Lifeline Digital

Art. 022-25-9xx
Installation guide

For use with DMP

English

346 80 21-75. Version 1.2 Revision 03.2023 - SW

Please Note:

This an international guide and may contain features and functions not currently available in your region.

Please contact your Tunstall Healthcare representative for more information.

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1. Safety instructions

WARNING

Before operating Lifeline Digital, read this this user manual carefully. If you have difficulty reading or carrying out the activities, ask for help. Pay particular attention to the following safety instructions:

- Lifeline Digital must be configured for you before use, otherwise you will not be able to make an alarm call.
- Ensure that Lifeline Digital is always connected to the mains socket.
- Ensure that the socket is always accessible to disconnect Lifeline Digital from the mains.
- Only use power adapters that are intended for use with this product and that have been supplied by Tunstall. Make sure that the power adapter has the following output specification: +12.0V ⎓ 1.0A, (12.0W) 

- Do not allow Lifeline Digital to come into contact with water or other liquids.
- Do not open the casing of Lifeline Digital. The casing must only be opened by qualified personnel.
- Do not expose Lifeline Digital to heat or cold, chemicals, excessive dust or violent shocks. The maximum temperature should not exceed 45°C.
- The distance between Lifeline Digital and an implanted medical device such as a pacemaker or implanted cardioverter/defibrillator must always be greater than 15 cm, otherwise Lifeline Digital may interfere with the device. This minimum distance is recommended by medical device manufacturers. If you suspect that interference has occurred, notify your supplier or the Alarm Receiving Centre (ARC).
- Lifeline Digital must not be operated in areas where the use of mobile phones is prohibited.
- Ensure operation over the mobile phone network and, if connected, the home network (LAN, Ethernet connection for Internet access).
- Lifeline Digital may interfere with the operation of inadequately shielded medical equipment. Consult a physician or the manufacturer of the medical device to determine if the device is adequately shielded from electromagnetic interference (EMI).
- If you feel that something is wrong with Lifeline Digital, notify the Alarm Receiving Centre.
- The pendant is a device suitable for everyday use. However, it can be damaged by extreme external influences (e.g. washing in a washing machine, chemicals, falling down). The damage is not necessarily visible. If pendant has been exposed to extreme external influences, check the function of the pendant, see Testing the installation, page 46.
- The pendant sends radio signals to Lifeline Digital. The radio range of the pendant may vary due to structural conditions. Therefore, test the radio range in your living environment.
- Allow at least 10 cm of space above and on all sides (guideline only) of Lifeline Digital to ensure a free flow of air. Do not cover or obstruct any ventilation slots.
- Do not place objects that create significant noise and/or heat, or objects that are made of metal close to, underneath, or on top of the home unit. For example, televisions, radios, microwaves, Wi-Fi routers, mobile phones, and computers.

2. Introduction

Lifeline Digital is an easy-to-use carephone with advanced telecare features that provides 24/7 access to assistance and remote monitoring. Lifeline Digital is designed to be used primarily by elderly people, people with reduced mobility or people with long-term health conditions that live independently.

Lifeline Digital is also suitable if the person in need of care lives in the same household as a person who due to their physical/mental limitations, is unable to independently trigger an alarm call in the event of an emergency.

2.1. Purpose

2.1.1. Lifeline Digital

Lifeline Digital is a carephone that provides additional security and independence in the home environment. By pressing the red alarm button on Lifeline Digital or the button on the pendant, the user immediately establishes a voice connection to an alarm receiver or Alarm Receiving Centre (ARC).

Each Lifeline Digital is configured by a technician specifically for the user. If you want to know how certain settings have been configured, contact your supplier.

2.1.2. Pendant

The pendant is used for radio triggering of alarm calls by pressing the alarm button. The red LED flashes to indicate that an alarm call has been sent to Lifeline Digital. Lifeline Digital confirms the alarm initiation with a speech message and an LED indication.

The pendant can be worn in different ways. It comes with a neck cord and a wrist strap. Other accessories are available. For more information, contact your supplier.

2.2. Functionality

The main functionality of Lifeline Digital is to distribute alarms and events to an alarm receiver or Alarm Receiving Centre (ARC).

Alarms and events can be triggered actively by the care recipient or passively by the system. Lifeline Digital distributes alarms and events according to pre-configured sequences to an alarm receiver or an Alarm Receiving Centre (ARC). The type of alarm or event determines which sequence to use for distribution.

Lifeline Digital has a keypad with three large buttons and three LED indicators. The buttons are used for basic alarm handling such as making alarm calls and manage telecare features. The buttons can also be used to adjust speaker volume, LED intensity and to connect or disconnect telecare peripherals. Lifeline Digital is equipped with a microphone and a speaker allowing the care recipient to use the device as a speakerphone during an alarm call.

Lifeline Digital primarily communicates using IP protocols via an Ethernet connection or over a 4G network, with fallback to 3G and 2G if 4G is unavailable. Lifeline Digital supports VoLTE (Voice over LTE) and VoIP (Voice over Internet Protocol) voice calls. Analog/GSM communication is also supported.

Lifeline Digital can connect to Tunstall's Device Management Platform (DMP) which is a cloud-based system that provides remote management, configuration and monitoring.

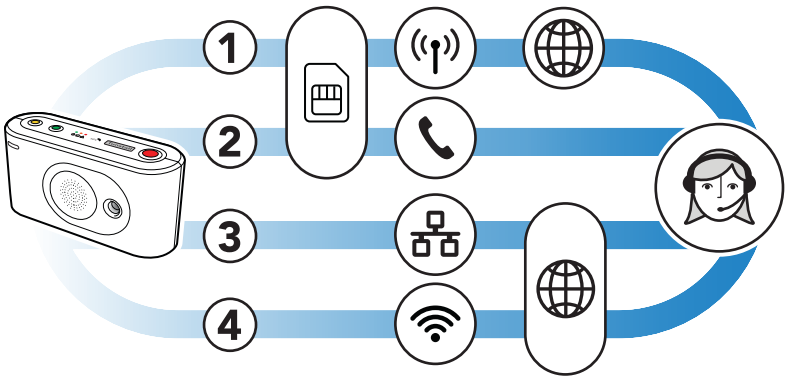
Lifeline Digital provides several advanced telecare and time control features that can be customized to fit individual requirements. In addition, Lifeline Digital has several device monitoring and backup features that continuously ensure the health of the device.

The Smart sensor platform provides additional dynamic features that combine sensors, timers and actuator control. These features can typically be scheduled for when and for how long they are active or inactive.

2.2.1. Communication paths

Lifeline Digital can communicate with alarm receivers and Alarm Receiving Centres (ARCs) across several different communication paths:

1. Cellular data network using IP protocols, including Voice over LTE (VoLTE)
2. Cellular network for analog/GSM voice calls
3. Ethernet/wired IP network using IP protocols, including Voice over Internet Protocol (VoIP)
4. Wi-Fi for additional connectivity



The cellular communication paths (1 and 2) use the SIM card to connect the device to a network. These communication paths are used to transmit data such as alarm information and voice calls. Lifeline Digital typically communicates over the 4G network with fallback to 3G and 2G if 4G is not available. Lifeline Digital supports VoLTE voice calls over the 4G network.

The device can connect to a wired IP network via a local router or network socket (3). This communication path is used to transmit data such as alarm information and VoIP voice calls.

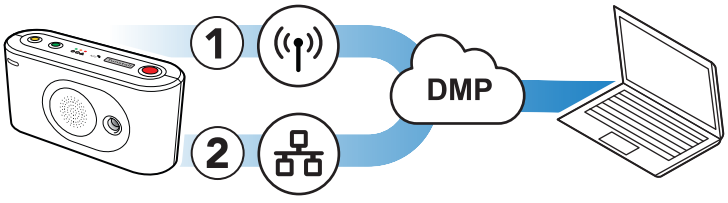
WARNING
No technical changes may be made to the router without the knowledge of your Telecare service provider, because this can interrupt the permanent connection to the Alarm Receiving Centre.

The device can connect to a local Wi-Fi network (4) to enable additional connectivity.

2.2.2. Communication paths for DMP

Tunstall's Device Management Platform (DMP) is a cloud-based system that provides remote management, configuration and monitoring of connected devices. Lifeline Digital and DMP communicate via:

1. Cellular network data (1)
2. Ethernet/wired IP network (2)

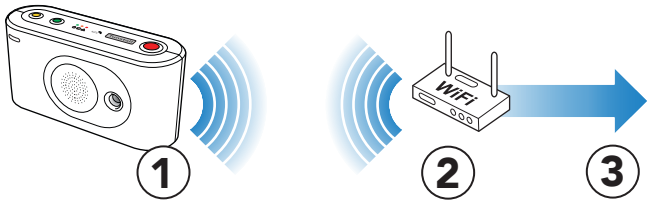


These communications paths are used to transmit heartbeats, configuration and firmware updates between DMP and connected devices. DMP is not part of the alarm distribution and holds no information of care recipients.

2.2.3. Wi-Fi connectivity

Lifeline Digital has Wi-Fi capability and can either connect to a local Wi-Fi network or be used to create an access point (AP).

- Connect Lifeline Digital (1) to a local Wi-Fi network (2) to enable additional connectivity



- Configure Lifeline Digital to act as an access point (AP) for Tunstall verified sensors and peripherals. This configuration can be used to stream video from a surveillance camera (1) via the device (2) to an alarm receiver (3)

2.2.4. Peripherals and radio sensors

Tunstall provides various alarm and telecare peripherals with different types of radio sensors. Available peripherals include personal alarm buttons/pendants, smoke detectors and door alarms. Tunstall also provides equipment with third party sensors such as Nexa smart home actuators.

Lifeline Digital supports:

- Tunstall's bidirectional frequency hopping that can receive radio signals across two separate radio frequencies: 869,2125 MHz and 868,3000 MHz. If the primary frequency is blocked, the device receives the signal across the secondary frequency (Tunstall Connected radio, two-way protocol).
- European 869,2125 MHz social alarm frequency (Tunstall classic, one-way protocol)
- Bluetooth 5.1 which enables connectivity with, for example, key-less locks
- Remote operation of Nexa smart home actuators across the 433.92 MHz frequency band

2.3. About this document

This document describes how to install and configure Lifeline Digital.

Make sure that you have read the document and are familiar with the installation and configuration process. Typically, not all sections in this document will be relevant to your case. Omit sections and settings that are already pre-configured or does not apply to your case.

It is assumed that an installer or technician is familiar with telecare alarm devices and has received training specific to Lifeline Digital and relevant configuration and management tools as well as any other products or systems that are relevant for installation and configuration of the device.

2.3.1. Version

This document reflects DMP version 4.3.

2.3.2. Symbols used in this document

WARNING
The warning symbol indicates a serious risk of damage to the equipment or personal injury.

CAUTION
The caution symbol indicates the possibility of damage to the equipment.

NOTE
The note symbol indicates additional information.

2.4. Device monitoring

Lifeline Digital has several monitoring and fallback features that ensure the operation of the device.

2.4.1. Periodic test alarm

The periodic test alarm checks the connection between Lifeline Digital and the Alarm Receiving Centre (ARC) at regular intervals. If the ARC does not receive a periodic test alarm from a device as expected, an alarm is generated.

2.4.2. Periodic link test

The periodic link test checks the connection between Lifeline Digital and connected peripherals with radio sensors at regular intervals. If the device does not receive a periodic link test transmission from a peripheral as expected, an alarm is sent to the Alarm Receiving Centre (ARC).

2.4.3. Link test

The link test checks the connection between Lifeline Digital and a peripheral with radio sensor at an adjustable interval. If the device does not receive a variable link test transmission from the peripheral as expected, an alarm is sent to the Alarm Receiving Centre (ARC). This link test does not affect the periodic link test.

NOTE
This feature is only available for Tx4 sensors.

2.4.4. Mains failure alarm

The mains failure alarm notifies the Alarm Receiving Centre (ARC) if a mains power failure occurs. The alarm is generated if mains power does not return within the specified time period. A random number of minutes (max. 59 minutes) is automatically added to the specified time period to prevent that all devices in the affected area generate alarms at the same time.

2.4.5. System warnings

System warnings are visual (LED) and audio indications that notifies the care recipient or caregiver of power and connectivity errors.

2.4.6. Heartbeats and online polls

Lifeline Digital sends heartbeats and online polls to Tunstall's Device Management Platform (DMP) at regular intervals:

- Heartbeats contain data about the status of the device. An alternative interval can be enabled to conserve energy when the device is operating on backup batteries.
- Online polls contain additional data about the device and are transmitted less frequently than heartbeats.

2.4.7. Low battery alarm

Battery powered radio sensors automatically notifies Lifeline Digital when the battery is running low. Lifeline Digital then generates a low battery alarm in conjunction with an alarm transmission to the Alarm Receiving Centre (ARC).

For example, when a radio sensor that has a low battery status is triggered, Lifeline Digital generates two separate alarms: one user alarm and one additional low battery alarm. The user alarm is routed to staff at a monitoring centre while the low battery alarm can be routed to technical support staff instead.

Low battery alarms are typically restricted to once every 24 hours to preserve battery life and limit data traffic to the ARC.

2.4.8. DMP

Tunstall's Device Management Platform (DMP) is a cloud-based system that provides remote management, configuration and monitoring of connected devices. From DMP it is possible to manually configure settings or apply preconfigured templates to one or several devices. DMP can also distribute configuration and firmware updates.

Within DMP it is possible to access the internal log of each connected device to examine what events have occurred. DMP also provides a continuous overview of the status (heartbeats) of each device. However, DMP is not part of the alarm distribution and holds no information of care recipients.

DMP requires a username and password.

2.5. Telecare features

Lifeline Digital has several advanced telecare features that can be customized to fit individual care requirements.

2.5.1. Alarm calls and alarm handling

The main functionality of Lifeline Digital is to distribute alarms and events to an alarm receiver or Alarm Receiving Centre (ARC). Alarms and events can be actively triggered by a care recipient or passively by the system. Lifeline Digital distributes alarms and events according to pre-configured sequences to the receiver or ARC. The type of alarm or event determines which sequence to use for distribution.

When an alarm call is initiated, the care recipient can use Lifeline Digital as a speakerphone to communicate with the alarm receiver or ARC operator.

2.5.2. Home/Away

The Home/Away feature is used to notify the system and the Alarm Receiving Centre (ARC) when the care recipient is away (or home). In the Away mode some functions and alarms are modified or suspended to avoid false alarms.

2.5.3. Presence/Ready

The Presence/Ready feature is used to notify the system and the Alarm Receiving Centre (ARC) when a caregiver is present and when the caregiver is ready to depart. Optionally, a deactivation timer can be configured to automatically deactivate Presence mode in case a caregiver forgets to register Ready before departing. In Presence mode some alarm functionality is modified and the Assistance feature can be enabled.

2.5.4. Speech messages

Speech messages are audio announcements that acknowledge an action or alert the care recipient or caregiver that a certain action is required. Speech messages are also intended to simplify testing and configuration for installers and technicians.

2.5.5. Basic Inactivity (BIA) monitoring

The Basic Inactivity (BIA) monitoring function is used to ensure that a person, who has unexpectedly become incapacitated and unable to trigger an alarm call, is visited or called as soon as possible following a preset time period. For example, after 24 hours at the latest.

The Basic Inactivity (BIA) monitoring generates an inactivity alarm if no activity is detected within a certain time. Activity is typically registered by pressing the yellow **Extra** button or passively triggering a motion sensor. Optionally, BIA can also be used as input for reporting Activities of Daily Life (ADL) to the Alarm Receiving Centre (ARC).

NOTE
When the system is set to Away mode, no alarm is generated.

2.5.6. Cancel At Source (CAS)

The Cancel At Source (CAS) feature repeats an active alarm until a caregiver physically cancels the alarm by pressing the green **Cancel** button on the device. CAS can be used to ensure that high dependency care recipients are visited before an alarm is completely cleared/acknowledged.

2.5.7. Temperature guard

The temperature guard monitors the ambient temperature and notifies the Alarm Receiving Centre (ARC) if the temperature falls below or rises above the pre-configured limits. The temperature guard can be used in conjunction with actuator control to turn on a heater or a cooling fan.

NOTE
The temperature guard has an initial stabilisation period of 180 minutes (3 hours) following power-up. During this period the temperature guard does not monitor the ambient temperature. This is to prevent the device from generating an alarm if it has been stored in a hot or cold environment prior to installation.

2.5.8. Emergency
The Emergency feature allows a caregiver to send an emergency alarm via Lifeline Digital using a personal alarm trigger.

2.5.9. Assistance
The Assistance feature allows a caregiver to send an assistance alarm if additional help is required. This function is only available in Presence mode.

2.6. Smart sensor platform

The Smart sensor platform provides dynamic features that combine sensors, timers and actuator control. These features can typically be scheduled for when and for how long they are active or inactive.

2.6.1. Time Schedule Control (TSC)
The Time Schedule Control (TSC) is used to configure schedules for features and alarm handling. Associated features and alarm handling functionality can be scheduled to be active on certain days of the week or during certain hours of the day.

2.6.2. Virtual Intelligent Bed Sensor (VIBS)
The Virtual Intelligent Bed Sensor (VIBS) monitors when a care recipient is in bed and out of bed. VIBS alerts the Alarm Receiving Centre (ARC) if the care recipient does not go to bed as expected or gets out of bed and does not return within the specified time. A motion sensor can be used to suppress alarms if movement is detected and the care recipient is considered to be OK while out of bed. VIBS can be used with or without the light control feature to switch on and off lights when the care recipient gets in and out of bed.

VIBS requires a bed sensor, a PIR motion sensor and optionally a Nexa Smart plug.

2.6.3. Virtual Intelligent Property Sensor (VIPS)
The Virtual Intelligent Property Sensor (VIPS) alerts the Alarm Receiving Centre (ARC) if a care recipient leaves the door open for too long or exits the property. The care recipient is considered to be absent when the door has been opened and closed but no movement has been detected within the property by the motion sensor. If the motion sensor detects movement after the door has been closed, the care recipient is considered to be at home and no alarm is generated.

If the door is left open for too long an alarm is generated. However, the alarm is deferred as long as the motion sensor detects movement while the door is open. This is to prevent false alarms in case the care recipient remains by to the door or briefly goes back into the property.

VIPS requires a door sensor and a PIR motion sensor.

2.6.4. Actuator control
Actuator control is used to turn on and off home appliances. For example, actuator control can be used to switch on a light when a care recipient gets out of bed or to turn on a heater if the temperature drops below a certain level.

Lifeline Digital currently supports Nexa Smart plugs. Unlike other types of peripherals, the Smart plug does not transmit to Lifeline Digital. Instead, Lifeline Digital sends an "On" or "Off" transmission to switch on or off the Smart plug.

2.7. Configuration methods

2.7.1. Local configuration
Local configuration refers to settings that can be configured locally using the buttons on the keypad. Local configuration is typically used for configuration of basic settings and testing during installation and maintenance.

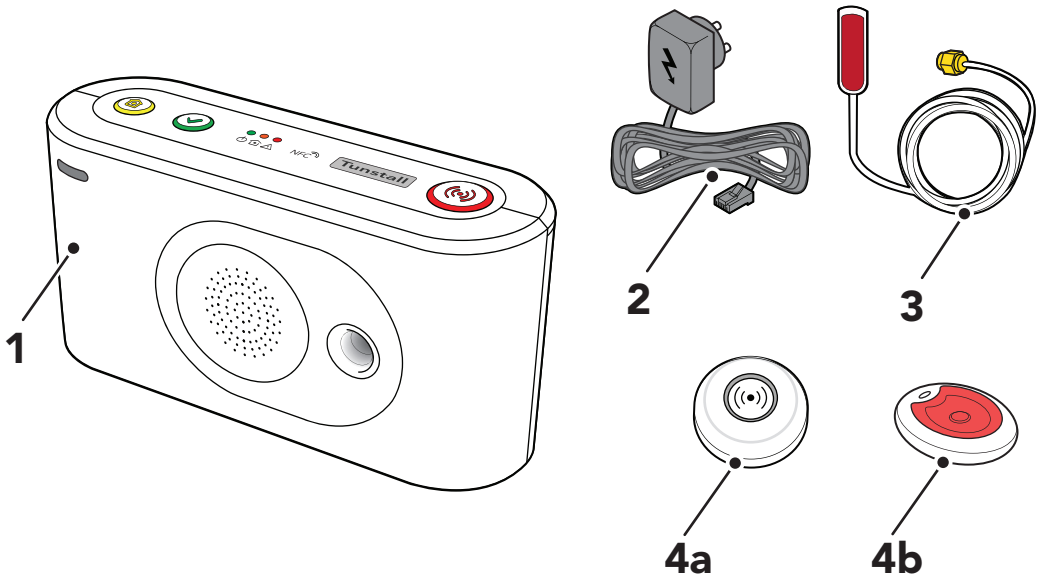
2.7.2. DMP
Tunstall's Device Management Platform (DMP) is a cloud-based system that provides remote management, configuration and monitoring of connected devices. From DMP it is possible to manually configure settings or apply preconfigured templates to one or several devices. DMP can also distribute configuration and firmware updates.

Within DMP it is possible to access the internal log of each connected device to examine what events have occurred. DMP also provides a continuous overview of the status (heartbeats) of each device. However, DMP is not part of the alarm distribution and holds no information of care recipients.

DMP requires a username and password.

3. Overview

3.1. What's in the box



1. Lifeline Digital
2. Mains power adapter
3. External cellular antenna (option)

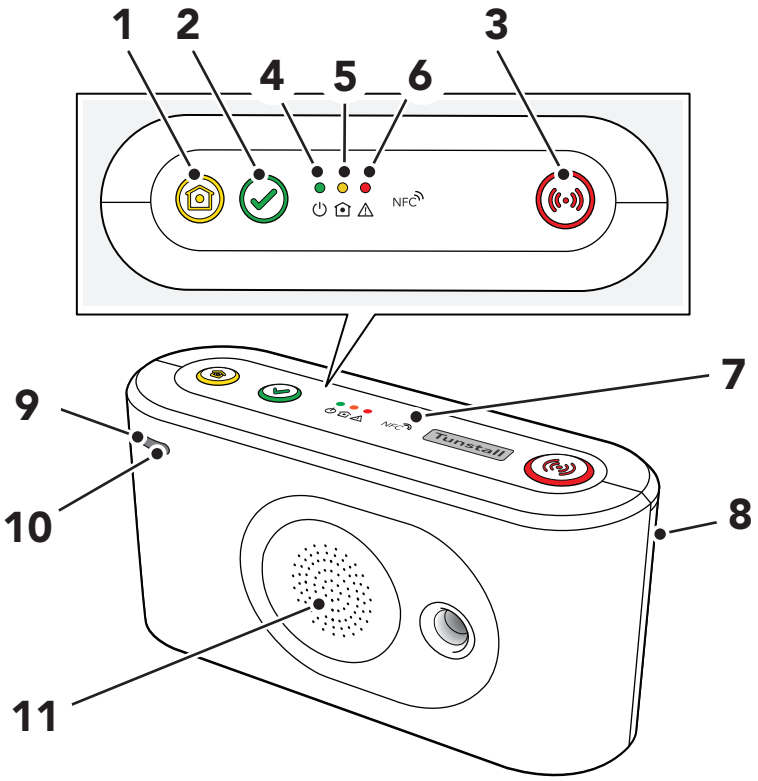
4a. Tx4 alarm button/pendant (region specific)

4b. MyAmie pendant (region specific)

Also included in the box:

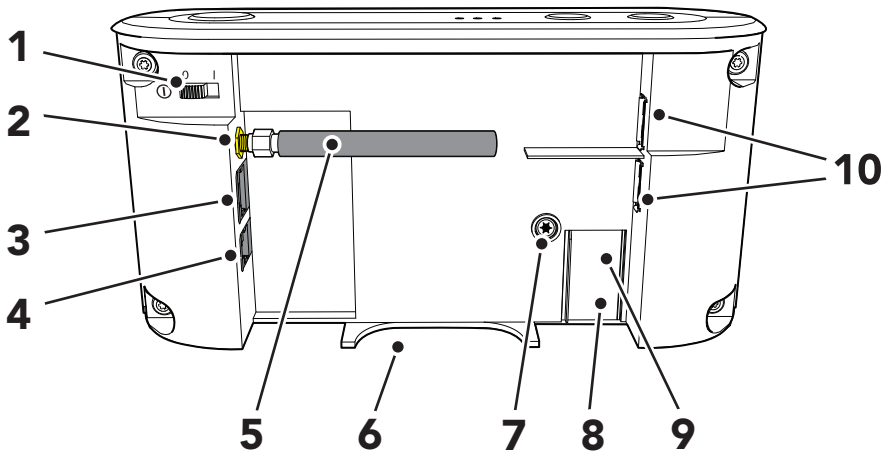
- Wrist strap and holder for Tx4 alarm button/pendant (region specific)
- Neck cord and holder for Tx4 alarm button/pendant (region specific)
- MyAmie neck cord (region specific)
- MyAmie wrist strap (region specific)

3.2. Front/top view



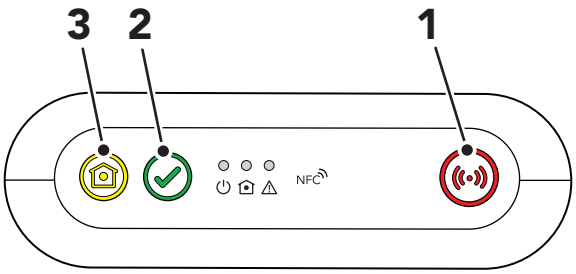
1. Yellow **Extra** button
2. Green **Cancel** button
3. Red **Alarm** button
4. Green LED indicator
5. Yellow LED indicator
6. Red LED indicator
7. NFC
8. Back cover
9. Microphone
10. IR receiver
11. Speaker

3.3. Rear-view



1. On/Off (I/0) switch
2. Antenna connector
3. Ethernet/network connector (RJ45 port)
4. Power connector 12V (RJ11 port)
5. Stub antenna
6. Cable slot
7. Security screw (T10) for battery slot
8. Battery slot
9. SIM card holder inside battery slot
10. 2x USB 2.0 ports

3.4. Button functions



1. Red **Alarm** button
2. Green **Cancel** button
3. Yellow **Extra** button

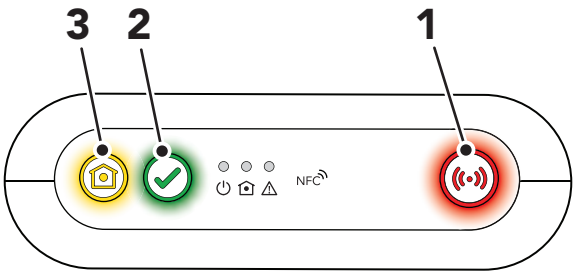
Mode	Button	Function
Standby	Press the red **Alarm** button	Activate alarm/make alarm call
	Press the green **Cancel** button	Cancel alarm Cancel call back Cancel At Source Cancel system warning announcement
	Press and hold the green **Cancel** button for 3 seconds[a.]	Toggle Home/Away mode[b.]
	Press and hold the green **Cancel** button for 10 seconds	Cancel all alarms and events in the distribution queue
	Press the yellow **Extra** button.	Defers inactivity alarm and resets the basic inactivity timer (BIA)[b.]
	Press and hold the yellow **Extra** button for 3 seconds[c.]	Connect to DMP (including configuration and firmware update)
	Press and hold the green **Cancel** button then press the red **Alarm** button twice	Toggle Presence/Ready mode[b.]
	Press and hold the green **Cancel** button then press and hold the red **Alarm** button for 5 seconds	Send a manual test alarm
	Press and hold the green **Cancel** button then press and hold the red **Alarm** button for 10 seconds	Connect to DMP (including configuration and firmware update) - alternative method
	Press and hold the green **Cancel** button, then press and hold the red **Alarm** button and the yellow **Extra** button for 3 secs.	Enable programming mode
Call back	Press the red **Alarm** button	Answer incoming call[b.]
	Press the green **Cancel** button	Cancel call back End ongoing call
Presence/Ready [b.]	Hold down the green **Cancel** button and press the red **Alarm** button twice.	Toggle Presence/Ready
Home/Away [b.]	Press and hold the green **Cancel** button for 3 seconds[a.]	Toggle Home/Away mode
Basic Inactivity Monitoring (BIA) [b.]	Press the yellow **Extra** button	Defers the inactivity alarm and resets the inactivity timer.
	Press and hold the green **Cancel** button then press the yellow **Extra** button	BIA timeout, temporarily disables BIA
	Press the yellow **Extra** button	Cancel BIA timeout/ resume BIA
Cancel At Source (CAS) [b.]	Press the green **Cancel** button	Cancel alarm at source
Assistance (in Presence mode) [b.]	Press red **Alarm** button	Call for assistance (for caregivers)

[a.] This function can be reassigned to the yellow **Extra** button by your supplier. Contact your supplier if you have any questions.

[b.] Feature must be enabled.

[c.] This function can be reassigned to the green **Cancel** button by your supplier. Contact your supplier if you have any questions

3.5. Button LEDs

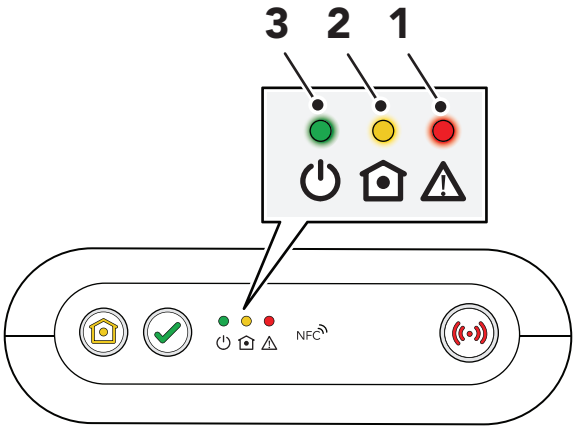


1. Red **Alarm** button
2. Green **Cancel** button
3. Yellow **Extra** button

Indication	Status
Red Alarm button LED on	Standby mode
Red Alarm button LED flashing (0.5s on/4.5s off)	Standby mode on backup battery
Red Alarm button LED flashing (0.5s on/0.5s off)	Connection attempt
Red Alarm button LED flashing (1s on/1s off)	Pausing between connection attempts
Red Alarm button LED flashing (0.5s on/4.5s off)	No remaining connection attempts
Green Cancel button LED on[a.]	Away mode
Green Cancel button LED flashing, (0.5 s on/ 4.5 s off)[a.]	Away mode on backup battery
Yellow Extra button LED flashing (0.5 s on/14.5 s off)	Idle, waiting to restart Basic inactivity monitoring
Yellow Extra button LED flashing (0.5 s on/9.5 s off)	Basic inactivity monitoring active
Yellow Extra button LED flashing (0.5 s on/ 0.5 s off)	Sending basic inactivity alarm

[a.]This function can be reassigned to the yellow **Extra** button by your supplier. Contact your supplier if you have any questions.

3.6. LED indicators



1. Red LED indicator
2. Yellow LED indicator
3. Green LED indicator

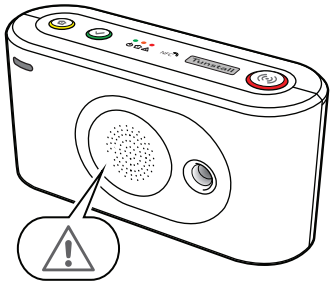
Indication	Status
Green LED on	Standby mode
Green LED flashing, (0.5 s on/ 4.5 s off)	Standby mode on backup battery
Green LED flashing (0.5 s on/ 0.5 s off)	Connection attempt
Green LED flashing (1 s on/1 s off)	Pausing between connection attempts
Green LED flashing (0.5 s on/ 4.5 s off)	No remaining connection attempts
Green LED rapid flashing	Cellular modem initialization
Yellow LED on	Presence mode
Yellow LED flashing (0.5 s on/ 2 s off)	Presence mode on backup battery
Yellow LED flashing (2 s on/ 2s off)	Cancel At Source mode
Yellow LED flashing (0.5 s on/ 4.5 s off)	Cancel At Source mode on backup battery.
Yellow LED flashing (0.5 s on/ 0.5 s off)	Connection attempt to DMP
Yellow LED flashing (1 s on/ 1 s off)	Pausing between connection attempts to DMP
Yellow LED rapid flashing	Media processor starting up
Red LED on	The microphone is turned on

System warning indications [a./b.]	Status
Red LED flashing x1	Ethernet failure
Red LED flashing x2	Mains power failure
Red LED flashing x3	Backup battery low
Red LED flashing x4	Cellular modem failure
Red LED flashing x5	Radio failure/interference

[a.] Feature must be enabled.

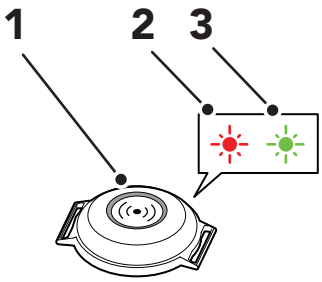
[b.] Note that if several error conditions are present they are presented sequentially with a 2 second pause between indications. For example, two consecutive flashes followed by a pause and three consecutive flashes indicates that there is a mains failure and that the battery is low

3.7. System warning announcements



Announcement	Description
"Warning"	Warning announcement that is followed by a warning message
"There is no mains power"	AC power to the device is lost
"Mains power is restored"	AC power to the device is restored
"Battery low"	The backup battery is low
"Reduction in radio range detected"	Radio interference is detected
"Radio system restored"	No radio interference is detected, and the radio system is restored
"Ethernet connection failure"	The Ethernet cable is disconnected
"Ethernet connection restored"	The Ethernet cable is reconnected
"Cellular data connection failure"	The cellular data connection is failing
"Cellular data connection restored"	The cellular data connection is restored

3.8. Tx4 alarm button/pendant

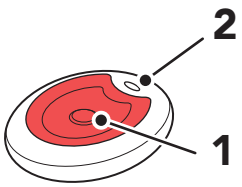


1. Push-button
2. Red LED indicator
3. Green LED indicator

When the button (1) is pressed:

- the red LED (2) lights up to indicate that the Tx4 is sending a radio signal to the Lifeline Digital.
- the red LED (2) flashes to indicate that the battery is low and that Tx4 is sending a radio signal to the Lifeline Digital.
- the green LED (3) lights up to acknowledge that the radio signal has been received by the Lifeline Digital

3.9. MyAmie pendant



1. Push-button
2. Red LED indicator

When the button (1) is pressed, the red LED indicator (2):

- lights up (for approximately 3 seconds) to indicate that MyAmie is sending a radio signal to the Lifeline Digital
- flashes (for approximately 3 seconds) to indicate that MyAmie is sending a radio signal to the Lifeline Digital but that the battery is low

4. Installation

This chapter describes how to install Lifeline Digital.

Before installation, the device must be prepared for active use:

- If the device is prepared and configured within Tunstall's Device Management Platform (DMP), either download the settings prior to on-site installation or make sure that the settings are ready for download from DMP during the installation process.
- Register the device with the Alarm Receiving Centre (ARC), if applicable.

Tunstall recommends that as much configuration as possible is carried out prior to the installation. However, settings that are related to the requirements of an individual care recipient, such as speaker volume and LED intensity, must be adjusted during installation. All components included in the installation must be tested on-site in addition to any previous testing that may have been done.

Make sure that you have read the document and are familiar with the installation and configuration process. Typically, not all sections in this document will be relevant to your case. Omit sections and settings that are already pre-configured or does not apply to your case.

Contact your supplier or Tunstall if you have any questions.

4.1. Connect and install Lifeline Digital

4.1.1. Determine a location for the device

Place the device in a location that:

- provides good audio coverage for the care recipient
- is expected to provide good radio coverage for all peripherals
- is expected to provide strong cellular signal (if applicable)
- is within cable reach of an internet router or Ethernet network socket (if applicable)
- is within cable reach of a wall socket
- is shielded from sources of heat, noise, or electrical interference

Do not place the device:

- in direct sunlight
- near a heater, as this may interfere with the integral temperature sensor and cause false alarms

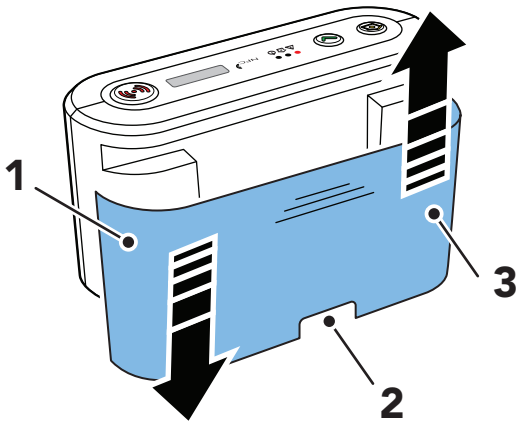
The device should remain in the intended location during installation. However, it may be necessary to adjust position or change location to improve cellular reception or radio range of the peripherals. Do not permanently mount the device until installation, configuration and testing is completed.

4.1.2. Remove and replace the back cover

NOTE
Only remove the back cover for installation, configuration, or maintenance. The back cover protects the device from tampering.

To remove and replace the back cover:

a) Push and slide out the back cover to remove it (1).
b) Run all cables through the cable slot (2).
c) Replace the back cover when installation, configuration or testing is completed (3).



4.1.3. Install SIM card

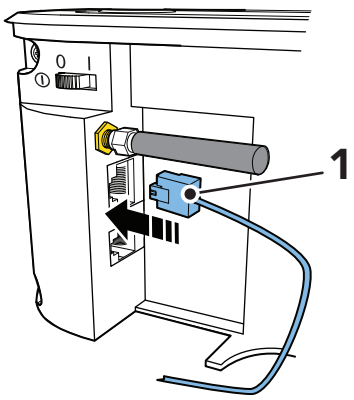
Lifeline Digital is typically delivered with a pre-installed mini-SIM card. However, if you need to insert or replace the SIM card, see Insert or replace the SIM card, page 99.

4.1.4. Connect the Ethernet cable

NOTE
The Ethernet cable is not supplied by Tunstall.

To connect an Ethernet cable:

a) Insert the Ethernet cable into the Ethernet port on the device (1).

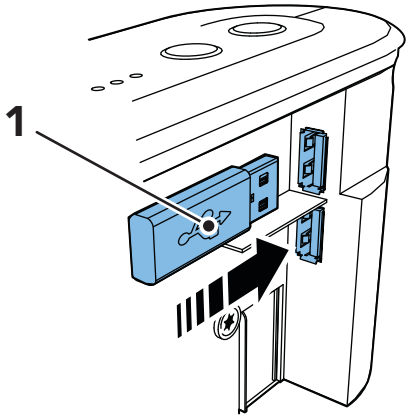


b) Connect the other end of the Ethernet cable into the local internet router or network socket.

4.1.5. Connect a USB

To connect a USB:

- Insert the USB plug into an available USB port (1).

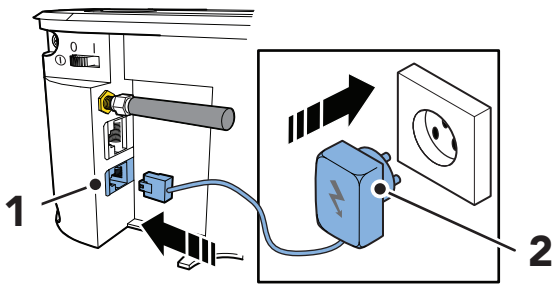


4.1.6. Connect to mains power

CAUTION
Only use a power adapter that is intended for use with this product and that has been supplied by Tunstall. Make sure that the power adapter has the following output specification:

- +12.0V ⎓ 1.0A, (12.0W)
- PIN 2"+"
  PIN 3"-"

a) Insert the power adaptor cable into the 12V connector on the device (1).
b) Connect the mains power adaptor into a wall socket (2).



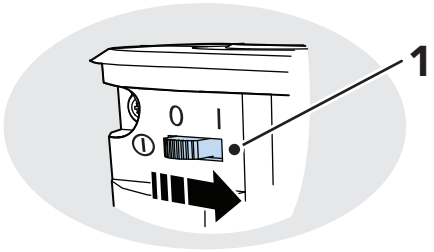
4.1.7. Switch on Lifeline Digital

To switch on Lifeline Digital:

- Set the On/OFF switch to 1 (ON) to power up the device (1).

  The green and yellow LED indicators starts to flash rapidly to indicate startup progress.

  The device is ready when the LED indicators stop flashing.



4.1.8. Manually connect to DMP

If the device is registered to Tunstall's Device Management Platform (DMP), you can manually connect to DMP to download configuration or firmware updates.

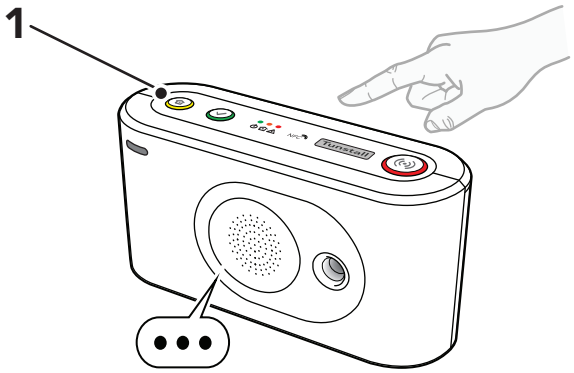
To manually connect to DMP:[1]

a) Press and hold the yellow **Extra** button (1) for approximately 3 seconds.

b) When the device emits a rising sound signal and the yellow LED indicator starts to flash, release the button.

   The device attempts to connect to DMP and announces either:

   - "Connected to DMP" when a connection is established.
   - "Connection attempt to DMP failed" if all connection attempts fail.



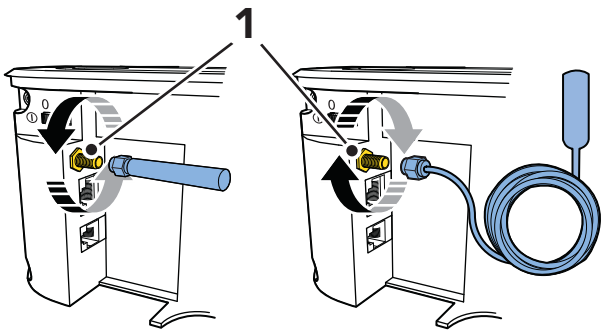
When Lifeline Digital is ready it announces "Communication with DMP completed".This may take several minutes depending on the network connection.

4.1.9. Connect the external cellular antenna (option)

If required, connect the external antenna:

a) Unscrew the stub antenna from the antenna connector (1).

b) Screw the antenna cable onto the antenna connector (1).

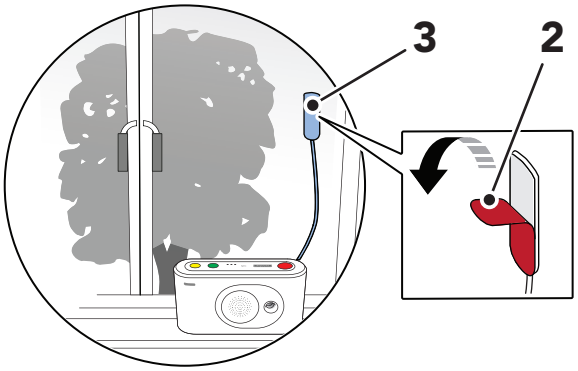


c) Determine a suitable location with strong cellular signal for the antenna using the cellular strength test, see Check cellular signal strength, page 30.

[1]This function can be reassigned to the green **Cancel** button by your supplier. Contact your supplier If you have any questions.

d) When installation, configuration and testing is completed, remove the adhesive cover from the back of the antenna (2) and fix the antenna in the selected location (3). The location must be:

- A non-metallic surface
- Indoors, the antenna is not water-resistant

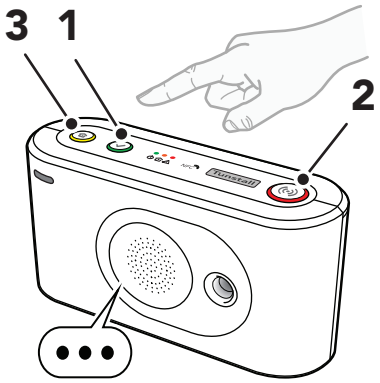


4.2. Configuring Lifeline Digital in programming mode

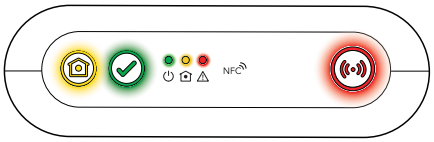
4.2.1. Enable programming mode

To enable programming mode:

a) Press and hold the green **Cancel** button (1), then press and hold the red **Alarm** button (2) and the yellow **Extra** button (3).



b) Release all buttons when the device emits a rising sound signal and announces "Programming mode".



The LED indicators start chaser sequence and the button LEDs flash in unison to indicate that the programming mode is enabled.

c) Press the green **Cancel** button (1) to exit programming mode. The device automatically exits Programming mode if no button is pressed for 20 seconds.

4.2.2. Programming mode and local configuration menu

a) Enable programming mode, see Enable programming mode, page 28.

b) Select a function in Programming mode:

- Press and hold the yellow **Extra** button until the device announces the number of the menu position you want to select according to the Local configuration menu, page 29.

  For example, the device announces “One” for speaker volume, “Two” for LED intensity and “Three” for Radio test mode.

- Optionally, press the yellow **Extra** button the number of times that corresponds to the menu position you want to select according to the Local configuration menu, page 29.

  For example, press once to select speaker volume, press twice to select LED intensity or press three times to select Radio test mode.

c) Select a radio sensor position in Programming mode:

- Press and hold the red **Alarm** button until the device announces “Auto pairing mode” or the number of the radio position you want to select according to the Local configuration menu, page 29.
- Optionally, press the red **Alarm** button the number of times that corresponds to the radio position you

want to select according to the Local configuration menu, page 29.

d) Press the green **Cancel** button to exit programming mode.

Menu position		Announcement[a.]	Description	Section
Yellow **Extra** button				
1		"One"	Adjust speaker volume	Adjust speaker volume, page 41
2		"Two"	Adjust LED intensity	Adjust LED intensity, page 42
3		"Three"	Radio test mode	Test the radio range of a peripheral, page 39
4		"Four"	Test cellular signal strength	Check cellular signal strength, page 30
5		"Five"	Cellular status	Checking cellular network status, page 31
	1	"One"	Error code (default)	Check cellular network error code, page 31
	2	"Two"	Check SIM card status	Check SIM card status, page 31
	3	"Three"	Check cellular network status	Check network status, page 32
	4	"Four"	Check cellular radio technology	Check cellular radio technology (RAT), page 33
8		"Eight"	Nexa/actuator pairing mode	Connecting and disconnecting Nexa smart plugs, page 43
Red **Alarm** button				
1		"One"	Radio sensor position 1	Connecting and disconnecting peripherals, page 34
2		"Two"	Radio sensor position 2	
3		"Three"	Radio sensor position 3	
4-64		"Four" - " Sixty-four"	Radio sensor position 4-64	
Green **Cancel** button				
			Go back / Exit	

[a.] If speech messages are disabled, beeps replace the announcements. For example, the device emits one beep for speaker volume, two beeps for LED intensity and three beeps for radio test mode.

4.3. Checking cellular signal strength

This section describes how to check cellular signal strength. The cellular signal strength test is required for all devices that communicate across cellular communication paths.

4.3.1. Check cellular signal strength

To check cellular signal strength:

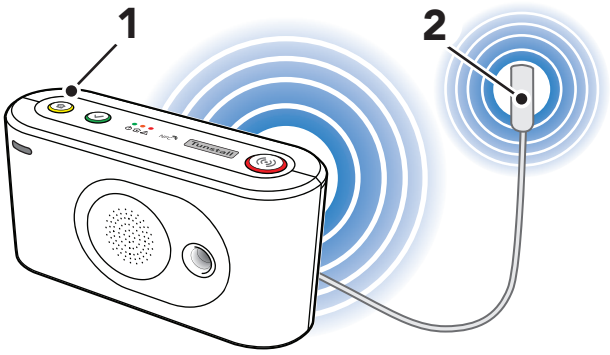
a) Enable programming mode, see Enable programming mode, page 28.

b) Press and hold the yellow **Extra** button (1).

c) When the device announces “Four”, release the button.

The device announces the current signal strength:

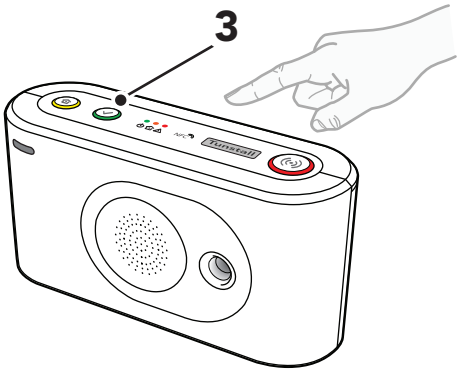
- “Cellular signal strength is One" for poor cellular signal strength.
- "Cellular signal strength is Two".
- "Cellular signal strength is Three".
- "Cellular signal strength is Four”.
- “Cellular signal strength is Five” for excellent cellular signal strength.



d) If necessary, adjust the position of the device to optimize cellular signal strength.

- Optionally, adjust the position of the the external antenna (2) to determine a location for optimal signal strength.

e) Press the green **Cancel** button (3) to end the test and exit. The test automatically ends after 2 minutes.



4.4. Checking cellular network status

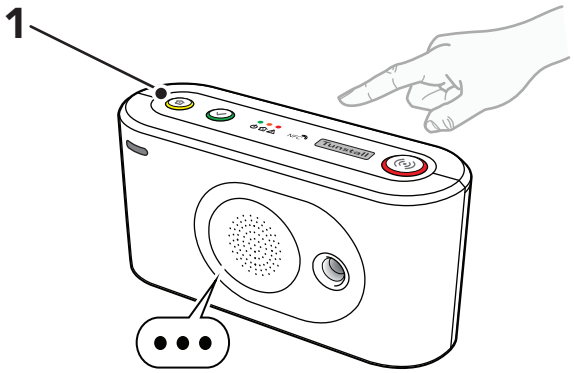
This section describes how to check cellular network information. This information can be used to troubleshoot cellular connectivity issues.

4.4.1. Check cellular network error code

To check the cellular network error code:

a) Enable programming mode, see Enable programming mode, page 28.

b) Press and hold the yellow **Extra** button (1).



c) When the device announces “Five”, release the button.

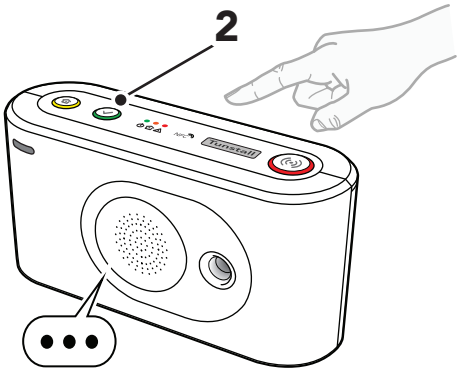
d) Press and hold the yellow **Extra** button (1).

e) When the device announces “One”, release the button.

The device announces:

- “Error code Zero” if there is no error code.
- “Error code One” if hardware initialization failed.
- “Error code Two” if software initialization failed.
- “Error code Three” if the SIM card failed
- “Error code Four” if network registration failed.
- “Error code Five” if GPRS initialization failed.

f) Press the green **Cancel** button (2) to exit.



4.4.2. Check SIM card status

To check SIM card status:

a) Enable programming mode, see Enable programming mode, page 28.

b) Press and hold the yellow **Extra** button (1).

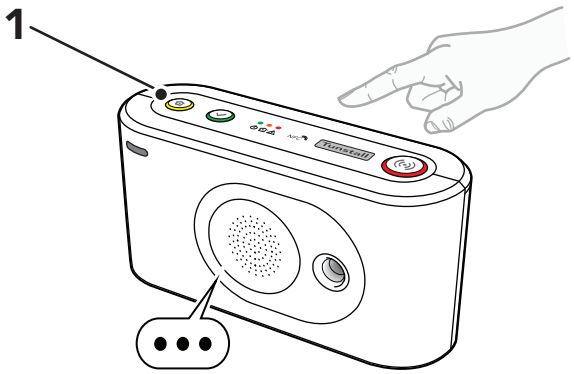
c) When the device announces “Five”, release the button.

d) Press and hold the yellow **Extra** button (1).

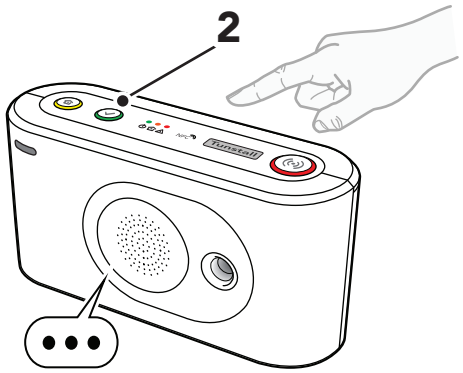
e) When the device announces “Two”, release the button.

The device announces:

- “SIM card status Zero” if no SIM card status is present.
- “SIM card status One” if no PIN is required and the SIM card is OK.
- “SIM card status Two” if PIN and SIM card are OK.
- “SIM card status Three” if PIN is required.
- “SIM card status Four” for PIN error (entered PIN is probably too short).
- “SIM card status Five” if the entered PIN is not correct.
- “SIM card status Six” if no SIM card is present.
- “SIM card status Seven” if the SIM card is blocked, and PUK is required.



f) Press the green **Cancel** button (2) to exit.



4.4.3. Check network status

To check network status:

a) Enable programming mode, see Enable programming mode, page 28.

b) Press and hold the yellow **Extra** button (1).

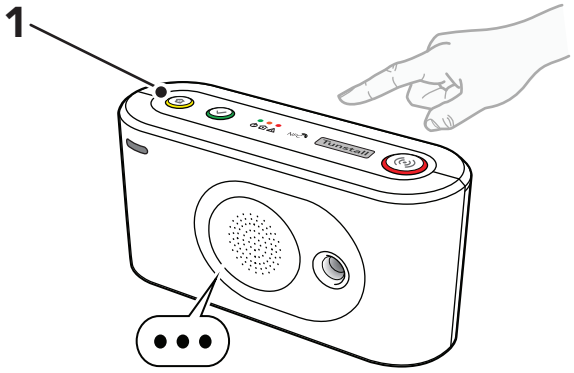
c) When the device announces “Five”, release the button.

d) Press and hold the yellow **Extra** button (1).

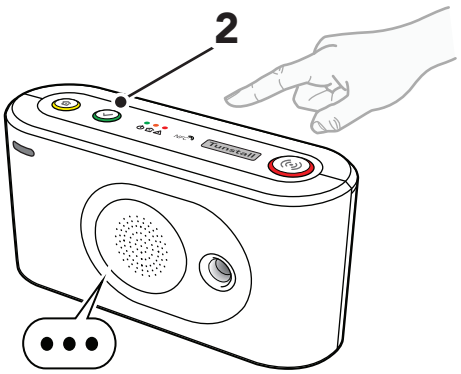
e) When the device announces “Three”, release the button.

The device announces:

- “Network status Zero" if no network registration status is present.
- “Network status One” if not registered to a network.
- “Network status Two" if registered to a home network.
- “Network status Three” if registered to a roaming network



f) Press the green **Cancel** button (2) to exit.



4.4.4. Check cellular radio technology (RAT)

To check cellular radio technology (RAT):

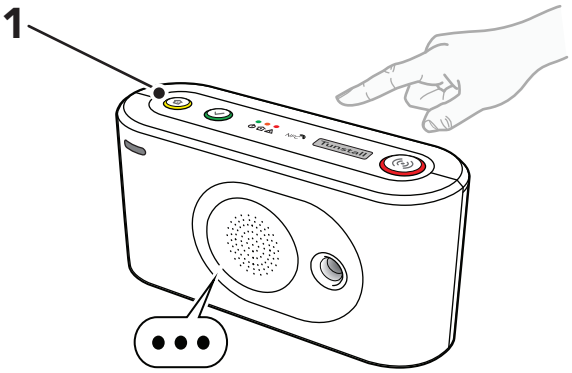
a) Enable programming mode, see Enable programming mode, page 28.

b) Press and hold the yellow **Extra** button (1).

c) When the device announces “Five”, release the button.

d) Press and hold the yellow **Extra** button (1).

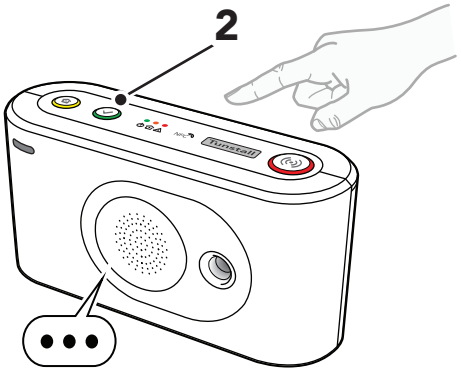
e) When the device announces “Four”, release the button.



The device announces:

- “Cellular radio technology Zero "for error.
- “Cellular radio technology One” if the device is searching for network access.
- “Cellular radio technology Two” for 2G.
- “Cellular radio technology Three” for 3G.
- “Cellular radio technology Four” for 4G.

f) Press the green **Cancel** button (2) to exit.



4.5. Connecting and disconnecting peripherals

This section describes how to connect and disconnect peripherals. Lifeline Digital supports up to 64 peripherals.

NOTE
The personal alarm trigger is typically connected to the device on delivery.

Connecting

There are two basic methods of connecting peripherals in programming mode:

1. Connect in auto paring mode to store a peripheral in the first available radio sensor position, see Connect a peripheral in auto pairing mode, page 34.
2. Connect in manual pairing mode to store a peripheral in a specific radio sensor position, see Connect a peripheral in manual pairing mode, page 36.

The radio code and basic settings of each peripheral are automatically stored in the device.

Disconnecting

There are two basic methods of disconnecting peripherals in programming mode:

1. Disconnect a peripheral in auto pairing mode, see Disconnect a peripheral in auto pairing mode, page 35.
2. Disconnect a peripheral from a specific radio sensor position in manual pairing mode, see Disconnect a peripheral in manual pairing mode, page 37.

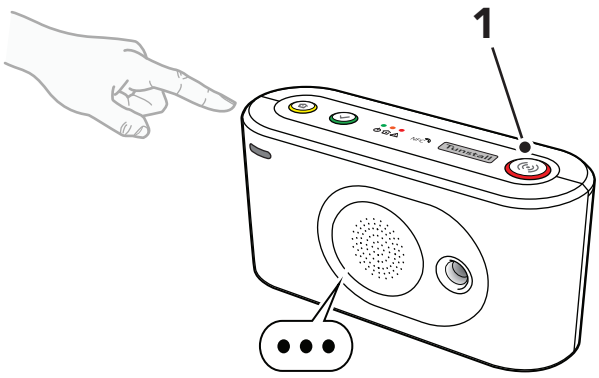
The radio code and basic settings of each peripheral are automatically erased from the device when disconnected.

4.5.1. Connect a peripheral in auto pairing mode

To connect a peripheral in auto pairing mode:

a) Enable programming mode, see Enable programming mode, page 28.
b) Press and hold the red **Alarm** button (1).
c) When the device announces “Auto pairing mode”, release the button.

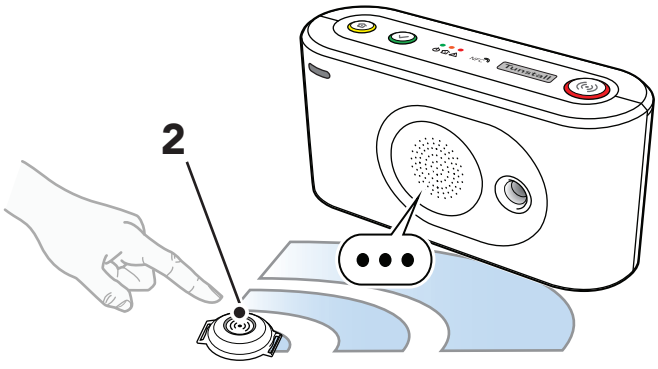
   The yellow and green button LEDs starts to flash in unison.



d) When the device announces “Activate transmitter now”, activate/trigger the peripheral (2).

   The device announces:

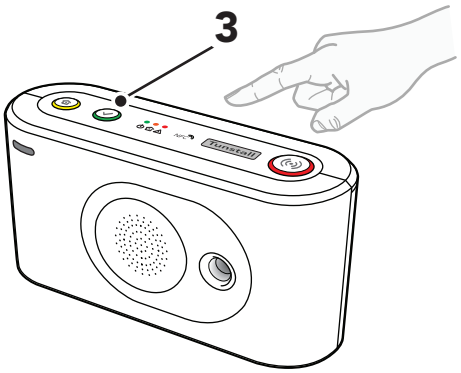
   - “Operation succeeded” if the peripheral was successfully connected.
   - “Battery low” if the battery of the peripheral is low.
   - “Operation failed” followed by an error code if the connection failed.
   - “Error code One” if the device memory is full.



- "Error code Two" if the peripheral is already connected to the device.

e) Repeat from step b to connect additional peripherals.

f) Press the green **Cancel** button (3) to save current settings and exit.



g) Activate/trigger the peripheral to make a test alarm to the device, press the green **Cancel** button to cancel the alarm before the alarm is distributed to the receiver.

4.5.2. Disconnect a peripheral in auto pairing mode

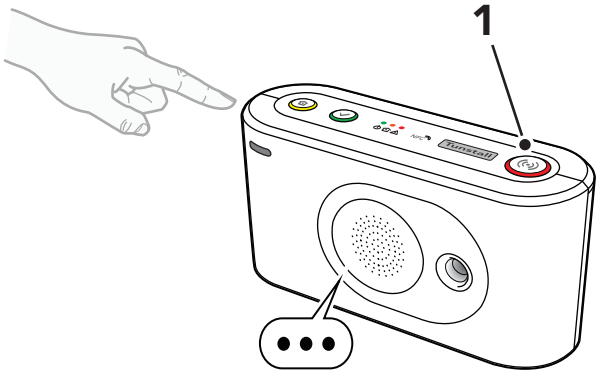
To disconnect a peripheral in auto pairing mode:

a) Enable programming mode, see Enable programming mode, page 28.

b) Press and hold the red **Alarm** button (1).

c) When the device announces "Auto pairing mode", release the button.

The yellow and green button LEDs starts to flash in unison.

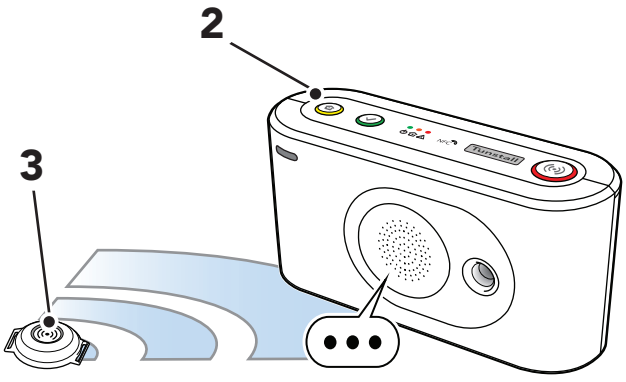


d) Press the yellow **Extra** button (2).

e) When the device announces "Erasing. Activate the transmitter now", activate/trigger the peripheral you want to disconnect (3).

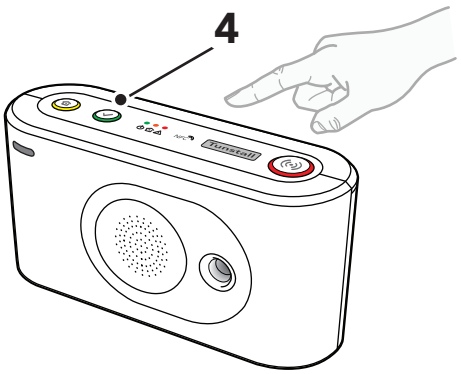
The device announces:

- "Operation succeeded" if the peripheral was successfully disconnected.
- "Operation failed" followed by an error code if the peripheral was not successfully disconnected.
- "Error code: three" if the peripheral is not connected to this device.
- "Error code: four" if there is a general failure.



f) Repeat from step b to disconnect additional peripherals.

g) Press the green **Cancel** button (4) to save current settings and exit.



4.5.3. Connect a peripheral in manual pairing mode

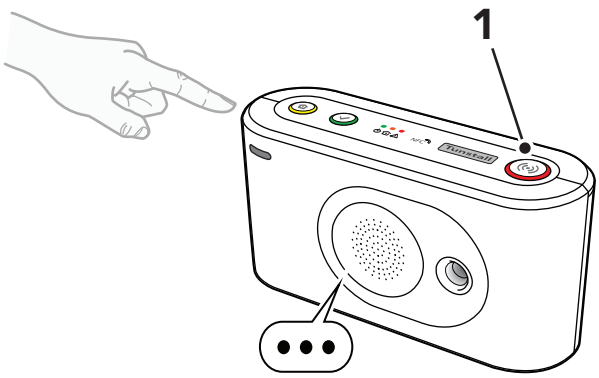
To connect a peripheral in manual pairing mode:

a) Enable programming mode, see Enable programming mode, page 28.

b) Press and hold the red **Alarm** button (1).

The device announces "Auto pairing mode" then continues to announce numbers in ascending order starting from "One".

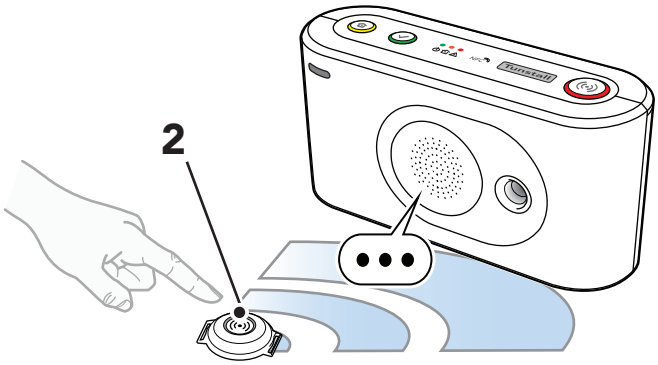
c) When the device announces the number of the the radio position you want to select, release the button.



d) When the device announces "Activate transmitter now", activate/trigger the peripheral (2).

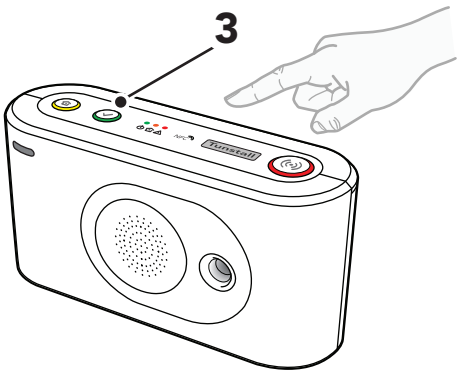
The device announces:

- "Operation succeeded" if the peripheral was successfully connected.
- "Battery low" if the battery of the peripheral is low.
- "Operation failed" followed by an error code if the connection failed.
- "Error code One" if the device memory is full.
- "Error code Two" if the peripheral is already connected to the device.



e) Repeat from step b to connect additional peripherals.

f) Press the green **Cancel** button (3) to save current settings and exit.



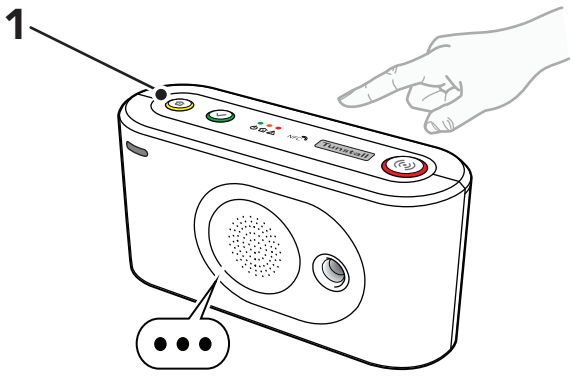
g) Activate/trigger the peripheral to make a test alarm to the device, press the green **Cancel** button to cancel the alarm before the alarm is distributed to the receiver.

4.5.4. Disconnect a peripheral in manual pairing mode

To disconnect a peripheral from a specific radio position in manual pairing mode:

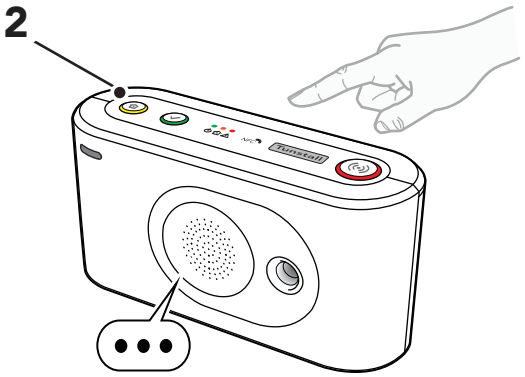
a) Enable programming mode, see Enable programming mode, page 28.

b) Press and hold the red **Alarm** button (1).



c) When the device announces the number of the the radio position you want to select, release the button.

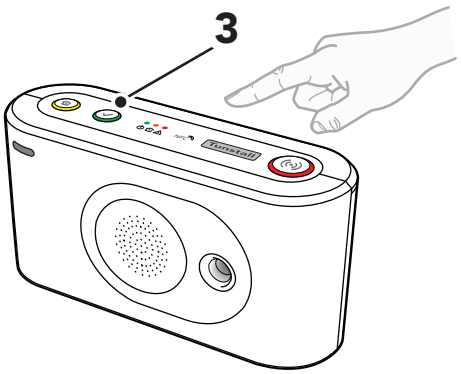
d) Press the yellow **Extra** button (2).



The device announces "Erasing" and:

- "Operation succeeded" if the peripheral was successfully disconnected.
- "Operation failed" followed by an error code if the peripheral was not successfully disconnected.
- "Error code: three" if the peripheral is not connected to this device.
- "Error code: four" if there is a general failure.

e) Press the green **Cancel** button (3) to save current settings and exit.



4.6. Testing the radio range of peripherals

This section describes how to use the Radio test mode to test the radio range of peripherals.

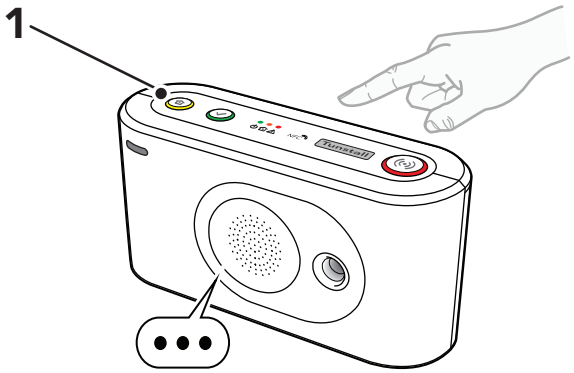
Each connected peripheral must be tested in its intended location. Wearable peripherals such as alarm buttons/pendants must be tested throughout the premises to ensure complete range coverage. Consider that certain building materials can block the radio signals

4.6.1. Test the radio range of a peripheral

CAUTION
Each connected peripheral must be tested in its intended location. Wearable peripherals such as alarm buttons/pendants must be tested throughout the premises to ensure complete range coverage.

To start Radio test mode:

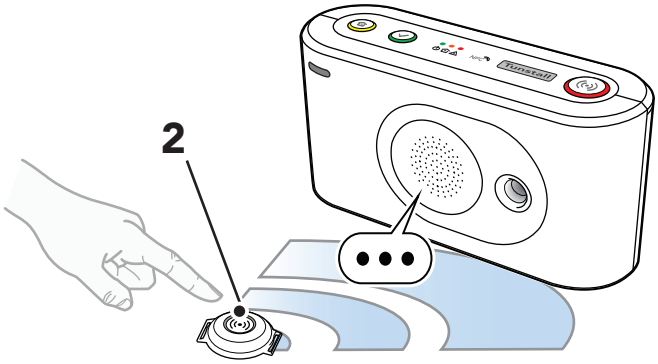
a) Enable programming mode, see Enable programming mode, page 28.
b) Press and hold the yellow **Extra** button (1).
c) When the device announces "Three", release the button.



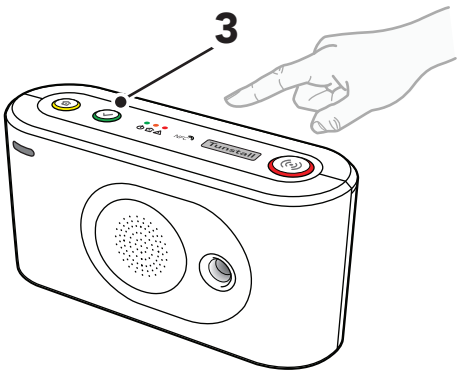
d) When the device announces "Radio test mode Activate transmitter now", activate/trigger the peripheral (2).

   The device emits beeps indicating the status of the peripheral:

   - One short beep indicates that the peripheral is connected and the battery is OK.
   - One long beep indicates that the peripheral is connected but the battery is low and must be replaced.
   - Two short beeps indicate that the peripheral is not connected and the battery is OK.
   - Two long beeps indicate that the peripheral is not connected and the battery is low and must be replaced.



e) Press the green **Cancel** button (3) to exit the radio test or the radio test automatically ends after approx. 60 seconds.



4.7. Adjusting speaker volume

Adjust the speaker volume if it is too low or too loud for the care recipient. The volume setting applies to all audio, including call volume, audio signals and announcements.

4.7.1. Adjust speaker volume

To adjust speaker volume:

a) Enable programming mode, see Enable programming mode, page 28.

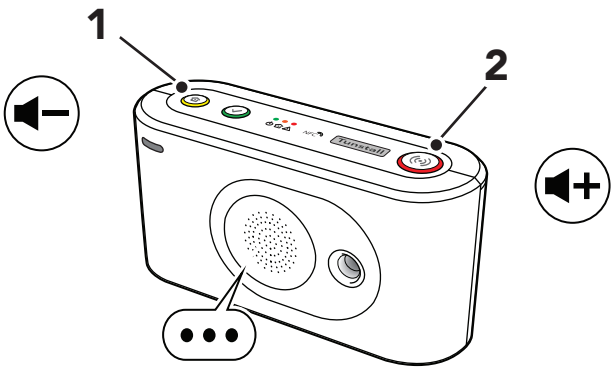
b) Press and hold the yellow **Extra** button (1).

c) When the device announces "One", release the button.

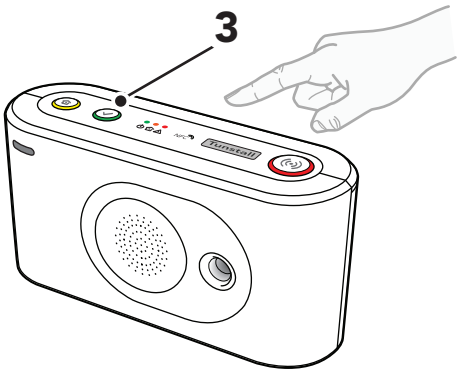
The device announces "Speaker volume" followed by the current volume level (1-15).

d) To adjust speaker volume:

- Press the red **Alarm** button (2) to increase speaker volume.
- Press the yellow **Extra** button (1) to decrease the speaker volume.



e) Press the green **Cancel** button (3) to save current settings and exit.



4.8. Adjusting LED intensity

Adjust the LED brightness if it is too bright or too dark for the care recipient.

4.8.1. Adjust LED intensity

To adjust LED intensity:

a) Enable programming mode, see Enable programming mode, page 28.

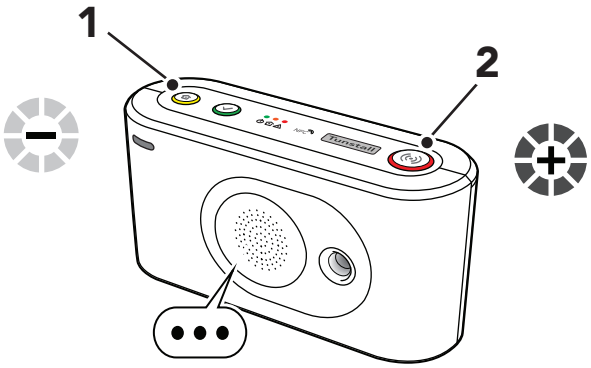
b) Press and hold the yellow **Extra** button (1).

c) When the device announces "Two", release the button.

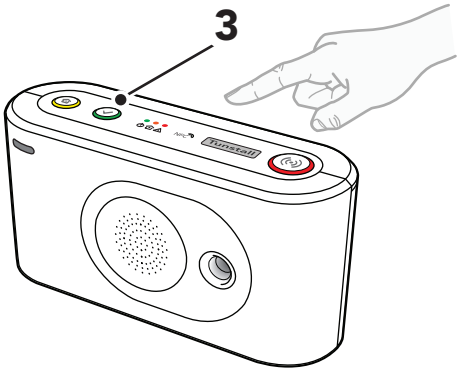
The device announces "Light intensity" followed by the current light intensity level (1-10).

d) To adjust LED intensity:

- Press the red **Alarm** button (2) to increase LED intensity.
- Press the yellow **Extra** button (1) to decrease LED intensity.
- Press and hold the red **Alarm** button (2) for 5 seconds, to toggle the red alarm button LED on and off.



e) Press the green **Cancel** button (3) to save current settings and exit.



4.9. Connecting and disconnecting Nexa smart plugs

This section describes how to connect and disconnect Nexa Smart plugs. Lifeline Digital transmits an "ON" code to connect to the Smart plug, and an "OFF" code to disconnect the Smart plug. The Smart plug does not transmit to Lifeline Digital.

Lifeline Digital supports up to 16 actuator output channels. More than one Nexa Smart plug can be associated with one channel.

4.9.1. Connect a Nexa smart plug in actuator pairing mode

NOTE
To simplify this procedure, connect a light to the Smart plug. When the Smart plug is paired to the device, the light will remain switched on.

To connect a Nexa smart plug:

a) Enable programming mode, see Enable programming mode, page 28.

b) Press and hold the yellow **Extra** button (1).

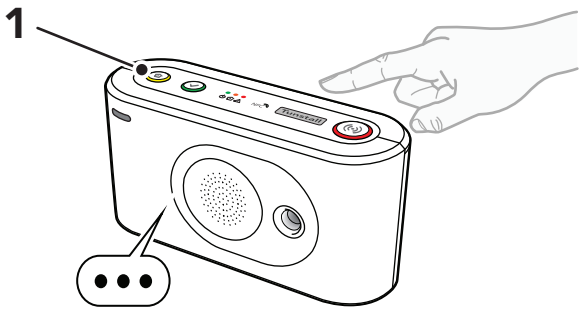
c) When the device announces "Eight", release the button.

d) When the device announces “Select radio channel”, press and hold the yellow **Extra** button (1).

The device announces numbers in ascending order, starting from “One”.

e) When the device announces the number of the actuator output channel that you want to select, release the button.

The device starts to emit consecutive beeps to indicate that actuator pairing mode is active.



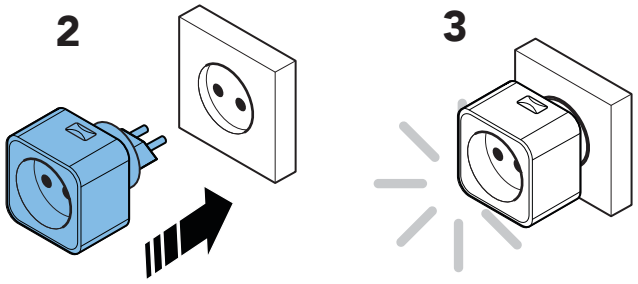
NOTE
Press the red **Alarm** button to toggle between pairing mode and erasing mode:

- Consecutive double beeps indicate that erasing mode is active
- Consecutive beeps indicate that pairing mode is active

f) Insert the Smart plug into a wall socket (2).

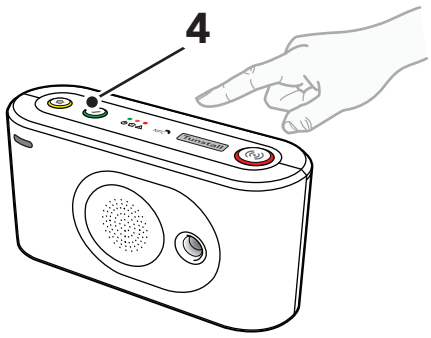
The Smart plug switches on and off a couple of times (3). The Smart Plug remains switched on when the pairing is completed.

If a light is connected to the Smart plug, the light will remain switched on when the Smart plug is paired to the device.



g) Press the green **Cancel** button (4) to exit paring mode.

h) Press the green **Cancel** button (4) to exit.



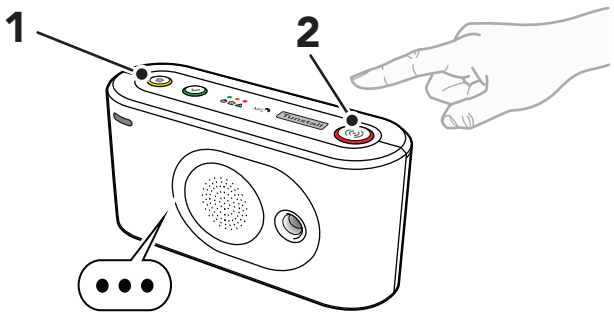
4.9.2. Disconnect a Nexa smart plug in actuator pairing mode

NOTE
To simplify this procedure, connect a light to the Smart plug. When the Smart plug is unpaired from the device, the light will remain switched off.

To disconnect a Smart plug:

a) Unplug the Smart plug from the wall socket.
b) Enable programming mode, see Enable programming mode, page 28.
c) Press and hold the yellow **Extra** button (1).
d) When the device announces “Eight”, release the button.
e) When the device announces “Select radio channel”, press and hold the yellow **Extra** button (1).

   The device announces numbers in ascending order, starting from “One”.
f) When the device announces the number of the radio channel you want to select, release the button.
g) Press the red **Alarm** button (2), the device then announces "Erasing" and then emits consecutive double beeps to indicate that erasing mode is active.



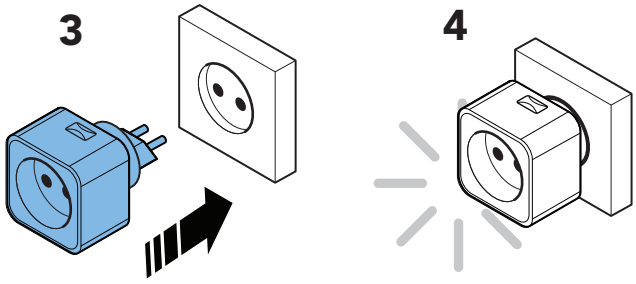
NOTE
Press the red **Alarm** button to toggle between pairing mode and erasing mode:

- Consecutive beeps indicate that pairing mode is active
- Consecutive double beeps indicate that erasing mode is active

h) Insert the Smart plug into a wall socket (3).

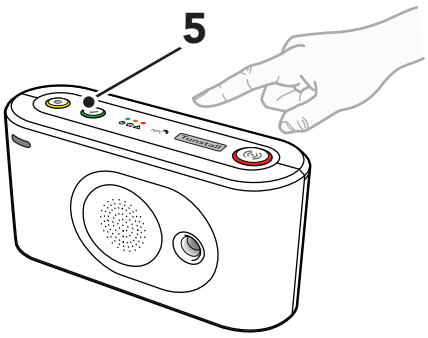
   The Smart plug switches on and off a couple of times (4), before switching off. The unpairing is completed.

   If a light is connected to the Smart plug, the light will remain switched off when the Smart plug is unpaired from the device.



i) Press the green **Cancel** (5) button to exit pairing mode.

j) Press the green **Cancel** button (5) to exit.



4.10. Testing the installation

This section describes how to test the installation before the device can be considered ready for use.

4.10.1. Test alarm calls

To test alarm calls:

a) Press the red **Alarm** button on Lifeline Digital to make an alarm call.
b) Confirm that the alarm operator receives the correct alarm information.
c) Press the alarm button/pendant to make an alarm call and confirm that the alarm operator receives the correct alarm information.
d) Activate/trigger any other connected alarm peripherals one by one and confirm that the alarm operator receives the correct alarm information.

4.10.2. Test alarm calls for backup communication path

CAUTION
You must restore the primary communication path properly. If the primary communication path is not properly restored, the device cannot communicate as intended.

If the device has a backup communication path, temporarily disable the primary communication path to enable testing of the backup path:

a) To disable the primary communication path, do one of the following depending on current configuration:
   - Unplug the Ethernet cable
   - Remove the SIM card, see Insert or replace the SIM card, page 99
   - Switch off the Wi-Fi router

NOTE
It may take some time for the device to switch to the backup communication path.

b) Press the alarm button/pendant to make an alarm call.
c) Confirm that the alarm operator receives the correct alarm information via the backup communication path.
d) To restore the primary communication path, do one of the following depending on current configuration:
   - Reinsert the Ethernet cable
   - Reinsert the SIM card, see Insert or replace the SIM card, page 99
   - Switch on the Wi-Fi- router

4.10.3. Ready to use

Before the device can be considered ready for use:

- Make sure that all relevant tests of the device and associated equipment are completed
- If applicable, fix the external antenna to a location with excellent coverage, see Connect the external cellular antenna (option), page 26
- Replace the back cover, see Remove and replace the back cover, page 24
- Make sure that the care recipient and caregivers understands how to use Lifeline Digital and any associated equipment

Lifeline Digital is now ready to use.

5. Configuring Lifeline Digital using DMP

This chapter describes how to configure Lifeline Digital using Tunstall's Device Management Platform (DMP).

Make sure that you have read the document and are familiar with the installation and configuration process. Typically, not all sections in this document will be relevant to your case. Omit sections and settings that are already pre-configured or does not apply to your case.

To configure Lifeline Digital using DMP you require:

- a username and password
- a list of all values and parameter settings to be configured. Do not change any settings or values unless advised by your supplier or Tunstall.
- If your organization enforce two-step verification, you must set up Google Authenticator, for more information refer to *DMP User manual*.

It is recommended that you carry out as much of the configuration as possible before installing the device on-site.

Updates and changes are deployed from DMP to the device whenever the device connects to DMP, either automatically at a heartbeat or online poll, or when you manually connect to DMP.

Contact your supplier or Tunstall if you have any questions.

5.1. Log in to DMP and access device settings

To log in to DMP and access device settings:

a) Go to the *DMP login* page.

The web address (URL) is provided by your organisation, supplier or Tunstall.

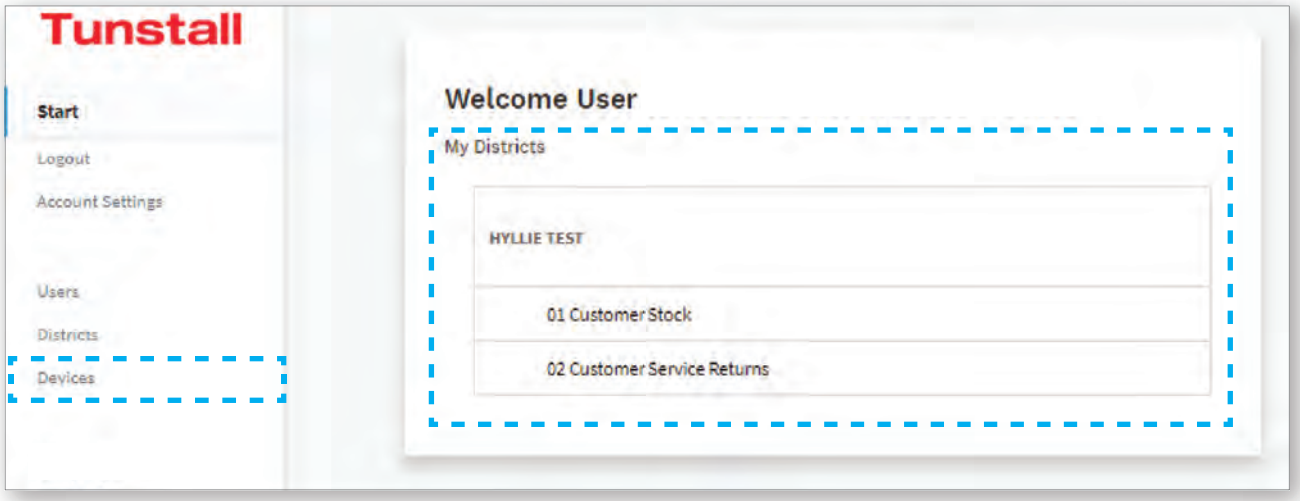
NOTE
Bookmark the web address (URL) for faster access in the future.

b) Enter your username and password then click **LOGIN**

DMP opens the *Start* page.

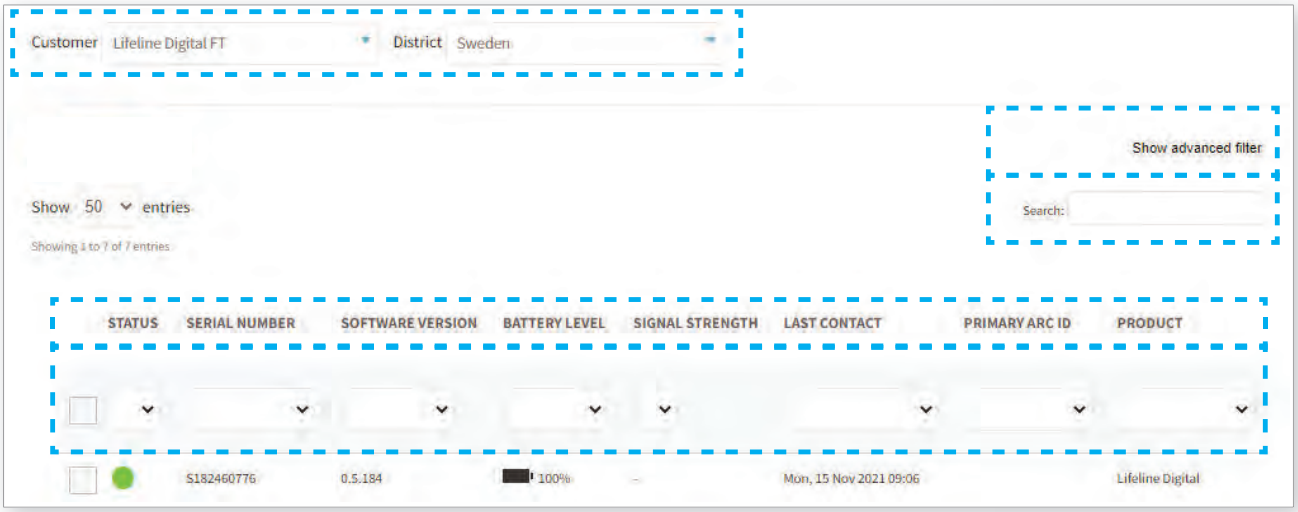
c) Under *My Districts*, click on the district that you want to view, or click **Devices** in the sidebar menu.

DMP opens the **Devices** page and displays a list of devices.



d) You can **search**, **sort** and **filter** the list:

- **Search** the list by entering a text in the search field
- **Sort** the list by clicking a column header. Click again to toggle between ascending and descending order
- **Filter** the list by selecting an option in the drop-down list below a column heading
- Click **Show advanced filter** to enable additional search and filter features
- If you have access to multiple districts and customers, click the *District* and *Customer* drop-down lists to select the appropriate customer and district

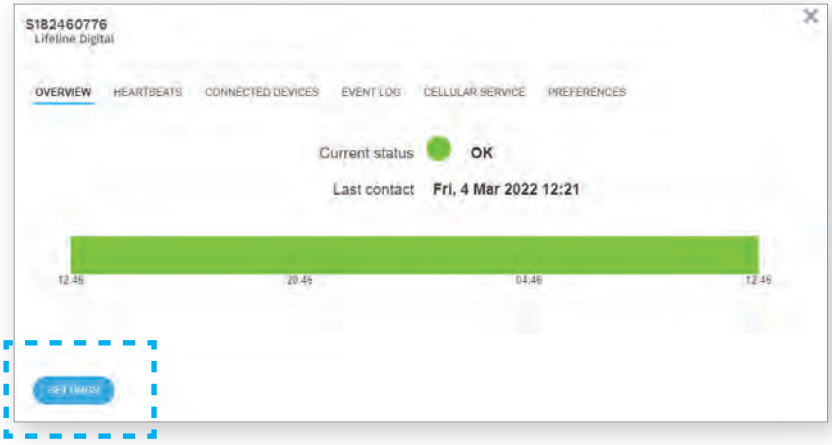


e) Click on the device that you want to view or edit.

DMP opens the Device information window.

f) Click **Settings** to open the Device settings window.

The *Common settings* tab is the default view.



5.2. Common settings

Common settings contains basic device and connectivity settings. To configure or change these settings you require a list of which settings to amend, together with their required values. This information is typically provided to you by your organization.

5.2.1. Configure common settings

To configure common settings:

a) The **Common settings** tab is selected by default when you click the **Settings** button in the Device information window, otherwise select **Common settings** in the side menu.

b) If the same alarm code is to be used for all alarm receivers or Alarm Receiving Centres (ARCs):

   i. Enter the alarm code in the *Main alarm code* field. The alarm code is used to identify the device at the Alarm Receiving Centre (ARC).

   ii. Click **Set**.

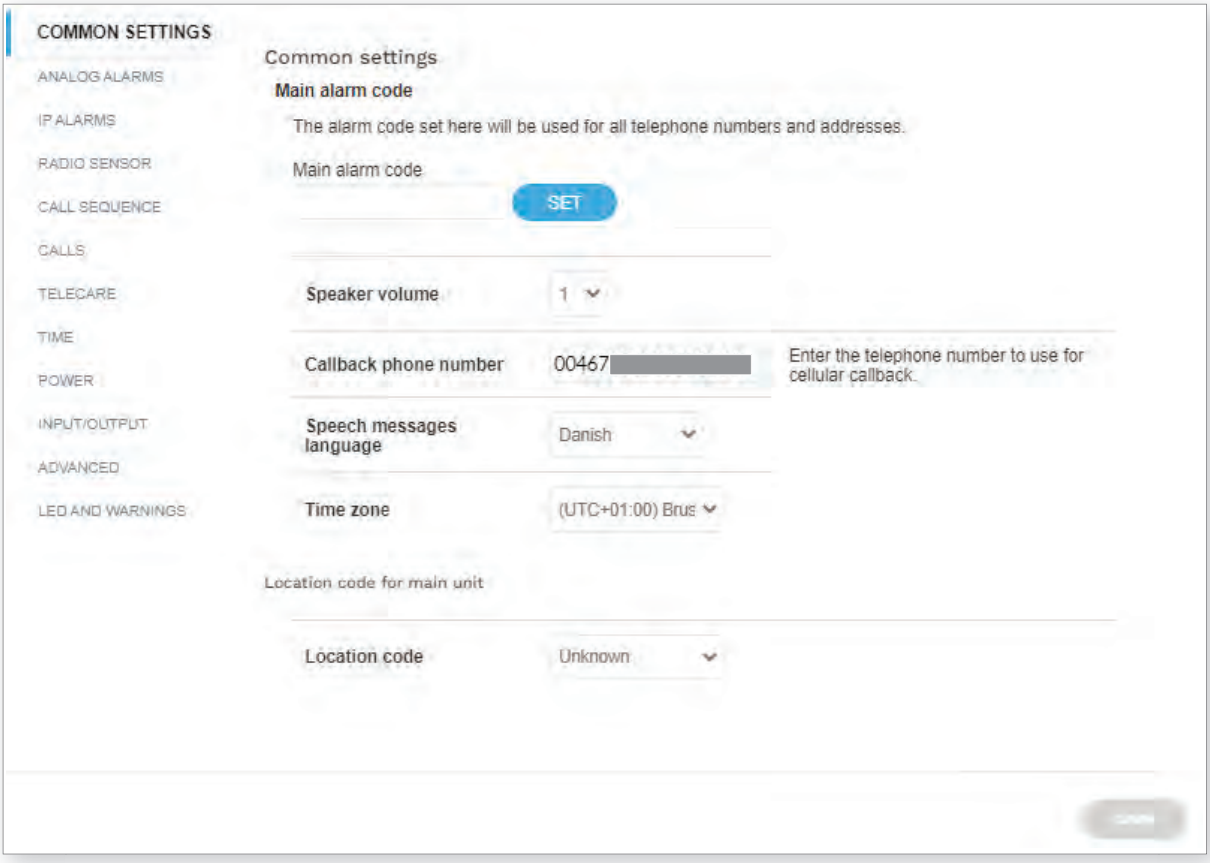
   The alarm code appears in all *Alarm code* fields.

c) Set the speaker volume in the *Speaker volume* drop-down list.

d) For cellular callback, enter the telephone number to use in the *Callback phone number* field. Use international telephone number format, for example: "+46[...]" or "0046[...]".

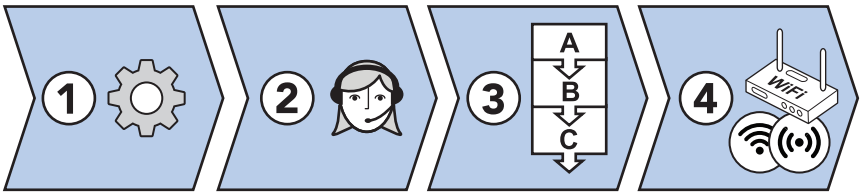
e) Select the correct time zone in the *Time zone* drop-down list.

f) Select a location code in the *Location code* drop-down list. The location code notifies the alarm receiver or ARC where the device is located.



5.3. Configuring communication settings

This section describes how to set up and configure communication between Lifeline Digital and the designated alarm receivers or Alarm Receiving Centres (ARCs):



1. Configure connectivity settings, including connectivity method (Ethernet or cellular), APN for cellular data and a telephone number for cellular callback:
   - Select device connectivity methods, page 52
   - Configure cellular network settings and Access Point Name (APN), page 52
   - Register a telephone number for callback, page 53
2. Configure the connection details for each alarm receiver or ARC that you want to connected to, and if required, the associated SIP account settings:
   - Set a main alarm code, page 53
   - Configure IP Alarm connections, page 54
   - Configure SIP accounts, page 55
   - Configure Analog alarm connections, page 56
3. Configure sequences to define in which order to call alarm receivers or ARCs and which sequence to use depending on alarm or event type:
   - Configure call sequences, page 57
   - Configure sequences per event group, page 59
4. For additional connectivity it is possible to connect the device to an existing Wi-Fi or set up the device as an access point:
   - Connect Lifeline Digital to Wi-Fi, page 59
   - Setting up an access point (Lifeline Digital as access point), page 60

If you need to amend these settings, you require a list of the parameter settings and values to be configured.

Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

5.3.1. Configuring connectivity settings

Configure connectivity settings, including connectivity method (Ethernet or cellular), APN for cellular data and cellular callback.

5.3.1.1. Select device connectivity methods

CAUTION
Only select connectivity methods that are to be used by the system. Incorrect configuration may cause device monitoring disruption and connection failure.

To select device connectivity methods:

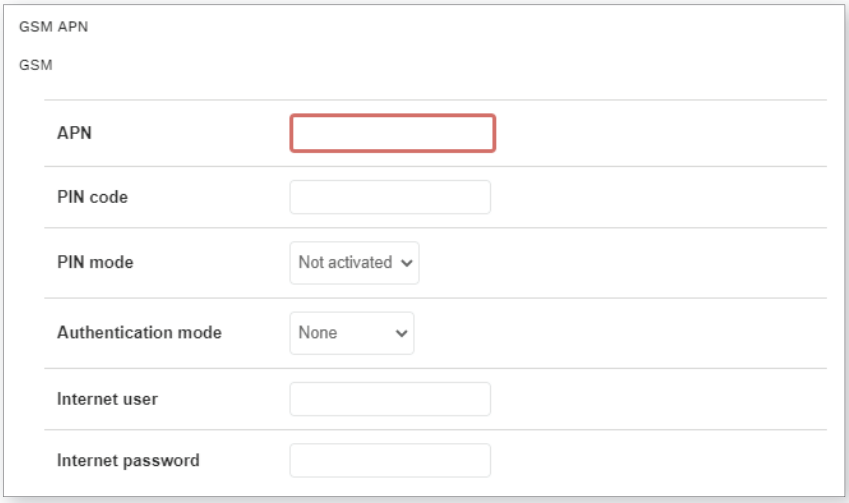
a) Go to **IP alarms** > **Device Connectivity Methods**.
b) Under *Device connectivity methods*, select the appropriate connectivity methods:
   - *Ethernet*
   - *Cellular*
   - *WiFi*

5.3.1.2. Configure cellular network settings and Access Point Name (APN)

CAUTION
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

To configure cellular network settings:

a) Go to **IP Alarms** > **GSM APN**.
b) Under *GSM*, enter the APN of your network provider in the *APN* field.
c) If required, configure PIN code:
   i. Enter PIN code for the SIM card in the *PIN code* field.
   ii. Activate PIN code in the *PIN mode* drop-down list.
d) If required, configure Internet settings:
   i. Select authentication protocol in the *Authentication mode* drop-down list.
   ii. Enter username in the *Internet user* field.
   iii. Enter password in the *Internet password* field.

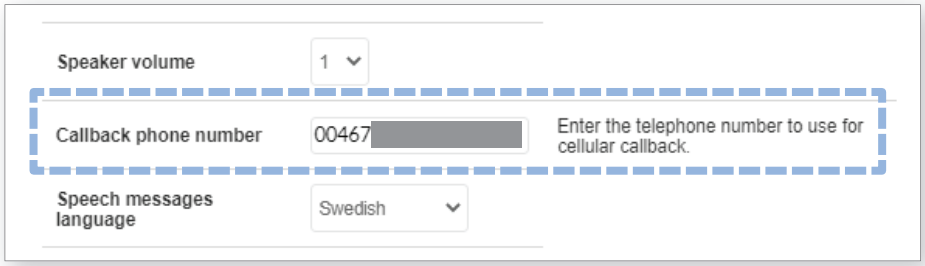


5.3.1.3. Register a telephone number for callback

To register a telephone number for callback:

a) Go to **Common settings**.
b) Enter the telephone number to use for cellular callback in the *Callback phone number* field.

NOTE
Use international telephone number format, for example: "+46[...]" or "0046[...]".



5.3.2. Configuring connection details

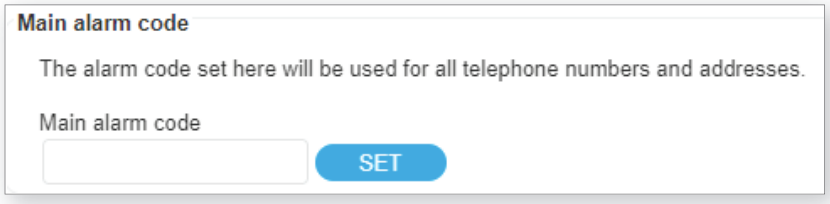
Configure the connection details for each alarm receiver or ARC that you want to connect to, and if required, the SIP account settings.

5.3.2.1. Set a main alarm code

An alarm code is used to identity the device at the Alarm Receiving Centre (ARC). If the same alarm code is to be used for all ARCs, setting the main alarm code sets the alarm code across all the ARCs.

a) Go to **Common settings**.
b) Under *Main alarm code*, enter the alarm code in the *Main alarm code* field.
c) Click **Set**.

The alarm code appears in all *Alarm code/ID* fields.



5.3.2.2. Configure IP Alarm connections

CAUTION
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

To configure connection details for IP Alarms:

a) Go to **IP Alarms** > **Connections** and select an appropriate **Address**. *Address n* is typically reserved for night redirection.

b) Enter the IP address or FQDN of the receiver in the *Address* field.

c) Select a communication protocol in the *Protocol* drop-down list:

- **Tunstall IPACS**
- **SCAIP**
- **Homephone-SIP**
- **EN50134-9**

NOTE
If the selected protocol does not support an alarm or event type, the alarm distribution moves on to the next step in the distribution sequence.

d) Set the number of connection attempts to be made for this address in the *No. of attempts* field.

NOTE
Tunstall strongly recommends at least 5 connection attempts for each address to ensure stable operation in case of temporary interference.

e) Enter the alarm code in the *Alarm code* field.

The alarm code is used to identify the device at the Alarm Receiving Centre (ARC). This step is not required if the *Main alarm code* field has been set.

f) If required, select a SIP account in the *SIP account* drop-down list. The corresponding SIP account must be configured separately under *IP Alarms* > *SIP Accounts*.

g) Select a connection type in the *Connection type* drop-down list:

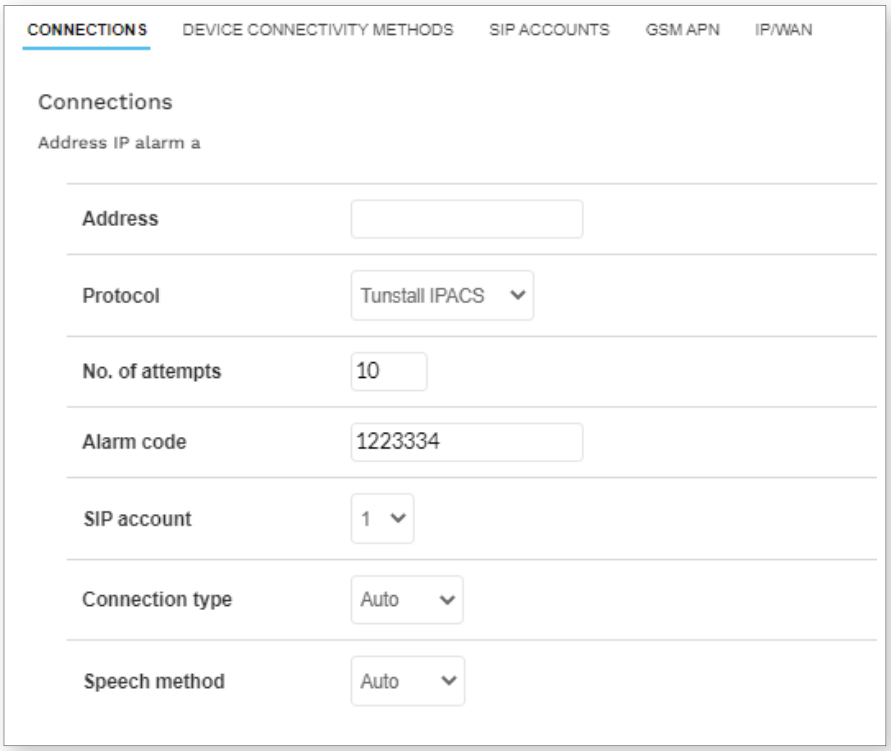
- **Wired** (Ethernet)
- **Cellular**
- **WLAN** (Wi-Fi), additional configuration is required under *IP Alarms* > *IP/WLAN*
- **Auto**, the system automatically determines connection type

h) Select an option for voice communication in the *Speech method* drop-down list:

- **VoIP**
- **Callback**
- **Dial out**
- **Auto**, the ARC determines which option to use

When "auto" is selected, there will be at least 5 connection attempts, regardless of the value in the *No. of attempts* field.

i) Repeat from Step b) to configure additional connections.



5.3.2.3. Configure SIP accounts

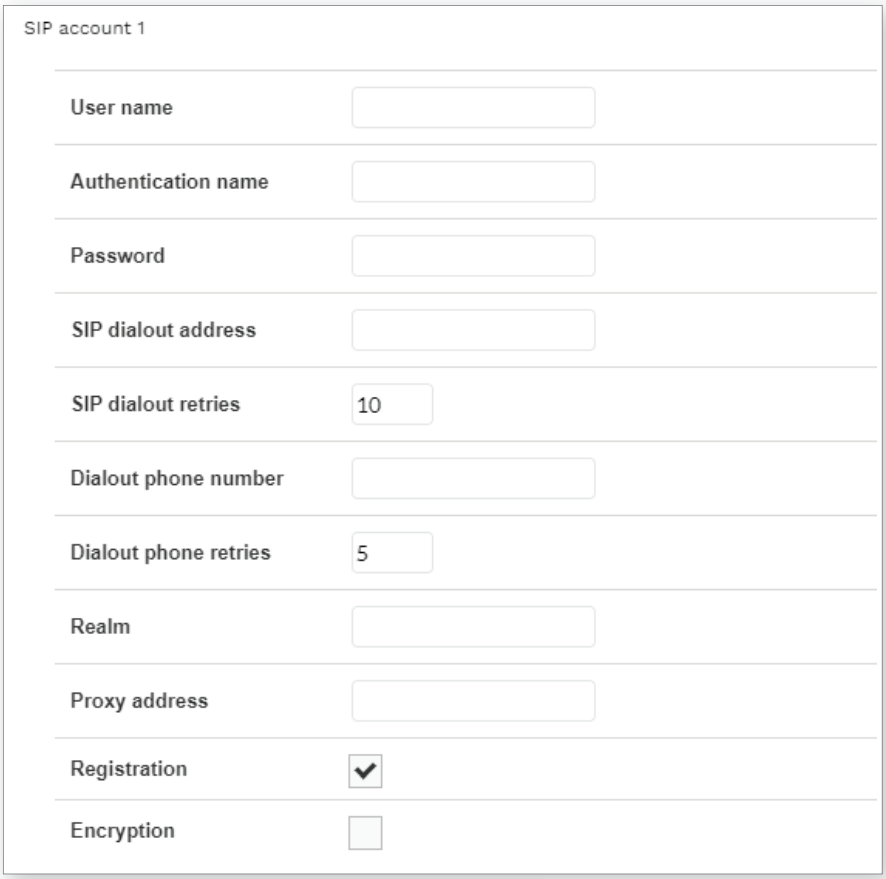
CAUTION
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

If required by the alarm receiver or Alarm Receiving Centre (ARC), to configure SIP accounts:

a) Go to **IP Alarms** > **SIP Accounts** and select an appropriate **SIP account**.
b) Enter SIP username in the *User name* field.
c) If required, enter the SIP authentication name in the *Authentication name* field. Leave this field blank if SIP username is used for authentication.
d) Enter SIP password in the *Password* field.
e) For VoIP dial out:
   i. Enter the IP address or FDQN for VoIP dial out in the *SIP dialout address* field.
   ii. Set the number of connection attempts to be made in the *Retries* field.
f) For analog/GSM dial out:
   i. Enter the telephone number in the *Dialout phone number* field.

NOTE
- Use international telephone number format, for example: "+46[...]" or "0046[...]".
- Do not use non-geographic telephone numbers.

   ii. Set the number of redial attempts to be made in the *Dialout phone retries* field.
g) If required, enter the SIP Realm/domain in the *Realm* field.
h) If required, enter the SIP proxy sever address in the *Proxy address* field.
i) If required, tick the *Registration* checkbox to use SIP registration.
j) If required, tick the *Encryption* checkbox to use encryption.



5.3.2.4. Configure Analog alarm connections

CAUTION
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

To configure connection details for analog alarms:

a) Go to **Analog Alarms**.
b) Select an appropriate **Address analog alarm** tab to expand the view. The *Address analog alarm N* tab is typically reserved for night redirection.
c) Enter the telephone number of the alarm receiver in the *Phone number* field.

NOTE
- Use international telephone number format, for example: "+46[...]" or "0046[...]".
- Do not use non-geographic telephone numbers.

d) Select a communication protocol in the *Protocol* drop-down list:

- **Homephone**
- **CPC/Antenna**
- **STT**
- **BS8521**
- **TT21**
- **TT92**

NOTE
If the selected protocol does not support an alarm or event type, the alarm distribution moves on to the next step in the distribution sequence.

e) Set the number of redial attempts in the *No. of attempts* drop-down list.

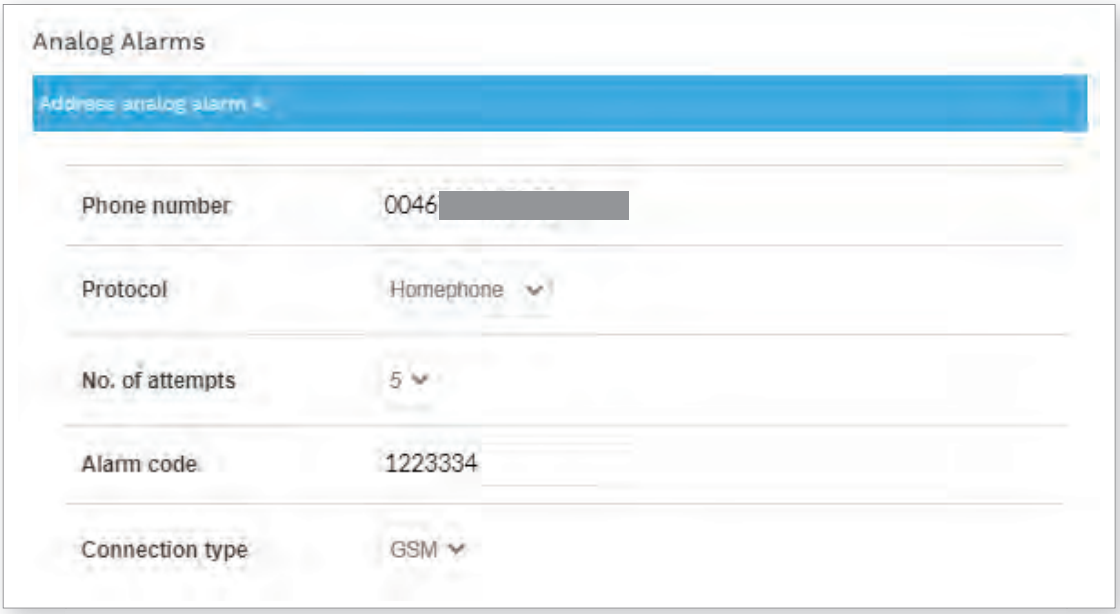
f) Enter the alarm code in the *Alarm code* field.

The alarm code is used to identity the device at the Alarm Receiving Centre (ARC). This step is not required if the *Main alarm code/ID* field is set.

g) Select connection type in the *Connection type* drop-down list:

- **GSM**

h) Repeat from Step b) to configure additional connections.



5.3.3. Configuring call sequences

Sequences define the order of alarm and event distribution, that is, in which order to call the alarm receivers or Alarm Receiving Centres (ARCs)

A sequence contains 10 steps, and each step can hold connection details for one receiver. The steps are executed sequentially until the alarm or event is successfully distributed or until all distribution attempts are exhausted. Distribution can be extended from one sequence to another if all connection attempts fail. The system also allows for alarms and events to be distributed to different alarm receivers depending on which event group they belong.

If you need to amend these settings, you require a list of the parameter settings and values to be configured.

5.3.3.1. Configure call sequences

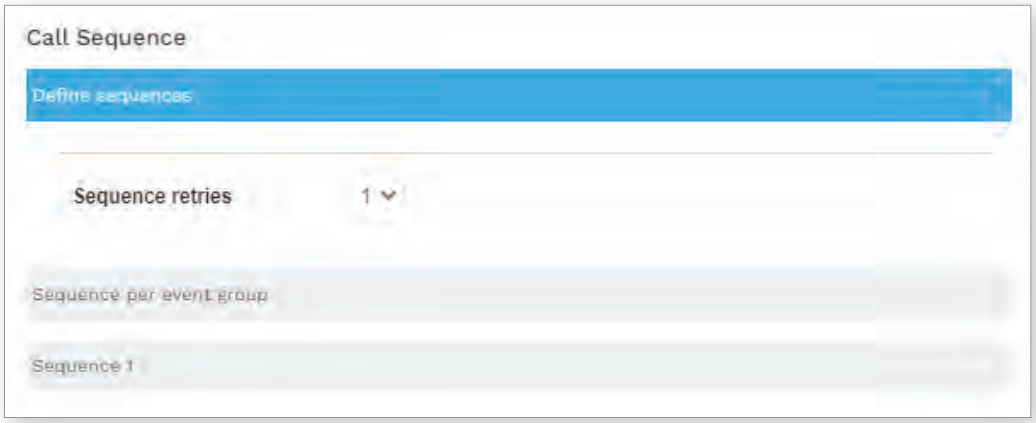
CAUTION
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

To configure sequences:

a) Go to **Call Sequence**.

b) Select **Define sequences** to expand the view.

i. Set the number of connection attempts to be made for each sequence in the *Sequence retries* field.



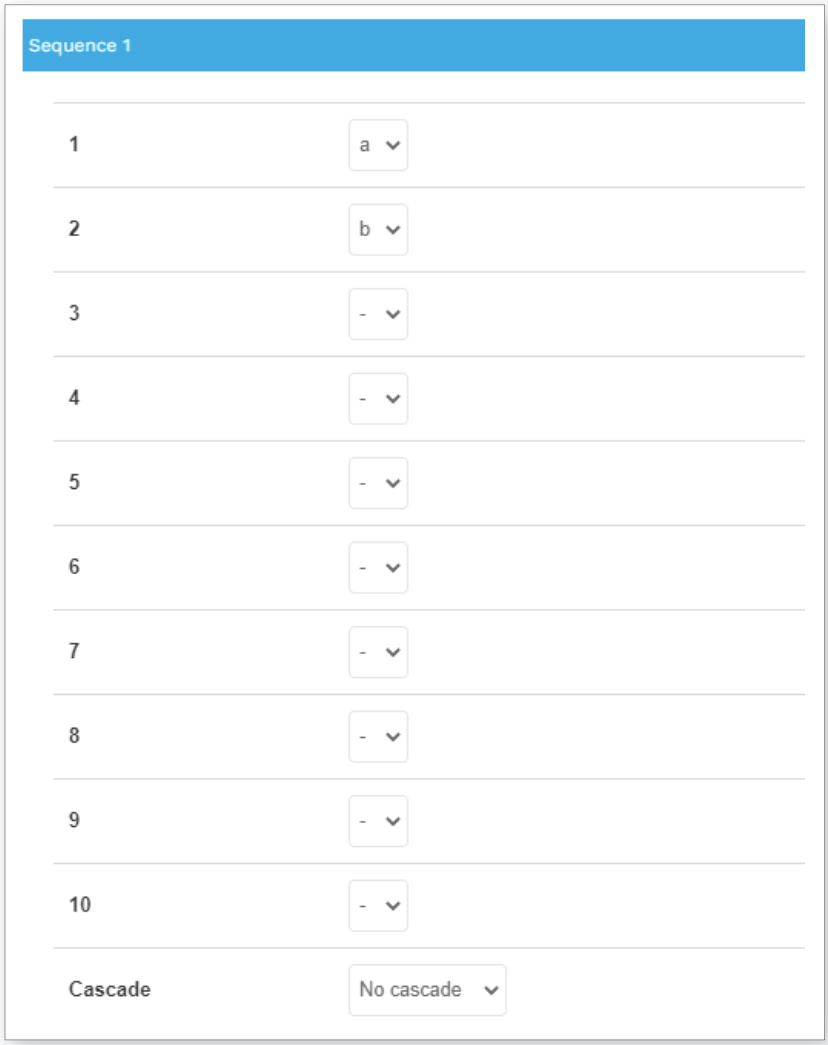
c) Select an appropriate **Sequence** to expand the view.

i. Select a sequence type in the drop-down list of each step to be included in the current sequence:

- Lowercase letters ("a, b, c") correspond to the addresses in the **IP Alarms** tab
- Uppercase letters ("A, B, C") corresponds to the telephone numbers in the **Analog Alarms** tab

ii. If required, select a sequence in the *Cascade* drop-down list to extend the distribution if all distribution attempts fail in the current sequence. When all distribution attempts are exhausted in the current sequence, the distribution continues to the selected sequence.

d) Repeat Step c) to configure additional sequences.



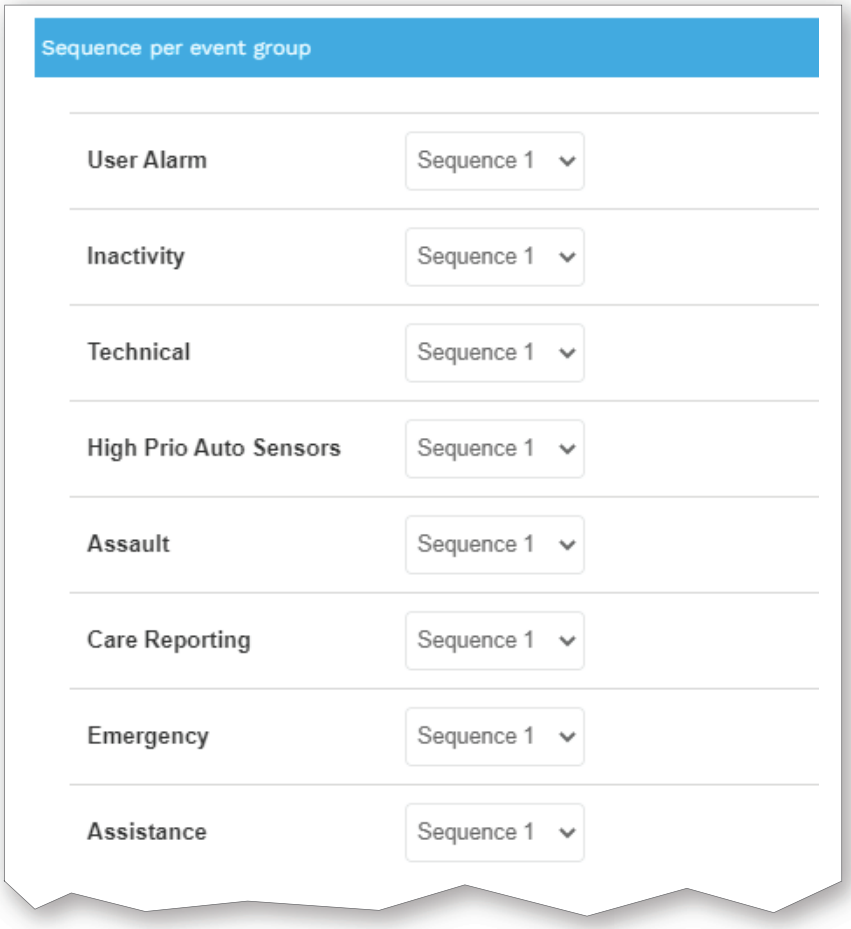
5.3.3.2. Configure sequences per event group

CAUTION
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

To select sequences for event groups:

a) Go to **Call Sequence**.
b) Click **Sequence per event group** to expand the view.
c) Select a sequence in the drop-down list of each required event group.

The selected sequence is used for distribution of all alarms and events that belongs to the current event group.



5.3.4. Configuring additional connectivity features

For additional connectivity, it is possible to connect the device to an existing Wi-Fi network or create an access point. When the device is set up as an access point, it can be used by other devices to connect to the Internet.

5.3.4.1. Connect Lifeline Digital to Wi-Fi

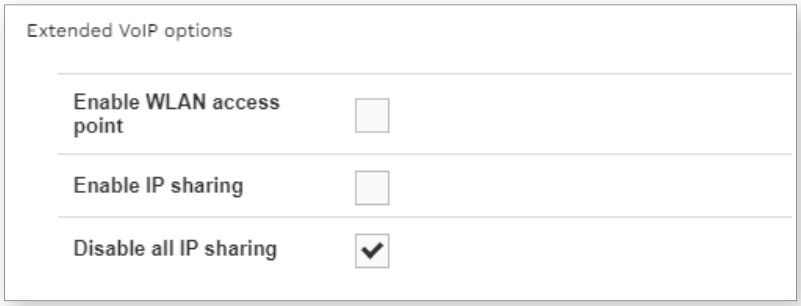
CAUTION
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

To connect the device to Wi-Fi:

a) Go to **IP Alarms** > **IP/WLAN**.

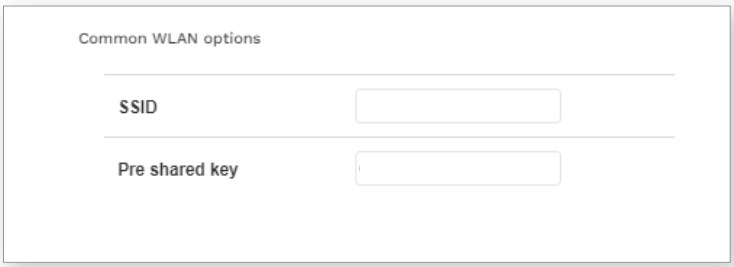
b) Under *Extended VoIP options* :

- Clear the *Enable IP sharing* checkbox.
- Clear the *Enable WLAN access point* checkbox.
- Tick the *Disable all IP Sharing* checkbox.



c) Under *Common WLAN options*:

i. Enter the name of the network you want to connect to in the *SSID* field.
ii. Enter the password of the network in the *Pre shared key* field.



5.3.4.2. Setting up an access point (Lifeline Digital as access point)

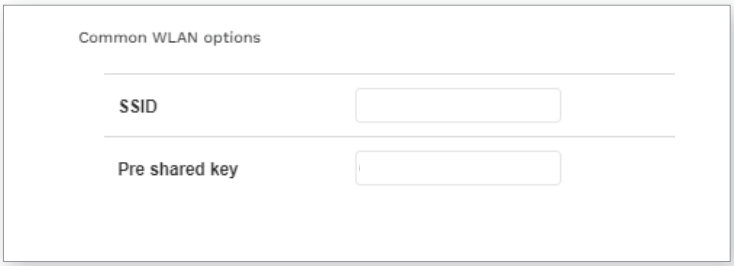
To set up an access point:

a) Go to **IP Alarms** > **IP/WLAN**.
b) Under *Extended VoIP options* :

- Tick the *Enable WLAN access point* checkbox.
- Tick the *Enable IP sharing* checkbox.
- Make sure that the *Disable all IP Sharing* checkbox is cleared.

c) Under *Common WLAN options*:

i. Enter a name to use for the access point in the *SSID* field.
ii. Enter a password to use for the access point in the *Pre shared key* field.

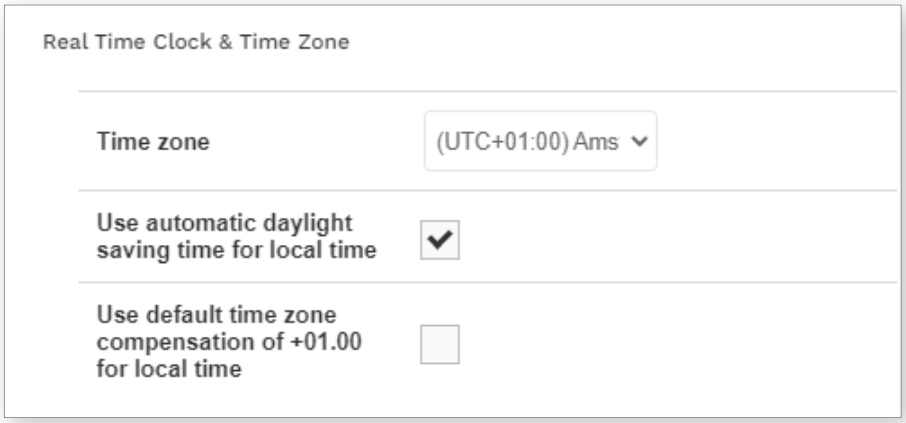

Common WLAN options
SSID
Pre shared key

5.4. Configuring time settings

5.4.1. Set the time zone

To set the time zone:

a) Go to **Time**.
b) Under *Real Time Clock & Time Zone*, select the correct time zone in the *Time zone* drop-down list.
c) If automatic daylight saving time is required, tick the *Use automatic daylight saving time for local time* checkbox.
d) If +1 hour offset is required, tick the *Use default time compensation of +01.00 for local time* checkbox.



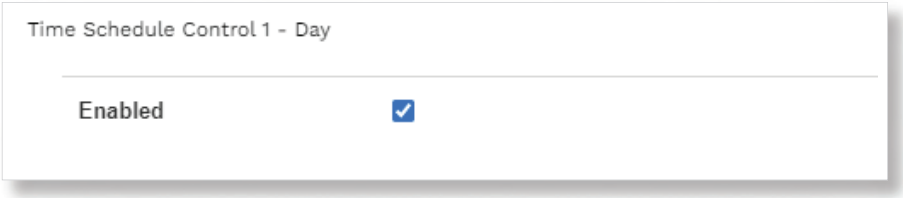
5.4.2. Time Schedule Control (TSC)

The Time Schedule Control (TSC) is used to configure schedules for features and alarm handling. Associated features and alarm handling functionality can be scheduled to be active on certain days of the week or during certain hours of the day.

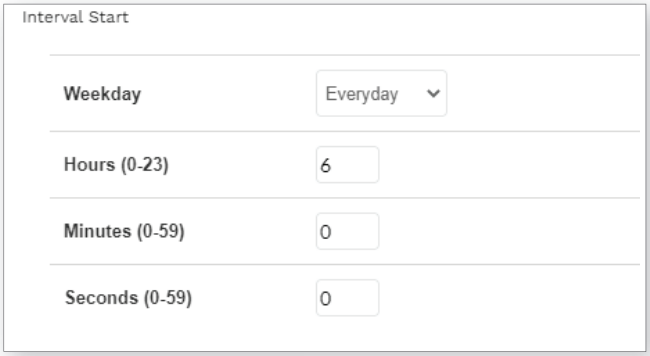
5.4.2.1. Configure a Time Schedule Control (TSC) interval

To configure a TSC interval:

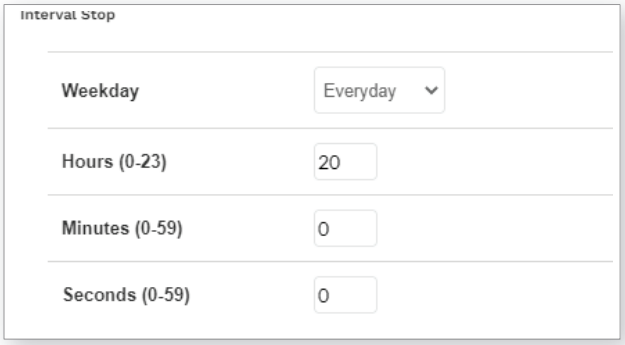
a) Go to **Time**.
b) Under an appropriate *Time Schedule Control*, tick the *Enabled* checkbox to enable the TSC.



c) Under *Interval Start*, select a day of the week or every day in the *Weekday* drop-down list and set the *Hours (0-23)*, *Minutes (0-59)* and *Seconds (0-59)* fields to set the start time for the interval.



d) Under *Interval Stop*, select a day of the week or every day in the *Weekday* drop-down list and set the *Hours (0-23)*, *Minutes (0-59)* and *Seconds (0-59)* fields to set the stop time for the interval.



5.5. Configuring power settings

5.5.1. Power saving scheme

The power saving scheme can be used to conserve battery power when the device is operating on backup batteries.

5.5.1.1. Adjust the power saving scheme

To adjust the power saving scheme:

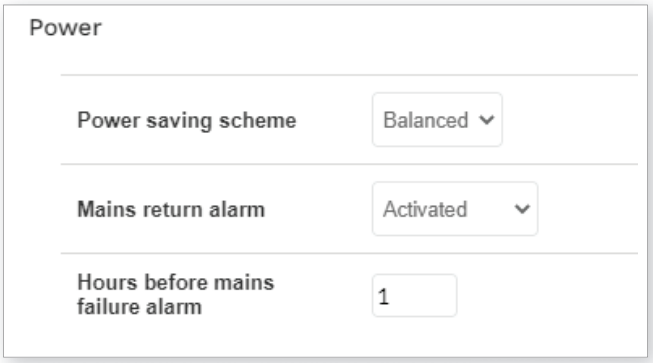
a) Go to **Power**.

b) Select a power saving option in the *Power saving scheme* drop-down list:

- **High**. The media processor and GSM module are switched off immediately when not needed
- **Balanced**. The media processor and GSM module are switched off after a period of inactivity
- **Low**. The media processor and GSM module are always switched on

The selected mode is activated when the device is operating on backup batteries.

NOTE
Speech messages are suspended when the media processor is switched off, but the media processor restarts to announce critical speech messages.



5.6. Configuring speaker volume and LED intensity

The speaker volume and the intensity of the keypad LEDs should be adjusted to fit the requirements of the care recipient.

The volume setting applies to all audio, including call volume, audio signals and announcements. However, speech messages have additional volume settings.

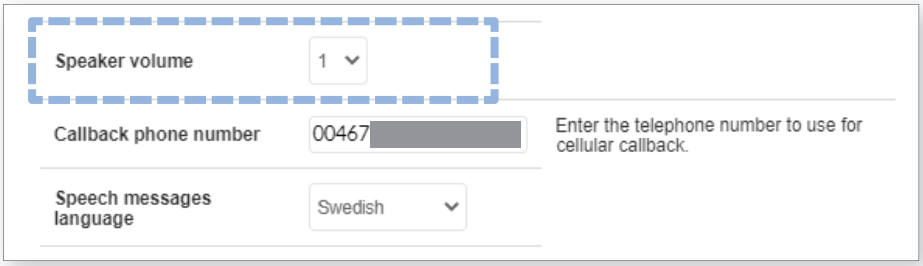
The intensity of the keypad LEDs is static but can be dimmed during certain times of the day or following a few minutes of inactivity.

5.6.1. Set speaker volume

To set speaker volume:

a) Go to **Common settings**.
b) Set the speaker volume in the *Speaker volume* drop-down list.

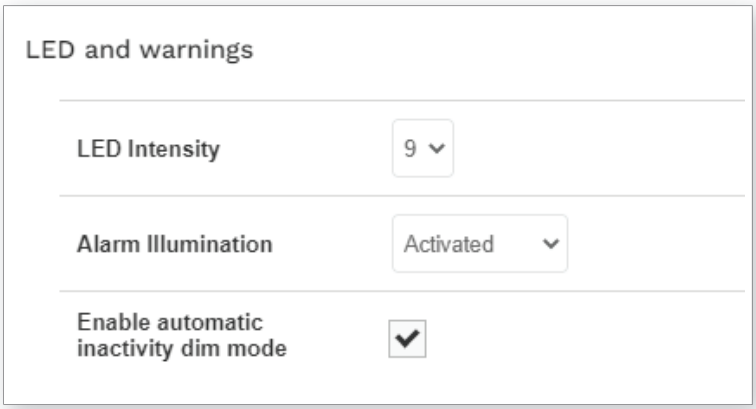
NOTE
Speech messages have additional volume settings.



5.6.2. Configure LEDs

To configure LEDs:

a) Go to **LED and warnings**.
b) Set intensity level (1-9) for LEDs in the *LED intensity* drop-down list.
c) Select an activation option for red **Alarm** button illumination in the *Alarm Illumination* drop-down list:
   - **Activated**
   - **Not activated**
d) If required, tick the *Enable automatic inactivity dim mode* checkbox to automatically dim the LEDs after a period of inactivity.



5.6.3. Configure LED dimmer

To configure LED dimmer :

a) Go to **LED and warnings**.

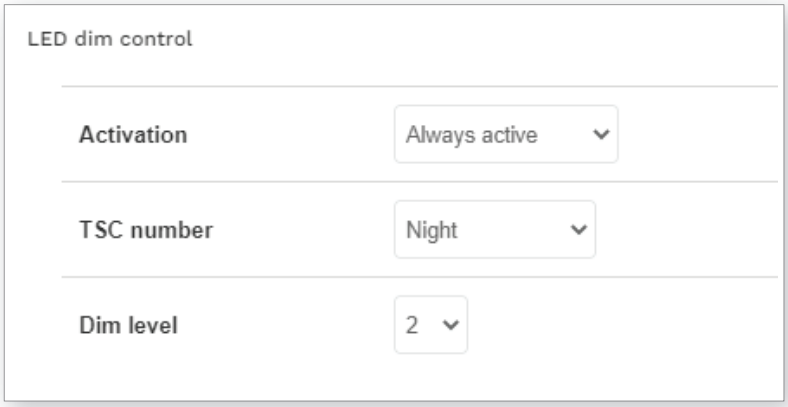
b) Under *LED dim control*, select an activation option in the *Activation* drop-down list:

- **Not activated**
- **Always active**
- **Active when associated Time Schedule Control (TSC) output is active**

c) If TSC is used for activation, select which TSC to use in the *TSC* drop-down list.

d) Set the intensity level in the *Dim level* drop-down list.

The intensity of the LEDs is dimmed to the selected level when this function is active.



5.7. Configuring settings for incoming and outgoing calls

5.7.1. Configure settings for outgoing call

To configure settings for outgoing calls:

a) Go to **Calls** > **Outgoing calls**.

b) Under *Outgoing calls*, select activation option for pre-alarm signal in the *Pre alarm signal* drop-down list:

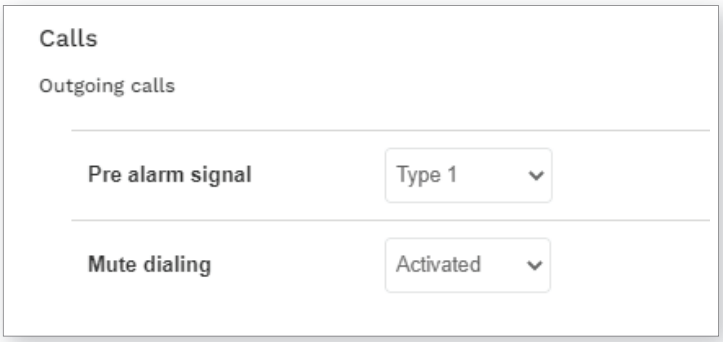
- **Not activated**
- **Type 1** Pre-alarm signal #1
- **Type 2** Pre-alarm signal #2
- **Type 3** Pre-alarm signal #3
- **Type 4** Pre-alarm signal #4
- **Type 5** Pre-alarm signal #5

The pre-alarm signal is emitted when an alarm call has been triggered but before the alarm distribution starts.

NOTE
This setting is only relevant when speech messages are disabled.

c) Select an activation option for mute dialling in the *Mute dialling* drop-down list:

- **Not activated**. The device emits dialing tones when making an alarm call.
- **Activated**. The device does not emit dial tones when making an alarm call.



5.7.2. Configure settings for incoming calls

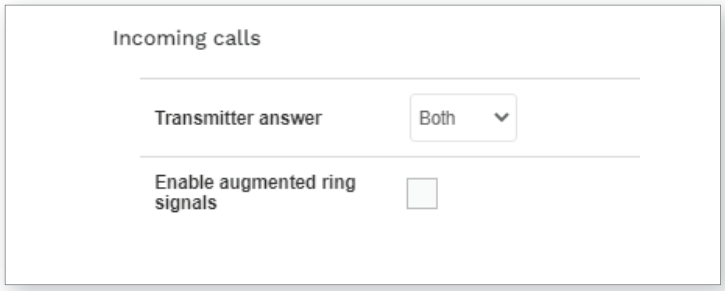
To configure settings for incoming calls:

a) Go to **Calls** > **Incoming calls**.

b) To enable the red **Alarm** button or pendant to answer incoming calls, select an option in the *Allow inbound call answer / Transmitter answer* drop-down list:

- **No**. Function is not active.
- **Ethernet**. Function is active for Ethernet connections
- **GSM**. Function is active for GSM connections
- **Both**. Function is active for both Ethernet and GSM connections.

c) To enable gradually increasing ring tone volume, tick the *Enable augmented ring signals*.



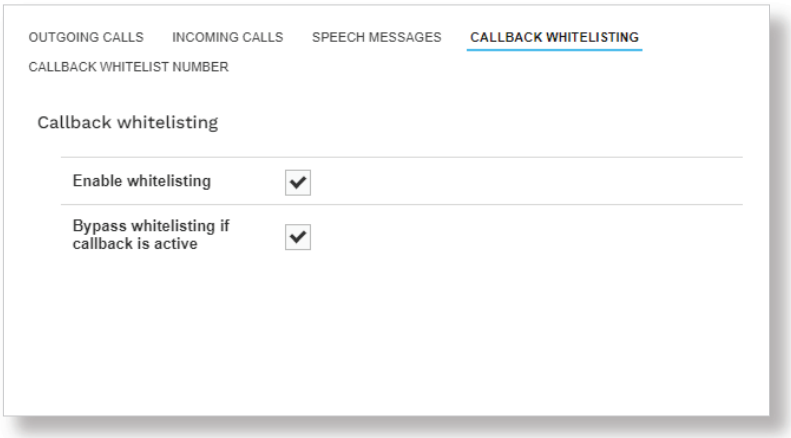
5.7.3. Configure callback whitelisting

To configure callback whitelisting:

a) Go to **Calls** > **Callback whitelisting**.

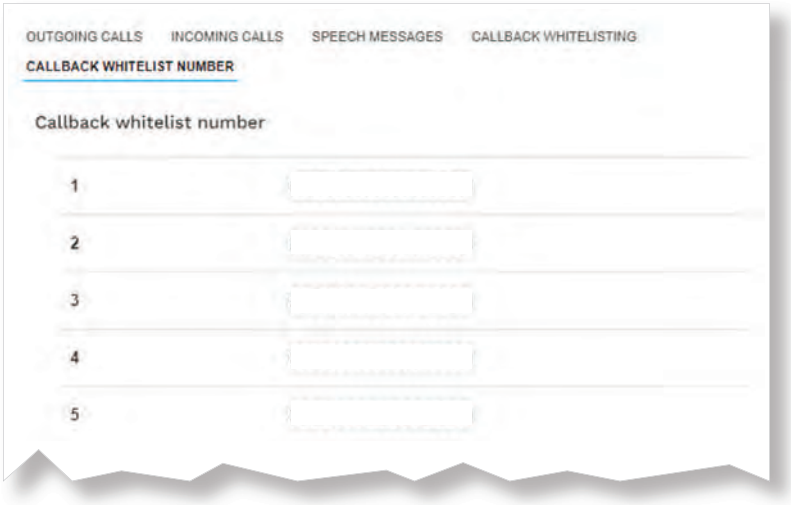
b) Tick the *Enable whitelisting* checkbox to enable whitelisting.

c) If required, tick the *Bypass whitelisting if callback is active* checkbox to bypass the whitelist if an alarm or event has triggered a callback.



d) Go to **Calls** > **Callback whitelist number** and enter the phone numbers that you want to add to the whitelist.

If you want to add all phone numbers that use a certain prefix to the whitelist, enter the prefix followed by "*" (asterisk). For example: "0708*" allows all incoming calls from phone numbers starting with "0708".



5.8. Configuring peripherals

This section describes how to configure peripherals with radio sensors, such as alarm buttons/pendants, door sensors and motion detectors. However, not all settings in this section are available for every type of radio sensor.

This section is primarily provided for reference. Tunstall strongly recommends that all new peripherals are connected manually. Only then amend settings or values if advised by your supplier or Tunstall.

5.8.1. Add and configure a radio sensor

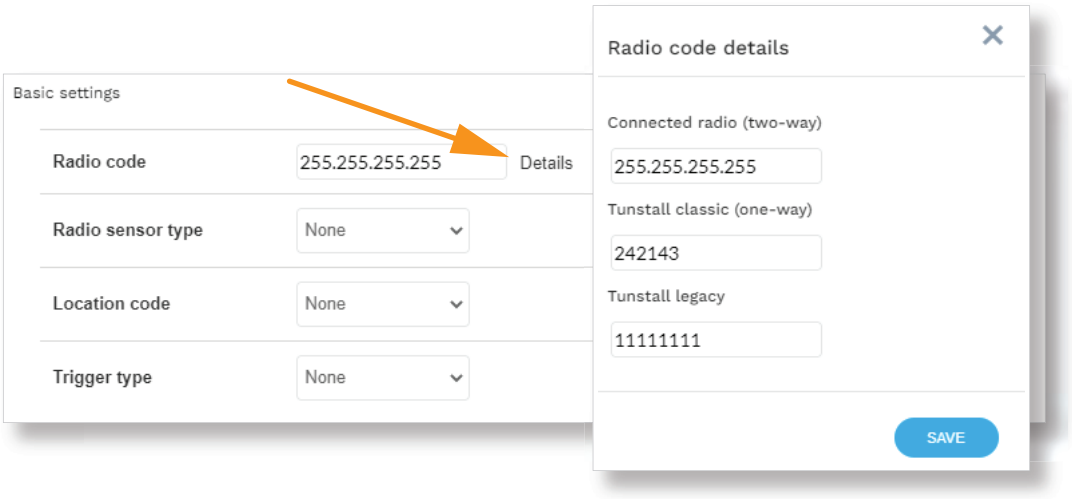
NOTE
It is not recommended to register new peripherals directly in DMP. Tunstall strongly recommends that all new peripherals are connected manually.

NOTE
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

To add and configure a radio sensor:

a) Go to **Radio Sensor**.
b) Click **Add sensor** to add a new sensor, or select an existing radio sensor to expand the view.

c) Under *Basic settings*, enter the radio code of the sensor in the *Radio code* field.
   i. Click **Details**. DMP opens the *Radio code details* window.
   ii. Enter the radio code of the sensor in the appropriate field and click **Save**.



NOTE
The radio code is typically printed on a label attached to the peripheral. The decimal radio code is used for "Connected radio (two-way)" (for example: 55.11.84.191), trinary for "Connected radio legacy (two-way)" (for example: 33112231) and six-digits for "Tunstall Classic (one-way)" (for example: 256449).

iii. Select sensor type in the *Radio sensor type* drop-down list:

- **Connected radio (two-way)** for decimal radio codes (for example: 55.11.84.191)
- **Connected radio legacy (two-way)** for trinary codes (for example: 33112231)
- **Tunstall Classic (one-way)** for six-digit radio codes (for example: 256449)
- **Linked with previous record** if the sensor is used to hold extended information from the previous radio sensor. This is only relevant for radio sensors that requires more than one radio sensor position.

iv. Select an event code in accordance to the trigger type, in the *Event 1 (main)* drop-down list.

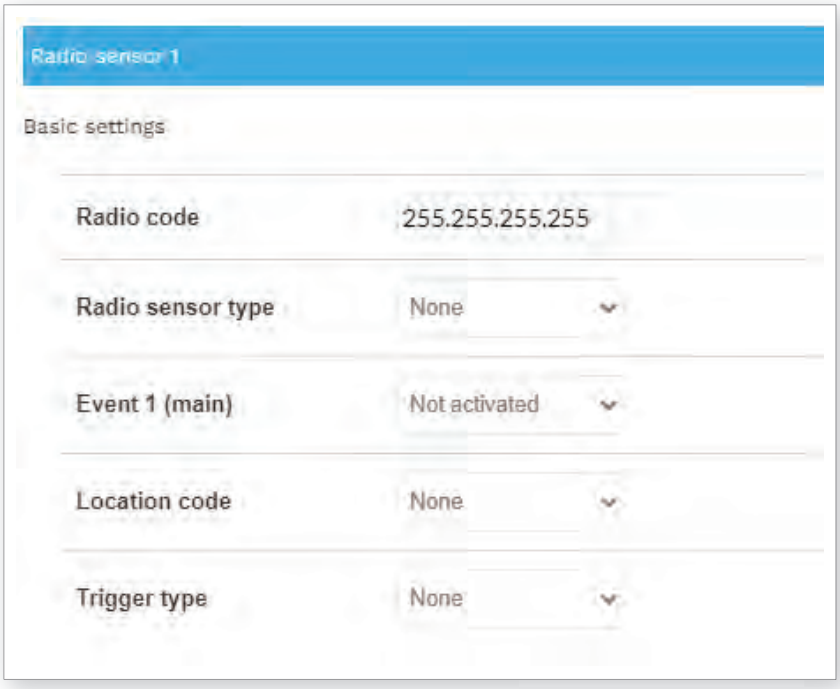
See Appendix D: Radio sensor events per trigger type, page 133 for a complete list of event codes according to trigger type.

An event code notifies the system and the alarm receiver or ARC of what has happened.

v. If required, select a location in the *Location code* drop-down list.

A location code notifies the system and the alarm receiver or ARC where the event or alarm has been triggered.

vi. Select trigger type in the *Trigger type* drop-down list.



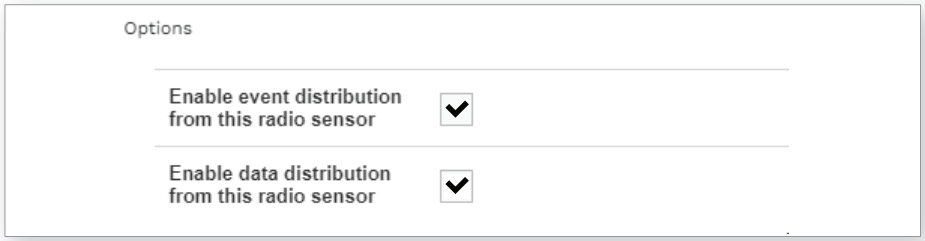
d) Under *Options*, the following options are available:

- *Enable event distribution from this radio sensor*
  - Select this option to enable event and alarm distribution from this radio sensor.
  - Deselect this option to suppress event distribution, that is, the system will not distribute events from this radio sensor to the ARC.

- *Enable data distribution from this radio sensor*

  NOTE
  This option is not currently supported.

  - Select this option to enable data distribution such as measured values from this radio sensor.
  - Deselect this option to suppress data distribution from this radio sensor, that is, the system will not distribute data such as measured values from this sensor.



e) Under *Link test*, tick the *Link test enabled* checkbox to enable link test for the selected radio sensor.

NOTE
This feature is only available for Tx4 sensors.

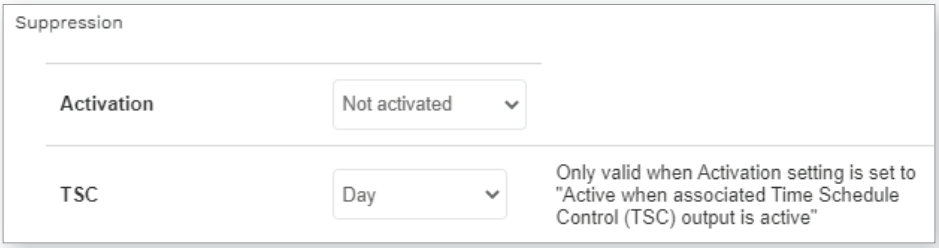
f) To enable suppression of a radio sensor:

i. Under *Suppression*, select an activation option in the *Activation* drop-down list:

- **Not activated**
- **Always active**
- **Active when the system is in Away mode**
- **Active when the system is in Home mode**
- **Active when associated Time Schedule Control (TSC) output is active**

ii. If TSC is used for activation, select a TSC in the *TSC* drop-down list.

The selected radio sensor is suppressed when this function is active. However, technical events that are critical for device monitoring are exempt from suppression.

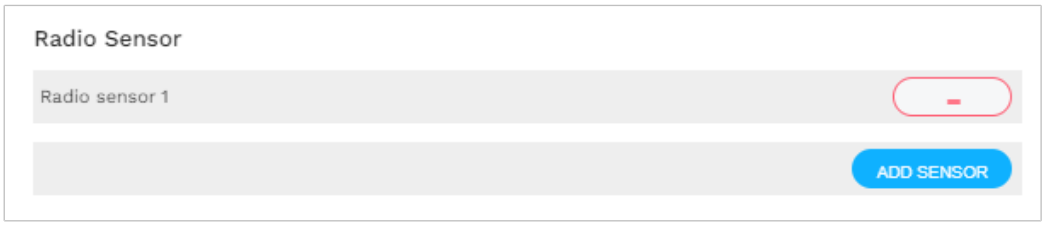


5.8.2. Delete a radio sensor

To delete a radio sensor record from Lifeline Digital:

a) Go to **Radio sensor**.

b) Click - on the sensor that you want to delete.



c) Click **Delete sensor** in the *Confirm delete* dialogue box.

The sensor is removed from the *Radio* tab.

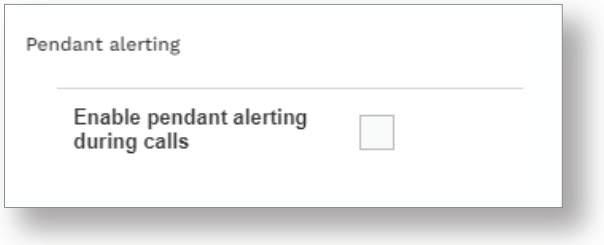
5.8.3. Enable pendant signalling during alarm calls

To enable pendant signalling during alarm calls:

a) Go to **Telecare > Other**

b) Under *Pendant alerting*, tick the *Enable pendant alerting during call* checkbox to enable feature.

When enabled, this feature allows a care recipient to communicate with the receiver by pressing the pendant to generate beeps during an alarm call.



5.9. Configuring device monitoring features

Lifeline Digital has several monitoring and fallback features that ensure the operation of the device.

5.9.1. Periodic test alarm

The periodic test alarm checks the connection between Lifeline Digital and the Alarm Receiving Centre (ARC) at regular intervals. If the ARC does not receive a periodic test alarm from a device as expected, an alarm is generated.

5.9.1.1. Configure periodic test alarms

CAUTION
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

To configure periodic test alarms:

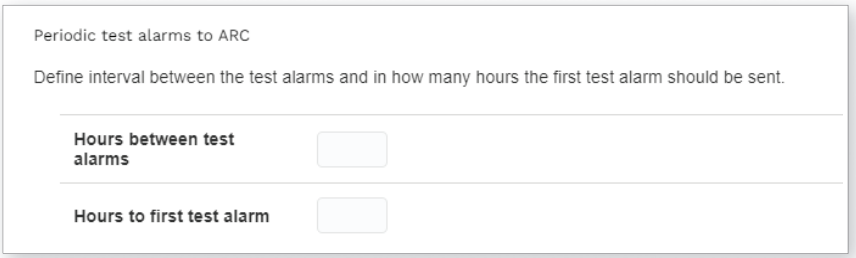
a) Go to **Time**.

b) Under *Periodic test alarms to ARC*, set the interval for periodic test alarms in the *Hours between test alarms* field.

Value	Description
0	Disabled
1-200	1-200 hours
201-245	1-45 days
246-255	45 days

The device generates a test alarm every time the interval expires.

c) Set the timer for when to generate the first periodic test alarm following power up in the *Hours to first test alarm* field.



5.9.2. Periodic link test

The periodic link test checks the connection between Lifeline Digital and connected peripherals with radio sensors at regular intervals. If the device does not receive a periodic link test transmission from a peripheral as expected, an alarm is sent to the Alarm Receiving Centre (ARC).

5.9.2.1. Configure periodic link test

CAUTION
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

To configure the periodic link test:

a) Go to **Time**.

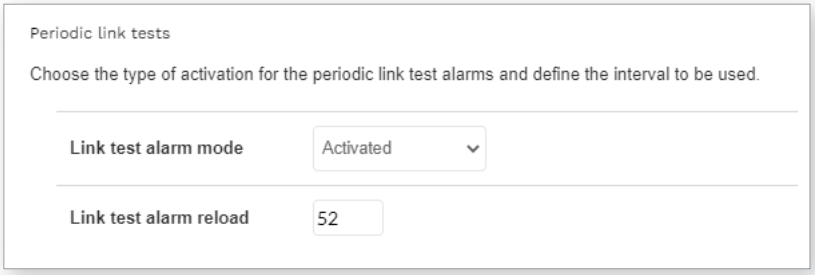
b) Under *Periodic link test*, select an activation option in the *Link test alarm mode* drop-down list:

- **Not activated**
- **Activated**

- **Recurrent**. If a link test failure is registered by the system, an alarm is generated every time the reload interval expires, until a successful link test transmission is detected.
- **Return function**. The system generates an alarm when a successful link test transmission is detected.
- **Return and Recurrent** . The system combines **Recurrent** and **Return function** functionality.

c) Set the reload interval in hours for when to generate a link test transmission in the *Link test alarm reload* field.

If the system does not receive a link test transmission before the reload interval expires, the system generates an alarm.



5.9.3. System warnings

System warnings are visual (LED) and audio indications that notifies the care recipient or caregiver of power and connectivity errors.

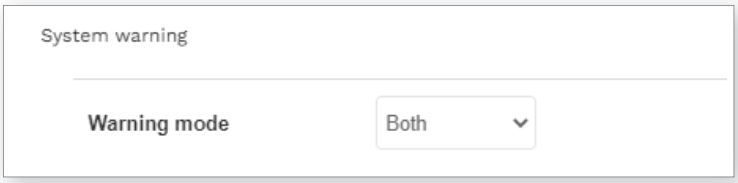
5.9.3.1. Configure system warning

To configure system warnings:

a) Go to **LED and warnings**.

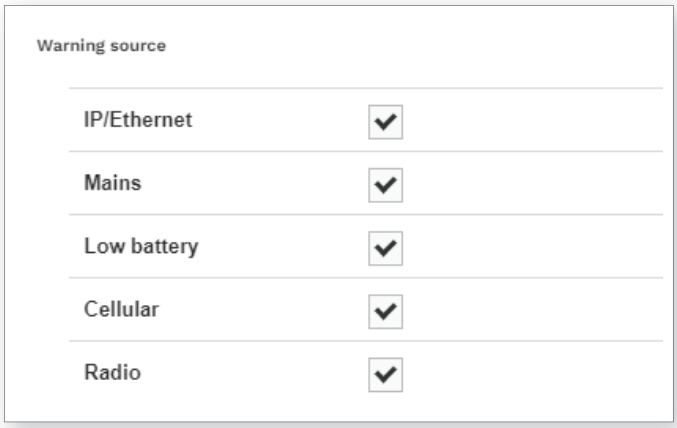
b) Under *System warning*, select an activation option in the *Warning mode* drop-down list:

- **Not activated**
- **Visual**. Enables visual system warnings on the red LED indicator
- **Acoustic**. Enables acoustic system warnings from the speaker
- **Both**. Enables both visual and acoustic system warnings



c) Under *Warning source*, select what types of errors to include in system warning:

- **IP/Ethernet** for IP/Ethernet failure
- **Mains** for mains power failure
- **Low battery** for low backup battery
- **Cellular** for cellular connectivity failure
- **Radio** for radio failure or radio interference



d) If required, configure the mute function for acoustic warnings:

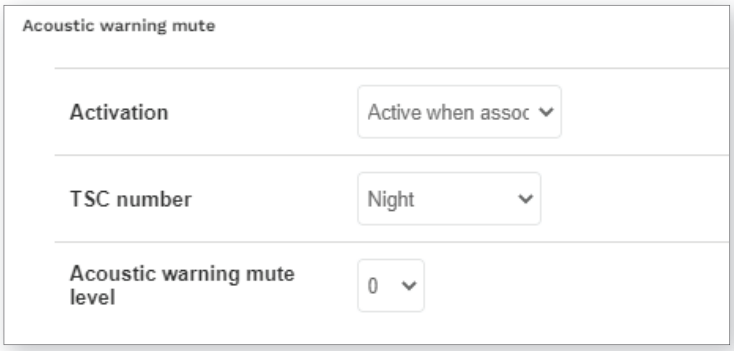
i. Under *Acoustic warning mute* select an activation option in the *Activation* drop-down list:

- **Not activated**
- **Always active**
- **Active when associated Time Schedule Control (TSC) output is active**

ii. If TSC is used for activation, select which TSC to use in the *TSC* drop-down list.

iii. Set the volume level in the *Acoustic warning mute level* drop-down list.

The acoustic warning is muted to the selected level when this function is active.



5.9.4. Heartbeats and online polls

Lifeline Digital sends heartbeats and online polls to Tunstall's Device Management Platform (DMP) at regular intervals:

- Heartbeats contain data about the status of the device. An alternative interval can be enabled to conserve energy when the device is operating on backup batteries.
- Online polls contain additional data about the device and are transmitted less frequently than heartbeats.

5.9.4.1. Configure the heartbeat interval (online ping)

CAUTION
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

To configure the heartbeat interval (online ping):

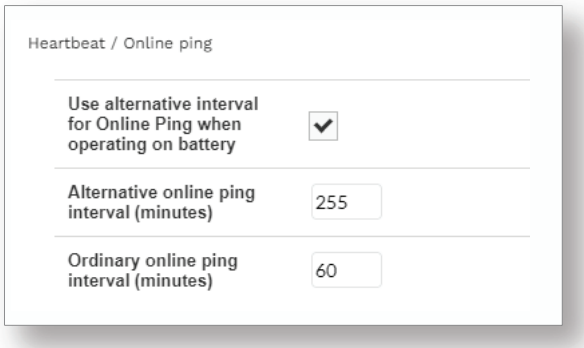
a) Go to **Time**.

b) Set the interval for heartbeats (online ping) in the *Ordinary online ping interval (minutes)* field.

c) To enable alternative interval for heartbeat (online ping):

i. Tick the *Use alternative interval for Online ping* checkbox.
ii. Set the alternative interval (in minutes) in the *Alternative online ping interval (minutes)* field.

The alternative interval for heartbeats (online ping) is activated when the device switches to backup batteries.

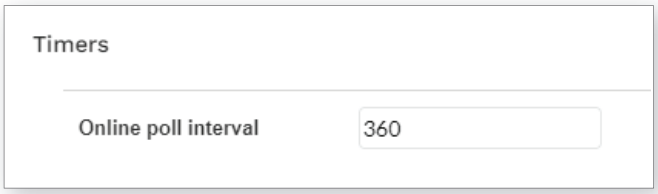


5.9.4.2. Set interval for online poll

CAUTION
Do not change settings or values unless advised by your supplier or Tunstall. Unauthorized changes may disrupt communication and cause connectivity failure.

To set the interval for online poll:

a) Go to **Time > Timers**.
b) Enter a value for the online poll interval in the *Online poll interval* field.



5.9.5. Mains failure alarm

The mains failure alarm notifies the Alarm Receiving Centre (ARC) if a mains power failure occurs. The alarm is generated if mains power does not return within the specified time period. A random number of minutes (max. 59 minutes) is automatically added to the specified time period to prevent that all devices in the affected area generate alarms at the same time.

5.9.5.1. Configure the mains failure alarm

To configure the mains failure alarm:

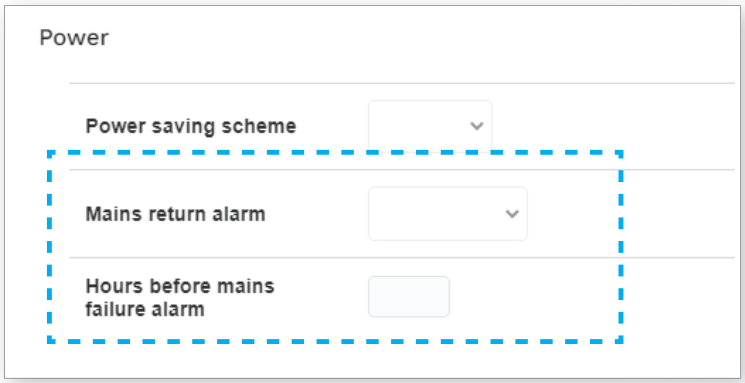
a) Go to **Power**.
b) Set the timer for when to generate a mains failure alarm following a mains failure in the *Hours before mains failure alarm* field.

The timer starts when a mains failure occurs and it generates an alarm if mains power does not return before the timer has elapsed.

NOTE
In the event of mains power failure, a random number of minutes (max. 59 minutes) is automatically added to the timer to prevent that all affected devices generate alarms at the same time.

c) Select whether or not the device notifies the Alarm Receiving Centre (ARC) when the mains power return in the *Mains return alarm* drop-down list

- **Activated**. The function is active.
- **Not activated**. The function is not active



5.10. Configuring telecare features

Lifeline Digital has several advanced telecare features that can be customized to fit individual care requirements.

5.10.1. Home/Away

The Home/Away feature is used to notify the system and the Alarm Receiving Centre (ARC) when the care recipient is away (or home). In the Away mode some functions and alarms are modified or suspended to avoid false alarms.

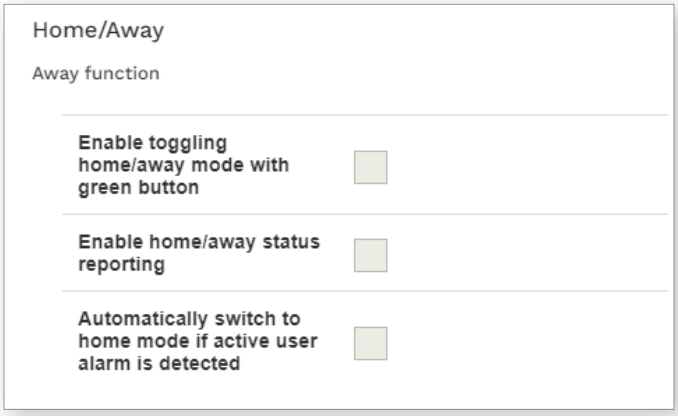
5.10.1.1. Configure the Home/Away feature

To configure the Home/Away feature:

a) Go to **Telecare > Home/Away**

b) The following options are available:

- *Enable toggling home/away mode with the green button*. Tick this checkbox to enable manual Home/Away toggling on the green **Cancel** button.
- *Enable home/away status reporting*. Tick this checkbox to enable status reporting to the Alarm Receiving Centre (ARC).
- *Automatically switch to home mode if active user alarm is detected*. Tick this checkbox to allow the system to override Away mode and switch to Home mode if a user alarm is detected.



5.10.2. Presence/Ready

The Presence/Ready feature is used to notify the system and the Alarm Receiving Centre (ARC) when a caregiver is present and when the caregiver is ready to depart. Optionally, a deactivation timer can be configured to automatically deactivate Presence mode in case a caregiver forgets to register Ready before departing. In Presence mode some alarm functionality is modified and the Assistance feature can be enabled.

5.10.2.1. Configure the Presence/Ready feature

To configure the Presence/Ready feature:

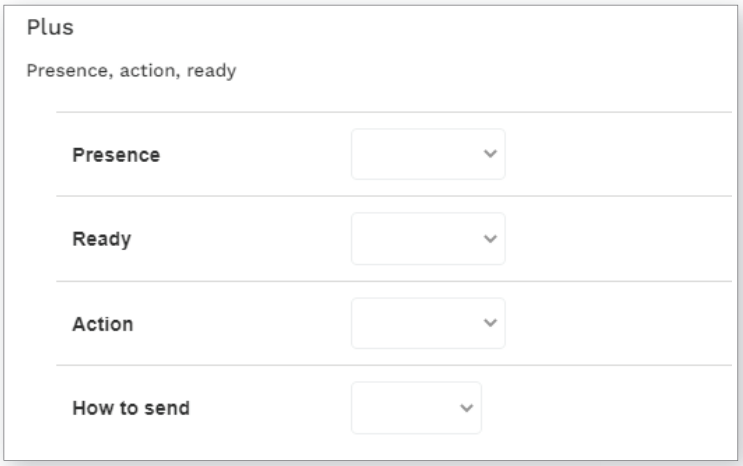
a) Go to **Telecare > Extended**.

b) Under *Presence, Action, Ready*, select an activation option for each function:

- *Presence* notifies the system and the ARC that a caregiver is present
- *Action* notifies the system and the ARC that a care action has been carried out
- *Ready* notifies the system and the ARC that the caregiver is ready for departure

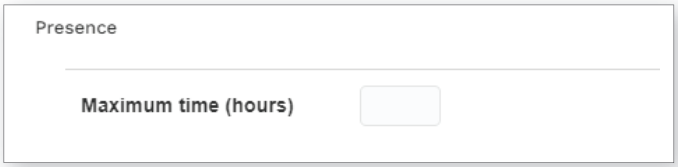
c) Select how to transmit reporting for *Presence, Action, Ready* in the *How to send* drop-down list:

- **Separate** to send reports independently
- **All** to send reports together when Ready mode is activated
- **Test alarm** to send the aggregated reports in conjunction with a periodic test alarm



d) Under *Presence*, set the maximum duration for Presence mode in the *Maximum time (hours)* field.

When the maximum time has elapsed, Presence mode is automatically deactivated.



5.10.3. Speech messages

Speech messages are audio announcements that acknowledge an action or alert the care recipient or caregiver that a certain action is required. Speech messages are also intended to simplify testing and configuration for installers and technicians.

5.10.3.1. Configure speech messages

To configure speech messages:

a) Go to **Calls** > **Speech messages**

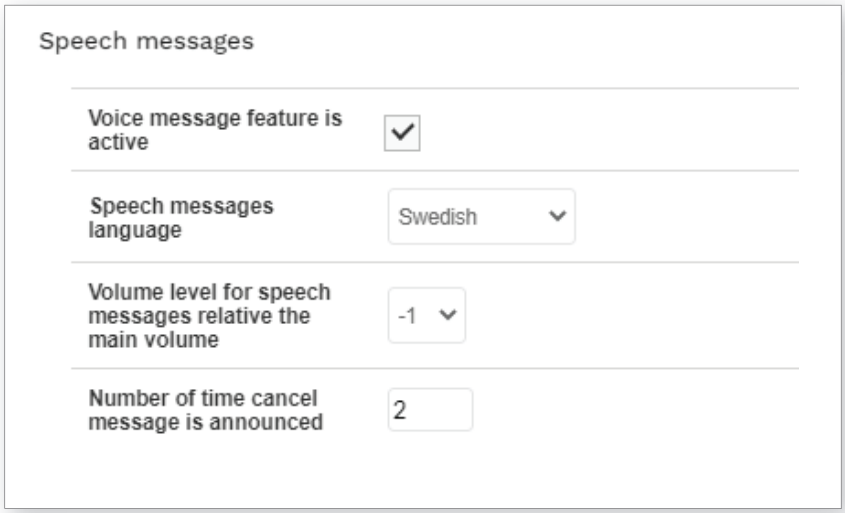
b) Under *Speech messages*, tick the *Voice message feature is active* checkbox to activate the speech messages feature.

c) Select the appropriate language in the *Speech messages language* drop-down list.

d) Set the volume level for speech messages *Volume level for speech messages relative the main volume* drop-down list.

The volume for speech messages is relative to the main speaker volume.

e) Set a value in the *Number of time cancel message is announced* field.


Speech messages
Voice message feature is active
Speech messages language
Swedish
Volume level for speech messages relative the main volume
-1
Number of time cancel message is announced
2

5.10.4. Basic Inactivity (BIA) monitoring

The Basic Inactivity (BIA) monitoring function is used to ensure that a person, who has unexpectedly become incapacitated and unable to trigger an alarm call, is visited or called as soon as possible following a preset time period. For example, after 24 hours at the latest.

The Basic Inactivity (BIA) monitoring generates an inactivity alarm if no activity is detected within a certain time. Activity is typically registered by pressing the yellow **Extra** button or passively triggering a motion sensor. Optionally, BIA can also be used as input for reporting Activities of Daily Life (ADL) to the Alarm Receiving Centre (ARC).

NOTE
When the system is set to Away mode, no alarm is generated.

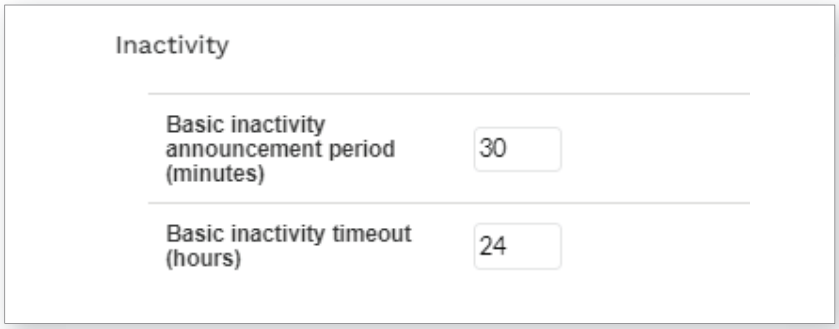
5.10.4.1. Configure Basic Inactivity (BIA) monitoring

To configure Basic Inactivity (BIA) monitoring:

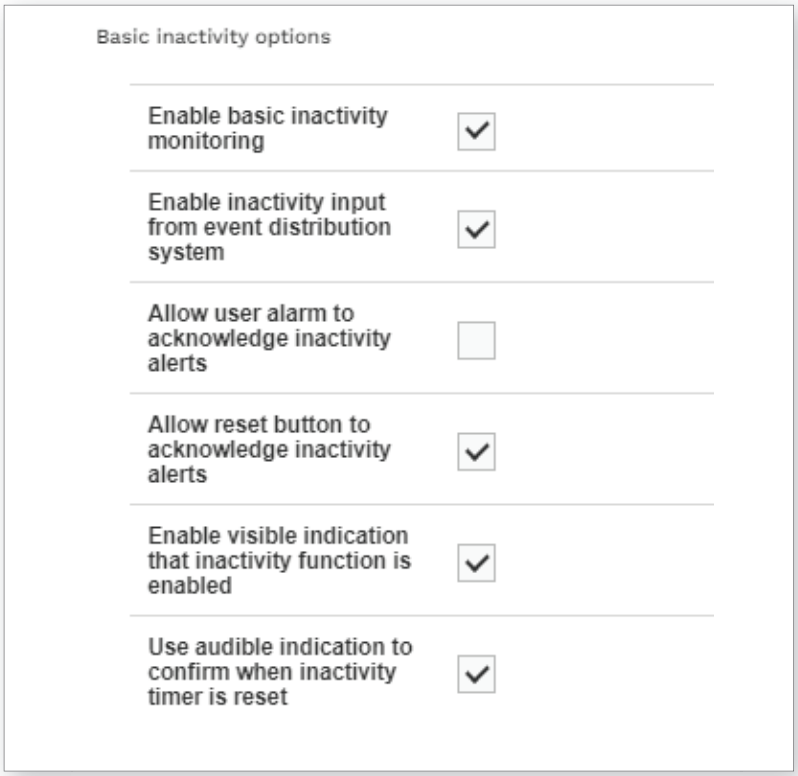
a) Go to **Telecare > Inactivity**
b) Under *Basic inactivity options*, tick the *Enable basic inactivity monitoring* checkbox to enable BIA.
c) Set timers and intervals:
   i. Set a time period for inactivity announcements in the *Basic inactivity announcement period (minutes)* field.

      The inactivity announcement period starts when the inactivity timer has elapsed, and during this time period the device continually announces "An inactivity alert is about to be made, please press cancel" to alert the care recipient.
   ii. Set the inactivity timer in the *Basic inactivity timeout (hours)* field.

      If the system does not detect any activity before the inactivity timer and the *Basic inactivity announcement period* have elapsed, an inactivity alarm is sent to the Alarm Receiving Centre (ARC). If activity is detected, the inactivity timer is reset and no alarm is generated.



d) Under *Basic inactivity options*, the following options are available:
   - *Enable basic inactivity monitoring*. Tick this checkbox to enable BIA monitoring.
   - *Enable inactivity input from event distribution system*. Tick this checkbox to enable input from event groups with inactivity input parameters.
   - *Allow user alarm to acknowledge inactivity alarms*. Tick this checkbox to enable radio sensors associated with user alarm to acknowledge inactivity alarms and register activity.
   - *Allow reset/cancel button to acknowledge inactivity alerts* . Tick this checkbox to enable the green **Cancel** button to acknowledge inactivity alarms and register activity.
   - *Enable visible indication that inactivity function is enabled* . Tick this checkbox to enable visual indication for BIA on the yellow **Extra** button.
   - *Use audible indication to confirm when inactivity timer is reset*. Tick this checkbox to enable an audible reassurance signal, i.e. a bleep, every time the inactivity timer is reset using the yellow extra button.



5.10.4.2. Enable BIA monitoring on the yellow button

NOTE
BIA monitoring is typically assigned to the yellow **Extra** button.

To enable BIA monitoring on the yellow **Extra** button:

a) Go to **Telecare > Other**

b) Under *Yellow button*, select **Inactivity** in the *Event type for yellow button* drop-down list.

The inactivity timer is reset when the yellow **Extra** button is pressed.

5.10.5. Cancel At Source (CAS)

The Cancel At Source (CAS) feature repeats an active alarm until a caregiver physically cancels the alarm by pressing the green **Cancel** button on the device. CAS can be used to ensure that high dependency care recipients are visited before an alarm is completely cleared/acknowledged.

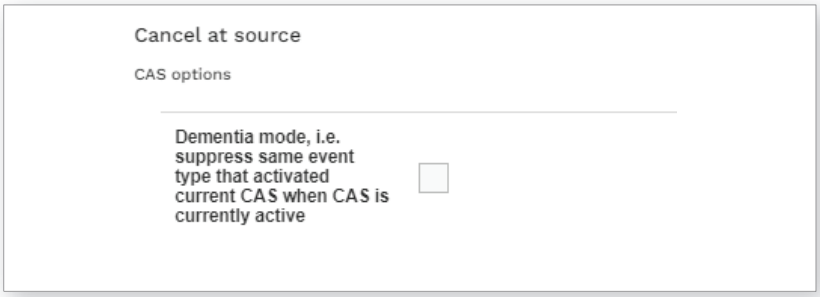
5.10.5.1. Configure Cancel At Source (CAS)

To configure Cancel At Source (CAS):

a) Go to **Telecare** > **Cancel At Source**.

b) Under *CAS options*, the following options are available:

- *Dementia mode*. Tick this checkbox to prevent the system from generating multiple alarms of the same type that caused the initial CAS alarm



5.10.6. Temperature guard

The temperature guard monitors the ambient temperature and notifies the Alarm Receiving Centre (ARC) if the temperature falls below or rises above the pre-configured limits. The temperature guard can be used in conjunction with actuator control to turn on a heater or a cooling fan.

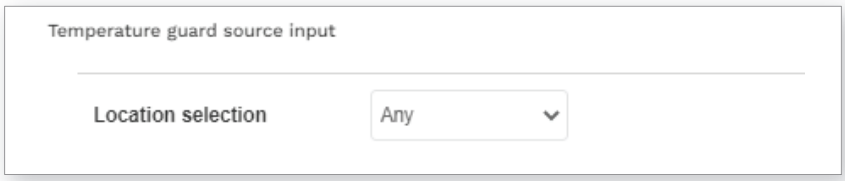
NOTE
The temperature guard has an initial stabilisation period of 180 minutes (3 hours) following power-up. During this period the temperature guard does not monitor the ambient temperature. This is to prevent the device from generating an alarm if it has been stored in a hot or cold environment prior to installation.

5.10.6.1. Configure temperature guard - low temperature alarm

NOTE
This section describes how to configure the integral temperature sensor.

To configure the temperature guard for low temperature alarm:

a) Go to **Telecare > Temperature guard**.
b) If required, select a location for the temperature sensor in the *Location selection* drop-down list.



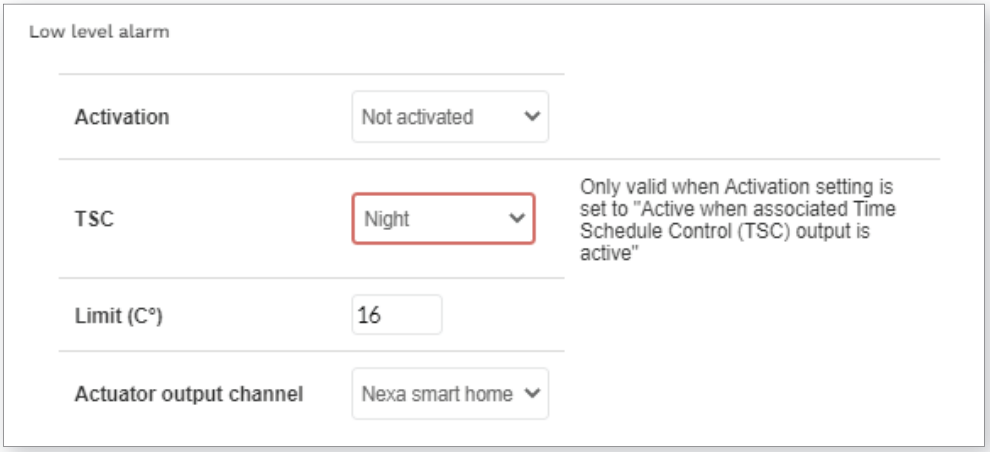
c) Under *Low level alarm*, select an activation option in the *Activation* drop-down list:

- **Not activated**
- **Always active**
- **Active when the system is in Away mode**
- **Active when the system is in Home mode**
- **Active when associated Time Schedule Control (TSC) output is active**

d) If TSC is used for activation, select which TSC to use in the *TSC* drop-down list.
e) Enter a value in °C (degree Celsius) to set the lower temperature limit in the *Limit (°C)* field. If the temperature falls and remains below this limit, an alarm is generated.
f) If required, enable an actuator, such as a heater, in conjunction with low temperature alarms:

i. Select a pre-configured channel in the *Actuator output channel* drop-down list.

NOTE
Internal hardwired output is only available in the Extended variant.

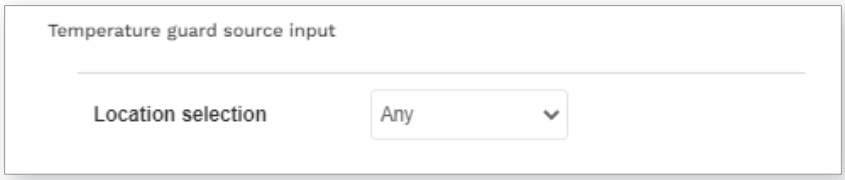


5.10.6.2. Configure temperature guard - high temperature alarm

NOTE
This section describes how to configure the integral temperature sensor.

To configure the temperature guard for high temperature alarm:

a) Go to **Telecare > Temperature guard**.
b) If required, select a location for the temperature sensor in the *Location selection* drop-down list.

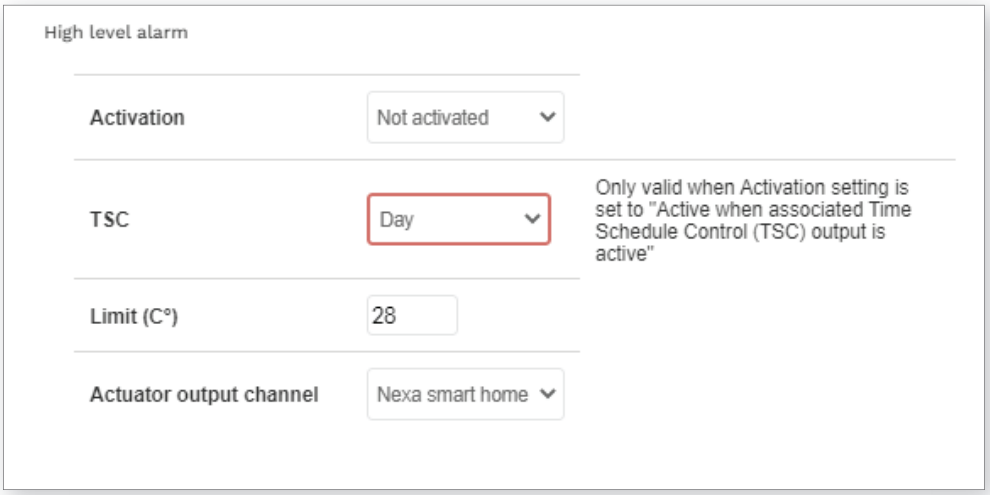


c) Under *High level alarm*, select an activation option in the *Activation* drop-down list:
- **Not activated**
- **Always active**
- **Active when the system is in Away mode**
- **Active when the system is in Home mode**
- **Active when associated Time Schedule Control (TSC) output is active**

d) If TSC is used for activation, select which TSC to use in the *TSC* drop-down list.
e) Enter a value in °C (degree Celsius) to set the higher temperature limit in the *Limit (°C)* field. If the temperature rise and remains above this limit, an alarm is generated.
f) If required, to enable an actuator, such as a cooling fan, in conjunction with high temperature alarms:

i. Select a pre-configured channel in the *Actuator output channel* drop-down list.

NOTE
Internal hardwired output is only available in the Extended variant.



5.10.7. Emergency

The Emergency feature allows a caregiver to send an emergency alarm via Lifeline Digital using a personal alarm trigger.

5.10.7.1. Enable Emergency feature

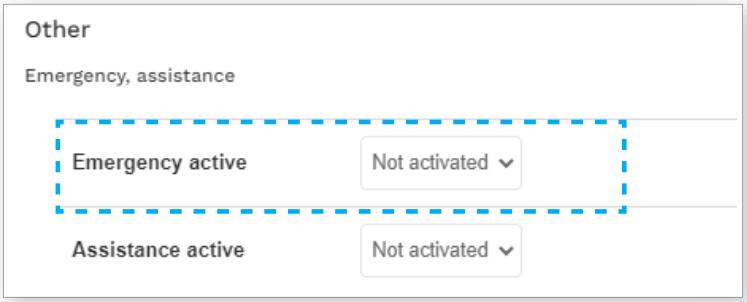
To enable Emergency feature:

a) Go to **Telecare > Other**.

b) Under *Emergency, assistance*, select an activation option in the *Emergency active* drop-down list:

- **Not activated**
- **Activated**

NOTE
This setting enables the Emergency feature within the system. If additional configuration of the peripheral is required, refer to the user manual or installation guide of the peripheral.



5.10.8. Assistance

The Assistance feature allows a caregiver to send an assistance alarm if additional help is required. This function is only available in Presence mode.

5.10.8.1. Enable Assistance feature

To enable Assistance feature:

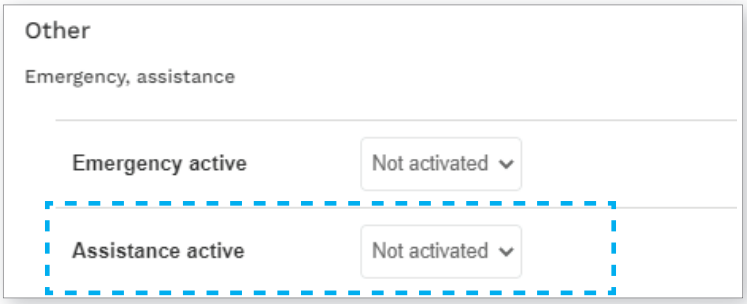
a) Go to **Telecare > Other**.

b) Under *Emergency, assistance*, select an activation option in the *Assistance active* drop-down list:

- **Not activated**

- **Activated**

NOTE
Assistance is only available when the system is in Presence mode.



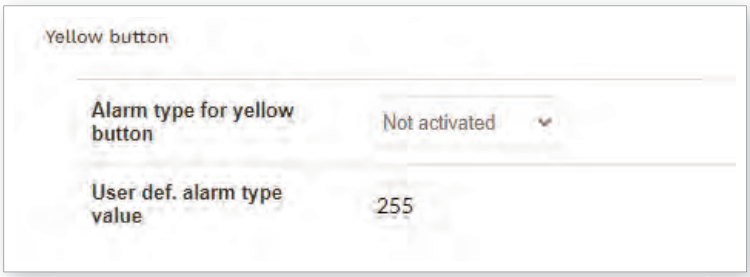
5.10.9. The yellow button

The yellow **Extra** button is typically used by the care recipient to register activity for Basic Inactivity (BIA) monitoring. However, it is possible to assign other types of alarms or events to the button.

5.10.9.1. Assign an event type to the yellow button

To assign an event type to the yellow **Extra** button:

a) Go to **Telecare > Other**.
b) Under *Yellow button*, select an event type in the *Event type for yellow button* drop-down list.
c) If **User defined** event is selected, set the event type value in the field.



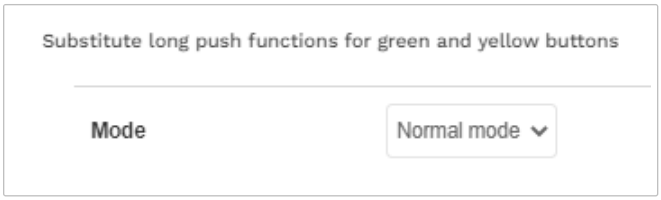
5.10.9.2. Swap button functionality

WARNING
Notify all users of the affected devices if you swap button functionality. Failure to notify may cause users to incorrectly handle the devices.

It is possible to swap some functionality between the green **Cancel** button and the yellow **Extra** button:

a) Go to *Telecare > Other*.
b) Under *Substitute long push functions for green and yellow buttons*, select one of the follow options in the drop-down list:
   - **Normal mode**:
     - Toggle Home/Away mode on the green **Cancel** button.
     - Manually connect to DMP on the yellow **Extra** button.
   - **Classic mode**:
     - Toggle Home/Away mode on the yellow **Extra** button.

◦ Manually connect to DMP on the green **Cancel** button.



5.11. Configuring the Smart sensor platform

The Smart sensor platform provides dynamic features that combine sensors, timers and actuator control. These features can typically be scheduled for when and for how long they are active or inactive.

5.11.1. Virtual Intelligent Bed Sensor (VIBS)

The Virtual Intelligent Bed Sensor (VIBS) monitors when a care recipient is in bed and out of bed. VIBS alerts the Alarm Receiving Centre (ARC) if the care recipient does not go to bed as expected or gets out of bed and does not return within the specified time. A motion sensor can be used to suppress alarms if movement is detected and the care recipient is considered to be OK while out of bed. VIBS can be used with or without the light control feature to switch on and off lights when the care recipient gets in and out of bed.

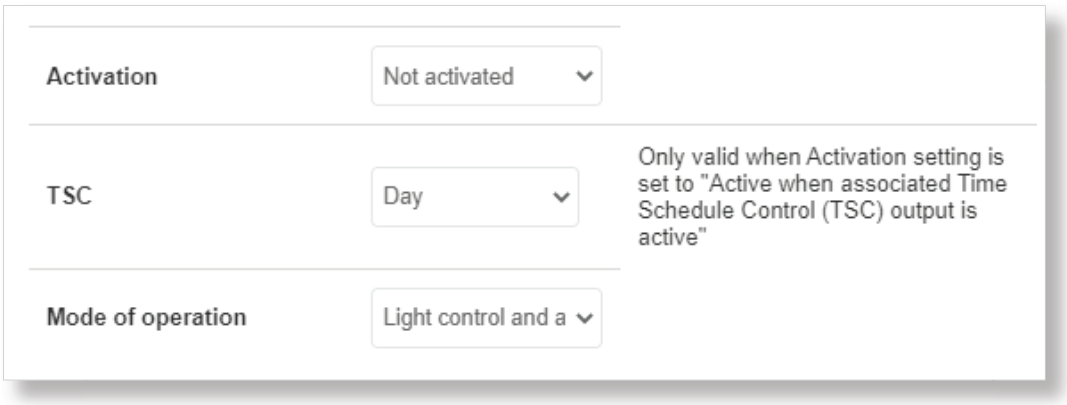
VIBS requires a bed sensor, a PIR motion sensor and optionally a Nexa Smart plug.

5.11.1.1. Configure Virtual Intelligent Bed Sensor (VIBS)

NOTE
To avoid false alarms from the associated radio sensors, you must typically clear the *Enable event distribution from this radio sensor* checkbox in the *Radio sensor* > *Options* tab.

To configure VIBS:

a) Go to **Telecare > Virtual Intelligent Bed Sensor**.
b) Enable VIBS:
   i. Select an activation option in the *Activation* drop-down list.
      - **Not activated**
      - **Always active**
      - **Active when the system is in Away mode**
      - **Active when the system is in Home mode**
      - **Active when associated Time Schedule Control (TSC) output is active**
   ii. If TSC is used for activation, select a TSC in the *TSC* drop-down list.
   iii. Select VIBS functionality in the *Mode of operation* drop-down list:
      - **Light control only** enables the light control feature
      - **Light control and alarms** enable the light control feature and alarm handling
      - **Alarms only** enables alarm handling



c) Set timers and alarm types:
   i. Set the guard time in the *Guard time (seconds)* field.

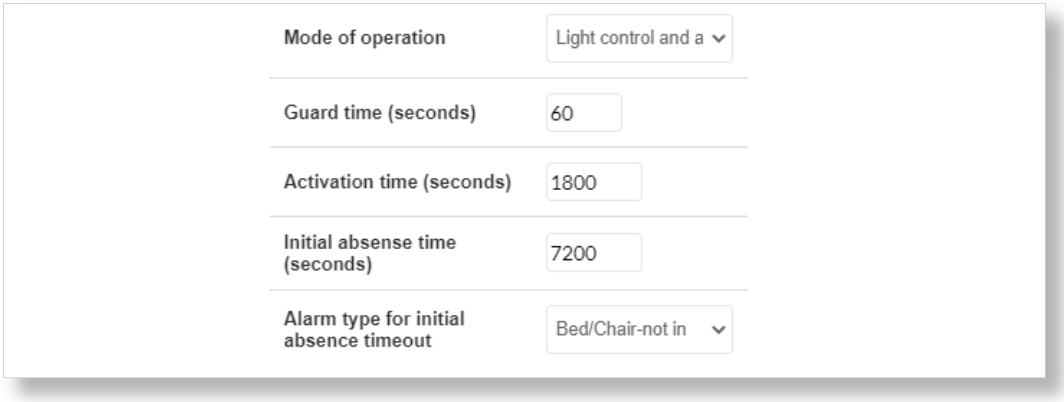
      The guard time starts when a care recipient gets into bed. If the care recipient gets out of bed before the guard time has elapsed, VIBS is not activated.
   ii. Set the activation time in the *Activation time (seconds)* field.

The activation time starts when the care recipient gets out of bed. If the care recipient returns to bed before the activation time has elapsed, no alarm is generated.

iii. Set the initial absence time to delay VIBS activation in the *Initial absence time (seconds)* field.

The initial absence time delays VIBS activation in case the care recipient goes to bed later than expected.

iv. Select which alarm or event to generate when the initial absence time elapses in the *Alarm type for initial absence timeout* field.



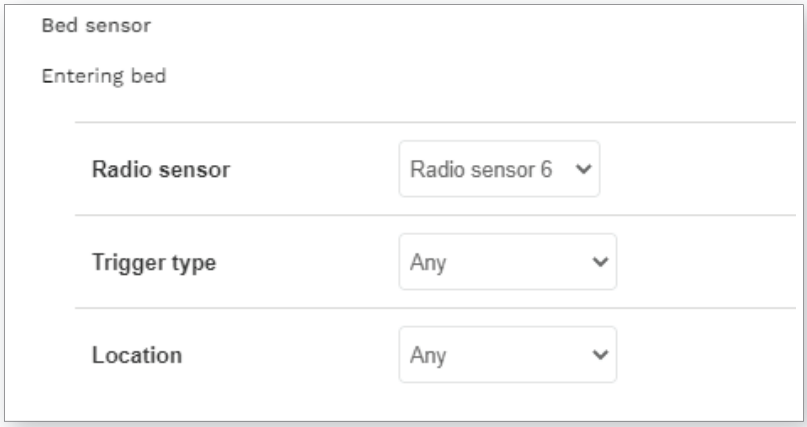
d) Under *Bed sensor* > *Entering bed*, enable the bed sensor to detect when a care recipient gets into bed:

i. Select the position of the bed sensor in the *Radio sensor* drop-down list.

ii. If required, select sensor trigger type in the *Trigger type* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

iii. If required, select location of the sensor in the *Location* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

The guard time starts when a care recipient gets into bed. If the care recipient gets out of bed before the guard time has elapsed, VIBS is not activated.



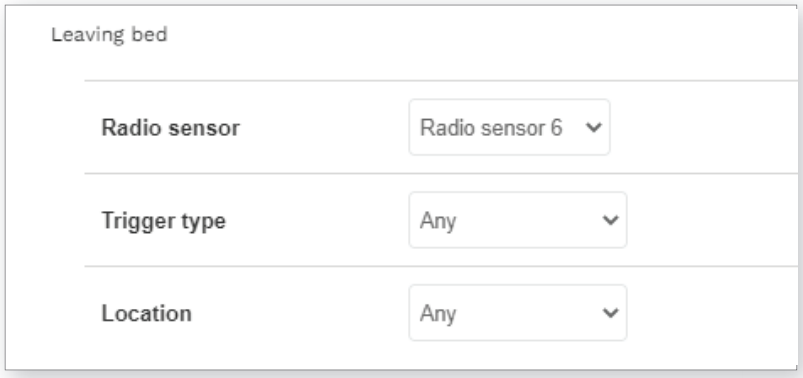
e) Under *Bed sensor* > *Leaving bed*, enable the bed sensor to detect when a care recipient gets out of bed:

i. Select the position of the bed sensor in the *Radio sensor* drop-down list.

ii. If required, select sensor trigger type in the *Trigger type* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

iii. If required, select location of the sensor in the *Location* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

The activation time starts when the care recipient gets out of bed. If the care recipient returns to bed before the activation time has elapsed, no alarm is generated.



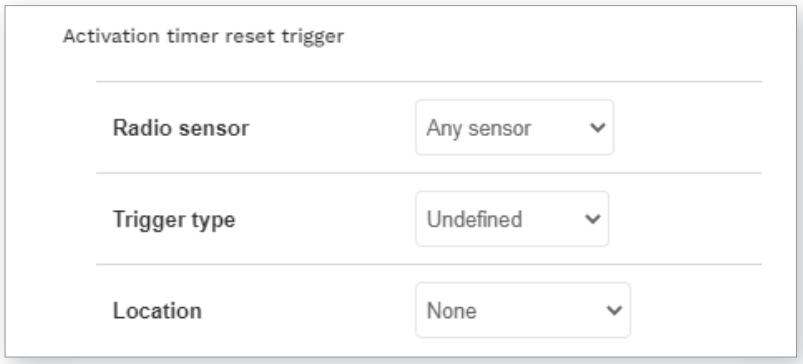
f) Under *Activation timer reset trigger*, to enable the reset trigger:

i. Select a sensor in the *Radio sensor* drop-down list. Select **None** if the reset trigger is not required.

ii. If required, select sensor trigger type in the *Trigger type* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

iii. If required, select location of the sensor in the *Location* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

The reset trigger restarts the activation time when triggered. For example, if a movement detector is used as reset trigger, the activation time restarts when movement is detected while the care recipient is out of bed. In this case the care recipient is considered to be OK and no alarm is generated as long as the activation time is extended.



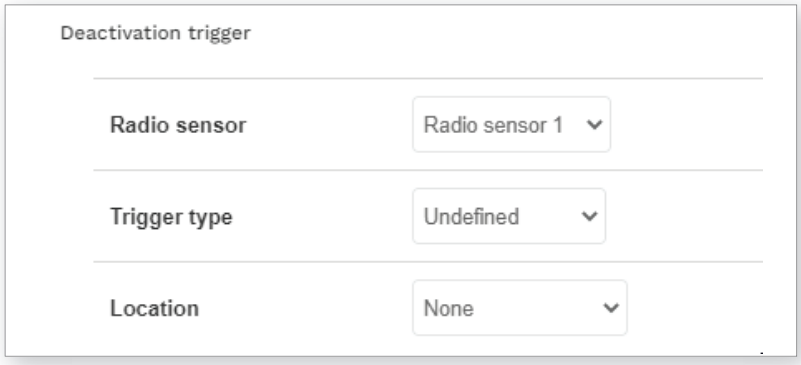
g) Under *Deactivation trigger*, to enable the deactivation trigger:

i. Select a sensor in the *Radio sensor* drop-down list. Select **None** if the deactivation trigger is not required.

ii. If required, select sensor trigger type in the *Trigger type* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

iii. If required, select location of the sensor in the *Location* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

The deactivation trigger deactivates the activation timer when triggered. For example, if a movement detector is used as deactivation trigger, the activation timer is deactivated when movement is detected while the care recipient is out of bed. In this case the care recipient is considered to be OK and no alarm is generated.



h) Under *Light control*, configure actuator control and timers:

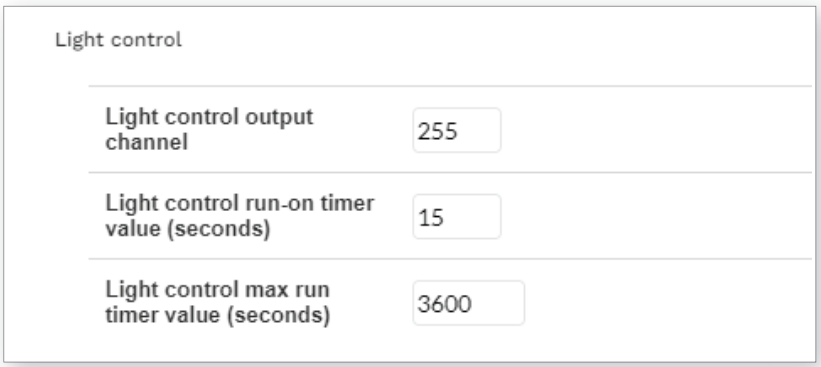
i. Select a channel with a pre-configured Smart plug in the *Light control output channel* field.

ii. Set the run-on timer in the *Light control run-on timer (seconds)* field.

The timer starts when a care recipient gets into bed and switches off the light when it elapses.

iii. Set the max run timer in the *Light control max run timer (seconds)* field.

The timer starts and the light switches on when the care recipient gets out of bed. When the timer has elapsed the light is switched off.



5.11.2. Virtual Intelligent Property Sensor (VIPS)

The Virtual Intelligent Property Sensor (VIPS) alerts the Alarm Receiving Centre (ARC) if a care recipient leaves the door open for too long or exits the property. The care recipient is considered to be absent when the door has been opened and closed but no movement has been detected within the property by the motion sensor. If the motion sensor detects movement after the door has been closed, the care recipient is considered to be at home and no alarm is generated.

If the door is left open for too long an alarm is generated. However, the alarm is deferred as long as the motion sensor detects movement while the door is open. This is to prevent false alarms in case the care recipient remains by to the door or briefly goes back into the property.

VIPS requires a door sensor and a PIR motion sensor.

5.11.2.1. Configure Virtual Intelligent Property Sensor (VIPS)

NOTE
To avoid false alarms from the associated radio sensors, you must typically clear the *Enable event distribution from this radio sensor* checkbox in the *Radio sensor* > *Options* tab.

To configure VIPS:

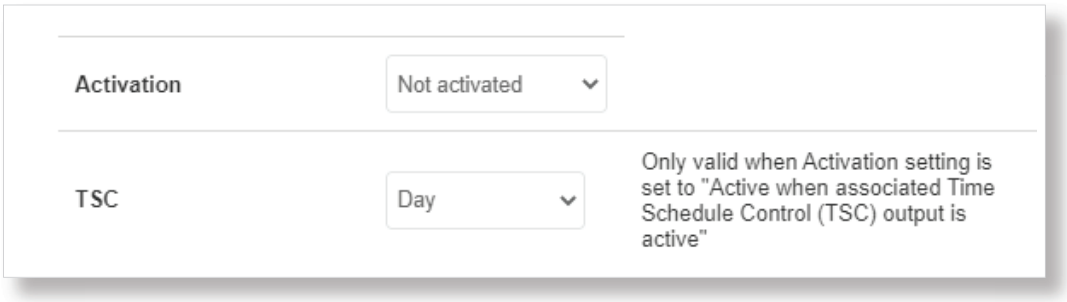
a) Go to **Telecare > Virtual Intelligent Property Sensor**.

b) Enable VIPS

i. Under *Virtual Intelligent Property Sensor* select an activation option in the *Activation* drop-down list:

- **Not activated**
- **Always active**
- **Active when the system is in Away mode**
- **Active when the system is in Home mode**
- **Active when associated Time Schedule Control (TSC) output is active**

ii. If TSC is used for activation, select a TSC in the *TSC* drop-down list.



c) Set timers and alarm types:

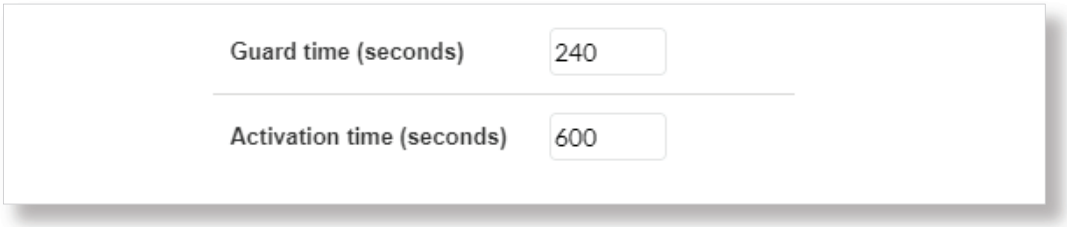
i. Set the guard time in the *Guard time (seconds)* field.

The guard time starts when the door opens. If the door closes before the guard time has elapsed, the guard alarm is not generated.

If the motion sensor detects movement before the guard time has elapsed, the care recipient is considered to still be at home and the guard time restarts.

ii. Set the activation time in the *Activation time (seconds)* field.

The activation time starts when the door closes. If the motion sensor detects movement before the activation time has elapsed, the care recipient is considered to be within the property and no alarm is generated.



d) Under *Door Sensor* > *Door Open*, enable the door sensor to detect when the door opens:

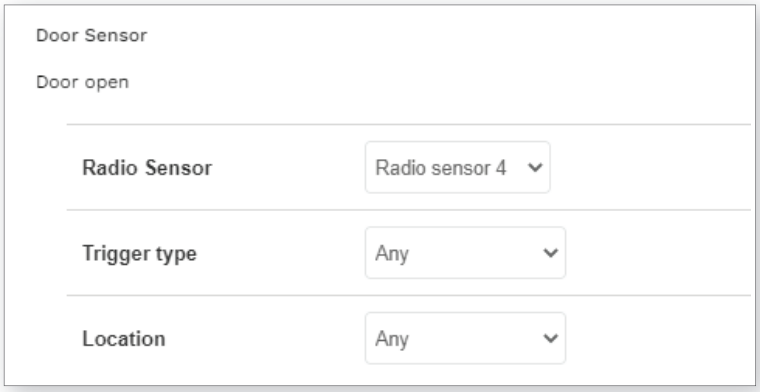
i. Select the door sensor in the *Radio sensor* drop-down list.

ii. If required, select sensor trigger type in the *Trigger type* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

iii. If required, select location of the sensor in the *Location* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

The guard time starts when the door opens. If the door closes before the guard time has elapsed, the guard alarm is not generated.

If the motion sensor detects movement before the guard time has elapsed, the care recipient is considered to still be at home and the guard time restarts.



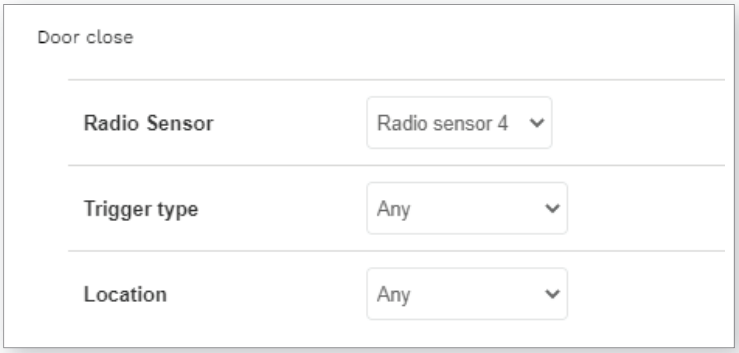
e) Under *Door Sensor* > *Door Close*, enable the door sensor to detect when the door closes:

i. Select the door sensor in the *Radio sensor* drop-down list.

ii. If required, select sensor trigger type in the *Trigger type* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

iii. If required, select location of the sensor in the *Location* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

The activation time starts when the door closes. If the motion sensor detects movement before the activation time has elapsed, the care recipient is considered to be within the property and no alarm is generated.



f) Under *Motion sensor*, enable the motion sensor:

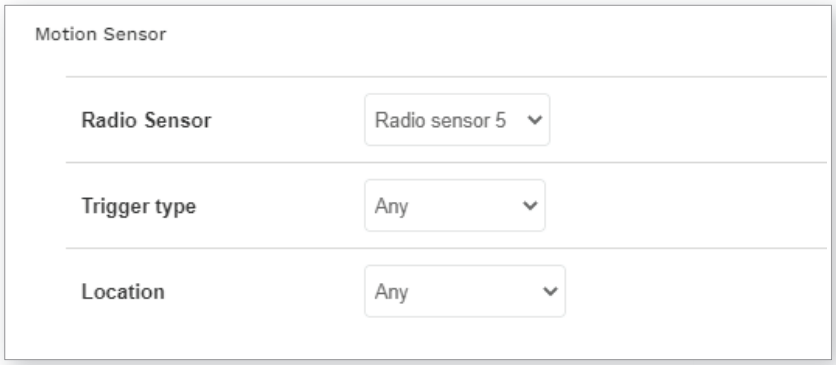
i. Select the motion sensor in the *Radio sensor* drop-down list.

ii. If required, select sensor trigger type in the *Trigger type* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

iii. If required, select location of the sensor in the *Location* drop-down list. Otherwise, select "Any" to keep settings from the selected radio sensor.

The motion sensor has two functions:

- If the motion sensor detects movement before the guard time has elapsed, the care recipient is considered to still be at home and the guard time restarts. This is to prevent false alarms if the care recipient opens the door but remains by the door or briefly goes back into the property.
- If the motion sensor detects movement before the activation time has elapsed, the care recipient is considered to be within the property and no alarm is generated. VIPS is reset.



5.11.3. Actuator control

Actuator control is used to turn on and off home appliances. For example, actuator control can be used to switch on a light when a care recipient gets out of bed or to turn on a heater if the temperature drops below a certain level.

Lifeline Digital currently supports Nexa Smart plugs. Unlike other types of peripherals, the Smart plug does not transmit to Lifeline Digital. Instead, Lifeline Digital sends an "On" or "Off" transmission to switch on or off the Smart plug.

5.11.3.1. Configure generic actuator control for Nexa smart plugs

NOTE
Nexa Smart plugs must be manually connected in actuator paring mode.

To configure generic actuator control for Nexa smart plug:

a) Go to **Input/Output**.

b) Under *Actuator control*, set an appropriate channel (1-16) in the *Channel for external actuator control* field.

The device will transmit to all Nexa Smart plugs that are paired to the selected channel.

Channel "250" is assigned to the red LED on the keypad, and is typically used in conjunction with "Mic activation" to indicate that the microphone is enabled during an alarm call.

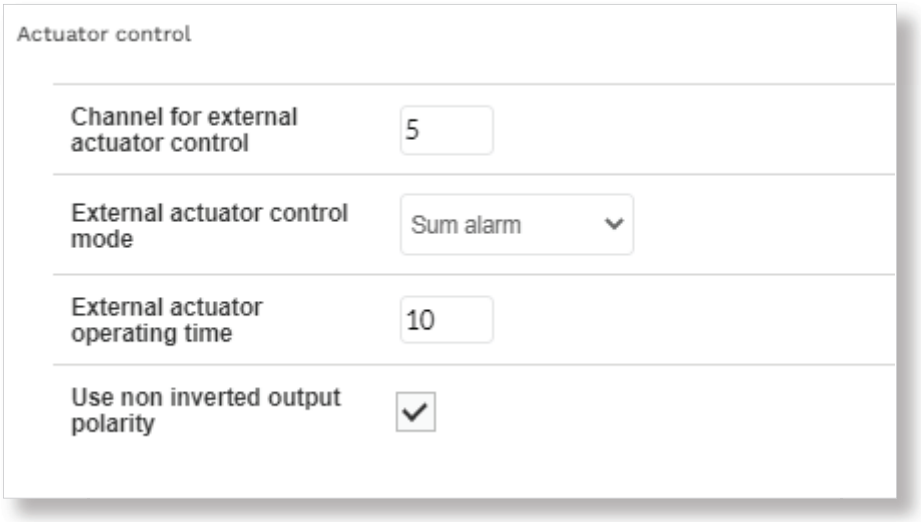
c) Select an activation option in the *External actuator control mode* drop-down list:

- **Off**
- **Sum alarm**. Activates the actuator when an event that is subject to actuator control is distributed. For information about which events are subject to actuator control, see Default event group distribution parameters, page 117.
- **Ringing**. Activates the actuator for a certain period when an incoming call is detected.
- **TX Control 1 (time)**. Activates the actuator for a certain period when the alarm button/pendant is pressed twice.
- **TX Control 1 (toggle)**. Toggles actuator output when the alarm button/pendant is pressed three times.
- **Presence**. Activates the actuator when the system is in Presence mode.
- **Syswarning**. Activates the actuator when there is an active system warning.
- **Alarm session**. Activates output when there is an ongoing alarm.
- **Mic activation**. Activates the actuator when the microphone is enabled during an alarm call. This option is typically used to activate the red LED indicator assigned to channel "250"

d) Set the timer in the *External actuator operating time* field to define duration of actuator output.

e) If required, to switch off a Nexa smart plug in conjunction with the selected *External actuator control mode* option, clear the *Use non inverted output polarity* checkbox.

For example: to switch off a TV connected to a Nexa smart plug when an alarm is triggered, use this option in conjunction with the **Alarm session** option.



5.11.3.2. Enable LED indication when the microphone is turned on

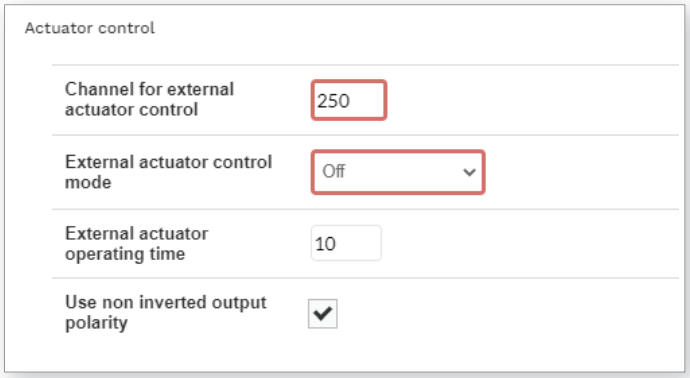
To enable LED indication when the microphone is turned on:

a) Go to **Input/Output** > *Actuator control*.

b) Enter value "250" in the *Channel for external actuator control* field to select the red LED channel.

c) Select "Mic activation" in the *External actuator control mode* drop-down list to enable microphone activation.

The red LED indicator switches on when the microphone is activated, for example, during an alarm call.



5.12. Advanced settings

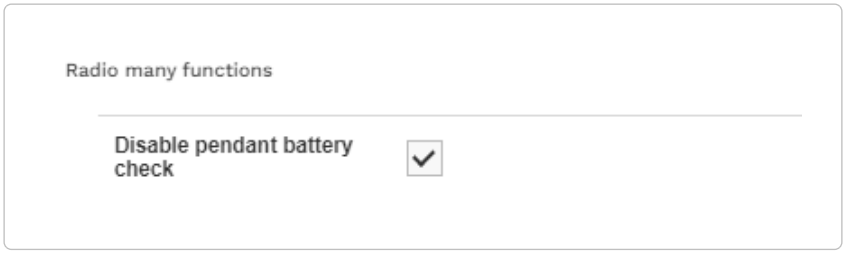
Access to advanced settings is determined by permission profiles and environment settings. Therefore, some settings and pages may not be available to you or may be display differently than described in this document.

5.12.1. Disable pendant battery check

To disable pedant battery check

a) Go to **Advanced** > **Radio** > *Radio*.

b) Under *Radio many functions*, tick the *Disable pendant battery check* checkbox to disable recurring battery check for all radio sensors.



5.12.2. Advanced event distribution options

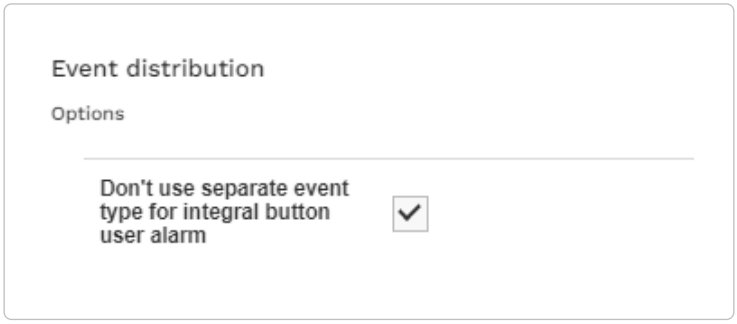
To configure advanced event distribution options:

a) Go to **Advanced** > **Event Distribution** > *Options*.

b) The following options are available:

- *Don't use separate event type for integral button user alarm* :
  - When this option is enabled/ticked, the integral alarm button generates a standard user alarm (event ID 0).
  - When this option is disabled/cleared, the integral alarm button generates a user alarm that is specific for the integral alarm button (event ID 31).

  Both event types belong to the same event group (event group ID 0) and retain the same distribution parameters.



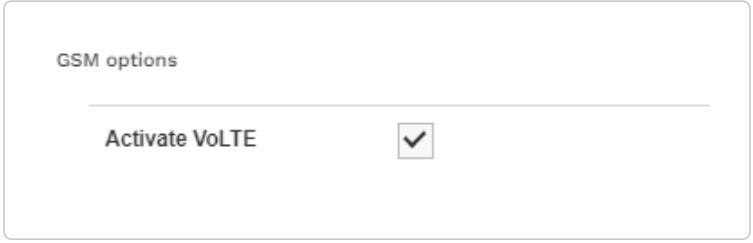
5.12.3. Enable/Disable Voice over LTE (VoLTE)

If your network operator supports VoLTE functionality for cellular communication:

a) Go to **Advanced** > **Other** > *GSM Options*.

b) Tick/clear the *Activate VoLTE* checkbox to enable/disable VoLTE communication.

When VoLTE functionality is active, the device is able to make IP voice calls via the SIM-card.



5.13. Save device settings

To save device settings:

a) When you have amended all required settings, click **Save**.

DMP displays a list of the accumulated changes. If necessary, click **Cancel** to amend any setting.

b) Click **Save** to save changes.

DMP displays a verification message.

c) Click **Verify**.

DMP displays a confirmation message.

d) Click **Close**.

DMP waits until it receives a heartbeat from the device and then starts to download the settings to the device.

6. Maintenance and cleaning

6.1. Power down Lifeline Digital

a) Remove the back cover, see Remove and replace the back cover, page 24.
b) Set the ON/OFF switch to 0 (OFF) to power down the device.
c) Disconnect all cables from the connection sockets.
d) Replace the back cover, see Remove and replace the back cover, page 24.

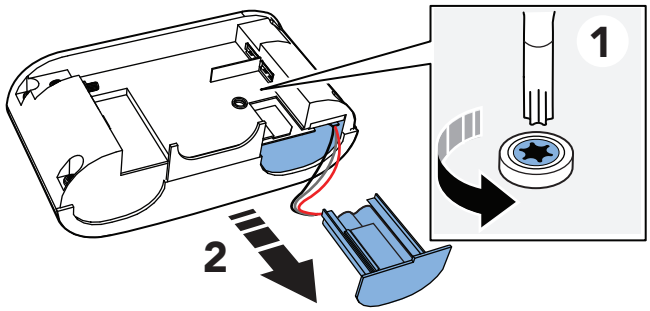
6.2. Replace the backup batteries

WARNING
Risk of explosion if battery is replaced by an incorrect type. Only use batteries supplied and fitted by Tunstall. Dispose of used batteries according to current local regulations.

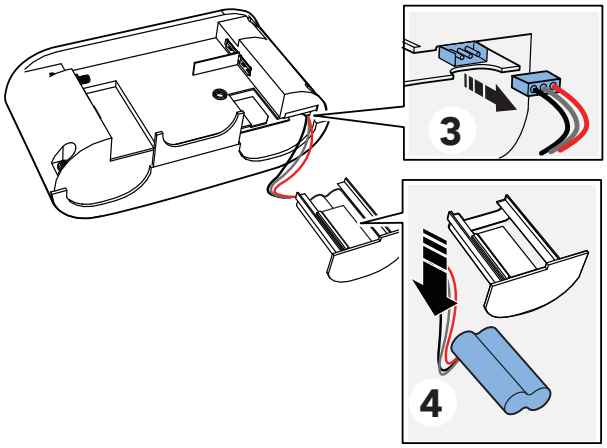
Required tool: T10 torx screwdriver.

To replace the backup batteries:

a) Remove the back cover.
b) Set the ON/OFF switch to **0** (OFF) to power down the device.
c) Unscrew the security screw using a T10 torx screwdriver (1).
d) Pull out the battery holder from the battery slot (2).



e) Disconnect the battery cable from the socket (3).
f) Remove the old battery pack from the battery holder (4).



g) Place the new battery pack in the battery holder.
h) Connect the new battery cable to the socket.

i) Insert the battery holder into the battery slot. If it is tight fit, carefully press down on the SIM card with your finger.

j) Screw the security screw in place using a T10 torx screwdriver.

k) Reconnect all cables to the device.

l) Replace the back cover.

m) Set the ON/OFF switch to **1** (ON) to power up the device.

6.3. Replacing the battery in the Tx4 alarm button/pendant

WARNING
Risk of explosion if battery is replaced by an incorrect type. Only use batteries from Tunstall. Dispose of used batteries according to current local regulations.

WARNING
Keep batteries out of reach of children. Swallowing a battery can be life-threatening. Seek immediate medical attention if this happens.

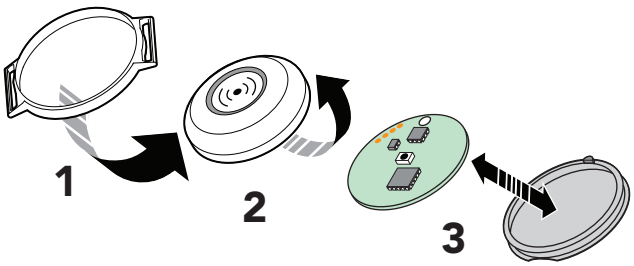
CAUTION
Only use new and unused battery kits from Tunstall. Do not reuse old parts as this can affect the water and dust protection.

To replace the battery in the Tx4 sensor:

a) Remove the Tx4 from the wearing option (1).

b) Pull off the silicon cover (2).

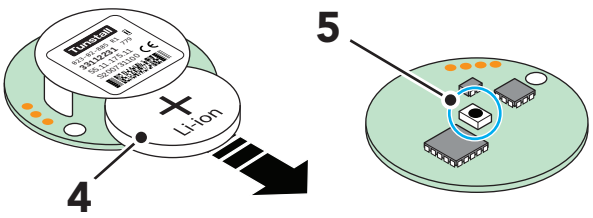
c) Separate the Tx4 circuit board from the back cover (3).



d) Place the Tx4 circuit board on a table top with the battery facing up.

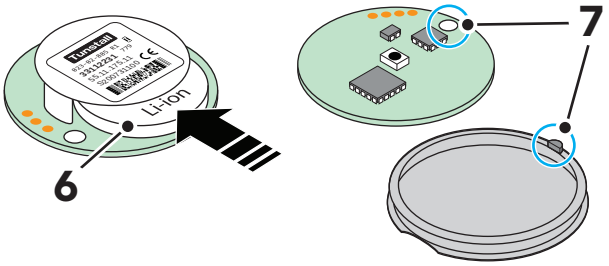
e) Push out the battery sideways using a tool made of plastic or other non-conductive material (4).

f) Turn over the Tx4 circuit board and press the small black button (4) until you feel a "click" to reset the button.



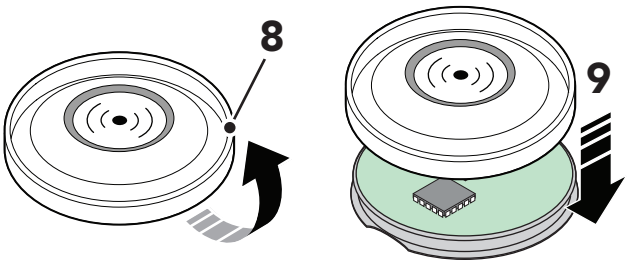
g) Slide the new battery into position (6).

h) Place the Tx4 circuit board in the new back cover and fit the round hole in the circuit board over the elevation on the edge of the back cover (7).



i) Fold up the edges of the new silicon cover (8).

j) Place the new silicon cover on top of the Tx4 circuit board and fold down the edges of the silicon cover over the edges of the back cover (9).



k) Refit the alarm button in the button holder and fit the ring of the button holder into the recess of the back cover.

l) Activate/trigger the Tx4 sensor to make a test alarm, press the green **Cancel** button before the alarm call is distributed to an alarm receiver.

6.4. Insert or replace the SIM card

NOTE
Lifeline Digital uses only mini-SIM cards.

Required tools: T10 torx screwdriver.

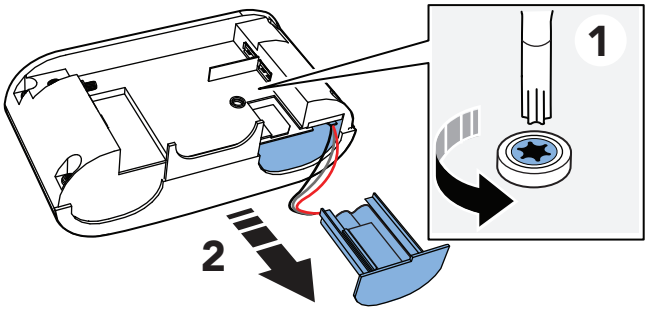
To insert or replace the SIM card:

a) Remove the back cover.

b) Set the ON/OFF switch to **0** (OFF) to power down the device.

c) Unscrew the security screw using a T10 torx screwdriver (1).

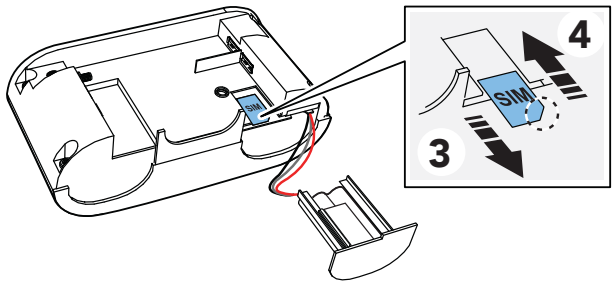
d) Pull out the battery holder from the battery slot (2).



e) If you are replacing an old SIM card, pull out the existing SIM card from the SIM card slot (3).

f) Insert the new SIM card (mini-SIM card size) in the SIM card slot (4).

Make sure that the metallic SIM card chip is facing down and that the SIM card notch is aligned as shown in the illustration.



g) Insert the battery holder into the battery slot. If it is a tight fit, carefully press down on the SIM card with your finger.

h) Screw the security screw back in place using a T10 torx screwdriver.

i) Replace the back cover.

j) Set the ON/OFF switch to **1** (ON) to power up the device.

6.5. Cleaning and disinfecting Lifeline Digital

Do not use a wet cloth to clean Lifeline Digital. Do not use harsh, aggressive or corrosive cleaning agents to clean Lifeline Digital or the pendant. Take care not to allow moisture to get into Lifeline Digital's case or speaker openings when cleaning. Do not spray cleaning agents or disinfectants directly onto Lifeline Digital.

Clean Lifeline Digital and pendant with a soft cloth or soft brush. Clean stubborn dirt with a soft, damp cloth. Only use a mild, diluted cleaning agent in exceptional cases. Use non-alcoholic disinfectants for hand-damp wipe disinfection of Lifeline Digital and pendant. When selecting cleaning agents and disinfectants, take into account the materials used in the devices. These are specified in the technical data, see Appendix F: Technical data, page 137.

6.6. Maintenance

Each time the user changes, a technician must carry out the following maintenance. To ensure that Lifeline Digital provides maximum safety even after long use, maintenance should be carried out after 5 years at the latest.

a) Replace the backup battery after 5 years at the latest, see Replace the backup batteries, page 97. Tunstall recommends replacing the backup batteries with Tunstall replacement batteries (supply and fitting) after 3 to 5 years.

b) Clean and disinfect Lifeline Digital and the pendant, see Cleaning and disinfecting Lifeline Digital, page 100.

c) Check the casing of Lifeline Digital and the pendant for visible damage.

d) Check connecting cables for damage and loose contacts. Replace defective connecting cables with original Tunstall cables.

e) Carry out a function test, see Testing the installation, page 46.

If Lifeline Digital and the pendant are not in perfect condition after maintenance, please have the devices repaired by Tunstall.

6.7. Re-use

Lifeline Digital is suitable for reuse by other users. For reuse, a technician must prepare Lifeline Digital as follows:

a) Put Lifeline Digital out of operation, Power down Lifeline Digital , page 97.

b) Migrate Lifeline Digital in the DMP from the district of devices in use to a district containing devices not in use, see DMP user manual.

c) Maintain units, see Maintenance, page 100.

d) If necessary, have units repaired or checked by Tunstall.

e) Replace missing accessories and enclosed short user guide.

f) Configure Lifeline Digital for the new user and migrate it in the DMP to a district of devices in use, see DMP user manual.

7. Disposal and recycling

When the device is decommissioned, dispose of the device and batteries in accordance with current local regulations.

7.1. Disposal of batteries

This device contains rechargeable Lithium-ion batteries. Batteries must be disposed of in accordance with current local regulations. To avoid the risk of short circuiting, pack batteries separately or cover them with plastic tape before discarding or returning them.

WARNING
Keep batteries out of reach of children. Swallowing a battery can be life-threatening. Seek immediate medical attention if this happens.

WARNING
Risk of explosion if battery is replaced by an incorrect type. Only use batteries from Tunstall. Dispose of used batteries according to current local regulations.

Appendix A. Startup mode

1. Startup mode

Startup mode provides shortcuts to certain functionality.

Startup mode is enabled by holding down a button on the keypad when the device is powered up:

- Press and hold down the red **Alarm** button to connect or disconnect telecare peripherals.
- Press and hold down the green **Cancel** button to start Radio test.
- Press and hold down the yellow **Extra** button to enable Programming mode.
- Press and hold down the green **Cancel** button and the yellow **Extra** button to connect or disconnect Nexa smart plugs.

Speech messages are not enabled in Startup mode, announcements are replaced by beeps.

1.1. Access local configuration menu in startup mode

NOTE
Speech messages are disabled in Startup mode.

To access local configuration menu in Startup mode:

a) Make sure that the device is switched off.
b) Press and hold the yellow **Extra** button.
c) Switch on the device.
d) Release the button when the device emits the number of beeps that corresponds to the menu position you want to select. See the table below.
e) Press the green **Cancel** button to exit and resume the startup procedure.

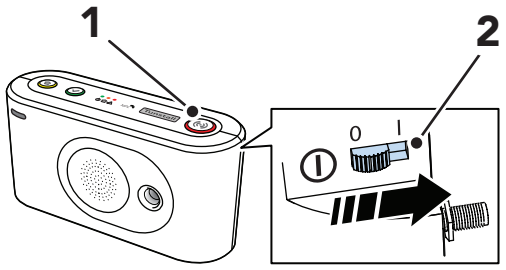
Menu position		Announcement[a.]	Description
Yellow **Extra** button			
1		"One"	Adjust speaker volume
2		"Two"	Adjust LED intensity
3		"Three"	Radio test mode
4		"Four"	Test cellular signal strength
5		"Five"	Cellular status
	1	"One"	Error code (default)
	2	"Two"	Check SIM card status
	3	"Three"	Check cellular network status
	4	"Four"	Check cellular radio technology
8		"Eight"	Nexa/actuator pairing mode
Red **Alarm** button			
1		"One"	Radio sensor position 1
2		"Two"	Radio sensor position 2
3		"Three"	Radio sensor position 3
4-64		"Four" - " Sixty-four"	Radio sensor position 4-64
Green **Cancel** button			
			Go back / Exit

[a.] If speech messages are disabled, beeps replace the announcements. For example, the device emits one beep for speaker volume, two beeps for LED intensity and three beeps for radio test mode.

1.2. Connect a peripheral in startup mode

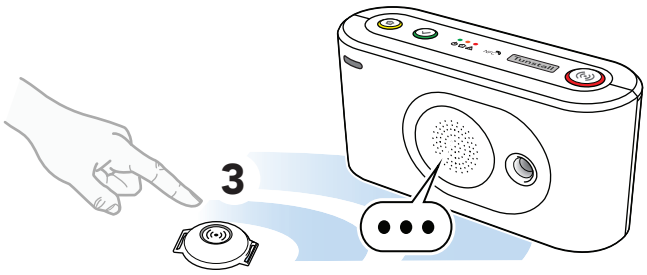
To connect a peripheral in Startup mode:

a) Make sure that the device is switched off.
b) Press and hold the red **Alarm** button (1).
c) Switch on the device (2).



d) When the device emits an undulating sound signal you can either:
   - Release the button to enable auto pairing. The peripheral will be connected and stored at the first available radio position.
   - Continue to hold the red **Alarm** button until the device emits the number of beeps that correspond to the radio sensor position you want to select, then release the button to enable manual pairing.

e) Activate/trigger the peripheral you want to connect (3). The device emits a beep and then a rising sound signal to acknowledge that the radio code is received and stored:



- A short beep indicates that the accessory has been installed.
- A long beep indicates that the accessory has been installed but that the battery is low and must be replaced.
- An error beep is emitted it if the accessory radio code is already stored in the device.

The device resumes the startup procedure.

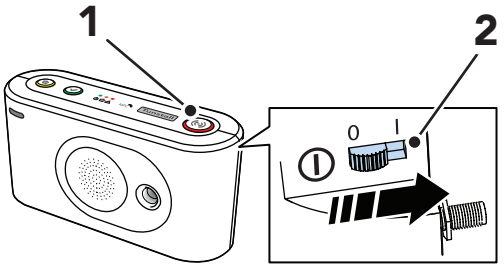
1.3. Disconnect a peripheral in startup mode

To disconnect a peripheral in Startup mode:

a) Make sure that the device is switched off.

b) Press and hold the red **Alarm** button (1).

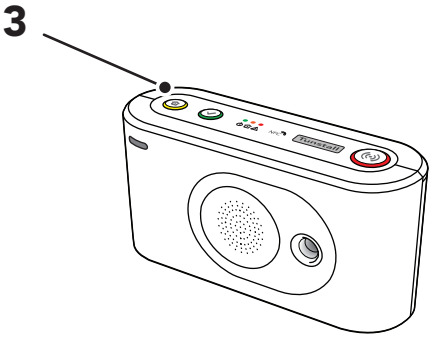
c) Switch on the device (2).



d) When the device emits an undulating sound signal you can either:

- Release the button to enable auto pairing.
- Continue to hold the red **Alarm** button until the device emits the number of beeps that corresponds to the radio sensor position that you want to select, then release the button to enable manual pairing

e) Press the yellow **Extra** button (3):



- If auto paring is enabled, trigger the peripheral you want disconnect.
- If manual pairing is enabled, the peripheral at the selected radio position is erased and disconnected.

The device resumes the startup procedure.

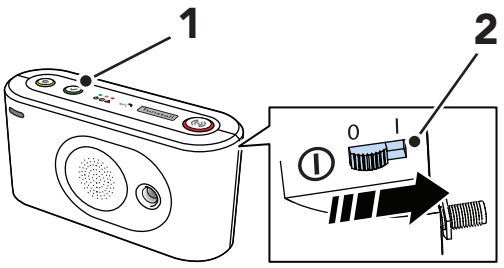
1.4. Check radio range in startup mode

To check the radio range in Startup mode:

a) Make sure that the device is switched off.

b) Press and hold the green **Cancel** button (1).

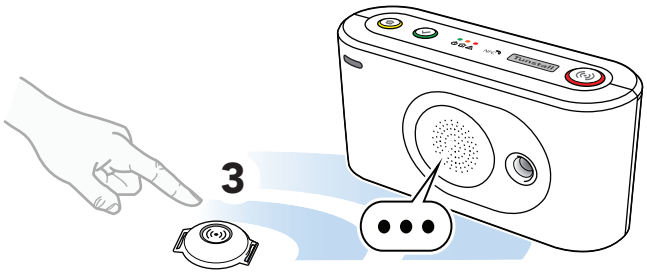
c) Switch on the device (2).



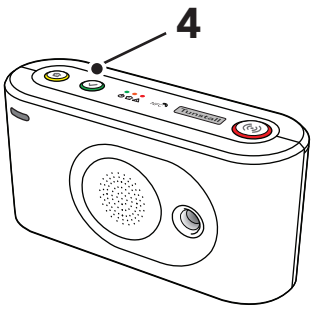
d) When the device emits four consecutive beeps, release the button.

e) Trigger the peripheral you want to test (3):

- One short beep indicates that the peripheral is connected and the battery is OK.
- One long beep indicates that the peripheral is connected but the battery is low and must be replaced.
- Two short beeps indicate that the peripheral is not connected and the battery is OK.
- Two long beeps indicate that the peripheral is not connected and the battery is low and must be replaced.



f) Press the green **Cancel** button (4) to exit the radio test and resume the startup procedure. The radio test automatically ends after approx. 60 seconds.



1.5. Connect a Nexa Smart plug in startup mode

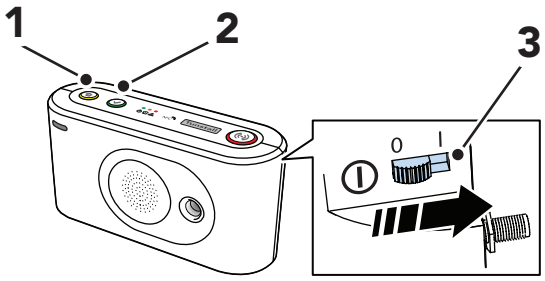
NOTE
To simplify this procedure, connect a light to the Smart plug. When the Smart plug is paired to the device, the light will remain switched on.

To connect a Nexa Smart plug in Startup mode:

a) Make sure that the device is switched off.

b) Press and hold the yellow **Extra** button (1) and the green **Cancel** button (2).

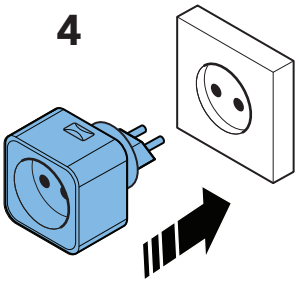
c) Switch on the device (3).

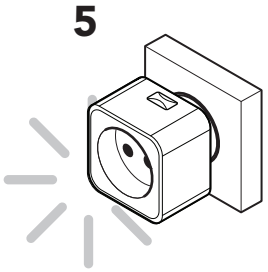


d) Release the buttons when the device emits the number of beeps that corresponds to the output channel that you want to select.

The device starts to emit consecutive beeps to indicate that actuator pairing mode is active.

e) Insert the Smart plug into a wall socket (4).

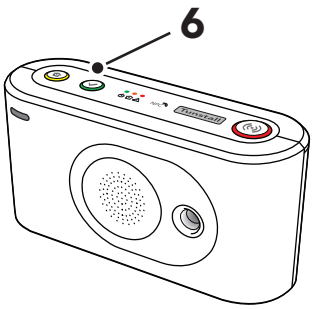




The Smart plug switches on and off a couple of times (5). The Smart Plug remains switched on when the pairing is completed.

If a light is connected to the Smart plug, the light will remain switched on when the Smart plug is paired to the device.

f) Press the green **Cancel** button (6) to save settings and exit.



The device resumes the startup procedure.

1.6. Disconnect a Nexa smart plug in startup mode

NOTE
To simplify this procedure, connect a light to the Smart plug. When the Smart plug is unpaired from the device, the light will remain switched off.

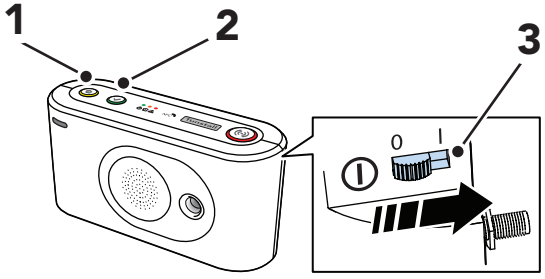
To disconnect a Nexa Smart plug in Startup mode:

a) Make sure that the device is switched off.

b) Disconnect the Smart plug from the wall socket.

c) Press and hold the yellow **Extra** button (1) and the green **Cancel** button (2).

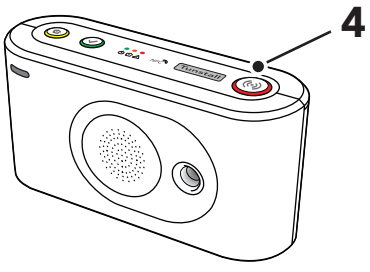
d) Switch on the device (3).



e) Release the buttons when the device emits the number of beeps that corresponds to the output channel that you want to select.

f) Press the red **Alarm** button (4) to enable erasing mode.

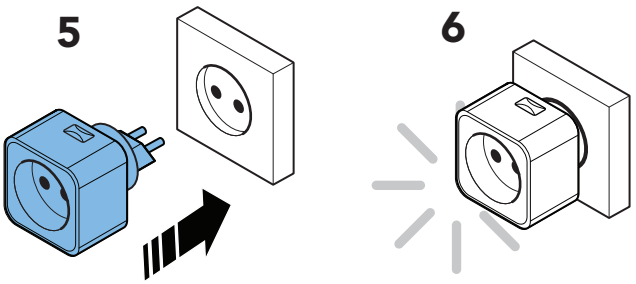
The device starts to emit consecutive double beeps to indicate that erasing mode is active.



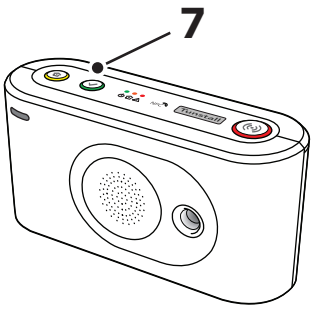
g) Insert the Smart plug into a wall socket (5).

The Smart plug switches on and off a couple of times (6). The Smart Plug remains switched off when the unpairing is completed.

If a light is connected to the Smart plug, the light will remain switched off when the Smart plug is unpaired from the device.



h) Press the green **Cancel** button (6) to save settings and exit.



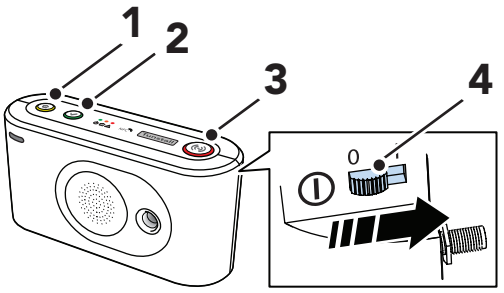
The device resumes the startup procedure.

2. Service menu

To access the service menu:

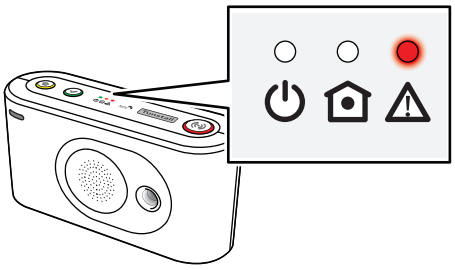
a) Make sure that the device is switched off,

b) Press and hold down all three buttons on the keypad (1) (2) (3), then switch on the device (4).



c) Release all buttons when the device emits a rising sound signal.

d) Use the yellow **Extra** button (1) to select one of the following service menu options:



- **Speaker test:** Press once to start a speaker test. Press the green **Cancel** button (2) to end the speaker test.

  The device emits a rising sound signal and then resumes the startup procedure.

- **SIM refresh:** Press two times to reset SIM status and trigger the cellular modem to search for the best available network in the current location.

  The device emits a rising sound signal to confirm the selection and then resumes the startup procedure.

- **Battery charging status:** Press three times to display the battery charging status on the red LED indicator.

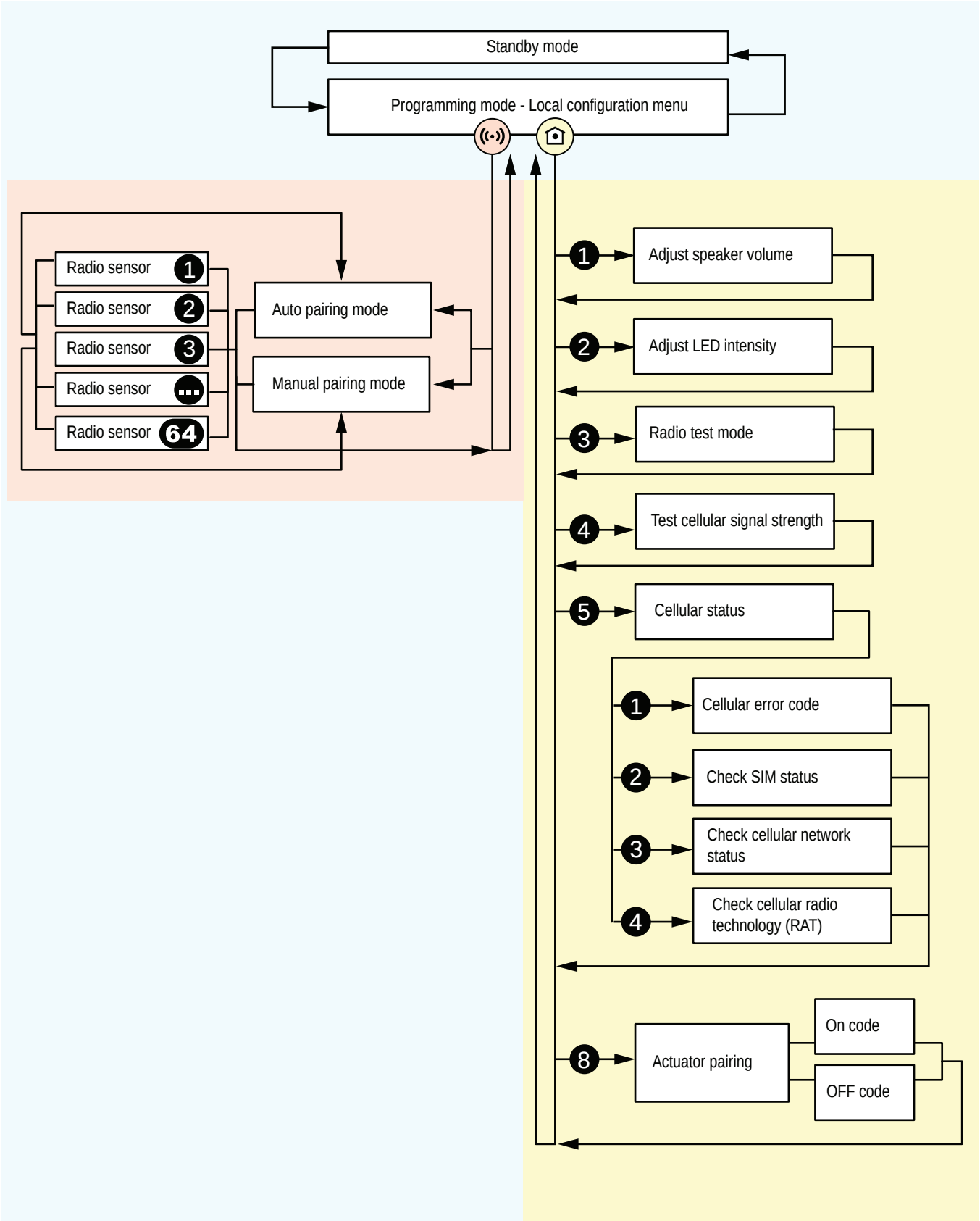
  The device emits a rising sound signal to confirm the selection and then resumes the startup procedure.

  When the startup procedure is completed:

- Red LED indicator on - backup battery is charging
- Red LED indicator off - backup battery is not charging

Restart Lifeline Digital manually by turning it off and then on again to switch off the battery charging status. If the device is not restarted manually, it will automatically switch off the battery charging status after approximately one week.

Appendix B. Programming mode diagram



Appendix C. Events and event distribution

1. Event codes and alarm types

The device uses internal normalized event codes as described in the table below. These event codes are converted to specific communication protocol events for distribution to the alarm receiver or Alarm Receiving Centre (ARC).

Event code	Event ID	Description	Event group	Event group ID
User alarm	0	User has pressed the help/alarm button. Either the integral button or the button on the pendant (previously known as "Medical" alarm)	User alarm	0
User alarm-batfail	1	Help/alarm button pressed on a pendant which has a low battery condition	User alarm	0
Assault	2	Help/alarm button has been pressed on a specific pendant configured for indicating an assault condition (i.e. staff assault pendant)	Assault	4
Assault-batfail	3	Help/alarm button has been pressed on an assault trigger which has a low battery condition	Assault	4
Presence	4	Presence indication (i.e. carer on the scene)	Care reporting	5
Ready	5	Ready indication (i.e. carer has left)	Care reporting	5
Assistance	6	Assistance is requested. This is normally indicated when the help button is pressed during a presence condition	Assistance	8
Action	7	Care action has been carried out (used for care activity registration)	Care reporting	5
Emergency	8	Help button has been pressed on a specific pendant used for indicating an emergency condition. (i.e. staff emergency pendant)	Emergency	7
Door-opening	9	Door usage – opening. (Can also be used to indicate alarm from a TASSP Property Exit sensor, PES)	Door	12
Bed-other	10	Alarm from bed sensor. (Can also be used to indicate alarm from a TASSP Bed/Chair/Carpet sensor, BCC)	Medium prio auto sensors	11
Carpet	11	Alarm from carpet sensor. (Can also be used to indicate alarm from a TASSP Bed/Chair/Carpet sensor, BCC)	Medium prio auto sensors	11
Inactivity	12	Inactivity alarm. Sent by the client inactivity detection function. (I.e. client has not pressed the dailiy activity button for a predefined period of time) This event code is formerly known as "passive alarm".	Inactivity	1
Online poll	13	Periodic poll event for connecting to the DMP for firmware updates, configuration updates, etc.	Device management	6
Periodic test	14	Periodic test alarm for connection test to the ARC.	Test	10
Accumulator-low	15	System battery/accumulator low	Technical	2
Mains-fail	16	Mains power failure	Technical	2
Mains-OK	17	Mains power return	Technical	2
Auto-batt fail	18[a.]	Low battery detected in any of the connected peripherals/pendants	Technical	2
Smoke	19	Smoke sensor activation	High prio auto sensors	3
Reminder	20	Alarm from the periodic reminder function	Emergency	7
User defined	21	Configurable event code. Can be used for setting used defined even code for protocols supporting this feature	User defined	9
Linktest-fail1	22[a.]	Link test failure transmitter #1 (also known as Auto Presence failure)	Technical	2
Linktest-fail2	23[a.]	Link test failure transmitter #2	Technical	2
Linktest-fail3	24[a.]	Link test failure transmitter #3	Technical	2
Linktest-fail4	25[a.]	Link test failure transmitter #4	Technical	2
Reporting-call0	26	Legacy event code used for Careline protocol	Call reporting	14
Reporting-call1	27	Indication that primary alarm path has failed. Also used as legacy event code used for Careline protocol.	Call reporting	14

Event code	Event ID	Description	Event group	Event group ID
Reporting-call-reset	28	User has pressed the cancel button during a callback session, i.e. callback session is cancelled.	Call reporting	14
Reporting-call-busy	29	Legacy event code used for Careline protocol	Call reporting	14
Door-opening-with-speech	30	Door usage – opening. (Same as #9, but with indication that speech is required)	User alarm	0
User alarm-integral button	31	User has pressed the integral help button	User alarm	0
CL12-transmitter3	32	Legacy event code - currently not in use	Call reporting	14
CL12-presence-time-out	33	Legacy event code - currently not in use	Call reporting	14
Bed-alarm-bosch	34	Legacy event code - currently not in use	Assistance	8
CL12-ext1	35	Legacy event code - currently not in use	Call reporting	14
CL12-ext2	36	Legacy event code - currently not in use	Call reporting	14
Call completed	37	Voice call session has been completed (previously call cancelled)	Call reporting	14
Natural-gas	38	Natural gas detector activation	High prio auto sensors	3
Flood	39	Flood detector activation	Medium prio auto sensors	11
Co	40	CO detector activation	High prio auto sensors	3
Repeated	41	Alarm repetition indication	Call reporting	14
Toilet-guard	42	Toilet guard activation	Medium prio auto sensors	11
Linktest-return	43[a.]	Link test return transmitter 1-64	Technical	2
Intrusion	44	Intruder alarm activation	Intrusion	16
Temperature-high	45	Temperature sensor – high temperature detected	Medium prio auto sensors	11
Fall detector-fall	46	Fall detector activation (fall is detected)	User alarm	0
Service	47	Legacy event code - currently not in use	Device management	6
Temperature-low	48	Temperature sensor – low temperature detected	Medium prio auto sensors	11
Extern-reminder	49	Legacy event code - currently not in use	Medium prio auto sensors	11
Extern-med-reminder	50	Legacy event code - currently not in use	Medium prio auto sensors	11
Medication dispenser-missed	51	Medication dispenser – dose missed	Medium prio auto sensors	11
Linktest-fail5	52[a.]	Link test failure transmitter #5	Technical	2
Linktest-fail6	53[a.]	Link test failure transmitter #6	Technical	2
Linktest-fail7	54[a.]	Link test failure transmitter #7	Technical	2
Linktest-fail	55[a.]	Link test fail transmitter 1-64	Technical	2
Linktest-return1	56[a.]	Link test return transmitter #1	Technical	2
Linktest-return2	57[a.]	Link test return transmitter #2	Technical	2
Linktest-return3	58[a.]	Link test return transmitter #3	Technical	2
Linktest-return4	59[a.]	Link test return transmitter #4	Technical	2
Linktest-return5	60[a.]	Link test return transmitter #5	Technical	2
Linktest-return6	61[a.]	Link test return transmitter #6	Technical	2
Linktest-return7	62[a.]	Link test return transmitter #7	Technical	2
Linktest-return8	63[a.]	Link test return transmitter #8	Technical	2
Active-tagestaste	64	Tagestaste/daily activity button has been pressed	Call reporting	14
Accumulator-fail	65	System accumulator/battery failure/broken accumulator.	Technical	2
Online update	66	Manual poll event for connecting to the DMP for firmware updates, configuration updates, etc.	Device management	6
User-alarm-no-speech	67	Help button pressed but speech shall not be initiated	Inactivity	1
Epilepsy-activation	68	Epilepsy sensor activation	Medium prio auto sensors	11
Movement	69	Movement sensor activation	Medium prio auto sensors	11

Event code	Event ID	Description	Event group	Event group ID
Cooker	70	Cooker guard activation	Medium prio auto sensors	11
Enuresis	71	Enuresis sensor activation	Medium prio auto sensors	11
Window	72	Window sensor activation	Medium prio auto sensors	11
Chair	73	Chair sensor activation	Medium prio auto sensors	11
Refrigerator	74	Refrigerator sensor activation	Medium prio auto sensors	11
Sound	75	Sound sensor activation	Medium prio auto sensors	11
Home	76	Home state entry	Call reporting	14
Away	77	Away state entry	Call reporting	14
Radio-RFI	78	Radio blocking detected	Technical	2
Online ping	79	Periodic heartbeat	Heartbeat	13
Online startup	80	System startup indication	Device management	6
Test call-IP	81	Periodic test alarm for connection test to the ARC – via fixed IP connection or WiFi	Test	10
Test call-Cellular	82	Periodic test alarm for connection test to the ARC – via cellular connectivity	Test	10
Stuck key	83	Stuck key has been detected	Technical	2
Unit failure	84	General failure reported for the system	Technical	2
Accumulator-charged	85	System accumulator/battery has been fully charged	Technical	2
IP module-fail	86	System IP module failure	Technical	2
IP connectivity-fail	87	IP connection failure	Technical	2
IP connectivity-restored	88	IP connection restored	Technical	2
Distribution-fail	89	Failed to distribute the alarm/contact the ARC	Call reporting	14
Personal trigger	90	Personal trigger activated	User alarm	0
Temperature-fault	91[a.]	Temperature sensor – failure	Technical	2
Temperature-rise	92	Temperature sensor – raise of temperature detected	Medium prio auto sensors	11
Co-EOL	93[a.]	CO detector – end of life	Technical	2
Co-fault	94[a.]	CO detector – failure	Technical	2
Door-closing	95	Door usage – closing	Door	12
Pressure mat	96	Pressure mat activation	Medium prio auto sensors	11
Pullcord	97	Pullcord activation	User alarm	0
Bed/Chair-not in	98	Bed/Chair sensor detected client not in	Medium prio auto sensors	11
Bed/Chair-not up	99	Bed/Chair sensor detected client not up	Medium prio auto sensors	11
Bed/Chair-absence	100	Bed/Chair sensor detected client absence	Medium prio auto sensors	11
Fall detector-button	101	Button on fall detector has been pressed	User alarm	0
Fall detector-not worn	102	Fall detector is not worn by the client	Medium prio auto sensors	11
Fall detector-cancelled	103	Fall detector-activation cancelled	Call reporting	14
Fall detector-fall risk level 1	104	Fall detector has detected risk for fall – level 1	Predictive	18
Fall detector-fall risk level 2	105	Fall detector has detected risk for fall – level 2	Predictive	18
Fall detector-fall risk level 3	106	Fall detector has detected risk for fall – level 3	Predictive	18
Fall detector-fall risk level 4	107	Fall detector has detected risk for fall – level 4	Predictive	18

Event code	Event ID	Description	Event group	Event group ID
Fall detector-fall risk level 5	108	Fall detector has detected risk for fall – level 5	Predictive	18
PIR entry-exit	109	PIR sensor activated – entry/exit	Medium prio auto sensors	11
PIR-non-entry-exit	110	PIR sensor activated – non entry/exit	Medium prio auto sensors	11
PIR-tamper	111[a.]	PIR sensor-tamper detected	Medium prio auto sensors	11
ROM1-4 event 1-4	112	ROM1-4 event 1-4	Medium prio auto sensors	11
PES-door open	113	Property Exit Sensor – door left open	Door	12
PES-client wandered	114	Property Exit Sensor – client wandered	Door	12
Bogus caller	115	Bogus caller activation	Medium prio auto sensors	11
Medication dispenser-taken	116	Medication dispenser – dose taken	Medium prio auto sensors	11
Medication dispenser-fault	117[a.]	Medication dispenser-fault	Technical	2
Bath-high level	118	Bath – high water level detected	Medium prio auto sensors	11
Bath-high temp	119	Bath – high temperature detected	Medium prio auto sensors	11
Bath-low temp	120	Bath – low temperature detected	Medium prio auto sensors	11
Epilepsy-other	121	Epilepsy sensor – other	Medium prio auto sensors	11
Radio-fault	122[a.]	Radio module fault detected	Technical	2
Hardwired input	123	Hardwired input activated	Medium prio auto sensors	11
Water consumption-high	124	Water consumption sensor – high consumption	Medium prio auto sensors	11
Sensor-fault	125[a.]	General sensor failure	Technical	2
Cancel	126	Alarm has been cancelled. (cancel button has been pressed)	Call reporting	14
AD-life-bed-occupied	127	AD life reporting – bed occupied	ADL reporting	15
AD-life-bed-unoccupied	128	AD life reporting – bed unoccupied	ADL reporting	15
AD-life-appliance-on	129	AD life reporting – appliance switched on	ADL reporting	15
AD-life-appliance-off	130	AD life reporting – appliance switched off	ADL reporting	15
AD-life-appliance-level	131	AD life reporting – appliance consumption level report	ADL reporting	15
AD-life-movement-level0	132	AD life reporting – movement level 0	ADL reporting	15
AD-life-movement-level1	133	AD life reporting – movement level 1	ADL reporting	15
AD-life-movement-level2	134	AD life reporting – movement level 2	ADL reporting	15
AD-life-movement-level3	135	AD life reporting – movement level 3	ADL reporting	15
Intrusion-arm	136	Intrusion system-arm	Intrusion	16
Intrusion-disarm	137	Intrusion system-disarm	Intrusion	16
Intrusion-activation	138	Intrusion system-activation	Intrusion	16
Intrusion-tamper	139[a.]	Intrusion system-tamper	Intrusion	16
Intrusion-door-bell	140	Intrusion system-door bell	Intrusion	16
Heat-detected	141	Heat detector activated	High prio auto sensors	3

[a.] This event is exempt from radio sensor suppression.

2. Event groups

Event groups contain groups of logically related event codes. Alarm distribution settings can be applied to the event group instead of every individual event code.

Event group	ID	Description
User alarm	0	Main event group for user alarms, such as when a care recipient has pressed the red alarm button. (Previously known as "Medical")
Inactivity	1	Group for inactivity alarms/passive events. (Previously known as "Passive")
Technical	2	Group for technical events like low battery, mains failure events, etc. (Previously known as "Battery")
High prio auto sensors	3	Group for alarm events from automatic high prio sensors such as smoke detectors, gas, CO detectors and similar. This group contains events that may be configured to be sent to the fire brigade and often have speech. (Previously known as "Fire")
Assault	4	Group for assault events
Care reporting	5	Group for events related to care activity registration such as presence/ready, care activity action, etc. (Previously known as "Plus")
Device management	6	Group for events related to connections to the Online server/Device Management Platform. (Previously known as "Online")
Emergency	7	Group for events related to emergency features
Assistance	8	Group for events related to assistance features
User defined	9	Group for the user defined event type
Periodic test	10	Group for the periodic test event
Medium prio auto sensors	11	Group for events related to automatic medium sensors such as Bed/Chair/Carpet/Temperature sensors. These events often do not have speech . (Previously known as "Door/Bed/Carpet")
Door	12	Group for events related to door sensors (with or without speech, depending on user preferences)
Heartbeat	13	Group for the heartbeat event type (Online ping)
Call reporting	14	Group for events related to voice call progress reporting
ADL reporting	15	Group for reporting events related to Activities of Daily Life
Intrusion	16	Group for events related to intrusion detection
Home/Away	17	Group for events related to the Home/Away function
Predictive	18	Group for events related to predictive care, such as fall prevention
Spare 1-16	19-34	Spare event groups reserved for future use
User defined group 1-32	35-66	Event groups for user defined remapping of default event allocation

3. Event group distribution parameters

Each event group has individual parameters that control event and alarm distribution. The table below describes the available parameters.

Group No.	Option	Description
1:0	**Use defaults:**	**Use hard coded default values for option 1:1-1:7**
1:1	Allow mic:	Allow microphone to be enabled during the alarm call
1:2	Allow speaker:	Allow speaker to be enabled during the alarm call
1:3	Allow reset:	Allow the user to reset/cancel the alarm with the green button
1:4	Audible reassurance:	Allow audible information during the call (for example call progress status beeps)
1:5	Visual reassurance:	Allow visual assurance during event distribution (LED indication)
1:6	Allow in Homephone:	Allow this event group to be distributed in Homephone protocols (i.e. protocols that are intended for Personal Recipients)
1:7	Inactivity input:	Use this event group for inactivity system input
2:0	**Use defaults:**	**Use hard coded default values for option 2:1-2:7**
2:1	Allow pre-call signal:	Allow pre-call signal for this event group
2:2	Answer call:	Allow this event group to be used for answering incoming calls
2:3	Allow when home:	Allow this event group to be distributed when in home mode
2:4	Allow when away:	Allow this event group to be distributed when in away mode
2:5	Allow in presence:	Allow distribution of this event group in presence mode
2:6	Allow in ready:	Allow distribution of this event group in ready mode
2:7	Actuator output:	Generates actuator output action when actuator is configured for sum alarm output.
3:0	**Use defaults:**	**Use hard coded default values for option 3:1-3:7**
3:1	Postpone in callback:	Postpone distribution of this event group in callback mode
3:2	Keep and postpone:	Keep events from this group and distribute later if manually cancelled. Note: Only applicable to certain event types such as reporting event types without speech. This option will be ignored in these cases: • Pre-call signal is enabled • Audible reassurance is enabled • Hard coded settings prohibit keep and postpone
3:3	Cancel At Source:	Events in this group are subject to CAS, i.e. needs to be cancelled at source.
3:4-3:7	Spare:	Spare parameters reserved for future use

4. Default event group distribution parameters

Each event group has individual parameters that control event and alarm distribution. The table below describes the default event group parameters.

Event group	ID	Default distribution parameters		
User alarm	0	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 1)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	Yes
		1:2	Allow speaker:	Yes
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	Yes
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	Yes
		1:7	Inactivity input:	Yes
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	Yes
		2:2	Answer call:	Yes
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	Yes
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	No
		3:2	Keep and postpone:	No
		3:3	Cancel At Source:	Yes
		3:4-3:7	Spare:	Spare parameters reserved for future use
Inactivity	1	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 4)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Technical	2	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 6)

Event group	ID	Default distribution parameters		
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
High prio auto sensors	3	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 3)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	Yes
		1:2	Allow speaker:	Yes
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	Yes
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	Yes
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	Yes
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	Yes
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	No
		3:2	Keep and postpone:	No
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Assault	4	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 2)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	Yes
		1:2	Allow speaker:	No
		1:3	Allow reset:	No
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	Yes

Event group	ID	Default distribution parameters		
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	Yes
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	No
		3:2	Keep and postpone:	No
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Care reporting	5	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 6)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Device management	6	-	Sequence:[a.]	17
		-	Priority:[b.]	255 (=default, hard coded to prio 10)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes

Event group	ID	Default distribution parameters		
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Emergency	7	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 2)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	No
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Assistance	8	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 2)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	Yes
		1:2	Allow speaker:	Yes
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	Yes
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	Yes
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	Yes
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	No
		3:2	Keep and postpone:	No
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use

Event group	ID	Default distribution parameters		
User defined	9	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 6)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Periodic test	10	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 6)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Medium prio auto sensors	11	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 5)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No

Event group	ID	Default distribution parameters		
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Door	12	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 5)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Heartbeat	13	-	Sequence:[a.]	18
		-	Priority:[b.]	255 (=default, hard coded to prio 10)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes

Event group	ID	Default distribution parameters		
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	No
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Call reporting	14	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 5)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
ADL reporting	15	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 6)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes

Event group	ID	Default distribution parameters		
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Intrusion	16	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 4)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	No
		3:2	Keep and postpone:	No
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Home/Away	17	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 5)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Predictive	18	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 5)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No

Event group	ID	Default distribution parameters		
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
Spare 1-16	19 - 34	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 6)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	Yes
		2:7	Actuator output:	No
		3:0	**Use defaults:**	**Yes**
		3:1	Postpone in callback:	Yes
		3:2	Keep and postpone:	Yes
		3:3	Cancel At Source:	No
		3:4-3:7	Spare:	Spare parameters reserved for future use
User defined group 1-32	35 - 66	-	Sequence:[a.]	1
		-	Priority:[b.]	255 (=default, hard coded to prio 6)
		1:0	**Use defaults:**	**Yes**
		1:1	Allow mic:	No
		1:2	Allow speaker:	No
		1:3	Allow reset:	Yes
		1:4	Audible reassurance:	No
		1:5	Visual reassurance:	Yes
		1:6	Allow in Homephone:	No
		1:7	Inactivity input:	No
		2:0	**Use defaults:**	**Yes**
		2:1	Allow pre-call signal:	No

Event group	ID	Default distribution parameters		
		2:2	Answer call:	No
		2:3	Allow when home:	Yes
		2:4	Allow when away:	Yes
		2:5	Allow in presence:	Yes
		2:6	Allow in ready:	No
		2:7	Actuator output:	No
		3:0	**Use defaults:**	
		3:1	Postpone in callback:	
		3:2	Keep and postpone:	
		3:3	Cancel At Source:	
		3:4-3:7	Spare:	Spare parameters reserved for future use

[a.] Defines which sequence to use for event distribution.

[b.] Defines the priority of distribution on a scale of 1 to 10. 1 is the highest priority. Alarm events with higher priority takes precedence and postpones lower priority alarm events. Lower priority alarm events resume distribution once a higher priority alarm event is finalised.

5. Event code mapping SCAIP

The device uses internal normalized event codes as described in the table below. These event codes are converted to specific communication protocol events for distribution to the alarm receiver or Alarm Receiving Centre (ARC).

The table below describes the mapping of normalized event codes to SCAIP protocol events.

Event	Event ID	SCAIP <dtc>	SCAIP <stc>
User alarm	0	0003 (Personal pendant)	0010 (Alarm manual)
User alarm-batfail	1	0003 (Personal pendant)	0010 (Alarm manual)
Assault	2	0006 (Attack pendant)	0010 (Alarm manual)
Assault-batfail	3	0006 (Attack pendant)	0010 (Alarm manual)
Presence	4	0002 (Local Unit/Controller)	0087 (Presence planned)
Ready	5	0002 (Local Unit/Controller)	0111 (Check out)
Assistance	6	0002 (Local Unit/Controller)	0110 (Assistance)
Action	7	N/A[a.]	N/A[a.]
Emergency	8	0007 (Panic button)	0010 (Alarm manual)
Door-opening	9	0014 (Door sensor)	0009 (Alarm automatic)
Bed-other	10	0012 (Bed sensor)	0009 (Alarm automatic)
Carpet	11	0013 (Mat sensor)	0009 (Alarm automatic)
Inactivity	12	0010 (Activity detector)	0009 (Alarm automatic)
Online poll	13	N/A[a.]	N/A[a.]
Periodic test	14	0002 (Local Unit/Controller)	0102 (Test primary ch)
Accumulator-low	15	0002 (Local Unit/Controller)	0016 (Battery low)
Mains-fail	16	0002 (Local Unit/Controller)	0085 (Power failure)
Mains-OK	17	0002 (Local Unit/Controller)	0086 (Power restored)
Auto-batt fail	18	0003 (Personal pendant)	0016 (Battery low)
Smoke	19	0023 (Smoke detector)	0009 (Alarm automatic)
Reminder	20	0002 (Local Unit/Controller)	0104 (Timeout)
User defined	21	N/A[b.]	0010 (Alarm manual)
Linktest-fail1	22	0002 (Local Unit/Controller)	0123 (Radio test missing)
Linktest-fail2	23	0002 (Local Unit/Controller)	0123 (Radio test missing)
Linktest-fail3	24	0002 (Local Unit/Controller)	0123 (Radio test missing)
Linktest-fail4	25	0002 (Local Unit/Controller)	0123 (Radio test missing)
Reporting-call0	26	N/A[a.]	N/A[a.]
Reporting-call1	27	0002 (Local Unit/Controller)	0026 (Primary comms fail)
Reporting-call-reset	28	0002 (Local Unit/Controller)	0093 (Reset manual)
Reporting-call-busy	29	N/A[a.]	N/A[a.]
Door-opening-with-speech	30	0014 (Door sensor)	0009 (Alarm automatic)
User alarm-integral button	31	0002 (Local Unit/Controller)	0010 (Alarm manual)
CL12-transmitter3	32	N/A[a.]	N/A[a.]
CL12-presence-timeout	33	N/A[a.]	N/A[a.]
Bed-alarm-bosch	34	N/A[a.]	N/A[a.]
CL12-ext1	35	N/A[a.]	N/A[a.]
CL12-ext2	36	N/A[a.]	N/A[a.]
Call completed	37	0002 (Local Unit/Controller)	0099 (Succeeded)
Natural-gas	38	0021 (Natural gas detector)	0009 (Alarm automatic)
Flood	39	0033 (Flood detector)	0009 (Alarm automatic)
Co	40	0026 (CO detector)	0009 (Alarm automatic)
Repeated	41	0002 (Local Unit/Controller)	0098 (Substituted)
Toilet-guard	42	0018 (Bathroom occupancy detector)	0009 (Alarm automatic)
Linktest-return	43	0002 (Local Unit/Controller)	0124 (Radio restored)
Intrusion	44	0028 (Intruder detector)	0009 (Alarm automatic)
Temperature-high	45	0002 (Local Unit/Controller)	0100 (Temperature high)
Fall detector-fall	46	0005 (Fall detector)	0009 (Alarm automatic)

Event	Event ID	SCAIP <dtc>	SCAIP <stc>
Service	47	N/A[a.]	N/A[a.]
Temperature-low	48	0002 (Local Unit/Controller)	0101 (Temperature low)
Extern-reminder	49	N/A[a.]	N/A[a.]
Extern-med-reminder	50	N/A[a.]	N/A[a.]
Medication dispenser-missed	51	0011 (Pill dispenser)	0081 (Pill not taken)
Linktest-fail5	52	0002 (Local Unit/Controller)	0123 (Radio test missing)
Linktest-fail6	53	0002 (Local Unit/Controller)	0123 (Radio test missing)
Linktest-fail7	54	0002 (Local Unit/Controller)	0123 (Radio test missing)
Linktest-fail	55	0002 (Local Unit/Controller)	0123 (Radio test missing)
Linktest-return1	56	0002 (Local Unit/Controller)	0124 (Radio restored)
Linktest-return2	57	0002 (Local Unit/Controller)	0124 (Radio restored)
Linktest-return3	58	0002 (Local Unit/Controller)	0124 (Radio restored)
Linktest-return4	59	0002 (Local Unit/Controller)	0124 (Radio restored)
Linktest-return5	60	0002 (Local Unit/Controller)	0124 (Radio restored)
Linktest-return6	61	0002 (Local Unit/Controller)	0124 (Radio restored)
Linktest-return7	62	0002 (Local Unit/Controller)	0124 (Radio restored)
Linktest-return8	63	0002 (Local Unit/Controller)	0124 (Radio restored)
Active-tagestaste	64	0010 (Activity detector)	0012 (Armed)
Accumulator-fail	65	0002 (Local Unit/Controller)	0014 (Battery failure)
Online update	66	N/A[a.]	N/A[a.]
User-alarm-no-speech	67	0002 (Local Unit/Controller)	0009 (Alarm automatic)
Epilepsy-activation	68	0017 (Epilepsy detector)	0009 (Alarm automatic)
Movement	69	0010 (Activity detector)	0010 (Alarm manual)
Cooker	70	0024 (Heat system monitor)	0009 (Alarm automatic)
Enuresis	71	0016 (Enuresis detector)	0009 (Alarm automatic)
Window	72	0036 (Perimeter)	0009 (Alarm automatic)
Chair	73	0044 (Chair monitor)	0009 (Alarm automatic)
Refrigerator	74	N/A[a.]	N/A[a.]
Sound	75	0049 (Monitoring device)	0009 (Alarm automatic)
Home	76	0002 (Local Unit/Controller)	0121 (Present home)
Away	77	0002 (Local Unit/Controller)	0003 (Absent)
Radio-RFI	78	0002 (Local Unit/Controller)	0122 (Radio interference)
Online ping	79	0002 (Local Unit/Controller) Note: Normally sent using specific PI message type.	0102 (Test primary ch)
Online startup	80	N/A[a.]	N/A[a.]
Test call-IP	81	0002 (Local Unit/Controller)	0102 (Test primary ch)
Test call-Cellular	82	0002 (Local Unit/Controller)	0103 (Test redundant ch)
Stuck key	83	0002 (Local Unit/Controller)	0067 (Malfunction)
Unit failure	84	0002 (Local Unit/Controller)	0067 (Malfunction)
Accumulator-charged	85	0002 (Local Unit/Controller)	0015 (Battery full)
IP module-fail	86	0002 (Local Unit/Controller)	0067 (Malfunction)
IP connectivity-fail	87	0002 (Local Unit/Controller)	0023 (IP comm fail)
IP connectivity-restored	88	0002 (Local Unit/Controller)	0112 (IP comm restored)
Distribution-fail	89	0002 (Local Unit/Controller)	0032 (Error code 1)
Personal trigger	90	0003 (Personal pendant)	0010 (Alarm manual)
Temperature-fault	91	0020 (Environmental monitor)	0067 (Malfunction)
Temperature-rise	92	0020 (Environmental monitor)	0126 (Temperature rise)
Co-EOL	93	0026 (CO detector)	0078 (Out of service)
Co-fault	94	0026 (CO detector)	0067 (Malfunction)
Door-closing	95	0014 (Door sensor)	0021 (Closed)
Pressure mat	96	0013 (Mat sensor)	0009 (Alarm automatic)
Pullcord	97	0004 (Fixed trigger)	0010 (Alarm manual)
Bed/Chair-not in	98	0012 (Bed sensor)	0104 (Timeout)

Event	Event ID	SCAIP <dtc>	SCAIP <stc>
Bed/Chair-not up	99	0012 (Bed sensor)	0117 (Lying in bed)
Bed/Chair-absence	100	0012 (Bed sensor)	0003 (Absent)
Fall detector-button	101	0005 (Fall detector)	0010 (Alarm manual)
Fall detector-not worn	102	0005 (Fall detector)	0049 (Inactive)
Fall detector-cancelled	103	0005 (Fall detector)	0093 (Reset manual)
Fall detector-fall risk level 1	104	0005 (Fall detector)	0053 (Level 1)
Fall detector-fall risk level 2	105	0005 (Fall detector)	0054 (Level 2)
Fall detector-fall risk level 3	106	0005 (Fall detector)	0055 (Level 3)
Fall detector-fall risk level 4	107	0005 (Fall detector)	0056 (Level 4)
Fall detector-fall risk level 5	108	0005 (Fall detector)	0057 (Level 5)
PIR entry-exit	109	0010 (Activity detector)	0076 (Open)
PIR-non-entry-exit	110	0010 (Activity detector)	0090 (Pulse)
PIR-tamper	111	0010 (Activity detector)	0125 (Tamper)
ROM1-4 event 1-4	112	0050 (Radio unit)	0009 (Alarm automatic)
PES-door open	113	0015 (Wandering sensor)	0076 (Open)
PES-client wandered	114	0015 (Wandering sensor)	0009 (Alarm automatic)
Bogus caller	115	0027 (Bogus caller)	0010 (Alarm manual)
Medication dispenser-taken	116	0011 (Pill dispenser)	0083 (Pill taken)
Medication dispenser-fault	117	0011 (Pill dispenser)	0067 (Malfunction)
Bath-high level	118	0034 (Bath sensor)	0046 (High level)
Bath-high temp	119	0034 (Bath sensor)	0100 (Temperature high)
Bath-low temp	120	0034 (Bath sensor)	0101 (Temperature low)
Epilepsy-other	121	0017 (Epilepsy detector)	0009 (Alarm automatic)
Radio-fault	122	0050 (Radio unit)	0067 (Malfunction)
Hardwired input	123	0004 (Fixed trigger)	0009 (Alarm automatic)
Water consumption-high	124	0020 (Environmental monitor)	0046 (High level)
Sensor-fault	125	0050 (Radio unit)	0032 (Error code 1)
Cancel	126	0002 (Local Unit/Controller)	0093 (Reset manual)
AD-life-bed-occupied	127	0049 (Monitoring device)	0117 (Lying in bed)
AD-life-bed-unoccupied	128	0049 (Monitoring device)	0003 (Absent)
AD-life-applicance-on	129	0049 (Monitoring device)	0074 (On)
AD-life-applicance-off	130	0049 (Monitoring device)	0072 (Off)
AD-life-applicance-level	131	0049 (Monitoring device)	0053 (Level 1)
AD-life-movement-level0	132	0010 (Activity detector)	0053 (Level 1)
AD-life-movement-level1	133	0010 (Activity detector)	0054 (Level 2)
AD-life-movement-level2	134	0010 (Activity detector)	0055 (Level 3)
AD-life-movement-level3	135	0010 (Activity detector)	0056 (Level 4)
Intrusion-arm	136	0028 (Intruder detector)	0012 (Armed)
Intrusion-disarm	137	0028 (Intruder detector)	0030 (Disarmed)
Intrusion-activation	138	0028 (Intruder detector)	0009 (Alarm automatic)
Intrusion-tamper	139	0028 (Intruder detector)	0125 (Tamper)
Intrusion-door-bell	140	0028 (Intruder detector)	0011 (Alert)
Heat-detected	141	0025 (Heat detector)	0009 (Alarm automatic)

[a.] Event code is not defined in this protocol.

[b.] Event code is configurable.

6. Event code mapping IPACS

The device uses internal normalized event codes as described in the table below. These event codes are converted to specific communication protocol events for distribution to the alarm receiver or Alarm Receiving Centre (ARC).

The table below describes the mapping of normalized event codes to IPACS protocol events.

Event	Event ID	IPACS code (Dec)	IPACS code (Hex)
User alarm	0	16	0x10
User alarm-batfail	1	21	0x15
Assault	2	32	0x20
Assault-batfail	3	37	0x25
Presence	4	49	0x31
Ready	5	51	0x33
Assistance	6	52	0x34
Action	7	54	0x36
Emergency	8	66	0x42
Door-opening	9	67	0x43
Bed-other	10	68	0x44
Carpet	11	69	0x45
Inactivity	12	112	0x70
Online poll	13	55	0x37
Periodic test	14	113	0x71
Accumulator-low	15	115	0x73
Mains-fail	16	116	0x74
Mains-OK	17	117	0x75
Auto-batt fail	18	118	0x76
Smoke	19	128	0x80
Reminder	20	119	0x77
User defined	21	N/A[a.]	N/A
Linktest-fail1	22	81	0x51
Linktest-fail2	23	82	0x52
Linktest-fail3	24	83	0x53
Linktest-fail4	25	84	0x54
Reporting-call0	26	N/A[b.]	N/A[b.]
Reporting-call1	27	20	0x14
Reporting-call-reset	28	19	0x13
Reporting-call-busy	29	N/A[b.]	N/A[b.]
Door-opening-with-speech	30	74	0x50
User alarm-integral button	31	22	0x16
CL12-transmitter3	32	N/A[b.]	N/A[b.]
CL12-presence-timeout	33	N/A[b.]	N/A[b.]
Bed-alarm-bosch	34	N/A[b.]	N/A[b.]
CL12-ext1	35	N/A[b.]	N/A[b.]
CL12-ext2	36	N/A[b.]	N/A[b.]
Call completed	37	18	0x12
Natural-gas	38	132	0x84
Flood	39	129	0x81
Co	40	135	0x87
Repeated	41	56	0x38
Toilet-guard	42	57	0x39
Linktest-return	43	97	0x61
Intrusion	44	137	0x96
Temperature-high	45	130	0x82
Fall detector-fall	46	70	0x46

Event	Event ID	IPACS code (Dec)	IPACS code (Hex)
Service	47	N/A[b.]	N/A[b.]
Temperature-low	48	136	0x88
Extern-reminder	49	N/A[b.]	N/A[b.]
Extern-med-reminder	50	N/A[b.]	N/A[b.]
Medication dispenser-missed	51	71	0x47
Linktest-fail5	52	85	0x55
Linktest-fail6	53	86	0x56
Linktest-fail7	54	87	0x57
Linktest-fail	55	88	0x58
Linktest-return1	56	97	0x61
Linktest-return2	57	98	0x62
Linktest-return3	58	99	0x63
Linktest-return4	59	100	0x64
Linktest-return5	60	101	0x65
Linktest-return6	61	102	0x66
Linktest-return7	62	103	0x67
Linktest-return8	63	104	0x68
Active-tagestaste	64	114	0x72
Accumulator-fail	65	120	0x78
Online update	66	121	0x79
User-alarm-no-speech	67	1	0x01
Epilepsy-activation	68	2	0x02
Movement	69	3	0x03
Cooker	70	4	0x04
Enuresis	71	5	0x05
Window	72	6	0x06
Chair	73	7	0x07
Refrigerator	74	8	0x08
Sound	75	9	0x09
Home	76	72	0x48
Away	77	73	0x49
Radio-RFI	78	105	0x69
Online ping	79	N/A[c.]	N/A
Online startup	80	151	0x97
Test call-IP	81	152	0x98
Test call-Cellular	82	153	0x99
Stuck key	83	154	0x9A
Unit failure	84	155	0x9B
Accumulator-charged	85	156	0x9C
IP module-fail	86	157	0x9D
IP connectivity-fail	87	158	0x9E
IP connectivity-restored	88	159	0x9F
Distribution-fail	89	160	0xA0
Personal trigger	90	161	0xA1
Temperature-fault	91	162	0xA2
Temperature-rise	92	163	0xA3
Co-EOL	93	164	0xA4
Co-fault	94	165	0xA5
Door-closing	95	166	0xA6
Pressure mat	96	167	0xA7
Pullcord	97	168	0xA8
Bed/Chair-not in	98	169	0xA9
Bed/Chair-not up	99	170	0xAA

Event	Event ID	IPACS code (Dec)	IPACS code (Hex)
Bed/Chair-absence	100	171	0xAB
Fall detector-button	101	172	0xAC
Fall detector-not worn	102	173	0xAD
Fall detector-cancelled	103	174	0xAE
Fall detector-fall risk level 1	104	175	0xAF
Fall detector-fall risk level 2	105	176	0xB0
Fall detector-fall risk level 3	106	177	0xB1
Fall detector-fall risk level 4	107	178	0xB2
Fall detector-fall risk level 5	108	179	0xB3
PIR entry-exit	109	180	0xB4
PIR-non-entry-exit	110	181	0xB5
PIR-tamper	111	182	0xB6
ROM1-4 event 1-4	112	183	0xB7
PES-door open	113	184	0xB8
PES-client wandered	114	185	0xB9
Bogus caller	115	186	0xBA
Medication dispenser-taken	116	187	0xBB
Medication dispenser-fault	117	188	0xBC
Bath-high level	118	189	0xBD
Bath-high temp	119	190	0xBE
Bath-low temp	120	191	0xBF
Epilepsy-other	121	192	0xC0
Radio-fault	122	193	0xC1
Hardwired input	123	194	0xC2
Water consumption-high	124	195	0xC3
Sensor-fault	125	196	0xC4
Cancel	126	197	0xC5
AD-life-bed-occupied	127	198	0xC6
AD-life-bed-unoccupied	128	199	0xC7
AD-life-applicance-on	129	200	0xC8
AD-life-applicance-off	130	201	0xC9
AD-life-applicance-level	131	202	0xCA
AD-life-movement-level0	132	203	0xCB
AD-life-movement-level1	133	204	0xCC
AD-life-movement-level2	134	205	0xCD
AD-life-movement-level3	135	206	0xCE
Intrusion-arm	136	207	0xCF
Intrusion-disarm	137	208	0xD0
Intrusion-activation	138	209	0xD1
Intrusion-tamper	139	210	0xD2
Intrusion-door-bell	140	211	0xD3
Heat-detected	141	212	0xD4

[a.] Event code is configurable

[b.] Event code is not defined in this protocol.

[c.] Sent as specific heartbeat message

Appendix D. Radio sensor events per trigger type

Trigger type no.	Trigger type	Radio sensor event (1-15)	Event trigger	Note
0	Basic personal trigger (MyAmie AP)	1	Button pressed once	
1	Tx3/Tx4 trigger	1	Button pressed once	
		2	Button pressed twice	
		3	Button pressed three times	
		4	Input 1 activated	
		8	Input 2 activated	
2	Premium personal trigger/wearable 9 Note: Legacy sensor that does not fully adhere to the mutually exclusive sensor event scheme.	1	Button pressed once	
		2	Button pressed twice	
		3	Button pressed three times	
		4	Button long pressed	
		5	Cancel button pressed	
		6	Auto TX Position Alarm	
		7	Fall detected	
		8	Inactivity detected	
		9	Man down detected (Tap(s) sense detected)	
		10	Man down detected (Drop/Shock detected)	
		11	Trigger not worn	
		12	Input 1 activated	
		13	Input 2 activated	
		14	Snubblometer – Low risk of fall. Informative alarm	
		15	Snubblometer – Medium risk of fall. Oversee the person	
		16	Snubblometer – High risk of fall. Alarm	
		17	Snubblometer – Fall alarm	
		18	Snubblometer – Low battery	
		19	Snubblometer – Disconnected	
		20	Snubblometer – Connected	
3	Temperature extremes sensor	1	High temperature	
		2	Low temperature	
		3	Temperature rise	
		15	Detector fault	
4	Flood detector	1	Activation	
5	Carbon monoxide detector	1	Activation	
		2	Device end of life	
		15	Detector fault	
6	Smoke detector	1	Activation	
7	Door contact (sensor)	1	Door opening	
		2	Door closing	
8	Pressure mat sensor	1	Activation	
9	Pullcord	1	Activation	
10	Assault/Emergency trigger	1	Button pressed once	
		2	Button pressed twice	
		3	Button pressed three times	
11	Bed occupancy sensor	1	Not in bed	
		2	Not up bed	
		3	Bed absence	

Trigger type no.	Trigger type	Radio sensor event (1-15)	Event trigger	Note
		4	Bed other	
		5	ADLIfe bed occupied	
		6	ADLife bed unoccupied	
12	PIR entry/exit	1	Activation	
13	Fall detector	1	Button pressed	
		2	Fall	
		3	Fall detector not worn	
		12	Cancel button pressed	
14	PIR standard	1	Standard activation	
		2	Entry/Exit activation	
		3	Tamper	
15	Carer trigger	1	Button pressed once	
		2	Button pressed twice	
		3	Button pressed three times	
20	Natural gas detector	1	Activation	
23	Tx4 Fire	1	Button pressed once (For programming)	
		4	Activation	
24	Electrical appliance usage sensor	1	Appliance switched on	
		2	Appliance switched off	
25	Serial TRM/Universal sensor	1	Activation	
26	Medication dispenser	1	Dose not taken	
		2	Dose taken	
		15	Device fault	
27	Bath sensor	1	High level	
		2	High temperature	
		3	Low temperature	
28	Epilepsy sensor	1	Epilepsy event	
		2	Spare event	
30	Tx4 IR (PIR)	4	Activation	
34	Enuresis sensor	1	Activation	
36	Chair occupancy sensor	1	User out of char	
		2	User in chair	
		3	User absent	
37	Heat detector	1	Activation	
39	PIR bed guard	1	Activation	
		2	Tamper	
40	Tx4 Door	1	Button pressed once (Programming button)	
		4	Activation/Door is opened	
43	Cooker guard	1	Activation	
		15	Device fault	
56	915 Tx4	1	Button pressed once	
		2	Button pressed twice	
		3	Button pressed three times	
		4	Input 1 activated	
		8	Input 2 activated	
57	Fall detector Vibby	1	Button pressed	
		2	Fall	
		3	Button pressed + fall (Simultaneously)	

Trigger type no.	Trigger type	Radio sensor event (1-15)	Event trigger	Note
		4	Activation	
70	Tx4 T-Box2	4	Input 1 activated	
		8	Input 2 activated	
71	Tx4 PC (Pull Cord)	1	Button pressed once (External button)	
		2	Button pressed twice (External button)	
		3	Button pressed three times (External button)	
		8	Input 2 activated (Pull cord is activate)	
72	Tx4 CO sensor		-	
73	Tx4 Flood sensor		-	
75	Snubblometer	1	Risk for fall level 1	
		2	Risk for fall level 2	
		3	Risk for fall level 3	
		4	Risk for fall level 4	
81	915 simple bed occupancy	1	Not in bed	
		2	Not up bed	
		3	Bed absence	
82	915 simple epilepsy	1	Activated	
83	915 simple bed in/out	1	Out of bed	
		2	In bed	
84	915 simple door guard	1	Door open	
85	915 simple door open/closed	1	Door open	
		2	Door closed	
86	915 simple temperature extremes sensor	1	High temperature	
		2	Low temperature	
94	Basic personal trigger (MyAmie ALB)	1	Button pressed once	

Appendix E. Homephone protocol commands

When the homephone protocol is used to connect to a receiver, the receiver uses the keypad on the telephone to send commands to Lifeline Digital.

Command	Description
1, 3	Switch to simplex mode, change speech direction.
2	Switch to duplex mode.
5	Increase microphone and speaker.
6	Disconnect the call.
7	Switch to simplex mode, connect microphone.
8	Swtich to simplex mode, connect speaker.
9	Relay action.

Appendix F. Technical data

1. Technical details Lifeline Digital

Weight	491g net weight
Dimensions	180 x 58 x 98 mm (L x W x H)
Mains power	230v AC (1.5 Watts, typical)
Backup battery	Rechargeable Lithium-ion battery, 18Wh, 2500mAh capacity (internally charged, BMS operated)
Backup battery order number	022-25-012
Backup time	72 hours of stand-by operation with one 5-minute IPACS heartbeat and normal use (expected at date of purchase and when fully charged[a.])
Number of programmable phone numbers for alarms	13
Number of programmable IP addresses for alarms	11
Radio frequencies	869.2125 MHz / 868.3000 MHz / 433.92 MHz
Cellular	2G, 3G, 4G (GSM/GPRS/Edge/ UMTS/LTE and VoLTE)
Physical interface	SMA antenna connector, 2x USB 2.0 ports, Ethernet port (RJ45), 12V power inlet (RJ11)
Wireless interface	NFC, Wi-Fi, 2G, 3G, 4G, Bluetooth Low Energy (BLE), Infrared receiver (IR) 2x SRD radio
Protocols	
IP	Tunstall IPACS, SCAIP, EN50134-9, Homephone-SIP
Analog/GSM	Homephone, CPC/Antenna, STT, BS8521, TT21, TT92
Materials	
Casing	PC/ASA (White) PC/ABS (Black)
Back cover	PC/ASA (White) PC/ABS (Black)
Keypad	Silicone
Environmental	
Operation temperature	0°C to +55°C
Storage temperature	-20°C to +45°C max. 3 months storage
Operation humidity	0 to 90% RH, non-condensing
Storage humidity	0 to 95% RH, non-condensing
Standard	
Safety	EN 62368-1:2014 + AC:2015 + A11:2017. IEC 62133. AS/NZS 62368.1:2018
Radio	EN 300 220-1 V3.1.1 + EN 300 220-2 V3.1.1 + EN 300 220-3-1 V2.1.1 Category 1. EN 301 908-1 V11.1.1. EN 300 328 V2.2.2. EN 300 330 V2.1.1. 47 CFR Part 22/RSS-132 Issue 3. AS/NZS 4268-2017. FCC Section 15.247
Social alarms	EN50134-1:2002, EN50134-2, EN50134-3:2012, AS4607
EMC	EN 301 489-1 V2.2.3 + Draft EN 301 489-17 V3.2.2 + Draft EN 301 489-3 V2.1.1 + Draft EN 301 489-52 V1.1.0 + EN 301 489-33/5. EN 55032:2015 + AC:2016 + EN 55035:2017 + EN 61000-3-2:2014 + EN 61000-3-3:2013. EN 50130-4:2011 + A1:2014 + EN 61000-6-3:2007 + A1:2011 + AC:2012. CISPR32:2015 + AC:2016
Design, manufacture, installation & service	ISO9001:2015
CE and UKCA compliant	Yes
ROHS compliant	2011/65/EU + 2015/863/EU
Directives	2014/53/EU + 2011/65/EU
Article number	
022-25-901	Lifeline Digital Tx4 (White) EU
022-25-902	Lifeline Digital Tx4 (Black) EU
022-25-903	Lifeline Digital MyAmie ALB (White) UK
022-25-904	Lifeline Digital MyAmie AP (White) EU
022-25-905	Lifeline Digital MyAmie AP (Black) EU
022-25-908	Lifeline Digital (White) Tx4 915 (Grey) APAC
022-25-911	Lifeline Digital Tx4 (White) Sweden

022-25-912	Lifeline Digital Tx4 (Black) Sweden
Options	
022-25-015-01	External antenna (White)
022-25-015-02	External antenna (Black)

[a.]Time may be reduced by factors including temperature extremes, weak or intermittent cellular connectivity, high levels of sensor radio frequency activity and battery ageing.

2. Technical details Tx4

Weight	16g net weight (without attachments)
Dimensions	H 13mm, Ø 35 mm (without attachments)
Actual button area	180 mm^2
Battery	Lithium button cell; CR2450; 3.0 V (changeable)
Battery lifetime	Approx. 5 years or 30.000 alarm transmissions[a.].
Radio frequencies	869.2125 MHz & 868.3000 MHz (frequency hopping)
Radio power	The transmitted power in the actual frequency band is less than 1mW e.r.p
Connection	Bi-directional
Range	At least 30 meters indoors. At least 250 meters outdoors
Water resistant	Water resistant IP67 (water resistant to a depth of 1 meter for 30 minutes), suitable for use in the shower.
Materials	
Cover	Silicone
Housing	ABS
Wrist strap	64% Polyamide, 16% Elastane, 20% Polyester
Wrist strap clasp	Polyoxymethylene (POM)
Neck cord	Polyester
Neck cord snap locks	Nylon
Wrist and neck cord holders	TPU
Environmental	
Temperature	+5°C to +40°C (Recommended)
Standards	
Safety	IEC 60950-1:2005, IEC 60950-1:2006+A11:2009+A1:2010+A12:2011
Radio	EN 300 220-1 v2.3.1, EN 300 220-2 v2.3.1
Social alarms	EN50134-2:2018
EMC	EN 55022:2010, EN 61000-3-2:2006, EN 61000-3-3:2008, EN61000-4-2,3,4,6,8,11, EN 301489-1, EN50130-4:2011
Design, manufacture, installation & service	ISO9001:2015
Ingress protection (IP)	IP67
CE and UKCA compliant	Yes
Article number	
023-02-802	Tx4 with wrist strap and neck cord (Gray)
023-02-820	Tx4 with wrist strap and neck cord (White)
023-02-821	Tx4 with wrist strap and neck cord (Black)
61014/42	Tx4 915 with wrist strap and neck cord (Gray) - Regional AS/NZS

[a.]Time may be reduced by factors including temperature extremes, weak or intermittent connectivity and battery ageing.

3. Technical details MyAmie

Weight	7g net weight (without attachments)
Dimensions	26 x 36 x 14mm (W x H x D)
Actual button area	165mm^2
Battery	Lithium button cell; CR2032; 3.0 V (non-changeable)
Battery lifetime	Up to 7 years[a.] (not changeable)
Radio frequencies	869.2125 MHz
Radio power	The transmitted power in the actual frequency band is less than 1mW e.r.p.
Connection	Uni-directional
Range	At least 30 meters indoors. At least 250 meters outdoors
Water resistant	Water resistant IP67 (water resistant to a depth of 1 meter for 30 minutes), suitable for use in the shower.
Materials	
Casing	ABS
Button	Hytrel
Wrist strap	Polyester/Elastic
Clasp for wrist strap	ABS
Standards	
Safety	EN 60950-1
Radio	EN 300 220-2
Social alarms	EN 50134-2
EMC	EN 55032, EN 301 489-1, EN 301 489-3, EN 50130-4
Design, manufacture, installation & service	ISO 9001: 2008
Ingress protection (IP)	IP67
CE and UKCA compliant	Yes
Article number	
P68005/01	MyAmie Auto Low Battery (ALB) (White with red button)
P68005/02	MyAmie Auto Presence (AP) (White with red button)

[a.]Time may be reduced by factors including temperature extremes, weak or intermittent connectivity and battery ageing.

4. Spare parts

Article number	Description	Region
022-25-012	Backup battery Lifeline Digital	Global
022-25-015-01	External antenna (white)	Global
022-25-015-02	External antenna (black)	Global
346 00 01 -69	Stub antenna (black)	Global
022-25-013	Power adapter EU (white)	EU
XD5706020A (346 00 01-48)	Power adapter EU (black)	EU
022-25-217-01	Power adapter UK (white)	UK
022-25-217-02	Power adapter UK (black)	UK
022-25-218-01	Power adapter AS/NZS (white)	AS/NZS
022-25-218-02	Power adapter AS/NZS (black)	AS/NZS
023-02-802	Tx4 with wrist strap and neck cord (gray)	EU
023-02-820	Tx4 with wrist strap and neck cord (white)	EU
023-02-821	Tx4 with wrist strap and neck cord (black)	EU
61014/42	Tx4 915 with wrist strap and neck cord (gray) - Regional AS/NZS	AS/NZS
K2892	Tx4 battery service kit - 10 pcs (gray)	Global
023-02-826-01	Tx4 battery service kit – 10 pcs (white)	Global
023-02-826-02	Tx4 battery service kit – 10 pcs (black)	Global
P68005/01	MyAmie Auto Low Battery (ALB) (White with red button)	EU
P68005/02	MyAmie Auto Presence (AP) (White with red button)	EU

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Our policy of continual development means that product specification and appearance may change without notice. Tunstall does not accept responsibility for any errors and omissions within this document.

Tunstall declare that this radio equipment is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following address: https://www.tunstall.com/lifeline-digital-documentation

Transmitting power: The transmitted power in the actual frequency band is less than 1mW e.r.p.

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