_____

- Fixed/portable trigger device
- Used to support the care of dementia patients
- For activity monitoring & boundary alarm applications
- Compatible with Reach IP, Advent XT2 and Touchsafe Pro V4.01 onward
- Passive infrared detector
- Free standing or wall mounting
- Door magnet supplied for boundary alarm
- Operation and detection LED indicators
- Red alarm transmit LED indicator
- Green alarm received LED indicator
- 2 user replaceable 1.5V AA Alkaline batteries
- Low battery warning
- Operating Temperature: +5ºC to +55ºC
- Telecare Transceiver: 869.2125MHz
- Digital Heartbeat
- Weight: 128 grams inc. batteries
- Dimensions: 128mm x 57mm x 35mm (HxWxD)
- Product Code: ZXT861

This PIR detector is for use with the activity monitoring feature on Reach IP at-home alarms and Advent XT2 assisted living systems. It monitors the presence of people and records their movements in the Cloud, it does not send an alarm call to the Care personnel.

The PIR can also be used as a boundary alarm for out passage detection with a configurable delay. This makes it possible for the user to leave and return without sending an alarm to the Care personnel, if they don't return within the pre-set delay an alarm is raised. This avoids unnecessary alarms and additional work for Carers caused by users peeking out of their door. There is no alarm when a person enters making it easy for Carers and visitors.

## Positioning

The PIR is for indoor use only, it can be mounted on the wall or door using the bracket provided or simply placed free-standing on a table.
The detection area is about 4 metres within a 90-degree detection angle, see below....

## Wall Mounted Vertical Detection Area
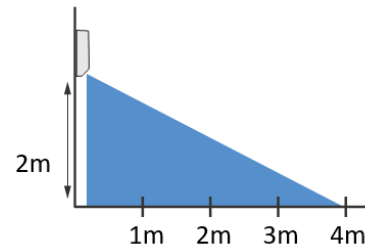


## Free Standing Vertical Detection Area
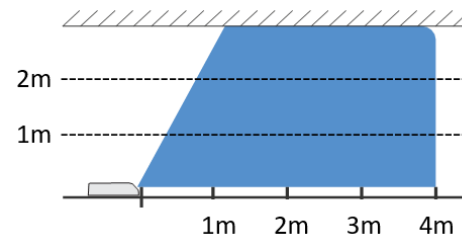


## Horizontal Detection Area
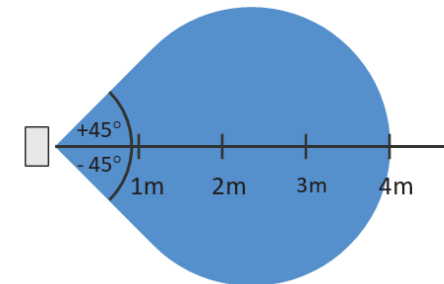


## Placement & Safety Instructions

- Do not place items in front of the PIR detector which may restrict its field of view
- Do not expose the PIR detector to direct sunlight or powerful lights
- Do not expose the PIR detector to rapid variation in temperature
- Do not expose the PIR detector to wind, air conditioning or heating
- Do not expose the PIR detector to dripping or splashing water
- Do not drop the PIR detector or expose to high vibration or shock
- Do not use abrasive or corrosive cleaning agents or detergents when cleaning the PIR detector.
- Do not disassemble the PIR detector or attempt to repair it yourself.
- This product should not be a substitute for routine visual monitoring by a Carer.

_____

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Cowley Road, Blyth Riverside Business Park, Blyth, Northumberland, NE24 5TF.
**Tel: +44 (0) 1670 352371   www.tynetec.co.uk**
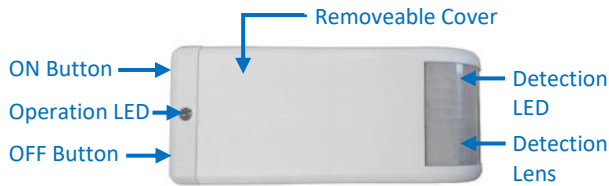
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Doc No. FM0867 V1.04 Page 1

# 869MHz Activity Monitoring PIR Detector

**Trusted Technology**
**Caring for People**

## Product Overview



**Removeable Cover**

**ON Button**
**Operation LED**
**OFF Button**
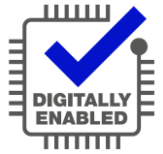
**Detection LED**
**Detection Lens**

**Operation LED**; this will indicate when the PIR is switched on/off, when it is in walk test mode, if the batteries are running low and when an alarm is transmitted/received. *Note: this can be switched off with DIP switch 6.*
**Detection LED**; this will indicate when movement is detected. *Note: this can be switched off with DIP switch 7.*

## Removing the PIR Cover

To fit the batteries, gently squeeze both sides of the PIR in the areas marked ▷ and slide the top cover off the base…



**Slide the cover off this direction**

**Squeeze both sides of the cover here**
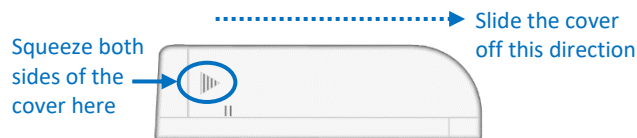
## Start-up Mode

When the batteries are first fitted the PIR will enter Start-up Mode and the Operation LED will **flash green** for 45 seconds. *Note: there is no movement detection or alarm transmissions during the Start-up period.*
If the batteries are low, the Operation LED will **flash red** during the Start-up period. Replace both batteries.
*Note: the batteries should be removed if the PIR is being stored or if it is not being used for a long period of time.*

## Normal Operation

**To switch the PIR ON**;
Press and hold the ON button until the Operation LED lights **green** then release.

**Switch ON**



All movement will be ignored for 15 seconds giving time to vacate the detection area without recording activity. There is also a delay of 15 seconds after movement is detected until an alarm is transmitted - this gives time to enter and switch the PIR OFF without recording activity. *Note: the entry/exit delay can be overridden for instant arm/alarm by selecting the Factory Config setting – DIP switch 1 ON.*

**To switch the PIR OFF;**
Press and hold the OFF button until the Operation LED lights **red** then release.

**Switch OFF**
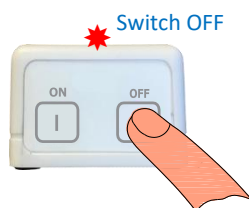


## Boundary Alarm Mode Operation

The PIR sensor in combination with its internal reed switches and door magnet can detect if the user has opened the door and gone out. After the door is closed and there is no movement detected by the PIR sensor an alarm is sent.

A delay can be set if the user regularly goes out and fetches mail/newspaper etc. In this case, if the user goes out and does not return back within a given time frame an alarm is transmitted.

There is no alarm when a person enters the room, making it easy for Care personnel and visitors to come and go.

**Bypass Mode**; when a Carer or other visitor leaves the room, they must press the **ON** button before opening the door. This gives a period of time to open and close the door (default is 15 seconds) without sending an alarm.

## Walk Test Mode

This is used to check the detection area of the PIR.
**To enter the walk test mode**; press and hold the ON button until the Operation LED lights **steady green** and keep holding until it changes to **red** then release the button.
The Operation LED will then **flash red** once every 3 seconds during walk test mode.
Walk in the intended PIR coverage area and check the Detection LED behind the PIR lens **flashes red** when movement is detected.
**To exit the walk test mode**; press the ON or OFF button at any time and the PIR will revert to ON mode, or if no movement is detected for 60 seconds the PIR will revert to ON mode automatically.
*Note: there are no radio alarm transmissions during walk test mode and the Detection/Operation LED's are always enabled.*

## Low Battery Check

When the PIR is switched ON the Operation LED will normally light **green**, if the batteries are low this will be followed by **5 quick red flashes**. Always replace both batteries together: **AA size 1.5V Alkaline (LR6)**.
A low battery check is also performed when the batteries are first fitted – see **Start-up Mode** above.
The PIR automatically checks the battery level every 24 hours. A low battery condition will be reported automatically to the Alarm Receiving Centre (ARC).
The batteries should be replaced within 7 days.
The Operation LED does not indicate when this alarm is sent. The first battery check is performed 1-10 minutes after Start-up. A battery check is also performed before each radio transmission.

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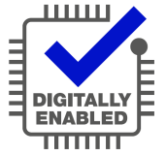
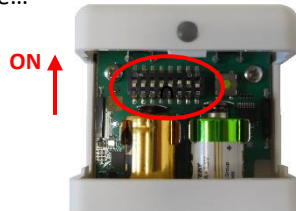## PIR Configuration DIP Switches

Remove the top cover to access the 8 way configuration DIP switch on the PCB inside…

**ON**

Use a terminal screwdriver to set the DIP switches

| DIP No. | Function | Default |
|---------|----------|---------|
| 1 | Configuration Settings | OFF |
| 2 | Power Saving Mode | OFF |
| 3 | Boundary Alarm Mode | OFF |
| 4 | Boundary Alarm Exit Delay | OFF |
| 5 | PIR Detection Sensitivity | OFF |
| 6 | Operation LED after Alarm | ON |
| 7 | Detection LED after Movement | ON |
| 8 | Disable OFF button & Alarm Delay | OFF |

### DIP Switch 1 – Configuration Settings

**OFF**: PIR configuration set using DIP switches 2 to 8.
**ON**: PIR uses the Factory Config below and DIP switches 2 to 8 are ignored.

| Function | Factory Config (DIP1 ON) |
|----------|--------------------------|
| Power Saving Mode | ON |
| No movement before new alarm | 20 Secs |
| Boundary Alarm Mode | Disabled |
| IR Detection Sensitivity | High |
| Operation LED after Alarm | ON |
| Detection LED after Movement | ON |
| OFF Button | Enabled |
| Exit Delay | 0 Secs |
| Alarm Delay | 0 Secs |

*Note: with DIP 1 ON there is no exit/alarm delay. The PIR must therefore be carefully positioned so a Carer can switch the PIR on/off without entering the detection area. Poor placement in this mode will result in false activity activations when Carers leave/enter the room.*
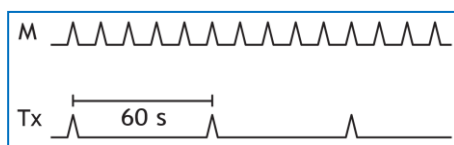
### DIP Switch 2 – Power Saving Mode

Transmitting alarms consumes battery power.
The PIR can be set to Power Saving Mode to extend battery life.
**OFF**: normal operation, the PIR sends an alarm (Tx) after the first movement detection (M) and will ignore new movement detections (M) for 60 seconds before a new alarm is sent.

Normal
Operation

M

Tx    60 s

ON: power saving mode, the PIR sends an alarm (Tx) after the first movement detection (M) and there must be a period of 60 seconds with no movement detection (M) before a new alarm is sent*.

Power
Saving

M    60 s

Tx
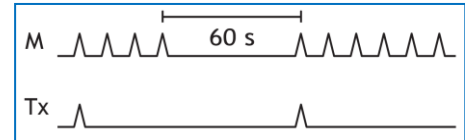
*Note: the period of no movement is reduced to 20 seconds with the Factory Config setting – DIP switch 1 ON.*

### DIP Switch 3 – Boundary Alarm Mode

**OFF**: normal PIR movement detection mode and DIP switch 4 is ignored.
**ON**: enable Boundary Alarm mode if the PIR is fitted to a door and used with the magnetic door contact.
*Note: DIP switches 2 & 5 are ignored if DIP switch 3 is ON.*

### DIP Switch 4 – Boundary Alarm Exit Delay

In Boundary Alarm mode this setting determines the delay before an exit alarm is transmitted.
**OFF**: short delay 5 seconds.
**ON**: long delay 180 seconds.
*Note: DIP switch 4 is ignored if DIP switch 3 is OFF.*

### DIP Switch 5 – PIR Detection Sensitivity

It is possible to adjust the sensitivity of the PIR detector by configuring the number of movement detection pulses that are needed before an alarm is sent.
**OFF**: high sensitivity.
**ON**: low sensitivity.
*Note: DIP switch 5 is ignored if DIP switch 3 is ON and sensitivity is automatically set to high.*

### DIP Switch 6 – Operation LED indication after Alarm

**OFF**: no indication when an alarm is sent.
**ON**: operation LED will indicate when an alarm is sent.
*Note: the Operation LED will always indicate during Start-up Mode and Walk Test Mode regardless of this setting.*

### DIP Switch 7 – Detection LED indication after Movement
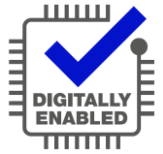
**OFF**: no indication when movement is detected.
**ON**: detection LED will indicate when movement is detected.
*Note: the Detection LED will always indicate during Walk Test Mode regardless of this setting.*

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Doc No. FM0867 V1.04 Page 3

## DIP Switch 8 – Disable OFF Button & Alarm Delay

The function of DIP 8 depends on the position of DIP 3. With DIP 3 OFF (Boundary Alarm not activated) – the OFF button can be configured, and alarm delays are set.

**DIP 8 OFF**: the PIR can be turned off with the OFF button. This means Carers can enter the room and press the OFF button within 15 seconds to prevent activity being recorded. By pressing the ON button when unit is in OFF mode, movement alarms are ignored during the first 15 seconds allowing time for Carers to leave the room (i.e. when being used as a bed alarm).

**DIP 8 ON**: the PIR cannot be turned off with the OFF button, this will prevent users from unintentionally turning the PIR off. There is no alarm delay.

With DIP 3 ON (Boundary Alarm activated) – the OFF button can be configured, and alarm delays depend on DIP 4.

**DIP 8 OFF**: the Boundary Alarm can be turned off with the OFF button.

**DIP 8 ON**: the Boundary Alarm cannot be turned off with the OFF button, this will prevent users from unintentionally turning the door alarm off. There is no alarm delay.

## Wall Mounted Installation

Identify the best location, use the wall mounting bracket as a template to mark the wall.



Fix bracket to the wall this way up

The PIR will be this way up
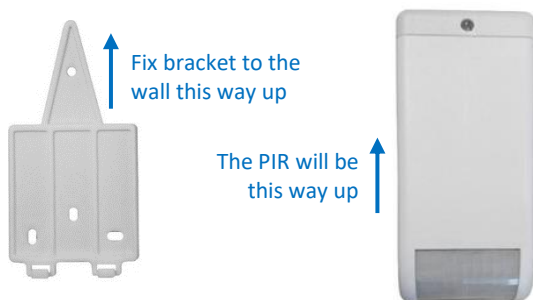
1. Before drilling the wall be sure there are no electrical cables or plumbing under the surface.
2. Use suitable screws & plugs to fix the bracket to the wall noting the correct orientation.
3. Remove the cover from the PIR as described on page 2
4. Fit the two AA batteries as indicated on the PCB.
5. The Operation LED will **flash green** for 45 seconds on Start-up.
6. Slide the PIR base onto the wall bracket, then slide the top cover into place and click closed.

## Free Standing Installation

1. Remove the top cover and fit the two AA batteries as indicated on the PCB.
2. The Operation LED will **flash green** for 45 seconds on Start-up.
3. Slide the top cover back into place and click closed.
4. Position the PIR for best coverage.

## Boundary Alarm Installation

The PIR has internal reed switches on both sides so the door magnet can be fitted on either side.
There are 2 sets of small lines on either side of the PIR cover to indicate where the reed switches are located.



Reed Switch Position
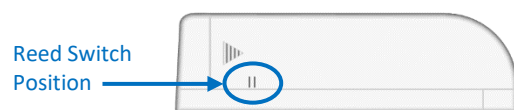
**IMPORTANT:** the centre of the door magnet must be aligned both horizontally and vertically with the two lines.
The distance between the PIR and the magnet must be no more 5mm.
The recommended height for mounting the PIR is around 2 meters.
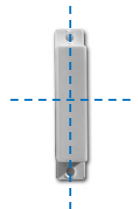


**Outgoing Door**: when the door is outgoing (as seen from the user's premises) the PIR should be mounted on the inside of the door and the magnet on the door frame;
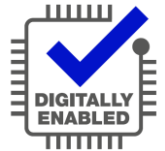


**OUTGOING**

PIR fixed to the door

Magnet fixed to the door frame
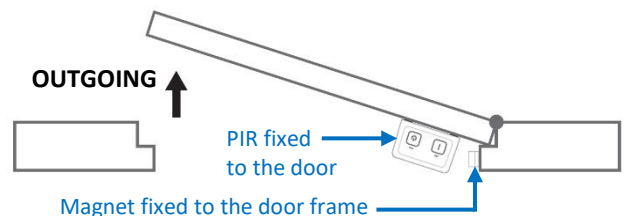
**Ingoing Door**: when the door is ingoing (as seen from the user's premises) the PIR should be mounted on the door frame and the magnet on the door;
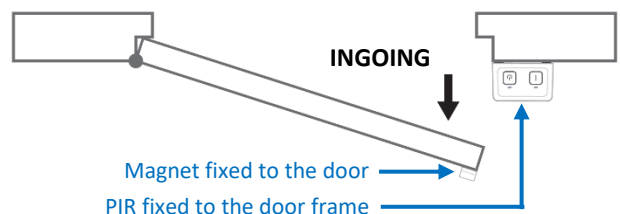


**INGOING**

Magnet fixed to the door

PIR fixed to the door frame

## Out of Range Notification (Reach IP)

The Reach IP can monitor all radio peripheral devices to determine whether they have been damaged or removed from an installation. Should the Reach IP be unable to detect a device's heartbeat it will automatically generate a "radio out of range" notification. Firstly, investigate if there's a genuine reason for the alert, if not, arrange for the peripheral device to be replaced immediately.

*The "Radio out of range timer" can be set from 30 hours to 99999 hours in Pulse CMP. "Radio supervision" can be disabled by unchecking the tick box associated with each peripheral device in Pulse CMP.*

## Maintenance

No routine maintenance is required; however, a walk test should be performed once a month to verify operation. PIR's are not as susceptible to dust and contamination as some detectors but it is still recommended to clean them periodically. PIR's can be dusted or wiped clean with a soft cloth, dampened slightly with mild soapy water. Do not clean with detergents, solvents, or polish.

## Disposal

Waste electrical products should not be disposed of with normal household waste. The PIR motion detector is ideally suited for disposal within the waste electronic and electrical equipment (WEEE) recycling scheme. Please recycle where facilities exist. Check with your local authority or contact your supplier for recycling/disposal advice.

## Telecare Radio ID

The PIR motion detector includes a radio transceiver to communicate with the Reach IP or Advent XT2.

The Radio ID is a 10-digit code printed on the PIR label…
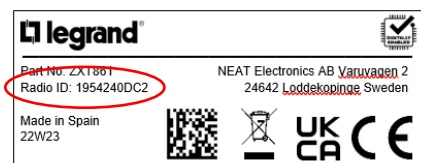


## Registering the PIR onto a Reach IP

Login to Pulse CMP (www.tynetecpulse.com) and enter the Reach IP Serial No. in the **ALARM UNIT** view. Press the **Accessories** button and enter the Radio ID code, Location and Equipment type. Press **Save** then ↻ **Synchronize**.
**IMPORTANT**: when the PIR is installed a test call must be made to check operation and start the digital heartbeat.

Alternatively, with the Reach IP in normal operating mode undo the fixing screw and remove the stand or connector cover to access the ● Power button.

● Power Button →



Press the ● Power button to enter Control Mode, then press and hold the ▢ button until the unit announces "*add radio device*" then release.
Press the ● button to confirm then activate the PIR.
The Reach IP unit will sound a high beep if it's a new device and announce "*range test mode*".
Press ● to confirm, or press ▢ to step to the next function, or press ○ to exit the mode.
Activate the PIR to check operation.

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Doc No. FM0867 V1.04 Page 5

## Registering the PIR onto an Advent XT2

Press the **Settings** button on the Home page of the Manager's Panel. Press the Manager (or Engineer) button, enter the password and press the **Programming** button. Select the **Program Radio Devices** option from the tabs along the bottom of the screen.
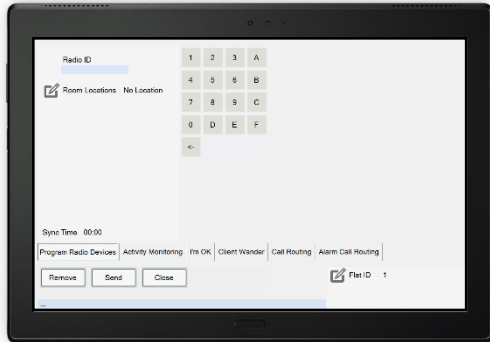


Press **Flat ID** and enter the flat number the PIR is being installed in. Enter 4-digits e.g. 0014.
Press **Radio ID** and enter the 10-digit code taken from the label on the back of PIR detector.
Press **Room Locations** and select where the PIR is located from the on-screen options e.g. Hallway.
Press the **Send** button to update the XT2 system.
Activate the PIR to check operation.

## Registering the PIR onto a Touchsafe Pro

Login to the Master Touchsafe Pro Nursecall Panel (must be V4.01 onward) using Engineer or Manager password. From the Main Menu page select the **Telecare** option to open the screen shown below.
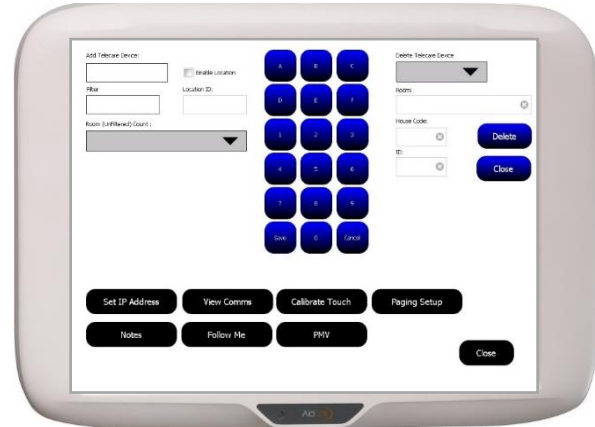


Touch the **Add Telecare Device** box and enter the Telecare device 10-digit Radio ID using the on-screen keypad.
Touch the **Filter** box and enter the zone you want to add the Telecare device to using the on-screen keypad.
Touch the **Room** box ▼ and select the Callpoint ID from the list that will be used to cancel the Telecare alarm.
Touch the **Save** button on the keypad.
Touch the **Close** button to exit.
Activate the PIR to check operation.

## Declaration of Conformity

**UKCA**  We declare this product complies with the relevant UK legislation on condition that it is used in the manner intended, and in accordance with the current installation standards and/or the manufacturer's recommendations. A copy of the full UKCA Declaration of Conformity is available on request.

**CE**  We declare this product complies with the relevant European legislation on condition that it is used in the manner intended, and in accordance with the current installation standards and/or the manufacturer's recommendations. A copy of the full CE Declaration of Conformity is available on request.

Chris Dodd
CEO
Legrand Assisted Living & Healthcare