

Care@Home™

Bed Sensor User Guide

ESUGSC104

Version 1.0

February 2019

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1. Overview

The Essence Bed Sensor is a battery-operated, bi-directional wireless sensor for detecting the resident's presence in bed.

Care@Home™ uses the bed sensor, together with an associated motion detector (PIR), to determine if the resident is in the bedroom.

The bed sensor consists of two connected units:

- Nonslip, waterproof, anti-microbial, pressure pad
- Transmitter



2. Setting Up the Bed Sensor

To set up the bed sensor:

- Ensure you have the required items
- Pair the bed sensor
- Place the bed sensor
- Associate the bed sensor with a motion detector

2.1. Required Items

Ensure you have the following:

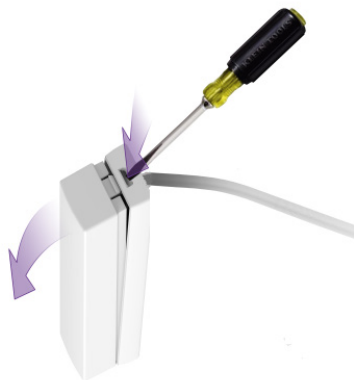
- One 3 V CR123A lithium battery
- A flat-headed screwdriver

2.2. Pairing the Bed Sensor

You need to pair the bed sensor with the control panel before the bed sensor can be used.

To pair the bed sensor:

1. Insert a screwdriver in the release tab opening at the top of the transmitter and press the tab to release the mounting base.

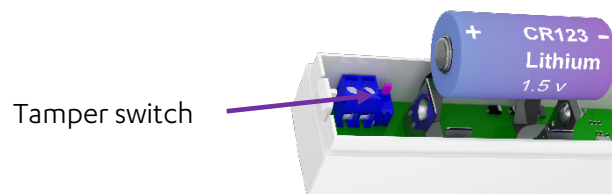


Setting Up the Bed Sensor

- Press and hold the **PAIRING** button on the control panel until you hear a double beep.



- Move the bed sensor at least 2 m (~6 ft. 7 in.) from the control panel.
- Press and hold the bed sensor's tamper switch.



- While continuing to hold the tamper switch, insert the battery, observing the correct polarity.



Caution: A battery can cause damage if it is installed incorrectly.

- Continue to hold the tamper switch until the control panel responds.
- Ensure that pairing was successful based on the response you receive from the control panel:

Control Panel Response	Meaning
<i>"Bed sensor added successfully"</i>	Pairing was successful.
<i>"Device added successfully"</i>	Bed sensor was paired incorrectly. <ol style="list-style-type: none"> Remove the bed sensor's battery. Pair again, and make sure to hold down the tamper switch during the whole process.
Beeps and EMERGENCY button ring lights red for two seconds.	Pairing was unsuccessful. Try again.

Control Panel Response	Meaning
Low pitch beep and EMERGENCY button ring lights blue as EMERGENCY button lights red.	This bed sensor has already been paired with this control panel.
Beeps and the EMERGENCY button ring lights red	Bed sensor cannot be paired. Control panel memory is full.

8. Attach the mounting base to the transmitter. The LED lights red.



2.3. Placing the Bed Sensor

Proper placement of the bed sensor is important for accurate detection and the resident's comfort.



- The pressure pad should be placed in the resident's bed:
 - On top of the mattress
 - Covered by a sheet
 - At the approximate location of the resident's waist/buttocks
 - With the cable on the side not used for getting in and out of bed
- Place the transmitter out of the resident's way, for example:
 - Under the mattress
 - Between the bedframe and the mattress

2.4. Associating the Bed Sensor with a Motion Detector


The bed sensor and motion detector work together to determine the presence of the resident in the bedroom. You must associate the bed sensor with a specific motion detector (PIR).

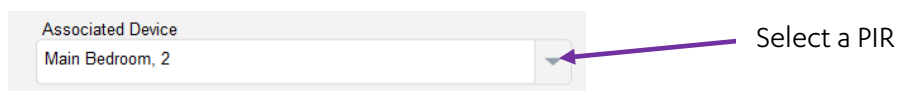
Use the Care@Home™ web application or Care@Home™ CMS to associate the bed sensor with a motion detector.



Caution: The bed sensor will not work if it is not associated with a motion detector.

To associate a bed sensor with a motion detector using the Care@Home™ web application:

1. Log on to the Care@Home™ web application.
2. Click **Users**. A list of users appears.
3. Click the name of the resident. The **Resident Information** screen appears.
4. Click **Devices**. A list of devices appears.
5. Click  for the bed sensor. The **Edit Device** window appears.
6. Click **Associated Device** and select a PIR.



7. Click **Save**.

To associate a bed sensor with a motion detector using Care@Home™ CMS:

1. Open Care@Home™ CMS.
2. From the **Main** menu, click **Activity Sensors**. The **Activity Sensors** window appears.
3. Click **Bed Sensor**. The bed sensor's details appear.
4. Click **Associated PIR** and select a PIR.



5. Click **Update**.

3. Operating the Bed Sensor

The bed sensor monitors certain events, and reports them by:

- LED indications
- Sending notifications to the CP

3.1. LED Indications

The bed sensor LED lights for the following events:

- Red – Battery replaced
- Green – Pad pressed

3.2. Notifications

The bed sensor sends notifications to the control panel for the following events:

- Pressure is applied to the pad
- Pressure is released from the pad
- The battery is low
- The tamper switch is activated

3.3. Supervision

The bed sensor is a supervised device. The bed sensor periodically transmits its status to the control panel. If after a pre-defined time the control panel does not receive a status message, the control panel sends a supervision lost message to the monitoring station.

The bed sensor's state, pressed or not pressed, is included in periodic updates.

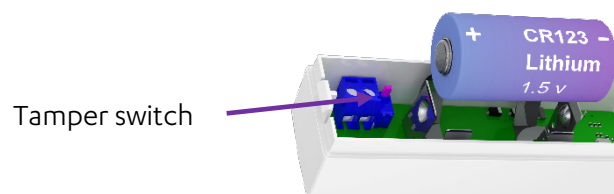
4. Replacing the Battery

To replace the battery:

1. Insert a screwdriver into the transmitter's slot and press the tab to release the mounting base.



2. Remove the old battery.
3. Press the tamper switch several times.



4. Insert the new battery, observing the correct polarity. The LED lights red.
5. Attach the mounting base to the transmitter.



5. Specifications

Item	Data
Part Number	ES700BD
Communications	<ul style="list-style-type: none"> ■ Maximum RF range: Up to 400 m (1,312 ft.) – open air ■ Protocols: Proprietary bi-directional radio protocol ■ Modulation and frequency: FSK modulation: <ul style="list-style-type: none"> ● 868.3 MHz (China) ● 869.225 MHz (Europe) ● 916.5 MHz (North America and Australia) ● 916.3 MHz (Israel) ■ Data security: 32-bit ID, over 4 billion combinations
Transmitter Security	<ul style="list-style-type: none"> ■ Tamper mechanism for open cover
Sensitivity	<ul style="list-style-type: none"> ■ Nominal detection threshold: 22 kg (50 lbs.)
Power Consumption	<ul style="list-style-type: none"> ■ Batteries: 3V CR123A lithium battery ■ Battery life: Up to 3 years
Dimensions	<p>Size (H x W x D):</p> <ul style="list-style-type: none"> ■ Transmitter: 98 x 25 x 25 mm – 3.86 x 0.98 x 0.98 in. ■ Pressure pad: 76.2 x 27.94 x 0.8 cm – 30 x 11 x 0.3 in.
Environment	<ul style="list-style-type: none"> ■ Storage ambient temperature range: -20°C – 70°C (-4°F – 158°F) ■ Operating ambient temperature range: 0°C – 49°C (32°F – 120°F) ■ Operating humidity: Up to 93% non-condensing
Compliance	<ul style="list-style-type: none"> ■ CE, FCC, IC, UL

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