Technical parameter

Microwave motion sensor

Operating voltage	12V
Microwave frequency	5.8GHz
Transmitting power	<1mW
Mounting height	12m Max.
Detection radius	4m
Detection speed	0.5~1.5m/s

```
  10 8  6  4  2  0  2  4  6  8  10 (m)
 2
 4
 6        Detection range
 8        Coverage Side View
10
12
14
16
(m)
```
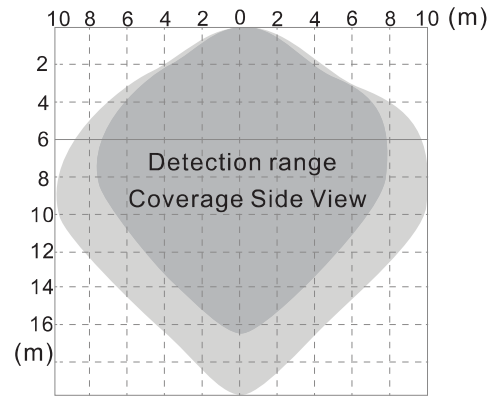
PIR motion sensor

Operating voltage	12V
Mounting height	Max 12m
Detection radius	4m
Detection speed	0.5~1.5m/s

```
        Detection range
10m
3m
0m
    4m   2m   0m   2m   4m
```
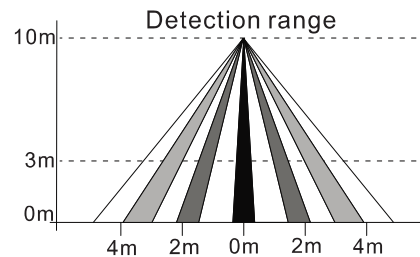
Difference description

It's commonly known Microwave and Infrared are main detecting technologies in lighting controls. Both have the advantage and disadvantage for industrial applications.

Advantage

* sensitive to minor motion.
* sensitive to radial movement.
* can be reflected by objects hence covering big detection area
* resilient to heat source, smoke and and air conditioner.

Disadvantage

* penetrates walls, picks up motions outside of the office area;
* back wave detection, false trigger by motions at the back.
* can be false triggered by ventilation fans, water pipe, elevators etc. in industrial application.

Advantage

* no penetration, confined detection area.
* sensitive to tangential movement.
* resilient to motion object which has no heat radiation.

Disadvantage

* can be false triggered by air conditioner, smoke and other heat sources.

Microwave Motion Sensor

PIR Motion Sensor

Sensor Remote Programmer

Sensor Remote Programmer

## SPECIFICATIONS

Power supply	2 x AAA 1.5V battery, Alkaline preferred
Carrying case	RC-100 in carrying case
Communication	940 nm Infrared Tx & Rx
Upload range	Up to 15 m (50 ft.)
Op. temperature	0°C~50°C (32°F~122°F)
Dimensions	123 x 70 x 20.3 mm (4. 84″ x 2.76″ x 0. 8″)

OVERVIEW

The "RC100" Wireless IR Configuration Tool is a handheld tool for remote configuration of IR-enabled fixture integrated sensors. The tool enables device to modify via pushbutton without ladders or tools, and stores up to four sensor parameter modes to speed configuration of multiple sensors.

The "RC100" uses bidirectional IR communication to send and receive sensor settings at mounting height up to 50 feet. The device can display previously established sensor parameters, copy parameters and send new parameters or store parameter profiles. For projects where identical settings may be desired across a large number of areas or spaces, this capability provides a streamlined method of configuration. Settings can be copied throughout a site, or in different sites.
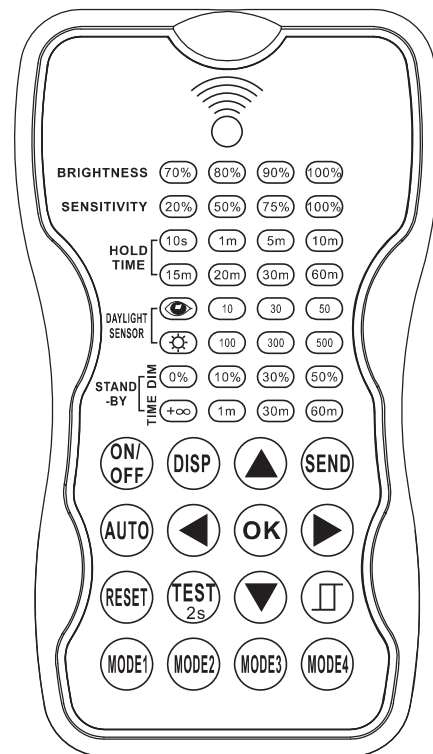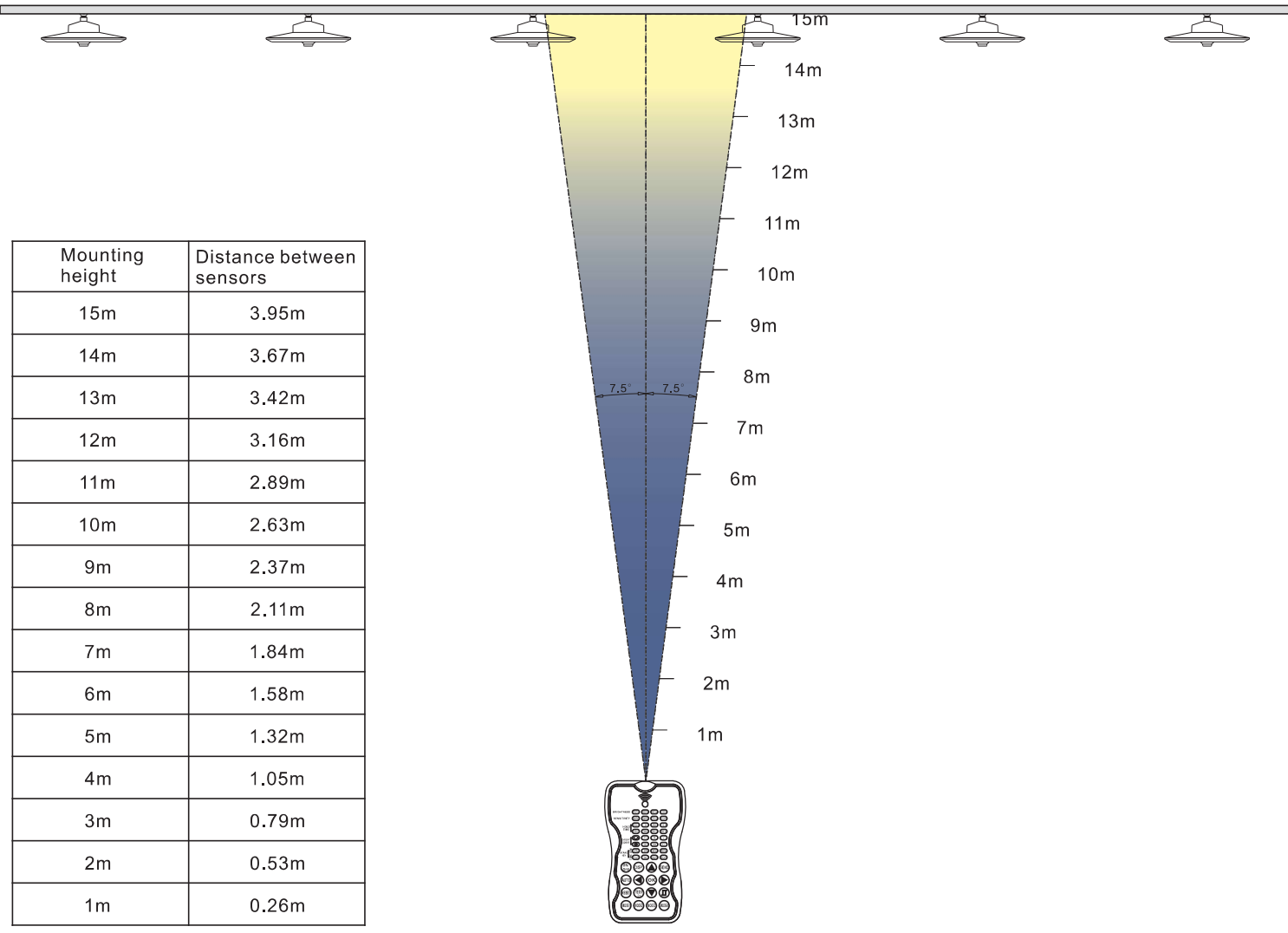
As the control angle of the Infrared Remote Controller is fixed (15°),
If the distance between sensors is too close, the sensors in the signal range will be set at the same time Please refer to the below chart for the distance of the installation of the sensor. There may have slight deviations between dimension in the diagram and the real one!
Infrared remote control can not only transmit in a straight line, but also be reflected by objects., Different environments have different effects,
The following is only for reference.

Mounting height	Distance between sensors
15m	3.95m
14m	3.67m
13m	3.42m
12m	3.16m
11m	2.89m
10m	2.63m
9m	2.37m
8m	2.11m
7m	1.84m
6m	1.58m
5m	1.32m
4m	1.05m
3m	0.79m
2m	0.53m
1m	0.26m

KEY DESCRIPTIONS

KEY	FUNCTION	KEY	FUNCTION
ON/OFF	Press the on/off button, the light goes to permanent on or permanent off mode,the sensor is locked ,MUST Press"AUTO " to quit from this mode.	AUTO	Press "Auto"button,the sensors starts to work automatically and all parameters remains the same as the latest status in auto mode.
DISP	Display current parameters	TEST 2s	The button "Test" is for testing purpose sensitivity only. the sensor goes to test mode (hold time is only 2s) automatically after commissioning, meanwhile the stand-by period and daylight sensor are disabled. Press "AUTO " to quit from this mode.
SEND	upload the selected parameters to sensors		
▲ ▼	Enter in the setting condition and navigate to UP and Down	⎍	When the light level exceeds this setting, the lights will turn off even when the space is occupied. Once the light level exceeds this setting, the sensor will wait and monitor for 1 mins in order to confirm the light level increase is not temporary before forcing the lights to go off. When light level goes below the settings, the light will turn on even without motion detection after 1min. This feature is disabled by default. if want to open this setting, just press ⎍ ,choose daylight sensor setpoint on/off .
◄ ►	Navigate to Right and Left		
OK	Confirm selected parameters and saving		
RESET	Default settings: 100% 100% 5m ☀ 30% 60m	MODE1 MODE2 MODE3 MODE4	Four modes with existing parameters which are avaiable to be updated and saved in Modes
BRIGHTNESS	Adjust the light brightness during hold time.	DAYLIGHT SENSOR	Select 👁 /10LUX/30LUX/50LUX/ ☼ threshold for sensor to turn light fixture ON. Select 👁 , current surrounding lux value as daylight lux threhold,select ☼ , the built-in daylight sensor stops working, and all motions detected could turn the light fixture on,no matter how bright the natural light is.
SENSITIVITY	Adjust sensor sensitivity		
HOLD TIME	The time of light fixture remains at programmed 70%/80%100% level after motion is not detected		
STAND-BY TIME	Select stand-by period at 1min/30min / 60min/+∞ ; Note:"+∞″ means bi-level dimming control, fixture never switches off.	STAND-BY DIM	Select the stand-by dimming level at 0%/ 10%/30%/ 50%; Note: "0%" means on/off control;

NOTE:

The "RC100" is a universal remote programmer with ALL available settings and parameters for remote sensors. Some settings and parameters may not be available on specific type of sensor under certain control mode. Please refer to the installation instruction of the sensor for the available settings and control options.

COMMAND BUTTONS

THE COMMDND BUTTONS provides a quick selection of the following operations by pressing respective buttons.

- To turn on/off light manually,press "ON/OFF" button,the sensor is locked ,MUST Press"AUTO " to quit from this mode.
- To test sensitivity only. Press "TEST" button,the sensor goes to test mode (hold time is only 2s) automatically after commissioning, meanwhile the stand-by period and daylight sensor are disabled. Press "AUTO " to quit from this mode.

- To send the current parameters to sensor ,aim to the sensor ,and press SEND button.

  NOTE: any commond button is pressed to sensor, the light will on one time and off as confrim.

SETTING

The SETTING Content contains all available settings and parameters for "RC-100" remote sensors. It allows you to change the available control, parameters, and operation of the sensor from factory default or current parameters.

NOTE:the setting works only in Auto mode.

Change multiple settings of sensor(s)

1.Press DISP button(if you push ON/OFF button before you push DISP button, the sensor is locked, so please push "AUTO" button to unlock the sensor ,and then push DISP button), the controler leds will show the latest parameters.

2.press (▲) or (▼) enter in the setting condition, navigate to the desired setting by pressing (▲)(▼)(◀)(▶) to select the new parameters.

3.press ok to confirm all setting and saving.

4.aim at the target sensor and press SEND to upload the new parameter. light will be one time and off , as confirm.

NOTE: 1.If you press DISP button, the remote control leds will show the latest parameters which were sent.

2.If you want to learn current surrounding lux value as daylight lux threhold, please choose (◉) when you select daylight sensor lux threshould.

Change multiple settings of sensor(s)(with daylight sensor on/off setpoint)

1.Press "DISP" , the remote control leds will show the latest parameters.

2.Press (▲)(▼)(◀)(▶) to Select the new parameter.

3.press (Ⅱ) ,daylight sensor off setpoint led in remote control will flash ,select daylight sensor setpoint for turn light off,and select daylight sensor setpoint for turn the light on .

4.press ok to confirm all setting and saving.

5.aim at the target sensor and press "SEND" to upload the new parameter.light will be one time and off , as confirm.

NOTE: (Ⅱ) is disabled by default.

1.Open or close daylight sensor on/off setpoint, it only works when remote control in the setting condition, you just push (Ⅱ) , daylight sensor setpoint on/off setpoint will be close or open.

2-1.when daylight sensor works, the setpoint on lux must be 10lux,30lux,50lux,not (◉) , the light turn on when natural light lower than 10lux,30lux,50lux even without motion detection after 1min.

2-2:when daylight sensor works, the setpoint off lux must be 100lux,300lux,500lux,not (☼) , the light turn off when natural light exceeds than 100lux,300lux,500lux even with motion detection after 1min.

2-3: when daylight sensor works,the stand-by time is only (+∞) .

3.(Ⅱ) is normal for outdoor using,not for indoor .

About RESET and MODE(1,2,3,4)

The "RC-100" comes with four MODES which are not default.You may make desired parameters and save as a new MODE(1,2,3,4)to configure the installed sensors.

RESET:

MODE	BRIGHTNESS	SENSITIVITY	HOLD TIME	DAYLIGHT SENSOR	STAND-BY DIM	STAND-BY TIME
MODE1	(100%)	(75%)	(5min)	☼	(30%)	(30min)
MODE 2	(100%)	(75%)	(1min)	☼	(30%)	(+∞)
MODE 3	(100%)	(75%)	(5min)	30Lux	(30%)	(30min)
MODE 4	(100%)	(75%)	(1min)	30Lux 300Lux	(30%)	(+∞)

Make a new Mode：

1.press (MODE1) / (MODE2) / (MODE3) / (MODE4) button,the remote control leds show existing parameters.

2.press (▲)(▼)(◄)(►) to select the new parameters.

3.if want to open/close daylight sensor lux setpoint on/off , press (⌠) ,select right lux setpoint.

4.Press "OK" to confirm all parameters and saving in the mode.

NOTE: if do not know existing parameters in (MODE1)/ (MODE2)/ (MODE3) / (MODE4) , repeat Step 1.

UPLOAD

The upload function allows you to configure the sensor with all parameters in one operation. You may select CURRENT SETTING parameters or the MODE for uploading. Current setting parameters or the MODE are displayed in "RC-100" Remote control .

Upload the current parameters to sensor(s),and duplicate the sensor parameters form one to anther

1.Press Display button OR press (MODE1)/ (MODE2)/ (MODE3)/ (MODE4), all parameters are displayed in "RC100" Remote control.

Note: check if all parameters are correct , if not, change them.

2.Aim at the sensor and press "SEND" button , the light will be one time on and off , as confirm.

Note: if other sensors need same parameters, just aim at the sensor and press "SEND" button.