# LOW CURRENT PHOTOELECTRIC BEAM SENSOR (INTELLIGENT)

C € © N1702 PB-IN-75SW : Outdoor 250ft. (75m)



Patent registered Patent pending

POLE COVERS SOLD SEPARATELY

Utility model pending Design registered

### **ENVIRONMENT MONITOR**

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

## **DESIGN FEATURES**

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

A HYBRID LOW CURRENT PHOTOELECTRIC BEAM SENSOR DESIGNED FOR SOLOR APPLICATION.

# 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, flourescent and mercury lights.
- \*Upper and Lower 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

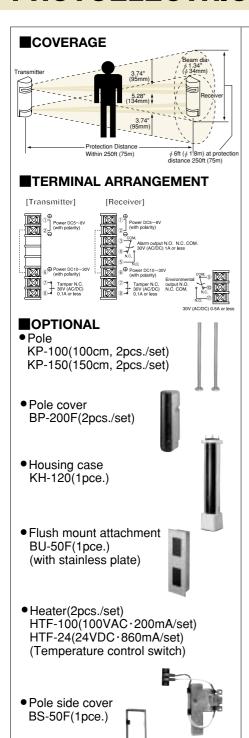
Response time can be field advised from 50ms-700ms.

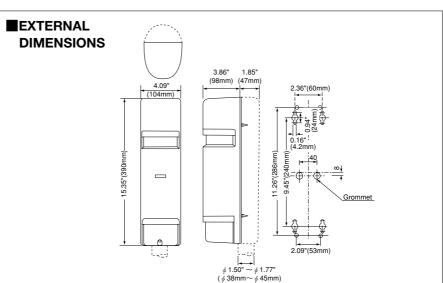
#### PROTECTION AGAINST FROST/DEW

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



# PHOTOELECTRIC BEAM SENSOR





# **■WIRING DISTANCE BETWEEN SENSOR AND POWER SUPPLY UNIT**

wire size voltage	6V	12V	24V
0.3 mm <sup>2</sup> ( \$\phi\$ 0.65mm)	1750'(534m)	2200'(670m)	20000'(6000m)
0.4 mm <sup>2</sup> ( \$\phi\$ 0.7mm)	2050'(625m)	2600'(793m)	23000'(7010m)
0.5 mm <sup>2</sup> ( \( \phi \) 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		
Fower consumption	10V to 30V DC: 25mA(TR. side 15mA) or less when armed		
	Dry contact relay Form C		
Alarm output	Action: Interruption time + off-delay 2 secs.		
	Contact capacity: 30V (AC/DC) 1A		
	Dry contact relay Form C		
Environment 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 on when an 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		
	Four frequencies selection		
Additional functions	Environmental fade out monitor		
	Beam strength monitor output		
Beam alignment adjustment	Horizontal: $\pm 90^{\circ}$ , Vertical: $\pm 10^{\circ}$		
Ambient temperature range	-13° F to +140° F (-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 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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