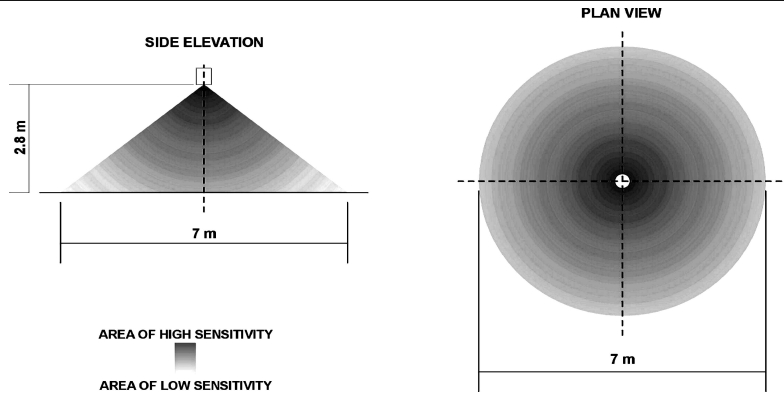


DETECTION PATTERN

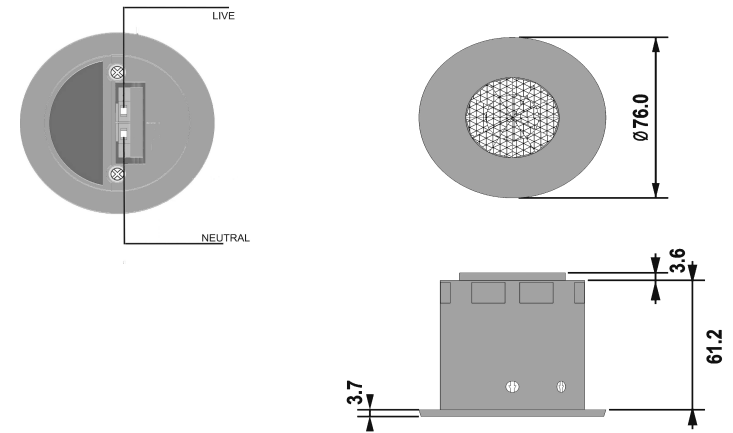


RAPIR RASOFT SETUP SCREEN

See Setup guide for programming information.

The image shows two screenshots of the RAPIR RASOFT setup screen. The left screenshot shows the 'Options' menu with 'Movement Action' selected. It includes checkboxes for '30 Second Exit Delay' and 'Only if lights are off', a 'Movement Action' field set to 'Scene 1', and options for 'Use as absence detector' and 'Ignores Light Sensor'. The right screenshot shows the 'Options' menu with 'Auto Off Trigger' selected. It includes a checked box for 'Auto turn lights off after:' with a timer set to 0 HH, 3 MM, and 0 SS. It also has a checked box for 'Disable Auto Off if they've been turned on by a keypad*' and a 'Timeout Event Action' field set to 'Off'. A note at the bottom reads '* Keypad or Other Room Controllers'.

PRODUCT DATA AND INSTALLATION SHEET RAPIR CEILING PRESENCE DETECTOR



DESCRIPTION

The RAPIR presence detector is designed to provide automatic control, of lighting, heating and ventilation loads. The RAPIR detects movement by means of a PIR sensor and transmits RAKO Scene Codes. When the area is no longer occupied the RAPIR can transmit an Off command after an adjustable time period. Other options such as Programmable Exit Delay, Ambient light settings, Time delays etc are programmable using the RASOFT software package (available separately).

INSTALLATION

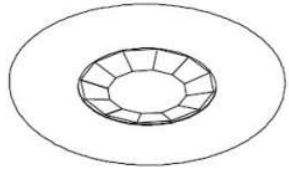
Warning. This device works at mains potential. Be sure to take care when working with electricity.

1. The detector should be sited so that the occupants of the room fall inside the detection pattern shown on page 4, at a recommended height of 2.8m on the ceiling. Note that the lower the sensor is installed the smaller the detection range will be, subject to the parameters shown on the diagram.
2. Avoid direct sunlight entering the sensor.
3. Do not site within 1m of forced air heating or ventilation.
4. Do not site within 1m of any lighting.
5. Do not fix to a vibrating surface.
6. Wire the product using the connector provided.
7. Mount using the methods shown on pages 2, 3.
8. Isolate the mains supply to the circuit at the main consumer unit.
9. Connect the controller via the terminal block to Live supply and Neutral.
10. Switch the mains supply back on at the consumer unit.
11. Set the module address by using a magnet and a room controller or RASOFT
12. Vacate the room or remain very still and wait for the module to transmit an OFF command to a RAKO dimmer module (should take no more than 2 minutes).
13. Check that the dimmer load switches on when movement is detected.
14. To set the LUX level, time delays and mode of operation use RASOFT

Rako thanks you for having purchased a Rako product and hopes that you are pleased with your system. Should for any reason you need to contact us please contact us via our website www.rakocontrols.com or by phoning our customer help line on 01634 226666.

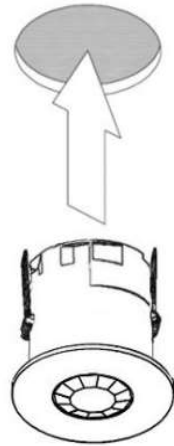
Flush Fixing

Warning - be careful bending springs when mounting unit.

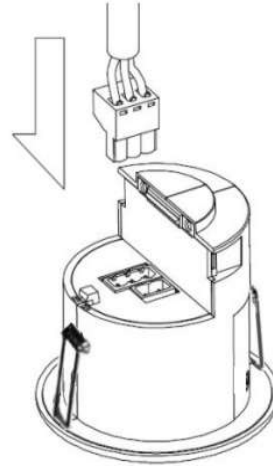


1

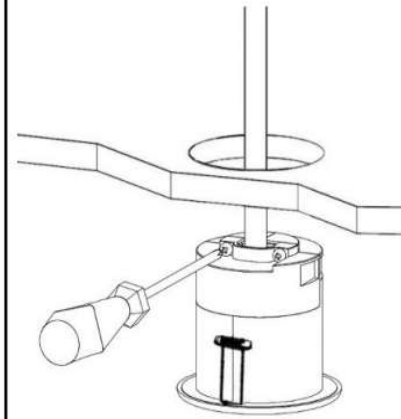
Hole Ø64mm



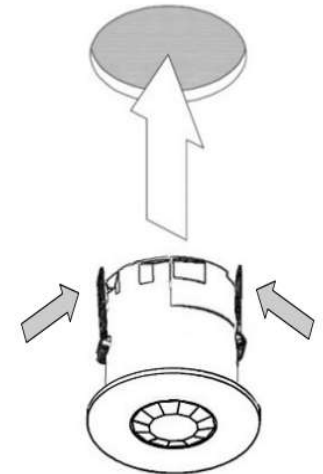
2



3



4

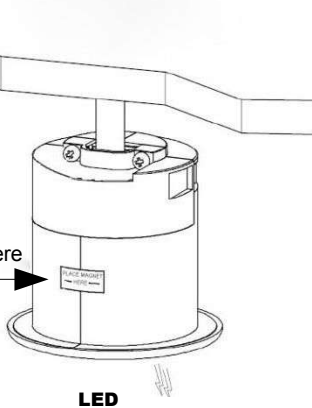


5

Set the RAPIR Address

Set RAPIR Address *before* pushing RAPIR into ceiling

Place magnet here



TESTING THE RAPIR

You will need a RAKO Wallplate, handheld remote or a PC equipped with RASOFT and a RAUSB. You also need a RAKO dimmer or relay module already installed and working. Check that the dimmer is operating correctly with the wallplate/RASOFT. The wallplate and dimmer should already be set to the desired House and Room Addresses.

Apply power to the RAPIR.

Hold a magnet against the RAPIR in the position indicated. A Red LED will illuminate inside the front lens of the RAPIR. Hold the magnet in position until the LED starts to flash.

Put the Wallplate into Programming Mode and send ID to the RAPIR (See wallplate Instructions for further detail), The RAPIR LED should stop flashing.

Switch the room lights on and then off using the wallplate.

Either leave the room immediately, or stay very still for more than 30 seconds.

Move within the RAPIR detection zone – the RAPIR will transmit a Scene 1 command which should illuminate the room light. for 5 minutes.

The default RAPIR settings can be changed using the RASOFT software.

PIR Setup guide

PIRs or Passive Infra-Red sensors are commonly used to turn lights on and off automatically. When this style of control is integrated with manual keypads the control requirements become far more involved. The following is intended to explain the options available within a Rako PIR and their functions. All functions are accessed when programming via Rasoft Pro.

User Level

This guide covers the functions available while programming in either Beginner or Intermediate level. Due to the potential complexity of PIR programming the user should consider carefully before attempting to use expert mode.

The PIR setup tab accesses all of the configuration screens required to program the PIR, some functions are only available for wired (WAPIR) PIR modules only.

Uploading Information to PIRs

When uploading information to PIRs it is important that the PIR is not performing any functions at the same time. This means it is always advisable to upload information to a PIR when the operator is out of detection range of the PIR.

Movement Action Tab

This list of checkboxes determines the command sent by the PIR when it detects motion, or lack of motion (depending on Contact Type selected, see below).

The normal mode of operation of a Rako PIR is as a motion detector, i.e. the PIR will do something (usually turning lights on) if it detects movement.

Ticking 'Use as absence detector' turns the PIR into an absence detector, i.e. it triggers a command when it ceases to detect movement. This is uncommon and if required would normally be selected if the PIR is ONLY to be used to turn lights Off. This should not be confused with the requirement for the PIR to turn lights off AFTER it has switched them on, which is governed by the Auto Off function.

Set Scene Only If Lights Are Off – This function is almost certainly a requirement if the PIR is in a room that also has a Rako keypad. Without this ticked selecting a dimmed scene would always involve movement, which in turn would trigger the PIR to set the lights to full.

30 Second Exit delay – This function allows a user to manually switch lighting off from a Rako keypad. Without this feature the movement of pressing the off button on a keypad would reset and then trigger the PIR bringing the lights back on. It should be noted that this function can cause confusion when testing a PIR by turning lights off and re-entering a room to check it turns them on again, adequate time should be left for the 30 seconds to expire.

Room – A PIR relies on knowing the current state of the room lighting (i.e. On or Off) as well as the ambient light level in order to function properly. It is therefore only under special circumstances that a PIR should trigger commands in Rooms other than the Local Room.

Light Level

A Rako PIR has an internal light sensor which can be set at a level above which the PIR will not activate. It is usually not desirable to have the PIR turn lights on if the room has adequate natural light. Typically a very low level is considered appropriate with the slider set close to the Ignore Light Sensor end of the scale (about 1/10th of the scale).

Live Status - Wired PIRs only.

Clicking the 'Poll Status' button refreshes the Live Status bar. A green infill indicates the ambient light detected by the sensor. This can be used as a gauge for setting the Required Light level above which the PIR will not activate. Note: setting this at the current ambient light level means that the sensor is currently on the cusp of working/not working and this will make testing difficult. The Live Status bar will also show the word 'Motion' in green or 'No Motion' in red to indicate whether the sensor is currently detecting motion. If the sensor is not detecting motion and a timeout has been activated then this will show as a countdown in hours/minutes/seconds.

Reset to Defaults

Resets the default settings of the PIR but DOES NOT reset any addressing information, e.g. House, Room or Channel addresses.

Before Off Tab – Wired PIRs only

Wired PIRs have the ability to send an extra command at a time BEFORE and Auto Off command (see below). This extra command may typically be used to warn an occupant that lights will be turning off soon.

Auto Off Trigger Tab

It is common, but not necessary, that the PIR should turn lights off when it has ceased to detect movement. It is also normal to have a delay, to ensure that temporary inactivity by occupants does not result in lights being turned off.

The Auto Off function is also controlled by three other tick boxes:

Auto turn lights off after - Determines whether the function is active or not, if set the time is set using the HH/MM/SS boxes below.

Disable Auto Off if they've been turned on by a keypad—Enabled by default. Selection of a scene from a Rako keypad will disable the Auto Off function. An example of use of this function is a room, such as a bathroom, where someone may be stationary for long periods of time. If a button, other than off, is pressed on a keypad the PIR will not turn lights off automatically. An off command from a keypad will reset the auto off. Having this function ticked does mean that when a button on a keypad has been pressed, the off function of the PIR will appear not to work, until reset by pressing off on a keypad. Note: Other PIRs in a room DO NOT disable Auto off when they send scene commands in the same way as a keypad does, allowing multiple PIRs to work with this function.

General

The above gives an overview of the features available when programming a PIR. It is usual to have a PIR or PIRs controlling a single Rako Room and interacting with a keypad addressed within that same Room. Sometimes, for various reasons, users program PIRs into Rooms where Group features are enabled or use a Rako Bridge to map commands either from or to a PIR. In all of these circumstances the level of programming complexity increases significantly and should be attempted with extreme caution. In these situations it is worth discussing your requirements with Rako's technical department before attempting programming.

Testing PIRs

When testing PIRs it is often worth programming short time out delays and setting the light level all the way to full whilst checking the basic operation, without doing either the PIR takes a very long time to test or does not work at all if the ambient light is over the operating threshold. Avoid extremely short time out delays, 20-30 seconds would be recommended.