

# SECURE WANDERING SYSTEM



INSTALLATION AND USER GUIDE

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# Installation principle

## SYSTEM DESCRIPTION

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### Operation

The secure wandering system provides a solution for monitoring patients or residents who are at risk of wandering or elopement.

Each monitored exit is fitted with a standalone controller which alerts staff when a person wearing a special wristband transmitter tries to go through it. If there are no supervisory staff near the exit, this information can be transmitted to the BUS/SCS nurse call unit using a door unit Cat. No. 0 766 06 configured for this function.

This way nurses are alerted immediately to the wandering patient and can identify which door they have gone through.

The system can operate in two modes:

- **Surveillance mode:** An alarm is activated when the wearer of a wristband transmitter is near a monitored exit and this exit is open.
- **Intruder mode:** An alarm is activated when an exit is opened.

Switching from one mode to the other can be done manually by entering a special code on the controller keypad, by closing a clock contact, or via a switch. Staff have a chaperone code which allows a person wearing a wristband transmitter to be let through a monitored exit without triggering an alarm.

Two control outputs allow:

- The exit to be locked once a wristband transmitter is detected in the vicinity (an electromagnetic lock or an electric door release is required).
- An audible or illuminated warning signal to be triggered when a wandering alarm is activated.

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### Safety instructions

This product must be installed in accordance with the installation instructions, and preferably by a qualified electrician. Incorrect installation and use may lead to the risk of electric shock or fire. Read the manual and consider exactly where the product is to be fitted before carrying out installation.

Do not open, remove, alter or modify the device unless this is specifically stated in the instructions. Legrand products must only be opened and repaired by personnel trained and authorised by Legrand. Any unauthorised opening or repair voids all liability, replacement rights and warranties.

Only use Legrand brand accessories.

### Operating environment

- This device complies with the directives concerning exposure to radio electric frequencies when used under the normal conditions described in the user manual. Follow the installation instructions described in the manual.

- Depending on the configuration, this device regularly transmits radio waves, the frequency and power of which comply with ARCEP recommendations.

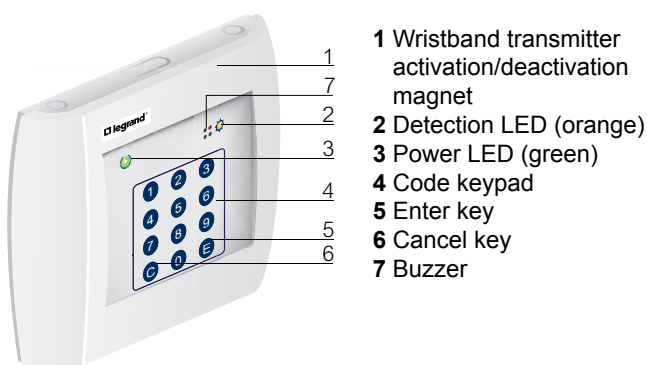
**Note:** In the event of a power cut, the system is deactivated and can no longer monitor patient wandering (doors are no longer secure and alarms will not be triggered). To ensure continuous operation during a mains failure, connect the system to an uninterruptible power supply (generator set and/or inverter).

# Device presentation and installation

## SECURE WANDERING SYSTEM

This system is used to indicate that a resident wearing a wristband transmitter Cat. No. 0 766 20 has passed through a monitored door. It can be used with door unit Cat. No. 0 766 06 configured for secure wandering which allows acknowledgement and feedback to the Legrand SCS nurse call unit system.

### Door controller Cat. No. 0 766 22



Situated close to the exit door, this controller is the heart of the system.

All auxiliary elements are connected to it.

A 12-button keypad is used to configure it and activate special functions (mode selection, alarm acknowledgement, etc.).

The buzzer and LEDs act as a warning if unauthorised wandering is detected. The buzzer makes a different sound depending on the type of alarm (chaperone, elopement or fault). The buzzer can be deactivated temporarily using the chaperone code.

The controller has a built-in antenna and can retrieve information from the antenna Cat. No 0 766 21 and door contact Cat. No. 0 431 00.

Depending on its operating mode, the controller:

- Buzzes and flashes
- Can lock the door if it has the necessary fitting (electromagnetic lock or door release)
- Can trigger a nurse call or send a message to the DECT system if connected to the door unit

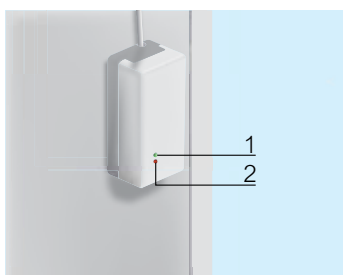
When the door is locked, it can be unlocked using special codes.

Requires a modular 12 V<sub>DC</sub> power supply (Cat. No. 4 131 05).

### Technical characteristics

- IP 20 - IK 04
- Operating temperature: 0 °C to +50 °C
- Power supply: 12 V<sub>DC</sub>, 150 mA
- Illuminated signals:
  - System power on (power LED)
  - Intruder mode (detection LED)
  - Wristband transmitter detection (detection LED)
- Audible signals: alarm (can be temporarily overridden by chaperone code)
- Functions which can be accessed via the keypad:
  - Alarm reset
  - Chaperone mode
  - Changeover between surveillance/intruder modes
  - System parameter settings
- Controller inputs:
  - Adjustable connection:
    - Volt-free contacts
    - Voltage detection
  - 5-24 V<sub>DC</sub>
  - 50 mA at 24 V<sub>DC</sub>
  - Door contact (NO/NC)
  - Chaperone contact (NO)
  - Alarm acknowledgement (NO/NC)
  - Mode selection
  - Panic alarm (NO)
- Volt-free contact outputs:
  - Lock: 1 A - 24 V<sub>AC</sub>/60 V<sub>DC</sub> max.
  - Alarm: 1 A - 24 V<sub>AC</sub>/60 V<sub>DC</sub> max.
- Internal antenna (**15W28 and above**)
- Cable type for link with door unit (system solution): 2 x 0.9 mm pairs
- Sound level
  - Volume = 1 75 dB(A) at 10 cm
  - Volume = 2 85 dB(A) at 10 cm

### Antenna Cat. No. 0 766 21 (additional antenna)



- 1 Status LED (green)
- 2 Detection LED (red)

Used for wide doors or double doors, this antenna is placed as close to the exit as possible, ideally 50 cm from the ground, opposite the controller. It picks up the radio signal from a wristband transmitter Cat. No. 0 766 20 and informs the controller Cat. No. 0 766 22.

The detection radius (around 1 to 15 m) can be set easily using a screwdriver.

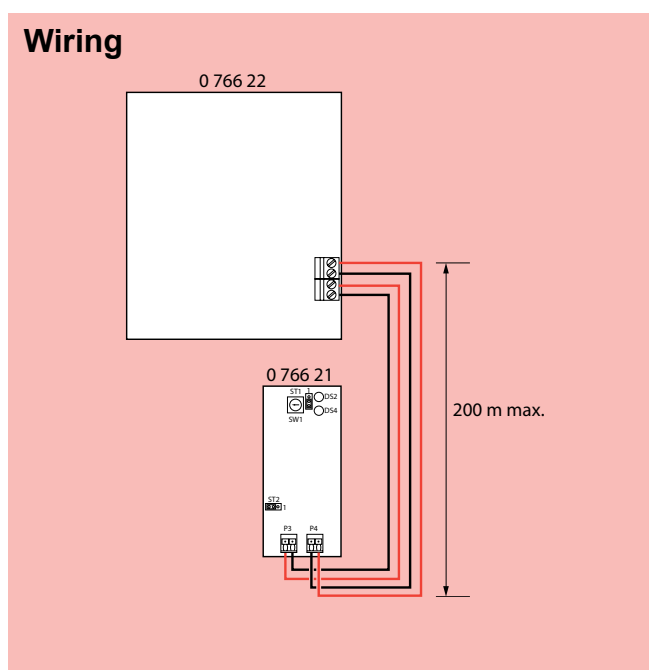
A green LED indicates that the antenna power is on. A red LED flashes when a wristband transmitter is in the detection zone (see "Setting the antennae").

The antenna activity is checked continuously by the controller.

#### Technical characteristics

- Power supply: via door controller Cat. No. 0 766 22
- Dimensions (H x W x D): 50 x 100 x 40 mm
- Screwed onto the wall
- IP 20 - IK 04
- Operating temperature: +0 °C to +50 °C
- Cable type (to controllers Cat. No. 0 766 22):  
2 x 0.9 mm pairs

### Wiring



**P4:** Polarised antenna power supply (15 V)

**P3:** Polarised BUS

**ST1:** • Position 1 - 2: additional antenna 1  
• Position 2 - 3: additional antenna 2

**ST2:** • Position 1 - 2: antenna in test mode  
• Position 2 - 3: factory position

**SW1:** Thumbwheel for setting the antenna range (factory setting = 8, which corresponds to around 3 - 4 m). Possible range 1 to 15 m.

# Device presentation and installation (continued)

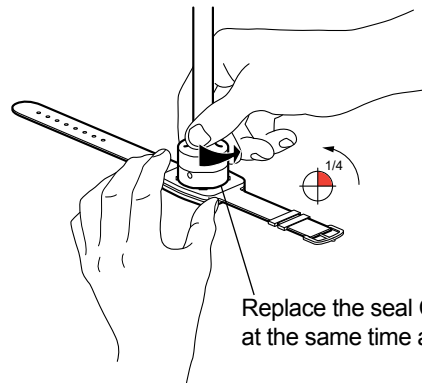
## SECURE WANDERING SYSTEM (CONTINUED)

### Wristband transmitter Cat. No. 0 766 20

Cat. No. 9 804 09



Actuation point for memory storage/clearing modes



Replace the seal Cat. No. 9 804 08 at the same time as the battery

Replacing the wristband battery

### **⚠ Do not register the wristband transmitters to the door controller Cat. No. 0 766 22.**

The wristband becomes operational as soon as it has been activated (by a long press on the middle of the face of the transmitter until the red LED flashes; the wristband then emits a vibration signal).

When the wristband is detected, a delay of a few seconds is necessary before it can be detected a second time.

Worn on the wrist or the ankle, this waterproof transmitter has an eyelet fastener to prevent it from being taken off by the wearer (person being monitored).

They are made of an hypoallergenic material which can be in continuous contact with the skin.

The battery has an expected lifetime of more than a year (although replacing the batteries annually is recommended).

The IP 67 protection allows residents to take showers.

The wristband transmitters can also be cleaned by placing them in an alcohol bath for 5 minutes.

They must be removed in the following cases:

- If they are faulty or the battery is dead
- When the resident leaves the unit
- When the resident undergoes an MRI (magnetic resonance imaging) scan etc.



To remove the wristband, cut the rubber strap section with a pair of round-end safety scissors. To replace it, order a new strap Cat. No. 9 804 09.

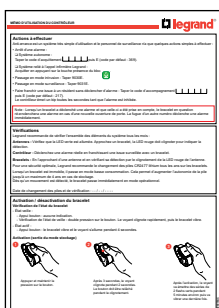
When a wristband transmitter is immobile it switches to low-consumption mode. This can help extend the battery life to a maximum of 4 years when stored.

As soon as movement is detected on the wristband transmitter, it switches immediately to operational mode.

When the wristband is no longer in use, it can be switched to storage mode to preserve battery life (⚠ First lay the wristband flat on a table to hold it still; then press the middle of the face until the red LED comes on; then release, and press 5 times in quick succession).

### Technical characteristics

- IP 67
- Hypoallergenic plastic
- Frequency: 868.25 MHz
- Power supply: 1 x CR2477 lithium battery
- Battery life: 18 months in normal operation
- Dimensions (mm): 33 x 37 x 12.9
- Weight: 35 g in working order



For more information, see data sheet LE04979..

# Device presentation and installation (continued)

## SECURE WANDERING SYSTEM - AUXILIARY ELEMENTS

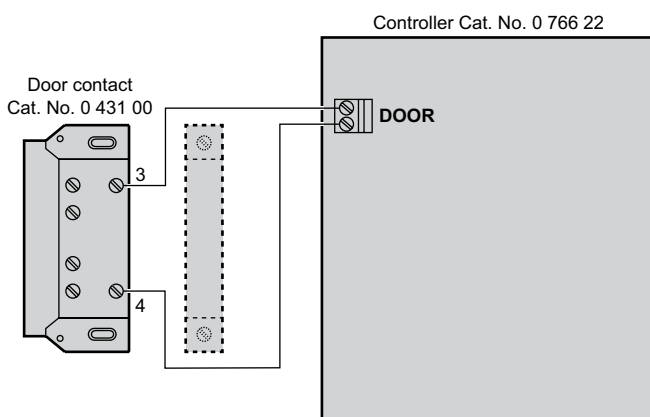
### Door contact Cat. Nos. 0 431 00/01



#### Technical characteristics

- IP 41 - IK 02
- Operating temperature: -10 °C to +70 °C
- Cable type (to controllers Cat. No. 0 766 22):  
1 x 0.9 mm pair

The magnetic opening sensor must be connected to the “DOOR” input of the controller Cat. No. 0 766 22.  
Surveillance mode: an elopement alarm is only generated on the double condition that a wristband transmitter and the door open position are both detected simultaneously.  
Intruder mode: an elopement alarm is only triggered if the door is opened.



### Power supply Cat. No. 4 131 05



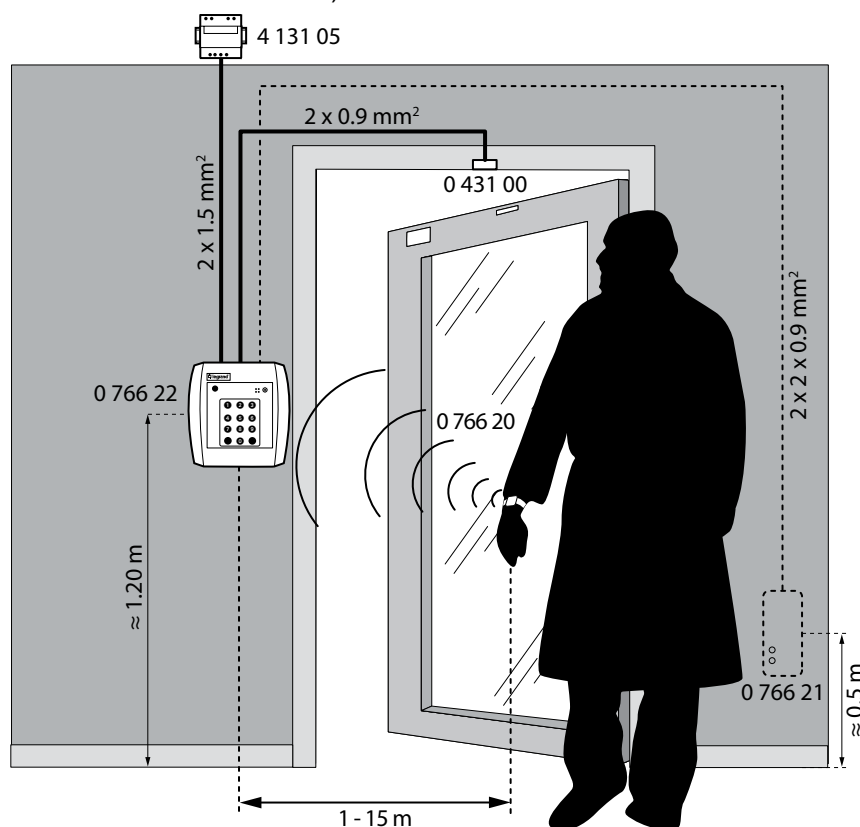
#### Technical characteristics

- Power: 15 W
- Operating voltage: 12 V
- Current: 1.25 A
- Dimensions: 5 x 17.5 mm modules
- Cable type (to controller Cat. No. 0 766 22):  
2 x 1.5 mm<sup>2</sup>
- Class II
- Double operating terminal
- Protected by PTC against overloads and short-circuits

# Standalone installation

## EXAMPLE INSTALLATION

The diagram below represents a typical installation for a standalone system (i.e. one which is not connected to the door unit Cat. No. 0 766 06 on the nurse call unit).



The controller with built-in antenna (**15W28 and above**) Cat. No. 0 766 22 is normally installed in the immediate vicinity of the exit door, at a height which allows easy access to the keypad (1.20 m). The additional antenna Cat. No. 0 766 21 is installed at a height of around 50 cm opposite the controller (on the other side of the door).

If the monitored exit is very wide (between 1 and 15 metres) it is possible to connect an additional antenna to the same controller. This antenna should be positioned on the other side of the passageway from the controller. This avoids having to set the antenna sensitivity too high, which risks detecting wristband transmitters in neighbouring rooms.

As with any radio-controlled system, the antenna position is crucial for wristband transmitter detection performance and careful consideration must be given to where it is installed. Equally, wherever possible, wristband transmitters must be placed in an identical manner on all residents being monitored (for example, on the right wrist if the antenna is to their right as they go through the exit).

The maximum wiring distance between antenna and controller is 200 metres.

# Standalone installation (continued)

## EXAMPLE INSTALLATION (CONTINUED)

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### Outdoor installation:

The secure wandering system is not intended for outdoor installation. However, monitoring of this type of exit is possible if the installation is adapted:

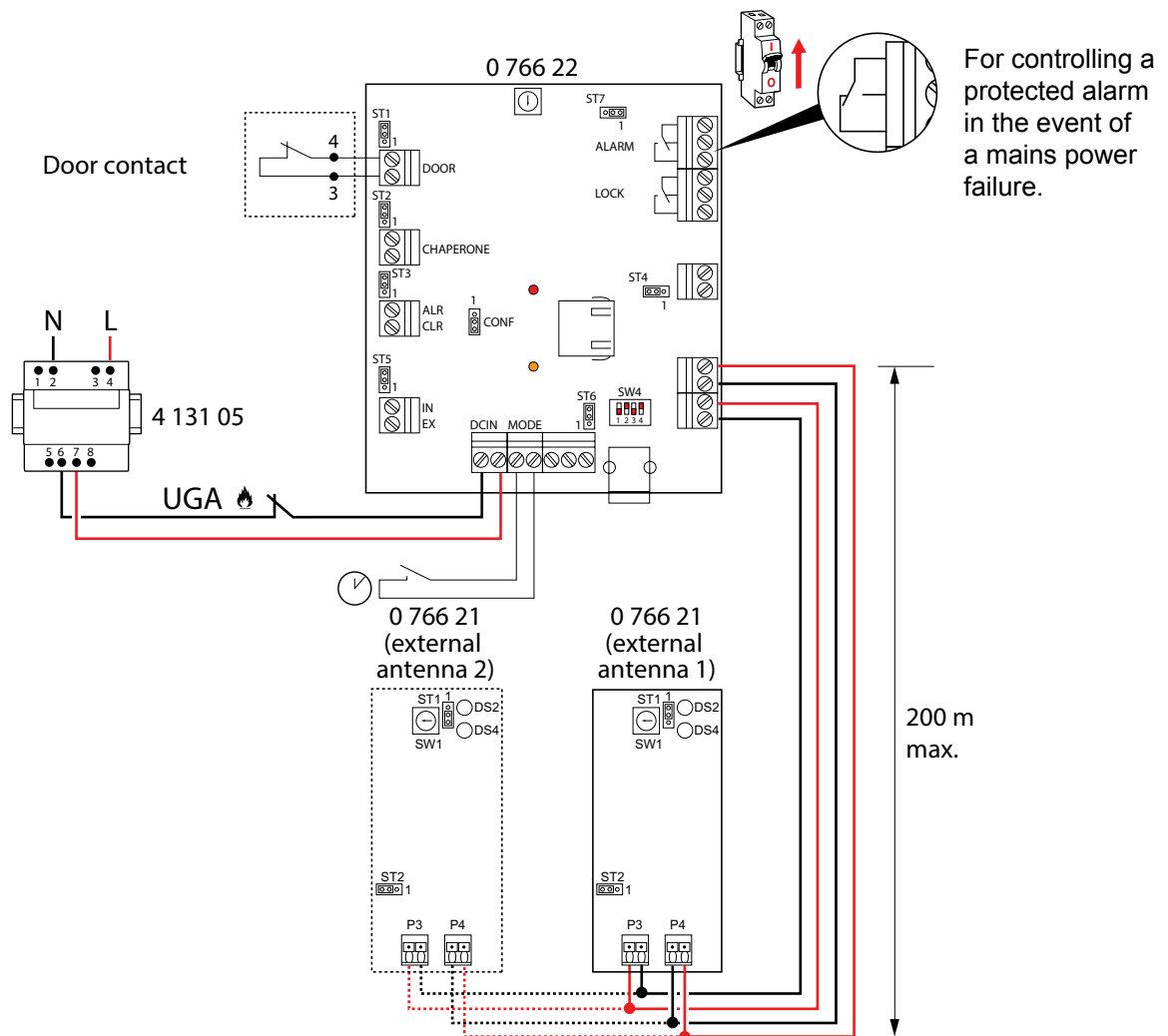
- The controller must always be installed indoors.
- The antenna boxes must be placed in weatherproof enclosures made from non-conductive materials (plastic, PVC, etc.).
- The enclosure must be protected from direct sunlight in order to avoid the risk of excessive temperatures inside the box.

### Selecting a door release or lock:

- **Door release:** flush-mounted
  - Cable type (to controller Cat. No. 0 766 22): 2 x 1.5 mm<sup>2</sup>
  - Cat. No. 0 408 95: undervoltage door release 12 V<sub>DC</sub> - 600 mA (for installation at emergency exits)
  - Cat. No. 0 408 98: shunt trip door release 12 V<sub>AC</sub> - 500 mA
- **Electromagnetic lock:** surface-mounted
  - Cable type (to controller Cat. No. 0 766 22): 2 x 1.5 mm<sup>2</sup>
  - Cat. No. 0 767 07: 300 kg lock
  - Cat. No. 0 767 08: 500 kg lock

## WIRING - CONTROLLERS AND ANTENNAE

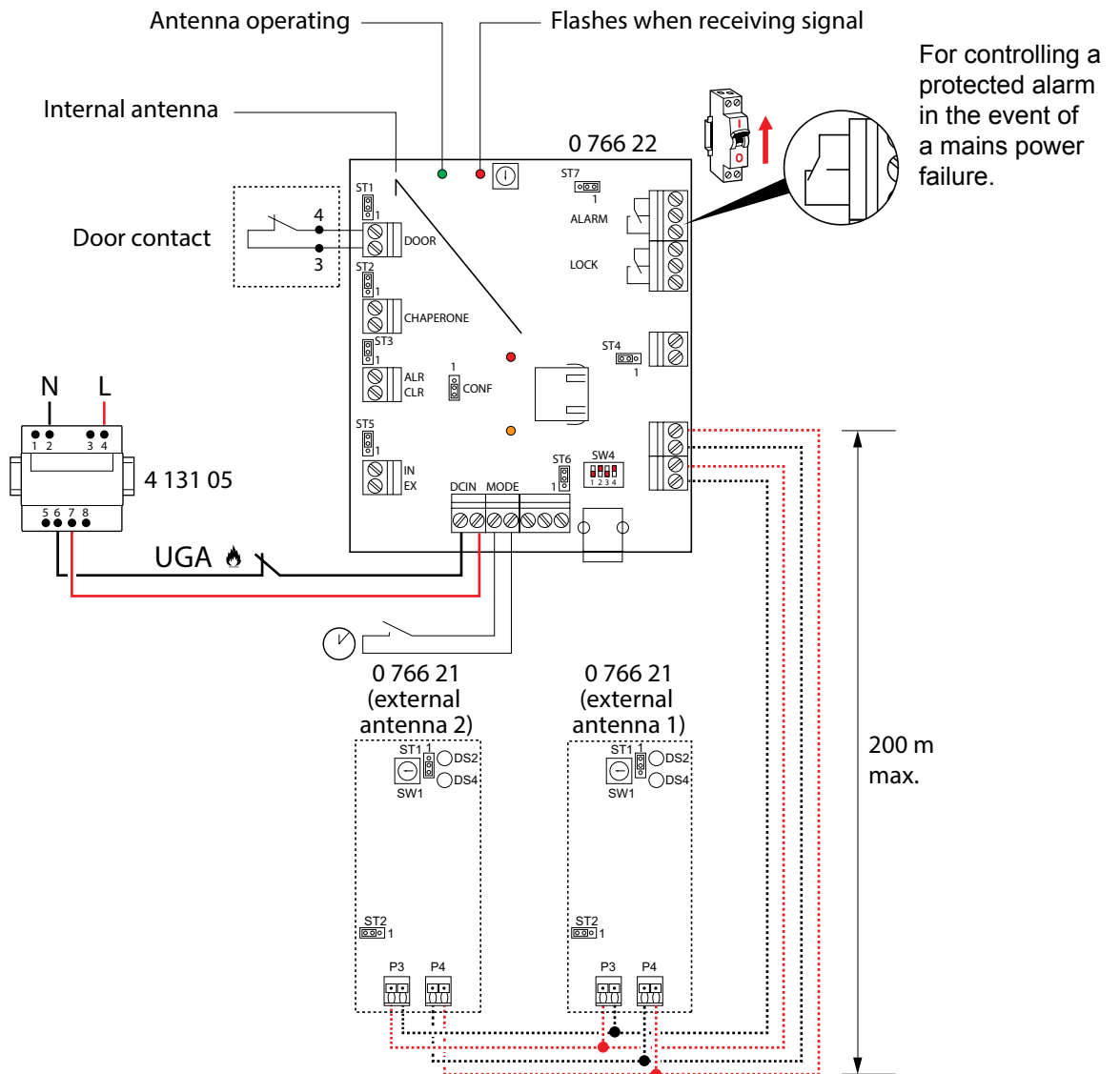
### Controller up to and including 15W27



# Standalone installation (continued)

## WIRING - CONTROLLERS AND ANTENNAE (CONTINUED)

### Controller 15W28 and beyond



## OPERATING MODES

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### Surveillance mode (elopement)

Standard mode: Simultaneous detection of the wristband transmitter and door opening is required to trigger the alarm.

Standard mode with electric door release or electromagnetic lock:

Detection of the wristband transmitter activates door locking.

The door is unlocked when the wristband moves out of the field of detection.

### Alarm acknowledgement

When an elopement is detected, the alarm is triggered (on the door controller, the buzzer sounds, the orange LED on the front panel flashes and the contact changes state) and remains active until it is acknowledged.

There are 2 different ways of acknowledging the alarm:

- by entering the acknowledgement code on the keypad (factory code: 369E)
- by pressing a remote (NC) contact or the associated door unit Cat. No. 0 766 06

### Chaperone mode

The chaperone code (factory code 217E) must be entered on the controller to allow a person wearing the wristband transmitter to go through an exit without setting off the alarm.

### Intruder mode

The alarm is activated as soon as the door opens (recommended mode for during the night).

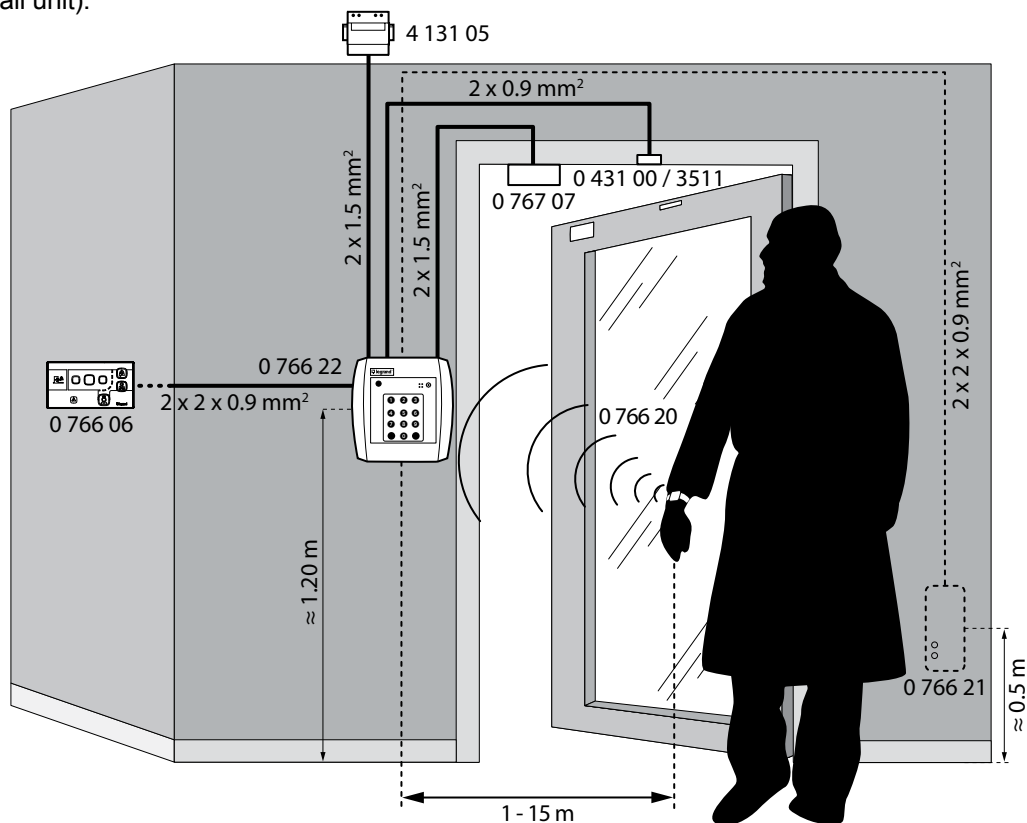
### Mode selection

The changeover from surveillance to intruder mode and vice versa is automatic via a time switch.

# System installation

## EXAMPLE INSTALLATION

The diagram below represents a typical installation for a BUS/SCS system (connected to door unit Cat. No. 0 766 06 on the nurse call unit).



The system installation allows elopement to be signalled on the BUS/SCS nurse call unit via door unit Cat. No. 0 766 06 and this information can be forwarded to the DECT system to be used for tracking purposes (see the BUS/SCS nurse call unit guide).

The controller Cat. No. 0 766 22 with built-in antenna (15W28) is normally installed in the immediate vicinity of the exit door, at a height that allows easy access to the keypad (1.20 m). Antenna Cat. No. 0 766 21 is installed at a height of around 50 cm opposite the controller.

If the monitored exit is very wide (between 1 and 15 metres) it is possible to connect an additional antenna to the same controller. This antenna should be positioned on the other side of the passageway from the controller. This avoids having to set the antenna sensitivity too high, which risks detecting wristband transmitters in neighbouring rooms.

As with any radio-controlled system, the antenna position is crucial for wristband transmitter detection performance and careful consideration must be given to where it is installed. Equally, wherever possible, wristband transmitters must be placed in an identical manner on all residents being monitored (for example, on the right wrist if the antenna is to their right as they go through the exit).

The maximum wiring distance between antenna and controller is 200 metres.



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### Outdoor installation:

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- The antenna boxes must be placed in weatherproof enclosures made from non-conductive materials (plastic, PVC, etc.).
- The enclosure must be protected from direct sunlight in order to avoid the risk of excessive temperatures inside the box.

### Selecting a door release or lock:

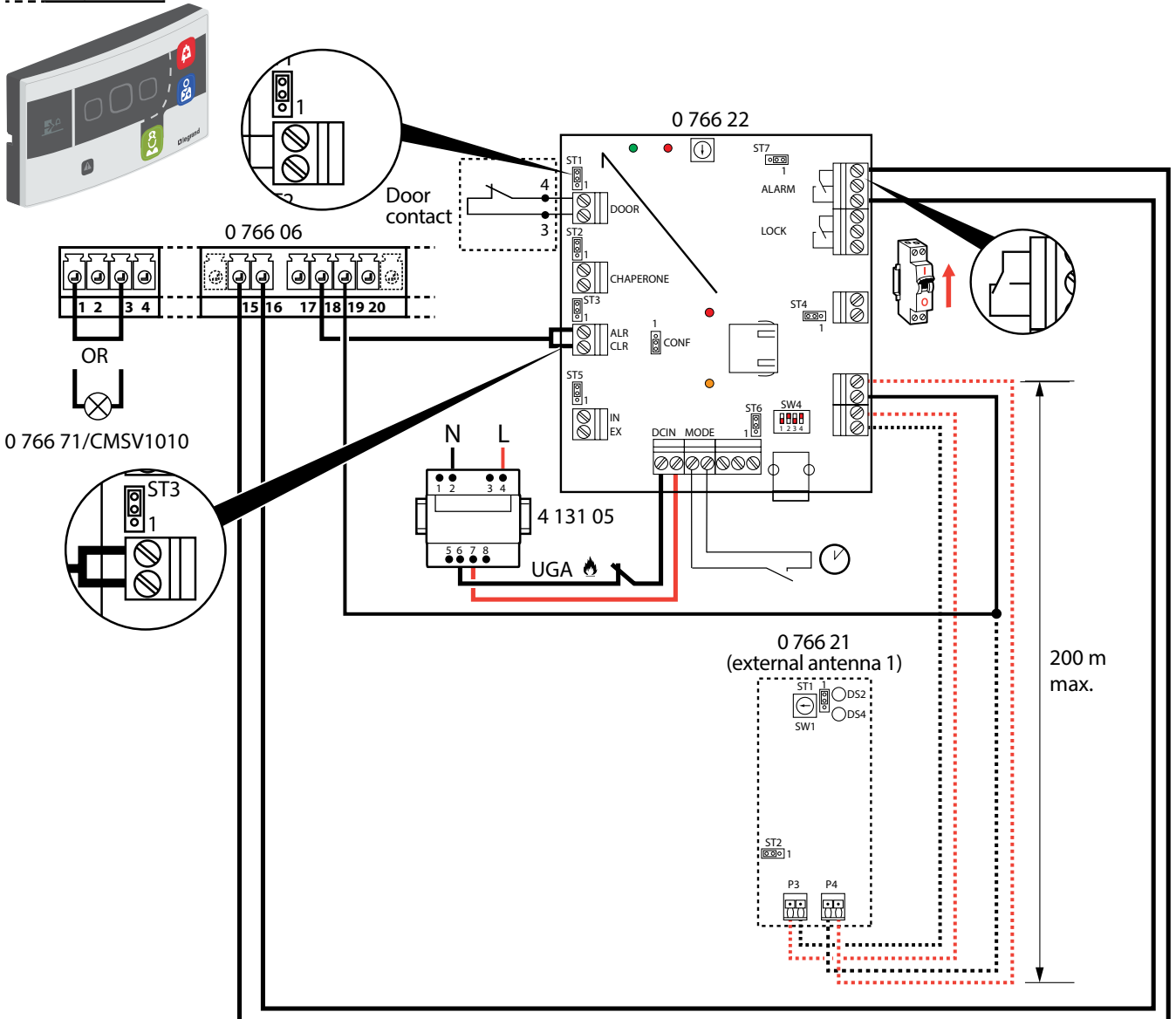
- **Door release:** flush-mounted
  - Cable type (to controller Cat. No. 0 766 22): 2 x 1.5 mm<sup>2</sup>
  - Cat. No. 0 408 95: undervoltage door release 12 V<sub>DC</sub> - 600 mA (for installation at emergency exits)
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- **Electromagnetic lock:** surface-mounted
  - Cable type (to controller Cat. No. 0 766 22): 2 x 1.5 mm<sup>2</sup>
  - Cat. No. 0 767 07: 300 kg lock
  - Cat. No. 0 767 08: 500 kg lock

# System installation (continued)

## WIRING - CONTROLLER/ANTENNAE AND DOOR UNIT

Door unit Cat. No. 0 766 06

M1	M2
8	0 to 9



## OPERATING MODES

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### Chaperone mode

The controller must be set to chaperone mode to allow a person wearing the wristband transmitter to go through an exit without setting off the alarm (chaperone time delay to be set).

This is done by entering a code on the keypad or by activating the chaperone input (via a push-button or keyswitch, etc.).

The chaperone contact must be normally open or normally non-powered.

For optimum security, the controller returns to surveillance mode after the door has been opened and closed. The chaperone time delay is cancelled.

### Acknowledgement

When an alarm is triggered, the alarm output and the buzzer remain active until they are acknowledged.

The alarm is acknowledged by pressing the green nurse present button on the door unit Cat. No. 0 766 06.

### Mode selection

The changeover from surveillance mode to intruder mode and vice versa can depend on the state of its wired input. When the contact is open (or the input is not powered) the system is in surveillance mode. When the contact is closed (or the input is powered) the system is in intruder mode.

The system status can therefore be controlled by an external device (clock, etc.).

When this input is not being used, the changeover from one mode to the other is achieved by entering a code on the keypad.

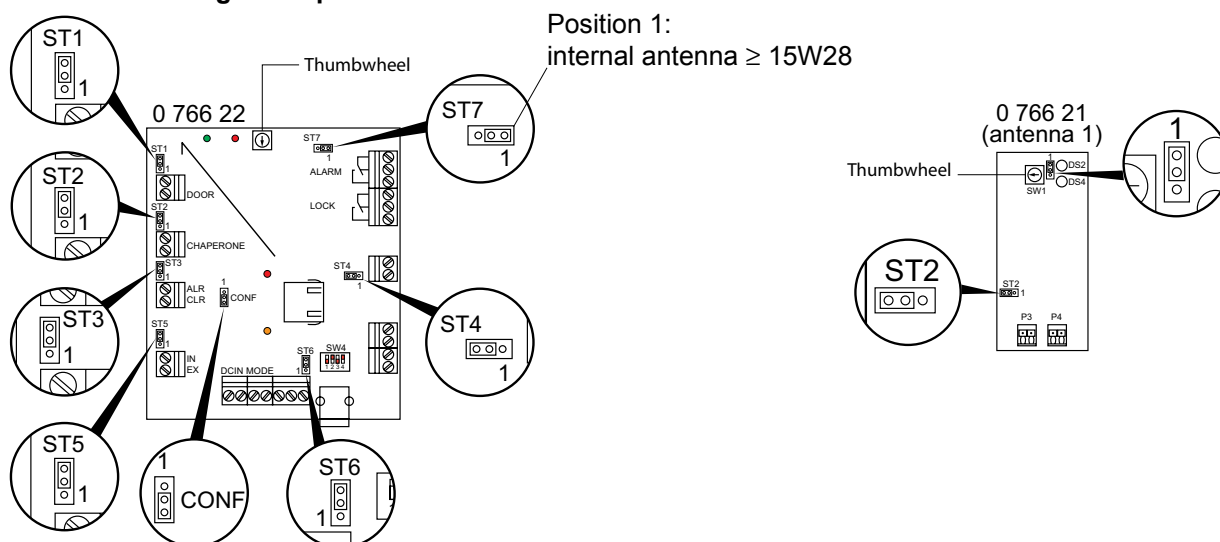
# Commissioning

- 1** Wire the devices according to one of the 4 wiring diagrams in the installation instructions for the controller Cat. No. 0 766 22:
  - Power supply Cat. No. 4 131 05
  - Controller Cat. No. 0 766 22
  - Door contact Cat. No. 0 431 00/01, if used
  - Additional antenna Cat. No. 0 766 21, if used
  - Chaperone button, if used
- 2** Switch the system power on.
- 3** Check that the internal red and orange LEDs (and green if there is an internal antenna) are lit on the controller's electronic module and that the green LED is lit on the additional antenna. If not, check the polarity on the controller and antenna.  
Check the 12 to 24 V<sub>DC</sub> voltage on the controller.  
Check the 15 V<sub>DC</sub> voltage on the antenna.
- 4** Activate the wristband transmitters Cat. No. 0 766 20 by placing the round white disk on the transmitter against the magnet on the door controller Cat. No. 0 766 22. When the wristband transmitter is activated, it emits a signal which makes the red LED on the antenna flash (internal and/or external antenna).
- 5** Repeat step 4 for each wristband transmitter. This is all that is required to make them operational (no need to identify the person).
- 6** Check the factory settings for the controller Cat. No. 0 766 22 and adjust them if necessary.  
**a: Factory settings:**  
When the controller is set up for the first time, or following a software update or restoration of the default settings (code 9090), the controller is initialised with the standard operating settings which have the following values:
  - Controller address: 1
  - Chaperone time delay: 20 seconds
  - Door contact operation: Normally closed (value 0)
  - Door contact time delay: 5 seconds
  - Chaperone code: 217
  - Acknowledgement code: 369
  - Buzzer volume: 2
  - Mode selection (surveillance/intruder) via wired input (value 0)
  - Locking control: Lock (value 1)
  - Direction detection: Deactivated
  - Surveillance of radio elements: Activated (value 0)
  - System link protocol: 2G anti-wandering system
  - No code filtering (monitoring of all wristband transmitters)
  - Immediate restart for the alarms: 20 sec. time delay (value 0)



**6** Check the factory settings for the controller Cat. No. 0 766 22 and adjust them if necessary (continued).

**a: Factory settings (continued):  
Default configurator position**



**b: Customising the settings for the controller Cat. No. 0 766 22:**

**The system settings are configured using codes which access the different parameter-setting steps.**

**Important:** The system must be set to parameter-setting mode before codes are entered on the keypad by setting the configurator (CONF) to position .

**Note:** A beep should sound every time a button is pressed.

A setting is changed by entering the following on the controller keypad:

- 1 - The parameter-setting mode access code: 9039
- 2 - E (confirmation)

Access to parameter-setting mode is confirmed by a beep on the controller.

- 3 - The setting code (90XX codes)
- 4 - E (confirmation)
- 5 - The setting value
- 6 - E (confirmation)

Confirmation of a new setting value is signalled by a long beep on the controller.

C: Cancels the entry in progress

The system remains in parameter-setting mode for 2 minutes and then returns automatically to normal mode.

Entering a valid configuration code extends this period by 2 minutes. After the 2-minute period has elapsed, the buttons no longer beep. Re-enter the parameter-setting mode access code to continue making adjustments.

The system remains fully operational in parameter-setting mode.

Once configuration is complete, replace the configurator to the factory position .

# Commissioning (continued)

## PARAMETER-SETTING

Code	Setting
9001	<b>Chaperone time delay:</b> Period during which the controller will not detect an alarm after a chaperone code has been entered. This delay can be set between 1 and 255 seconds. Example: Chaperone time delay of 45 s: <b>9001 E 45 E</b> After the door has been opened and closed, the controller returns to surveillance mode and the chaperone time delay is cancelled.
9002	<b>Chaperone code:</b> Code which must be entered when the system is in surveillance mode in order for a person wearing the wristband transmitter to go through the monitored exit without triggering an alarm. This code can be between 1 and 4 digits long. Avoid using codes which start with "90" so as to avoid any of the parameter settings being changed by mistake. Example of code 1234: <b>9002 E 1234 E</b>
9003	<b>Acknowledgement code (standalone mode only):</b> Code which must be entered in order to acknowledge an alarm and stop the buzzer. This code can be between 1 and 4 digits long. Example of code 456: <b>9003 E 456 E</b>
9004	<b>Buzzer volume:</b> Sound level of the buzzer output in the event of an alarm. 0 = no audible signal, 1 = medium volume (75 dB(A) at 10 cm), 2 = high volume (85 dB(A) at 10 cm) Example: Setting the buzzer to medium volume: <b>9004 E 1 E</b>
9005	<b>Mode change mechanism:</b> Allows the user to choose whether the changeover from intruder mode to surveillance mode is performed by entering codes on the keypad (value 1) or by analysing the mode selection input (value 0). Example: Mode selection by entering codes on the keypad: <b>9005 E 1 E</b>
9006	<b>Locking control:</b> Operation with locking control (value 0) or with release control (value 1). Example: Electric door release connected to the locking control: <b>9006 E 1 E</b>
9009	<b>Activation of radio receiver monitoring:</b> Enable (value 1) or disable (value 0) this function. When this option is enabled and the link with a radio receiver is broken, the green LED flashes and a beep is emitted every 10 sec. Example: Disabling the radio monitoring function: <b>9009 E 0 E</b>

Code	Setting
9012	<b>Door contact:</b> Using a normally closed (value 0) or normally open (value 1) door contact. Example: Connecting a normally open door contact: <b>9012 E 1 E</b>
9013	<b>Door contact time delay:</b> When the door is closed again the system considers it to be open for a few more seconds. It is therefore possible to position the detection antenna a few metres beyond the door to be monitored. This way the alarm is still triggered if the person wearing the wristband transmitter passes through the exit but is only detected a few seconds after the door has closed again. However, in chaperone mode, closing of the door is taken into account straight away. The length of time can be programmed between 1 and 25 seconds. The default time delay is 5 seconds. Example: 10-second time delay: <b>9013 E 10 E</b>
9014	<b>Immediate restart for alarm:</b> When this option is enabled (value 1) an elopement alarm can be reactivated immediately following acknowledgement of the alarm. Otherwise the wristband transmitter has to leave the detection zone for at least 20 seconds before a new elopement alarm is possible again for this number. Example: Immediate restart authorised for alarm: <b>9014 E 1 E</b>
9090	<b>Load default settings:</b> Deletion of all current settings and return to default settings. The code 9090 must be entered twice in order to prevent accidental changes. Example: <b>9090 E 9090 E</b>
0000	<b>Controller reset:</b> Resets the controller in the same way as when the power is restored. The code 9999 must be configured as a setting in order for this to be taken into account. Example: <b>0000 E 9999 E</b> Resets the controller

It is possible to add or remove a wristband transmitter number to/from the monitoring list: please contact Legrand customer service for more information.

# Commissioning (continued)

## SETTING THE ANTENNAE

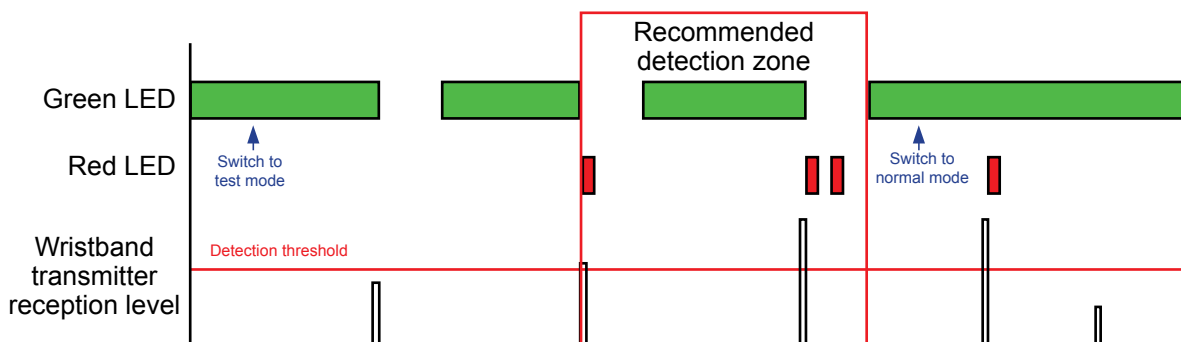
Due to the low power radiated by the wristband transmitters, the sensitivity level of the antennae must be set under conditions that are as close as possible to normal system usage.

Proceed as follows in order to set the antenna:

- Set the thumbwheel to 8, which corresponds to medium sensitivity for the receiver.
- Check that the antenna is in test mode: position of configurator ST2 at  $\text{0001}$  on the external antenna and position of configurator ST7 at  $\text{0001}$  on the internal antenna.
- Put on a wristband transmitter as it would be worn by the monitored residents/patients (for example, on the right wrist).
- Make sure there are no other wristband transmitters in the vicinity that can cause interference (set them to standby mode or put them in a metal box or enclosure).
- Adjust the sensitivity of the antenna using the thumbwheel so that you will be detected once inside the desired area. The detection and reception level in relation to the threshold defined by the thumbwheel are indicated by the antenna LEDs flashing (see below). Allow a safety margin in order to ensure detection even if a wristband transmitter's radio range is altered (if an unusual obstacle is present, for example). The value 0 corresponds to the receiver's minimum sensitivity level, i.e. the transmitter must be very close (just a few centimetres away) in order to be detected. The higher the value set on the thumbwheel, the greater the detection distance. The value F corresponds to the acknowledgement of any correctly decoded signal received.
- Exit test mode by resetting configurator ST2 to position  $\text{0001}$  on the external antenna and configurator ST7 to position  $\text{0001}$  on the internal antenna.
- Perform one or more activation tests in normal mode.

### Illuminated signals in test mode

- DS4 green LED
  - On continuously: Awaiting reception
  - Off for 200 ms: Receiving signal from wristband transmitter
- DS2 red LED
  - Off: No reception or level below that determined by the thumbwheel
  - 100 ms pulse: Reception with a level slightly higher than the threshold determined by the thumbwheel
  - Two 100 ms pulses: Reception with a level much higher than the threshold determined by the thumbwheel



It is advisable to mark out the detection zone on the ground.



# Operating codes

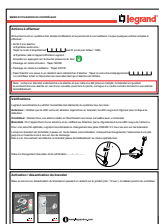
## CONTROL CODE

It is possible to change the operating mode by entering a code.  
A setting is changed by entering the following on the controller keypad:

- 1 - Enter the code
- 2 - E (confirmation)
  - C: Cancels the entry in progress

Code	Control
<b>369</b>	<b>Default acknowledgement code</b> Example: 369 E (used to acknowledge controller Cat. No. 0 766 22)
<b>9030</b>	<b>Switch to night mode (intruder)*</b>
<b>9031</b>	<b>Switch to day mode (surveillance)*</b>

\*When operating mode selection via the keypad is activated, each changeover from one mode to another is memorised. **If there is a power cut, the controller starts up in the last mode that was active.**  
**When it is set up for the first time, the controller starts up in surveillance mode.**



System operation: refer to data sheet LE04979. available on [www.legrandoc.com](http://www.legrandoc.com)

# Operation

## OPERATION IN DAY MODE (SURVEILLANCE)

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This mode is activated using code 9031 (only if code 9005 E 1 E has been confirmed beforehand) or via a time switch connected to the "MODE" terminals.

The controller must generate an alarm if a resident fitted with a wristband goes through a monitored door.

When in rest mode, the green power supply LED is on constantly and the detection LED is off. The alarm output is active and the locking output inactive.

If a wristband transmitter is detected by one of the antennae, this status is signalled by the detection LED flashing slowly. Locking control is also activated if the system lock mode is programmed. This status is maintained for 5 seconds (factory setting) following the last detection of the wristband transmitter.

If the door is opened at the same time as a wristband transmitter is detected, the alarm contact changes state, the buzzer is activated and the detection LED flashes (see the illuminated and audible signals diagrams). This status is maintained until the alarm is acknowledged.

Acknowledgement involves typing the acknowledgement code into the keypad or activating the acknowledgement contact (green button on the door unit Cat. No. 0 766 06). This causes the audible signal to stop and the alarm contact returns to rest mode. The wristband transmitter corresponding to the acknowledged alarm must leave the detection zone for at least 20 seconds (factory setting) before an elopement alarm can be reactivated for this transmitter.

The controller must be set to chaperone mode to allow a person wearing a wristband transmitter to go through a door without setting off the alarm. This is done by typing the chaperone code into the keypad or by closing the chaperone contact connected to the controller. The detection LED flashes quickly and the buzzer sounds at the same rate. The locking output is now inactive even if a wristband transmitter is detected. As long as the controller is in chaperone mode, a person wearing a wristband transmitter can go through an exit without setting off the alarm. The controller returns to surveillance mode at the end of a time delay or when the door is closed (see door contact time delay code 9013).

## OPERATION IN NIGHT MODE (INTRUDER)

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Night mode can only be set on systems equipped with door contacts.

This mode is activated using code 9030 (only if code 9005 E 1 E has been confirmed beforehand) or via a time switch connected to the “MODE” terminals.

This mode is used when the controller needs to generate an alarm if a door contact is opened by anyone (regardless of whether they are wearing a wristband transmitter).

When in rest mode, the power supply LED is on constantly and the detection LED emits 2 short pulses every 10 seconds. The alarm output is active and the locking output is also active if the system is in lock mode.

If a wristband transmitter worn by a resident is detected by one of the antennae, this status is signalled by the detection LED flashing slowly.

If the door is opened, the alarm relay is released, the buzzer is activated and the detection LED flashes (see the illuminated and audible signals diagrams). This status is maintained until the alarm is acknowledged.

Acknowledgement involves typing the acknowledgement code into the keypad or activating the acknowledgement contact (green button on the door unit Cat. No. 0 766 06). This causes the audible signal to stop and the alarm output to be reactivated.

The controller must be set to chaperone mode to allow someone to pass through the monitored exit without setting off the alarm. This is done by typing the chaperone code into the keypad or by closing the chaperone contact connected to the controller. The detection LED flashes quickly and the buzzer sounds at the same rate. The locking output is now inactive. The controller returns to intruder mode at the end of an adjustable time delay.

# Operation (continued)

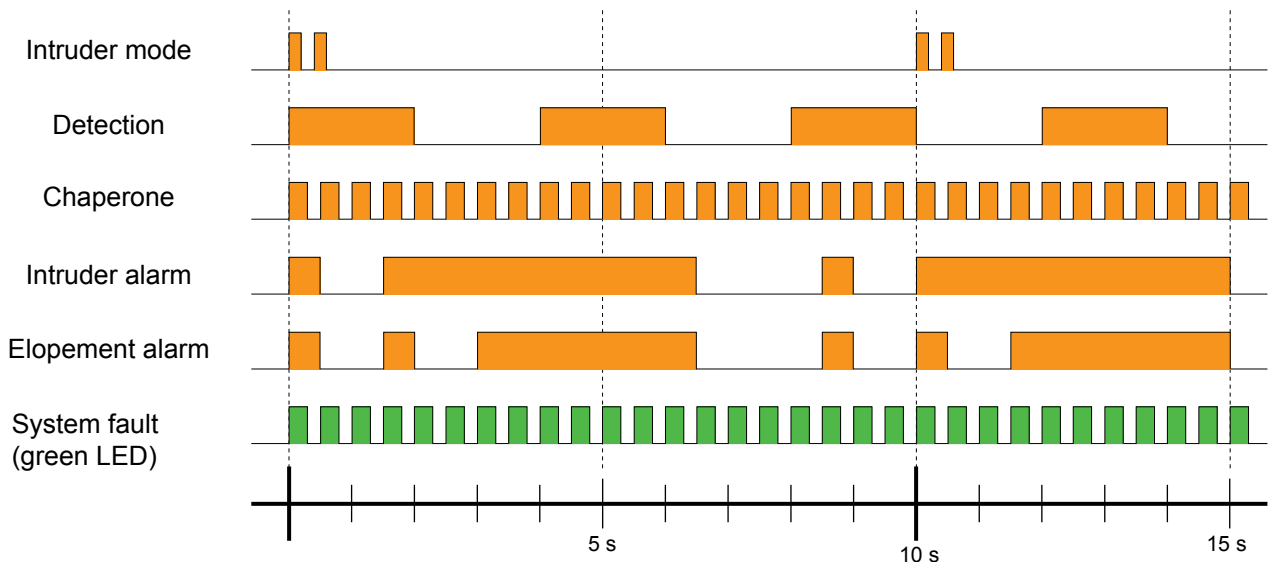
## ILLUMINATED AND AUDIBLE SIGNALS

### Illuminated signal:

The controller status is indicated by two LEDs.

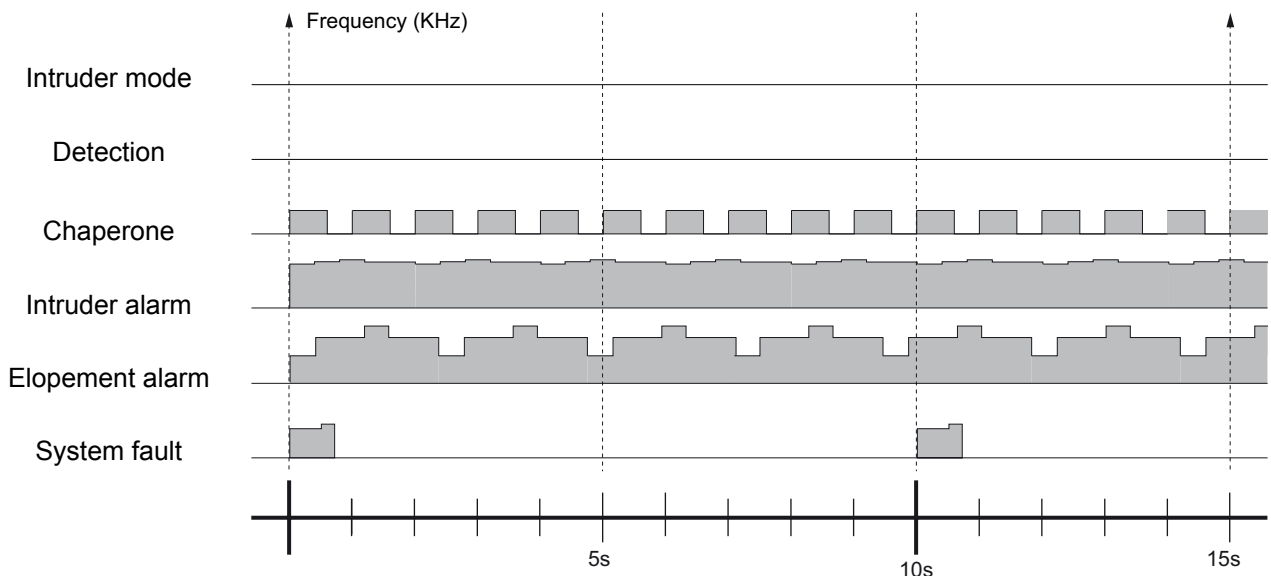
A continuously lit green LED indicates that the system power is on. Flashing indicates that there is a system fault which requires the controller and the antennae to be checked.

The orange detection LED indicates the system status using different flashing modes (see the diagram below).



### Audible signalling:

When an alarm is triggered a specific audible signal starts.



## Troubleshooting

Fault type	Diagnostics
The green LED on the front panel does not light up	Check the polarity of the power supply: see the wiring diagram.
Codes entered on the keypad are inoperative or there is a problem with the LEDs (inactive)	Check that the cable between the controller front panel and the printed circuit board is connected correctly.
The controller is emitting an audible signal in spite of all the previous checks	Move all wristband transmitters away from the controller. If the problem persists, replace the controller.

If you encounter a problem which is not listed in the table above and for which you cannot determine the cause, check the position of the configurators and restore the factory settings (see "Parameter-setting").



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