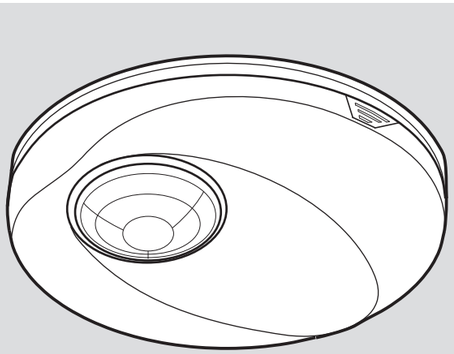
PIR PRESENCE DETECTOR
OS-463R / OS-463RA



INSTALLATION MANUAL

TECHNICAL SPECIFICATIONS

Rated Voltage	230V~±10% 50/60Hz
Load	**OS-463R (2 channels):** μ Load Ⅰ (L↓) for Lighting: Incandescent Lamp: max. 2000W AC Halogen Lamp : max. 1000W LV Halogen Lamp : max. 1000VA Fluorescent Lamp : max. 900VA / 100 μF Load Ⅱ (D1-D2) for HVAC (Potential free contact for 250VAC or 30VDC Max): Max. 5A (cos φ =1) Max. 1/10HP (approx. 73W) **OS-463RA (1 channel):** μ Load (L↓) for Lighting: Incandescent Lamp: max. 2000W AC Halogen Lamp : max. 1000W LV Halogen Lamp : max. 1000VA Fluorescent Lamp : max. 900VA / 100 μF
Timer Adjustment (constant adjustment)	**OS-463R :** Time1(for lighting): Adjustable from 5sec to 20min, plus test & ⎍ mode Time2 (for HVAC) : Adjustable from 10sec to 60min **OS-463RA :** Time: Adjustable from 5sec to 20min, plus test & ⎍ mode
Lux Adjustment	Adjustable from 10Lux to 2000Lux (constant adjustment)
Meter Adjustment	Adjustable from approx. Φ1m (-) to approx. Φ7m (+) at height of 2.5m
Detection Range	360°circular, Φ7m at height of 2.5m
Operating Temperature	0°C to +45°C
Environmental Protection	Class Ⅱ, IP40

All procedures indicated in this manual must be carried out by a professional installer.

1 PACKAGE CONTENTS

Pattern				
Item	Detector	Manual	Wood Screw Φ4 x 25.4mm	Tapping Screw Φ3 x 10mm
Quantity	1	1	2	2

2 FEATURES

2.1 Features

OS-463R / 463RA is a ceiling mount presence detector for indoor application in office, conference room, hotel, home and lavatory.

- OS-463R has two relays for outputs load Ⅰ and load Ⅱ: load Ⅰ is for lighting control and load Ⅱ is potential free for HVAC control (Heating, Ventilation, Air Conditioning, etc.)
- OS-463RA is designed with a single load for controlling lighting devices.
- Omni-directional detector integrated with the unique lens provides "No dead spot" zones and superior sensitivity for every spot zone in its 360° detection range. The detection beams are distributed properly and well-concentrated over the detection range, which enable it to detect the smallest movement.
- Either side or bottom cable entry is available for wiring.
- Built-in red LED is used as an indicator for test.

2.2 Dimension: Φ121.5 x 42.5mm (See FIG.1)

FIG.1

3 INSTALLATION AND WIRING

Please disconnect power completely and read the entire instruction manual carefully before installation.

3.1 Select a proper location

3.1.1 It is recommended to install at the height of 2.5m, and the detection range can reach up to the diameter of 7m. (See FIG.2).

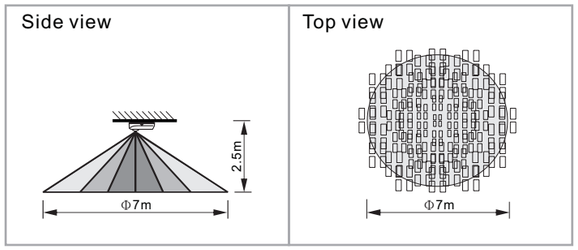


FIG.2

3.1.2 Helpful tips for installation
Since the detector is in response to temperature change, please avoid the following conditions (See FIG.3):

- Avoid the detector aiming towards the objects whose surfaces are highly reflective, such as mirror, monitor, etc.
- Avoid the detector aiming towards the objects which may be swayed in the wind, such as curtain, tall plants, miniature garden, etc.
- Avoid mounting the detector near heat sources, such as heating vents, air conditionings, vents as dryers, lights, etc.

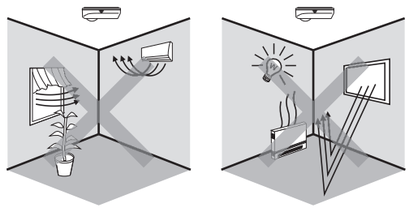


FIG.3

3.2 Wiring

3.2.1 Two loads are controlled by one detector (See FIG.4).

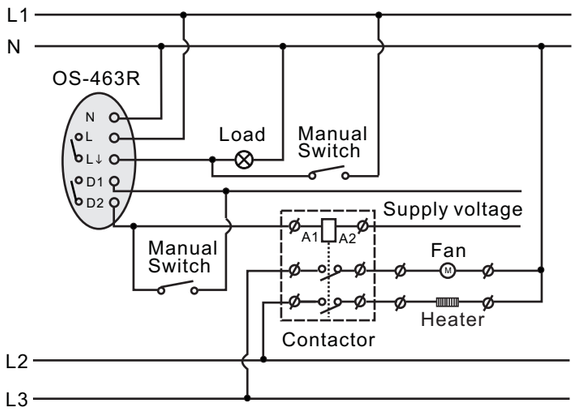


FIG.4

3.2.2 One load is controlled by two detectors to enlarge detection range (See FIG.5).

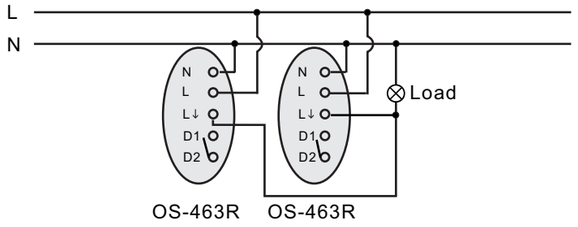


FIG.5

3.2.3 OS-463R / 463RA controls staircase switch timer (time1 should be set to ⎍) (See FIG.6).

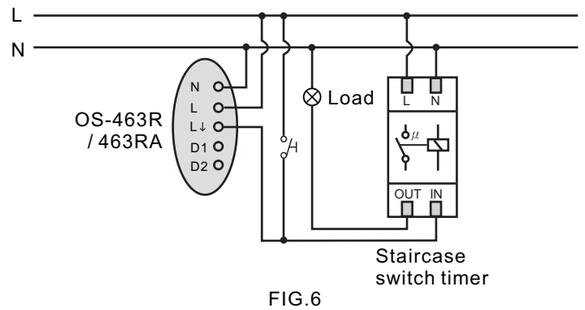


FIG.6

3.2.4 One load is controlled by one detector (See FIG.7).

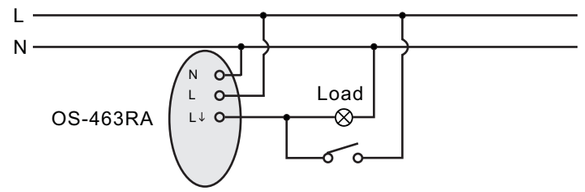


FIG.7

3.3 Installation procedure

3.3.1 Push the point-to-point of outer cover gently and take it off with applicable force (See FIG.8).
3.3.2 Dismantle lens body from bottom case by a screw-driver to be aimed at the gap (See FIG.9).
3.3.3 Remove the card board and accessories to assemble OS-463R / 463RA (See FIG.10).

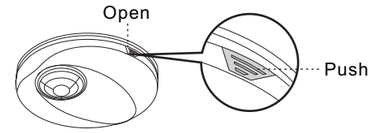


FIG.8

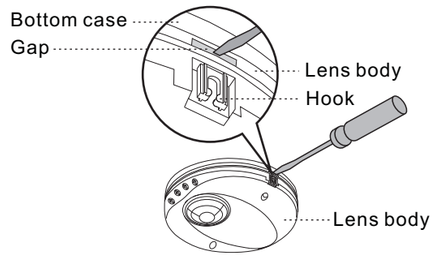


FIG.9

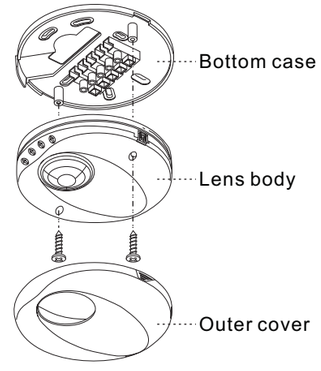


FIG.10

3.3.4 There are two ways of cable entry on the unit. One is fed into the bottom case (FIG.11-A), another is fed into the side of the bottom case and outer cover (FIG.11-B). Select your preferred cable entry and break its knock-out to feed the wires through, then screw the wires into the corresponding terminal blocks. Refer to the wiring diagrams.(see FIG.4 to FIG. 7)

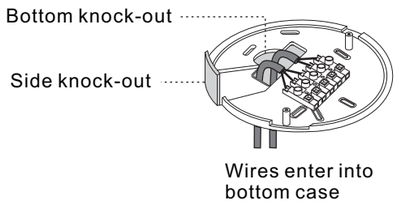


FIG.11-A **(Bottom entry)**

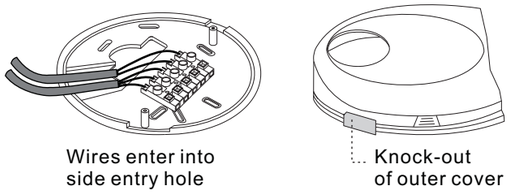


FIG.11-B **(Side entry)**

3.3.5 Insert the lens body into the bottom case, fasten it with screws firmly, then cover the outer cover (See FIG.10).
3.3.6 Recheck and wipe slightly with a clean dry cloth if the detector surface is dirty.
3.3.7 Fasten bottom case on the ceiling with wood screws (See FIG.12).
The bottom case is with omni-directional holes that can be cooperated to various standard screw installation of old existing holes.

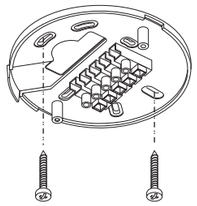


FIG.12

3.3.8 Restore the power.

4 OPERATION AND FUNCTION

NOTE

- **Test mode:** Set the arrowhead of "time1" or "time" knob at "test" to enter into test mode. Once the detector is triggered, both light and LED will turn on for 2sec, then turns off.
- **Short impulse mode:** Set knob at "⎍", staircase timer will be triggered by presence of person, and then the connected load being switched on according to pre-set time value of staircase timer.

4.1 Time, Lux, meter knob.

Following marked values (excepting test and ⎍) are only for reference. You can adjust the knobs at any position you desired (See FIG.13-A & FIG.13-B).

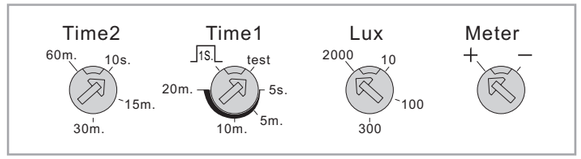


FIG.13-A **(OS-463R)**

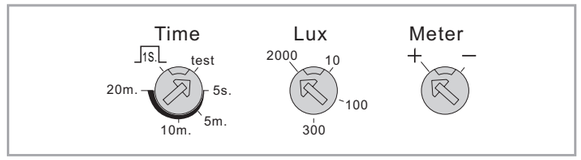


FIG.13-B **(OS-463RA)**

4.1.1 Time knob setting

- **OS-463R:**
  Time 1: Adjustable from 5sec to 20min.
  Time 2: Adjustable from 10sec to 60min.
- **OS-463RA:**
  Time: Adjustable from 5sec to 20min.

4.1.2 LUX knob setting

4.1.2.1 Lux value is adjustable from approx. 10Lux to 2000Lux.
4.1.2.2 Set Lux knob at 10Lux for the minimum Lux value , OS-463R / 463RA can work at dark status only.
4.1.2.3 Set Lux knob at 2000Lux for the maximum Lux value, OS-463R / 463RA can be triggered at any light level.

4.1.3 Meter knob setting

- Set meter knob value at "-" for the smallest "field of view".
- Set meter knob value at "+" for the largest "field of view".
- Set meter knob value at the position between "-" and "+" for "desired field of view".

4.2 Test mode

4.2.1 LED function

There is a red LED built-in as an indicator for easy and convenient test operation (See FIG.14).
Under test mode, the red LED will turn on for 2sec as soon as detector is triggered.

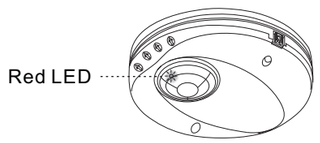


FIG.14

4.2.2 Walk test

The purpose of walk test is to select a proper installation place to get the best detection range. Set meter knob at "+", time1 knob at "test" (refer to step 4.1), then you can conduct a walk test and the detector is uncontrolled by Lux (See FIG.15).

NOTE

When the power is connected the first time or it is re-supplied after shutting off, the detector will enter into 60sec warm up mode. During which, LED and the load can be switched on for 60sec regardless of the time knob of detector is set to any modes, and then off. After warming up is finished, the mode selected will be activated auto-matically.

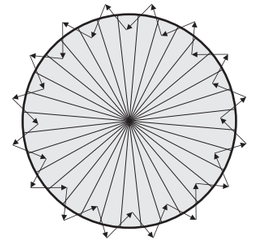


FIG.15

- **Test procedure**

4.2.2.1 Tester must be within the detection coverage.
4.2.2.2 Switch on the power.
4.2.2.3 Walk from outside across to the detection pattern. Red LED will turn on for 2sec once the movement is detected (In others modes except test mode, even if the movement is detected, red LED keeps off.).
4.2.2.4 Adjust meter knob to change coverage.
4.2.2.5 Repeat step 4.2.2.4 to 4.2.2.5 until it meets user's demands.

5 TROUBLE SHOOTING

When OS-463R / 463RA works abnormally, check assumptive problems and suggested solutions in following table that will be hopefully to solve your problem.

Problem	Possible cause	Suggested solution
Lighting device does not turn on	1.Power does not turn on. 2.Incorrect wiring. 3.Improper knob setting. 4.Malfunctioned load.	1.Switch on the power. 2.Refer to wiring diagrams (FIG.4 to FIG.7) and check if the load is malfunc-tioned. 3.Check if knobs are set to the correct position, then supply the power to check if the LED will turn on. 4.Replace the disabled load with a new one.
Lighting device does not turn off	1.Incorrect time setting. 2. Detector is nuisance triggered. 3.Incorrect wiring.	1.To test the delay time specified on either time1or time2 knob and check detector is nuisance triggered if lighting device does not turn off as the delay time is reached. 2.Keep away from detection coverage to avoid activating detector while doing the test. 3.Make sure load and wires are connected correctly.
LED does not turn on	1. Out of the detection range. 2. No power supplied. 3."Time" knob setting isn't on "test". 4. Incorrect wiring.	1.Walk within the effective detection range (Φ7m). 2.Switch on the power. 3.Turn the knob position to "test". 4.Refer to wiring diagrams (FIG4 to FIG.7).
Nuisance triggering	There are heat sources, highly reflective objects or any objects which may be swayed in the wind within the detection coverage.	Avoid aiming the detector toward any heat sources, such as air conditioners, electric fans, heaters or any highly reflective surfaces. Make sure there are no swaying objects within the detection coverage.