

TAKEX

PHOTOELECTRIC BEAM SENSOR

“ANTI-CRAWL” HIGH SECURITY PHOTOBEAM
CE  PB-IN-100AT:Outdoor 100m (330 ft.)



Patent registered(No. 1766439)
Utility model registered:2
Utility model pending:3
Design registered:1

BASIC OPERATION

The following basic operation is required for the purpose of preventing lost alarms from intrusion by crawling without burdening the system with false alarms via small animals.

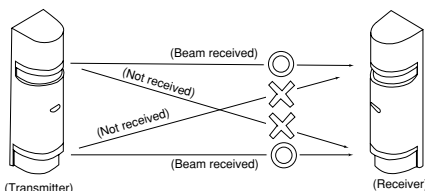
* Lower or upper beams interrupted

An alarm is not initiated by instantaneous beam interruption, but an alarm is initiated when the interruption continues during a set response time.

The response time can be tailored to prevent intrusion by crawling while at the same time avoiding false alarms due to small animals.

* ALL beams interrupted

Same as PB-IN-HF series, an alarm is initiated when beam interruption continues during the response time.



The TAKEX Intelligent-Quad series now has a new member to its product family, the PB-IN-100AT “Anti-crawl” photoelectric beam. This beam has been designed for high security applications where attempts to crawl through a portion of the photobeam create an alarm event instead of no alarm.

Transmitters project double modulated beams that differ in pulse pattern from upper and lower parts.

Through CPU processing, the upper receiver selects the beam from the upper transmitter and the lower receiver selects the beam from the lower transmitter, allowing for an AND-gated or an OR-gated system.

FOUR FREQUENCY SELECTION

4 separate choices of frequency avoids cross-talk in stacked or long linear installations.

DUAL RESPONSE TIME SYSTEM Patent registered

Two individual response times are provided for separate adjustment of AND/OR gates.

This enables detection of intruders, but minimizes false alarms.

BEAM TRANSMISSION STRENGTH SELECTION

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

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.

EASY BEAM ALIGNMENT

Audible signal for alignment [Utility model] ... An alignment tone aids in quick set-up beams. The tone becomes maximum at peak of beam level.

Beam selector ... Upper and lower beam alignment can be adjusted without using a shading plate.

Sensitivity attenuation LED ... Lights when beam level is attenuated, which shows low sensitivity.

Monitor jack output

PROGRAMMED AGC

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

ENVIRONMENTAL MODULE BUILT-IN

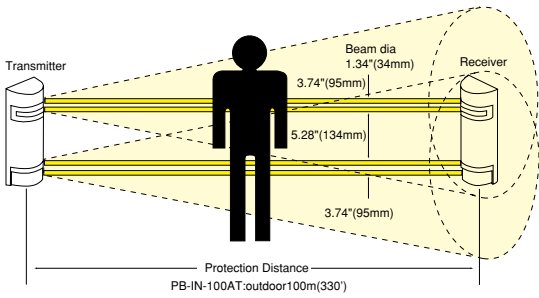
Environmental trouble signal is sent when beam reception level is reduced below an acceptable level.

PROTECTION AGAINST FROST/DEW

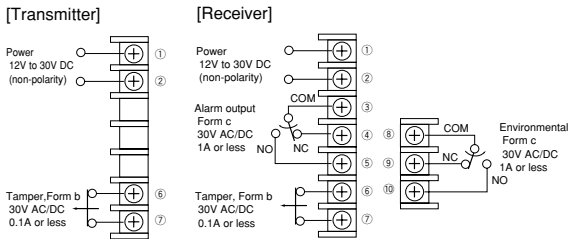
As a special hood is attached on sensor cover, beam protection continues without interruption even when the cover is screened by frost or dew.

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COVERAGE



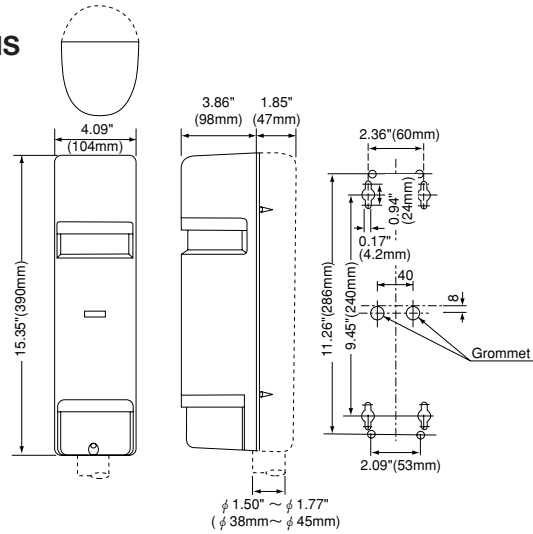
TERMINAL ARRANGEMENT



OPTIONAL

- Pole
KP-100(100cm, 2pcs./set)
KP-150(150cm, 2pcs./set)
- Pole cover
BP-200F(2pcs./set)
- Housing case
KH-120(1pce.)
- 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.)

EXTERNAL DIMENSIONS



SPECIFICATIONS

Model	PB-IN-100AT
Detection system	Near infrared beam interruption system (TR,-RE 4 beams simultaneous interruption or upper 2 beams interruption or lower 2 beams interruption)
Infrared beam	Double modulation pulsed beam by LED
Protection distance	Outdoor 100m (330') or less
Max. arrival distance	Tenfold 1000m(3300')
Response time	Dual response time system 35-500msec. (AND gated) 100,200,300,500msec.(OR gated)
Power supply	12V to 30V DC(non-polarity)
Current consumption	85mA or less at protection(Max. 120mA or less)
Alarm output	Dry contact relay output 1c Reset: Interruption time+off-delay(approx. 1.5 sec.) Contact capacity:30V AC/DC, 1A or less
Environmental output	Dry contact relay:1c Contact operation:Output when weather condition gets worse Contact capacity:30V AC/DC, 1A or less
Tamper output	Dry contact relay:1b Contact operation:Output when transmitter or 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, Beam selector, Programmed AGC. Auto-gain lock function, Monitor jack.
Beam adjustment	Horizontal: $\pm 90^\circ$, Vertical: $\pm 10^\circ$
Ambient temperature range	-35°C to +66°C (-31°F to +151°F)
Mounting position	Outdoor
Wiring	Terminals
Weight	Transmitter:1200g(42 oz) Receiver :1300g(45.5oz)
Appearance	PC resin(wine red)

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

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