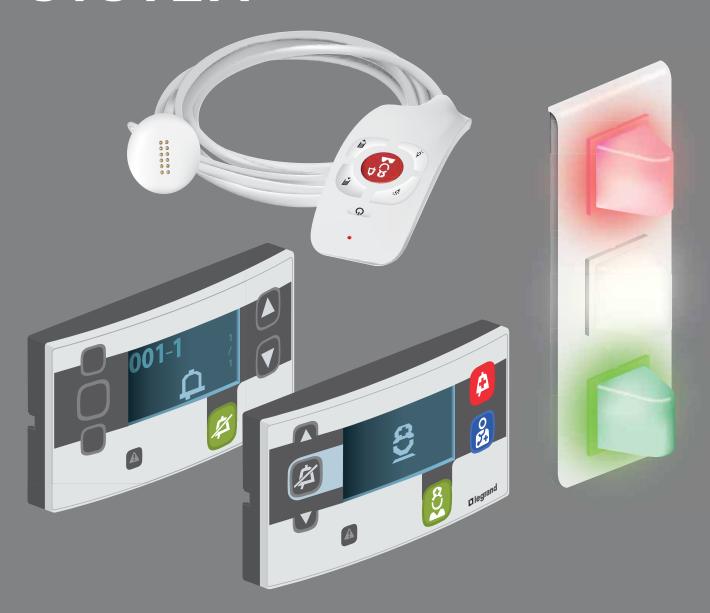
# BUS/SCS NURSE CALL SYSTEM



**INSTALLATION AND USAGE GUIDE** 





# **Topics**

### SPECIFICATION

See pages 6 to 10.

### DESIGN/DEFINITION

See pages 48 to 65.

For traceability see the guide for the software 0 766 18.

Pages 6 to 10 and 66 to 83: option of having the wiring diagrams validated by Legrand.

### INSTALLATION

See pages 66 to 83.

### PROGRAMMING/CONFIGURATION

- Configured using configurators: see pages 84 to 93.
- Virtual configuration (using software): see pages 94 to 115.

### TRAINING

See pages 48 to 65.

Standard training possible at our accredited Innoval centres.

Project training possible at our accredited Innoval centres or on site.

### ACCEPTANCE TESTING

See page 116 and pages 48 to 65.

### OPERATION/SUPERVISION

See pages 48 to 65. For traceability see the software manual 0 766 18.

### USAGE

See pages 48 to 65 and the memo sheet LE05065XX.

### DIAGNOSTICS/TROUBLESHOOTING/ MAINTENANCE

See pages 122 to 133.

### SYSTEM MODIFICATION

- Diagrams: see pages 66 to 83.
- Configuration using configurators: see pages 84 to 93.
- Virtual configuration (using software): see pages 94 to 115.
- Operation checks: see pages 48 to 65 and the memo sheet LE05065XX.

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# **BUS/SCS** installation principle

### DESCRIPTION OF THE SYSTEM ARCHITECTURE

### Fundamental rules to follow when installing the BUS/SCS nurse call system

Patient call system products are associated with personal safety. They should therefore be installed by a qualified electrician, in strict accordance with the conditions of installation and the operating instructions.

It is recommended that a single protection device is installed for the entire nurse call system (BUS power supply, indicator

and display). If the entire installation is on the same BUS (power supply indicator + power supply bus), it is possible to install one protective device per department and to separate the departments using an extension Cat. No. 0 766 10 (providing galvanic isolation) and to not connect the indicator power supply cable.

To ensure continuous operation during a mains failure, connect to a secure network (generator set and/or inverter). If there is a mains failure longer than 300 ms, all calls prior to the cut may be lost.

Power supplies should be distributed at equal distances along the whole length of the BUS.

The nurse call system complies with VDE 0834-1/0834-2 (DIN 41050) standards.

### **INSTALLATION EXAMPLE**

One floor (or department) can have a maximum of 150 rooms. One floor (or department) can have an average of 50 rooms per power supply unit.

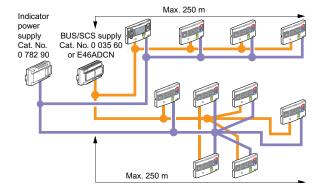
A building can have 14 floors (or 14 departments).

### **IMPORTANT**

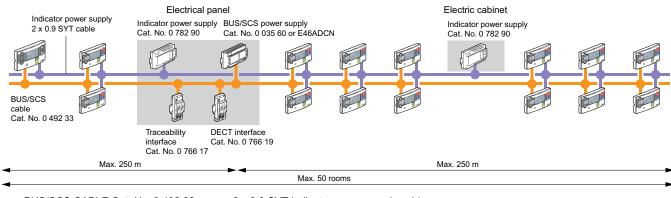
It is essential to install only one main control unit (Cat. No. 0 766 11) per department.

### Star installation (recommended)

See chapter: "Wiring example for maximum lengths of the BUS system"



### Installation of a department



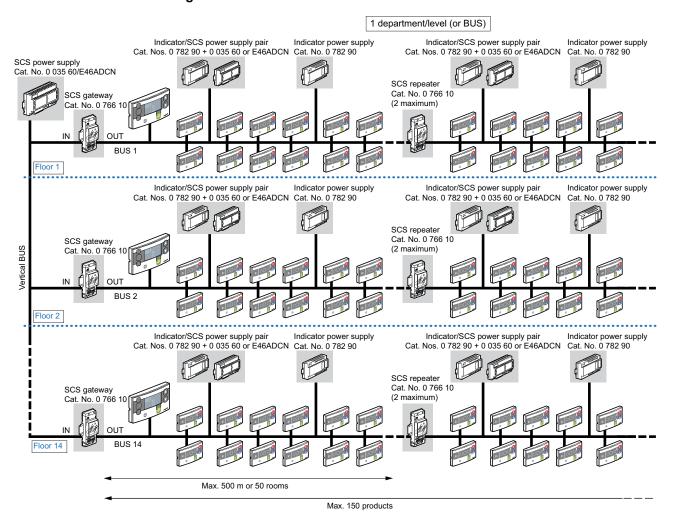
BUS/SCS CABLE Cat. No. 0 492 33 2 x 0.9 SYT indicator power supply cable

The BUS/SCS cables and indicator must be placed in the ELV cable ducting (see NF C 15-100)



### **INSTALLATION EXAMPLE**

### Installation within a building



### **IMPORTANT**

An installation can comprise a maximum of 14 control units (Cat. No. 0 766 11) connected to the same vertical BUS, with a maximum of 14 departments for a virtual configuration and a maximum of 10 departments for a configurator configuration.

# **BUS/SCS** installation principle (continued)

### **CONFIGURATION EXAMPLE**

### Example: A building with three floors.

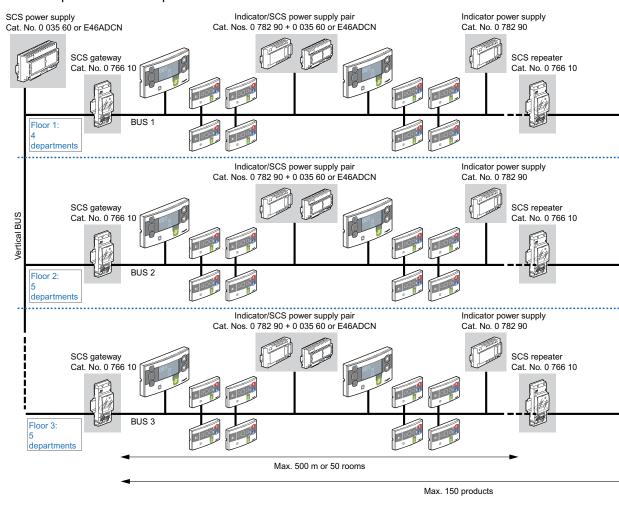
It is possible to distribute 14 departments over 3 levels.

1st floor: 4 departments 2nd floor: 5 departments 3rd floor: 5 departments

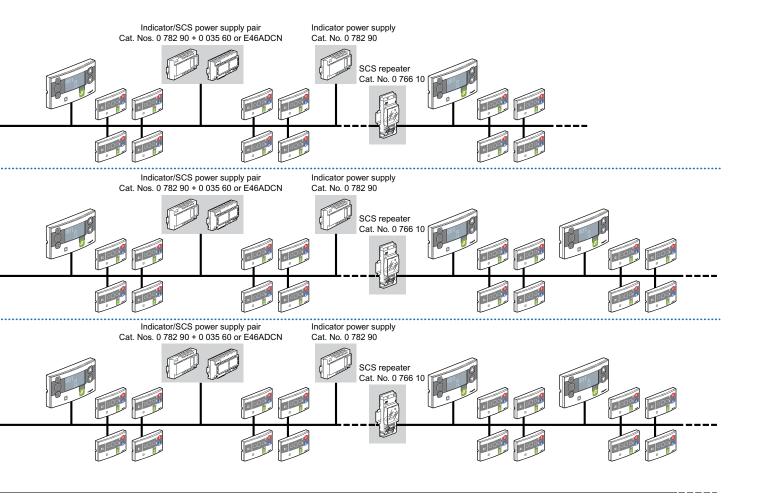
Total number of departments: 14 departments

The bus is made up of 2 cables:

- BUS/SCS cable Cat. No. 0 492 33
- 2 x 0.9 SYT indicator cable



The total length of the bus per power supply pair (Cat. Nos. 0 782 90 + 0 035 60 or E46ADCN) must not exceed 500 metres. Beyond that, a bus extension must be used (Cat. No. 0 766 10) as well as other power supply pairs (Cat. Nos. 0 782 90 + 0 035 60 or E46ADCN). The length of the connection between the bus power supply and the furthest device must not exceed 250 metres.



# **BUS/SCS** installation principle (continued)

### CABLING EXAMPLE FOR MAXIMUM LENGTHS OF THE BUS SYSTEM

The main devices, the nurse room control units and the patient room door units must be connected to the BUS/ SCS 27  $V_{--}$  power supply and a 27 V indicator power supply.

The nurse call installation can be wired via a tap junction from all other devices (door units, control units, etc.). The following installation examples are typical configurations.

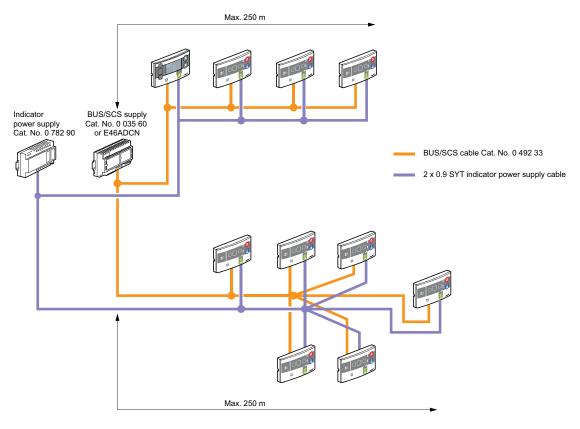
It is vital that a power supply calculation is completed to determine the power supplies required for each installation.

The number of devices that can be connected to the bus and the indicator power supply depends on the total power that they require.

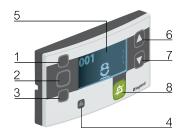
Once the installation has been set up, it is also necessary to check the proper functioning of the installation and the correct sizing of the power supplies with regard to the borderline case established during the study phase. As well as power consumption requirements, BUS cabling must always comply with the following rules:

- The length of the connection between the power supply and the furthest device must not exceed 250 metres.
- The total length of connections within a department must not exceed 500 metres for bus power supply Cat. No. 0 035 60 or E46ADCN.

If distances or required bus power is exceeded, it is possible to extend the installation using bus extension Cat. No. 0 766 10.



# **Device presentation and installation**



- 1 White LED bathroom indicator
- 2 Red LED alarm indicator
- 3 Green LED nurse presence indicator
- 4 Yellow LED installation fault indicator
- **5** Display
- 6 and 7 Navigation buttons
- **8** Mute (silence) or confirmation button/product recognition button for virtual parameter setting

# MAIN CONTROL UNIT CAT. NO. 0 766 11 AND SECONDARY CONTROL UNIT CAT. NO. 0 766 09

### Main control unit Cat. No. 0 766 11

The main control unit allows monitoring and control of rooms belonging to the same department.

All information can be displayed on the LCD screen, enabling complete data management.

In installations which use interphones, it is also necessary to install an interphone unit Cat. No. 0 766 08.

For installation in the nurses' station.

### Secondary control unit Cat. No. 0 766 09

The secondary control unit allows information to be relayed from the main control unit.

Can be used in a specific room (rest area, dining room, etc.).

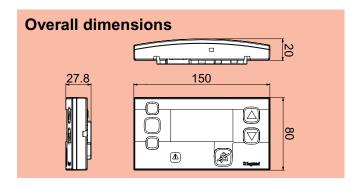
In installations which use interphones, it is also necessary to install an interphone unit Cat. No. 0 766 08.

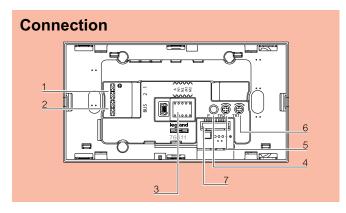
### **Technical characteristics**

- Power supply: 27 V<sub>=</sub>
- Indicator power supply consumption:
  - in standby mode: 19 mA
  - max: 66 mA
- BUS power supply consumption: 3 mA
   Consumption in degraded mode: 29 mA on BUS power supply
- Operating temperature: 5 to 40°C
- Antimicrobial
- Protection index: IP 42
- Dimensions (H x W x D): 80 x 150 x 20 mm
- Installation (supplied with mounting support):
  - in 2-gang horizontal flush-mounting box (4 modules)
- on wall with surface-mounting frame

Cat. No. 0 766 14

- on control unit Cat. No. 766 12 or Cat. No. 766 13 (inclined plane) for fixing control unit onto table
- Sound level: max: 60 dBA at 2 m min: 40 dBA at 2 m

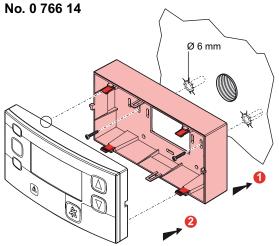




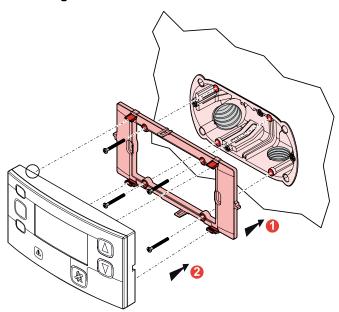
- 1 Terminals 1-2, 27 V<sub>=</sub> indicator power supply
- 2 BUS terminals
- 3 Location of the configurators
- 4 Reset to factory settings button (by holding button down for 10 s)
- 5 Control button brightness adjustment
- 6 Buzzer sound level adjustment
- 7 Connector for interphone unit

# MAIN CONTROL UNIT CAT. NO. 0 766 11 AND SECONDARY CONTROL UNIT CAT. NO. 0 766 09 (CONTINUED)

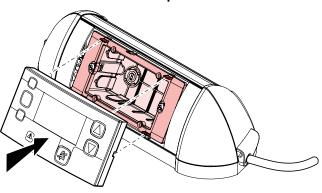
Surface-mounted wall installation with frame Cat.



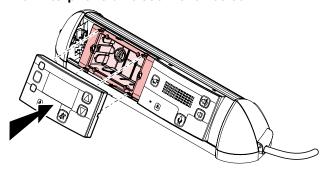
Flush-mounted wall installation with flush-mounting box

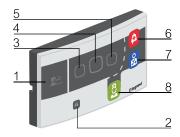


Installation on an inclined plane Cat. No. 0 766 12



Installation on an inclined plane Cat. No. 766 13 with interphone unit Cat. No. 0 766 08





- 1 Red LED call indicator for calls from another room
- 2 Yellow LED installation fault indicator
- 3 White LED bathroom indicator
- 4 Red LED alarm indicator
- 5 Green LED nurse presence indicator
- 6 Call button/indicator
- 7 Doctor request button/indicator
- **8** Nurse presence and acknowledgement button/indicator/product recognition button for virtual parameter setting

### PATIENT ROOM DOOR UNITS

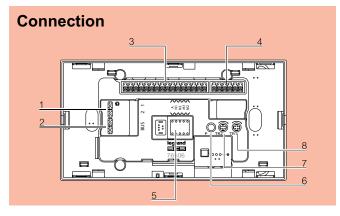
### Door unit with indicators Cat. No. 0 766 06

The door unit allows control and local display of calls, with visual and audible signalling.

### **Technical characteristics**

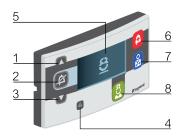
- Power supply: 27 V<sub>=</sub>
- Indicator power supply consumption:
  - in standby mode: 38.5 mA
  - max: 198 mA
- BUS power supply consumption: 2.2mA
   Consumption in degraded mode: 68 mA on BUS power supply
- Operating temperature: 5 to 40°C
- Antimicrobial
- Protection index: IP 42
- Dimensions (H x W x D): 80 x 150 x 20 mm
- Installation (supplied with mounting support):
- in 2-gang horizontal flush-mounting box (4 modules)
- on wall with surface-mounting frame
- Cat. No. 0 766 14
- Sound level: max: 60 dBA at 2 m min: 40 dBA at 2 m

# Overall dimensions 27.8 150 88



- 1 Terminals 1-2, 27 V<sub>=</sub> indicator power supply
- 2 BUS terminals
- 3 Terminal block numbered 1 to 16
- 4 Terminal block numbered 17 to 22
- **5** Location of the configurators
- 6 Reset to factory settings button (by holding button down for 10 s)
- 7 Control button brightness adjustment
- 8 Buzzer sound level adjustment

Flush-mounted or surface-mounted wall installation (see main control unit Cat. No. 0 766 11)



- 1 Navigation button
- 2 Mute button (silence)
- 3 Navigation button
- 4 Yellow LED installation fault indicator
- 5 Display
- 6 Call button/indicator
- 7 Doctor request button/indicator
- **8** Nurse presence and acknowledgement button/indicator/product recognition button for virtual parameter setting

### PATIENT ROOM DOOR UNITS (CONTINUED)

### Door unit with display unit Cat. No. 0 766 07

The door unit allows control and local display of calls, with visual and audio indication, on a digital and graphic screen.

Used in conjunction with the interphone unit Cat. No. 0 766 08 for communicating with rooms issuing calls and with a nurse present.

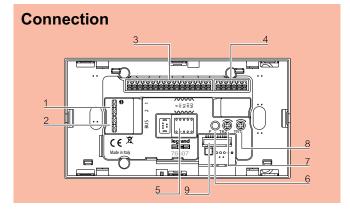
Hang-up function at the end of a call.

### **Technical characteristics**

- Power supply: 27 V<sub>=</sub>
- Indicator power supply consumption:
  - in standby mode: 38.5 mA
  - max: 233 mA
- BUS power supply consumption: 3 mA
   Consumption in degraded mode: 53 mA on BUS power supply
- Operating temperature: 5 to 40°C
- Antimicrobial
- Protection index: IP 42
- Dimensions (H x W x D): 80 x 150 x 20 mm
- Installation (supplied with mounting support):
  - in 2-gang horizontal flush-mounting box (4 modules)
  - on wall with surface-mounting frame

Cat. No. 0 766 14

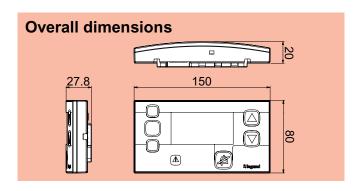
 Sound level: max: 60 dBA at 2 m min: 40 dBA at 2 m

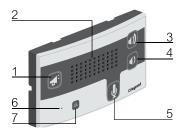


- 1 Terminals 1-2, 27 V<sub>=</sub> indicator power supply
- 2 BUS terminals
- 3 Terminal block numbered 1 to 16
- 4 Terminal block numbered 17 to 22
- 5 Location of the configurators
- **6** Reset to factory settings button (by holding button down for 10 s)
- 7 Control button brightness adjustment
- 8 Buzzer sound level adjustment
- **9** Connector for interphone unit

Flush-mounted or surface-mounted wall installation (see main control unit Cat. No. 0 766 11)

Installation with interphone unit (see interphone unit Cat. No. 0 766 08)





- 1 Communication button
- 2 Loudspeaker
- **3 4** Volume adjustment controls (maximum and minimum)
- 5 Hands-free button
- 6 Microphone
- 7 Yellow LED installation fault indicator

### Interphone unit Cat. No. 0 766 08

The interphone unit is used in conjunction with the main control unit (Cat. No. 0 766 11), the secondary control unit (Cat. No. 0 766 09) and the door unit (Cat. No. 0 766 07) and allows two-way voice communication.

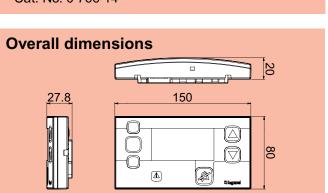
Once the call has been made, the nurse can speak to the patient and acknowledge the call if necessary. It must be used with a patient room microphone (Cat. No. 0 782 00) if the distance between the patient and the door unit is greater than 2 m.

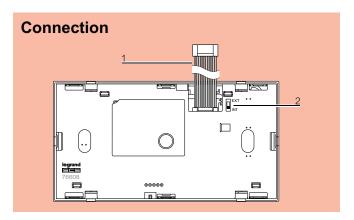
### **Technical characteristics**

- Power supply: via door units Cat. No. 0 766 07 or main control unit Cat. No. 0 766 11
- Normal consumption: 42 mA on indicator power supply

Consumption in degraded mode: 10 mA on BUS power supply

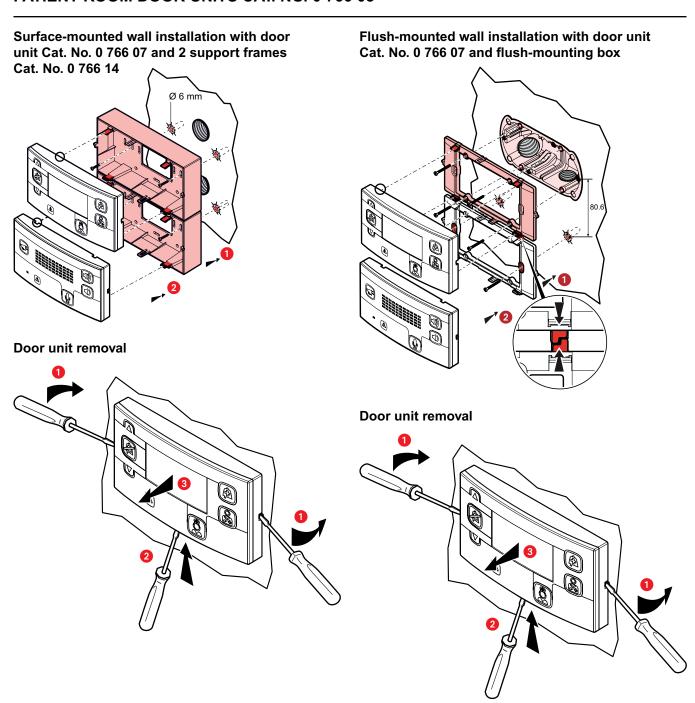
- Operating temperature: 5 to 40°C
- Antimicrobial
- Protection index: IP 42
- Dimensions (H x W x D): 80 x 150 x 20 mm
- Installation (supplied with fixing support):
  - directly onto the wall or with support frame Cat. No. 0 766 14





1 Ribbon cable for connection to the door unit Cat. No. 0 766 07 or main control unit Cat. No. 0 766 11/09 2 External microphone activation/deactivation switch Cat. No. 0 782 00

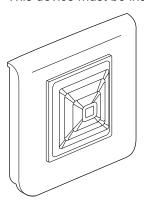
### PATIENT ROOM DOOR UNITS CAT. NO. 0 766 08





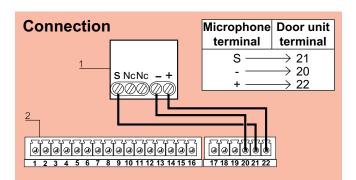
### PATIENT ROOM MICROPHONE CAT. NO. 0 782 00

The microphone is used in conjunction with the interphone unit (Cat. No. 0 766 08) to improve sound quality. This device must be installed close to the bedhead.



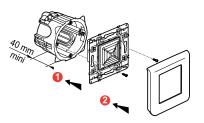
### **Technical Characteristics**

- Power supply: via door units Cat. No. 0 766 07
- Operating temperature: 5 to 40°C
- Protection index: IP 20
- Overall dimensions (H x W): 82 x 82 mm
- Installation (supplied with mounting support):
- in 1-gang flush-mounting box
- on wall with surface-mounting frame Cat. No. 0 802 81
- in a strip using special support supplied

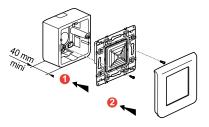


**1** Microphone terminal block: 0 782 00 **2** Door unit terminal block: 0 766 07

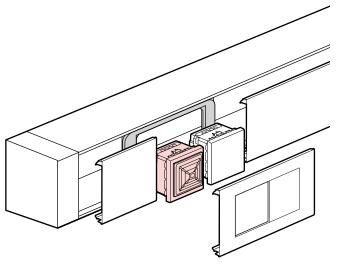
Flush-mounted wall installation in 1-gang screw flushmounting box



Surface-mounted wall installation with frame Cat. No. 0 802 81



Installation in a strip using special support





### SOCKETS CAT. NOS. 0 782 41/46 FOR HAND-HELD REMOTE CONTROL UNITS

# Sockets Cat. Nos. 0 782 41 for mounting in a strip and 0 782 46 for call-only hand-held remote control unit (pushbutton cord)

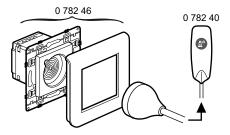
Magnetic connection between hand-held unit and socket: can be ejected in all directions with pull out torque designed to avoid any damage to the equipment.

Antimicrobial.

Non-indexed magnetic connection socket for hand-held remote control unit Cat. No. 0 782 40.

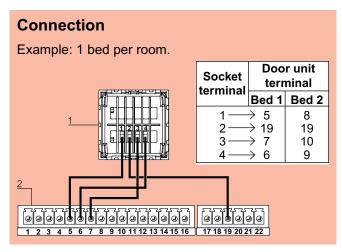
0 782 41





### **Technical characteristics**

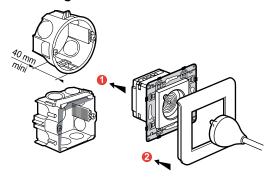
- · Power supply: via the door unit
- Operating temperature: 5 to 40°C
- Antimicrobial
- Protection index: IP 42
- · Dimensions:
- Cat. No. 0 782 41 : 45 x 45 x 36 mm
- Cat. No. 0 782 46 : 82 x 82 x 36 mm
- Installation:
- in 1-gang flush-mounting box (2 modules)
- on wall with surface-mounting frame Cat. No. 0 802 81
- in a strip using special support supplied



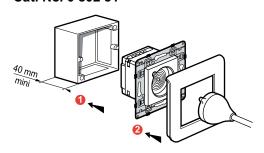
1 Socket terminal block: 0 782 41/46 2 Door unit terminal block: 0 766 06/07



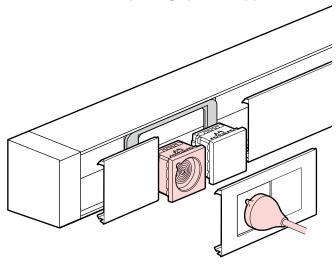
# Flush-mounted wall installation in 1-gang flush-mounting box



Surface-mounted wall installation with frame Cat. No. 0 802 81









### SOCKETS CAT. NOS. 0 782 45/47 FOR HAND-HELD REMOTE CONTROL UNITS

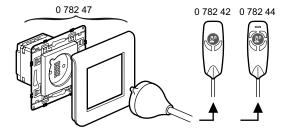
# Sockets Cat. Nos. 782 45 and 782 47 for hand-held remote control call and command units

Magnetic connection between hand-held remote control unit and socket: can be ejected in all directions with pull-out torque designed to avoid any damage to the equipment.

Antimicrobial.

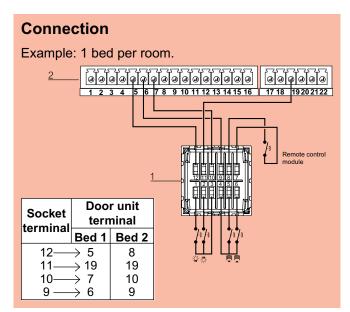
Indexed magnetic connection socket for hand-held remote control unit Cat. Nos. 0 782 42 and 782 44.





### **Technical characteristics**

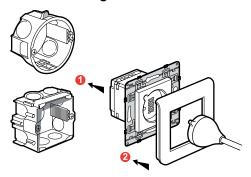
- Power supply:
  - via the door unit for nurse calls
- via the remote control module Cat. No. 0 783 77 or 0 783 78 or 783 79 for lighting and roller blinds
- Operating temperature: 5 to 40°C
- Antimicrobial
- Protection index: IP 42
- Dimensions:
- Cat. No. 0 782 45 : 45 x 45 x 36 mm
- Cat. No. 0 782 47 : 82 x 82 x 36 mm
- Installation:
- in 1-gang (2 modules) flush-mounting box
- on wall with surface-mounting frame Cat. No. 0 802 81



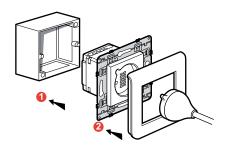
1 Socket terminal block: 0 782 45/47 2 Door unit terminal block: 0 766 06/07



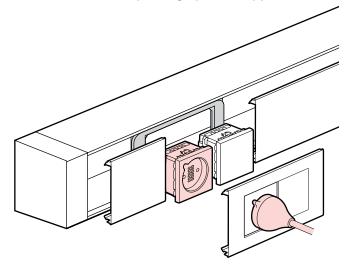
# Flush-mounted wall installation in 1-gang flush-mounting box



Surface-mounted wall installation with frame Cat. No. 0 802 81









### REMOTE CONTROL MODULES CAT. NOS. 0 783 77/78/79

These boxes provide control for lighting or other SELV functions via hand-held remote control units. To be fitted in wall strips or suspended ceilings.

### **Technical characteristics**

• Power supply: 100 - 240 V

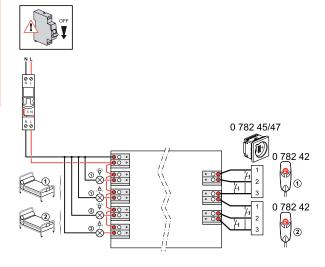
• Operating temperature: 0 to 35°C

• Dimensions: 230 x 71 x 44 mm

 Installation: in the bedhead strip or in the suspended ceiling

# Remote control module for wall strips for controlling four lighting outputs Cat. No. 0 783 77

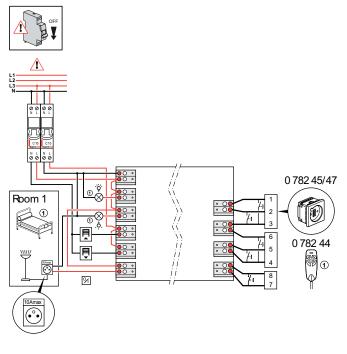
Compatible with hand-held remote control unit Cat. No. 0 782 42.





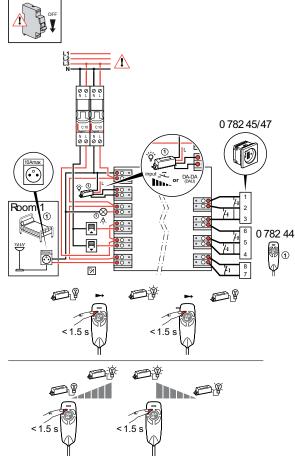
# Remote control module for wall strips for controlling two lighting outputs and roller blinds Cat. No. 0 783 78

Compatible with hand-held remote control unit Cat. No. 0 782 44.



Remote control module for bedhead strips, for controlling two lighting outputs (room lighting with dimming and reading ON/OFF), roller blinds and one 10 A any-function output Cat. No. 0 783 79

Compatible with hand-held remote control unit Cat. No. 0 782 44.





### HAND-HELD REMOTE CONTROL UNITS

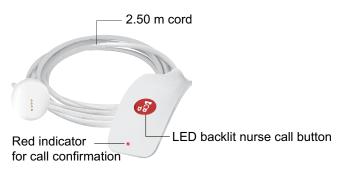
Allows patients to call a nurse (using an NC pushbutton) via the door unit.

Magnetic connection between hand-held remote control unit and socket:

can be ejected in all directions with pull out torque designed to avoid any damage to the equipment. Cleaning recommended using wipes moistened with detergent for food preparation surfaces (such as Anios, etc.)

# Hand-held remote control unit for call only (call pushbutton cord) Cat. No. 0 782 40

For use with socket Cat. No. 0 782 41 or 0 782 46.



# Call and control hand-held remote control unit Cat. No 0 782 42

For use with socket Cat. No. 0 782 45 or 0 782 47.



- 1 LED backlit nurse call button
- 2 Reading light control (NO pushbutton)
- 3 Room lighting control (NO pushbutton)

### **Technical characteristics**

- Power supply: sockets for hand-held remote control units
- Operating temperature: 5 to 40°C
- Antimicrobial
- Protection index: IP 67 (excluding plug)
- Length of cord: 2.5 m
- Can be fixed or held in place by clamp Cat. No. 0 782 43
- · Back-lighting consumption: 2 mA



### **CLAMP CAT. NO. 0 782 43**

# Call and control hand-held remote control unit Cat. No 0 782 44

For use with socket Cat. No. 0 782 45 or 0 782 47.



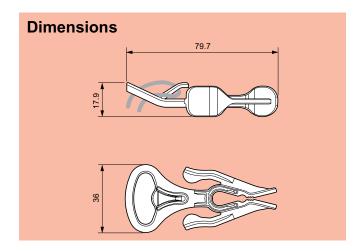
- 1 LED backlit nurse call button
- 2 Reading light control (NO pushbutton)
- 3 Room lighting control (NO pushbutton)
- 4 Red indicator for call confirmation
- 5 and 6 Roller blind control (NO pushbutton)
- 7 Free function button (NO pushbutton)

### **Technical characteristics**

- Power supply: via sockets for hand-held remote control units
- Operating temperature: 5 to 40°C
- Antimicrobial
- Protection index: IP 67 (excluding plug)
- Back-lighting consumption: 2 mA
- Length of cord: 2.5 m
- Can be fixed or held in place by clamp Cat. No. 0 782 43

For holding the hand-held remote control unit within reach:

on bedding, clothes or the arm of a chair.





### BED EXTENSION CAT. NO. 0 782 19 FOR DOOR UNITS CAT. NOS. 0 766 06/07

Connected to the hand-held remote control units and to the door unit, this extension can manage up to 4 beds per room and identify them as 1 to 4 on the various displays (door units, control units, corridor display units and DECT).

### **Technical characteristics**

Power supply: door unitConsumption: 1.8 W max.

• Operating temperature: -5°C to +40°C

• Size: 6 DIN modules

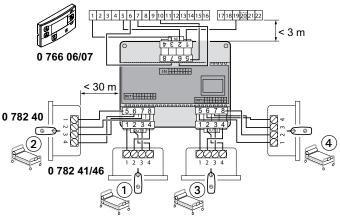
# = Call source		
Door unit		
Bed 1	1	
Bed 2	2	
Bed 3	3	
Bed 4	4	
WC/bathroom	w	

Example of a call:

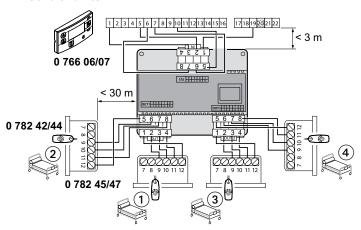
A001-3!: call from department A, room 1, bed 3.

### Connection

Installation with call-only hand-held remote control units



# Installation with call and control hand-held remote control units





- 1 Red indicator for call confirmation
- 2 NC call button Ejectable red anti-microbial cord

### **EJECTABLE BATHROOM CALL PULL-CORD CAT. NO. 0 782 48**

Allows calls to a nurse from the bathrooms.

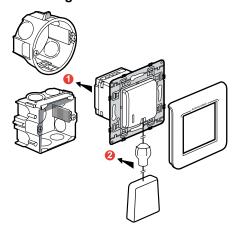


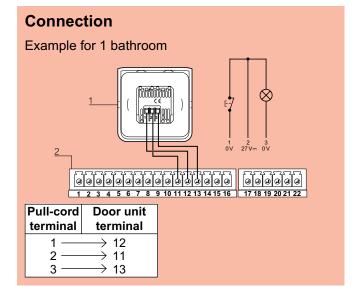
Can be positioned in zone 1 of the bathroom and recommended at a height of 2.3m

### **Technical characteristics**

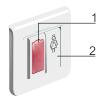
- Power supply: via door units
   Cat. No. 0 766 06 or 0 766 07
- Operating temperature: 5 to 40°C
- Antimicrobial
- Protection index: IP 55 (flush-mounting only)
- Dimensions (H x W x D): 82 x 82 x 43 mm
- Installation: in 1-gang flush-mounting box

### Flush-mounted wall installation in 1-gang flushmounting box





- 1 Bathroom pull-cord terminal block: 0 782 48
- 2 Door unit terminal block: 0 766 06/07



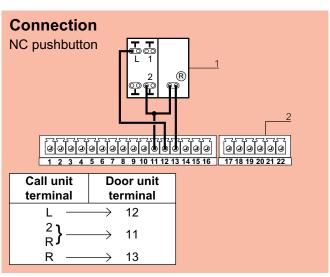
- 1 Red indicator for call confirmation
- 2 NC call button

Possibility of IP 44 with plate Cat. No. 0 788 80

### **BATHROOM CALL UNITS CAT. NO. 0 766 85**

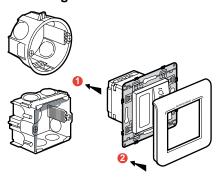
### **Technical characteristics**

- Power supply: via door units Cat. No. 0 766 06 or 0 766 07
- Operating temperature: 5 to 40°C
- Antimicrobial
- Protection index: IP 20
- Dimensions (H x W x D): 82 x 82 x 43 mm
- · Installation:
- in 1-gang (2 modules) flush-mounting box
- in surface-mounting frame Cat. No. 0 802 81 (IP 20)

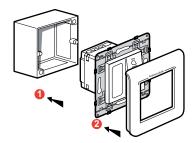


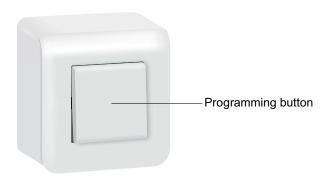
1 Call unit terminal block: 0 766 85 2 Door unit terminal block: 0 766 06/07

### Flush-mounted wall installation in 1-gang flushmounting box



# Surface-mounted wall installation with box Cat. No. 0 802 81



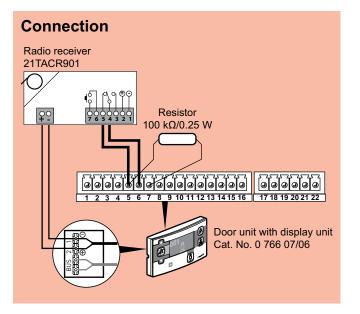


### RADIO RECEIVER CAT. NO. 21TACR901 FOR PORTABLE RADIO TRANSMITTERS

Radio unit which receives call signals sent by portable activation units (pendant or wristwatch type activation units, etc.), and transmits the information to the door unit.

### **Technical characteristics**

- Power supply via the door unit or 9 to 24 V=
- Consumption: 12 mA
- Operating temperature: 5 to 40°C
- Dimensions: 82 x 82 mm D = 50 mm
- NO-NC relay output Relay output power 1 A/30 V
- Surface mounting with frame Cat. No. 0 802 81 supplied
- Recommended: in suspended ceiling or technical cabinet (not accessible to the public)
- Programming: refer to the instructions supplied with the product





### PORTABLE ACTIVATION UNIT CAT. NO. 21PDER904

Portable radio transmitter that can be used on the wrist, clipped on or worn as a pendant. Enables the patient to send a call from inside his/her room, irrespective of where he/she is located. Operates with radio receiver Cat. No. 21TACR901. Supplied with a clip-on accessory and a black anti-strangulation chain.

### **Technical characteristics**

• European frequency for social alarms: 869.2375 MHz

• Weight: 11 g

Protection index: IP 67Battery life: 5 years

Radio range: up to 200 m in free field
Dimensions: 39.2 x 34.3 x 9.9 mm



### WRISTWATCH ACTIVATION UNIT CAT. NO. 21PMOR902

Portable radio transmitter.

Enables the patient to send a call from inside his/her room, irrespective of where he/she is located. Operates with radio receiver Cat. No. 21TACR901.

Supplied with the wrist strap and a clip so that it can be worn as a pendant.

### **Technical characteristics**

- European frequency for social alarms: 869.2375 MHz
- · Weight: 24 g
- Protection index: IP 67
- Battery life: 2 years (with one call a day)
- Replaceable battery: CR2032 (Renata)
- Radio range: up to 200 m in free field
- Dimensions: 46 x 38 x 13 mm



### PORTABLE ACTIVATION UNIT AND SUDDEN FALL DETECTOR CAT. NO. 21PDER911

Portable radio transmitter.

2 functions: sends a signal automatically when the patient falls suddenly. Also enables the patient to send a call manually from inside his/her room, irrespective of where he/she is located.

Operates with radio receiver Cat. No. 21TACR901.

### **Technical characteristics**

- European frequency for social alarms: 869.2375 MHz
- Weight: 35 g
- Protection index: IP 67
- · Battery life: 2 years (with one call a day)
- Replaceable battery: CR2477
- Radio range: up to 200 m in free field
- Dimensions: 37 x 12 mm



- 1 Red indicator for call confirmation
- 2 NC call pushbutton

### CALL DEVICES FOR SPECIFIC ENVIRONMENTS

Allows patients to call a nurse.

### Weatherproof call unit Cat. No. 0 782 49

Suitable for damp environments (e.g.: rehabilitation and spa recovery centres with swimming pool, steam room, sauna, etc.).

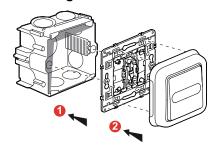
### **Technical characteristics**

- Power supply: via door units
   Cat. No. 0 766 06 or 0 766 07
- Operating temperature: 5 to 40°C
- Antimicrobial
- Protection index: IP 55 IK 07
- Overall dimensions (H x W): 86 x 86 mm
- Installation:
  - in 1-gang flush-mounting box

# 

- 1 Sealed call button terminal block: 0 782 49
- 2 Door unit terminal block: 0 766 06/07

### Flush-mounted wall installation in 1-gang flushmounting box





- 1 Red indicator for call confirmation
- 2 NC call button

### CALL DEVICES FOR SPECIFIC ENVIRONMENTS (CONTINUED)

### High-resistance call unit Cat. No. 0 782 51

Suitable for psychiatric and penal institutions, etc.

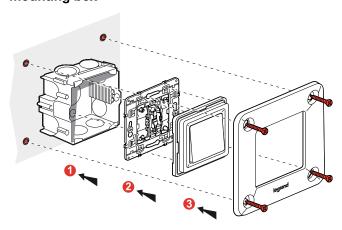
### **Technical characteristics**

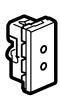
- Power supply: via door units Cat. No. 766 06 or 766 07
- Operating temperature: 5 to 40°C
- Protection index: IP 55 IK 10
- Overall dimensions (H x W): 110 x 110 mm
- Installation:
  - in 1-gang flush-mounting box
  - surface-mounted with frame Cat. No. 0 778 90

# 

- 1 Soliroc call button terminal block: 0 782 51
- 2 Door unit terminal block: 0 766 06/07

Flush-mounted wall installation with 1-gang flush-mounting box







### BIOMEDICAL CALL DEVICES: SOCKET CAT. NO. 0 771 50 + PLUG CAT. NO. 0 782 07

Signals the end of a cycle via an alarm on the nurse call system.

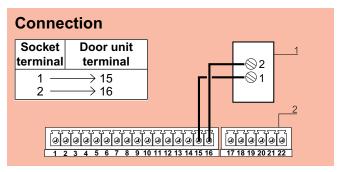
For connection to portable electrical medical devices such as syringe pumps, respirators, etc.

### Comprises:

- Socket Cat. No. 0 771 50
- Shunt plug Cat. No. 0 782 07 : For biomedical alarm standby. Used with socket Cat. No. 0 771 50.

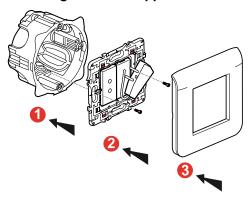
### **Technical characteristics**

- Power supply: via door units Cat. No. 0 766 06 or 0 766 07
- Operating temperature: 5 to 40°C
- Protection index: IP 20
- Overall dimensions (H x W): 45 x 22.5 mm
- Installation:
- in 1-gang flush-mounting box with universal Batibox support Cat. No. 0 802 51
- surface-mounted with frame Cat. No. 802 81 and universal Batibox support Cat. No. 0 802 51
- can be installed in ducting, strips or bedhead trunking units

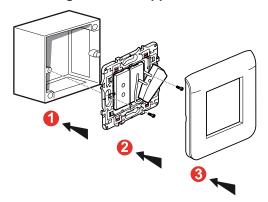


- 1 Biomedical call socket terminal block: 0 771 50
- 2 Door unit terminal block: 0 766 06/07

Flush-mounted wall installation in 1-gang flushmounting box with support Cat. No. 0 802 51



Flush-mounted wall installation in 1-gang flushmounting box with support Cat. No. 0 802 51





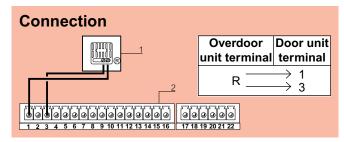
### CORRIDOR OVERDOOR LIGHT UNITS

Ensures that room status information is transferred into the corridor.

For installation above doors.

### Call only corridor light unit Cat. No. 0 766 71

For call signalling (1 call).



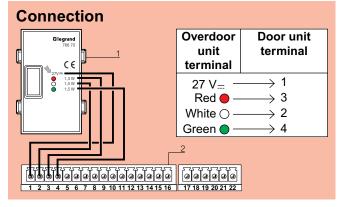
- 1 Overdoor light unit terminal block: 0 766 71
- 2 Door unit terminal block: 0 766 06/07

# Corridor call and nurse presence light unit Cat. No. 0 766 70 and 0 766 76 $\,$

Indicates calls, bathroom calls and nurse presence. Triangular LED light units.

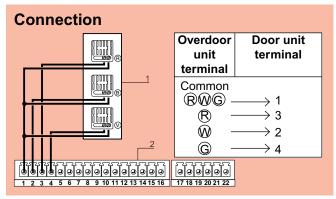
Recommended for compliance with VDE 0834-1, 0834-2 and DIN 41050 standards.

Cat. No. 0 766 70



- 1 Monobloc overdoor light unit terminal block: 0 766 70
- 2 Door unit terminal block: 0 766 06/07

Cat. No. 0 766 76



- 1 Red, white, green overdoor light unit terminal block: 0 766 76
- 2 Door unit terminal block: 0 766 06/07

### **Technical characteristics**

- $\bullet$  Power supply: 27  $V_{=}$  (via the indicator power supply)
- Operating temperature: 5 to 40°C
- Protection index: IP 20
- Dimensions (H x W):

0 766 71: 82 x 82 mm 0 766 70: 114 x 77.5 mm 0 766 76: 153 x 82 mm

- · Installation:
- in flush-mounting box

1-gang for Cat. No. 766 71 1-gang for Cat. No. 766 70

3-gang for Cat. No. 766 76

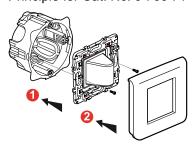
- surface-mounted

With support frame Cat. No. 802 81 for Cat. No. 766 71

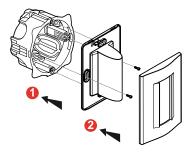
with support frame Cat. No. 802 83 for Cat. No.  $766\ 76$ 

## Flush-mounted wall installation in flush-mounting box

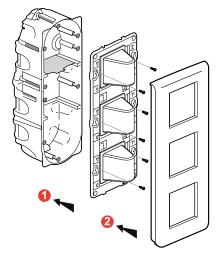
Principle for Cat. No. 0 766 71



Principle for Cat. No. 0 766 70

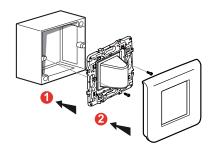


### Principle for Cat. No. 0 766 76

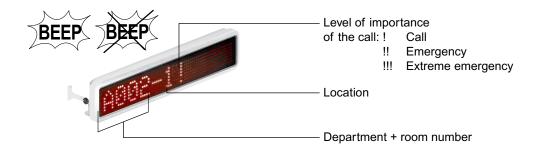


## Surface-mounted wall installation with support frame

Principle for Cat. No. 0 766 71



## Device presentation and installation (continued)



### CORRIDOR DISPLAY UNITS CAT. NOS. 0 766 04 AND 0 766 05

Indication of calls and nurse presence by priority level. For installation in the corridor.

Supplied with power supply and interface.

Single display Cat. No. 0 766 04 and double display Cat. No. 0 766 05

### **Technical characteristics**

Power supply: 27 V<sub>=</sub>

• Max. consumption: 0 766 04: 8 W

0 766 05: 16 W

• Operating temperature: 5 to 40°C

• Protection index: IP 42

• Dimensions (H x W x D): 108 x 518 x 47 mm

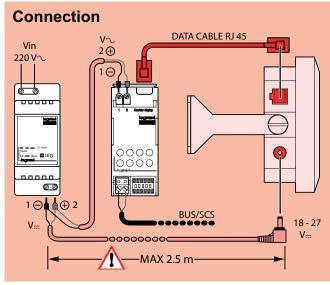
(0 766 04)

108 x 515 x 94 mm

(0.766.05)

Installation:

- in a suspended ceiling or on the wall
- projecting using accessory Cat. No. 0 766 03
- Sound level: 55 dBA at 2 m

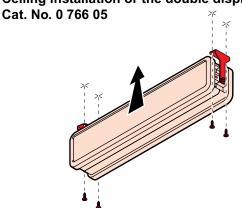


1 Virtual configuration button

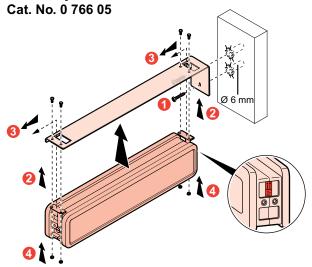
Wall installation of single display Cat. No. 0 766 04

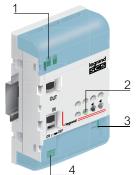


Ceiling installation of the double display



Projecting installation of single display with accessory 0 766 03 Cat. No. 042 766 or double





- 1 BUS OUT terminals
- 2 Product status LED
- 3 Configurators
- 4 BUS IN terminals

### BUS/SCS EXTENSION CAT. NO. 0 766 10

The BUS/SCS extension is used to communicate information between two BUS/SCS nurse call systems. It is used where departments are grouped together or for departments with more than 80 rooms.

It has two bus linking terminals, marked IN and OUT. The front panel has a 'C' button for virtual configuration and an LED indicator:

- Correct power supply and configuration (on steady)
- Bus not connected (off)
- Missing or incorrect configuration (flashing)

A No declaration button for the virtual configuration (use the ID).

### **Technical characteristics**

Power supply: 27 V<sub>=</sub>

• BUS power supply consumption during operation: 40 mA

Operating temperature: 5 to 40°C

Size: 4 DIN modules

Gateway version: Within a building, enables the number of departments (floors) to be increased by connecting to the vertical BUS (see installation example p. 4). Maximum of: 14 products connected on the vertical bus.

Repeater version: Within a department,

(Cat. No. 0 766 11) allows extension of the length of the BUS/SCS or an increase in the number of rooms. Maximum of: 2 products per bus (on each level).

#### TRACEABILITY SOFTWARE CAT. NO. 0 766 18

This software is used for storing events, recording their dates and times, and classifying them according to type (calls, nurse presence, acknowledgement, etc.). For installation on a PC connected to the traceability interface Cat. No. 0 766 17 via the USB (type A) - mini USB (type A) cable.

The software can be installed on several computers.

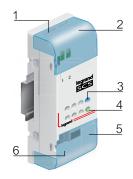
## Minimum configuration required

- PC with Pentium processor (1 GHz minimum)
- 512 MB (XP) or 1 GB (Vista/7) of RAM
- SVGA graphics card with 800 x 600 resolution in 256 colours
- 500 MB of hard disk space
- CD-ROM drive
- Mouse
- Windows XP 32-bit Service Pack 2, Vista 32 and 64-bit, Windows 7 32 and 64-bit
- Microsoft .NET Framework 4.0



A The instructions for the traceability software can be found on the software CD.

## Device presentation and installation (continued)



- 1 27 V<sub>...</sub> indicator power supply terminals
- 2 Mini USB connector
- 3 Virtual configuration button
- 4 Signalling LED
- **5** Location of the configurators
- 6 BUS/SCS input terminal

### TRACEABILITY INTERFACE CAT. NO. 0 766 17

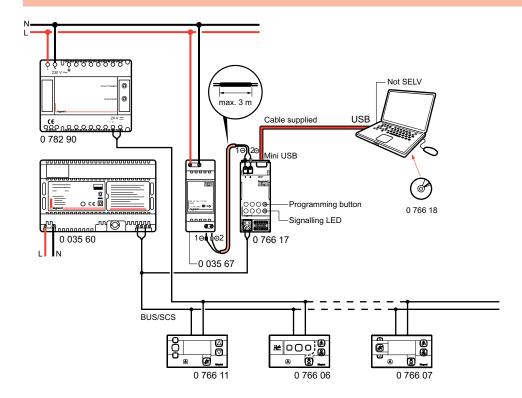
All events can be stored on this interface (up to 100,000 events: calls from patient rooms, calls from bathrooms, nurse presence and mute setting, biomedical alarm, faulty system, etc.) having taken place in a zone. The information is saved directly onto the device The data can be downloaded or sent via RSS feed using software Cat. No. 0 766 18 via the USB port.

Above the 100,000<sup>th</sup> event either the records are blocked, or the oldest records are overwritten, depending on the configuration chosen. One interface must be installed per department.

USB (type A) - mini USB (type A) cable supplied (length 2 m).

### **Technical Characteristics**

- Power supply: 27 V<sub>=</sub>
- Indicator power supply consumption: 30 mA
- Bus power supply consumption: 4.5 mA
- Operating temperature: 5 to 40°C
- Size: 2 DIN modules





- 1 27 V<sub>...</sub> indicator power supply terminals
- 2 RJ11 ESPA 4.4.4. connector
- 3 Virtual configuration button
- 4 Signalling LED
- 5 Location of the configurators
- 6 BUS/SCS input terminal

### **DECT INTERFACE CAT. NO. 0 766 19**

This interface allows events to be transferred from the BUS system to the DECT system using the ESPA 4.4.4. protocol.

One interface must be installed per department.

### **Technical characteristics**

• Power supply: 27 V<sub>=</sub>

• Indicator power supply consumption: 30 mA

• Bus power supply consumption: 4.5 mA

• Operating temperature: 5 to 40°C

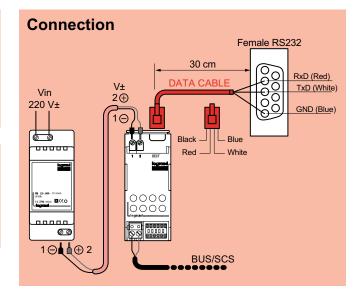
· Size: 2 DIN modules

### **Communication parameters**

· Speed: 9600 bauds

Data bits: 7Parity: even

• Bit stop: 1



The DATA cable is supplied with a 30 cm cord and a female RS232. The RS232 can be replaced by an RJ 45. It is also possible to replace the DATA cable with a longer cord (max. length 5 m). For longer lengths, use interface units (RS232  $\rightarrow$  IP, RS232  $\rightarrow$  RS485, etc.) and connect them to the digital infrastructure of the building.

## Device presentation and installation (continued)



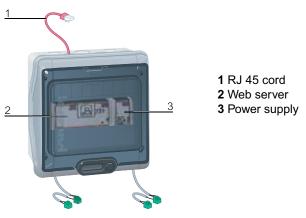
## NURSE CALL CONFIGURATOR SOFTWARE CAT. NO. 0 766 15

This software is used for virtual configuration of the installation.

Used with the configuration kit Cat. No. 0 766 16.

## Minimum configuration required

- PC with Pentium processor (2 GHz minimum)
- 512 MB (XP) or 1 GB (Vista/7) of RAM
- SVGA graphics card with 800 x 600 resolution in 256 colours
- 500 MB of hard disk space
- CD-Rom reader
- Mouse
- Windows XP 32-bit Service Pack 2, Vista 32 and 64-bit
- Microsoft .NET Framework 3.5



### **CONFIGURATION KIT CAT. NO. 0 766 16**

This kit is used for configuring the hospital system products.

For this it must be connected to a PC equipped with the Nurse Call Configurator software (0 766 15).

It can be used outside the installation (as stand-alone) or connected to the existing installation.

### **Technical characteristics**

- Supply voltage: 220 240 V $\sim$  50/60 Hz
- Output voltage: 27 V...
- Operating temperature: 0°C to + 45°C
- Conforms to NF C 15-100



## BUS/SCS POWER SUPPLY CAT. NO. 0 035 60 OR E46ADCN

The power supply should be used to power the system's communication bus (BUS/SCS). It also allows operation in degraded mode, if the indicator power supply is no longer provided. This way, BUS communication remains operational, but without the local indicators.

Double-insulated SELV safety device.

### **Technical characteristics**

• Supply voltage: 230 V $\sim$  ± 10% – 50/60 Hz

BUS output voltage: 27 V...
Max. BUS current: 1.2 A

Max. dissipated power: 11 W

• Max. consumption: 43.4 W

• Operating temperature: 5 to 40°C

Protection index: IP 30Size: 8 DIN modules



## BUS/SCS POWER SUPPLY FOR INTER-PHONES CAT NO. 0 634 35 OR 346000

The power supply should be used to power the system's communication bus (BUS/SCS) in instances of an installation with an interphone unit. It also allows operation in a degraded mode, if the indicator power supply is no longer provided. This way the bus communication remains operational, but without the local indicators.

Double-insulated SELV safety device.

#### **Technical characteristics**

• Supply voltage: 230 V $\sim$ 

• BUS output voltage: 27 V=

Max. BUS current: 1.2 A

• Max. dissipated power: 11 W

• Max. consumption: 43.4 W

• Operating temperature: 5 to 40°C

• Protection index: IP 30

• Size: 8 DIN modules

## **Device presentation and installation (continued)**



- 1 Power supply input
- 2 Output
- 3 Signalling LED
  - Green LED = normal operation
  - Red LED = overload

### **INDICATOR POWER SUPPLY CAT. NO. 0 782 90**

This power supply should be used to supply signalling indicators, door units, control units, corridor units, etc. Double-insulated SELV safety device.

### **Technical characteristics**

• Supply voltage: 230 V $\sim$  ± 10% – 50/60 Hz

• Output voltage: 29 V...

· Max. current: 2 A

Max. consumption: 64.5 W

Operating temperature: 5 to 40°C

Protection index: IP 30Size: 6 DIN modules



### **CABLE CAT. NO. 0 492 33**

Halogen-free BUS/SCS cable used to connect communicating products in the nurse call system.

#### **Technical characteristics**

- · Sheath colour: white
- · Outside diameter: max. 5 mm
- Number of wires: 2 flexible twisted wires (white, blue)
- Wire cross-section: 0.5 mm<sup>2</sup>
- Electrical resistance: less than 72  $\Omega$ /km
- Operating temperature: -15°C to +70°C
- Length: 200 m



## **AUXILIARY POWER SUPPLY CAT. NO. 0 035 67**

Used to power the DECT interface Cat. No. 0 766 19, the traceability interface Cat. No. 0 766 17 and corridor display units Cat. Nos. 0 766 04/05.

## **Technical Characteristics**

• Max. BUS current: 600 mA

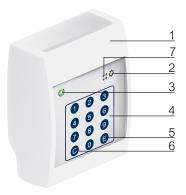
• Max. power: 21.5 W

• Max. consumption: 26.8 W

• Operating temperature: 5 to 40°C

Protection index: IP 20Size: 2 DIN modules

## Device presentation and installation (continued)



- 1 Bracelet activation magnet
- 2 Detection LED (orange)
- 3 Status LED (green)
- 4 Code keypad
- 5 Validation button
- 6 Correction button
- 7 Buzzer

### **SECURE WANDERING DEVICE**

Indicates that a door has been crossed by a resident fitted with a bracelet Cat. No. 0 766 20.

Works with door unit Cat. No. 0 766 06 configured for secure wandering and allowing acknowledgement.

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

The door controller retrieves data from the aerial Cat. No. 0 766 21 and from the door contact

Cat. No. 0 431 00 and either issues a call for a nurse or locks the door, depending on its operating mode.

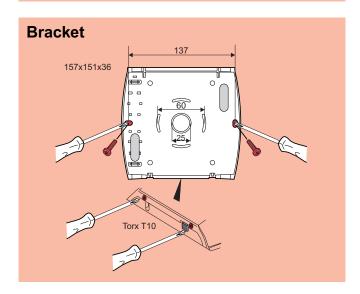
If the door is locked, it can be unlocked with the proper codes.

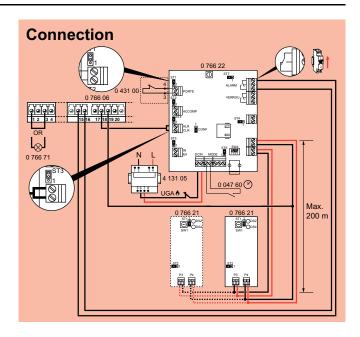
Coded keypad for capturing the bracelet's signal when a specific door has been crossed.

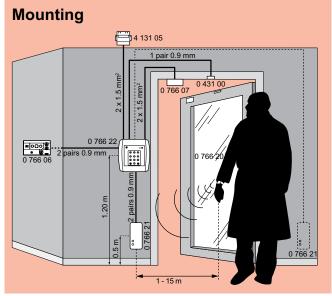
Requires a 12 V<sub>m</sub> modular power supply.

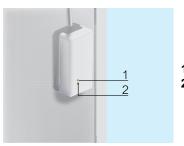
## **Technical characteristics**

- Power supply: 12 V...
- Dimensions (H x W x D ): 120 x 150 x 50 mm
- · Wall-mounted with screws









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



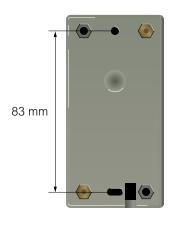
#### Aerial Cat. No. 0 766 21

Receives the bracelet's signal and transmits it to the controller Cat. No. 0 766 22. It is possible to adjust the aerial's range (approx. 1 to 15 m).

### **Technical characteristics**

- Power supply: via the door controller Cat. No. 0 766 22
- Dimensions (H x W x D ): 50 x 100 x 40 mm
- · Wall-mounted with screws

### **Bracket**



#### Bracelet Cat. No. 0 766 20

Fitted with 869 MHz radio transmitter. Permanent fixing.

Product is activated by passing a magnet over it. Batteries should be changed each year.

### **Technical characteristics**

- IP 55 IK 08
- Anti-allergy
- · Colour: white





## **Operating modes**

### **CALL + NURSE PRESENCE**

This is the basic programme for all hospital signalling installations.

It provides all essential functions as standard, and can be enlarged with Secure Wandering and Interphone functions.

### Scenario 1:

### 1- Patient calls from room



The patient calls by pressing a button on the hand-held remote control unit.



The door unit signals the call and emits an audible alarm.

### 2- Nurse present in the room



The nurse signals her presence on the door unit.



The door unit stops the audible alarm.

## 3- Acknowledgement of the call by the nurse



The nurse signals that the call has been dealt with.



The door unit turns off.



The red indicator on the corridor light unit comes on with a steady light.



The corridor display unit signals the room issuing a call.



The nurses' station control unit signals the room issuing a call and emits an audible alarm.



The green indicator on the corridor light unit also comes on with a steady light.



The corridor display unit signals the presence of a nurse.



The nurses' station control unit signals the nurse presence in the room.



All the indicators on the corridor light unit turn off.



The corridor display unit no longer signals this call.



The nurses' station control unit no longer signals this call.

## **BATHROOM CALL + NURSE PRESENCE**

### Scenario 2:

### 1- The patient calls from the bathroom







The door unit signals the call and emits an audible alarm.

## 2- Nurse present in the room



The nurse signals her presence on the door unit.



The door unit stops the audible alarm.

## 3- Acknowledgement of the call by the nurse



The nurse signals that the call has been dealt with.





The door unit turns off.



The red and white indicators on the corridor light unit are steadily on.



The corridor display unit signals the room issuing a call (bathroom call indicated).



The nurses' station control unit signals the room issuing a call.



The green indicator on the corridor light unit also comes on with a steady light.



The corridor display unit signals the room with nurse presence.



The nurses' station control unit signals the nurse presence in the room.



All the indicators on the corridor light unit turn off.



The corridor display unit no longer signals this call.



The nurses' station control unit no longer signals this call.

## **CALL + NURSE PRESENCE + NURSE ASSISTANCE**

This is useful for the nurse when assistance is required following a patient's call.

#### Scenario 3:

- 1- The patient calls from the room (see p. 40)
- 2- Presence of the nurse in the room (see p. 40)
- 3- The nurse requests assistance



The nurse requests the assistance of another nurse by pressing the call button on the door unit.

OR



The nurse requests the assistance of another nurse by pressing the call button on the hand-held remote control unit.



The call button begins to flash red and emits a rapid audible alarm.



The second nurse signals her presence at the door unit.



The door unit stops the audible alarm.

5 - Acknowledgement of the call (see p. 40)



The red indicator flashes and the green indicator remains steadily on.



The corridor display unit signals the room issuing a call.



The nurses' station control unit signals the room issuing a call and emits a more rapid audible alarm.



The red and green indicators on the corridor light unit are steadily on.



The corridor display unit no longer signals this call.



The nurses' station control unit no longer signals this call.

### CALL-FORWARDING BETWEEN ROOMS IN THE PRESENCE OF A NURSE

This is useful for the nurse when assistance is required following a patient's call.

#### Scenario 3:

- 1- The patient in room 001 calls for a nurse
- 2- The nurse goes to that room
- 3- A patient in room 002 calls for a nurse
- 4- Call forwarding between rooms: the call from room 002 is signaled to the nurse in room 001



The door unit signals the call from the room (indicating the room number on the display unit) and emits an audible alarm.



The door unit signals the call and emits an audible alarm.

Room 002

### 5- The new call is recognised



The nurse signals recognition of the new call and the audible alarm is cut off.

- 6 Nurse presence in room 002 (see p. 40)
- 7 The call is acknowledged (see p. 40)
  - The nurse requests assistance (see p. 44)



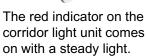


The door unit signals the call. The audible alarm is cut off.



Room 002

Room 002





The corridor display unit signals the most recent call.



The nurses' station control unit signals the rooms issuing calls.



The red indicator on the light unit remains on.



The corridor display unit signals the room issuing a call.



The nurses' station control unit signals the room issuing a call.

## PATIENT CALL WITH INTERPHONE INSTALLATION

### 1- Patient calls from room



The patient calls by pressing the hand-held remote control unit (see nurse call operation p. 36).



The nurses' station control unit signals the room issuing a call and emits an audible alarm.

## 2- End of call



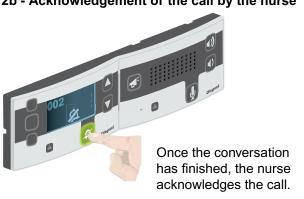
Once the call has been dealt with, the nurse ends the conversation.



The nurses' station control unit continues to signal the call but stops the audible alarm.

### OR

## 2b - Acknowledgement of the call by the nurse





The door unit switches off.







The nurse and the patient can talk.



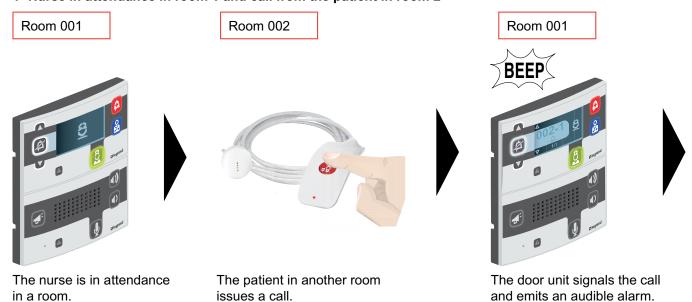
The door unit continues to call but stops the audible alarm.



The nurses' station control unit no longer signals this call.

## **INTER-ROOM CALL (1)**

## 1- Nurse in attendance in room 1 and call from the patient in room 2



## 2- Acknowledgement of the call by the nurse



Once the conversation has finished, the nurse acknowledges the call.

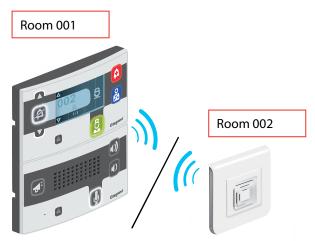


The interphone unit switches off, communication has ended. The nurse's presence continues to be indicated on the door unit.



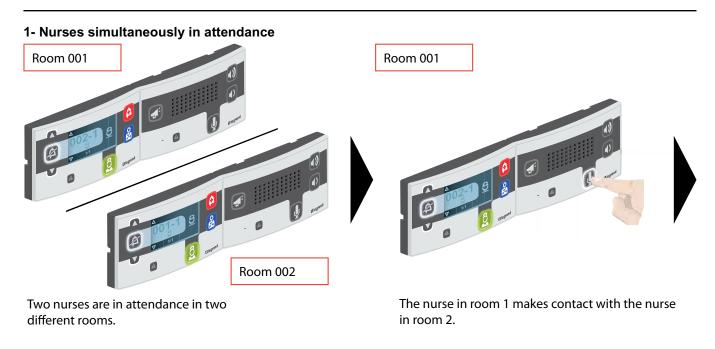






The nurse makes contact with the patient.

## INTER-ROOM CALL (2)



### 2- Acknowledgement of the call by the nurse

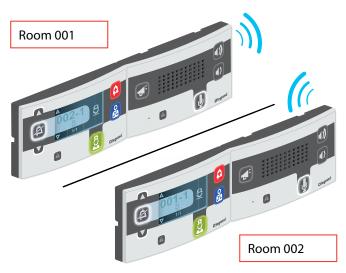


Once the conversation has ended, the nurse in room 1 ends the communication by pressing the microphone again.



The interphone units switch off, communication has ended. The presence of nurses continues to be indicated on the door units.

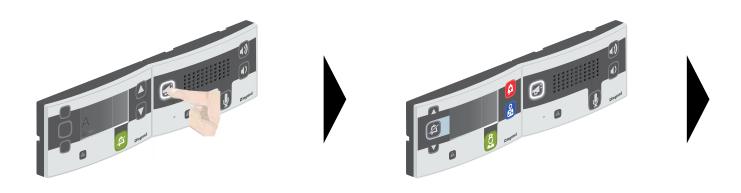




The two nurses can talk to each other.

## **GENERAL CALL**

### 1- General call from the nurses' station



The nurse issues a general call from the nurse station control unit by holding down the megaphone button.

All the room door units signal the call.

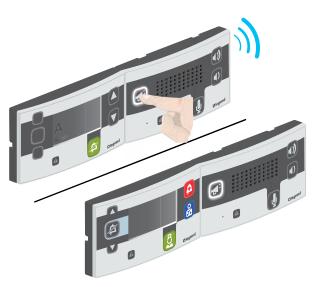
## 2- End of general call



Once the call is complete, the nurse ends communication by releasing the megaphone button.



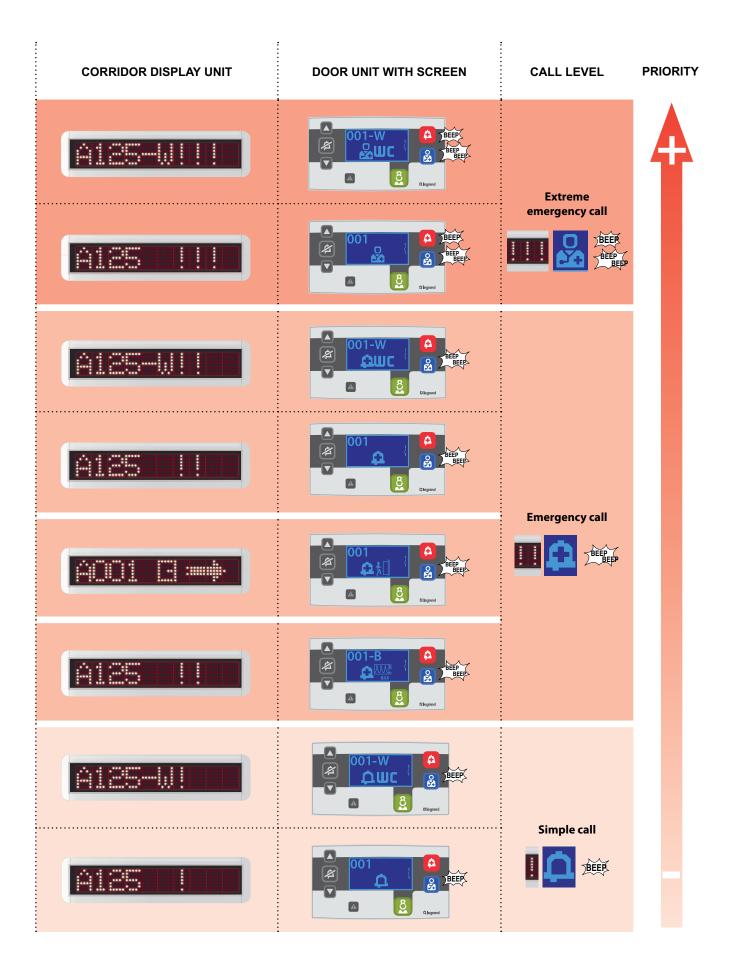
All the room door units switch off, communication has ended.



Calls are broadcast from the nurses' control unit to the door units of all rooms in the department.

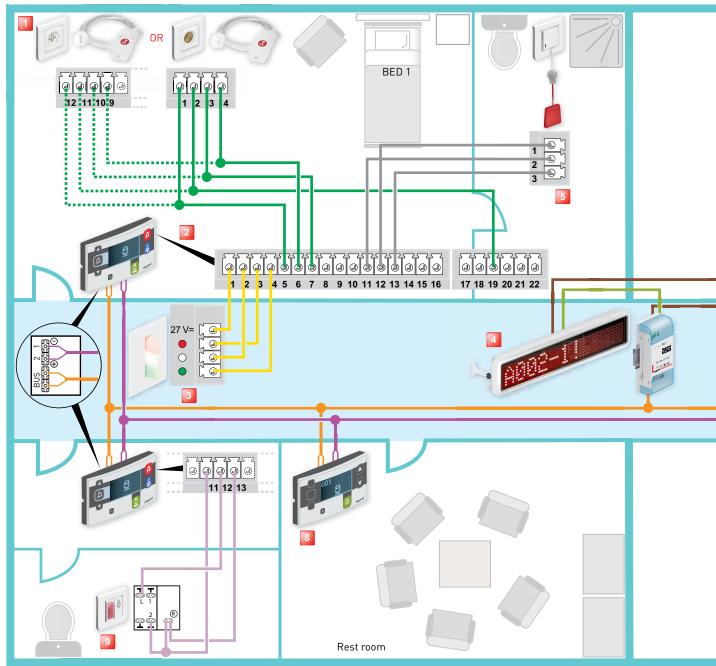
# Call urgency/priority levels

PRIORITY	TYPE OF CALL	CONTROL	DISPLAY ON CORRIDOR OVERDOOR LIGHT UNIT	DISPLAY ON CONTROL UNIT
4	Extreme emergency call from bathroom (blue code)	+ 🚨 + 🟖	Flashing quickly	001-W DEEP BEEP BEEP BEEP
	Extreme emergency call from patient room (blue code)	OR 🗭 + 🤮 + 🛍	Flashing quickly	001 BEEP BEEP Clegand
	Emergency call (assistance) bathroom	+ 2 +	Flashing slowly	OO1-W BEEP BEEP BEEP BEEP
	Emergency call (assistance) patient room	OR OR ♠	Flashing slowly	001 BEEP BEEP  A plagued
	Escape alarm		Flashing slowly	001 BEEP BEEP C) logand
	Biomedical alarm	X	Flashing slowly	001-B DEEP BEEP BEEP
	Bathroom call			001-W BEEF
	Patient room call	OR 🔑		001 BEEP



## Wiring: call + nurse presence installation

## A Do not fully clip on the door units

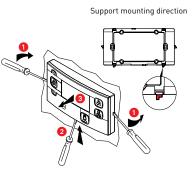


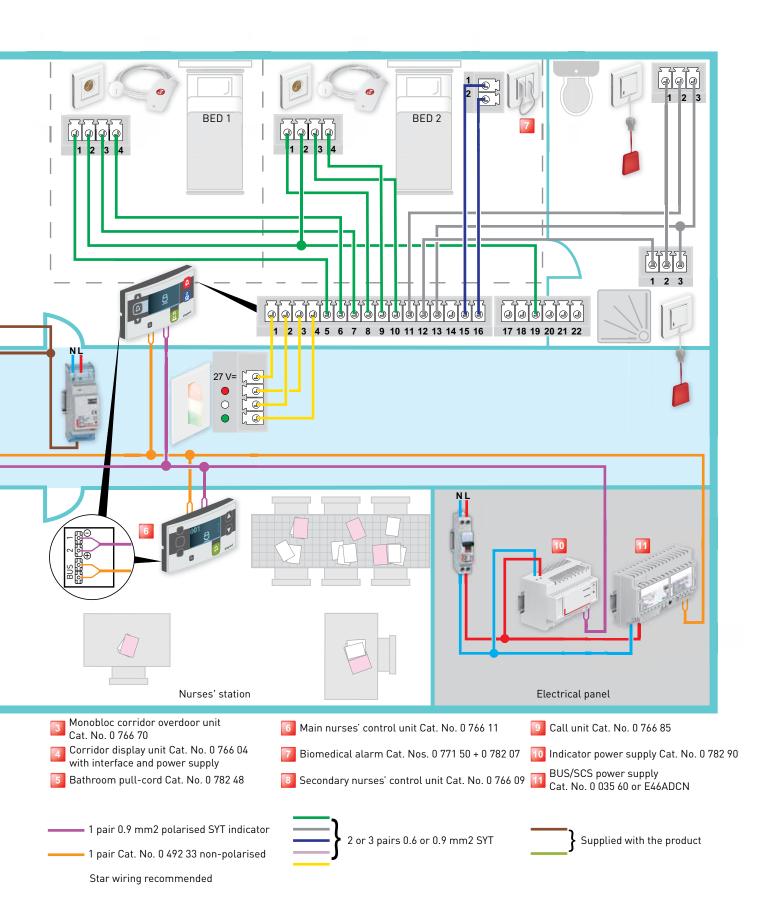
- Socket + hand-held control unit for call Cat. Nos. 0 782 45/47 + 0 782 42/44 or socket + hand-held control unit for call Cat. Nos. 0 782 41/46 + 0 782 40
- Door unit with display unit Cat. No. 0 766 07/06

#### Terminal Terminal Description Description 10 Lamp common Bed 2 hand-held control unit call indicator White lamp Bathroom pull-cord common 11 Red lamp 12 Bathroom pull-cord contact Green lamp 13 Bathroom pull-cord indicator Bed 1 hand-held control unit common 5 14 Bathroom call acknowledgment button (option) Bed 1 hand-held control unit call button 15 Biomedical contact common 6 7 Bed 1 hand-held control unit call indicator 16 Biomedical contact Bed 2 hand-held control unit common Beds 1 & 2 hand-held control unit backlighting Bed 2 hand-held control unit call button

If the monitor lights are not being used, replace them with a 100 k $\Omega$ /0.25 W resistor If the call contact is not being used, short-circuit the corresponding terminals

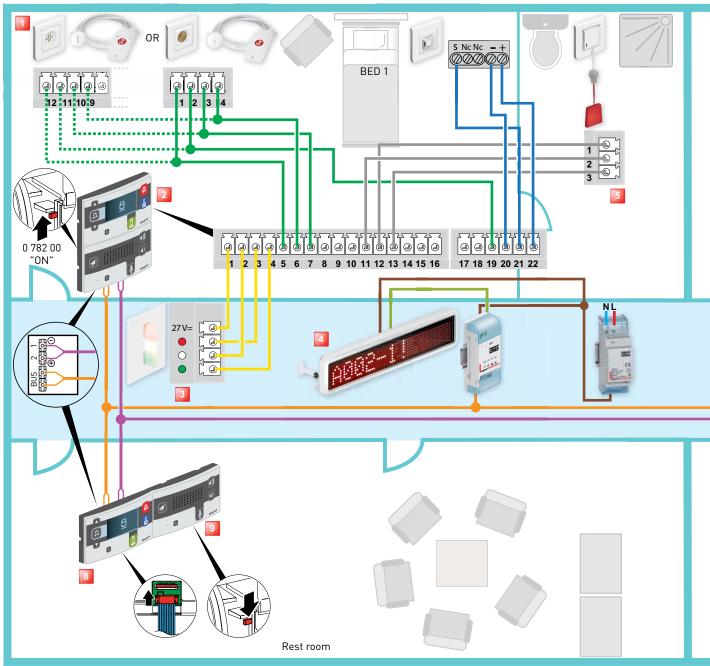
#### Removing the door unit





## Wiring: call + nurse presence installation with interphone

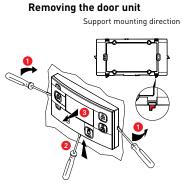
A Do not fully clip on the door units

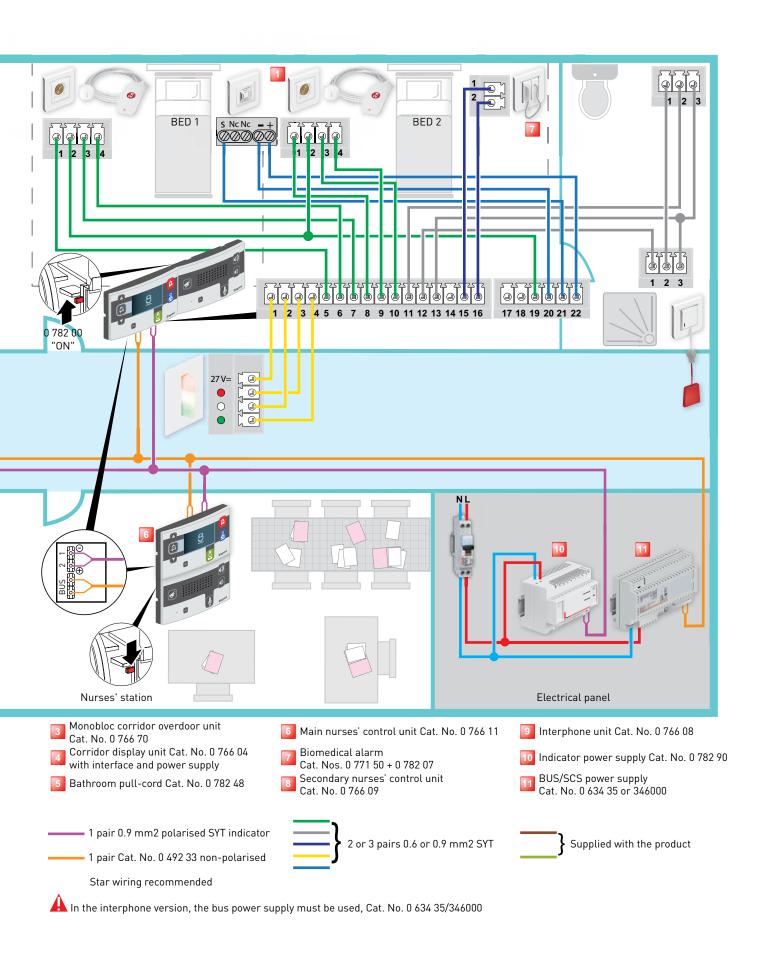


- Socket + hand-held remote control unit for call Cat. Nos. 0.78245/47 + 0.78242/44 or socket + hand-held remote control unit for call Cat. Nos. 0.78241/46 + 0.78240
- Door unit with display unit Cat. No. 0 766 07/06

Terminal	Description	Terminal	Description
1	Lamp common	10	Bed 2 hand-held control unit call indicator
2	White lamp		Bathroom pull-cord common
3	Red lamp	12	Bathroom pull-cord contact
4	Green lamp		Bathroom pull-cord indicator
5	Bed 1 hand-held control unit common	14	Bathroom call acknowledgment button (option)
6	6 Bed 1 hand-held control unit call button		Biomedical contact common
7	7 Bed 1 hand-held control unit call indicator		Biomedical contact
8	Bed 2 hand-held control unit common	19	Beds 1 & 2 hand-held control unit backlighting
9	Bed 2 hand-held control unit call button	20	Microphone earth
		21	Microphone input
		22	Microphone + 27 V

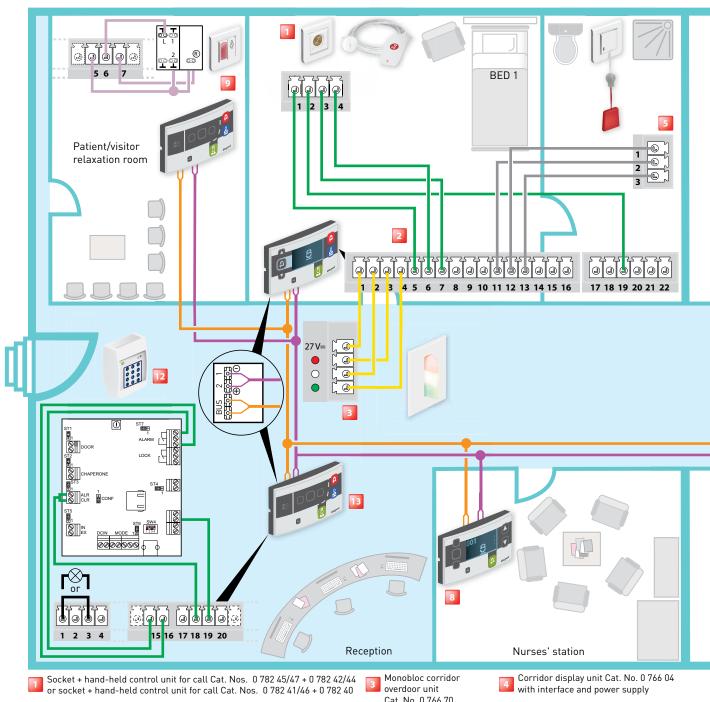
If the monitor lights are not being used, replace them with a 100 k $\Omega$ /0.25 W resistor If the call contact is not being used, short-circuit the corresponding terminals





## Wiring: secure wandering installation with call

A Do not fully clip on the door units



Cat. No. 0 766 70

Beds 1 & 2 hand-held control unit backlighting

Door unit with display unit Cat. No. 0 766 07/06

Bed 2 hand-held control unit common

Bed 2 hand-held control unit call button

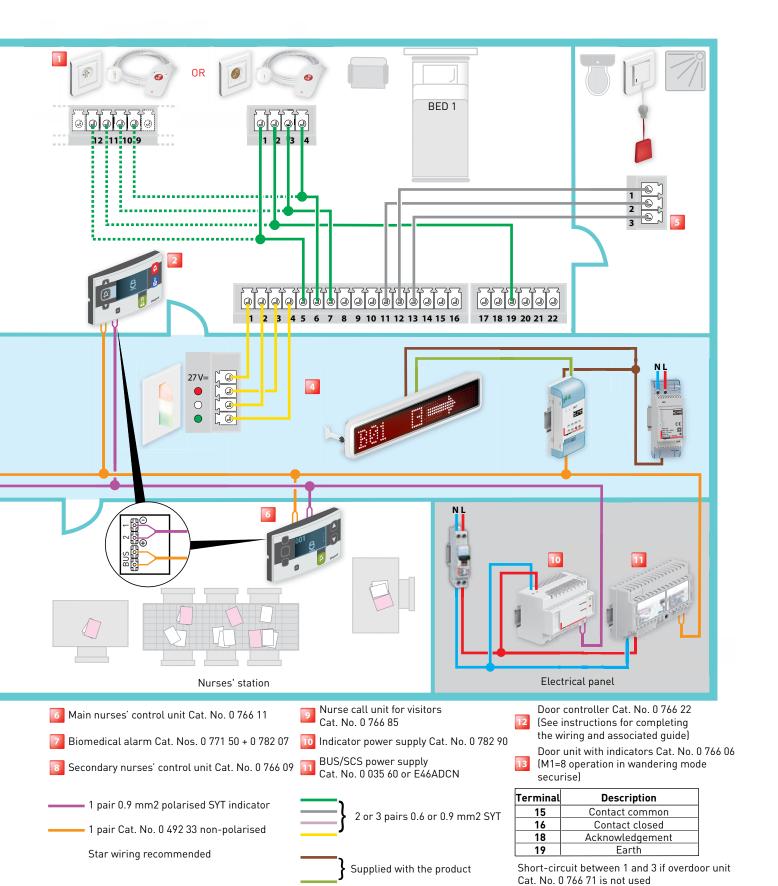
Terminal	Description	Terminal	Description	
1	Lamp common	10	Bed 2 hand-held control unit call indicator	
2	White lamp	11	Bathroom pull-cord common	
3	Red lamp	12	Bathroom pull-cord contact	
4	Green lamp	13	Bathroom pull-cord indicator	
5	Bed 1 hand-held control unit common	14	Bathroom call acknowledgment button (option)	
6	Bed 1 hand-held control unit call button	15	Biomedical contact common	
7	Bed 1 hand-held control unit call indicator	16	Biomedical contact	

If the monitor lights are not being used, replace them with a 100 k $\Omega/0.25$  W resistor If the call contact is not being used, short-circuit the corresponding terminals



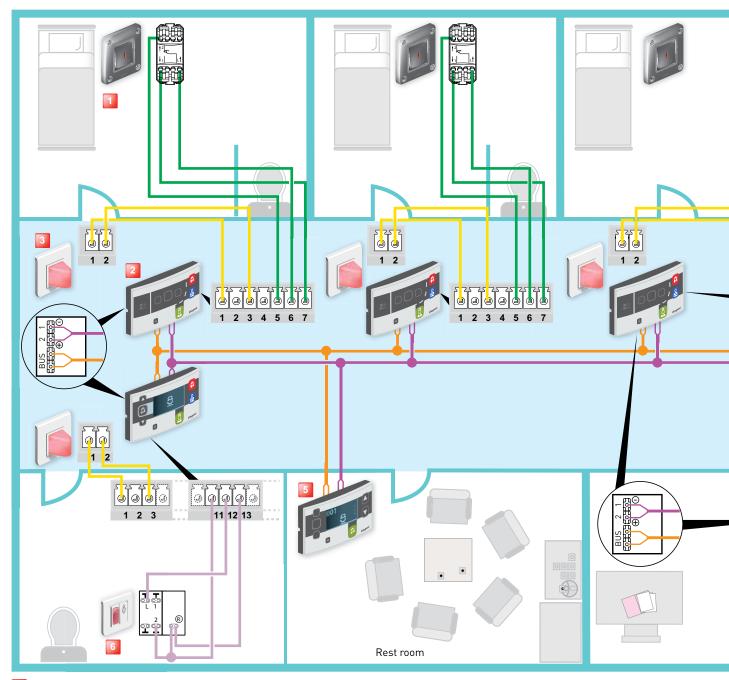
Bathroom pull-cord Cat. No. 0 782 48

## + nurse present



# Wiring: prison/psychiatric call installation

## A Do not fully clip on the door units

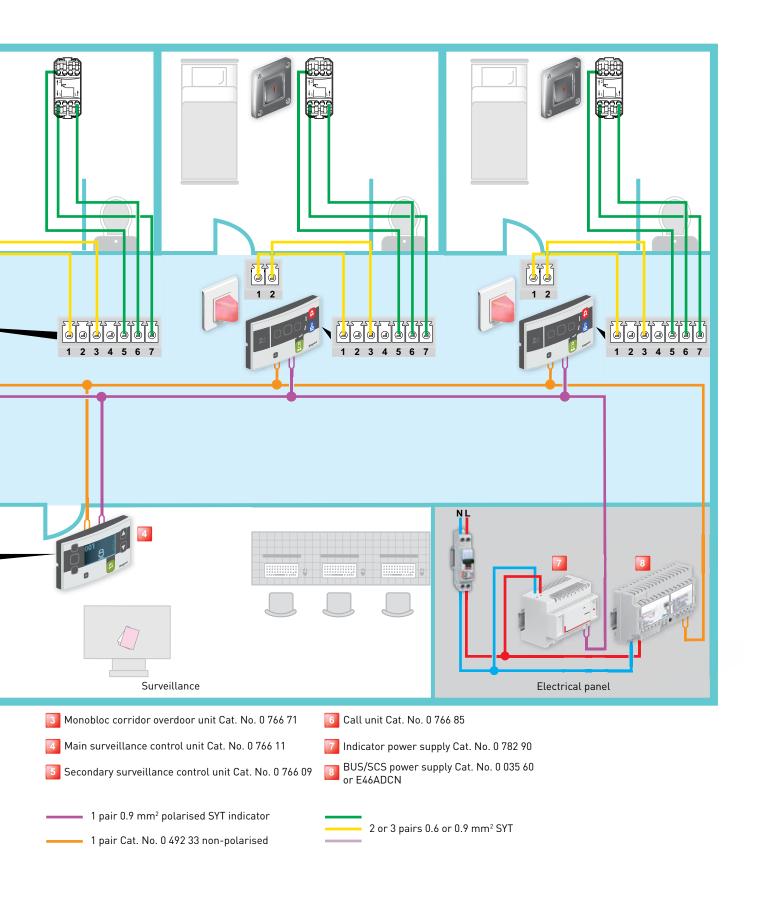


- High-resistance call unit Cat. No. 0 782 51
- 2 Door unit Cat. No. 0 766 06

Terminal	Description	Terminal	Description		
1	Lamp common 10		Push-button 2 call indicator		
2	White lamp 11		Bathroom pull-cord common		
3	Red lamp	12	Bathroom pull-cord contact		
4	Green lamp	13	Bathroom pull-cord indicator		
5	Push-button 1 common	14	Bathroom call acknowledgment button (option)		
6	Push-button 1 call button	15	Biomedical contact common		
7	Push-button 1 call indicator	16	Biomedical contact		
8	Push-button 2 common				
9	Push-button 2 call button				

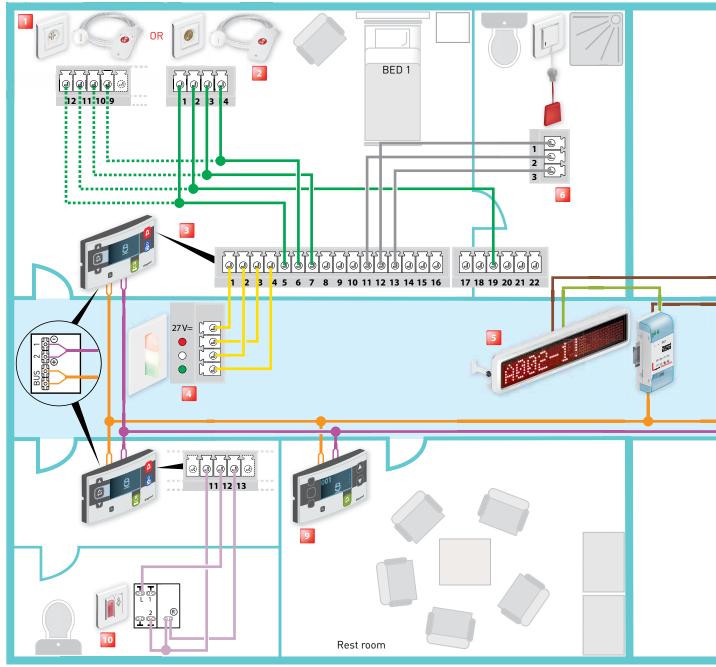
If the monitor lights are not being used replace them with a resistance of 100 k $\Omega$ /0.25 W If the call contact is not being used, short-circuit the corresponding terminals





### Wiring: call + nurse presence traceability interface

#### A Do not fully clip on the door units

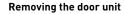


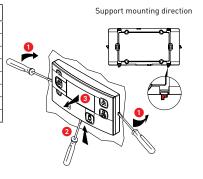
Socket + hand-held control unit for call Cat. Nos. 0 782 45/47 + 0 782 42/44

- Door unit with display unit Cat. No. 0 766 07/06
- Socket + hand-held control unit for call Cat. Nos. 0 782 41/46 + 0 782 40

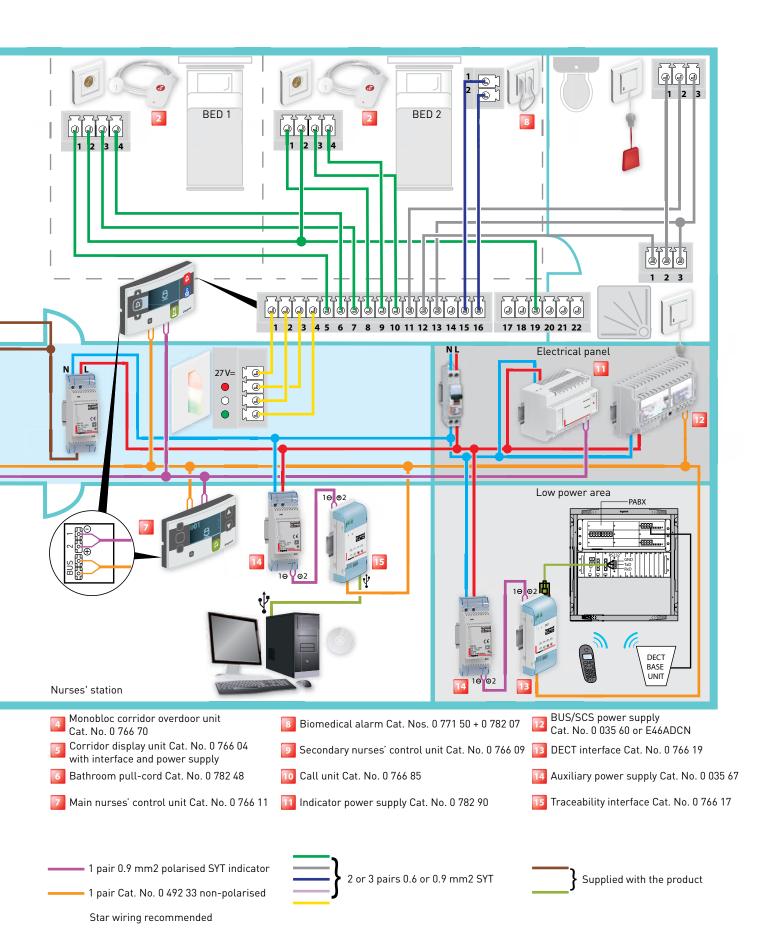
#### Terminal Terminal Description Description 10 Lamp common Bed 2 hand-held control unit call indicator White lamp Bathroom pull-cord common 11 Red lamp 12 Bathroom pull-cord contact 13 Bathroom pull-cord indicator Green lamp Bathroom call acknowledgment button (option) 5 Bed 1 hand-held control unit common 14 Bed 1 hand-held control unit call button 15 Biomedical contact common 6 7 Bed 1 hand-held control unit call indicator 16 Biomedical contact Bed 2 hand-held control unit common Beds 1 & 2 hand-held control unit backlighting Bed 2 hand-held control unit call button

If the monitor lights are not being used, replace them with a 100 k $\Omega$ /0.25 W resistor If the call contact is not being used, short-circuit the corresponding terminals

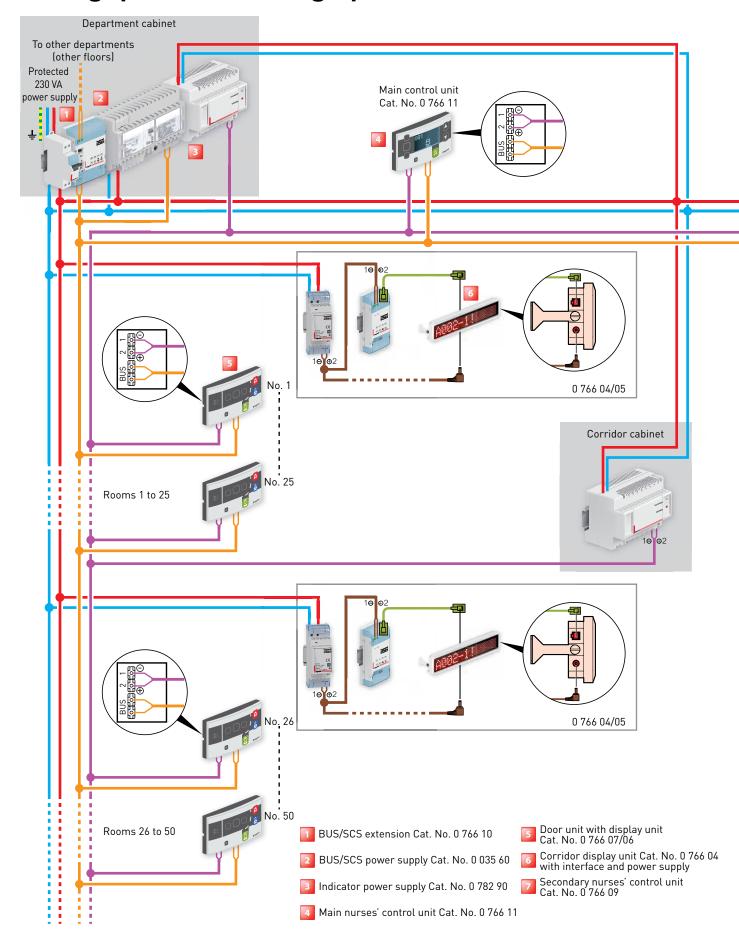


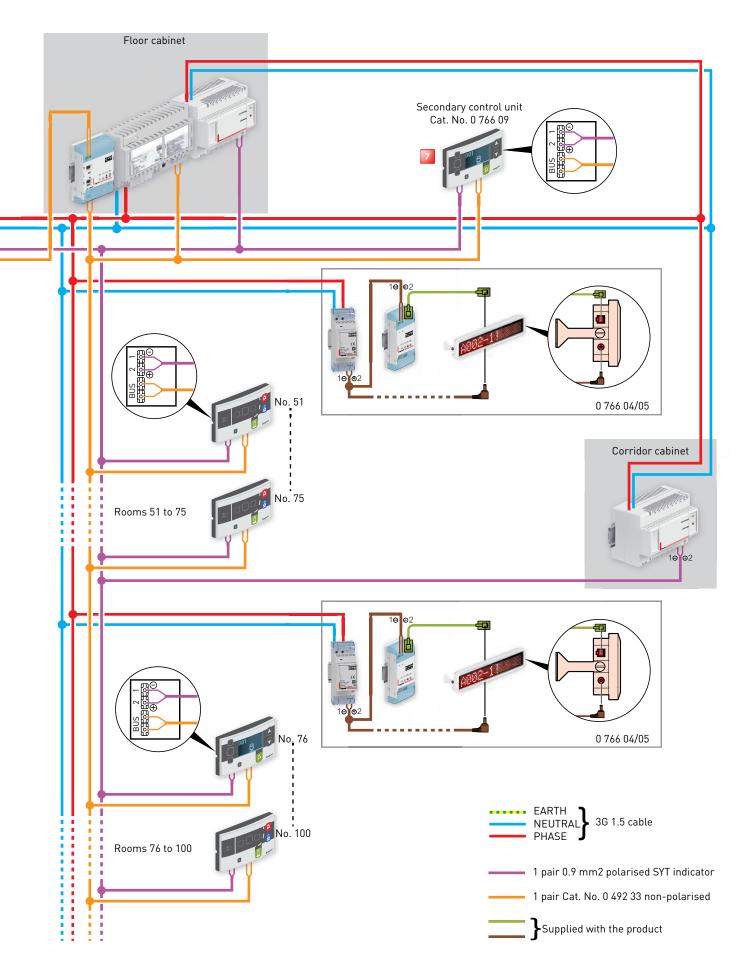


### + DECT interface

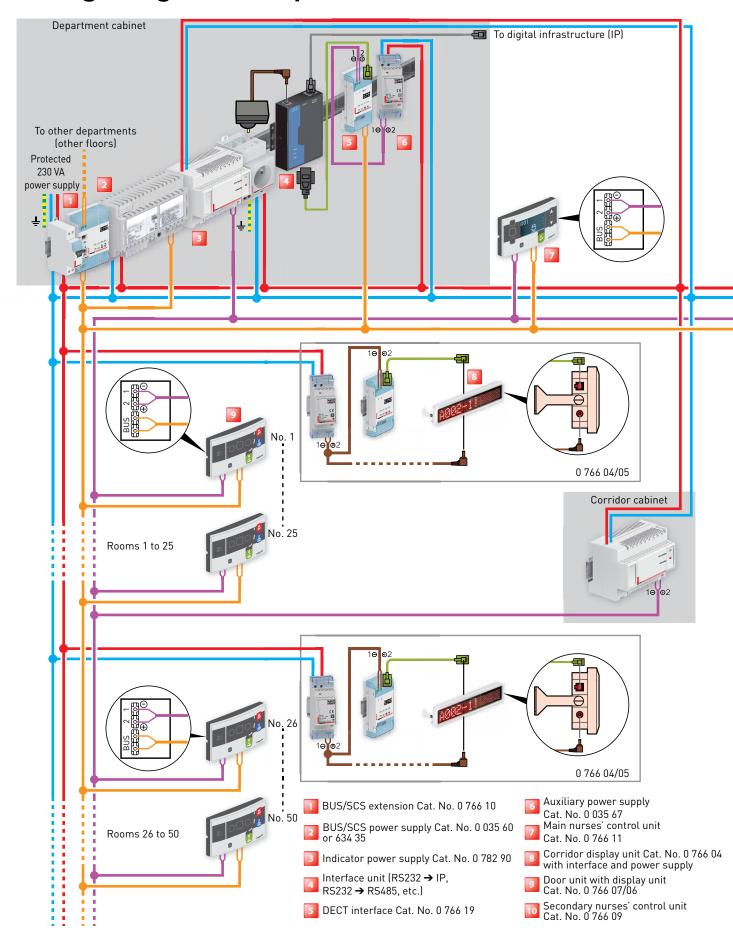


# Wiring: power for wiring up to 100 beds



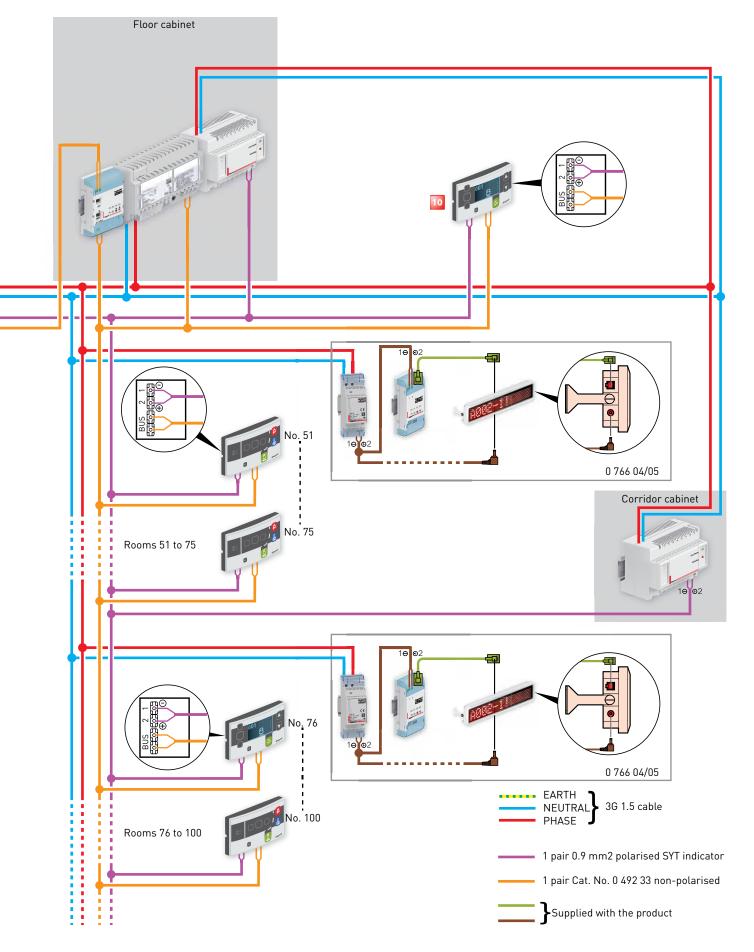


## Wiring: Diagram of department + DECT interface

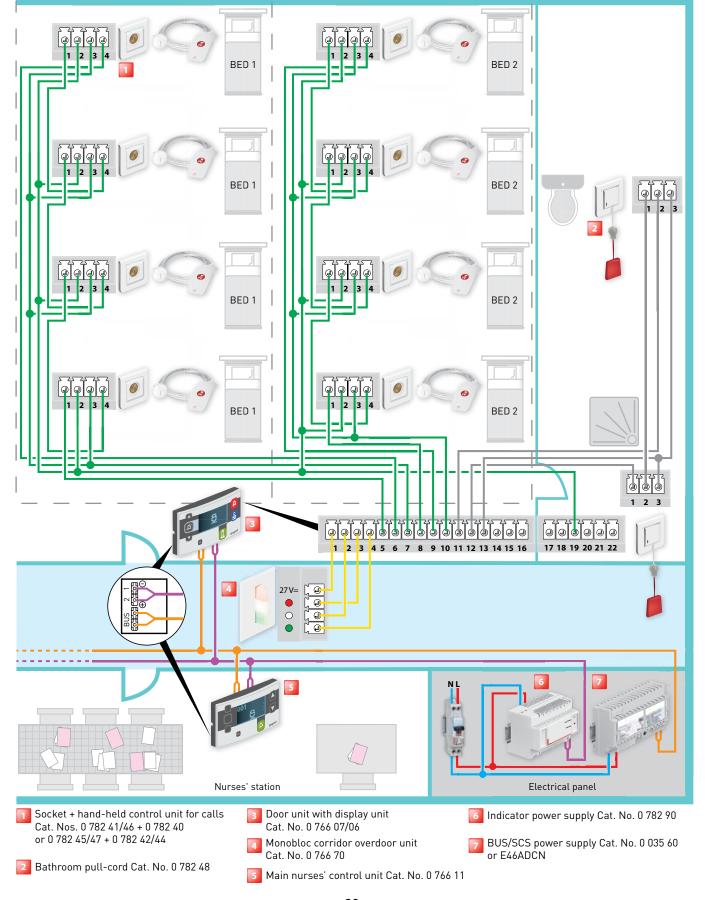




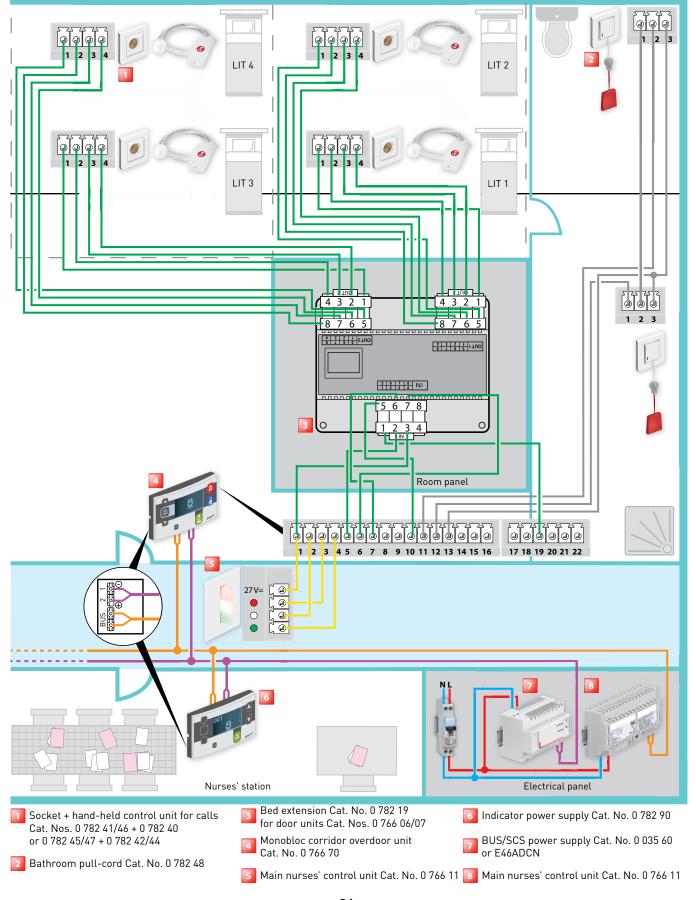
### and RS232/IP interface



# Wiring: Rooms with up to 8 beds without identification of the beds

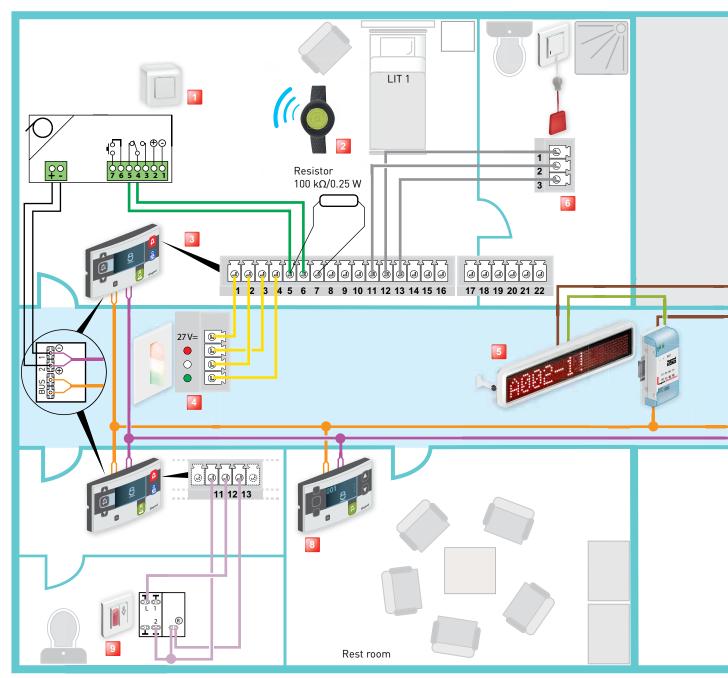


# Wiring: rooms with up to 4 beds with identification of the beds



## Wiring: call + nurse presence installation

A Do not fully clip on the door units

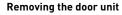


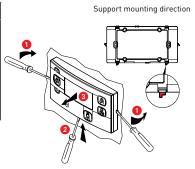
- Radio receiver Cat. No. 21TACR901 for portable radio transmitters
  - Door unit with display unit Cat. No. 0 766 07/06

Portable activation unit Cat. No. 21PDER904

Terminal	Désignation	Borne	Description
1	Lamp common	10	Bed 2 hand-held control unit call indicator
2	White lamp	11	Bathroom pull-cord common
3	Red lamp	12	Bathroom pull-cord contact
4	Green lamp	13	Bathroom pull-cord indicator
5	Bed 1 hand-held control unit common	14	Bathroom call acknowledgment button (option)
6	Bed 1 hand-held control unit call button	15	Biomedical contact common
7	Bed 1 hand-held control unit call indicator	16	Biomedical contact
8	Bed 2 hand-held control unit common	19	Beds 1 & 2 hand-held control unit backlighting
9	Bed 2 hand-held control unit call button		

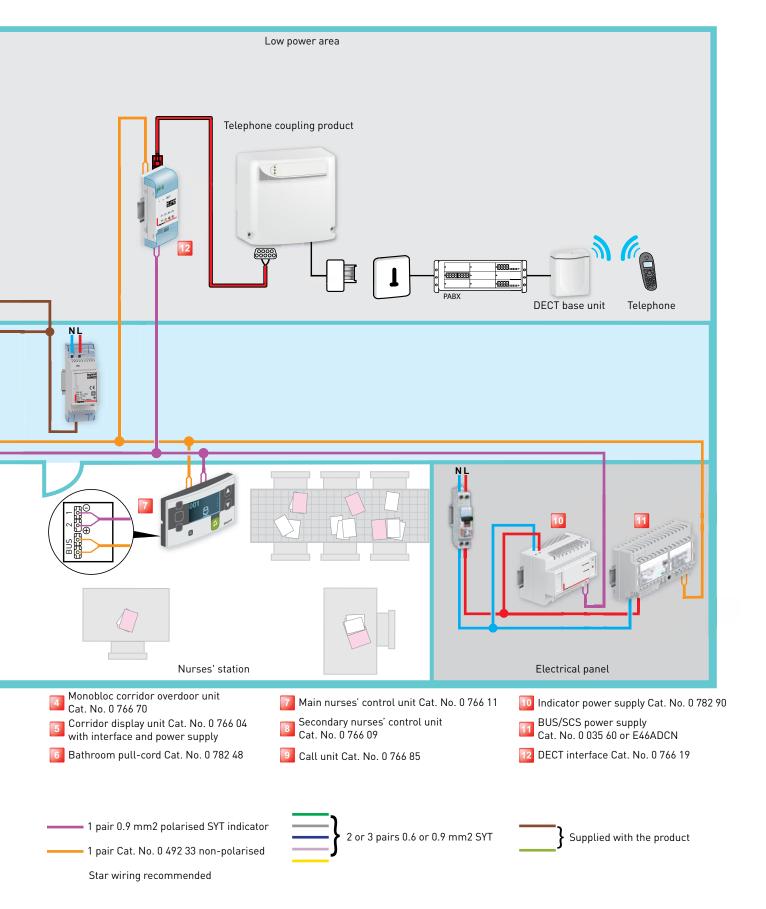
If the monitor lights are not being used, replace them with a 100 k $\Omega$ /0.25 W resistor If the call contact is not being used, short-circuit the corresponding terminals







### with radio transmitter and receiver



# **Parameter setting**

#### **DEVICE CONFIGURATION**

It is possible to manage 10 zones (departments) in a physical configuration.

- For any installation with fewer than 80 directions (rooms) per department, it is possible to carry out a physical configuration (i.e. using configurators).
- Virtual configuration is obligatory when there are more than 80 directions per department (not yet available).

20 additional addresses are reserved for:

- secondary control unit
- corridor display unit (maximum 5)
- traceability
- call forwarding over DECT
- door controller for secure wandering
- bus extension



#### PHYSICAL DEVICE CONFIGURATION

A Physical configuration (using configurators) and virtual configuration (using software) are not compatible.

Physical configuration is carried out by inserting the "configurators" into the correct locations in each device, distinguished by either a number or a graphic symbol.

This mode should be used for installations with no more than 100 devices in each zone (80 directions (rooms) + 20 additional addresses).



Cat. Nos. 0 492 00/01/02/03/04/05/06/07/08/09 or Cat. Nos. 3501/0/1/2/3/4/5/6/7/8/9



Cat. No. 0 261 45 or 3501K

#### Case comprising:

- 10 "0" configurators (Cat. No. 0 492 00 or 3501/0)
- 10 "1" configurators (Cat. No. 0 492 01 or 3501/1)
- 10 "2" configurators (Cat. No. 0 492 02 or 3501/2)
- 10 "3" configurators (Cat. No. 0 492 03 or 3501/3)
- 10 "4" configurators (Cat. No. 0 492 04 or 3501/4)
- 10 "5" configurators (Cat. No. 0 492 05 or 3501/5)
- 10 "6" configurators (Cat. No. 0 492 06 or 3501/6) - 10 "7" configurators (Cat. No. 0 492 07 or 3501/7)
- 10 "8" configurators (Cat. No. 0 492 08 or 3501/8)
- 10 "9" configurators (Cat. No. 0 492 09 or 3501/9)

#### Example of recommendation for 50 rooms

- 1 case Cat. No. 0 261 45 or 3501K
- 10 x Cat. Nos. 0 492 01/02 or 3501/1/2 (1 x 0 492 01/02 or 3501/1/2 for 5 rooms)
- 5 x Cat. Nos. 0 492 03/04/05/06 or 3501/3/4/5/6 (1 x 0 492 03/04/05/06 or 3501/3/4/5/6 for 10 rooms)

#### Configuration of the main control unit for nurses' station Cat. No. 0 766 11

A: indicates the zone to which the device belongs (0 to 9)

N1: not in use N2: not in use

M1: 1 for the first control unit

M2: not used

#### Configuration of the secondary control unit Cat. No. 0 766 09

A: indicates the zone to which the device belongs (0 to 9)

N1: indicates the secondary control unit number (0 to 9)

N2: indicates the secondary control unit number (0 to 9)

M1: 2

M2: not used

#### PHYSICAL DEVICE CONFIGURATION (CONTINUED)

#### Configuration of door unit with indicators Cat. No. 0 766 06

A: indicates the zone to which the device belongs (0 to 9)

N1: indicates the room number (0 to 9)

N2: indicates the room number (0 to 9)

M1: terminal operating mode (see table)

M2: bathroom acknowledgement mode:

- -1 = door unit
- 2 = additional pushbutton in the bathrooms
- $\emptyset = no configurator$

### Configuration of door unit with display unit Cat. No. 0 766 07

A: indicates the zone to which the device belongs (0 to 9)

N1: indicates the room number (0 to 9)

N2: indicates the room number (0 to 9)

M1: terminal operating mode (see table)

M2: bathroom acknowledgement mode:

- -1 = door unit
- 2 = additional pushbutton in the bathrooms

# Configuration of the display unit interface Cat. No. 0 766 04

A: indicates the zone to which the device belongs (0 to 9)

N1: indicates the device address (0 to 9)

N2: indicates the device address (0 to 9)

M1: audible signalling mode:

- 1 = buzzer enabled
- 2 = buzzer disabled

## Configuration of the DECT interface Cat. No. 0 766 19

A: indicates the zone to which the device belongs (0 to 9)

N1: indicates the device address (0 to 9)

N2: indicates the device address (0 to 9)

M1: type of message sent on the ESPA444

Config. M1	Hand- held remote Bed 1	Hand- held remote Bed 2	Bathroom	Biomedical contact	Wandering	Config. M2
1	~	X	X	X	X	Ø
2	~	X	~	X	X	1/2
3	~	X	~	~	X	1/2
4	~	~	Х	Х	Х	Ø
5	~	~	~	X	X	1/2
6	~	~	V	V	Х	1/2
7	Х	Х	V	х	Х	1/2
8	X	X	X	X	V	Door no. (0 to 9)

Config. M1	Error message	Alarm	Emergency	Call
1	~	X	X	X
2	~	V	X	X
3	~	V	~	X
4	~	V	~	V



#### Configuration of the BUS/SCS extension Cat. No. 0 766 10

#### "Physical extension" mode - repeater version

This mode should be used whenever it is necessary to extend the physical limit of the maximum length of the bus, but not the limit of the number of addresses in the zone.

In this application, configurator Cat. No. 0 492 20/3501/T is inserted in A and none in N1, N2.

#### "Logical extension" mode - gateway version

This mode allows an installation to be created with a larger number of zones connected to vertical trunking.

A: indicates the zone to which the device belongs (0 to 9)

N1: indicates the device address (0 to 9)

N2: indicates the device address (0 to 9)

M1: not in use

#### Configuration of the traceability interface Cat. No. 0 766 17

A: indicates the zone to which the device belongs (0 to 9)

N1: indicates the device address (0 to 9)

N2: indicates the device address (0 to 9)

M1: operating mode when the interface memory is full:

- 1 : older records are overwritten by new ones
- 2 : new records are suspended until old records have been saved and deleted from the interface

M2: not in use

#### PHYSICAL DEVICE CONFIGURATION (CONTINUED)

#### Example:

Installation of a zone comprising:

- 10 rooms with door units for 2 beds, biomedical alarm and bathroom
- 1 main control unit for the monitoring station, 1 secondary unit
- 1 corridor display unit with audible signalling, 1 traceability interface and 1 DECT interface

#### Door units Cat. Nos. 0 766 06/07



N1 N2 M1 M2

U	U	2	6	1
				TA
	4			EB







N1 N2 M1 M2



N1 N2 M1 M2





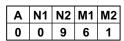


Α	N1	N2	М1	M2
0	0	7	6	1





N1 N2 M1 M2

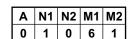




Interface for corridor display unit Cat. No. 0 766 04

Α	N1	N2	M1
0	9	8	1







Traceability interface Cat. No. 0 766 17

Α	N1	N2	М1
0	9	7	1



Control unit for nurses' station Cat. No. 0 766 11

Α	N1	N2	M1	M2
0	0	0	1	1



Secondary control unit Cat. No. 0 766 09

Α	N1	N2	M1	M2
0	9	9	2	1



DECT interface Cat. No. 0 766 19

Α	N1	N2	M1
0	9	6	4



#### PHYSICAL DEVICE CONFIGURATION (CONTINUED)

This section describes the essential concepts of 'physical' and 'virtual' device configuration.

To understand the addressing logic, the terms used in the text are defined below:

- Zone (A): Set of devices belonging to the same nursing department (10 zones max. configured with configurator: A, B, C... J and 14 zones max. with virtual configuration: A, B, C... N).
- N1–N2: Numerical identifier for each room in the (nursing) department.
- M1-M2: These configurators identify the device operating mode.

#### Healthcare building with 1 department of 80 rooms on 1 floor configured with configurator

Department A
Cat. No. 0 766 11
Room 1 \_\_\_\_\_ 80

Control unit for nurses' station Cat. No. 0 766 11

Α	N1	N2	M1	M2
0	0	0	1	1



Display: 001 to 080 **not modifiable** 

Door units Cat. Nos. 0 766 06/07

Α	N1	N2	М1	M2
0	0	1	2	1



Configuration for room no. 1 in department A with 1 bed and 1 bathroom

#### Healthcare building with 3 floors configured with configurator

Department C Cat. No. 0 766 11

Room 1\_\_\_\_\_80

Department B

Room 1\_\_\_\_\_80

Cat. No. 0 766 11

Control unit for nurses' station Cat. No. 0 766 11

Α	N1	N2	M1	М2
2	0	0	1	1

Floor 3



Display: 001 to 080 **not modifiable** 

Control unit for nurses' station Cat. No. 0 766 11

Α	N1	N2	M1	М2
1	0	0	1	1

Floor 2



Display: 001 to 080 **not modifiable** 

Department A Cat. No. 0 766 11

Room 1 \_\_\_\_\_ 80

Floor 1

Control unit for nurses' station Cat. No. 0 766 11

Α	N1	N2	M1	M2
0	0	0	1	1



Display: 001 to 080 **not modifiable** 

Door units Cat. Nos. 0 766 06/07

Α	N1	N2	M1	М2
2	0	1	2	1



Configuration for room no. 1 in department C with 1 bed and 1 bathroom

Door units Cat. Nos. 0 766 06/07

Α	N1	N2	M1	M2
1	0	1	2	1



Configuration for room no. 1 in department B with 1 bed and 1 bathroom

Door units Cat. Nos. 0 766 06/07

Α	N1	N2	M1	М2
^	^	1	2	4



Configuration for room no. 1 in department A with 1 bed and 1 bathroom

Can be positioned on floor 1, 2 or 3

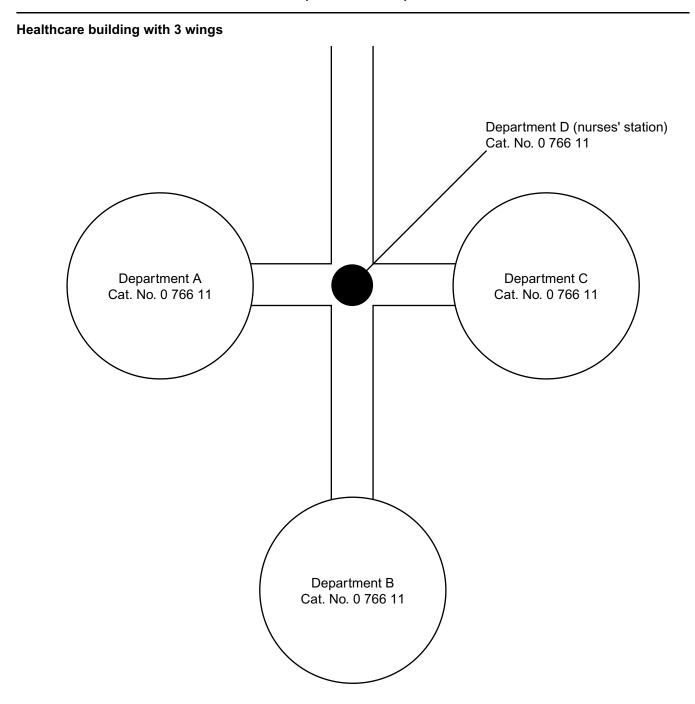
Main control unit Cat. No. 766 11 with activation of transfers (4 max.)

Α	N1	N2	M1	М2
3	0	0	1	1



Display: A001 to A080, B001 to B080, C001 to C080 not modifiable

#### PHYSICAL DEVICE CONFIGURATION (CONTINUED)



### Control unit for nurses' station Cat. No. 0 766 11

Α	N1	N2	M1	M2
2	0	0	1	1



Display: 001 to 080 **not modifiable** 

### Control unit for nurses' station Cat. No. 0 766 11

Α	N1	N2	M1	M2
1	0	0	1	1



Display: 001 to 080 **not modifiable** 

### Control unit for nurses' station Cat. No. 0 766 11

Α	N1	N2	М1	M2
0	0	0	1	1



Display: 001 to 080 **not modifiable** 

#### Door units Cat. Nos. 0 766 06/07

	Α	N1	N2	M1	M2
ĺ	2	0	1	2	1



Configuration for room no. 1 in department C with 1 bed and 1 bathroom

#### Door units Cat. Nos. 0 766 06/07

Α	N1	N2	M1	M2
1	0	1	2	1



Configuration for room no. 1 in department B with 1 bed and 1 bathroom

#### Door units Cat. Nos. 0 766 06/07

Α	N1	N2	M1	M2
0	0	1	2	1



Configuration for room no. 1 in department A with 1 bed and 1 bathroom

Main control unit Cat. No. 766 11 with activation of transfers (4 max.)

Α	N1	N2	M1	М2
3	0	0	1	1



Display: A001 to A080, B001 to B080, C001 to C080 not modifiable

#### VIRTUAL DEVICE CONFIGURATION



A Physical configuration (using configurators) and virtual configuration (using software) are not compatible.

When a product has been configured using configurators, in order to be able to configure it virtually (using software):

- 1 Remove the configurators
- 2 Switch off the BUS and indicator power supplies for 30 sec. minimum

#### **Principle**

Install the Nurse Call Configurator software Cat. No. 0 766 15 on the PC which is to be used for parameter setting.

Virtual configuration of the hospital system enables you to:

- increase the number of rooms per department to 150 instead of 80 with a physical configuration
- have 4-digit numbering for the rooms with the department in figures or letters
- have a saved record of the project

#### Implementation

Hospital system products are configured in virtual mode using a PC.

The virtual configuration software must therefore be installed on a PC. Cat. No. 0 766 15.

There are 3 options for virtual configuration:

- Configuration kit used outside the installation (standalone mode)
- Configuration kit connected to the installation
- Web server Cat. No. F454 installed in an enclosure connected to the vertical BUS or the floor BUS. When this is in use the nurse call system is no longer operational.

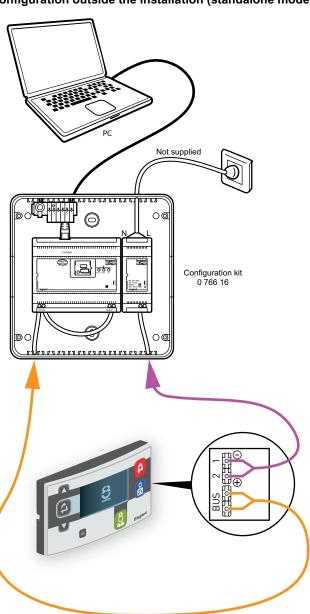
The PC will be connected to the interface via an electronic link (IP). The configuration kit must have a fixed IP address (192.168.1.35 by default).

#### Replacing a product

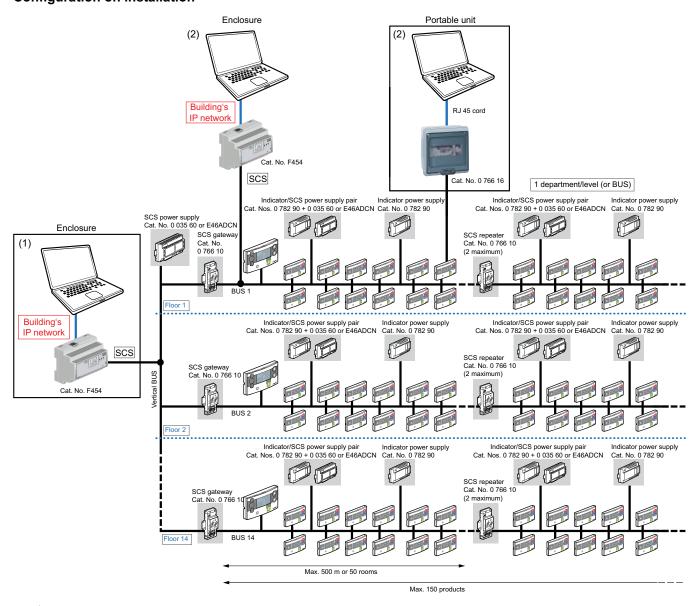
A faulty product must be replaced outside the installation (as in the diagram opposite).

Please refer to the section entitled: Procedure for replacing a product.

#### Configuration outside the installation (standalone mode)



#### Configuration on installation



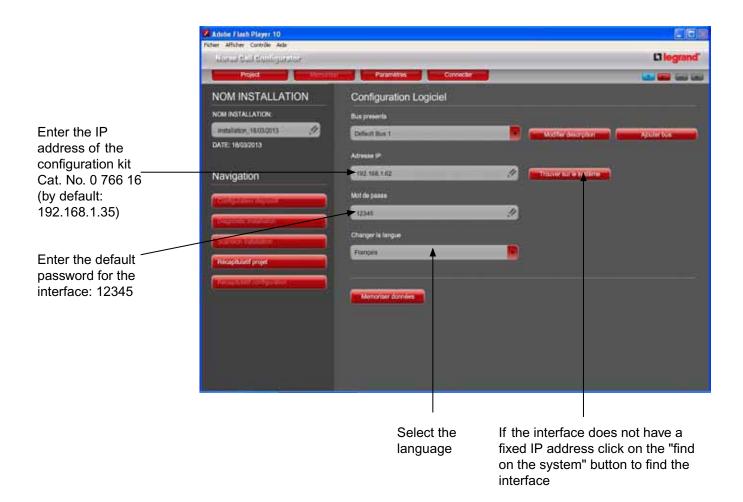
- (1) ⚠ Parameter setting blocks operation of the entire building.
- (2) △ Disconnect the gateway Cat. No. 0 766 10 for the floor. Now parameter setting only blocks operation of the floor concerned.

#### VIRTUAL DEVICE CONFIGURATION (CONTINUED)

#### **Launching the Nurse Call Configurator**

Give the PC a fixed IP address: 192.168.1.100 (recommended)

Once the Nurse Call Configurator software has started:



Once all the parameters have been entered click on

Connecter in the taskbar.



The PC is connected to the interface.

#### **VIRTUAL DEVICE CONFIGURATION (CONTINUED)**

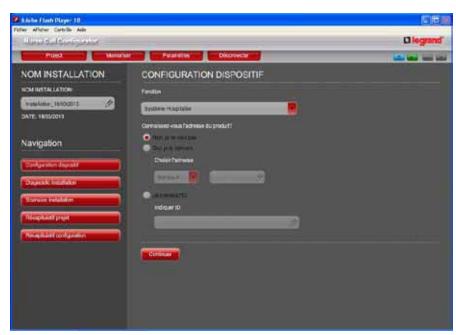
#### **Product configuration**



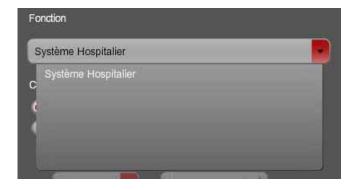
If a product has not been configured, the icon flashes quickly.

In "Virtual Configurator" select

Configuration dispositif



In the "Function" drop-down menu select "Hospital System"



There are two possible solutions for finding the product to be configured:

- Either by the ID number marked on the back of the product
- Or by pressing the green "Nurse presence" button on the front of the product to be configured (recommended)

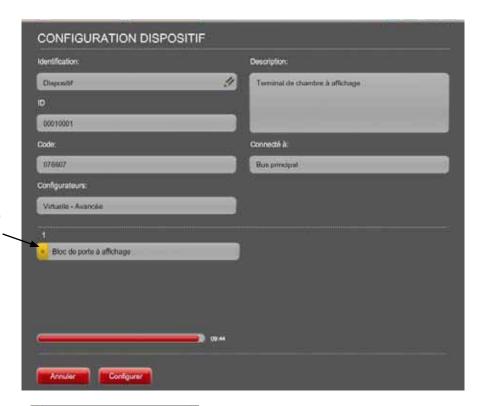
Once the product has been found the following page is displayed:

- Identification = product name provided in the software
- ID = ID of the product being configured
- Code = product Cat. No.
- Configurators: configuration type (physical/virtual)
- Product type with indication of the configuration status (yellow = not configured, green = configuration OK, red = configuration not OK)



Connaissez-vous l'adresse du produit?

Non, je ne sais pas



To access product configuration click on

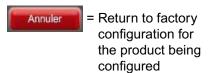


#### VIRTUAL DEVICE CONFIGURATION (CONTINUED)

Configuration principle for parameters:







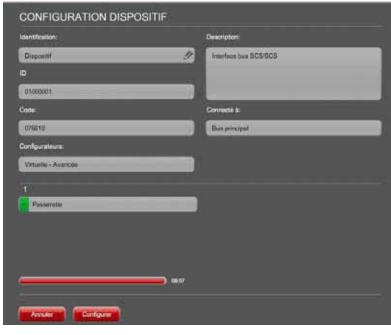
Once the configuration has been sent correctly the product becomes green.



#### Note:

In standalone mode, once the parameters have been configured, the product triggers a call and rings.





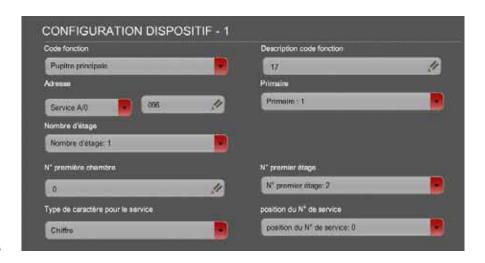
#### The different parameters

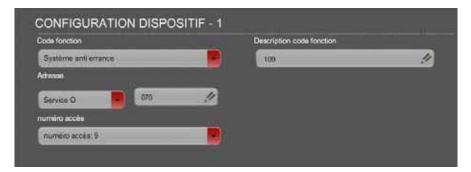
#### Main control unit Cat. No. 0 766 11

- Address = device address. A: = Department no. selection (zone) Address of the main control unit = 000.
- Number of floors: number of floors covered by the same department.
- First room no. = offset (between the address of the product and the room number displayed) on the room no. No. which will be displayed for the room with the address SCS = 1. The other rooms will be in succession.
- First floor no. = offset on the first floor number. No. which will be displayed for the first floor of the department.
- Character type for the department: Letter/figure = display mode for the department number.
- Position of the department no.: It will be possible to offset the department number 1, 2 or 3 positions starting from the left (its initial position).

### Wandering prevention system Cat. No. 0 766 06

- Address = product address.
   Department no. for the monitored door and 0: SCS address of the product (additional products: start with 169, then decrease).
- Access number: number of the door displayed





#### VIRTUAL DEVICE CONFIGURATION (CONTINUED)

#### Door unit Cat. No. 0 766 06/07

- Address = product address.
   Department no. for the room and
   0: address of the room which will be displayed according to the parameters of the main control unit.
- Bed 1 present: Yes/No
- Bed 2 present: Yes/No
- Bathroom: Yes/No. Bathroom pull-cord present in the room.
- Biomedical contact: Biomedical contact present in the room.
- Corridor overdoor light unit: selection of the colours in the corridor.

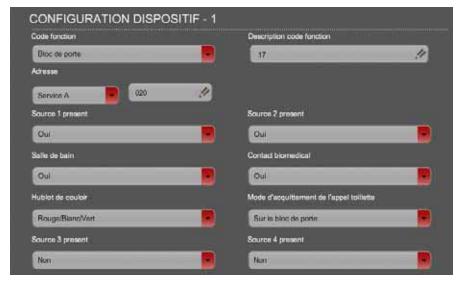
#### Corridor display unit: Cat. No. 0 766 04 / 0 766 05

- Address = product address.
   Department no. for the monitored door and 0: SCS address of the product (additional products: start with 169, then decrease).
- Buzzer activated: Yes/No. For making the display unit ring or not when a call is made.

#### Secondary control unit: Cat. No. 0 766 09

• Address = product address.

Department no. for the monitored door and 0: SCS address of the product (additional products: start with 169, then decrease).



 Acknowledgement mode for a bathroom call: if there is a bathroom pull-cord, the call can be acknowledged either by a pushbutton in the bathroom or on the door unit





# <u>Traceability interface:</u> <u>Cat. No. 0 766 17</u>

- Address = product address.
   Department no. for the monitored door and 0: SCS address of the product (additional products: start with 169, then decrease).
- Full memory management process: either overwrite the oldest events or stop saving events.

Gateway: Cat. No. 0 766 10 (the product ID is mandatory for parameter setting)

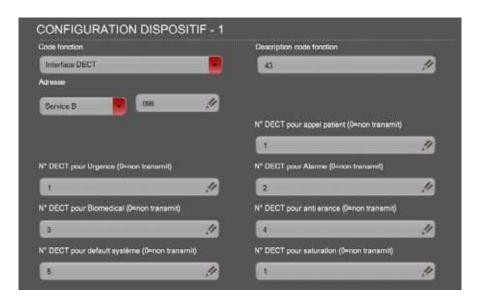
Address = product address.
 Department no. for the monitored door and 0: SCS address of the product (additional products: start with 169, then decrease).

#### DECT interface Cat. No. 0 766 19

- Address = product address.
   Department no. for the monitored door and 0: SCS address of the product (additional products: start with 169, then decrease).
- **DECT no. for xxxxx:** corresponds to the Caller no. in the ESPA 444 frame linked to an event type.







#### **VIRTUAL DEVICE CONFIGURATION (CONTINUED)**

#### Save the project

For building maintenance the product configuration must be saved (in the event that parameters are set again or if a replacement is required).

- **Procedure:** carry out a complete scan of the installation
- Go to Scan installation
- 2 Select Request for entire installation/Find all devices
- 3 Start the scan

A message appears, warning that the nurse call system is inoperative during parameter setting.

4 Check that the total number of products scanned corresponds to the number of products installed on the BUS (example: x/4 therefore 4 BUS products in the installation).







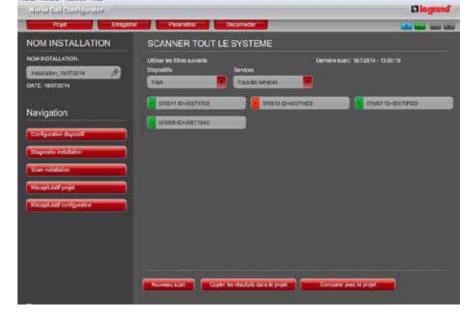
The result of the scan is displayed.

Each product is shown by its catalogue number and its ID number.

A

Do not save the project at this stage.

If you save it, the file will be empty.



5 At the end of the scan, copy the results to the Project (select then substitute ).







#### **VIRTUAL DEVICE CONFIGURATION (CONTINUED)**

Once the copy has been carried out, the ID numbers no longer appear.

To show the ID numbers, place the mouse arrow over a product (a label appears).



6 To save, go to Project/Save As...

This backup enables you to recover the configuration of the products in the installation.

**NOTE:** Legrand recommends that you restart the software and open the backup file to check that the project has been saved correctly.



#### Numbering examples

⚠ The SCS addressing range is from no. 1 to no. 169.

1. One department per floor (department only including one floor):

Department 0 located on the ground floor: Room numbers from 0020 to 0189		
Parameter	Value	
Address	A/000	
Number of floors	1	
First room number	19	
First floor number	0	
Character type for the department	Figure	
Position of the department no.	0	

Department 1 located on the 1 <sup>st</sup> floor: Room numbers from 1001 to 1170		
Parameter	Value	
Address	B/000	
Number of floors	1	
First room number	0	
First floor number	0	
Character type for the department	Figure	
Position of the department no.	0	

#### 2. Multiple departments on the same floor:

Department 0 located on the 2 <sup>nd</sup> floor: Room numbers from 2020 to 2098			
Parameter	Value		
Address	A/000		
Number of floors	1		
First room number	19		
First floor number	2		
Character type for the department	Figure		
Position of the department no.	1		

Department 1 located on the 2 <sup>nd</sup> floor: Room numbers from 2101 to 2199		
Parameter	Value	
Address	B/000	
Number of floors	1	
First room number	00	
First floor number	2	
Character type for the department	Figure	
Position of the department no.	1	

#### 3. One department stretching across multiple floors:

Department 2 with 3 levels: Room numbers from 2301 to 2399/2400 to 2499/2530 to 2599		
Parameter	Value	
Address	C/000	
Number of floors	1	
First room number	00	
First floor number	3	
Character type for the department	Figure	
Position of the department no. 0		

Department 2 with 3 levels: Room numbers from 3320 to 3399/4320 to 4399/5320 to 5399		
Parameter	Value	
Address	C/000	
Number of floors	1	
First room number	19	
First floor number	3	
Character type for the department:	Figure	
Position of the department no. 1		

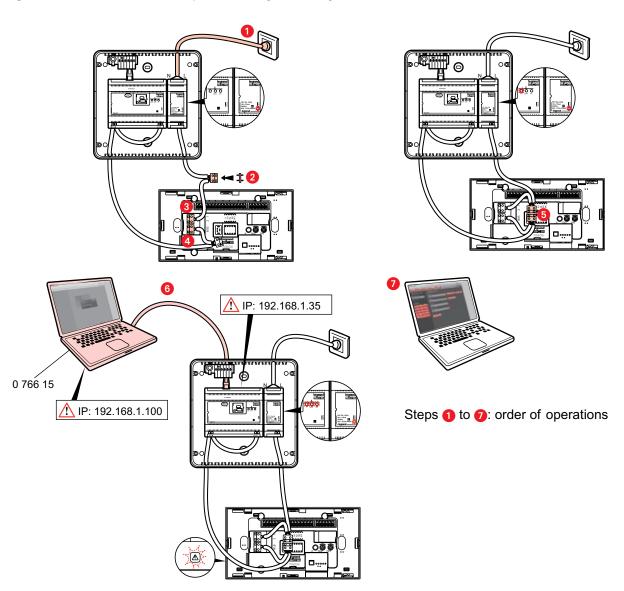
# Procedure for replacing a faulty BUS/SCS product in virtual configuration

#### PROCEDURE OUTSIDE THE INSTALLATION (STANDALONE MODE)

Note: a product must be replaced by a product with the same catalogue number.

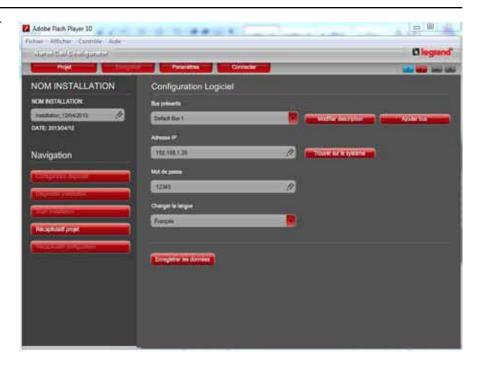
The production date of the new product must be later than 12W26

- (1) Take a note of the ID number of the faulty product in the department.
- ② Take a note of the ID number of the new product.
- ③ Connect the PC to the new product using the configuration kit Cat. No. 0 766 16.





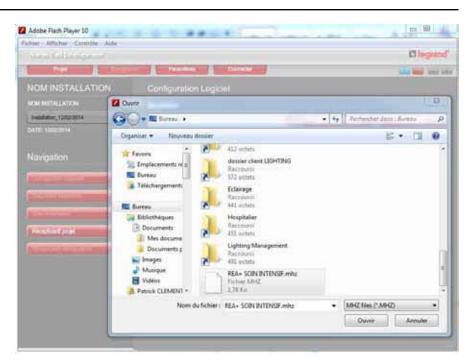
(4) Start the Nurse Call Configurator software Cat. No. 0 766 15.



## Procedure for replacing a faulty BUS/SCS product in virtual configuration (continued)

## PROCEDURE OUTSIDE THE INSTALLATION (STANDALONE MODE) (CONTINUED)

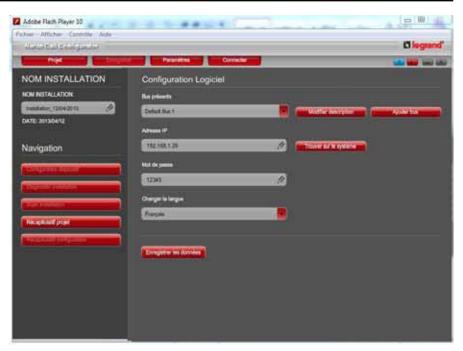
(5) Click on the "Project" tab then on "Open" and open the backup file for the installation (.mhz file).



6 The file opens at the page showing all the devices in the installation. Click on the "Parameters" tab to access the configuration page for connection to the kit.



(7) Enter the IP address of the configuration kit (default address: 192.168.1.35 and default password: 12345) to connect the software to the system. Click on "Save data" to save the modifications then click on "Project summary".



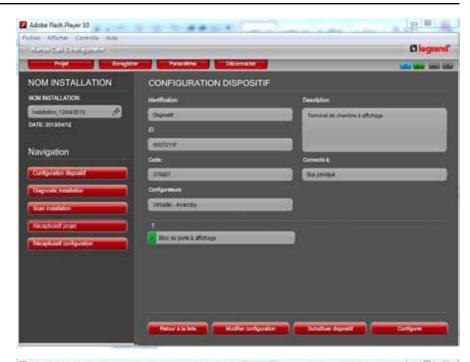
(8) Select the faulty product using its ID number (to display the ID numbers, place the mouse cursor over each product).



## Procedure for replacing a faulty BUS/SCS product in virtual configuration (continued)

## PROCEDURE OUTSIDE THE INSTALLATION (STANDALONE MODE) (CONTINUED)

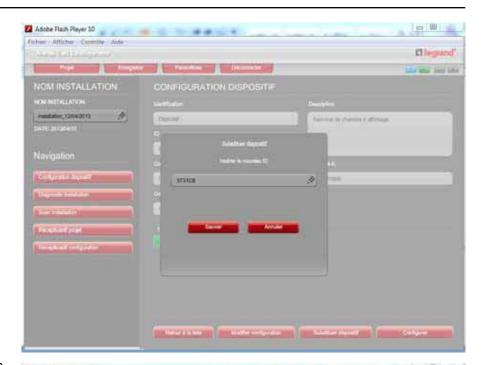
9 Click on "Replace device".



(10) Click on "Continue".



(1) Enter the ID number of the new product then save.



Check that the ID number has been updated correctly, then click on "Configure".



## Procedure for replacing a faulty BUS/SCS product in virtual configuration (continued)

## PROCEDURE OUTSIDE THE INSTALLATION (STANDALONE MODE) (CONTINUED)

A dialogue box appears. Click on "Continue" then on "Close".



(2) Click on "Project" then "Save As" to save the file (.mhz file).



- (3) Send the programmed product on-site for installation then install it in place of the faulty product.
- (4) Check the operation of the installation.

## **Commissioning**

#### **POWER ON**



Do not fully clip on the units before commissioning is complete.

### Recommendations (see p. 4)

- 1 Only connect one door unit and disconnect the indicator and bus power supplies to the other rooms (door unit).
- 2 Set the circuit breaker for the bus and indicator power supplies to ON.
- 3 Check that the green power indicator is on.
- 4 Set the door unit parameters using physical configuration (using configurators) or virtual configuration (for software).
- Test the local operation of a room (hand-held remote control unit, call pull cord, corridor light unit and door unit).
- 6 Issue a room recognition confirmation on the nurses' control unit.

#### SETTING UP A DEPARTMENT

#### Changing the language on the nurses' control unit



- Go to the configuration menu by pressing both scroll buttons at the same time.
- Use the arrows to select **Install/Configuration** from the main menu then confirm using the green button.
- Select the **Language** tab and confirm, then use the arrows to select the required language and confirm with the green button.

#### Exit the menu and return to the main menu



• Select the **Back** tab, then confirm with the green button.

## Zone (department) recognition



- Select **Install/Configuration** from the main menu using the arrows, then confirm with the green button.
- Now select the **Zone Recognition** menu. Confirm with the green button.
- To start the recognition procedure, select **Start procedure**, then confirm with the green button.
- The progress bar shows the progress of the procedure.
- Once the procedure has finished, check that all installed products are present. To do so, select the table with the arrows and confirm using the green button.
- The unit can display all addresses found for each type of product: select the product type (RT, CD, WS, etc.) with the arrows and confirm using the green button.
- To return to the previous menu select **Back** then confirm with the green button.

- If the room is detected, reconnect and test the other rooms one at a time (see step no. 4).
- 8 Once all the rooms are connected, issue a department recognition confirmation from the main control unit.

Check that all rooms are present.

NS = Nurses' control unit Cat. No. 0 766 11

RT = Room unit Cat. No. 0 766 06/07

**CD** = Corridor display unit Cat. No. 0 766 04/05

WS = Wandering prevention unit Cat. No. 0 766 06

**TRACE** = Traceability interface Cat. No. 0 766 17

**DECT** = DECT interface Cat. No. 0 766 19

**GW** = Gateway Cat. No. 0 766 10

**2NS** = Secondary nurses' control unit Cat. No. 0 766 09

- 9 Check overall operation.
- 10 Clip on all the door units.

## **Commissioning (continued)**

### **SETTING UP A DEPARTMENT (CONTINUED)**

#### Configuring department transfers



- Go back to the configuration menu by pressing both scroll buttons at the same time.
- Use the arrows to select **Install/Configuration** from the main menu then confirm using the green button.
- Select the **Department grouping** menu. Confirm with the green button.
- To start the recognition procedure, select **Start procedure**, then confirm with the green button.

- The progress bar shows the status of the procedure.
- Once the procedure is complete, select the departments to be grouped (maximum of 3).
- To return to the previous menu select **Back** then confirm with the green button.
- Carry out the same procedure for all departments that will be authorised to forward calls.

Remember to write down the departments to which calls can be forwarded on the memo sheet by the nurses' control unit (department transfers).



## **COMMISSIONING THE DECT INTERFACE CAT. NO. 0 766 19**

#### Example of interface configuration:

A: indicates the zone to which the device belongs

A = 1

N1 = 9

N2 = 9

M1 = 4



## Configuration of the DECT interface Cat. No. 0 766 19:

Allows all messages to be forwarded over DECT (call, emergency, alarm and error)

A: indicates the zone to which the device belongs (0 to 9)

N1: indicates the device address (0 to 9) N2: indicates the device address (0 to 9) M1: type of message sent on the ESPA444

Config. M1	Error message	Alarm	Emergency	Call
1	~	X	X	X
2	~	V	Х	Х
3	~	V	~	X
4	~	V	~	V

**Tip**: use the OCC software to check that the ESPA 444 protocol is working correctly.

## **Commissioning (continued)**

## **Communication parameters**

• Speed: 9600 bauds

Data bits: 7Parity: evenBit stop: 1

## Message sent in ESPA 444

1 [ENQ]	2 [ENQ]	 [SOH] 1 [STX]	1 [US] T03 [RS]	2[US]C002- !!! [RS]	6[US]1[RS]	4[US]3[RS]	3[US]7[ETX]	[ACK]	[EOT] [EOT] [EOT]
		Message type	Call no. = T03	Message to be transmitted: C002- !!!	Message priority = Normal	Call type = Standard	Type of audible signal Beep coding = 7	•	End of message

Example of message: C002-!!! To be read: extreme emergency in zone C, room no. 002 from the door unit

Zone no.			Rooi	m no.			Call source	Event
	001	031	061	091	121	151	Empty (door unit)	Empty (nothing)
В	002	032	062	092	122	152	1 (bed 1)	! (nurse call)
С	003	033	063	093	123	153	2 (bed 2)	!! (emergency call)
D	004	034	064	094	124	154	W (WC/bathroom)	!!! (extreme emergency call)
Е	005	035	065	095	125	155	B (biomedical emergency)	
F	006	036	066	096	126	156	P (nurse presence)	
G	007	037	067	097	127	157	E (system fault)	
Н	800	038	068	098	128	158		-
I	009	039	069	099	129	159		
J	010	040	070	100	130	160		
	011	041	071	101	131	161		
	012	042	072	102	132	162		
	013	043	073	103	133	163		
	014	044	074	104	134	164		
	015	045	075	105	135	165		
	016	046	076	106	136	166		
	017	047	077	107	137	167		
	018	048	078	108	138	168		
	019	049	079	109	139	169		
	020	050	080	110	140	170		
	021	051	081	111	141	171		
	022	052	082	112	142	172		
	023	053	083	113	143	173		
	024	054	084	114	144	174		
	025	055	085	115	145	175		
	026	056	086	116	146			
	027	057	087	117	147			
	028	058	088	118	148			
	029	059	089	119	149			
	030	060	090	120	150			



Event	Message	Description
Nurse present	A001-P	Nurse present in room A:001
Nurse call	A001-#!	Nurse call from the source # in room A:001
Emergency call	A001-# !!	Emergency call from the source # in room A:001
Extreme emergency call (blue code)	A001-# !!!	Extreme emergency call 🔝 from source # in room A:001
Biomedical alarm	A001-B !!!	Biomedical emergency in room A:001
Escape alarm	A009-WS!!	Escape alert, door no. 9 in department A
System fault	A001-E+	System fault in room A:001
BUS/SCS overload	A-SCS overload	BUS/SCS overload (communication) in department A

# = Call source							
Door unit							
Bed 1	1						
Bed 2	2						
Bed 3	3						
Bed 4	4						
WC/bathroom	W						

## Note:

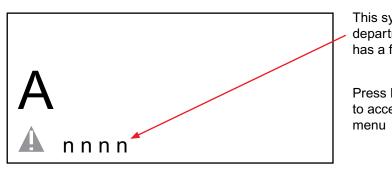
Check with the manufacturer of the telephone coupling product. They will guide you based on the information contained in these final 2 pages. These manufacturers generally have a helpline.

## Maintenance codes and software version (visible on nurse's control unit)



Software version and mechanical version: refer to the last page of the manual.

#### **DIAGNOSTICS**

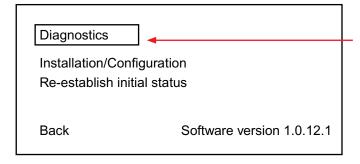


This symbol represents an anomaly within the department. "nnnn" is the number of the room which has a fault.

Press both buttons simultaneously to access the nurses' control unit

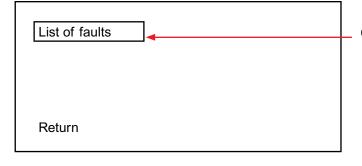






Confirm by pressing

It will only be possible to view the details of faults after recognising the zone.

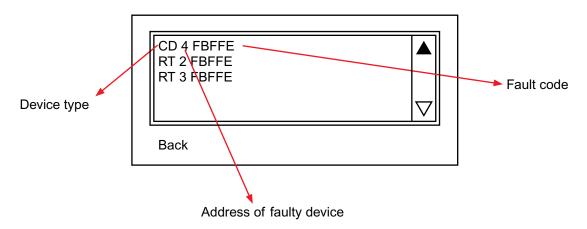


Confirm by pressing 🚄





#### List of faulty devices



NS = Nurses' control unit Cat. No. 0 766 11

**RT** = Room unit Cat. No. 0 766 06/07

CD = Corridor display unit Cat. No. 0 766 04/05

**WS** = Wandering prevention unit Cat. No. 0 766 06

TRACE = Traceability interface Cat. No. 0 766 17

**DECT** = DECT interface Cat. No. 0 766 19

**GW** = Gateway Cat. No. 0 766 10

2NS = Secondary nurses' control unit Cat. No. 0 766 09

## Maintenance codes (visible on nurses' control unit)



## **NURSE'S CONTROL UNIT FAULT CODE**

S	n	n	n	n	#	#	#	#	#	#	
								F	F6, th	sed. If no ere is a p call Legra mer servi	roduc and ce.
							F		Not used	d	
						F		OK			
						D,C,9,8		_	ator pow		
						B,A,9,8		_	/SCS pov	wer suppl	y fault
						7,6,5,4,			en fault		
						E,C,A,8	,0,4,2,0	ivien	nory fault		
					F		ОК				
						,8,6,4,2,0	_	hone m	odule fau	ılt	



## SECONDARY CONTROL UNIT FAULT CODE

N	s	n	n	n	n	#	#			ı	#	1	#
											If 1 F6 pro ca cu	oduct	F or re is a : fault, grand er
								Г	F	F	Not use		used
							F D,C,		,4,1,0	OK Pov			nult
									2,1,0	Pov BU	wer sup IS/SCS reen fau		nult
									5,4,2,0		mory fa		
						F			OK				
						E,C,A, D,B,9,			Interph Invalid		module le	e faul	t

# Maintenance codes (visible on the nurses' control unit) (continued)



## **DOOR UNIT FAULT CODE**

Т	n	n	n	n	#	#		#	#	#	#	
											1.16 1.55	
										there is	I. If not FF a product fa and custon	ault,
									E,C,A,8, 6,4,2,0		ılt on bed 1 note contro	
									D,C,9,8, 5,4,1,0		ılt on bed 2 note contro	
									B,A,9,8, 3,2,1,0		ılt on bathro eld remote o	
									7,6,5,4, 3,2,1,0	control	and-held re unit disconr	
									F	OK		
								E,C,A,8,	,6,4,2,0		nd-held ren	
								D,B,7,5,	3,1	Code not	valid	
							Ĺ	F		OK		
						E.C.	,A,8,6	4.2.0	Memory f	ault		
							,9,8,5,			power sup	ply fault	
							,9,8,3,		BUS/SCS	fault	-	
							5,4,3,2	2,1,0		ult (0 766	07)	
						F			OK			
					E.C.A	8,6,4,2,	0	Interpho	ne module f	ault		
						8,5,4,1,0			idor lamp fa			
						8,3,2,1,0			orridor lamp			
						,3,2,1,0			rridor lamp	fault		
					F			OK				



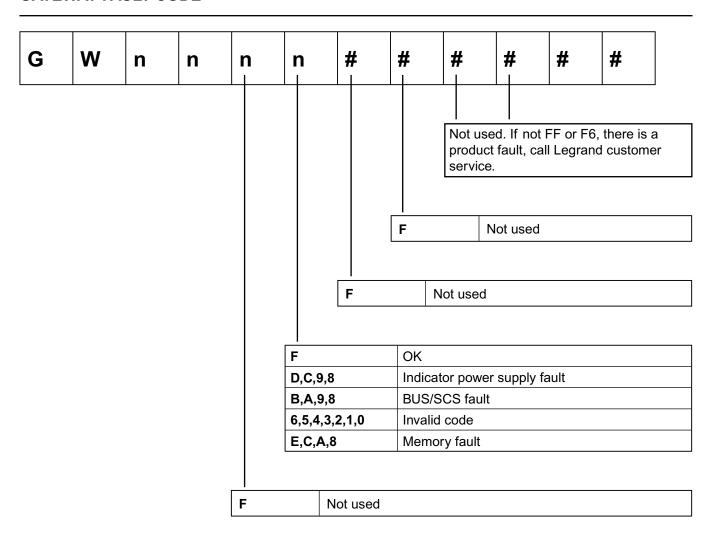
## FAULT CODE ON CORRIDOR DISPLAY UNIT

С	D	n	n	n	n	#	#		#		#	7	#	#		
									F		F	F fa C	6, the ault, conston	ed. If nere is a all Legner serv	prod rand vice.	
							B,A	,9,8, ,5,4,3	5,4,1, 3,2,1, 5,2,1,0 6,4,2,	0	BUS	/SC: lay ι			cted	
						F		No	ot use	ed						

## Maintenance codes (visible on the nurses' control unit) (continued)



### **GATEWAY FAULT CODE**





## FAULT CODE ON THE TRACEABILITY INTERFACE

product	Т	R	A	С	E	n	n	n	n	#	#	#	#	#	#
D,C Power supply 1  0,B Invalid code												F		If not F6, tl producall L custo servi	t FF or here is a uct fault, egrand omer ce.
0,B Invalid code															1 6 11
F Not used												T			

## Maintenance codes (visible on the nurses' control unit)(continued)

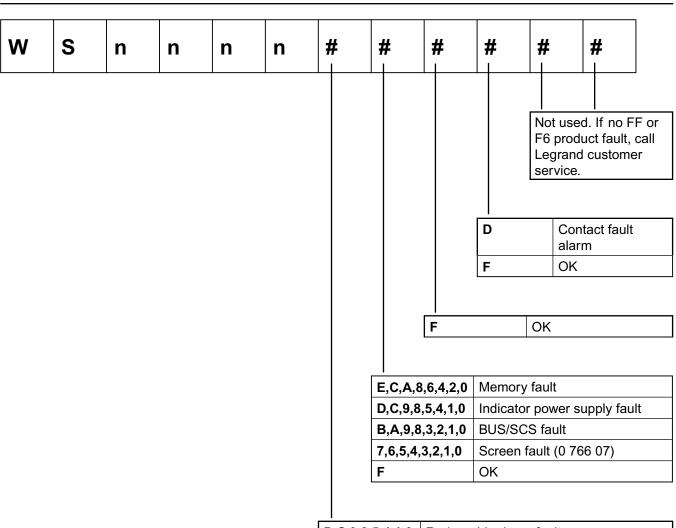


## **DECT INTERFACE FAULT CODE**

D	E	С	Т	n	n	n	n	#	7	#	#	7	# '	#	#
									- 1		F			not F there produ	ict fault, egrand mer ce.
									F	•			OK		
										D,C,9,	8,5,4,1	,0	Pow	er supp	oly fault
									E	3,A,9,	8,3,2,1	,0	BUS	/SCS f	ault
									7	<b>7</b> ,6,5,4	1,3,2,1,	0	disco		
									E	E,C,A,	8,6,4,2	2,0	Mem	nory fau	ult
								F			Not u	sec	t		



## **ANTI-WANDERING UNIT FAULT CODE**



D,C,9,8,5,4,1,0	Red corridor lamp fault
F	ОК

## **Changes to products**

CAT. NOS.	DESCRIPTION	VERSION	CHANGE	APPLICATION
				DATE:
0 766 11/09	Control unit	1.0.12	Created	11W45
0 766 06/07 0 766 08	Door unit Interphone module	01/01/2011	Virtual configuration compatible	12W26
0 766 08 0 766 10 0 766 04/05	BUS/SCS extension Corridor display unit	01/02/2010	Update for 0 782 19 (bed extension)	13W09
0 766 19	DECT interface	1.0.12	Created	11W45
		1.1.11	Compatible with virtual configuration	12W26
		1.2.10	Update for 0 782 19 (bed extension)	13W09
		1.2.16	Update of technical messages	14W07
0 766 17	Traceability interface	1.1.14	Created	12W26
		1.2.10	Update for 0 782 19 (bed extension)	13W30
0 766 18	Traceability software	1.0.4778.74	Created	13W30
0 782 19	Bed extension	1.2.10	Created	13W08
0 782 40	1-button hand-held remote control unit	1	Created	11W41
0 782 42	3-button hand-held remote control unit	1	Created	11W41
		2	Addition of mechanical end stops on control buttons	13W36
0 782 44	6-button hand-held remote control unit	1	Created	11W41
		2	Addition of mechanical end stops on control buttons	13W47
0 782 41/45/46/47	Magnetic socket	1	Created	11W41
0 782 48	Bathroom pull-cord	1	Created	11W45
			Increased production control	13W49
0 782 49/51	Special call button	1	Created	11W45
0 766 16	Configuration kit	1	Created	12W26
			Change in box	13W26
0 766 15	Virtual configuration software	1	Created	12W26
		2.2	Change for bed extension	13W09
0 766 70	3-colour indicator	1	Created	11W45



## **Troubleshooting assistance**

FAULT TYPE	DIAGNOSTICS
Door unit Cat. No. 0 766 06 or 0 766 07 flashes, displaying the software version number.	Add the configurator on the door unit in position M2 which must be 1 or 2. See physical device configuration table in the <i>Parameter setting</i> section (door units 0 766 06/07)
A transient fault on the door unit (between 1 and 30 s): $\Lambda$	-Check if the hand-held remote control unit common (calls) is connected to the correct terminal
Door unit "burnt" (smell of burnt electronic component)	Check the wiring on terminal 19: there is either a short-circuit between the common and terminal 19, or excess voltage on terminal 19
The overdoor light unit is not working	Check the indicator power supply and its polarity

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