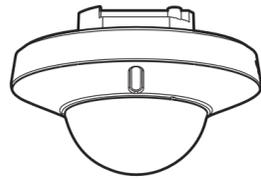


CLIPSAL

by Schneider Electric

PIR Sensor, 360deg, 15m, dual channel, Remote control option

Art. no. 752IR2RC



INSTRUCTION MANUAL

TECHNICAL SPECIFICATIONS

Rated voltage	220 - 240 V~, 50/60Hz	
Load	Load I (L') for Lighting:	μ
	Incandescent Lamp:	Max. 2000W
	HV Halogen Lamp:	Max. 1000W
	LV Halogen Lamp:	Max. 1000VA
	Fluorescent Lamp:	Max. 900VA
LED Lamp:	Max. 100W	
Energy Saving Lamp (CFL):	Max. 100W	
Load II (D1-D2) for HVAC (Lux is invalid):	Relay rating:	Max. 5A (cosφ=1), 250V ~
	Motor load:	Max. 100W
	Auto Off Timer Adjustment	Time 1 (for lighting): Adjustable from approx. 10sec to 30min, Test & √ _{ts} L Time 2 (for HVAC): Adjustable from approx. 10sec to 60min and √ _{ts} L
Lux Adjustment	Adjustable from approx. 10Lux to 2000Lux	
Detection Range	360° circular, up to Φ30m at height of 2.5m	
Environmental Protection	Class II IP40 (Flush mount with flush-mount enclosure) IP52 (Surface mount with surface-mount enclosure)	

Safety Warning

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

It is illegal for persons other than an appropriately licensed electrical contractor or other persons authorised by legislation to work on the fixed wiring of any electrical installation.

• To comply with all safety standards, the product must be used only for the purpose described in this instruction and must be installed in accordance with the wiring rules and regulation in the location where it is installed.

• There are no user serviceable parts inside the product.

Failure to follow these instructions will result in death or serious injury.

1 PACKAGE CONTENTS

Drawing	Item	Quantity
	Sensor	1
	Screw Φ3 x 16mm	2
	Lens mask	3
	Manual	1
	Enclosure, surface-mount	1
	Non-dropping screw Φ3x15mm	4
	Rubber washer	2
	Wood screw Φ4 x 25.4mm	2
	Enclosure, flush-mount, spring clips	1

Accessories for optional purchase

Drawing	Item	Quantity
	IR remote control 752RC/IR	1

2 PRODUCT DESCRIPTION

The sensor is a ceiling mount presence sensor for lighting automation control. User can pre-set the desired Lux and Time values by VR or IR setting for automatic control lighting on / off with low initial cost and great energy saving potential. It can be widely used in home, warehouse, open office, conference room, class-room, library, corridor, etc.

2.1 Features

- Available in various mounting methods, e.g. surface mount and flush mount both applicable, and can be fitted into the junction box.
- Automatic sensitivity adjustment function: The sensitivity of sensor will be raised after the load is switched on to reduce false-off problem, and after the load is switched off, sensitivity returns to the normal condition for standby mode.
- To enlarge the detection range by connecting the slave sensor to master sensor, max. 10pcs slave sensors can be connected.
- Dual loads – One for controlling lighting device and one voltage free contact for controlling the HVAC (heating, ventilation and air conditioning).
- A red LED is equipped as an indicator for test triggering and IR setting.
- IR remote controller for easy and quick settings (Optional purchase).
- The ambient Lux value can be read-in as the threshold for switching on / off the loads by IR if the pre-set Lux value does not match user's requirement.

2.2 Dimension

- **Sensor:** Φ110 x 70mm (See FIG.1-A)

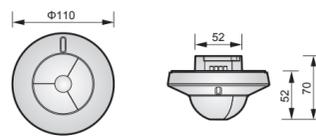


FIG.1-A

- **Sensor with flush-mount enclosure** (See FIG.1-B)

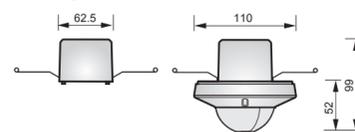


FIG.1-B

- **Sensor with surface-mount enclosure** (See FIG.1-C)

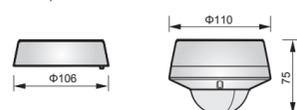


FIG.1-C

3 INSTALLATION AND WIRING

3.1 Select a proper location

3.1.1 The sensor can be installed at the height of 2 - 3m, it's recommended to install it at the height of 2.5m to gain the optimal detection pattern, the detection range can reach up to the diameter of 30m and 360° detection angle (See FIG.2).

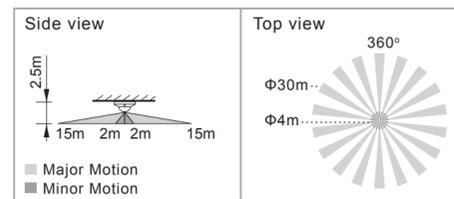


FIG.2

3.1.2 Pay attention to the walking direction in the test proceeding. It is more sensitive to movement across the sensor and less sensitive to movement directly toward to sensor which will reduce the detection coverage (See FIG.3).

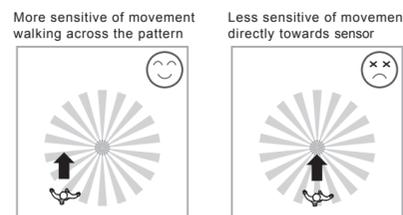


FIG.3

3.1.3 Helpful tips for installation

Since the sensor is in response to temperature change, please avoid the following conditions (See FIG.4-A & FIG.4-B):

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



FIG.4-A



FIG.4-B

3.2 Function

3.2.1 The function of R/S terminal

3.2.1.1 Terminal of R/S and push button (N.O.) can be series connected to control load's on / off manually. (case 1: on → off; case 2: off → on). While pressing push button (≤ 1sec):

Case 1: Manual off switching (Lux settings is invalid): If the lighting is under on mode, it can be manually switched off.

If the lighting is switched off manually by pressing (≤ 1sec) the push button (activate the manual off mode), it keeps off even the sensor is triggered.

If the room is vacant for a longer period (switch off delay time elapsed), the manual off status (= manual off mode) is deactivated, then the sensor backs to the last setting mode before entering into manual off mode.

If the device is in the manual off mode, the second press on the push button activates the manual on mode.

Case 2: Manual on switching (Lux settings is invalid): If the lighting is under off mode, it can be manually switched on.

If the lighting is switched on manually by pressing (≤ 1sec) the push button (activate the manual on mode), it keeps on while the sensor is triggered constantly, and it turns off when no movement detected and the switch off delay time elapsed, and the sensor backs to the last setting mode before entering into manual on mode.

If the device is in the manual on mode, the second press on the push button activates the manual off mode.

3.2.2 ON / OFF delay function

According to the changeable ambient light level, sensor can postpone load's delay time of turning on and off to avoid load's unnecessarily turning on or off due to rapid ambient light change:

Ambient light level changes from bright to dark: If the ambient light level keeps be lower than the preset Lux value for 10sec, the light will be automatically switched on after 10sec. (LED will be on 10sec for indication)

Ambient light level changes from dark to bright: If the ambient light level continuously exceeds the switch off Lux value for 5min, there are different reactions according to the time setting value.

Time setting 5min, the light will be automatically switched off after 5min.

Time setting < 5min, the light will be automatically switched off when the set time reached if no movement is detected during the 5min. But if there is movement detected within the 5min, the time will be reset upon detection and until 5min later, the light is switched off.

3.2.3 Auto sensitivity adjustment function

To raise the sensitivity of sensor after load is switched on can reduce the possibility of false-off problem. When the load is on, the sensitivity of sensor will be raised automatically. When the load is off, the sensitivity of sensor will return to normal standby condition.

3.3 Wiring

⚠ DANGER

HAZARD OF ELECTRIC SHOCK

Dangerous voltage is present at the wiring terminals.

- To avoid injury, lock out and tag the supply circuit before installation.
- A circuit breaker (250 V AC, 10 A) Type C must be installed according to AS/NZ 60898-1.

Failure to follow these instructions will result in death or serious injury.

3.3.1 Normal operation (See FIG.5)

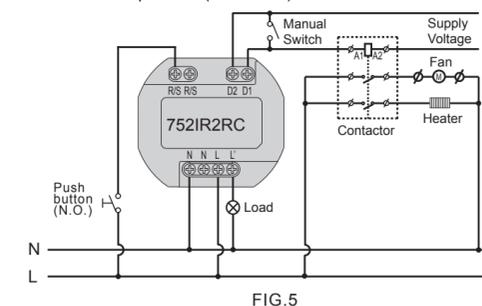


FIG.5

3.3.2 Staircase timer switch controlled by one sensor (Time should be set to √_{ts}L, see FIG.6)

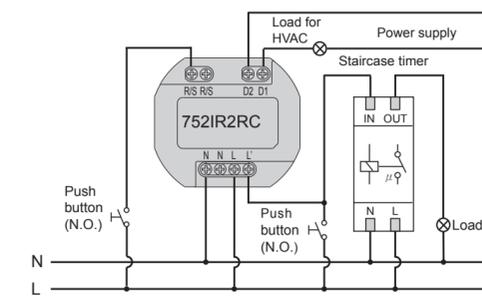


FIG.6

3.4 Installation procedure

3.4.1 Flush mount with junction box

3.4.1.1 Take off decorative frame of the sensor, then take the sensor head apart from power box by unscrew its 4pcs non-dropping screws (See FIG.8).

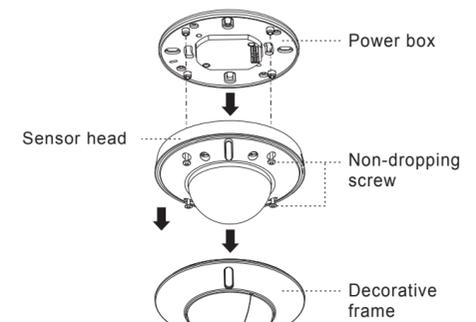


FIG.8

3.4.1.2 Pull out AC power cables from junction box (See FIG.9), then strip off 6 - 8mm of cable sheathing for wiring.

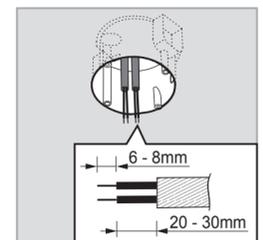


FIG.9

3.4.1.3 Fix the power box into junction box with 2pcs screws (See FIG.10).

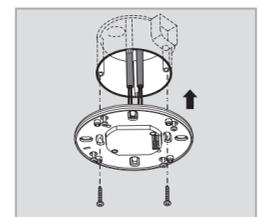


FIG.10

3.4.1.4 Fix the sensor head on power box by inserting its four non-dropping screws into the corresponding screw holes, then cover up the decorative frame (See FIG.9).

3.4.1.5 Restore the power supply.

3.4.2 Flush mount with flush-mount enclosure

3.4.2.1 To install sensor, please drill a hole with diameter of 65mm on ceiling board and keep the power cable outside. Please strip off 6 - 8mm of cable sheathing for wiring (See FIG.11).

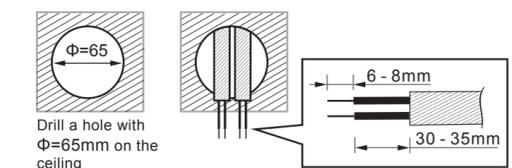


FIG.11

3.4.2.2 Use screwdriver to break the rubber gasket on flush-mount enclosure, then feed cables through it (See FIG.12).

3.4.2.3 Please refer to illustration of FIG.5 - FIG.6 for correct wiring and then screw the flush-mount enclosure tightly.

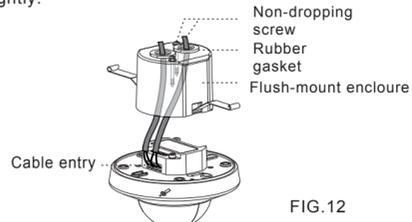


FIG.12

3.4.2.4 Close up sensor's two spring clips and insert sensor into the drilled hole on ceiling (See FIG.13).

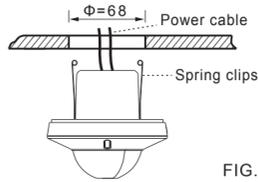


FIG.13

3.4.2.5 Restore the power supply.

3.4.3 Surface mount with enclosure

3.4.3.1 There are 4 pairs of knockouts with various distances from 41mm to 85mm on the bottom cover of combined enclosure can be selected for different mounting applications (See FIG.14-A). Select two same figures on both ends for the corresponding distance for fixing (See FIG.14-B).

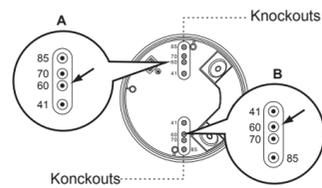


FIG.14-A

NO.	A	B	The distance between A and B
1	41	41	41mm
2	60	60	60mm
3	70	70	70mm
4	85	85	85mm

FIG.14-B

3.4.3.2 To feed AC power cables through the side of enclosure, please use the cutting pliers to break the cable entry knockouts on the side of the enclosure, then insert cables into enclosure and feed through it. Strip off 6 - 8mm of cable sheathing for wiring (See FIG.15).

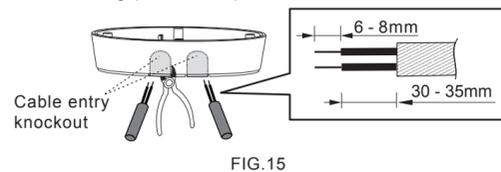


FIG.15

3.4.3.3 Choose proper knockouts to fix the enclosure on the surface of ceiling board with 2pcs wood screws attached with rubber washer (See FIG.16).

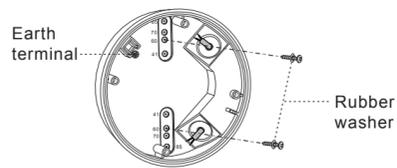


FIG.16

3.4.3.4 Insert 4pcs non-dropping screws to the corresponding screw holes on sensor's fixing plate, and those 4pcs screws will not drop off to provide convenience to the subsequent installations (See FIG.17).

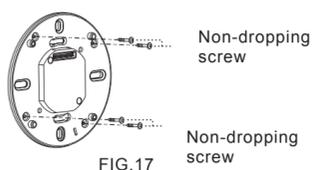


FIG.17

3.4.3.5 Refer to wiring diagrams for correct wiring connection (See FIG.5 - FIG.6). There is a square hole in the fixing plate, when you put the fixing plate into the enclosure, please fit the filler into the enclosure's protrusion (See FIG.18), then fix the sensor head on the power box following FIG.8 and assemble them with the attached 4pcs non-dropping screws.

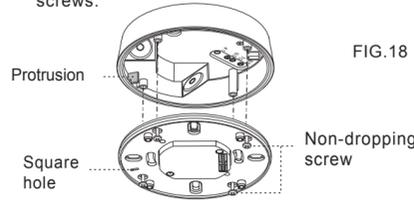


FIG.18

3.4.3.6 Cover up the sensor's decorative frame and restore the power supply.

4 OPERATION AND FUNCTION

4.1 Lux, Time knobs

Knob	Function	Knob setting
	Set the light value for switching on load	Range: Approx. 10 to 2000Lux User can set the knob according to their requirement for application. The marked values are for reference only.
	Set delay off time for lighting	Range: Approx. 10sec to 30min Test: Test mode (Load and red LED will be 2sec on, 2sec off) 1sL: Short impulse mode for staircase timer switch control (Load will be 1sec on, 9sec off)
	Set delay off time for HVAC	Range: Approx. 10sec to 60min (Reaction is regardless of Lux value) 1sL: Short impulse mode for staircase timer switch control (Load will be 5sec on, 5sec off)

4.2 Usage of lens mask

4.2.1 The sensor has supplied 3pcs lens masks to allow elimination of coverage in unwanted areas. Each lens shield has 3 layers, each layer includes 4 small units and each small unit can cover 30° detection area. For example, to install the sensor at the height of 2.5m, the detection range can reach up to 1m diameter if the complete lens masks has been used, and up to 6m diameter if layer C has been cut, as well, up to 12m diameter if layer B also has been cut, the detection range can reach up to 30m diameter when no lens shield is used.

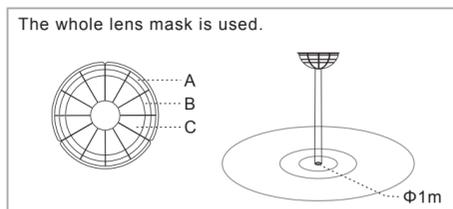


FIG.19-A

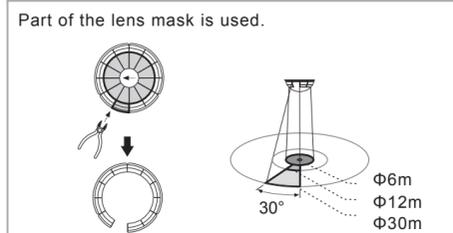
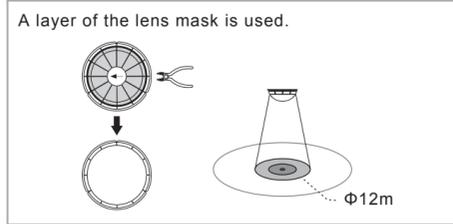
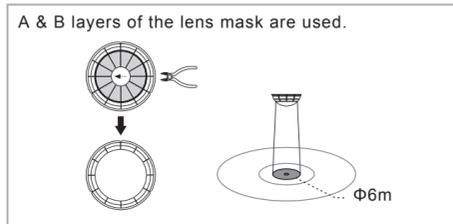


FIG.19-B

● The shadow part of the lens mask in the FIG.19-A & FIG.19-B is needed to be cut off.

4.2.2 Fixing lens mask: There is circular hook on the back of the decorative frame and the lens mask is designed with a circular groove. The lens shield can be fitted by joining the groove of lens mask with its corresponding hook on the decorative frame (See FIG.20-A & FIG.20-B).

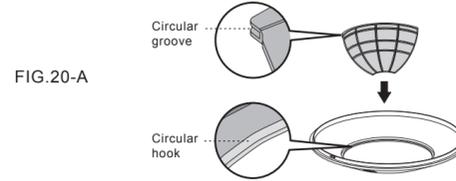


FIG.20-A

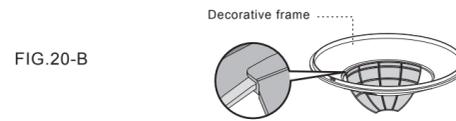


FIG.20-B

4.3 Walk test

The purpose of conducting the walk test is to check and adjust the detection coverage. Set Time knob to "Test", then conducting a walk test and Lux is disabled.

HINT

It takes approx. 60sec for sensor to warm up after power is supplied, then enters into normal operation to carry out a walk test.

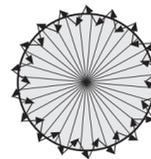


FIG.21

Test procedure

- 4.3.1 Tester must be within the detection coverage.
- 4.3.2 Switch power on.
- 4.3.3 The sensor takes approx. 60sec to warm up with load and LED on, then turns off after warming up time.
- 4.3.4 Walk from outside across to the detection pattern until LED turns on for approx. 2sec then off, the next trigger should be 2sec interval (See FIG.21).
- 4.3.5 Adjusting lens mask for desired detection range.

4.3.6 Repeat step 4.3.4 and 4.3.5 until it meets user's demands.

5 TROUBLE SHOOTING

When the sensor works abnormally, please check assumptive problems and suggested solutions in following table that will hopefully to solve your problem.

Problem	Possible cause	Suggested solution
Lighting device does not turn on	1. Power does not turn on. 2. Wired incorrectly. 3. Lux knob adjusted incorrectly. 4. Malfunctioned load.	1. Switch on the power. 2. Refer to wiring diagrams for correct connection. 3. Check if Lux knob are set to the correct position. 4. Replace the disabled load with a new one.
Lighting device does not turn off	1. Auto off time is set too long. 2. Sensor is nuisance triggered. 3. Wired incorrectly.	1. Set auto off time to a shorter time and check the load is switched off or not according to the pre-set off time. 2. Keep away from detection coverage to avoid activating sensor while doing the test. 3. Make sure load and wires are connected correctly.
LED does not turn on	1. Time knob is not set to Test. 2. Exceeding the detection range.	1. Time knob must be located to Test position. 2. Walk in the effective detection range of 30m diameter.
Nuisance triggered	There are heat sources, highly reflective objects or any objects which may be swayed in the wind within the detection coverage.	Avoid aiming the sensor towards any heat sources, such as air conditionings, electric fans, heaters or any highly reflective surfaces. Make sure there are no swaying objects within the detection coverage.

6 OPTIONAL ACCESSORY

6.1 It is strongly recommended to purchase our high quality IR remote controller 752RC/IR for easy and safe setting operations on sensor, and to own the "Lux learning" function to read-in the actual light level as threshold for switching the connected load.

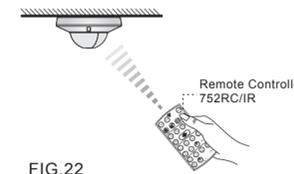


FIG.22

7 WARRANTY

Schneider Electric (Australia) Pty Ltd, (Clipsal by Schneider Electric), warrants this product to be free from defects in materials and workmanship for a period of three years from the date of installation. The benefits conferred herein are in addition to any other rights and remedies you may have at law in respect to this product. Australian and New Zealand customers please see the notes below.

Australia: Australian Consumer Law specifies that our goods come with guarantees that cannot be excluded. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

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