Radio Powr Savr™

Installation Instructions *Please Read Before Installing*

English

Wireless Battery-Powered Occupancy Sensor

LRF4-OCRB-P 3 V⎓ 14 µA 868 MHz

Compatible Products

For a full list of compatible products visit www.lutron.com/globalenergysolutions

Product Description

Lutron's ceiling-mounted Occupancy and Vacancy Sensors are wireless, battery-powered, passive infrared (PIR) devices that automatically control lights via RF communication with a dimming or switching device. These Sensors detect the heat from people moving within an area to determine when the space is occupied. The Sensors then transmit the appropriate commands to the associated dimming or switching device to turn the lights on or off automatically, providing both convenience and exceptional energy savings.

- **Easy-to-follow Instructions**

P/N 041-274b

Important Notes

1. This Sensor is part of a system and cannot be used to control a load without a compatible dimming or switching device. Refer to the instruction sheets of the receiving device(s) for installation information.
2. ***Clean Sensor with a soft damp cloth only.*** **DO NOT** use any chemical cleaners.
3. The Sensor is intended for indoor use only. Operate between 0 °C and 40 °C (32 °F and 104 °F).
4. **DO NOT** paint Sensor.
5. Use only high-quality lithium batteries, size CR123, 3 V⎓ (ANSI-5018LC, IEC-CR17345). DO NOT use rechargeable batteries. Using improperly rated batteries could damage the Sensor.

   NOTICE: DO NOT disassemble, crush, puncture, or incinerate batteries. DO NOT dispose of batteries in normal household waste. Please recycle, take to a proper battery disposal facility, or contact your local waste disposal provider regarding local restrictions on the disposal or recycling of batteries.
6. The range and performance of the RF system is highly dependent on a variety of complex factors such as:
   - Distance between system components
   - Geometry of the building structure
   - Construction of walls separating system components
   - Electrical equipment located near system components

WARNING: Risk of entrapment. To avoid the risk of entrapment, this product must not be used to control equipment which could create hazardous situations, such as entrapment, if operated accidentally. Examples of equipment which must not be controlled with this product include (but are not limited to) motorized gates, garage doors, industrial doors, etc. It is the installer's responsibility to ensure that the equipment being controlled is visible from every control location and that only suitable equipment is connected to these controls. Failure to do so could result in serious injury or death.

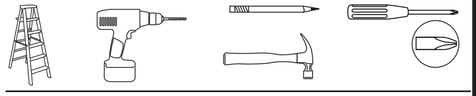
Key Features

- **Low Maintenance**. 10-year battery life. Convenient low-battery indicator.
- **Multiple Devices.** Up to 3 Sensors can work together to control lights for broader coverage in large spaces. Each Sensor may be added to a maximum of 10 receiving devices.

Sensor Operation

The Sensor will automatically turn lights on when a space is occupied and automatically turn lights off after a space is vacated. The lights can also be manually turned off at any time by using the dimming or switching device directly.

Tools You May Need



Installation

The Sensor installation procedure is outlined below. Please follow these steps to ensure the Sensor will perform as intended:

A. Pre-Installation
B. Set-Up
C. Sensor Placement and Coverage
D. Temporary Mounting Methods
E. Testing Sensor Coverage
F. Testing Wireless Communication
G. Permanent Mounting Methods
H. Advanced Set-Up (Optional)
I. Lens Masking (Optional)

Technical Assistance

For questions concerning the installation or operation of this product, call the ***Lutron Technical Support Center.*** Please provide exact model number when calling.

China - Beijing **10.800.712.1536**
China - Shanghai **10.800.120.1536**
Singapore **800.120.4491**
Other countries 8am – 8pm EST
+1.610.282.3800
www.lutron.com

Limited Warranty

Lutron EA Ltd. ("Lutron EA") warrants each unit to be free from defects in material and workmanship and to perform under normal use and service. To the extent permitted by law, Lutron EA and Lutron Electronics Co. Inc. ("Lutron") make no warranties or representations as to the units except as set forth herein. This warranty shall run for a period of two years from the date of purchase and Lutron's obligations under this warranty are limited to remedying any defect, replacing any defective part or replacement (at Lutron EA's sole option) and shall be effective only if the defective unit is shipped to Lutron EA postage prepaid within 24 months after purchase of the unit. Repair or replacement of the unit does not affect the expiry date of the warranty. This warranty does not cover damage or deficiencies due to abuse, misuse, inadequate wiring or insulation or use or installation other than in accordance with instructions accompanying the unit. To the extent permitted by law, neither Lutron EA nor Lutron shall be liable for any other loss or damage including consequential or special loss or damages, loss of profits, loss of income, or loss of contracts arising out of or relating to the supply of the unit or the use of the unit and the purchaser assumes and will hold harmless Lutron EA and Lutron in respect of all such loss or damage. Nothing in this warranty shall have the effect of limiting or excluding Lutron EA's or Lutron's liability for fraud or for death or personal injury resulting from its own negligence, or any other liability, if and to the extent that the same may not be limited or excluded as a matter of law. This warranty does not affect the statutory rights of consumer purchasers of this product. Although every attempt is made to ensure that catalogue information is accurate and up-to-date, please check with Lutron EA before specifying or purchasing this equipment to confirm availability, exact specifications, and suitability for your application.

LUTRON®

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Coopersburg, PA 18036-1299, U.S.A.
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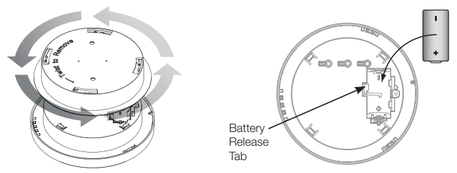
Instructions

Install a Sensor in as little as 15 minutes

A Pre-Installation

1 Before setting up the Sensor, the corresponding dimming or switching device(s) should be installed. Refer to that product's installation sheet for instructions.

2 Twist and remove mounting bracket to insert battery.



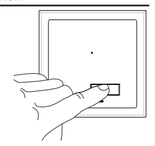
B Set-Up

In order for the Sensor to operate properly, it must first be set up with a corresponding dimming or switching device. The procedure for setting up a Sensor with a Rania® Wireless RF Switch is detailed below.

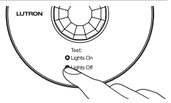
If setting up a Sensor with a different device, visit www.lutron.com/occsensors or consult the installation guide for that device for the correct set-up procedure.

Setting up a Sensor with a Rania® Wireless RF Switch

1 While the Rania Wireless RF Switch is off, press and hold the On/Off Button for approximately 6 seconds. Once the LED starts to blink slowly, release the button.



2 Add the Sensor to the Switch by pressing and holding the "Lights Off" button on the front of the Sensor for approximately 6 seconds until the lens flashes briefly. The lights in the room will also flash 3 times, indicating the Sensor has been successfully added. The Switch will exit set-up mode automatically.



3 The "Lights On" and "Lights Off" buttons should now switch the lights in the room on and off, respectively, when pressed.
Repeat the above procedure to set up the Sensor with any additional devices.

C Sensor Placement and Coverage

Before mounting the Sensor, please note the following:

- The Sensor is designed for ceiling use only. **DO NOT** install on ceilings higher than 3,7 m (12 ft) or non-ceiling surfaces. Doing so may significantly inhibit the Sensor's performance.
- The Sensor should be installed in a location where it has a good view of all parts of the room. The Sensor requires line of sight to operate properly. **If you cannot see the Sensor, it cannot see you.** The Sensor cannot see through glass objects such as patio or shower doors.
- **DO NOT** mount the Sensor within 1,2 m (4 ft) of HVAC vents, within15 cm (6 in) of other RF devices, or within 1,2 m (4 ft) of light bulbs installed below the ceiling line.
- The Sensor may be installed up to 18,3 m (60 ft) away from the associated dimming or switching device(s) if they are in direct line of sight. If there are walls or other barriers between the Sensor and receiving device(s), the Sensor should be located within 9,1 m (30 ft).
- Whenever possible, avoid placing the Sensor in a location where it has a broad view outside the intended space. If this is unavoidable, the lens can be masked to block the view of undesired areas (refer to section ***I. Lens Masking***).
- The Sensor's detection range is dependent on the ceiling height, as shown in the table below.

Coverage Chart (for sensor mounted in center of room)

Ceiling Height	Max. Room Dimensions for Complete Coverage	Radius of Coverage at Floor
2,4 m (8 ft)	5,5 x 5,5 m (18 x 18 ft)	4,0 m (13 ft)
2,7 m (9 ft)	6,1 x 6,1 m (20 x 20 ft)	4,4 m (14,5 ft)
3,0 m (10 ft)	6,7 x 6,7 m (22 x 22 ft)	4,9 m (16 ft)
3,7 m (12 ft)	7,9 x 7,9 m (26 x 26 ft)	5,8 m (19 ft)

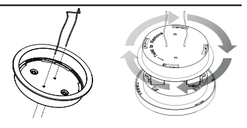
D Temporary Mounting Methods

If you are uncertain about correctly positioning the Sensor, the following temporary mounting and testing procedures are recommended to verify proper performance before permanently installing the Sensor.

1 Temporary Mounting: Drop Ceiling

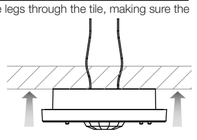
Use this procedure if the Sensor will be mounted on a ceiling tile.
The ceiling tile mounting wire is provided for both temporary and permanent mounting of the Sensor to drop ceilings composed of multiple tiles. It is designed to allow temporary mounting, testing, and repositioning (if necessary) of the Sensor without damaging a ceiling tile. Once the Sensor's final position has been chosen, the mounting wire can be twisted to lock the Sensor in place permanently.

1.1 Insert the ceiling tile mounting wire through the two smaller holes in the mounting bracket and replace the mounting bracket.



1.2 Mount Sensor to a ceiling tile by inserting the wire legs through the tile, making sure the Sensor is flush to the tile.

Note: Do not twist wire legs together.



1.3 Perform the Sensor coverage and wireless communication tests as described in sections ***E. Testing Sensor Coverage*** and ***F. Testing Wireless Communication***.

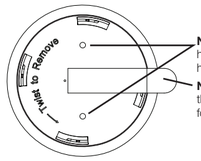
1.4 If the Sensor does not perform satisfactorily from this location, it may be moved to another location by pulling the Sensor straight down and repeating steps 1.2 and 1.4.

1.5 If the Sensor's performance is satisfactory, it should be permanently attached to the ceiling tile, as described in section ***G. Permanent Mounting Methods***.

2 Temporary Mounting: Solid Ceiling

Use this procedure if the Sensor will be mounted on a solid, continuous ceiling surface such as drywall, plaster, concrete, or wood.
Two 3M™ Command™ adhesive strips are provided for temporarily mounting and testing the Sensor on smooth, solid ceiling surfaces. These strips are designed for easy, damage-free removal and are not reusable. These strips should not be used for permanently mounting the Sensor (see section ***G. Permanent Mounting Methods***). Carefully follow the removal instructions below to ensure the ceiling is not damaged during removal.
NOTE: DO NOT use the adhesive strips on ceiling tiles, as they will likely cause damage to the tile upon removal.

2.1 Peel the **red** "Command Strips" liner off of one of the adhesive strips and apply the strip to the flat side of the mounting bracket as shown in the diagram. Press firmly.



NOTE: DO NOT cover the bracket's screw holes because they will be used to mark screw hole locations on the ceiling.
NOTE: Leave the removal tab exposed past the edge of the bracket so it can be accessed for removal later.

2.2 Identify a location on the ceiling where the Sensor will have a good view of the room.

2.3 Remove the **black** "wall side" liner from the adhesive strip.

2.4 Position the mounting bracket on a clean, dry, dust-free ceiling and press firmly for several seconds.

2.5 Attach the Sensor to the mounting bracket by inserting and twisting in a clockwise direction until the Sensor locks into place.

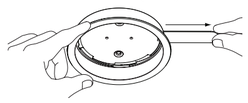
2.6 Perform the Sensor coverage and wireless communication tests as described in sections ***E. Testing Sensor Coverage*** and ***F. Testing Wireless Communication***.

Removing Temporary Mounting Strip

2.7 Remove the Sensor from the mounting bracket by twisting in a counter-clockwise direction.
If the Sensor coverage and wireless communication tests have been successfully completed, use the mounting bracket as a template to mark the screw hole locations with a pencil.

2.8 To remove the bracket from the ceiling, grasp the removal tab on the adhesive strip and pull the tab **VERY SLOWLY** straight across the ceiling, stretching the strip until the bracket releases from the ceiling. Discard the strip. **NEVER** pull the strip at an angle, as it may break or damage the ceiling surface.

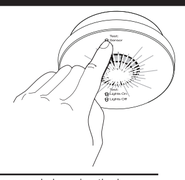
NOTE: Pull very slowly.



NOTE: Do not pull at an angle.

E Testing Sensor Coverage

1 With the Sensor mounted on the ceiling, press and release the "Test: Sensor" button on the front of the device. The lens will glow briefly, indicating the test mode has been entered.



NOTE: There is a warm-up period of approximately 90 seconds after the batteries are installed before the test mode can be activated. If the button is pressed during this time, the lens will flash continuously until the warm-up period is complete, and then the test mode will be automatically entered.

2 Confirm the coverage area by walking through the space and observing the lens. The lens will glow solid every time motion is detected. If the lens remains off during motion, the Sensor cannot detect motion at that location.

3 Press and release the "Test: Sensor" button again to exit the test mode. If the button is not pressed, the test mode will automatically time out 15 minutes after being enabled, or 5 minutes after the last detected motion if the room is vacated.

4 If the Sensor has significant trouble detecting motion during the test, it should be moved to another location and retested. If the Sensor still has poor detection from the new location, refer to the ***Troubleshooting*** section.

NOTE: If the Sensor is detecting motion in areas that are not desirable, such as hallways or adjacent rooms, refer to section ***I. Lens Masking***.

5 If Sensor detection is satisfactory during this test, perform the wireless communication test as described in section ***F. Testing Wireless Communication***.

F Testing Wireless Communication

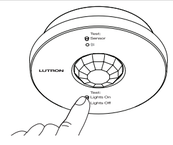
This test should be performed to verify that the Sensor has been correctly set up with the corresponding dimming or switching device and that there is proper wireless communication from the chosen Sensor location.

1 If the lights in the room are not on, turn them ON manually at the dimming or switching device.

2 Press and release the "Lights Off" button on the front of the Sensor. The lights should turn OFF.

3 Press and release the "Lights On" button on the front of the Sensor. The lights should turn ON.

If the lights do not respond correctly, refer to the ***Troubleshooting*** page.

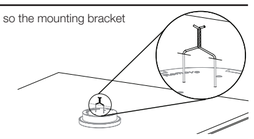


G Permanent Mounting Methods

1 Permanent Mounting: Drop Ceiling

1.1 After the Sensor has been temporarily mounted, leave the Sensor in place on the tile and either take the tile down or remove an adjacent tile to gain access to the legs of the mounting wire on the back of the tile.

1.2 Twist the wire legs together tightly so the mounting bracket remains snug against the tile.



1.3 Replace the tile.

2 Permanent Mounting: Solid Ceiling

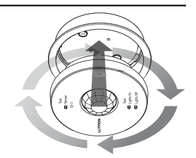
2.1 Drill two 4,8 mm (3/16 in) pilot holes for the provided screw anchors.

2.2 Press the anchors into the holes and tap flush with a hammer.

2.3 Place the flat side of the mounting bracket against the ceiling and install the two provided screws using a hand screwdriver.

Note: Do not overtighten.

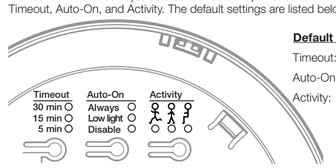
2.4 Attach the Sensor to the mounting bracket by inserting and twisting in a clockwise direction until the Sensor locks into place.



H Advanced Set-Up (Optional)

The Sensor features several advanced set-up modes. For the majority of installations, the default settings will provide the best performance and you will not need to utilize the advanced set-up.

The Sensor has three adjustable advanced set-up modes:
Timeout, Auto-On, and Activity. The default settings are listed below.



Default Settings:
Timeout: 15 minutes
Auto-On: Always
Activity: Low Activity

Advanced Set-Up Modes

Timeout

The Sensor will turn the lights off if no motion occurs for the duration of the timeout period. There are four available timeout settings: **1, 5, 15, and 30 minutes**.

Auto-On

The automatic-on functionality of the Sensor can be adjusted to control how the lights respond upon initial occupancy. There are three available settings: Always, Low light, and Disable.

Always: The lights will always turn on.

Low light: The lights will only turn on automatically upon entry if there is not already sufficient ambient light in the room.

Disable: This setting converts the Sensor to vacancy mode. The lights will not automatically turn on but will still automatically turn off after vacancy. The lights must be manually turned on by using the associated dimming or switching device.

NOTE: When Auto-On is disabled, there is a built-in 15-second vacancy grace period that begins when the lights are automatically turned off, during which the lights will automatically turn back on in response to motion. This grace period is provided as a safety and convenience feature in the event that the lights turn off while the room is still occupied, so that the user does not need to manually turn the lights back on. After 15 seconds, the grace period expires and the lights must be manually turned on.

Activity

The sensitivity of the Sensor can be adjusted based on the expected level of activity within the room. There are three available activity settings: Low Activity, Medium Activity, and High Activity.

Low Activity: This is the most sensitive setting and will detect very slight motions. This is the recommended setting, as it will work well for nearly all applications. It is ideal for spaces where occupants will often be seated for long periods of time.

Medium Activity*: This setting is slightly less sensitive than the Low Activity setting and can be used for spaces that experience normal activity.

High Activity*: This is the least sensitive setting and can be used for spaces that will generally only experience large motions, such as foot traffic.

*The Low Activity setting is the default and will perform best for most applications. Rarely, if the Sensor is placed near external noise sources such as heating vents, air conditioning vents, or light bulbs, it may turn the lights on without occupancy or keep the lights on too long after vacancy. If this occurs, changing the sensitivity to Medium Activity or High Activity should resolve the problem.

Advanced Set-Up Operation

The advanced set-up is accessed by using the buttons on the back of the Sensor.

Check Settings

To display the current setting, press and release the desired button. An LED will illuminate briefly, indicating the current setting.

Change Settings

The standard settings for Timeout, Auto-On, and Activity are changed using the procedure described below in the left column. The procedure for selecting a 1-minute timeout is slightly different and described below in the right column.

Standard Modes

1 To adjust a setting, press and hold the desired button until the LED corresponding to the current setting begins flashing rapidly, indicating the setting can now be adjusted.

2 Each subsequent button press of less than 2 seconds will increment to the next available setting. Pressing any of the other buttons will have no effect.

3 To save the selected setting, press and hold the button until the LED turns on solid. This indicates the saved setting.

1-Minute Timeout*

1 To select a 1-minute timeout, press and hold the timeout button for approximately 10 seconds until all 3 LEDs begin flashing rapidly.

2 To save the 1-minute timeout setting, press and hold the timeout button until all 3 LEDs turn on solid, indicating the 1-minute timeout has been saved.

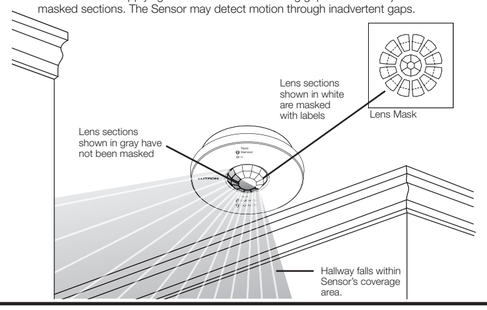
* The 1-minute timeout is intended for use in high-activity, briefly occupied areas only (e.g., closet, laundry room, etc.). Do not use this setting in areas that experience minor motion or extended occupancy (e.g., office, bathroom, etc.), as the lights may unexpectedly turn off.

I Lens Masking (Optional)

Whenever possible, the Sensor should be installed in a location where it cannot easily see into areas outside the intended space, such as hallways or adjacent rooms. If this situation cannot be avoided, portions of the lens may be masked with the provided labels to block the Sensor's view of the undesired areas. **Note:** Apply mask to outside of lens only; do not disassemble sensor.

- It is recommended to remove the Sensor from the mounting bracket before applying the masking labels.

  NOTE: The Sensor can be screwed onto the mounting bracket in several different orientations. Be sure to note the Sensor's orientation before taking it down and replace the Sensor in the same orientation to ensure the intended area gets blocked.
- Outer lens sections correspond to the detection regions furthest away from the Sensor, while inner sections correspond to regions closer to the Sensor.
- Be careful when applying the labels to avoid creating gaps between adjacent masked sections. The Sensor may detect motion through inadvertent gaps.



Troubleshooting

Symptom	Possible Causes	Solution
Lights do not turn ON when space is occupied.	Sensor is not correctly added to dimming / switching device(s).	Refer to section **B. Set-Up.**
	Sensor's Auto-On setting is set to "Low light" or "Disable".	Refer to section **H. Advanced Set-Up.**
	The lights were recently turned off manually and the timeout has not yet expired.	For more details, refer to *Frequently Asked Questions* at www.lutron.com/occsensors
	Sensor does not have full view of room.	Refer to section **C. Sensor Placement and Coverage.**
	Sensor is outside wireless range of dimming/switching device.	Refer to section **C. Sensor Placement and Coverage** or **F. Testing Wireless Communication.**
	Battery has been installed incorrectly.	Refer to section **A. Pre-Installation.**
	Dimming/switching device has been improperly wired.	Refer to the instruction sheet of the receiving device or call Lutron Technical Support Center at 10.800.712.1536 (Beijing), 10.800.120.1536 (Shanghai), or 800.120.4491 (Singapore).
	Light bulb(s) burned out.	
	Breaker is off or tripped.	
Lights turn OFF while space is occupied.	Sensor's timeout is too short for this application.	Refer to section **H. Advanced Set-Up.**
	Sensor does not have full view of room.	Refer to section **C. Sensor Placement and Coverage.**
	Lens mask is improperly applied.	Refer to section **I. Lens Masking.**
	Sensor's Activity Setting is too high.	Refer to section **H. Advanced Set-Up.**
Lights stay ON after space is vacated.	Sensor's timeout has not yet expired.	Refer to section **H. Advanced Set-Up.**
	An external noise source such as an HVAC vent is interfering.	Try moving Sensor to a new location or reducing sensitivity. Refer to section **C. Sensor Placement and Coverage** or **H. Advanced Set-Up.**
	Battery has been installed incorrectly.	Refer to section **A. Pre-Installation.**
Lights turn ON when walking past room.	Sensor coverage extends beyond room perimeter.	Refer to section **C. Sensor Placement and Coverage** or **I. Lens Masking.**
Behavior of lights does not match Sensor settings.	The intended setting was not saved.	Refer to section **H. Advanced Set-Up.**
	Multiple Sensors are added to a dimming/switching device and their settings do not match.	Refer to section **H. Advanced Set-Up.**
Sensor lens does not glow in response to motion during Sensor coverage testing.	Sensor cannot see motion due to obstruction.	Move Sensor to another location. Refer to section **C. Sensor Placement and Coverage.**
	Room is too big or oddly shaped.	Multiple Sensors may be necessary for full room coverage. For more details, refer to *Frequently Asked Questions* at www.lutron.com/occsensors
	Battery has been installed incorrectly.	Refer to section **A. Pre-Installation.**
Lens does not stop glowing during Sensor coverage testing even when there is no motion.	An external noise source such as an HVAC vent is interfering.	Try moving Sensor to a new location or reducing sensitivity. Refer to section **C. Sensor Placement and Coverage** or **H. Advanced Set-Up.**
Lights do not respond correctly during wireless communication testing.	Sensor is not correctly added to dimming / switching device.	Refer to section **B. Set-Up.**
	Sensor is outside wireless range of dimming/switching device.	Move Sensor closer to dimming/switching device and retry test. Refer to section **F. Testing Wireless Communication.**
	Battery has been installed incorrectly.	Refer to section **A. Pre-Installation.**
	Dimming/switching device has been improperly wired.	Refer to the instruction sheet of the receiving device or call Lutron Technical Support Center at 10.800.712.1536 (Beijing), 10.800.120.1536 (Shanghai), or 800.120.4491 (Singapore).
	Light bulb(s) burned out.	
	Breaker is off or tripped.	
Sensor lens flashes and lights do not turn ON when space is occupied.	Battery is low.	Replace battery. For more details, refer to *Frequently Asked Questions* at www.lutron.com/occsensors
	Sensor is in test mode.	Remove sensor from test mode. Refer to section **E. Testing Sensor Coverage.**

Radio Powr Savr™

安装说明　安装之前请参阅

中文

电池供电型无线占空传感器

LRF4-OCRB-P 3 V⎓　14 µA　868 MHz

兼容产品

有关兼容产品的完整清单，敬请浏览 www.lutron.com/globalenergysolutions

产品说明

路创的天花板安装占空传感器是一种无线的被动式红外（PIR）传感器。 它们靠电池供电，通过与调光或开关装置之间的射频通信自动控制灯光。传感器可检测到区域内走动的人身上发出的热量，从而判断空间是否占用。传感器然后向相关的调光或开关装置发出适当的命令，自动开灯或关灯，这样，不仅使用方便、节能效果也显著。

• 简单易懂的说明书

P/N 041-274b

重要注释

1. 本传感器属于系统的一部分， 如果没有兼容的调光或开关装置，则无法用其控制负载。有关安装信息，请参阅接收装置的说明书。
2. 仅限使用柔软湿布清洗传感器。 请勿使用任何化学清洁剂。
3. 此传感器只能在室内使用。工作温度介于 0 °C 至 40 °C (32 °F 至 104 °F) 之间。
4. 请勿粉刷传感器。
5. 只能使用优质锂电池， 其规格为CR123，电压为 3 V⎓ (ANSI-5018LC，IEC-CR17345)。不得使用充电电池。使用额定值不正确的电池可能会损坏传感器。

   注意： 不要拆解、碾压、刺穿或焚烧电池。不要把电池丢入一般的家庭垃圾中。请将其放到电池回收箱内以便回收再生，或请与当地的垃圾处理部门联系以了解当地关于电池的处置或回收再生有哪些规定。
6. 射频系统的工作性能和范围取决于一系列复杂的因素，如：
   - 系统组件之间的距离
   - 建筑物的几何结构
   - 分隔系统组件的墙壁结构
   - 临近系统组件的电气设备

注意 – 禁闭的危险 – 为了避免禁闭，严重受伤或死亡的危险，不能使用此控制器控制在控制位置看不见的设备，或一旦意外操作即有可能产生诸如禁闭等危险结果的设备。不得使用此控制器进行控制的设备包括（但不限于）电动大门、车库门、工业用门，微波炉，加热垫等。是安装方的责任确保从任何控制位置可以看见要控制的设备，并且只有合适的设备连接到此控制器。不这样做，可能导致严重受伤或死亡。

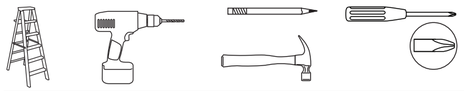
主要特点

- 维护量低。10年电池寿命。方便的低电量指示。
- 多装置。在大空间场合，可由多达3个传感器协同工作来控制灯光，以覆盖更大的范围。每个传感器最多可加入10个接收装置。

传感器的运行

当某一空间占用时，传感器将自动开灯，而当空间空置后，传感器将自动关灯。同时，也可直接通过调光或开关装置随时手动关灯。

可能会用到的工具



安装

传感器的安装程序概述如下。请遵循这些步骤进行安装， 以确保传感器按预期工作。

A. 安装前的准备
B. 设置
C. 传感器的位置和覆盖范围
D. 临时安装方式
E. 传感器覆盖范围测试
F. 无线通信测试
G. 永久性安装方式
H. 高级设置（可选）
I. 透镜遮蔽（可选）

技术支持

若对安装和使用本产品还有疑问，请致电路创技术支援中心。致电时请提供准确的型号。

中国北京	中国上海	新加坡
10.800.712.1536	10.800.120.1536	800.120.4491

其他国家：8am – 8pm 美国东部时间

+1.610.282.3800　　www.lutron.com/asia

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Coopersburg, PA 18036-1299, U.S.A.
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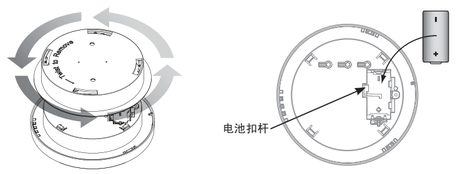
说明

只需15分钟 就能轻松安装传感器

A 安装前的准备

1 设置传感器前，应安装相应的调光或开关装置。 具体说明请参阅相应产品的安装说明书。

2 拧开安装支架并将其取下， 然后装入电池。



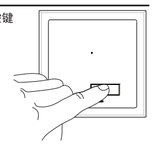
B 设置

为了确保传感器的正确运行，必须首先将其设置成配用相应的调光或开关装置。将传感器设置成配用 Rania® 无线射频开关的程序详述如下。

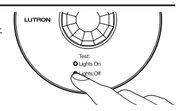
如果要将传感器设置成配用别的装置，请登录 www.lutron.com/occsensors 或参阅相应装置的安装指南，以获取该装置的正确设置程序。

将传感器设置成配用 *Rania* 无线射频开关

1 在 *Rania* 无线射频开关关闭时， 按下并且按住开 / 关按键大约6秒钟。当LED指示灯开始缓慢闪烁后，释放按键。



2 按下并按住传感器前面的 “关灯” (Lights Off) 按钮约6秒钟，直至透镜短暂闪烁， 将传感器添加至该开关。此时房间内的灯光也会闪烁3次，表明该传感器已成功添加。开关会自动退出设置模式。



3 现在，分别按下 “开灯” (Lights On) 和 “关灯” (Lights Off) 按钮，应能相应地打开和关闭房内的灯光。
重复上述步骤，将传感器设置成配用其它装置。

C 传感器的位置和覆盖范围

安装传感器前，请注意下列事项：

- 该传感器只限于装在天花板上使用。不得安装在高度超过3.7米（12英尺）的天花板上或非天花板表面上。否则可能会严重影响传感器的性能。
- 传感器应安装在能统览整个房间的位置上。只有保证具有良好的视线范围传感器才能正常工作。如果您看不见传感器，传感器也就 “看不见” 您。传感器不能穿透玻璃物体，如天井或沐浴间的门。
- 不得在下列范围之内安装传感器：距离暖通空调排风口1.2米（4英尺）、距离其它射频装置15厘米（6英寸）或距离安装在天花线下的电灯泡1.2米（4英尺）。
- 如果传感器处在相应的调光或开关装置直视线范围内，它们之间的最大安装距离可达到18.3米（60英尺）。如果传感器与接收装置之间存在墙壁或其它阻隔，应将传感器安装在距离相应的调光或开关装置9.1米（30英尺）的范围内。
- 只要有可能，传感器的安装位置应避开可看到所要覆盖的空间之外的地方。如果这种情况无法避免，可遮蔽透镜以阻止传感器看到无关的区域（请参阅 I. 透镜遮蔽）。
- 传感器的检测范围取决于天花板的高度，具体如下表所示。

覆盖范围表（适用于传感器安装在房间中央的情况）

天花板高度	整个覆盖范围所对应的最大房间尺寸	在地面的覆盖半径
2.4 米（8 英尺）	5.5 x 5.5 米（18 x 18 英尺）	4.0 米（13 英尺）
2.7 米（9 英尺）	6.1 x 6.1 米（20 x 20 英尺）	4.4 米（14.5 英尺）
3.0 米（10 英尺）	6.7 x 6.7 米（22 x 22 英尺）	4.9 米（16 英尺）
3.7 米（12 英尺）	7.9 x 7.9 米（26 x 26 英尺）	5.8 米（19 英尺）

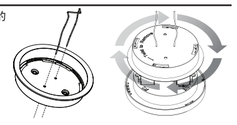
D 临时安装方式

如果您对传感器的正确安装位置没有把握，则建议您采纳下列临时安装和测试程序，以便在永久性安装传感器之前确认其是否正确工作。

1 临时安装：吊顶天花板

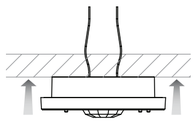
如果要在吊顶天花板板上安装传感器，请采用此程序。
提供的吊顶天花板板安装卡线用于临时或永久将传感器安装在由多块天花板构成的吊顶天花板。其特殊设计允许在不损坏吊顶天花板板的前提下临时安装、测试和调整传感器位置（如有必要）。一旦最终选定传感器的安装位置，可扭紧安装卡线将传感器永久锁定在位置上。

1.1 将吊顶天花板板安装卡线穿入安装支架的两个小孔内，然后重新装好安装支架。



1.2 将线脚穿入吊顶天花板板，使传感器固定在吊顶天花板板上，要确保传感器与吊顶天花板齐平。

注：不要将线脚扭在一起。



1.3 按照 E. 传感器覆盖范围测试 和 F. 无线通信测试中所述的方法进行传感器的覆盖范围和无线通信测试。

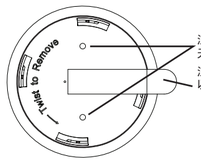
1.4 如果传感器在此位置的表现不佳，可将其直接取下，然后重复步骤1.2和1.4，将其挪到另一位置。

1.5 如果传感器的表现令人满意，则按 G. 永久性安装方式中所述的方法永久性地将其固定在天花板上。

2 临时安装：实心天花板

如果传感器要安装在连续实心天花板板表面（如墙板、石膏、混凝土或木材），则采用此程序。
随供两条 3M™ Command™ 粘合带，用于在平滑的实心天花板上临时安装和测试传感器。粘合带使用简单、拆除时不会对天花板或传感器造成损坏，而且为一次性用品。不得将这些粘合带用于传感器的永久性安装（请参阅 G. 永久性安装方式）。请严格遵照下列的移除说明，以确保移除时不会损坏天花板。
注释：切勿在吊顶天花板板上使用粘合带，否则可能会在移除粘合带时损坏天花板。

2.1 剥掉其中一条粘合带的红色 “Command Strips” 衬纸， 然后如图所示将粘合带粘贴在安装支架的平整面，压紧。



注释：不得覆盖支架的螺孔，因为它们用于标记天花板上的螺孔位置。
注释：留下揭除拉头并使其超出安装支架边缘，以便在其后将其揭除。

2.2 在天花板上确定一个使传感器能统览整个房间的位置。

2.3 揭除粘合带上的黑色 “墙侧” 衬纸。

2.4 将安装支架置于洁净、干燥和无尘的天花板上并用力紧压几秒钟。

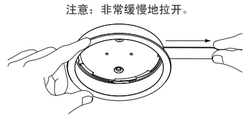
2.5 将传感器插入安装支架内并朝顺时针方向拧紧，直至传感器锁定在位置上，使传感器固定在安装支架内。

2.6 按照 E. 传感器覆盖范围测试 和 F. 无线通信测试小节中所述的步骤，进行传感器覆盖范围和无线通信测试。

移除临时安装用的粘合带

2.7 朝逆时针方向转动传感器， 将其从安装支架中取下。
如果已成功完成传感器覆盖范围和无线通信测试，则可将安装支架作为模板，用铅笔标出螺孔的位置。

2.8 若要从天花板上拆除安装支架时， 抓住粘合带的揭除拉头，朝与天花板平行的方向非常缓慢的拉开拉头，直至安装支架脱离天花板。丢弃揭下的粘合带。严禁朝与天花板成某一角度的方向拉开粘合带， 否则可能会断裂或损坏天花板表面。



E 传感器覆盖范围测试

1 传感器在天花板上安装就位后，按下该装置前面的 “测试：传感器” (Test: Sensor) 按钮，然后松开。透镜会短暂发光，表明已进入测试模式。

注意：将电池装入后， 传感器大约需要90秒的预热时间，然后才能激活测试模式。如果在此期间按下按钮，透镜会持续闪烁，直至预热时间结束为止，然后自动进入测试模式。

2 在空间内行走并观察透镜，确认传感器的覆盖区域。每次检测到移动时，透镜都会稳定发光。如果移动时透镜不发光，说明该传感器无法检测到此位置上的移动。

3 再次按下 “测试：传感器” 按钮，然后放开，退出测试模式。如果未按下该按钮， 测试模式会自动在激活15分钟后停止， 或如果房间内无人，则会在最近一次检测到移动的5分钟后停止。

4 如果传感器在测试期间明显不太容易检测到移动，则应将其移至别处， 然后重新测试。如果传感器在新位置上仍然不太容易检测到移动，则请参阅疑难排解部分。

注： 如果传感器检测到无关区域内的移动，如走廊或隔壁房间，请参阅 I. 透镜遮蔽。

5 如果在本测试期间传感器的检测效果令人满意， 则按照 F. 无线通信测试中所述的方法进行传感器的无线通信测试。

F 无线通信测试

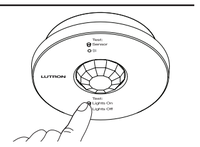
为了验证传感器是否已设置成配用相应的调光或开关装置， 同时也为了验证传感器是否在所选定的安装位置具有适当的无线通信，必须进行本项测试。

1 如果房间内的灯没有亮， 则通过调光或开关装置手动将其打开。

2 按下传感器前面的 “关灯” (Lights Off) 按钮，然后松开。灯应关闭。

3 按下传感器前面的 “开灯” (Lights On) 按钮，然后松开。灯应打开。

如果灯的响应不正确，请参阅疑难排解页。

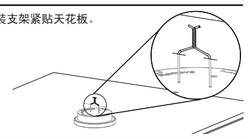


G 永久性安装方式

1 永久性安装：吊顶天花板

1.1 传感器临时固定后，让传感器留在吊顶天花板板上， 取下该天花板或取下其旁边的天花板，以便能够接触到该天花板后面的安装卡线绑脚。

1.2 将两个线脚紧紧扭在一起， 使安装支架紧贴天花板。



1.3 重新装好天花板。

2 永久性安装：实心天花板

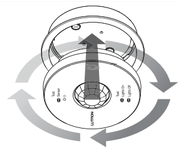
2.1 钻两个 4.8 mm（3/16英寸）的定位孔，以便固定随供的螺钉锚件。

2.2 将锚件压入定位孔内并用锤子轻轻敲打，直至齐平。

2.3 将安装支架的平整面靠着天花板，然后用螺丝刀将两个随供的螺钉拧入。

注：不要拧得太紧。

2.4 将传感器插入安装支架内并朝顺时针方向拧紧，直至传感器锁定在位置上，使传感器固定在安装支架内。



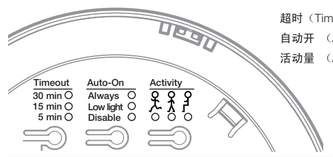
H 高级设置 （可选）

该传感器有若干高级设置模式。对大多数安装而言，默认设置已可提供最佳的性能，无需进行高级设置。

该传感器有三种可调的高级设置模式：
超时、自动开以及活动量。默认设置如下所列。

默认设置：

超时（Timeout）：	15 分钟
自动开 （Auto-On）：	始终
活动量 （Activity）：	低活动量



高级设置模式

超时（Timeout）
如果在一段时间内没有检测到移动，传感器将关闭灯光。有4种超时设置可用： 1分钟、5分钟、15分钟和30分钟。

自动开（Auto-On）
通过调整传感器的自动开功能，可以控制灯光对最初占用的响应方式。有三种设置可用：始终、低亮度和停用。

始终 (Always)：始终将灯打开。

低亮度 (Low light)：如果房间内的环境亮度不足，则一旦有人进入房间灯将自动打开。

停用 (Disable)：此设置会将传感器转变成空置检测模式。灯不会自动打开， 但仍会在房间空置后自动关闭。必须通过相应的调光或开关装置手动开灯。

注： 当自动开功能停用时，仍会有一个内置的15秒宽限期。宽限期从灯自动关闭时起算，如果在这段时间内检测到移动，灯将再次自动打开。所提供的宽限期具有安全、方便的特点：如果在灯关闭时房间内仍有人，用户无需手动开灯。过了15秒之后，宽限期结束，必须手动开灯。

活动量（Activity）
传感器的灵敏度可根据房间内预期的活动量大小进行调整。有三种活动量设置可供选用：低活动量、中活动量和高活动量。

低活动量：这是灵敏度最高的设置，能够检测非常微小的移动。 由于它几乎在所有的场合都有良好的表现，所以这也是推荐使用的设置。它特别适合房内人员通常久坐的场合。

中活动量*：此设置的灵敏度比低活动量设置稍低， 可用于正常活动量的场合。

高活动量*：此设置的灵敏度最低，可用于一般只有大移动的空间， 如人多走动的地方。

* 低活动量设置是默认设置，对大部分应用都会有上佳的表现。如果将传感器安装在靠近热风排出口、空调通风口或灯泡等外部噪声源的地方， 可能会偶尔出现在无人的情况下开灯或在房间空置超过指定的时间后仍亮灯。如果出现这种情况，只要将灵敏度变更为中活动量或高活动量即可解决问题。

高级设置的操作

高级设置可通过传感器背面的按钮来实现。

查看当前的设置
若要查看当前的设置，按下所需的按钮，然后松开，同时LED指示灯会短暂点亮。

调整设置
若要改变传感器的标准设置（超时，自动开，活动量）请参照左下栏。设置一分钟超时的步骤有一些不同，请参照右下栏。

标准设置

1. 若要调整设置，按下并按住所需的按钮直到对应于当前设置的LED指示灯开始快速闪烁，这表明现在可以调整设置。
2. 此后每按一次按钮（按下时间少于2秒）即可调节该模式的设置。同时，按其它按钮都无效。
3. 若要保存所选定的设置， 按下并按住该按钮直到LED指示灯恒亮，这表明设置已保存。

一分钟超时设置 *

1. 若要选择一分钟超时设置，按下并按住超时 (Timeout) 按钮大约10 秒钟直到3个LED指示灯同时开始快速闪烁。
2. 若要保存所选定的一分钟超时设置，按下并按住超时 (Timeout) 按钮直到3个LED指示灯同时恒亮，这表明已保存一分钟超时设置。

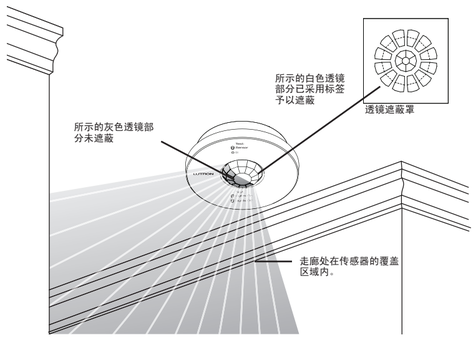
* 一分钟超时设置主要是为了用在高活动量，短暂占用的区域（衣柜，壁橱，洗衣房，等等）。 如果传感器安装在长时间占用、低活动量的区域（办公室，洗手间，等等）并使用一分钟超时设置，灯有可能在使用中关闭。

I 透镜遮蔽 （可选）

只要有可能，传感器的安装位置应使其不容易看到所要覆盖的空间之外的地方，如走廊或隔壁房间。 如果这种情况无法避免，可采用所提供的标签来遮蔽部分透镜，以阻止传感器看到无关的区域。注释： 只能将遮蔽罩粘贴在透镜的外面；不得拆开传感器。

- 建议在粘贴遮蔽标签前将传感器从安装支架中拆下。

  注： 将传感器固定到安装支架上时可以采用若干不同的朝向。 务必要在拆下传感器之前记下其朝向并采用相同的朝向将其装回去，以确保正确遮蔽要屏蔽的区域。
- 外侧透镜部分对应的是距离传感器较远的检测区， 内侧透镜部分对应的是距离传感器较近的区域。
- 当粘贴标签时，务必注意不要在相邻的遮蔽部分之间留出空隙。 否则传感器可通过这些空隙检测移动。



疑难排解

表征	可能原因	解决方案
空间有人时灯不开。	传感器未正确加入调光/开关装置。	请参阅 B. 设置。
	传感器的自动开设置设在 “低亮度” 或 “停用”。	请参阅 H. 高级设置。
	刚刚手动将灯关闭，而超时时限未到。	详情请参阅 www.lutron.com/occsensors 网页中的常见问题
	传感器不能统览整个房间。	请参阅 C. 传感器的位置和覆盖范围。
	传感器没有处于调光/开关装置的无线覆盖范围内。	请参阅 C. 传感器的位置和覆盖范围 或 F. 无线通信测试。
	电池安装不正确。	请参阅 A. 安装前的准备。
	调光/开关装置的接线不正确。	请参阅接收装置的说明书，或致电路创技术支持中心：10.800.712.1536（北京） 或10.800.120.1536（上海）或800.120.4491（新加坡）。
	灯泡烧坏。	
	断路器断开或跳闸。	
空间有人时灯关闭。	传感器在此应用的的超时设定时间太短。	请参阅 H. 高级设置。
	传感器不能统览整个房间。	请参阅 C. 传感器的位置和覆盖范围。
	透镜遮蔽罩的粘贴不正确。	请参阅 I. 透镜遮蔽。
	传感器的活动量设置过高。	请参阅 H. 高级设置。
空间无人后灯仍开着。	传感器的超时时限仍未到。	请参阅 H. 高级设置。
	受到诸如暖通空调排风口等外部噪声源的干扰。	试一试将传感器移至别处或降低传感器的灵敏度。请参阅 C. 传感器的位置和覆盖范围 或 H. 高级设置。
	电池安装不正确。	请参阅 A. 安装前的准备。
走过房间门口时灯打开。	传感器的覆盖范围超出了房间的周界。	请参阅 C. 传感器的位置和覆盖范围 或 I. 透镜遮蔽。
灯的行为与传感器的设置不匹配。	未保存拟定的设置。	请参阅 H. 高级设置。
	多个传感器加入同一个调光/开关装置，而传感器的设置不匹配。	请参阅 H. 高级设置。
进行传感器覆盖范围测试时，传感器透镜不能根据移动情况发光。	由于受遮挡，传感器无法检测到移动。	将传感器移至别处。请参阅 C. 传感器的位置和覆盖范围。
	房间太大或形状不规则。	可能需要多个传感器才能覆盖整个房间。 详情请参阅 www.lutron.com/occsensors 网页中的常见问题
	电池安装不正确。	请参阅 A. 安装前的准备。
进行传感器覆盖范围测试时，即使没有移动，传感器透镜也一直发光。	受到诸如暖通空调排风口等外部噪声源的干扰。	试一试将传感器移至别处或降低传感器的灵敏度。请参阅 C. 传感器的位置和覆盖范围 或 H. 高级设置。
进行无线通信测试时，灯不能作出正确的响应。	传感器未正确加入调光 / 开关装置。	请参阅 B. 设置。
	传感器没有处于调光/开关装置的无线覆盖范围内。	将传感器移近调光/开关装置，然后重新测试。请参阅 F. 无线通信测试。
	电池安装不正确。	请参阅 A. 安装前的准备。
	调光/开关装置的接线不正确。	请参阅接收装置的说明书，或致电路创技术支持中心：10.800.712.1536（北京） 或10.800.120.1536（上海）或800.120.4491（新加坡）。
	灯泡烧坏。	
	断路器断开或跳闸。	
空间有人时传感器透镜闪烁而灯不亮。	电池电量低。	更换电池。详情请参阅 www.lutron.com/occsensors 网页中的常见问题
	传感器处于测试模式。	将传感器退出测试模式。请参阅 E. 传感器覆盖范围测试。