrared pulsed beam interruption system (TR-RE 4 beam simultaneous interruption)   |                             |                             |
| Infrared beam             | Double Modulation LED pulse train  |                             |                             |
| Protection distance       | Outdoor 165' (50m) or less   | Outdoor 330' (100m) or less | Outdoor 660' (200m) or less |
| Max. arrival distance     | 1650' (500m)   | 3300' (1000m)               | 6600' (2000m)               |
| Response time             | 0.05sec. to 0.7sec. (Variable at pot)  |                             |                             |
| Power supply              | 12 to 30V DC (Non-polarity)  |                             |                             |
| Current consumption       | 30mA or less   | 32mA or less                | 34mA or less                |
| Alarm output              | Dry contact relay output form C<br>Contact action : Interruption time(Min.2sec.)<br>Contact capacity : 30V (AC/DC) <b>0.25A</b> (resistive load)<br>Protective resistor  |                             |                             |
| Environmental output      | Dry contact relay output form C<br>Action : Activated when weather condition gets worse<br>Contact capacity : 30V (AC/DC) <b>0.25A</b> (resistive load)<br>Protective resistor   |                             |                             |
| Tamper output             | Dry contact relay (N.C.)<br>Action : Activated when cover is detached<br>Contact capacity : 30V (AC/DC) 0.1A (resistive load)<br>Protective resistor   |                             |                             |
| Alarm LED                 | Red LED (Receiver) ON : when an alarm is initiated   |                             |                             |
| Attenuation LED           | Red LED (Receiver) ON : when beam is attenuated  |                             |                             |
| Ambient temperature range | -31°F to +151°F (-35°C to +66°C)   |                             |                             |
| Beam adjustment           | Horizontal : ±90°, Vertical : ± 20°  |                             |                             |
| Functions                 | Modulated beam frequency selection, Tone indicator, Environmental module<br>Beam power selection, Transmitting power adjustment, Alarm memory indication,<br>Programmed AGC, Auto-gain lock function, Monitor jack, Tamper,<br>Response time adjustment, Upper / Lower beam switch, Wireless Alignment Checker connecting function |                             |                             |
| Mounting positions        | Outdoor, Indoor  |                             |                             |
| Wiring                    | Terminals  |                             |                             |
| Weight                    | Transmitter : 49oz (1400g) Receiver : 51.5oz (1470g)   |                             |                             |
| Appearance                | PC resin (wine red)  |                             |                             |
| Accessory                 | Pole attachment, Anti-Bird spike, Screws, Instruction manual   |                             |                             |

**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.

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