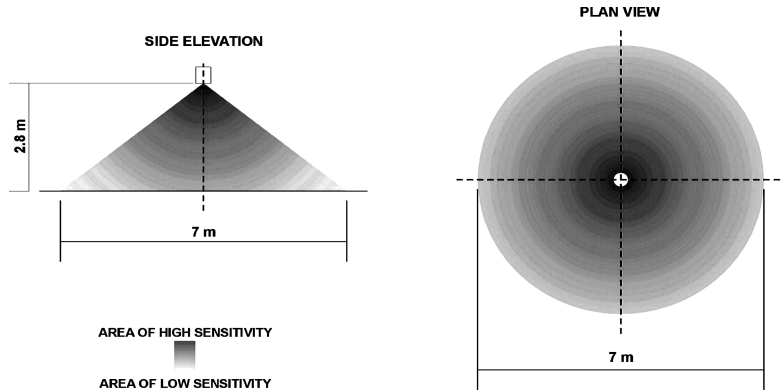
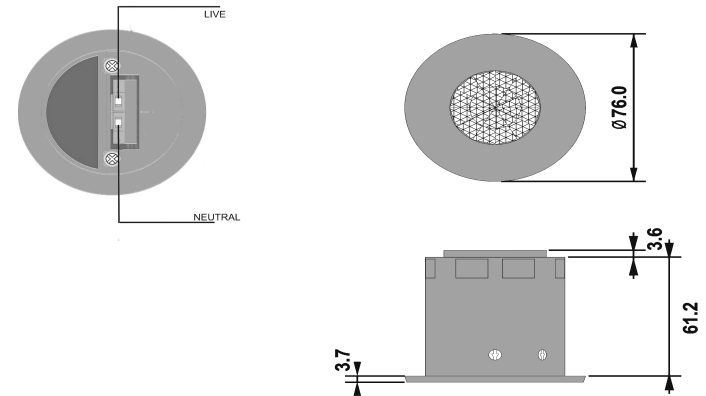


## DETECTION PATTERN



## PRODUCT DATA AND INSTALLATION SHEET WAPIR CEILING PRESENCE DETECTOR



## WAPIR RASOFT SETUP SCREEN

Options

Movement Action Before Off Auto Off Trigger

Action to send when there is movement Required Light Level

30 Second Exit Delay  Only if lights are off

Movement Action

Room: Local Room

Channel: All Channels

Action: Scene

Scene: Scene 1

Fade Rate

Use Default Value

Use as absence detector  Ignores Light Sensor

Reset To Defaults

Live Status: Not Monitoring

Poll Status

See Setup guide for programming information.

Options

Movement Action Before Off Auto Off Trigger

Auto turn lights off after:

HH MM SS

0 5 0

Disable Auto Off if they've been turned on by a keypad\*

Timeout Event Action

Room: Local Room

Channel: All Channels

Action: Scene

Reset To Defaults

Live Status: Not Monitoring

Poll Status

## DESCRIPTION

The WAPIR presence detector is designed to provide automatic control, of lighting, heating and ventilation loads. The WAPIR detects movement by means of a PIR sensor and transmits RAKO Scene Codes onto Rako Wired Network. When the area is no longer occupied the WAPIR 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

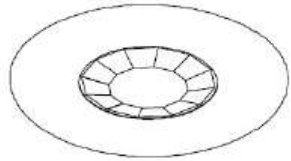
Warning. Be sure to take care when working with electricity.

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. Connect the WAPIR to a Rako Wired network using a WP-CONC or WP-CON Connection module
9. Using Rasoft, Add the WAPIR to the project file like other wired devices (Wallplates, Raklinks etc)
10. Create & Upload MAPS in the WAPIR setup screen to switch lights on and off as required
11. Test the WAPIR by vacating & re-entering the room at intervals. Use the "AutoUpdate" 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](http://www.rakocontrols.com) or by phoning our customer help line on 01634 226666.

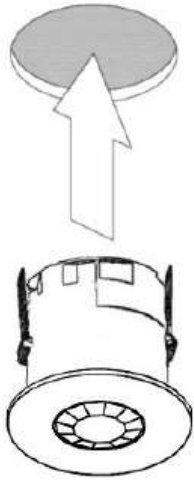
## FLUSH FIXING

*Warning - be careful bending springs when mounting unit.*



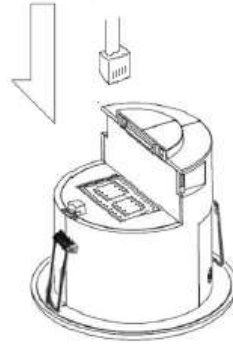
1

Hole Ø64mm

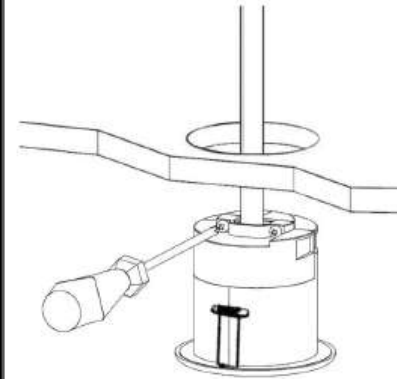


2

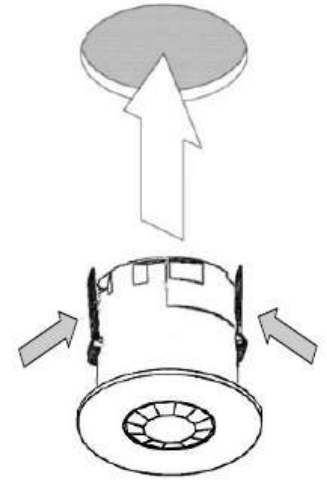
RJ11 data cable  
from WP-CONC



3



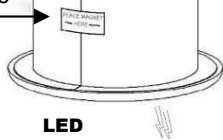
4



## 5 Assign the WAPIR onto the Rako Wired Network

Set WAPIR Address  
*before* pushing  
WAPIR into ceiling

Place magnet here



Hold magnet against case so that  
RED led lights inside PIR module.  
Hold magnet in position until LED  
starts to blink.

## 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.