

LOW CURRENT PHOTOELECTRIC BEAM SENSOR

Intelligent
PB-IN-75SW Outdoor 250ft (75m)



TAKEX[®]

A hybrid low current photoelectric beam sensor designed for solar application.

Features

• SYNCHRONISED HIGH POWERED BEAMS

100 times sensitivity margin and 10 times distance margin by using double modulation and Phase Locked Loop (PLL) circuit. (patented)

- External light compensation circuit provides excellent tolerance against sunlight, automobile headlights, fluorescent light or mercury light.
- Beams are 'and-gated', which helps to prevent false alarms from falling leaves and small animals.

• 4 FREQUENCY SELECTIONS

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

• LOW CURRENT CONSUMPTION

Low current consumption design for use with solar panels and low current output control panels.

Under 6mA when used 6VDC. (approx. 3.7mA for transmitter only)

• RECEIVING LEVEL INDICATION

- Sensitivity attenuation LED lights when beam is attenuated.
- Convenient for checking sensitivity margin after putting cover on.

• RESPONSE TIME

Response time can be adjusted from 50ms-700ms.

• ENVIRONMENT MONITOR

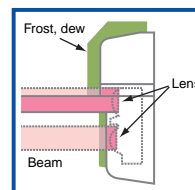
- Annunciation by relay output of specific low signal due to fog, rain or snow.

• DESIGN FEATURES

- Wide Beam adjustment. (Horizontal $\pm 90^\circ$, Vertical $\pm 10^\circ$).
- Tamper output.
- Strong PC resin cover.
- Automatic Gain Lock.

• PROTECTION AGAINST FROST/DEW

Special front cover hood design prevents false alarms when the cover is coated with frost or dew.



Specifications

Model	Low Current Photoelectric Beam Sensor
Model Number	PB-IN-75SW
Detection System	Near infrared beam interruption system (TR-RE. 4 beams simultaneous interruption)
Infrared Beam	Double modulation pulsed beam by LED
Protection Distance	Outdoor 250' (75m) or less
Max.Arrival Distance	Tenfold 2500' (750m)
Response Time	50m sec. to 700m sec. variable (Standard: 50m sec.)
Power Supply	5V to 8V DC or 10V to 30V DC (with-polarity)
Current Consumption	5V to 8V DC: 6mA(TR, side 3.7mA) or less when armed 10V to 30V DC: 25mA(TR, side 15mA) or less when armed
Alarm Output	Dry contact relay Form C Action: Interruption time + off - delay 2 secs. Contact capacity: 30V (AC/DC), 1A Dry contact relay: Form C
Environmental Output	Action: An output when environment causes low signal level Contact capacity: 30V (AC/DC), 0.5A Dry contact relay: Form B
Tamper Output	Action: trigger an output when cover is opened Contact capacity: 30V (DC), 0.1A
Alarm LED	Red LED (receiver) lights when alarm is initiated
Sensitivity Attenuation LED	Red LED (receiver) lights when beam reception is attenuated
Operation LED	Green LED (transmitter) lights when cover is opened with power on
Additional Functions	Four frequencies selection Environmental fade out monitor Beam strength monitor output
Beam Adjustment	Horizontal: $\pm 90^\circ$, Vertical: $\pm 10^\circ$
Ambient Temperature Range	- 25°C to +60°C
Installation	Outdoor
Wiring	M3 self-up terminals
Weight	Transmitter: 42 oz (1200g), Receiver: 45.5 oz (1300g)
Appearance	PC resin (wine red)

Due to ongoing product improvements, specifications may change without notice.

Optional Extras

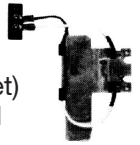
- Pole cover
BP-200F (2pcs./set)



- Flush mount attachment
BU-50F (1pce.)
(with stainless plate)



- Heater (2pcs./set)
HTF-24
(24VDC • 860mA/set)
Temperature control switch)



- Pole side cover
BS-50F (1pce.)



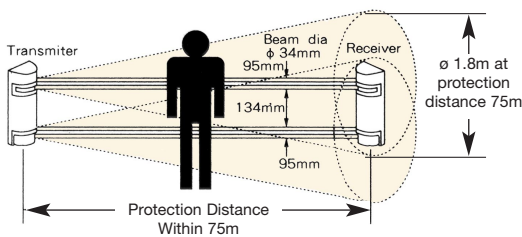
- Solar Panel & Battery
BA-6SL (2pcs./set)
2 sets per system



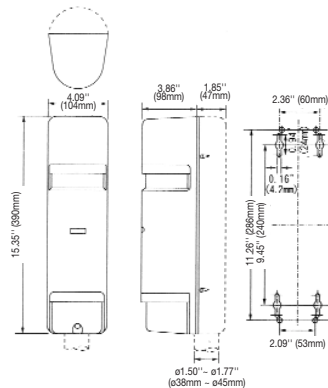
Wiring Distance Between Sensor & Power Supply Unit

wire size	voltage	6V	12V	24V
0.3mm ²	($\phi 0.65\text{mm}$)	1750' (534m)	2200' (670m)	20000' (6100m)
0.4mm ²	($\phi 0.7\text{mm}$)	2050' (625m)	2600' (793m)	23000' (7010m)
0.5mm ²	($\phi 0.8\text{mm}$)	2700' (823m)	3400' (1040m)	30000' (9150m)
0.64mm ²	($\phi 0.9\text{mm}$)	3400' (1040m)	4300' (1310m)	38000' (11600m)

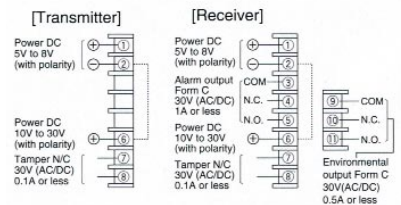
Coverage



External Dimensions



Terminal Arrangement



Note : This sensor is designed to detect intrusion and to initiate 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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