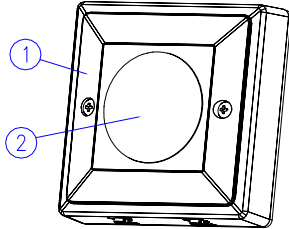


# HC22-1

## SURFACE MOUNT CEILING SENSOR



- ① Main Body
- ② Lens

### INTRODUCTION

Your 360 degrees Surface Mount Ceiling Sensor is a fully automatic indoor controller capable of controlling up to 2000W incandescent or 1500W fluorescent lightings. It uses a passive infrared sensor which reacts to changes in temperature emitted by the micro motion of persons or objects passing through its detecting area. When you enter the room, it turns on automatically the light to which it is connected and the light remains lit as long as the ceiling sensor senses any activity in the room. It however will automatically turn off the light after the preset turn-off time is expired.

With this sensor installed, you get rid of the nuisance of fumbling in a dark hallway or staircase for a light switch, thus avoiding danger for the elderly, infirm and children at night or when it is dark.

**Note :** Read this entire manual before you start to install the system.

### SAFETY PRECAUTIONS

- DO NOT install it when it is raining.
- DO isolate the power supply during installation or maintenance.
- DO ensure that the power supply circuit is protected by a 16 amp circuit breaker or suitable equivalent fuse.

### IMPORTANT

Installation must be performed by skilled technicians who are informed about the standards and technical requirements of the appliance and its proper installation.

Do not attempt installation unless you have some experience with household wiring.

Before proceeding with the installation, **TURN OFF THE POWER TO THE LIGHTING CIRCUIT AT THE CIRCUIT BREAKER OR FUSE BOX TO AVOID ELECTRICAL SHOCK.**

### CHOOSING A MOUNTING LOCATION

- Avoid aiming the motion sensor at pools, heating vents, air conditioners or objects which may change temperature rapidly.
- Do not allow sunlight to fall directly on the front of unit.
- The motion sensor is more sensitive to objects moving across its field of view. It is less sensitive to an object moving directly towards the sensor head. (FIGURE 1)

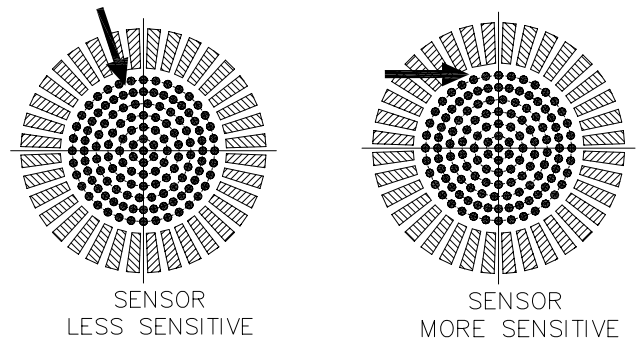


FIGURE 1

### INSTALLATION

The unit has a sensing angle of 360° and can detect up to 3 meters radius for micro motion and up to 5 meters radius for walk toward motion at the mounting height of 2.5 meters. (FIGURE 2)

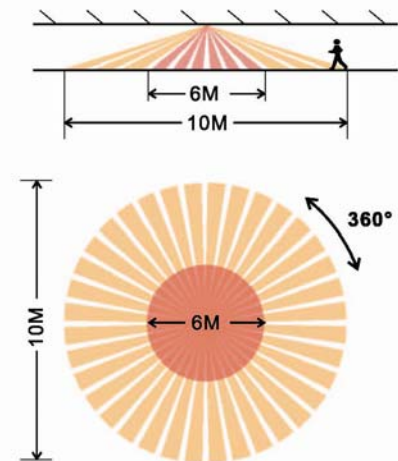


FIGURE 2

Install a wall switch adjacent to the power source (FIGURE 3). This helps you operate the light with ease. See OPERATION for further information.

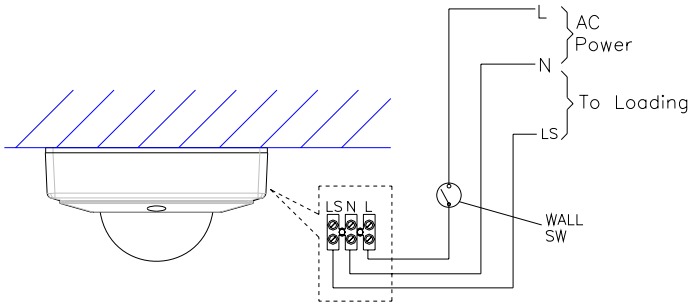


FIGURE 3

**Warning:**

The terminal block must be recessed inside a junction box with insulating material and the 6mm reinforced insulation distance must be kept after installation.

**WIRING INSTRUCTION**

- (1) Switch off the power source or wall switch.
- (2) Strip approximately 6-8mm insulating part of the wires from the power cord.
- (3) Connect the BROWN wire (Live wire) of power cord to the terminal block "L" mark.

Connect the BLUE wire (Neutral wire) of power cord to the terminal block "N" mark.

Connect the RED wire of lamp wire to the terminal block "LS" mark. (FIGURE 4)

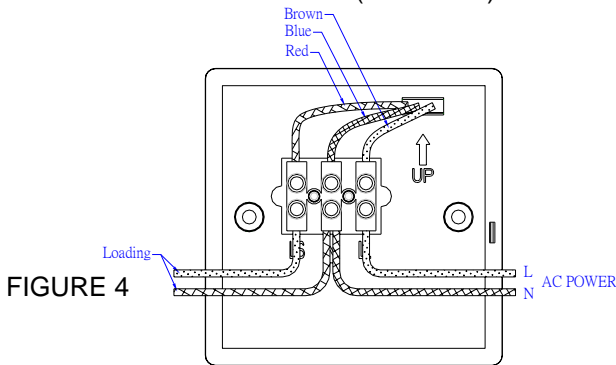


FIGURE 4

- (4) Fit the main body to the wall box of the ceiling and secure it with two fixing screws provided. (FIGURE 5)

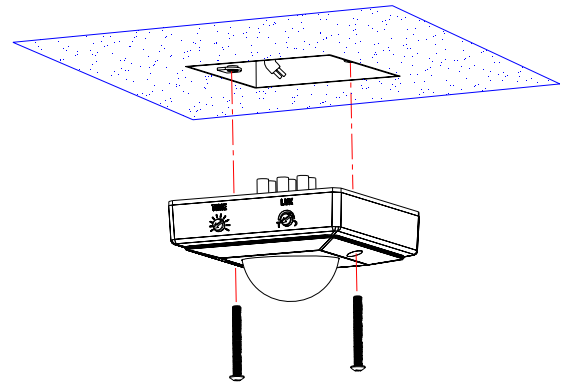


FIGURE 5

**SETTING THE LIGHTING SYSTEM**

**(1) TEST MODE**

- Turn the Lux control and the Time control counter-clockwise to the edge-the TEST position. (FIGURE 6)

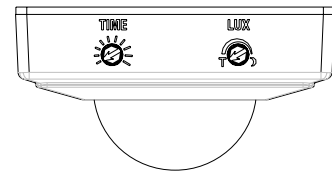


FIGURE 6

- Turn the wall switch on, the light will turn on immediately and wait for about 1 minute to warm up the unit. After warm-up time is expired and the light goes off, you may make a walk test and the light will turn on. This confirms that the wiring was done properly and that the light is working.
- Walk through the coverage area. The light will turn on for about 5 seconds when motion is detected and turn off shortly after motion stops. Wait for the light to turn off before moving again to test the sensor.

**(2) SETTINGS**

**■ TIME ADJUSTMENT**

The TIME adjustment controls how long the light will stay on after motion has been detected.

Adjust the TIME Control Knob clockwise to increase the turn-off time (40 minutes maximum) or counter-clockwise to decrease the turn-off time (5 seconds minimum). There are ten scales for time adjustment (from MIN to MAX) -- 5, 10, 20, 40, 80, 160 second and 5, 10, 20, 40 minute. (FIGURE 7)

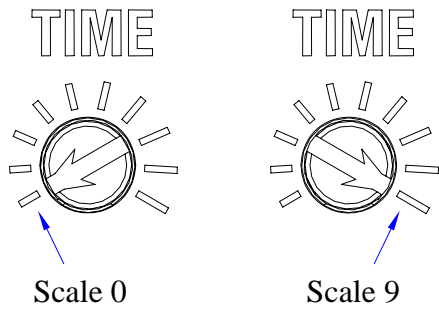


FIGURE 7

Scale	Time Interval	Scale	Time Interval
0	5 second	5	160 second
1	10 second	6	5 minute
2	20 second	7	10 minute
3	40 second	8	20 minute
4	80 second	9	40 minute

### ■ LUX ADJUSTMENT

The LUX adjustment determines at what light level the light will start operating when you set the sensor to the AUTO mode.

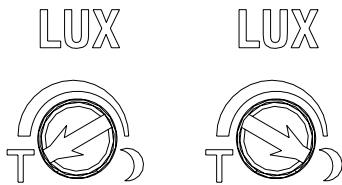


FIGURE 8

Provisionally turn the LUX Control Knob to the edge clockwise at the moon (dusk) position. (FIGURE 8) In this provisional setting mode, the Motion Sensor remains inactive during daylight. At dusk when you find it is the LUX level you desired for operation, simply set the LUX control knob to the position that you tried satisfactorily.

## OPERATION

### ■ Automatic Operation

When the sensor detects motion, the light automatically turns on. The built-in photocell turns the sensor off and on according to the light level selected by the LUX adjustment.

## TROUBLESHOOTING

Light does not turn on

- Confirm that you have made a correct "wiring connection".
- Make sure that the bulbs have not burned out.

Light remains on

- Make sure the wiring connection is correct.
- Check if the TIME setting is correct.

Others

- The specification of protective shield shall consult to local service agent.

## SPECIFICATIONS

Power Requirement	AC 220~240V / 50Hz
Lighting Load	See below setup criteria
Detection Angle	Up to 360° at 25°C at 2.5m mounting height
Detection Distance	Micro motion: up to 3m radius Walk toward motion: up to 5m radius
Mounting Height	Recommended 2.5 ~ 5m (8.2 ~ 16.4 Ft) Ceiling Mount
Time Adjustment	5 sec. ~ 40 min. (5, 10, 20, 40, 80, 160 second and 5, 10, 20, 40 minute)
Lux Adjustment	Approx. 30 ~ 200 Lux / test mode
Warm Up Time	About 1 min
Protection Class	Class II
Protection Degree	IP44
Safety	CE
Smart relay patent number	M399426 / 202010012599.5 / CN201780930U

\*Specifications are subject to change without notice.

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### Warning:

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

When replacing old appliances with new once, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.

## SETUP CRITERIA

Bulb Type	Maximum Lighting Load
<b>Incandescent</b>	8 q'ty parallel connection 2000W/8.3A (@240VAC)
<b>Halogen</b>	8 q'ty parallel connection 2000W/8.3A (@240VAC)
<b>Fluorescent T8</b>	1500W/6.3A (@240VAC)
<b>LED</b>	8 q'ty parallel connection 300W/1.25A (@240VAC)
Setup Condition	Number of fittings
<b>Fluorescent T5</b>	12x(14Wx1)
Loading=AxBxC)	12x(14Wx2)
Max. 1200W	12x(14Wx3)
	12x(14Wx4)
	10x(21Wx1)
A=Ballast Q'ty	10x(21Wx2)
B=Watt	10x(24Wx1)
C=Lamp Q'ty	10x(24Wx2)
	10x(28Wx1)
	10x(28Wx2)
<b>CFL &amp; PL</b>	5Wx12
Loading=AxB	9Wx12
Max. 1200W	11Wx12
	13Wx12
	19Wx12
A=Watt	20Wx12
B=Lamp Q'ty	23Wx12
	24Wx12
	26Wx12
	27Wx12
	32Wx12
	36Wx12
	38Wx12
	42Wx10
	50Wx10
	55Wx10
	80Wx10