# Care@Home<sup>™</sup>

Door/Window Sensor User Guide

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## 1. Overview

The door/window sensor (MGLS) is a magnetic sensor for detecting opening and closing of doors.

This sensor consists of:



Figure 1: Care@Home™ Door/Window Sensor

Care@Home™ Door/Window Sensor User Guide

# 2. Installing the MGLS

To install the MGLS:

- Ensure you have the required items
- Determine the best location
- Set up the MGLS
- Test the MGLS

### 2.1. Required Items

Ensure you have:

- A flat screwdriver to open the transmitter
- One 3 V CR123A lithium battery

## 2.2. Determining the Best Location

When selecting a mounting position for the MGLS, choose a location which is:

- A flat door or frame surface that is clean, dry, and smooth
- Within 400 m (1,312 ft.) of the control panel (CP)
- As high as possible, yet at a height accessible for occasional maintenance
- Consistent with the recommendations in the following table

#### Table 1: Transmitter and Magnet Recommendations

Situation	Transmitter Location	Magnet Location
Front door of residence	Frame of door	Door
Refrigerator with one door	Frame of refrigerator	Refrigerator door
Refrigerator with side by side freezer compartment and door	Top of refrigerator side of the frame	Top of refrigerator door
Refrigerator with side by side refrigerator doors	Either door	Other door from magnet
Refrigerator with lower freezer compartment	Frame of refrigerator door	Refrigerator door



NOTE: Avoid, if possible, installation on the top of a door or door frame due to the dust accumulation there.

## 2.3. Setting Up the MGLS

To set up the MGLS:

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



Figure 2: Release Mounting Base



- 2. If the MGLS is from a Care@Home<sup>™</sup> kit:
  - a. Move the MGLS at least 2 m (~6 ft. 7 in.) away from the CP.
  - b. Press the tamper switch at least three times.

Tamper Switch \_\_\_\_\_\_ + CR123 - Lithium

Figure 3: MGLS Tamper Switch

c. Insert the battery, observing the correct polarity.



Figure 4: Battery Insertion



WARNING! A new battery can cause damage if it is incorrectly installed.



When the battery is installed, the internal LED lights up red, indicating that the device has powered up successfully.





- d. Skip ahead to step 4.
- 3. If the MGLS is **not** from a Care@Home<sup>™</sup> kit, you must add the MGLS to the Care@Home<sup>™</sup> system.
  - a. Press the **PAIRING** button, located on the right edge of the front of the CP, for five seconds.
  - b. Move the MGLS at least 2 m (~6 ft. 7 in.) away from the CP.
  - c. Press the <u>tamper switch</u> at least three times.
  - d. Insert the battery, observing the correct polarity.
  - e. Ensure that the pairing process is successful. The process can have the following results:
    - Success The CP beeps and the CP **ring** blinks blue three times.
    - Failure The CP beeps and the CP ring lights up red for two seconds. Try to pair the MGLS again.
    - Already paired The CP beeps, the CP ring lights up blue, and the EMERGENCY button lights up red.

NOTE: If no additional peripheral devices can be integrated, as when the CP memory is full, the CP beeps and the CP **ring** lights up red.



4. Attach the transmitter to the mounting base.



#### Figure 6: Close Transmitter

- Identify the location for mounting the MGLS. Refer to 2.2 Determining the Best Location on page
   4.
- 6. Clean the surfaces of the mounting locations thoroughly. Make sure the locations are dry.



- 7. Peel off the protective strip from the mounting-tape of the transmitter.
- 8. Press the transmitter into place.
- 9. Position the magnet at the same level as the transmitter, so that the alignment marks are aligned, as illustrated in the following figure.



The two units of the MGLS must be placed, **at most**, 3 cm (1.2 in.) from each other.



#### Figure 7: Aligning MGLS Components

- 10. Peel off the protective strip from the mounting-tape of the magnet.
- 11. Press the magnet into place.

#### 2.4. Testing the MGLS

Test the MGLS:

- 1. Open the door which has the MGLS. The MGLS LED should light up red.
- 2. Close the door where the MGLS is installed. The MGLS LED should light up green.
- 3. Verify that the notifications are sent to the CP. View the **Events History Page** in the **Care** web application. Refer to ESUG05051 Care@Home™ Administrator User Guide

## 3. Operating the MGLS

The MGLS monitors certain events, and reports them by:

- LED indications
- Sending notifications to the CP.

### 3.1. LED Indications

The MGLS LED lights up for the following events:

- Red Door open, or tamper alert
- Green Door closed after having been opened

#### 3.2. Notifications

The MGLS sends notifications to the CP for the following events:

- A door is opened or closed
- The room temperature exceeds the configured temperature threshold
- The MGLS battery charge is low
- The MGLS tamper switch is disturbed

### 3.3. Supervision

The MGLS is a supervised device. The MGLS periodically transmits its status to the CP. If after a predefined time the CP does not receive the status message, the CP sends a **Supervision lost** message to the monitoring station.

## 3.4. Configuring the MGLS

You can configure parameters for the MGLS using Care@Home<sup>™</sup> CMS. For example, you can disable the LED, and define how and when the MGLS issues notifications to the CP. Refer to the Care@Home<sup>™</sup> CMS Reference for the version of Care@Home<sup>™</sup> system installed on your resident's premises.



# 4. Replacing the Battery

When the battery charge is low, the battery must be replaced.

To replace the battery:

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



Figure 8: Release Mounting Base

- 2. Remove the old battery.
- 3. Press the tamper switch at least three times.



Figure 9: MGLS Tamper Switch

4. Insert the new battery, observing the correct polarity.



- 5. When the battery is installed, the LED lights up red, indicating that the device has powered up successfully.
- 6. Return the transmitter to the mounting base.



# 5. Specifications

The following table lists the technical aspects and data of the MGLS.

Category	Details		
Essence	Part number	ES700MGLS	
Power Supply	Battery	One 3 V CR123A lithium	
	Approved manufacturers	GP, Energizer, Duracell	
	Nominal battery life	Up to three years	
	Battery power test	Upon power-up and periodically	
Wireless	Bi-directional	End-to-end bi-directional ESI protocol Advanced radio supervision algorithm	
	Frequency	<ul> <li>FSK modulation:</li> <li>869.225 MHz (Europe)</li> <li>868.3 MHz (China)</li> <li>916.5 MHz (North America and Australia)</li> </ul>	
	RF coverage	400 m (1,312 ft.) – open air	
	Encoding	32-bit ID, over 4 billion combinations	
Functional	Nominal detection threshold	Closing distance: 35 mm (~1.38 in.) Opening distance: 45 mm (~1.78 in.)	
	Visual indications	Green LED for closure Red LED for opening	
	Tamper mechanism	Double triggered tamper: cover open and tearing from wall	
Environmental	Humidity	93% non-condensing	
	Operating temperatures	-10°C - 55°C (14°F - 131°F)	
	Storage temperatures	-20°C - 70°C (-4°F - 158°F)	

#### Table 2: Device Technical Specifications

Category	Details		
Physical	Dimensions (H x W x D)	Transmitter: 98 x 25 x 25 mm - 3.86 x 0.98 x 0.98 in.	
		Magnet: 46 x 10 x 15 mm - 1.81 x 0.39 x 0.57 in.	
	Weight	Transmitter: 45 g (incl. battery) - 0.1 lb.	
		Magnet: 25 g - 0.06 lb.	
	Color	RAL 9003 - glossy white	
Compliance with	CE	EMC	
Standards		Radio	
		Safety	



## Appendix A Installation Method Alternatives

There are two ways to install the MGLS mounting base:

- Using double-sided adhesive mounting tape
- Using screws

Before choosing the installation method, consider the following:

- The magnet is only installed using mounting tape.
- Installation with mounting tape is more common.
- Using screws can reinforce the tape-based installation.

#### Using Mounting Tape

Mounting tape is approved for the following surfaces:

- ABS
- Polycarbonate (PC)
- Aluminum
- Galvanized steel
- Enameled steel
- Stainless steel
- Nickel coated ABS
- PVC
- Glass/Epoxy
- Ceramic
- PBT
- Glass (with and without silane coating)
- Acrylic or polyurethane paint
- Polyester Paint



### **Using Screws**

The mounting base has two holes. The thin plastic covering over the holes can be removed, if necessary. You can drill through the tape, if needed.

#### **Required Equipment**

Before beginning, prepare the following equipment:

- A drill with a standard appropriate bit
- Two 3 X 35 DIN 7982 C screws and wall anchors for the screws. The screws and wall anchors are not provided.
- A standard Philips screwdriver

#### Installing the MGLS with Screws

To install the MGLS using screws:

1. Using a screwdriver, clear the two holes in the mounting base for the screws.



Figure 10: Mounting Base with Screws

- 2. Place and hold the mounting base on the desired mounting location.
- 3. Mark the drilling spots through the screw holes.
- 4. Drill the holes.
- 5. Insert two wall anchors in the drilled holes, if needed.
- 6. Place the mounting base over the wall anchors in the drilled holes.
- 7. Screw in the two screws.

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