

# LOW CURRENT PHOTOELECTRIC BEAM SENSOR (INTELLIGENT)

PB-IN-75SW : Outdoor 250ft. (75m)



Patent registered 1  
 Patent pending 2  
 Utility model pending 7  
 Design registered 1

POLE COVERS SOLD SEPARATELY

*A HIBRID LOW CURRENT PHOTOELECTRIC BEAM SENSOR DESIGNED FOR SOLAR APPLICATION.*

**FOUR SYNCHRONIZED 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 sun light, automobile, fluorescent and mercury lights.
- \*4 beams are "and-gated", which helps to prevent false alarms from falling leaves and small animals.

**FOUR FREQUENCIES SELECTION**

4 separate choices of frequency avoids 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 DC6V. (approx. 3.7mA for transmitter only)

**RECEIVING LEVEL INDICATION FUNCTION**

- \* Sensitivity attenuation LED  
 Lights when beam is attenuated.  
 Convenient for checking sensitivity margin after putting cover on.
- \* Monitor jack output  
 Tester to measure receiving level is available on the market, therefore axis adjustment can be done correctly.

**RESPONSE TIME**

Response time can be field advised from 50ms-700ms.

**ENVIRONMENT MONITOR**

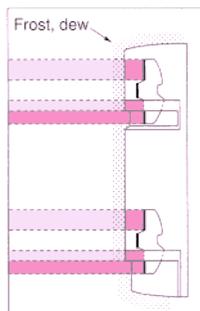
Annunciation by relay output of specific low signal level due to fog, rain or snow.

**DESIGN FEATURES**

- \* Extensive Beam alignment adjustment.  
 (Horizontal  $\pm 90^\circ$ , Vertical  $\pm 10^\circ$ )
- \* Tamper output for high security.
- \* Strong PC resin used for cover.
- \* Automatic gain lock.

**PROTECTION AGAINST FROST/DEW**

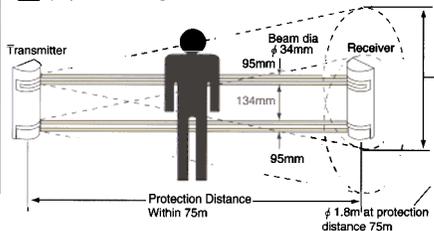
Special front cover hood design prevents false alarms when the cover is coated with frost or dew.



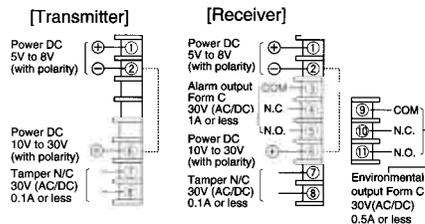
Application

# PHOTOELECTRIC BEAM SENSOR

## COVERAGE



## TERMINAL ARRANGEMENT



## OPTIONAL

- Pole  
KP-100(100cm, 2pcs./set)  
KP-150(150cm, 2pcs./set)

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

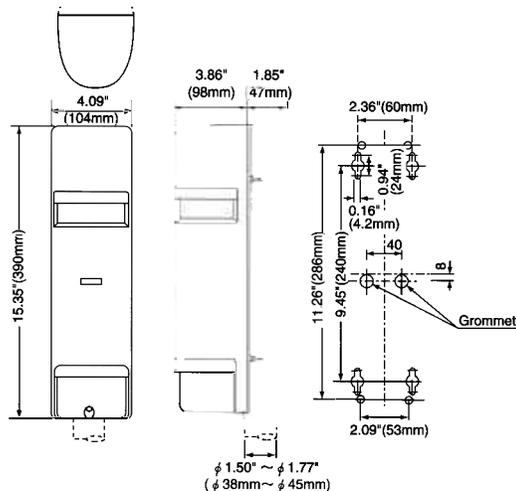
- Housing case  
KH-120(1pce.)

- 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



## WIRING DISTANCE BETWEEN SENSOR AND POWER SUPPLY UNIT

wire size	voltage	6V	12V	24V
0.3 mm <sup>2</sup> (φ 0.65mm)		1750'(534m)	2200'(670m)	20000'(6000m)
0.4 mm <sup>2</sup> (φ 0.7mm)		2050'(625m)	2600'(793m)	23000'(7010m)
0.5 mm <sup>2</sup> (φ 0.8mm)		2700'(823m)	3400'(1040m)	30000'(9150m)
0.64 mm <sup>2</sup> (φ 0.9mm)		3400'(1040m)	4300'(1310m)	38000'(11600m)

## SPECIFICATIONS

NAME	Low current photoelectric beam sensor
Model	PB-IN-75SW
Detection system	Near infrared beam interruption system (TR, -RE, beams simultaneous interruption)
Infrared beam	Double modulation pulsed beam by LED
Protection distance	Outdoor 250ft (75m) or less
Max. arrival distance	Tenfold 2500ft (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)
Power 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
Environment output	Dry contact relay Form C Action : an output when environment causes low signal level Contact capacity : 30V (AC/DC) 0.5A
Tamper output	Dry contact relay Form B Action : trigger an output when cover is opened Contact capacity : 30V (DC) 0.1A
Alarm LED	Red LED (receiver) lights on when alarm is initiated
Sensitivity attenuation LED	Red LED (receiver) lights on when beam reception is attenuated
Operation LED	Green LED (transmitter) lights on when cover is opened with power on
Additional functions	Four frequencies selection Environmental fade out monitor Beam strength monitor output
Beam alignment adjustment	Horizontal : ±90°, Vertical : ±10°
Ambient temperature range	-25°C to +60°C
Installation	Outdoor
Wiring	M3 self-up terminals
Weight	Transmitter : 42oz (1200g) Receiver : 45.5oz (1300g)
Appearance	PC resin (wine red)

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