TAKEX

Instruction Manual

REX SENSOR
PS-530E

Request to Exit
(INDOOR ONLY)

We appreciate your purchase of a TAKEX passive infrared REX sensor. This sensor will provide long and dependable service when properly installed. Please read this Instruction Manual carefully for correct and effective use.

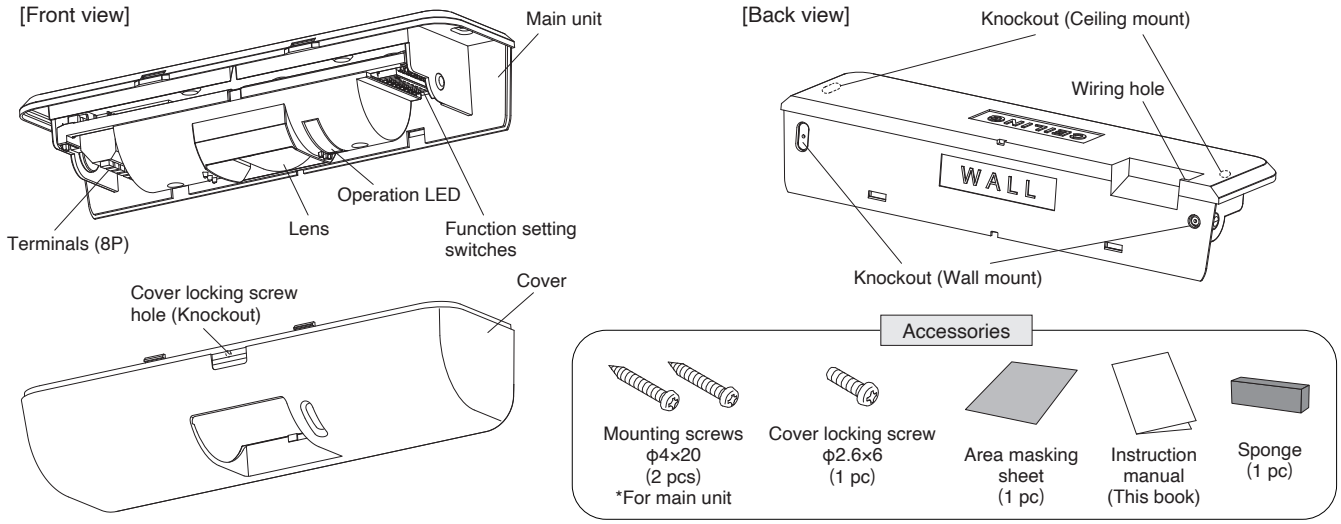
Please Note :This device is not intended to be used as an Intrusion Detection Unit ; it is not a burglary-preventing device. TAKEX is not responsible for damage, injury or losses caused by accident, theft, Acts of God (including inductive surge by lightning), abuse, misuse, abnormal usage, faulty installation or improper maintenance.

PRODUCT DESCRIPTION

The TAKEX PS-530E passive infrared "request-to-exit" sensor is specifically designed for applications involving coverage at the threshold of a doorway. A number of field selectable options and adjustments make it a compatible choice for access control applications, door strike release and automatic door operation.

The level of access control feature (UL294) : Destructive Attack Level I. Line Security Level I. Endurance Level IV. Standby Power Level I.

1 PARTS DESCRIPTION



2 PRECAUTIONS

Be sure to observe

- This manual describes precautions by classifying them based on degrees of danger and damage that would be generated when using the unit incorrectly.

⚠ Warning This indicates the possibility of severe injury, and even death, if ignored or a user handles the unit incorrectly.

⚠ Caution This indicates the possibility of minor injury and/or damage to properties, or of a notification delay in your system due to false operations and/or non-detection, if ignored or a user handles the unit incorrectly.

- These precautions are categorized throughout the manual using the following symbols.

⃠ A prohibited action, you must not do.	❗ An action you must do, and information you should keep in mind.

⚠ Warning

⃠ Do not disassemble or modify this device. This may cause a fire, electrical shock, or malfunction of the device.

❗ If the following events occur, turn off the power of the unit immediately, and ask the place of purchase for repair. Failure to follow this may result in fire, electric shock, and/or malfunction.
- Smoke, abnormal odor, and/or sound are found
- Liquid, such as water, and/or foreign material has entered the unit
- The unit has deformed and/or damaged parts

❗ Use the supplied mounting screws to fix the sensor unit for operation. This can prevent injuries, and/or damage to the unit if the unit falls, as well as prevent the sensor from being tampered.

⃠ Do not install this device in a location that cannot support its weight. This may cause the device to fall and cause an injury or malfunction of the device.

❗ Mount the unit on a solid ceiling or wall surfaces where reinforcement materials are used. If you mount the unit on non-wood materials of plaster board or concrete, securely mount it using anchors and mounting screws that match the wall materials. Unstable mounting may result in injury and/or property damage if the unit falls.

⃠ Do not use the unit with power voltage levels other than those specified. Failure to follow this may result in fire, electric shock, and/or malfunction.

⃠ Do not connect devices that exceed the indicated capacity to the output contact of the unit. Failure to follow this may result in electric shock, fire, and/or malfunction.

⃠ Do not touch terminals with wet hands. Failure to follow this may result in electric shock.

⚠ Caution

⃠ Do not apply impact to the unit. Strong impact may result in performance deterioration and/or damage to the unit.

❗ Make sure to perform a sufficient operation check on the whole system before operation.

❗ Be sure to cover any unused or incorrectly drilled holes, such as mounting holes and knockouts, with caulk or similar material. Water may seep in and damage the product.

❗ Refer to the detection area chart, and select the installation location. Then, check the actual operation, and adjust the appropriate area.

Do not install the unit in places subject to oil smoke or steam, high humidity, and/or a lot of dust. Electricity that travels through these substances may result in fire, electric shock, and/or false operation.

Ask qualified personnel for any electrical work necessary for installation, if required. Failure to follow this may result in fire and/or electric shock.

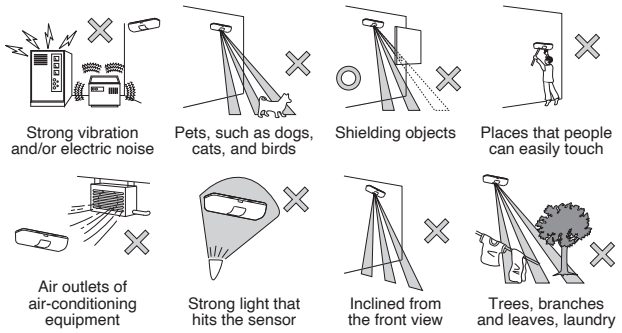
Securely conduct installation work according to the instruction manual. Also, make sure to use the supplied accessories and specified components. Failure to follow this may result in injury and/or property damage in the event of fire, electric shock or fall of the unit.

If the ceiling is higher than 4.5m(15'), install the unit on the wall.

This unit is for indoor use. Do not use the unit in places subject to water and/or high humidity. Failure to follow this may result in malfunction if water gets into the unit.

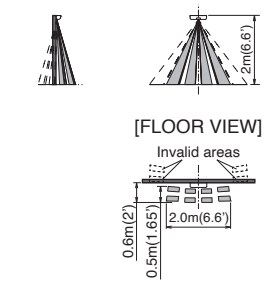
Do not perform aerial wiring of power and signal cables. Failure to follow this may result in electric shock, fire, and/or malfunction.

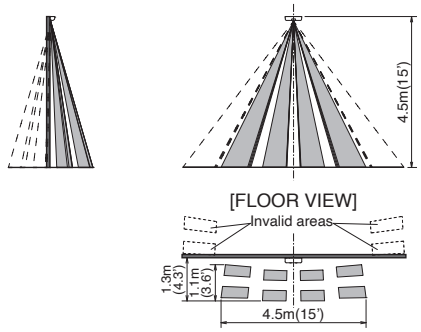
Avoid installing the unit in the following places. Otherwise, false detection may occur.

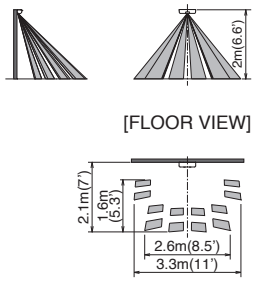


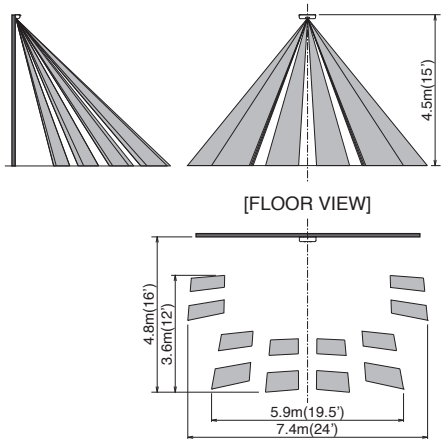
3 DETECTION AREA

	Mounting height：2.0m(6.6')	Mounting height：4.5m(15')
Angle：0°	[SIDE VIEW] [FRONT VIEW] [FLOOR VIEW]	[SIDE VIEW] [FRONT VIEW] [FLOOR VIEW]
Angle：30°	[SIDE VIEW] [FRONT VIEW] [FLOOR VIEW]	[SIDE VIEW] [FRONT VIEW] [FLOOR VIEW]

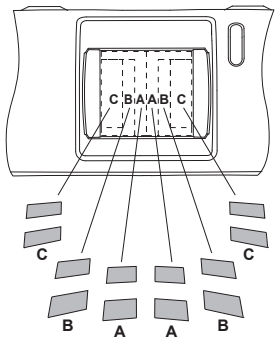




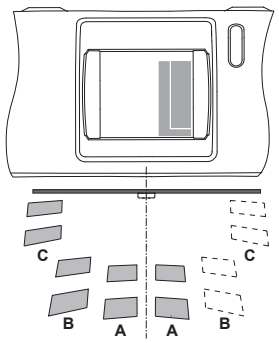




Area masking sheet

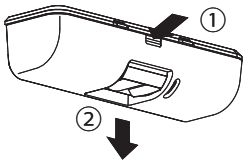


(e.g.：Detection area for masking "B" & "C")



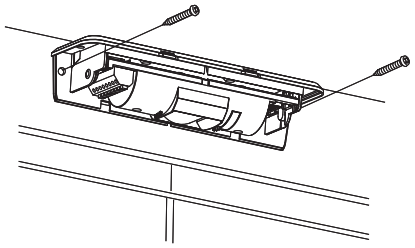
4 INSTALLATION

(1) Detach the cover from the main unit.
Slide downward while pressing the center of the cover.

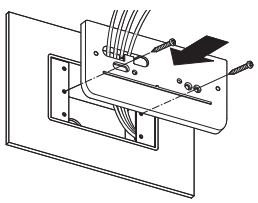


(2) Break knockouts for screw hole corresponding to the installation location. Place the main unit on the mounting location.

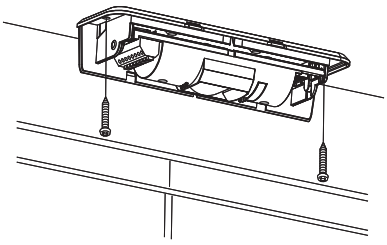
Wall mount



Install mounting plate PS-3PL (optional) onto a single gang box as needed.
*In case installing PS-3PL, use specified mounting screws attached to PS-3PL

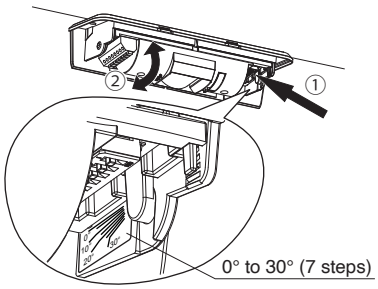


Ceiling mount

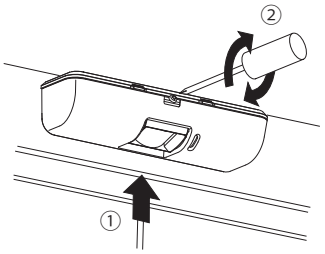


(3) Run wires through the wiring hole and connect them to the terminal blocks.
(Refer to "***5 WIRING***")

(4) Set the function by the setting switches and adjust the lens angle for optimal detection area.
(Refer to "***6 FUNCTIONS***")

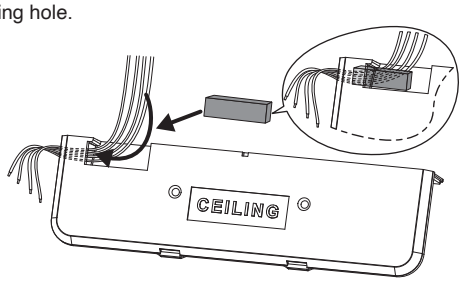


(5) Attach the cover to the main unit.
If necessary, to lock the cover, break the cover locking screw hole.
Insert and tighten the cover locking screw.

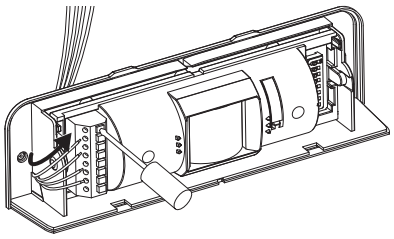


5 WIRING

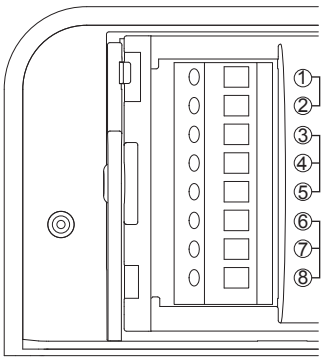
(1) Run wires through the wiring hole and pack the sponge into the wiring hole.



(2) Connect wires to the terminal blocks.



[TERMINAL ARRANGEMENT]



POWER

❶ 10.5 to 28V DC (non-polarity)
12 to 24V AC (50/60Hz)

❷ 40mA max./DC
70mA max./AC

OUTPUT1 (Dry contact Relay 2c)

❸ N.O. (N.C.)
❹ COM.
❺ N.C. (N.O.)

30V DC 1A or less
24V AC 0.6A or less

OUTPUT2

❻ N.O. (N.C.)
❼ COM.
❽ N.C. (N.O.)

( ) : Fail Secure mode

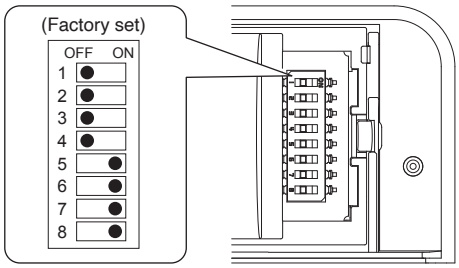
●Use wire AWG 16 to AWG 22.
●Wiring distance

Wire size \ Voltage	12V AC/DC	24V AC/DC
AWG 22 (Dia.0.65mm)	100m (330')	900m (3,000')
AWG 20 (Dia.0.8mm)	150m (500')	1,400m (4,600')
AWG 18 (Dia.1.0mm)	250m (820')	2,300m (7,500')
AWG 16 (Dia.1.25mm)	400m (1,300')	3,600m (12,000')

*When 2 or more units are connected, the wiring distance is calculated as follows: [Above / number of units]

●The N.C. and N.O. output will reverse according to the "Relay mode" set up.
(Refer to "***6 FUNCTIONS***")
●The unit is intended to be powered by either a UL Listed power supply or a UL Listed Class 2 transformer.

6 FUNCTIONS



1,2,3 Output hold time

The output hold time for the 2 output relays and the operation LED can be adjustable.

SET UP	OUTPUT TIME
1 ● 2 ● 3 ●	0.5s (Factory set)
1 ○ 2 ● 3 ●	1s
1 ● 2 ○ 3 ●	2s
1 ○ 2 ○ 3 ●	4s

SET UP	OUTPUT TIME
1 ● 2 ● 3 ○	8s
1 ○ 2 ● 3 ○	16s
1 ● 2 ○ 3 ○	32s
1 ○ 2 ○ 3 ○	64s

4,5 Sensitivity

SET UP	SENSITIVITY
4 ● 5 ●	Low
4 ○ 5 ●	Middle

SET UP	SENSITIVITY
4 ● 5 ○	High (Factory set)
4 ○ 5 ○	Ex-High

*Sensitivity Ex-High setting is NOT for UL installations.

6 LED mode

SET UP	LED	
6 ○	ON	Turns on during the output hold time. (Factory set)
6 ●	OFF	Disabled

7 Retrigger

SET UP	RETRIGGER	
7 ○	ON	The output hold time retrigger by detection while the relay is activated. (Factory set)
7 ●	OFF	The output hold time does not retrigger by detection while the relay is activated. This setting is suitable for use with access control systems.

8 Power fail

・Relay mode "FAIL SAFE"

This mode selects "Fail Safe" (OPENING DOOR OR UNLOCK ELECTRIC STRIKE) operation in the event of power failure.

・Relay mode "FAIL SECURE"

This mode selects "Fail Secure" (CLOSING DOOR OR LOCK ELECTRIC STRIKE) operation in the event of power failure.

SET UP	POWER FAIL	
8 ☐●	Fail Safe	Fail safe if power fails (Factory set)
8 ●☐	Fail Secure	Fail secure if power fails

* Note that N.C. and N.O. output terminal configuration reverses according to the relay mode.

7 OPERATION CHECK

(1) After wiring, apply power to the unit and check the operation. It takes approx. 1 minute for "warm up" after turning power on.
(2) Confirm the detection zone by walk test. (Apply the supplied area masking sheet to the lens as needed for narrower detection area.)
(3) Check the operation of the connected equipment.
(4) If necessary, make fine adjustment.

8 TROUBLESHOOTING

Solve possible problems according to the following table. If normal operations cannot be restored by this means, contact either the dealer from whom you bought the unit or TAKEX.

Trouble	Cause	Action
Completely inactive	①No power supply, broken wire or improper voltage ②Cover shielded by substances (including glass) ③Improper detection area adjustment	①Correct power supply or replace broken wire ②Remove the substances ③Readjust the detection area setting
Sometimes inactive	①Improper detection area adjustment ②Lens is soiled with dust or water drop	①Readjust the detection area setting ②Clean the lens with soft cloth (Do not use chemicals such as thinners or alcohol)
Activated when no person has passed	①Not yet 1 minute after power turned on ②Unstable power voltage ③Something moving in detection area or too rapid temperature variations ④Large electrical noise source such as power machine nearby or its wiring close to that of sensor ⑤Intense reflection of sun light or head light shining on the sensor ⑥Is the sensor reacting to passersby outside ?	①Wait approx. 1 minute ②Stabilize the power voltage ③Remove the cause ④Relocate device ⑤Relocate device or shield with a blind ⑥Readjust the detection area
The alarm LED lights, but connected units are inactive	①Poor contact output connection or broken wire or short circuit ②Contact output is not working ③The connected unit has faulty	①Check the wiring or connection ②Check the contact output terminal using a tester ③Check the connected unit

Maintenance

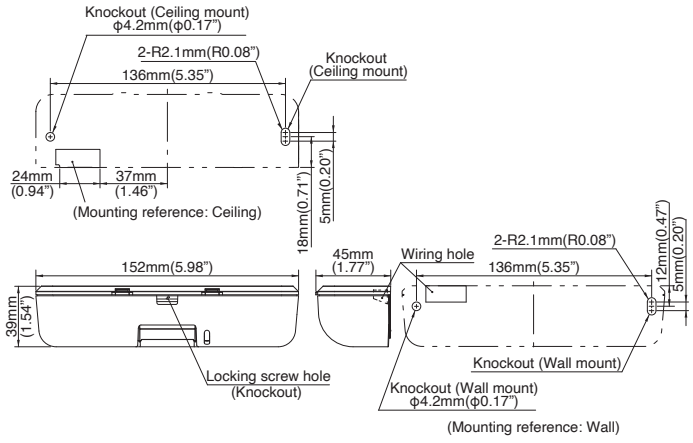
1. Clean the device with a soft, damp cloth and wipe off water drops. Use water with weak neutral detergent to clean stubborn dirt. Do not use substance such as thinner or benzene.
2. Perform operation check on a regular basis.

9 SPECIFICATION

Model		PS-530E	PS-530E(BK)
Detection system		Passive infrared	
Detection area	Mounting height	4.5m(15') max.	
	Adjustment range	Wall mount / Ceiling mount: Vertically 30°(7 steps)	
	Sensitivity	Low / Middle / High / Ex-High	
Supply voltage		10.5 to 28V DC (non-polarity) or 12 to 24V AC (50Hz / 60Hz) (UL Listed Class2)	
Current consumption		40mA or less / DC 70mA or less / AC	
Output		Dry contact relay 2C Operation : One shot Output hold time : Adjustable approx. 0.5sec. to 64sec. Contact capacity : 30VDC 1A or less / 24VAC 0.6A or less (Class 2 Power Limited)	
LED (Green)		Operation : Synchronous dry contact relay (LED disabled)	
Wiring connection		Screwless terminal	
Ambient temperature		−10°C to +50°C (+14°F to +122°F) without condensation	
Mounting position		Wall, ceiling, on or under frame (indoor)	
Weight		100g (3.5oz)	
Appearance		White	Black

Specifications and design are subject to change without prior notice.

10 EXTERNAL DIMENSIONS



■Options

Mounting plate：PS-3PL
PS-3PL (BK)

Limited Warranty :

TAKEX products are warranted to be free from defects in material and workmanship for 12 months from original date of shipment. Our warranty does not cover damage or failure caused by natural disasters, 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.

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