Tunstall

Battery Radio PIR 869MHz Installation and User Instructions
Part number 67005/45

Functionality

The PIR initiates a radio signal to your 869MHz Social Alarm Equipment upon detection of movement.

A single 3V battery would be expected to last over 18 months (for typical usage). The battery is automatically tested and when found low, a radio signal communicating this is passed to your equipment.

The PIR can be switched to either Entry/Exit (eg with Lifeline tones) or Standard modes. It can also transmit tamper radio signals. Check with Tunstall for full system compatibility; web site www.tunstallgroup.com. If unsure of compatibility, leave the PIR set to 'standard' (as supplied).

Installation (1)

For optimum radio performance it is recommended the PIR is installed away from metallic surfaces. It is advisable to avoid placing above or facing sources of heat, direct sunlight, or high humidity. See detection performance paragraph to confirm position and use.

Mount onto a surface or corner- suggested approx 2m above floor level. The supplied Velcro pads are suitable for mounting the PIR on stable, flat, dust-free surfaces, below 90 Celcius

i) Remove lower end screw, open cover and carefully remove pcb (take anti-static electricity precautions)- lever lower plastic clamp away from pcb to release.

ii) Mount case to wall using chosen methods (see separate paragraphs) Lens should be lowermost.

iii) Reinstall pcb (top end first- ensure is fitted into clamps)

iv) If applicable, set configuration switch (switch number 2). For Entry/ Exit set to left (off, marked E), for standard, set to right (on, marked ST). See diagram. Note if your Lifeline and PIRs are pre-programmed (i.e entry/exit box on box label is ticked) then the Lifeline has been set to recognise the PIR as entry exit and the switch does not have to be set.

v) Install lens converter if required- see diagram.

vi) Install battery (see guidance in battery replacement paragraph) and replace front cover.

vii) Prepare social alarm equipment for radio programming.

viii) Note that the PIR will first enter warm up mode (when PIR LED glows continuously). This could last up to 60 seconds.

ix) Then the PIR will enter walk test mode. Walk test mode transmits for all detected activity and is indicated by the flashing of the LED. This transmission is used to programme the PIR into the social alarm equipment. (Should this activity be when the cover is not in place, a tamper transmission will result.)

x) For 2 minutes after battery insertion, unit is in this walk test mode (the social alarm equipment can also be placed into a mode to confirm radio reception). If walk test is required again- remove and re-insert battery.

xi) Note that if a tamper transmission is received by the Lifeline social alarm equipment when it is in normal operating mode (not in programming mode)- a silent intruder call will result (which can be cancelled using the cancel key on the Lifeline.)

xii) After no activity detection for 2 minutes, the PIR drops out of walk test mode and returns to normal mode. This normal mode is where a transmission is sent only after 2 minutes of non-detection of movement.

xiii) Note that if more then one PIR is to be programmed into the Lifeline, it may be necessary to power up only one PIR at once to avoid multiple transmissions confusing the programming procedure.

Installation (2) Screw Mounting

Knock out the most suitable holes provided in the rear plastics. Mount to wall/surface using provided screws and wall plugs.

Installation (3) Pad Mounting

Four 22mm self adhesive coins are provided for fitting to the surface.

Adhesive methods of mounting have variable performance depending upon the surface integrity.

The surface should be stable, dry and dust free. Chose the position carefully as once placed onto the wall, the pads should not be removed.

Recommendations are below:

Fit loop coins (softer feel) to rear of PIR as below- press firmly: Wall mount illustrated to left, corner mount to right.


Fit hook coins onto loop using Velcro feature, remove backing pad from hook and press PIR firmly onto surface.

Full adhesion onto surface is obtained after 60 minutes- refrain from removing within this time.

Should the PIR need to be removed (eg to ease battery replacement) then it is recommended that it is rolled off the surface from one side to the other.

Lens Converter

Fit as required, remove unnecessary peg
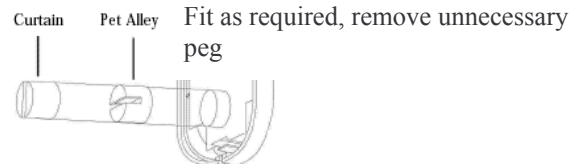
See detection performance paragraph

LED Indicator- low battery

When tamper is active or unit is in walk test, the LED illuminates on movement. If the battery is low, the led flashes 3 times/second. This low battery status (either with or without led) should have already been communicated to the alarm receiving station- the battery is checked around every 8 days.

If the battery is low upon installation, the led will flash for 30 seconds and an auto low battery transmission will be sent, followed by normal operation (with low battery being communicated)

Battery Replacement

A replacement battery is available from Tunstall, part number: S1004033. It is type CR123A

i) Open cover

(note that the Lifeline will make a (tamper) silent call to the control centre- be ready to either allow this call to be answered at the centre or cancel the call using the cancel key)
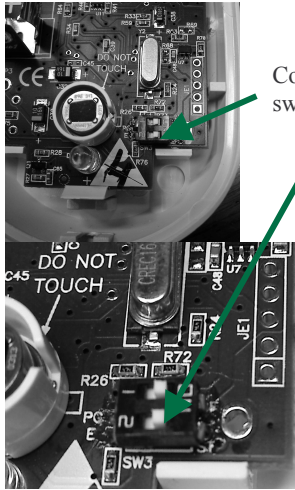
ii) Remove battery

iii) Replace battery- note polarity markings on pcb. Caution- Risk of explosion if battery is replaced by an incorrect type or incorrectly. Dispose of used batteries according to the instructions.

iv)Reassemble cover

(it is not necessary to re-programme the PIR into the alarm receiving station)

Configuration Switch

Configuration switch- 2

Note that switch 1 must be not be moved from rightmost (DF)- default position

Entry Exit
Standard

Specification

Detection method: Dual element Pyro Ceramic Sensor, RFI shielded.
Detection speed 1 to 5 ft/ second
Pulse count- automatic
Warm up period- up to 60 seconds
Daylight immunity: White lens, focal attenuation
Battery life 18 months typical
Auto walk test mode upon power up- timeout after non detection

Detection Performance

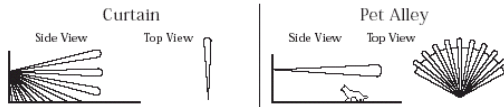Detection performance is maximised if movement is across beams, i.e. at right angles to PIR

Wide Angle Lens:

Wide Angle
Side View   Top View
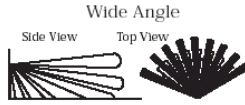
Wide angle:

Angle: 120˚
Distance: 15m
Zone number: 102
Default setting: Automatic

Lens converter, pat. pend.

Curtain
Side View   Top View

Pet Alley
Side View   Top View

Range of cover:

Distance: 9m max.

PIR mounting height for pet alley can be reduced (taking account of pet size.)

NOTICES

Approval: This product is marked with a CE mark and constitutes a Class 2.7 device.
The radio system has been designed to comply with EN50134 series of European Norm standards specific to Social Alarms.

The product exceeds the requirement for Electromagnetic Compatibility (EMC) standard BS EN 50130 part 4; which sets criteria for EMC Immunity for components of fire, intruder and social alarm systems.
The radio triggers (and receiver) are in accordance with the specific European Social Alarm radio frequency band allocation (from 869.20 to 869.25MHz). They operate at 869.2125 MHz.
The radio transmitters comply with mandatory radio standards for Short Range Devices (SRD) ETSI EN 300-220: The radio receiver also conforms and exceeds the mandatory class 1 criteria necessary for **"Highly reliable SRD…serving human life inherent systems."**

Transmitter parameters

The transmitter follows a pre programmed cycle leading to a typical duty cycle class of 1 (<0.1%):	A class 2.7 device
Effective radiated power 200 micro Watts	Frequency error ± 3 kHz maximum
Adjacent channel power <100 nano Watts	
Effective range up to 50m (into standard alarm telephone)	Intended area for use is Europe
Intended environment is group II - indoor in general with intended operating temperature between -10 to +55 Celsius	

Declaration of Conformity
We, Tunstall Telecom of Whitley Lodge, Whitley Bridge, Yorkshire, England, DN14 0HR
Declare that the Wireless 869 Radio PIR conforms with the essential requirements of the RTTE directive 1999/5/EC. Essential radio test suites have been carried out.
Model Number: 67005/45
Applicable standards:
EMC   EN 55022:1998
                   ETSI EN300-683:1997 (Class 1)
                   ETSI EN301-489-1:(2000-08) Class 1
Safety   EN 60950:2000
Radio   ETSI EN 300 220-3:(2000-09)
Social Alarm EN50130-4:1995 + amendment A1:1998
Signed

Technical Director   Date   5 November 2004
Associated Summary Information (04RTTE002A)   The CE mark was first applied in November 2004