

# PHOTOELECTRIC BEAM SENSOR

## (INTELLIGENT QUAD SERIES)

- PB-IN- 50HFA** : Outdoor 50m (165 ft.)
- PB-IN-100HFA** : Outdoor 100m (330ft.)
- PB-IN-200HFA** : Outdoor 200m (660ft.)



[POLE COVERS SOLD SEPARATELY]

Application

The TAKEX intelligent "QUAD" photoelectric beam is especially designed for outdoor protection. Unique Quad beams are synchronized to work together to reinforce the range and stability in severe weather conditions. The PB-IN-HFA series beams are equipped with many features which provide a wide choice of field selectable options. These options result in considerable flexibility for a variety of application requirements.

### 4 SYNCHRONIZED HIGH POWER INFRARED [PATENTED]

- \* 4 beams are "and-gated", which help to prevent false alarms from falling leaves and small animals.
- \* The active infrared transmission is exceptionally strong with a maximum arrival distance ten times greater than the specified protection distance.
- \* External light compensation circuit provides excellent tolerance against sun light, automobile head lights, fluorescent light or mercury light.

### FOUR FREQUENCIES SELECTIONS

4 separate choices of frequency avoid cross-talk.

### BEAM TRANSMISSION STRENGTH SELECTION

2 levels of beam transmission strength which can be set to suit the protection distance.

### EASY BEAM ALIGNMENT

- \* Audible signal for alignment [Utility model]  
An alignment tone aids in quick set-up to beams. The tone becomes maximum at peak of beam level.
- \* Sensitivity attenuation LED  
Lights when beam level is attenuated, which shows low sensitivity.
- \* Monitor jack output \* Target color
- \* Wild adjustment (horizontally  $\pm 90^\circ$ , vertically  $\pm 10^\circ$ )

### RoHS CERTIFIED COMPLIANT



Environment friendly. Free from Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyl, Polybrominated diphenyl ether.

### AUTO-GAIN LOCK

Optimal sensitivity gain is automatically set at any coverage distance up to the maximum protection distance. Auto-Gain lock is easily confirmed by sound check.

### PROGRAMMED AGC

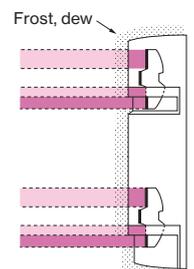
Sensitivity is automatically increased in bad weather to contend with fog, heavy rain, frost or snow.

### ALARM MEMORY

Alarm memory LED located on receiver can be automatically reset (flickering 5 min. after an alarm and auto-reset 55 min. after that) or manually controlled.

### PROTECTION AGAINST FROST/DEW

As a special hood is attached on sensor cover, beam protection continues without interruption even when the cover is screened by frost or dew.



### ENVIRONMENTAL MODULE BUILT-IN

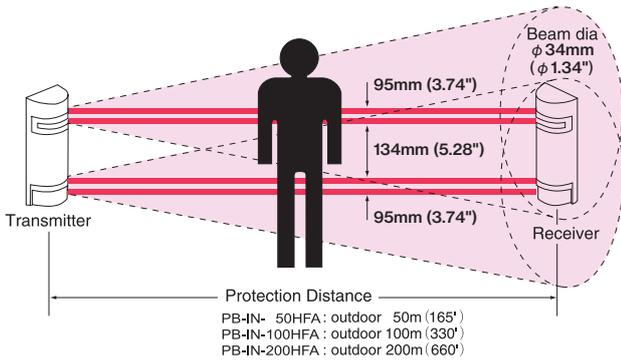
Environmental trouble signal is sent when beam reception level is reduced below an acceptable level.

### OTHER FEATURES

- \* Tamper output (transmitter and receiver)
- \* Polycarbonate cover excellent at anti-shock
- \* Optional accessories \* Target color

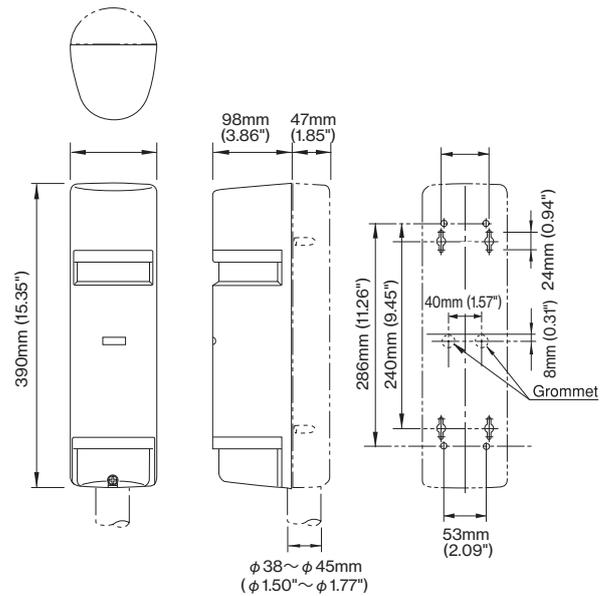
# PASSIVE INFRARED SENSOR

## COVERAGE



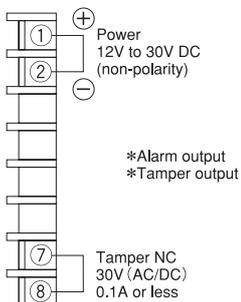
## EXTERNAL DIMENSIONS

[Unit : mm (inch)]

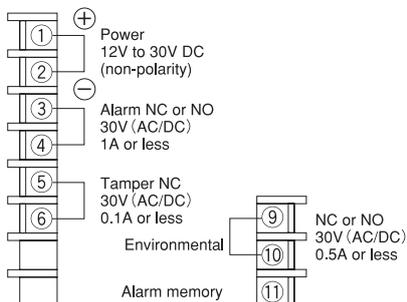


## TERMINAL ARRANGEMENT

### <Transmitter>



### <Receiver>



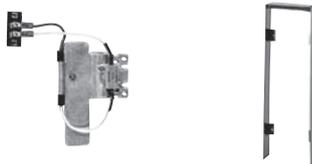
\*Relay shown in energised (non-alarm) condition

## OPTIONAL

- Pole KP-100 (100cm, 2pcs./set) KP-150 (150cm, 2pcs./set)
- Pole cover BP-200F (2pcs./set)
- Flush mount attachment BU-50F (1pce.) (with stainless plate)



- Heater (2pcs./set) HTF-100 (100VAC·200mA/set) HTF-24 (24VDC·860mA/set) (Temperature control switch)
- Pole side cover BS-50F (1pce.)



## SPECIFICATIONS

Product name	Photoelectric beam sensor		
Model	PB-IN-50HFA	PB-IN-100HFA	PB-IN-200HFA
Detection system	Near infrared beam interruption system (TR.-RE. 4 beams simultaneous interruption)		
Infrared beam	Double modulation pulsed beams by LED		
Protection distance	Outdoor 50m (165') or less	Outdoor 100m (330') or less	Outdoor 200m (660') or less
Max. arrival distance	500m (1650')	1000m (3300')	2000m (6600')
Response time	50msec. to 700msec. variable (Standard : 50msec.)		
Power supply	12V to 30V DC (non-polarity)		
Current consumption	60mA or less at protection (max. 95mA or less)	70mA or less at protection (max. 105mA or less)	85mA or less at protection (max. 120mA or less)
Alarm output	Dry contact relay : N.C. or N.O (selectable) Reset : Interruption time + off-delay (approx. 1.5sec) Contact capacity: 30V (AC/DC) 1A or less		
Environmental output	Dry contact relay : N.C. or N.O (selectable) Contact operation : Output when weather condition gets worse Contact capacity: 30V (AC/DC) 0.5A or less		
Tamper output	Dry contact : N.C. Contact operation : Output when receiver cover is detached Contact capacity: 30V (AC/DC) 0.1A or less		
Alarm LED	Red LED (receiver) lights when an alarm is initiated		
Sensitivity attenuation LED	Red LED (receiver) lights when beam reception is attenuated		
Functions	Modulated beam frequency selection, Tone indicator, Environmental module, Beam power selection, Alarm memory indication, Programmed AGC, Auto-gain lock function, Monitor jack.		
Beam adjustment	Horizontal : ±90°, Vertical : ±10°		
Ambient temperature range	-31°F to +151°F (-35°C to +66°C)		
Mounting position	Outdoor (IP55)		
Wiring	Terminals		
Weight	Transmitter : 42oz (1200g) Receiver : 45.5oz (1300g)		
Appearance	PC resin (wine red)		

\* The specifications are subject to change without notice.

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.

# TAKEX

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