

VPA Sensor

Information and Operation Instructions



BRI810-B-M4

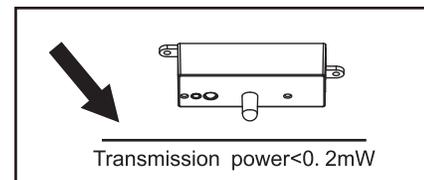


**RC-100
(OPTIONAL)**

Technical Data

Power supply	120/277VAC 50/60Hz
Maximum load @ -40°F ~ +158°F (-40°C ~ +70°C)	Resistive/Tungsten - 600W@120V Ballast Electronic (LED) - 800VA@120V/1200VA@277V
HF System	5.8GHz CW
Dim control output	0-10V, max. 25mA sinking current
Detection radius/angle	Max 26ft.(8m) /360°
Mounting height	Max 20ft
Humidity	Max. 95% RH
Temperature	-40°F ~ +158°F (-40°C ~ +70°C)

Note: The high-frequency output of this sensor is <math><0.2\text{mW}</math> – that is just one-5000th of the transmission power of a mobile phone or the output of a microwave oven.



! WARNING

Note: Warm up time is 15 seconds. After the sensor connects input power for the first time, the light will stay on 15 seconds, then go to dimming to work normally.

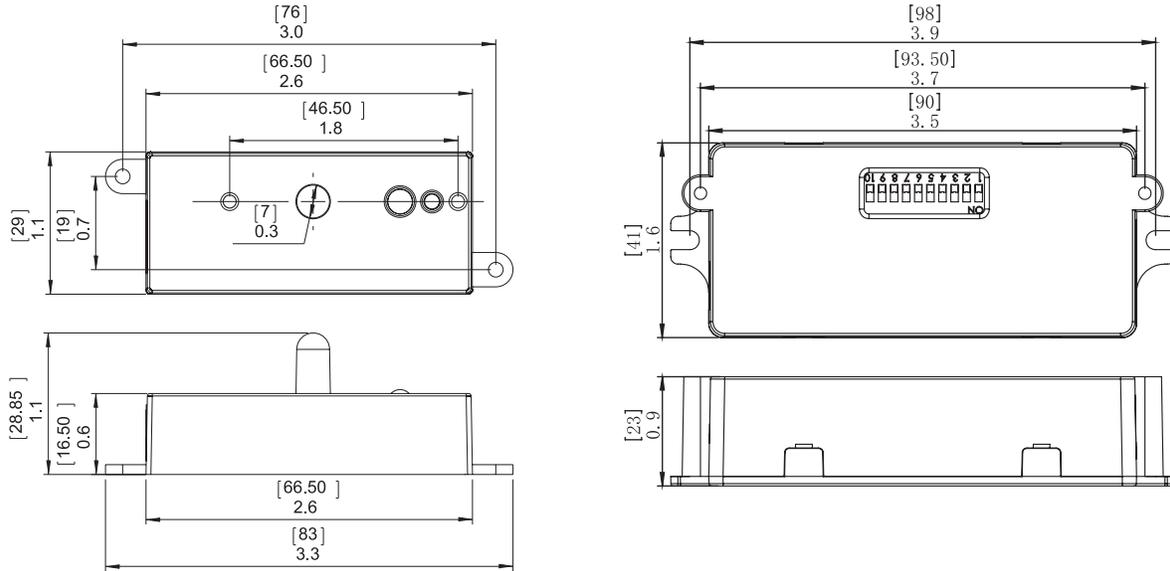
Note: Factory Default Setting: Sensitivity: 100%, Hold on time: 10 seconds, Daylight sensor: 30lux, Dimming level: 30%, Dimming time: 60 minutes.

Note: For any setting changed by DIP switch or remote control, the LED light that the sensor connects to will flash on/off to confirm.

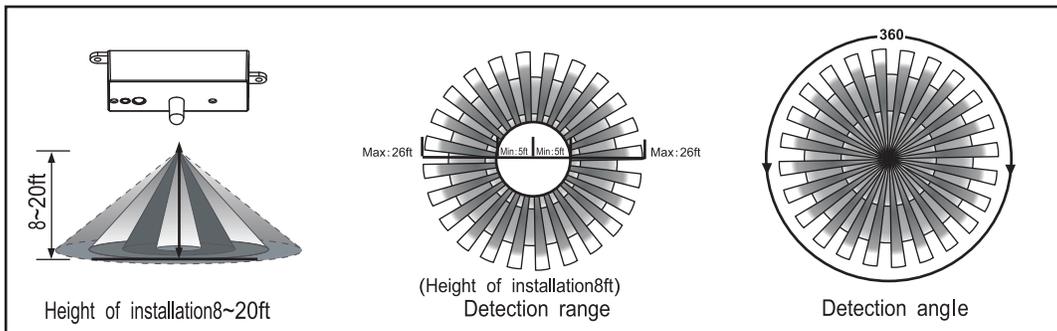
VPA Sensor

Information and Operation Instructions

Dimensions (Units: inch [mm])



Sensor Coverage



Once powering the device up, the BR1810-B-M4 will use factory default parameters to operate.

VPA Sensor

Information and Operation Instructions

Function and Options

The microwave sensor is utilized to achieve tri-level dimming control. There are three levels of light control: 100% – dimming light (0%, 10%, 30%, 50%) – off, two periods of selectable waiting time: motion hold-time and stand-by time, selectable daylight threshold, and choice of detection area. The operation of the light is illustrated in the below figures:



The light will not switch on when natural light is sufficient, even when there is motion detected.



The light switches on automatically with motion when natural light is insufficient.



The light turns on at full or dims to maintain the lux level. The light output regulates according to the level of natural light available.



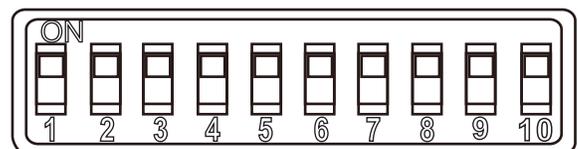
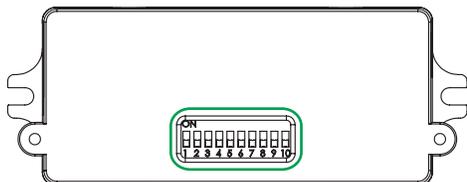
The light dims to stand-by period after hold-time and stays on at the selected minimum dimming level.



The light switches off completely after the stand-by period.

Parameter Setting by DIP Switch

Consider the picture: 1, 2 set sensitivity; 3, 4 set hold time; 5, 6 set the lux; 7, 8 stand-by light level; 9, 10 set stand-by time.

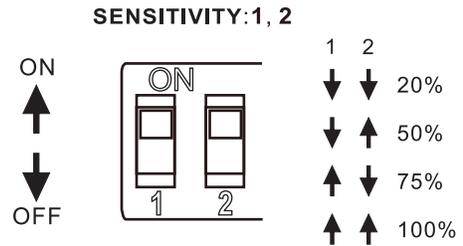


Parameter Setting by DIP Switch, Continued

Detection Range Setting (Sensitivity)

Detection range is the term used to describe the radii of the more or less circular detection zone produced on the ground after mounting the sensor light at a height of 8-20ft.

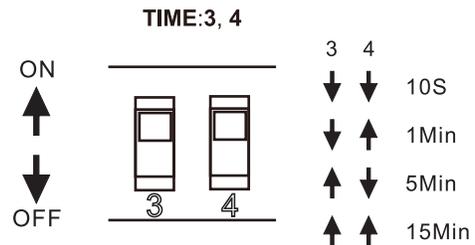
Pull switch to the ON position as “↑”, pull switch to the OFF position as “↓”, switch location and detection range of the corresponding table is as follows:



Hold Time Setting

The light can be set to stay ON for any period of time between approx. 10sec and a maximum of 15min. Any movement detected before this time elapse will re-start the timer. It is recommended to select the shortest time for adjusting the detection zone and for performing the walk test.

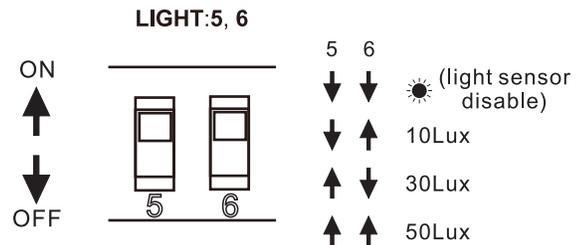
Pull switch to the ON position as “↑”, pull switch to the OFF position as “↓”, switch location and hold time of the corresponding table is as follows:



Light-control Setting

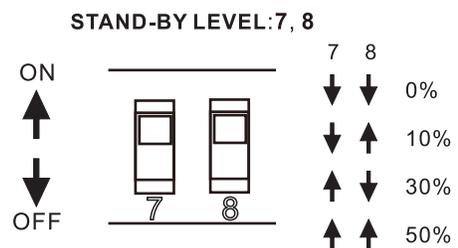
The chosen light response threshold can be infinitely from approx. 10-50lux.

Pull switch to the ON position as “↑”, pull switch to the OFF position as “↓”, switch location and hold time of the corresponding table is as follows:



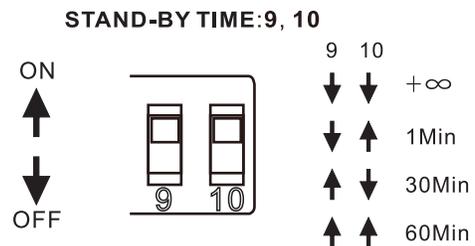
Stand-by Light Level Setting

Pull switch to the ON position as “↑”, pull switch to the OFF position as “↓”, switch location and stand-by level of the corresponding table is as follows:



Stand-by Time Setting

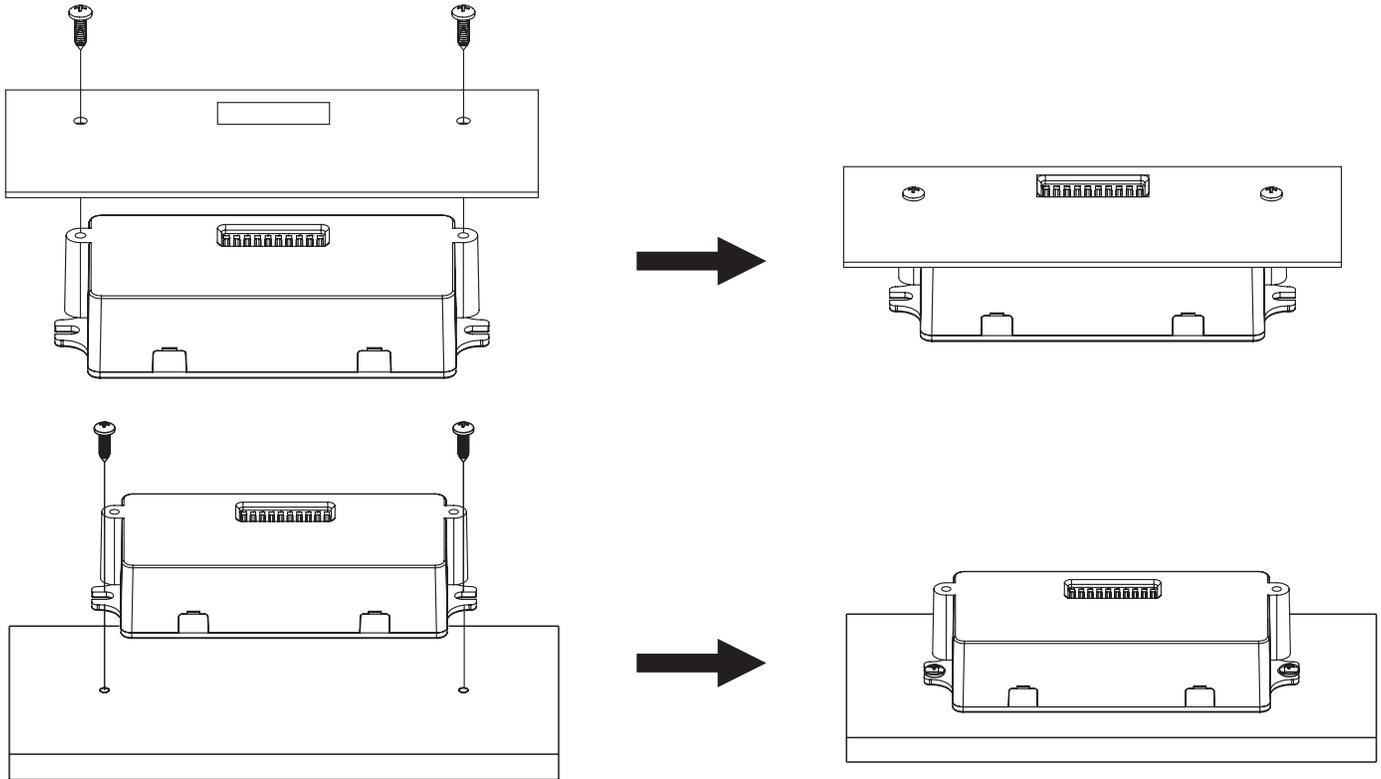
Pull switch to the ON position as “↑”, pull switch to the OFF position as “↓”, switch location and stand-by time of the corresponding table is as follows:



VPA Sensor

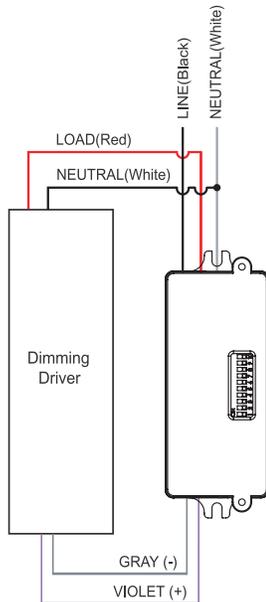
Information and Operation Instructions

Installation

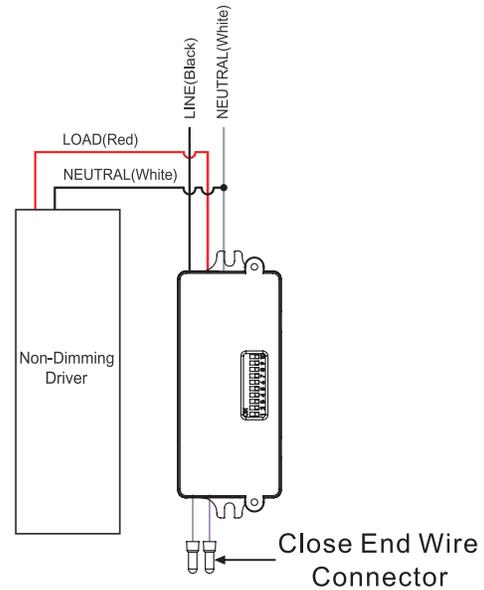


Wiring Diagrams

Wiring with dimming ballast or LED driver.
Dimming Driver



Wiring with non-dimming ballast or LED driver.
Non-Dimming Driver



RC-100 Sensor Remote Programmer Specifications

Power supply	2 x AAA 1.5V battery, Alkaline preferred
Carrying case	RC-100 in carrying case
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")



WARNING

Remove the batteries from compartment if the remote will not be used in 30 days.

Overview

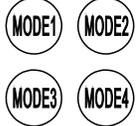
The remote control Wireless IR Configuration Tool is a handheld tool for remote configuration of IR-enabled fixture integrated sensors. The tool enables device to modify via pushbutton without ladders or tools and stores up to four sensor parameter modes to speed configuration of multiple sensors.

The remote control 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.

LED Indicators

LED	DESCRIPTION	LED	DESCRIPTION
BRIGHTNESS	High end trim turning function (To Set the output level of connected lighting during occupancy)		To select the current surrounding lux value as the daylight threshold. This feature enables the fixture to function well in any real application circumstances.
SENSITIVITY	To set the occupancy sensing sensitivity of the Sensor		The daylight sensor stops working, and all motion detected could turn on the lighting fixture, no matter how bright the natural light is.
HOLD TIME	The time that the Sensor will turn off(if you choose stand-by level is 0) or dim the light to a low level after the area is vacated	STAND-BY DIM	To set the output level of connected lighting during vacancy. The sensor will regulate the lighting output at the set level. Setting the STAND-BY DIM level at 0 means light full off during vacancy.
DAYLIGHT SENSOR	To represents various thresholds of natural light level for the Sensor.	STAND-BY TIME	To represents the time that the Sensor will keep the light at low dim level after the HOLD TIME elapsed.

Button Operation

BUTTON	DESCRIPTION	BUTTON	DESCRIPTION
	Press the  button, the light goes to permanent on or permanent off mode, and the sensor is disabled. (MUST press  button to quit this mode for Setting.		Press  button, the sensor starts to function and all settings remain the same as the latest status before the light is switched on/off.
	Display the current/latest setting parameters in LED indicators(the LED indicators will on for showing the setting parameters).		The button  is for testing purpose sensitivity only, after you choose sensitivity thresholds, then you press  button, The sensor goes to test mode(hold time is only 2s) automatically ,meanwhile the stand-by period and daylight sensor are disabled. Press  button to quit from this mode.
	Press  button, all settings go back to settings of dip Switch in sensor.		
	Enter in the setting condition, the parameter leds of remote control will flash to be selected. and Navigate to UP and Down for choose selected parameters in LED indicators.		Navigate to LEFT and RIGHT for choose selected parameters in LED indicators.
	Confirm the selected parameters selected parameters in remote control.		Open and close smart daylight Sensor. Press  or  Enter in the setting condition, the parameter leds of remote control will flash to be selected, Press  for open or close smart daylight Sensor.
	Press  button, upload the current parameters to sensor(s), the led light which the sensor connects will on/off as confirm.		
	4 Scene modes with preset parameters which are available to be changed and saved in modes.		

Setting

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

Change multiple settings of sensor(s)

- Press  button, the remote control LEDs will show the latest parameters you set.
Note: If you push  button before, you must push  button to unlock the sensor.
- Press  or  enter in the setting condition, the parameter LEDs of remote control will flash to be selected, navigate to the desired setting by pressing     to select the new parameters.
- Press OK to confirm all settings and save.
- Aim at the target sensor and press to upload the new parameter, the LED light which the sensor connects will switch ON/OFF as confirm.
Note: The setting works key step is by push  or , enter in the setting condition.
Note: The LED light which the sensor connects will ON/OFF after getting the new parameter as confirm.
Note: If you press  button, the remote LED indicators will show the latest parameters which were sent.

Settings, Continued

Change Multiple Settings of Sensors with Smart Photocell Sensor Open

1. Press **DISP**, the remote LED indicators will show the latest parameters.
2. Press **▲** or **▼** enter in the setting condition, the parameter LED indicators of the remote control will flash to be selected.
3. Press **⏏**, 2 LED indicators will flash in daylight sensor settings, select daylight **10** **30** **50** as setpoint to light on automatically, select daylight **100** **300** **500** as setpoint to light off automatically.
4. Press **OK** to confirm all settings and save.
5. Aim at the target sensor and press **SEND** to upload the new parameter. The LED light which the sensor connects will switch on/off.

Note: **⏏** is disabled by default.

1. Open or close the smart daylight sensor by pressing **⏏** when remote control is in setting condition.
2. When the smart daylight sensor opens, 2 LED indicators will flash in daylight sensor settings, select daylight **10** **30** **50** as setpoint to light on automatically, select daylight **100** **300** **500** as setpoint to light off automatically. When the smart daylight sensor closes, 1 LED indicator will flash in the daylight sensor setting for choosing the daylight sensor threshold.
3. When the smart daylight sensor opens, the stand-by time is **+∞**.
4. Smart daylight sensor takes place of normal photocell sensor and works independently.
5. See **Daylight Sensor Function** section.

Corridor Function

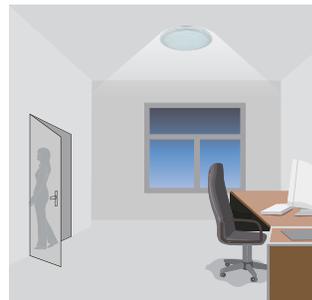
This function inside the motion sensor to achieve tri-level control form some areas which require a light change notice before switching off. The sensor offers 3 levels of light: 100% → dimmed light (natural light is insufficient) → off; and 2 periods of selectable waiting time: motion hold-time and stand-by period; selectable daylight threshold and freedom of detection area.



With sufficient natural light, the light does not switch on when presence is detected.



With insufficient natural light, the sensor switches on the light automatically when presence is detected.



After hold-time, the light dims to stand-by level if the surrounding natural light is below the daylight threshold.



Light switches off automatically after the stand-by period elapses.

Daylight Sensor Function

Open the daylight sensor by pressing **⏏** when the remote control is in the setting condition.



The light switches on at 100% when there is movement detected.



The light dims to stand-by level after the hold-time.



The light remains in dimming level at night.

Settings on this demonstration:

Hold-time: 30min

setpoint to light on: 50lux

setpoint to light off: 300lux

Stand-by Dim: 10%

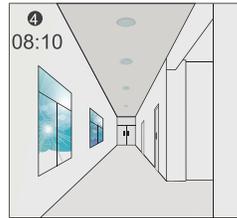
Stand-by period: +∞

(when the smart photocell sensor open, the stand-by time is only +∞)

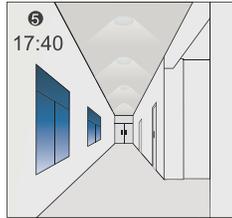
VPA Sensor

Information and Operation Instructions

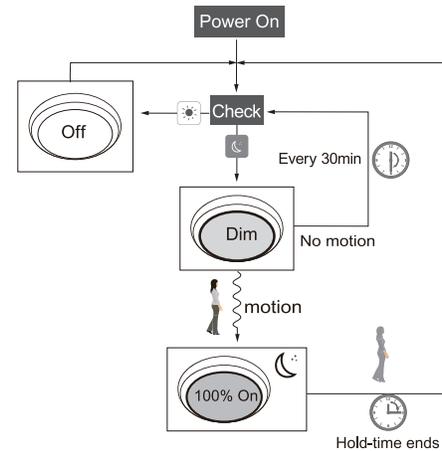
① ↔ ③ goes in cycle at night...
100% on when movement detected, and dims to 10% in long absence.



When the natural light level exceeds setpoint off to light, the light will turn off even if when the space is occupied.



The light automatically turns on at 10% when natural light is insufficient (no motion).



Corridor Function vs Daylight Sensor Function

1. In corridor function, turn on the light MUST by natural light level lower daylight sensor setting and occupancy. In smart daylight sensor function, turn on the light by natural light level lower daylight setpoint to light on even if vacancy.
2. In corridor function, turn off light by stand-by time finish if vacancy. In smart daylight sensor function, turn off the light by natural light level higher than daylight setpoint to light off even if occupancy.
3. In smart daylight sensor function, natural light level lighter/lower than daylight setpoint to light off/on MUST keep at least 1 minute, which will turn off/on the light automatically.

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

The remote control comes with 4 scene MODES which are not default. You may make desired parameters and save as the new MODE (1, 2, 3, 4) to configure the installed sensors.

RESET: All settings go back to settings of DIP switch in sensor.

SCENE MODES(1 2 3 4)

Application	Scene Options	Brightness	Detection Area	Hold Time	Stand-by Time	Stand-by Dim Level	Daylight Sensor
Indoor	Mode 1	100%	75%	5min	30min	30%	☀️
Indoor	Mode 2	100%	75%	1min	+∞	30%	☀️
Indoor	Mode 3	100%	75%	5min	30min	30%	30LUX
Outdoor	Mode 4	100%	75%	1min	+∞	30%	☀️ (30LUX/300LUX)

Change the MODES:

1. Press **MODE** / **MODE** / **MODE** / **MODE** button, the remote control LED indicators show existing parameters.
2. Press **▲** / **▼** / **◀** / **▶** to select the new parameters.
3. Press **OK** to confirm all parameters and saving in the mode.

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 the remote control.

Upload the current parameters to sensor(s) and duplicate the sensor parameters from one to another

1. Press **DISP** button or press **MODE** / **MODE** / **MODE** / **MODE**, all parameters are displayed in the remote control.
Note: Check if all parameters are correct. If not, change them.
2. Aim at the sensor and press the **SEND** button, the light that sensor connects to will flash on/off to confirm.
Note: If other sensors need the same parameters, just aim at the sensor and press **SEND** button.