

TAKEX PHOTOELECTRIC BEAM SENSOR PB-4RNS

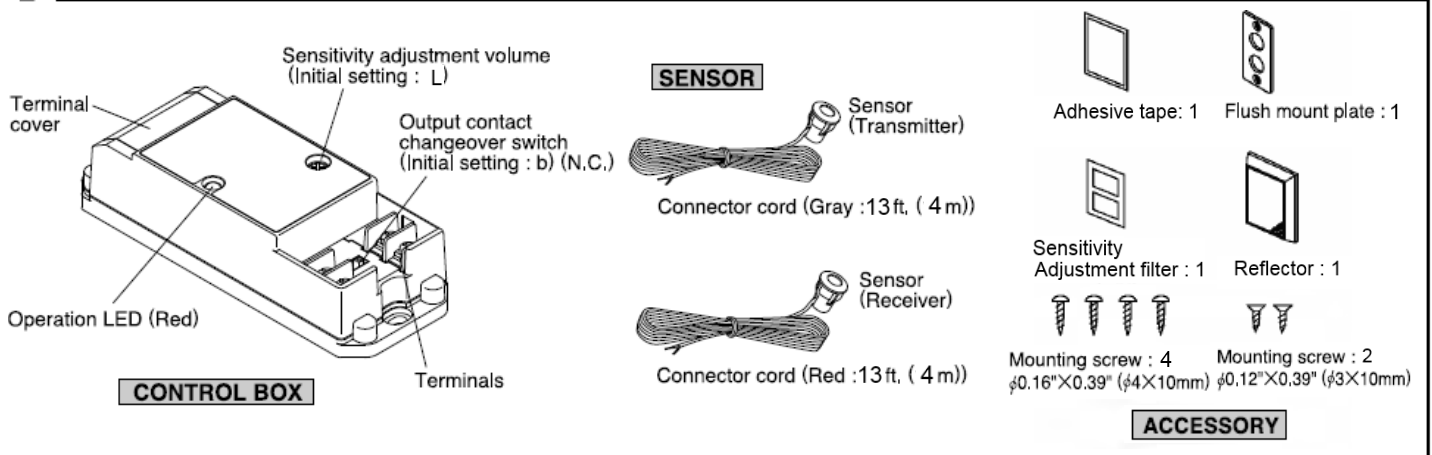
Instruction Manual

Thank you for purchasing this TAKEX product. This sensor will provide long and dependable service when properly installed. Please read this Instruction Manual carefully for correct and effective use.

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

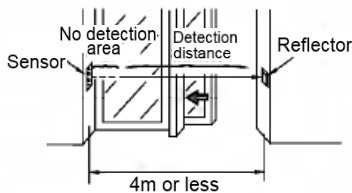
TAKEX is not responsible for damage, injury or losses caused by accident, theft, Acts of God (including inductive surge by lightning), abuse, misuse, abnormal usage, faulty installation or improper maintenance.

1 PARTS DESCRIPTION



2 DO'S AND DON'T'S

1. Attach transmitter and receiver to flush mount plate. Set detection distance between sensor and reflector to 4m or less. There is no detection area near sensor heads. Set sensors so that objects to be detected pass area except no detection area.
2. Remove obstacles that may interrupt beams.

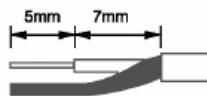


Note :

No detection area depends on sensitivity setting.

Sensitivity Volume	No detection area (Object : white cloth, etc)
L	15cm or less
H	30cm or less

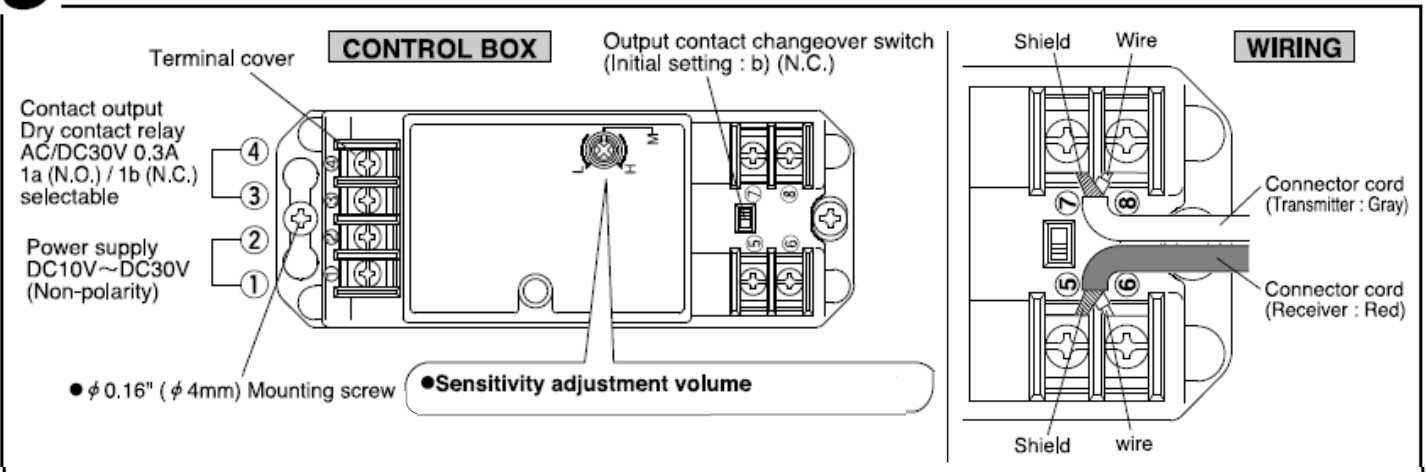
3. Do not extend connector cord. Extension of connector cord will cause deterioration of sensitivity.
4. Cut connection cords as the following figure, when necessary.



- Do not supply the power during engineering work of installation.
- Put terminal cover on terminals after the wiring.
- Do not use this product with outside of the supply voltage indicated. It may cause fire or electric shock.
- Contact output volume is $< 30\text{V (AC / DC) } 0.3\text{A}$ or less. Make the connected device's volume within this capacity. Otherwise it may cause fire.
- Do not disassemble or modify the device. It may cause fire or electric shock.



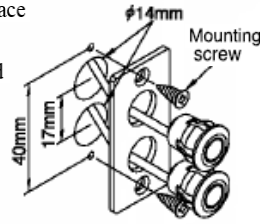
3 INSTALLATION AND WIRING



INSTALLATION

SENSOR

1. Make two holes (φ14mm) on mounting surface and clean away rough hole edge.
2. Attach sensor heads to flush mount plate and fix it to the hole with screws.



REFLECTOR

1. Set "Sensitivity adjustment volume" on the control box at "M".
2. Position where LED is on while moving reflector. Attach reflector to that position with screws or adhesive tape.
3. Attach sensitivity adjustment filter on reflector. Set sensitivity adjustment volume to the point where LED goes ON. (In case LED does not go ON, set it at "L".)
4. Remove sensitivity adjustment filter from reflector.

4 OPERATION CHECK

- (1) Make installation and wiring of control box and sensors. [REF, 3. Installation and wiring]
- (2) Supply the power, and make sure that operation LED on the control box goes off. Operation LED lights up when beam is interrupted and goes out when beam is not interrupted.
- (3) Interrupt beam, and make sure that operation LED lights up and the connected devices work correctly.

(NOTE) In case operation LED goes off even though beam is interrupted, sensitivity may be too high. Reduce sensitivity by turning sensitivity adjustment volume.

5 TROUBLE SHOOTING

Symptom	Possible cause	Remedy
Inactive	Broken / improper wiring.	Check / correct wiring.
Malfunction	Detection distance does not match with sensitivity adjustment.	Adjust sensitivity.
	Some obstacles are interrupting the beam.	Remove interrupting obstacles.
	Protection distance is over 33ft. (10m).	Set the distance within 33ft. (10m).
	Lens surface is soiled or frozen.	Clear the lens surface.

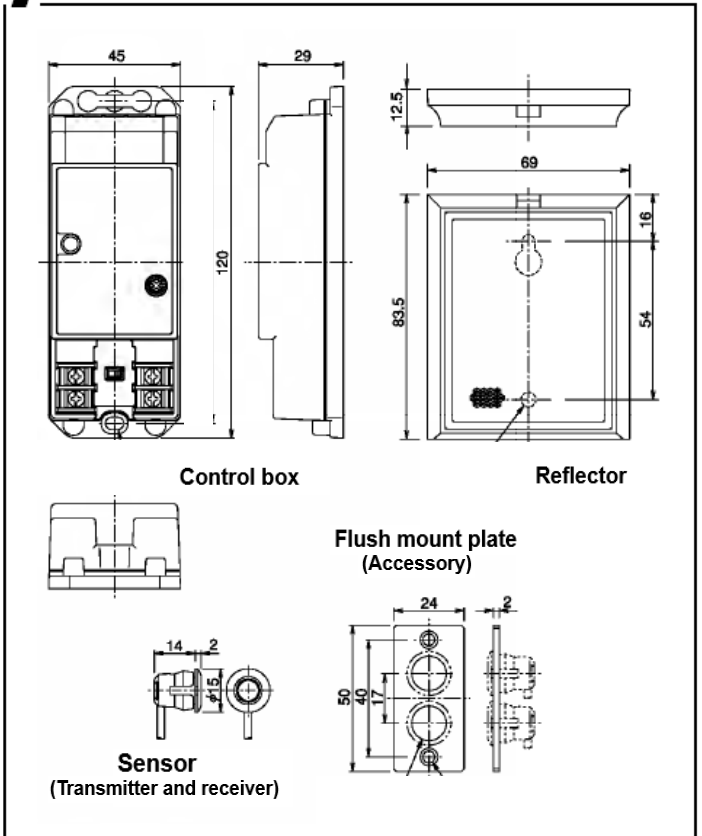
Limited Warranty

TAKEX products are warranted to be free from defects in material and workmanship for 12 months from original date of shipment. This sensor is a product that raises an output when it detects infrared rays and is not an accident prevention product. Our warranty does not cover damage or failure caused by Acts of God, abuse, misuse, abnormal usage, faulty installation, improper maintenance or any repairs other than those provided by TAKEX. All implied warranties with respect to TAKEX, including implied warranties for merchantability and implied warranties for fitness, are limited in duration to 12 months from original date of shipment. During the Warranty Period, TAKEX will repair or replace, at its sole option, free of charge, any defective parts returned prepaid. Please provide the model number of the products, original date of shipment and nature of difficulty being experienced. There will be charges rendered for product repairs made after our Warranty Period has expired.

6 SPECIFICATIONS

Model	PB-4RNS
Detection system	Near infrared beam (reflection type)
Protection distance	13 ft. (4 m) or less
Supply voltage	DC10V to DC30V (Non-polarity)
Current consumption	45mA or less
Alarm output	Dry contact relay : 30V (AC / DC) 0.3A 1a (N.O.) / 1b (N.C.) selectable Contact action : Interruption time + Delay time (approx. 1 sec.)
Response time	Detect 100msec. or more of beam interruption
Operation LED	Lights Red when detection (beam is interrupted)
Ambient temperature range	-13°F to +131°F (-25°C to +55°C) (without condensation or frozen)
Appearance	Sensor : PC resin (clear) Control box : ABS resin (white)
Weight	Sensor : 4.2oz (120g) Control box : 3.3oz (95g)
Accessory	φ 0.16" × 0.39" (φ 4 × 10mm) mounting screw × 4 φ 0.12" × 0.39" (φ 3 × 10mm) mounting screw × 2 (for flush mounting plate) Flush mounting plate × 1 , Adhesive tape X 1 Reflector X 1 , Sensitivity adjustment filter X 1

7 EXTERNAL DIMENSIONS



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