

Thanks for purchasing this product. Read this instruction before using the product to make sure that you use it correctly.

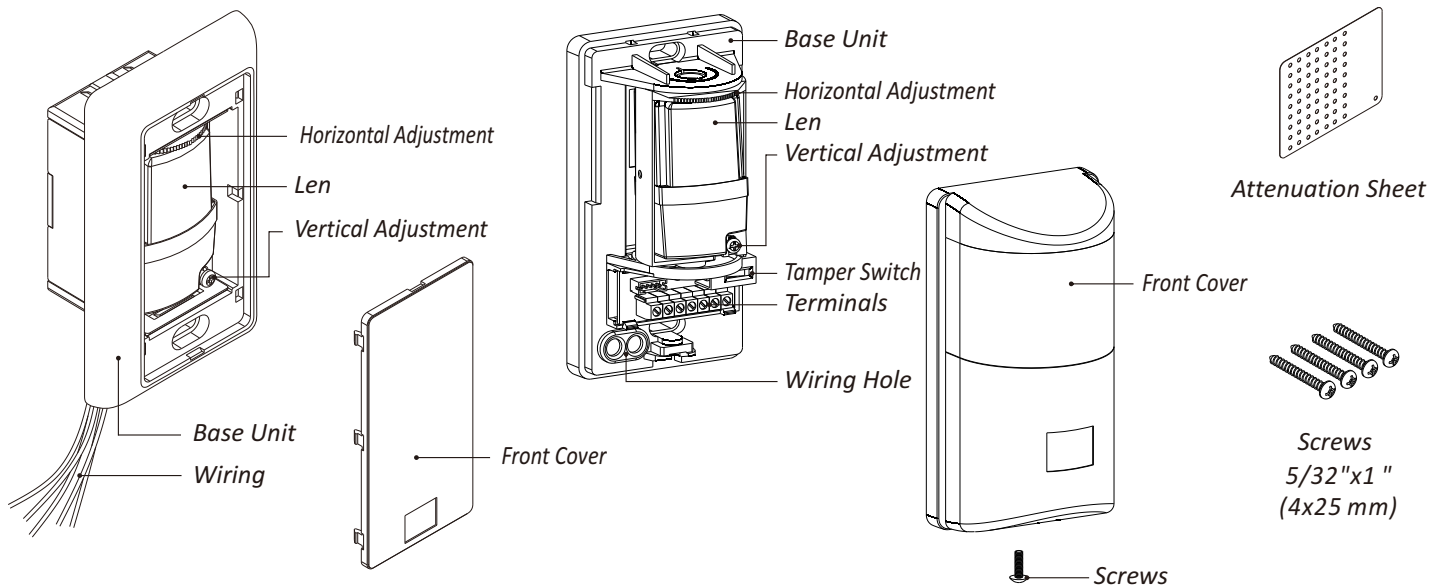
FEATURES OF THE PRODUCT

- BUILD WITH HIGH GRADE ASPHERIC LENS.
- DRIP-BREAKER DESIGN, PH-15FA COULD BE FOR OUTDOOR/INDOOR.
- 3-STEP LED INDICATOR FOR EFFECTIVE ALIGNMENT.
- FLUSH AND SURFACE MOUNT FOR OPTIONS.

1 PARTS NAME :

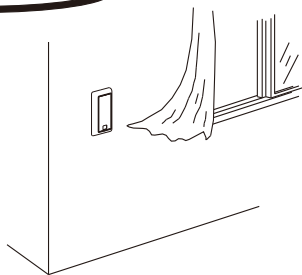
● PH-15FA (FLUSH Mount)

● PH-15SA (SURFACE Mount)

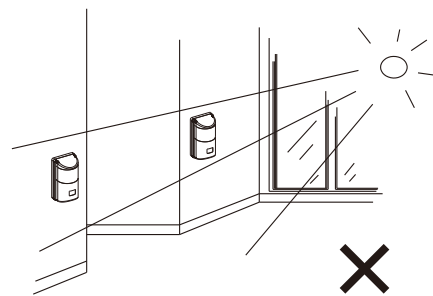


2 PRECAUTIONS FOR INSTALLATION :

IMPROPER LOCATION



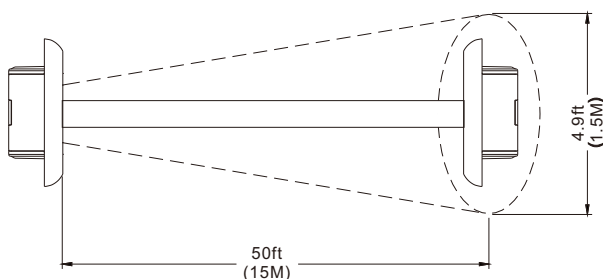
- Avoid any possible objects between Transmitter and Receiver (ex. Curtain, Bonsai ...)



- Avoid direct sunshine and long-time strong sunshine, that would hurt product's life.

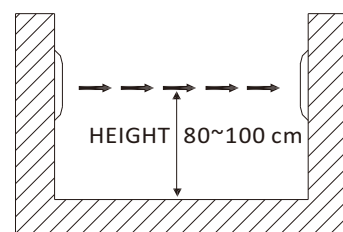
DETECTION RANGE

With 15M Detection Range between Transmitter and Receiver.



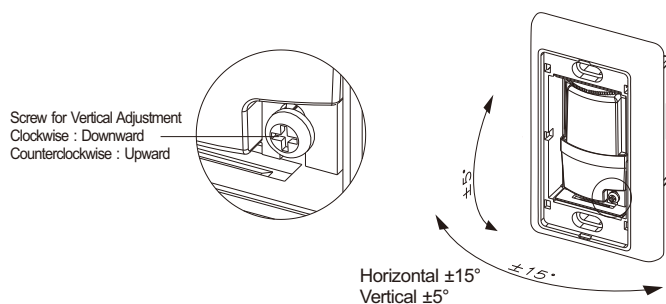
INSTALLATION HEIGHT

As these products are designed to detect humans, installing so that the center of the sensors are at a height of approximately 80cm~100cm from the ground for both wall and pole mounting.

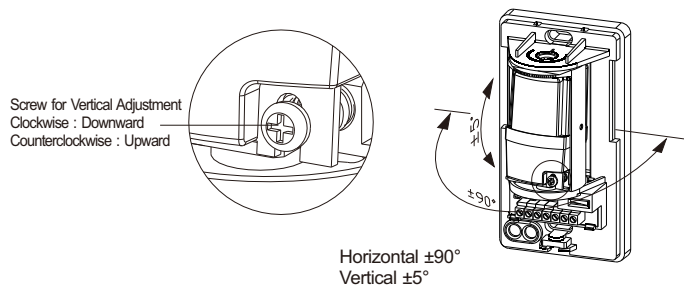


ADJUSTMENT ANGLE

● PH-15FA (FLUSH Mount)



● PH-15SA (SURFACE Mount)

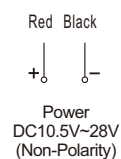


3 WIRING :

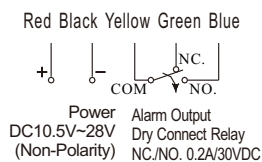
WIRING

● PH-15FA (FLUSH Mount)

<Transmitter>

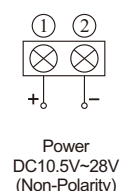


<Receiver>

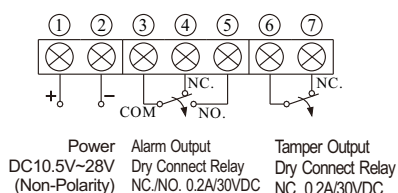


● PH-15SA (SURFACE Mount)

<Transmitter>

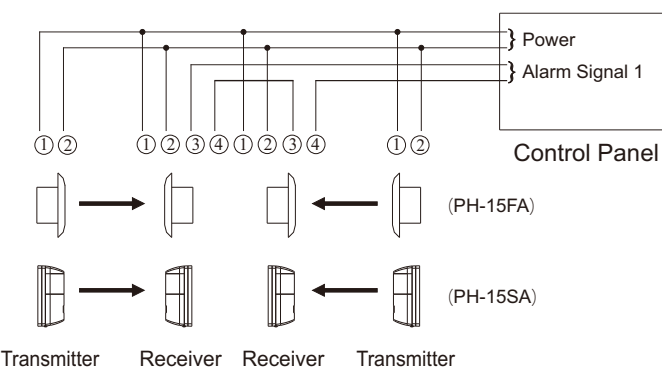


<Receiver>

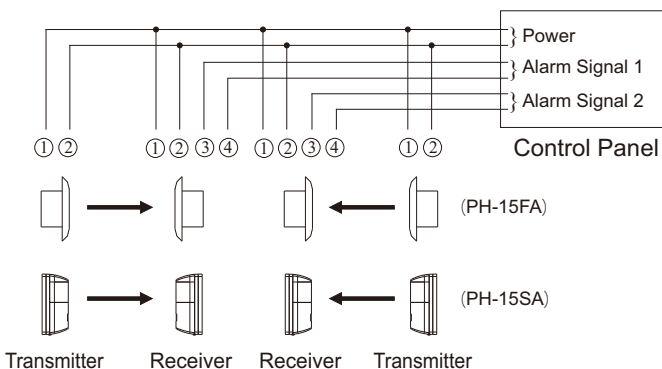


POWER AND SIGNAL INSTALLATION

Connect Example (A)



Connect Example (B)



LENGTH OF THE WIRING

(The length spec between wiring and sensors)

WIRE	MODEL	PH-15FA / PH-15SA	
	VOLTAGE	12VDC	24VDC
AWG22 (0.65mm)		300 M	2000 M
AWG20 (0.80mm)		550 M	3300 M
AWG18 (0.80mm)		800 M	5000 M
AWG17 (1.10mm)		1000 M	6000 M

NOTE :

- When two(2) or more units are connected, the wiring distance is calculated as above, the figure on the left divided by number of units.
- The main wires for power couldn't exceed above-mentioned length.
- Signal wiring connection should consider the possible impedance matching from the wiring of Control Panel. (ex. Terminal Resistor)

4 INSTALLATION PROCEDURE :

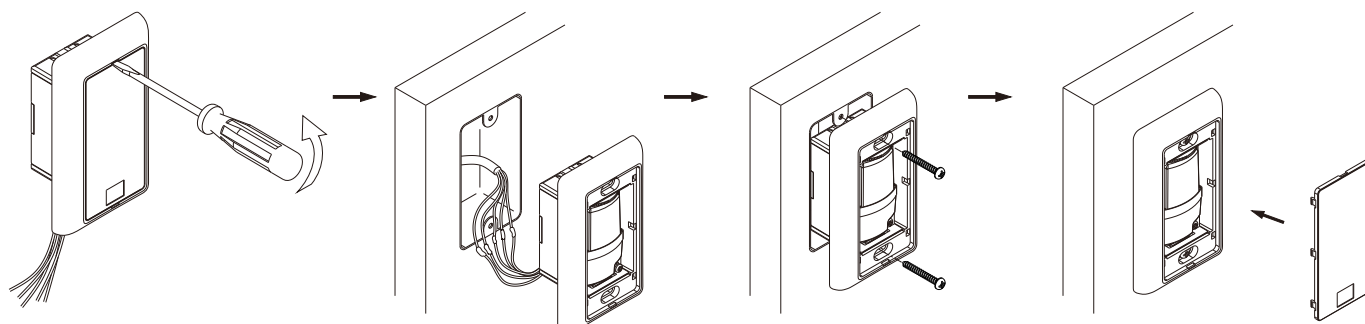
PH-15FA (BOX MOUNTING)

4-1-1 Remove the cover piece with screwdriver.

4-1-2 Refer to section [3.WIRING] to connect the wiring.

4-1-3 Organize the wirings into the box and fix with screws 5/32"x1" .

4-1-4 Refer to section [5. ALIGNMENT] and check if alignment done properly, if yes, then attach the cover piece back.

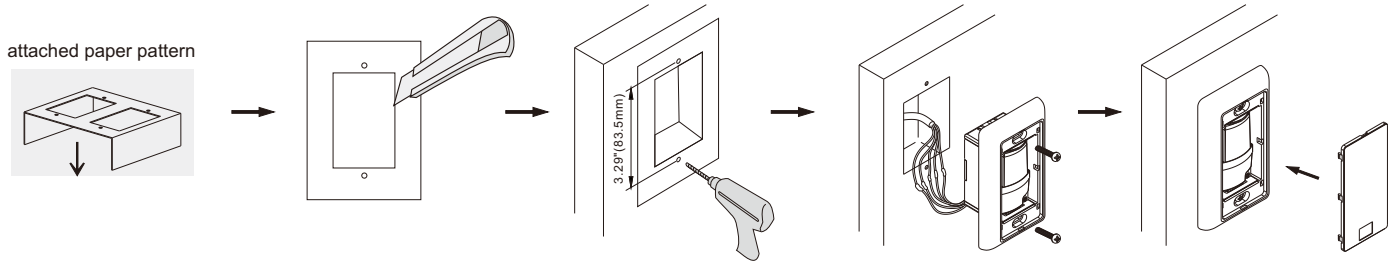


PH-15FA (WALL MOUNTING)

- 4-2-1 Remove the cover piece with screwdriver.
4-2-2 Use attached paper pattern to cut hole on the wall.

- 4-2-3 According to the position identified to drill two(2) fixing holes(2 mm).
4-2-4 Refer to section [3. WIRING] to connect the wiring.

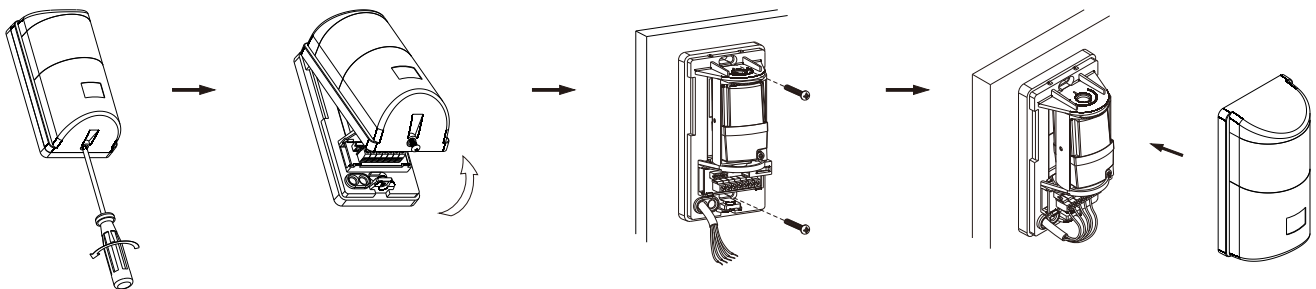
- 4-2-5 Install and fix screws 5/32"x1" .
4-2-6 Refer to section [5. ALIGNMENT] and check if alignment done properly, if yes, then attach the cover piece back.



PH-15SA (WALL MOUNTING)

- 4-3-1 Remove the cover piece with screwdriver.
4-3-2 Pull wiring thru cable entry and fix the unit on the wall with screws 5/32"x1" .

- 4-3-3 Refer to section [3. WIRING] to connect the wiring.
4-3-4 Refer to section [5. ALIGNMENT] and check if alignment done properly, if yes, then attach the cover piece back.

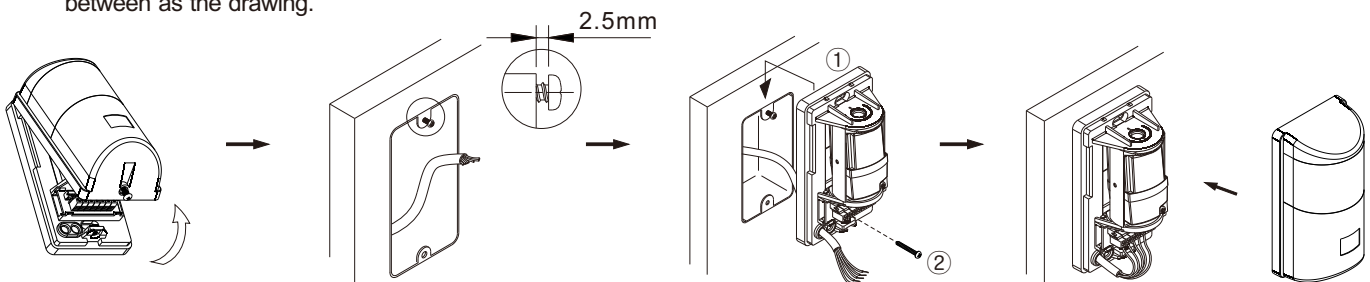


PH-15SA (BOX MOUNTING)

- 4-4-1 Remove the cover piece with screwdriver.
4-4-2 Install the screw 5/32"x1" in switch box and keep 2.5 mm space between as the drawing.

- 4-4-3 Put the infrared beam unit in switch box (Drawing-1), and fix the screw tightly (Drawing-2).
4-4-4 Refer to section [3. WIRING] to connect the wiring.

- 4-4-5 Refer to section [5. ALIGNMENT] and check if alignment done properly, if yes, then attach the cover piece back.



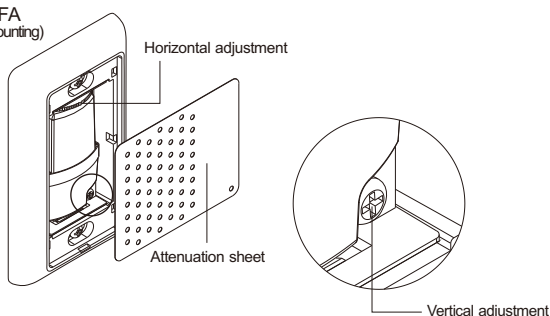
5 OPTICAL ALIGNMENT PROCEDURE :

- 5-1 Turn on the power to the PH-15FA/SA Transmitter and Receiver.
5-2 Adjust Transmitter and Receiver vertically and horizontally to do optical axis adjustment.
5-3 Check Receiver LED Operation, adjust Transmitter and Receiver vertically and horizontally again till Receiver LED is off.
5-4 Put the Attenuation sheet in front of the Receiver to weak the signal, then repeat the section [5-3] till Receiver LED is totally off.
This procedure could make sure Receiver got better and steady operation.

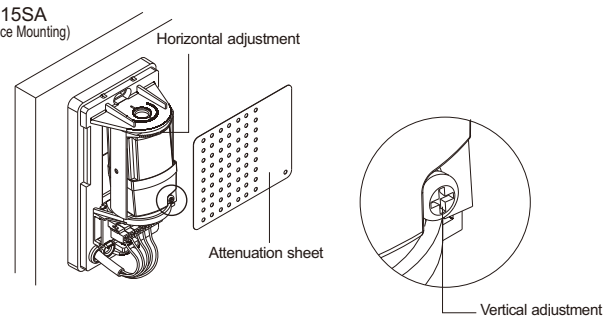
This function informs you of the operation and condition of the receiver by LED.

Receiver LED Operation	Receiver Condition
Red/Yellow LED Off	Strong (operation well)
Yellow LED lit (Red LED Off)	Weak (re-adjust, no Alarm Output)
Red LED lit (Yellow LED Off)	Alarm Output

● PH-15FA (Flush Mounting)



● PH-15SA (Surface Mounting)



6 TROUBLE-SHOOTING GUIDE :

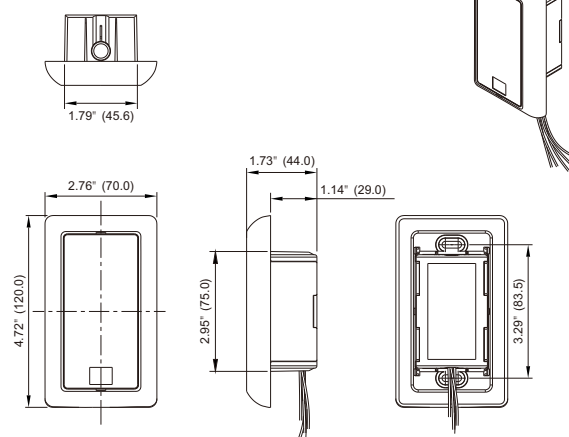
CONDITION	POSSIBLE CAUSE	REMEDY
Operation LED doesn't light. (Transmitter)	1. Disruption of power or inadequate power. 2. Bad wiring connection or broken wire, short.	1. Correct Power source. 2. Check and correct wiring.
Receiver Alarm LED does not light when the beam is broken.	1. Disruption of power or inadequate power. 2. Bad wiring connection or broken wire, short. 3. Reflection of beam is flooding receiver and sent into the receiver.	1. Correct Power source. 2. Check and correct wiring. 3. Remove reflecting object or change the installation location.
Receiver Alarm LED Alarm stays lit.	1. Alignment is off. 2. Shading object between Transmitter and Receiver. 3. Optics of units are soiled.	1. Check and adjust. 2. Check and remove any possible obstacles. 3. Clean the optics with a soft cloth.
Intermittent Alarm.	1. Bad wiring Connection. 2. Unstable power source. 3. Shading object between Transmitter and Receiver. 4. The wiring of power machine is located nearby Transmitter and Receiver. 5. Unstable installation of Transmitter and Receiver. 6. Optics of units are soiled. 7. Improper alignment.	1. Check and correct wiring. 2. Stabilize supply voltage. 3. Check and remove any possible obstacles. 4. Change environments or place for installation to avoid the interference source. 5. Looking for proper installation location. 6. Clean the optics with soft cloth. 7. Check and re-adjust.

7 SPECIFICATION :

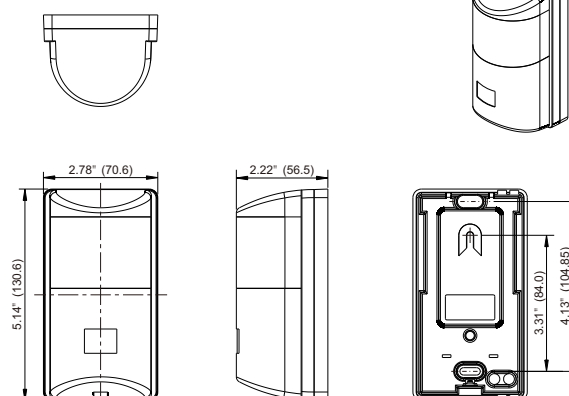
MODEL NO.	PH-15FA	PH-15SA
Detection Range	Indoor 15 M	
Tenfold Distance	150 M	
Current Consumption	Transmitter 12mA (16mA Max.) Receiver 24mA (26mA Max.)	
Supply Voltage	10.5V~28VDC (Non-Polarity)	
Detection System	Infrared beam interruption system	
Beam Characteristics	Pulsed Infrared 1000pps	
Response Time	150ms (100~200ms)	
Interruption Time	1second	
Alarm Output	Dry contact relay NC. / NO. 0.2A / 30VDC (When the beam is blocked.)	
Tamper Output	None Dry Contact NC. 0.2A/30VDC	
Indicator LED	Transmitter : Green Operation LED lights on when cover is opened with power on. Receiver : Red Alarm LED lights on when an alarm is initiated. Yellow Sensitive LED lights on when beam reception is attenuated. Both Yellow and Red LED should be off as correct installation.	
Functions	3- step Alignment LED.	
Ambient Temperature	-25°C ~ +55°C	
Environment Humidity	95% (Max.)	
Wiring	AWG26 Wiring	Terminals
Beam Adjustment	Horizontal ± 15° Vertical ± 5°	Horizontal ± 90° Vertical ± 5°
Mounting Position	Indoor / Outdoor / Flush Mount	Indoor / Surface Mount
Weight	6.9oz (195g)	9.7oz (275g)
Dimension (W X H X D)	2.76"x 4.72"x 1.73" (70.0x120.0x44.0 mm)	2.78"x 5.14"x 2.22" (70.6x130.6x56.5 mm)
Standard Accessories	Screw 5/32" x 1" X 4 pcs Attenuation sheet X 1 pc	

8 DIMENSIONS :

● PH-15FA (FLUSH Mount)



● PH-15SA (SURFACE Mount)



Unit : inch(mm)

No:A059B02-01

Please Note :

- 1.This sensor is designed to detect intrusion and initiate an alarm; it is not a burglary-preventing device.
- 2.We are 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.
- 3.Specifications and design are subject to change without prior notice.



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