secura

Technical Manual

EGi

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Cables & technical data

NOMENCLATURE	FUNCTION	mm²	CARACTERISTICS
NA	Relay output: contact normally open	1.5	230 V~; 6 A
COM	Common relay output	1.5	0 V
NC	Relay output: contact normally closed	1.5	230 V~; 6A
E1...E10	Digital inputs for external sensors	0.5	Dry contact to common
REF	Common	0.5	0 V
5 V	5V and 10 mA continuous output	0.5	5 V⎓; 10 mA
C	Actuators ground	1	0 V
GND	EGI 5104 module ground	1	0 V
MIC	Audio input	0.5	1.24 V$_{RMS}$ senstitivity
DAT	Radio frequency reader data	0.5	0 - 5 V
LED		0.5	0 - 5 V
CLK		0.5	0 - 5 V
12 V		0.5	12 V⎓; 65 mA
S in +	Audio + input	0.5	1.7 V$_{RMS}$ senstitivity
S in –	Audio – input	0.5	1.7 V$_{RMS}$ senstitivity
S out +	Audio + output	0.75	1.7 V$_{RMS}$ senstitivity
S out –	Audio – output	0.75	1.7 V$_{RMS}$ senstitivity

What is Secura?

EGi's **Secura** series allows communication and the management of assistance alarms in public buildings and particularly in homes for the elderly.

Secura's 3 levels (**Basic**, **Medium** and **Plus**) allow for a range of options from the most basic communication between rooms or areas and staff at the home, to the incorporation of telephony and intercom systems and even staff identification and recording care activities provided for users, allowing the control and management of assistance in the home and some of the services provided there.

- **Secura Basic** is oriented towards the management of assistance alarms and communication in homes with approximately 40 rooms, between the users themselves and care staff.

  The **Secura Basic** system is formed by elements such as the **EGI 5301** terminal and the **EGI 5101** wireless alarm generator combined with the most frequently used alarm devices in seniors residences such as bedside pushbuttons or bathroom pull cords. All of these devices trigger alarms and/or connect the user to a pre-established telephone (conventional telephones at control desk or DECT wireless telephones). To do this the system uses the analogue telephone lines in every room, which have to be installed in the home for normal telephone communication.

- **Secura Plus** is the ideal system for the **Integrated Management of Homes for the Elderly as** it allows a wide range of functions to be controlled in more than 400 rooms:

  - **MANAGEMENT OF ALARMS** generated manually by users of the home or automatically by the different modules in users' rooms or other spaces.

  - **CALL IDENTIFICATION**, providing information such as the room the call is made from, the type of alarm (falls, person out of bed, window open, water leakage etc ..) if the alarm has been dealt with or not, etc.

  - **INTEGRATION OF TELEPHONY, INTERCOM SYSTEMS AND PUBLIC ADDRESS SYSTEMS**, thanks to the full-duplex, hands-free technology which allows users to communicate, without requiring any action by them, with care staff and for the latter to use desktop or DECT wireless telephones to communicate with residents.

    The system can also be connected to the general public address system to broadcast general messages or background music in rooms or areas.

  - **STAFF IDENTIFICATION** which indicates who has attended the call, when and how, thanks to the use of proximity readers (RFID cards) as well as the management of care staff tasks (control of working hours, programmed tasks, control of extra services, control of doors, access to restricted areas...) and the preparation of statistics on monitoring or reports for relatives of home residents.

  - **MANAGEMENT MODULE**. The computerisation of the system by means of SPECIFIC SOFTWARE, allows it to be integrated into the Home management system to prepare reports (on services, user care, staff control, the billing of extra services, etc.).

- **Secura Medium** allows over 400 rooms to be controlled in a similar way to the Secura Plus system but with a simplified range of functions.

  Secura Medium's functions, composition, wiring and installation elements are the same as those of Secura Plus, but with the following exceptions:

  * Identification cards and the **5106** module for the identification card reader-identifier and **5105** radio frequency card reader and their associated modules cannot be used.

  * The room module is also a simplified version.

Secura's products are grouped according to the following table:

Basic	Medium	Plus
5301. Room terminal with wireless alarm generator. **5101**. Wireless alarm generator/pendant. **5102**. Wireless alarm generator/bracelet. **5201**. Wall module for bathroom pull cord. **5701**. Bathroom pull cord. **5103**. Wall module for bed pushbutton. **5202**. Bed pushbutton.	**CENTRALISER:** - **5302**. 1 power supply source + CPU. - **5107**. Connection plate for 8 telephone lines. - **5502**. Voice and data plate for every 16 rooms/room modules. **5501.1**. Room module (5 inputs, 2 outputs). **5101**. Remote control unit/pendant. **5102**. Remote control unit/bracelet. **5201**. Wall module for bathroom pull cord. **5701**. Bathroom pull cord. **5103**. Wall module for bed pushbutton. **5202**. Bed pushbutton. **5203**. Emergency pushbutton. **5104**. Microphone + preamplifier. **G26U/16**. 2 W, 16 Ω loudspeaker. **5801**. Management software. **5802**. **SECURA** test equipment.	**CENTRALISER:** - **5302**. 1 power supply source + CPU. - **5107**. Connection plate for 8 telephone lines. - **5502**. Voice and data plate for every 16 rooms/room modules. **5501**. Room module (10 inputs, 4 outputs). **5101**. Remote control unit/pendant. **5102**. Remote control unit/bracelet. **5201**. Wall module for bathroom pull cord. **5701**. Bathroom pull cord. **5103**. Wall module for bed pushbutton. **5202**. Bed pushbutton. **5203**. Emergency pushbutton. **5104**. Microphone + preamplifier. **5105**. Radio frequency card reader. **G26U/16**. 2 W, 16 Ω loudspeaker. **5106**. Reader – identifier for control desk. **5108**. Card for radio frequency reader. **5801**. Management software. **5802**. **SECURA** test equipment.

In all cases the **SECURA** system requires a telephone exchange with the following characteristcs:

Basic	Medium	Plus
• **1 analogue extension** for each **5301** terminal. • **1 analogue, digital or DECT telephone** for each control post or person who is going to take the call. • Connection to extensions is carried out by means of **RJ11** or **RJ45** connectors.	• **8 telephone lines** for each **5107** plate. • **1 analogue, digital or DECT telephone** for each control post or person who is going to take the call.	• **8 telephone lines** for each **5107** plate (not recommended more than 2). • **1 analogue, digital or DECT telephone** for each control post or person who is going to take the call.

In addition, for **SECURA Medium** and **Plus** a **non-dedicated PC** should be used for each control station.

PC characteristics: PIII or higher, 256 Mb RAM, sound card, Windows NT® or Windows 2000®.

The **Basic**, **Medium** and **Plus** ranges offer different characteristics:

| Basic	Medium	Plus
• **Full-duplex** communication with up to 4 DECT wireless telephones or with conventional multi-frequency analogue telephones for care staff. These telephones ring when an alarm is generated by pressing the different pushbuttons or pulling the external pull cords.	• Connects to centraliser through data/voice network and allows the transmission and reception of one 64,000 baud (telephone quality) **full-duplex**, bi-directional audio channel and one 16,000 baud full-duplex bi-directional data channel which is used to send the information received by the devices connected to the module and to allow the remote control of outputs.	• Connects to centraliser through data/voice network and allows the transmission and reception of one 64,000 baud (telephone quality) **full-duplex**, bi-directional audio channel and one 16,000 baud full-duplex bi-directional data channel which is used to send the information received by the devices connected to the module and to allow the remote control of outputs.
• **One input** to connect alarm generating elements (pushbuttons, pull cords etc.).	• It includes **5 inputs** allowing alarm signals to be identified individually and **2 outputs** to connect devices such as: relay-activated external actuators, and preamplified microphone, loudspeaker.	• It includes **10 inputs** and **4 outputs** allowing alarm signals to be identified individually and **4 outputs** to connect devices such as: relay-activated external actuators, microphone, preamplified microphone, loudspeaker.
• **One output** to connect external events by means of a relay included in the system.		• **Staff identification**, which indicates who has attended the call, when and how, thanks to the use of proximity readers (RFID cards), as well as the management of care staff tasks (control of working hours, programmed tasks, control of extra services, control of doors, access to restricted areas…) and the preparation of statistics on monitoring or reports for relatives of home residents.

Room terminal | 5301

5301 Room terminal with wireless alarm generator

This reference includes the room terminal and the **EGi 5101** wireless alarm generator unit.

- Full-duplex communication with up to 4 DECT wireless telephones or with conventional, multi-frequency analogue telephones for care staff.
- It allows communication to be programmed with up to 4 cascade-connected telephones. In this way if the first telephone does not answer or is busy the call passes on to the second one and so on up to the fourth telephone. The time to divert the call to the next telephone number must be set in the manufacturing process. Its default set is 3 minutes.
- When pressed, or in combination with the **EGi 5101/5102** wireless alarm generator, or by means of an external signal, an alarm is generated which is received at the care staff's telephone (which must have a display screen if the extension from which the call is made has to be identified).
- Two **RJ11** telephone connectors, one to connect the telephone line to the analogue central unit and the other for the user's telephone (optional).
- Rear switch to select "private" mode (care staff can speak to the user but not listen in, except in the case of an alarm triggered by the user himself.).
- 6A/250 V relay output for the control of 1 external element or several if parallel-connected (light signal, TV on/off) which can be connected to mains.
- Connection to 230 V by means of a standard mains plug (included).
- Loudspeaker volume adjustment.
- Allows for a maximum of 8 **EGi 5101/5102** wireless alarm generators. Identification by room terminal/extension number.
- External calls can be received, depending on the specifications of the telephone central unit (if any). The acceptance is made through any of the buttons that are normally used to generate an alarm.

Schematics [1]

❶ Telephone line failure LED

❷ Supply LED

❸ Absence/return button (not operational)

❹ Cancel alarm button

❺ Alarm LED

❻ Alarm button
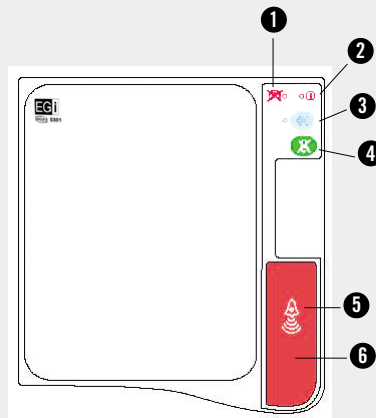
❼ Telephone line connector

❽ User telephone connector

❾ Private button (it avoids entering calls)

❿ Series line connector not operational

⓫ Peripherals connections

⓬ 230 V~; 50 Hz cable output
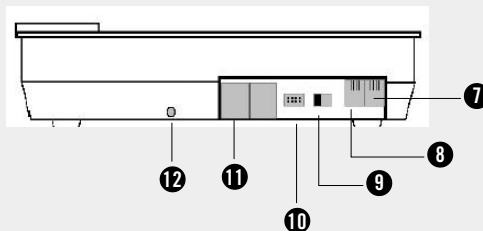
⓫ Peripherals connections
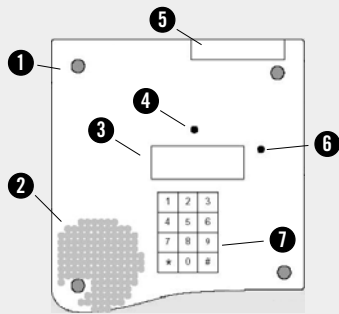
NA   relay output (**NO** - normally open)

COM **COMMON** relay output

NC   relay output (normally closed)

E1   Input for bed pushbutton and bathroom pull cord

Ref Ground for bed pushbutton and bathroom pull cord

5V   5V output

Room terminal | 5301

Schematics [1]

① Non-slip leg

② Loudspeaker grid

③ Label

④ Reset button

⑤ Rear connectors

⑥ Loudspeaker volume

⑦ Programming key

Room terminal programming [2]

Once installed the terminal has to be programmed with the extension numbers to be called in the event of an emergency.

To start programming first enter the security code. The default code is **1199**. Once it has been entered the terminal will issue three short "beeps" and all of the LEDs will flash indicating that it is in programming mode. If the keyboard is not pressed within 15 seconds the terminal will return to a "rest" state.

In the programming mode the platform responds with a short "beep" for each key pressed and a lower and longer tone (buzz) for each incorrect key pressed.

EXTENSIONS PROGRAMMING SEQUENCE:

EXTENSION 1   * 111374# [Telephone extension number]#
EXTENSION 2   * 157454# [Telephone extension number]#
EXTENSION 3   * 203534# [Telephone extension number]#
EXTENSION 4   * 249614# [Telephone extension number]#

The wireless alarm generator, which accompanies the room terminal is supplied ready programmed. The following steps should be carried out:

Enter programming mode: **1199**

Type in code: *630022#

Press the wireless alarm generator within five seconds (the room terminal thus memorises the code).

The codes to programme a third to eighth alarm generator code are:

third   > *630033#   fifth   > *630055#   seventh > *630077#
fourth > *630044#   sixth   > *630066#   eighth > *630088#

Once programming has been completed we can return to the normal waiting mode by waiting 15 seconds or by pressing *000000#.

The terminal has a battery to run on if the mains supply fails. If the user needs to switch off the terminal the following code *456456# must be entered when in programming mode (**1199**). If the terminal is in a state of alarm then it will not switch off until the alarm has been cancelled.

Alarm calls [3]

During the call the person who has generated the call or who is receiving it can carry out a series of actions by pressing the telephone keys. To do this the telephone should be able to emit DTMF tones. In some cases a control has to be activated on the telephone to change to the "dialling by multi-frequency tones" mode.

In the event of an accidental alarm being generated the user can cancel it before 3 seconds have elapsed by pressing the cancel alarm button on the **5301** terminal.

The following actions can be carried out using the keys:

KEY	ACTION
1	Half-duplex mode, activate room terminal loudspeaker (speak from telephone).
2	Half-duplex mode, activate room terminal microphone (listen from telephone).
*	Half-duplex mode, toggle microphone/loudspeaker activation.
7	Full-duplex mode. It is also used to continue a call if the conversation lasts more than 3 minutes. The terminal emits "beeps" warning that communication is going to be cut off in order to pass it on to the following programmed telephone.
5	End call. If the call is not ended with 5 the terminal will not interpret that the alarm has been attended and after 3 minutes have elapsed it will call the second programmed terminal.
0	Activate auxiliary relay output.
8	Desactivate auxiliary relay output.
#	Reduce volume.
9	Increase volume.

TECHNICAL SPECIFICATIONS	5301
Power supply	230 V~; 50 Hz
Relay output	230 V~, 6 A
Output	5 V⎓ y 10 mA
Rechargeable battery	Ni-MH 6V 1300 mA

Wireless alarm generator | 5101
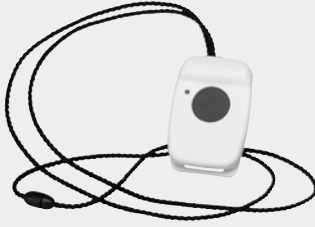
5101 Wireless alarm generator – Pendant

- 433 MHz harmonised band.
- Compact so that the user can wear it around the neck. Includes anti-strangle system.
- One single button which, when pressed, causes the **EGi 5301** terminal to emit an acoustic warning and allows full-duplex, hands-free communication between user and care staff.
- Light signal which indicates when the unit is being pressed and rounded edges to prevent injury.
- Totally tight (IP-X7 specifications), so that the user can use it in the shower or bath.
- For safety reasons it cannot be opened. When the factory-fitted battery runs out (after several years of life) the LED will not light up and the Wireless Alarm Generator should be replaced.
- Pre-programmed, unique identity code. Up to 254 different codes can be assigned per installation. Each **5301** can be programmed to accept a maximum total number of eight **EGi 5101/5102** remote control units. Identification of a call is made only by room terminal/extension.
- Reach in the open: 50 m.
- Complies with EN-50134-2.

Wireless alarm generator | 5102

5102 Wireless alarm generator / Bracelet

- Compact and with elastic strap so that the user can wear it on his wrist.
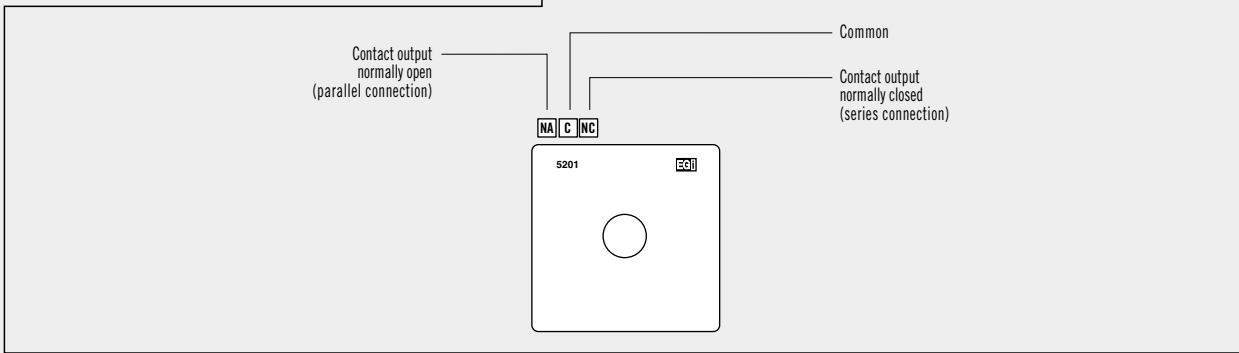- Same characteristics as **5101**.
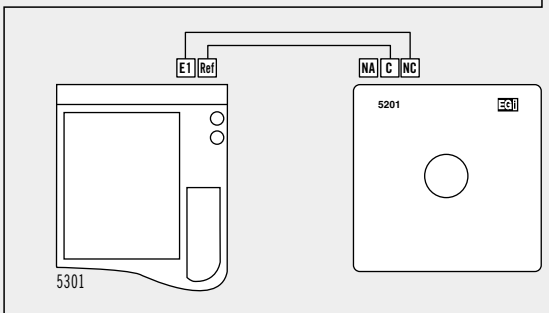
Wall module for bathroom pull cord | 5201

5201 Wall module for bathroom pull cord

- Installation in 60 mm standard box and combinable with many different series of electrical switchgear.
- Connectable to input of **EGi 5301** and **5501**, several units can be parallel-connected. Parallel-connected through contact which is normally open and serially connected through contact normally closed.
- Contact normally closed (to detect cable breakage as alarm).
- Installable in bathrooms, hygienic, protected from splashes.
- Anti-strangle device at wall inlet.
- Considerable mechanical run with audible mechanical rewind (click).
- Usable in all directions.
- Works in combination with **EGi 5701** bathroom pull cord.

Schematics [1]

Common

Contact output normally open (parallel connection)

Contact output normally closed (series connection)

| NA | C | NC |

5201 EGi

5201 *Example of connection to 5301 room terminal* [2]

| E1 | Ref |

| NA | C | NC |

5201 EGi

5301

XXXX

5201 *Example of connection to 5501 / 5501.1 room terminals* [3]

| E1 | Ref |

| NA | C | NC |

5201 EGi

5501 / 5501.1

XXXX
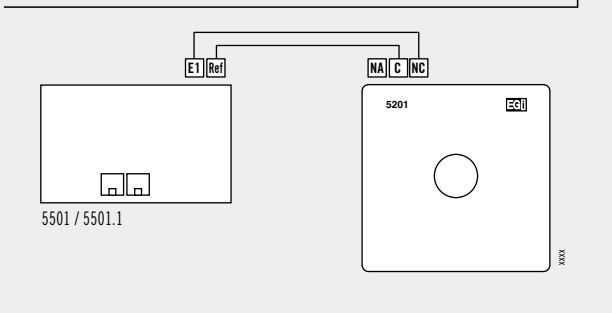
TECHNICAL SPECIFICATIONS	5201
Contact	24 V $=$; 50 mA

Bathroom pull cord | 5701
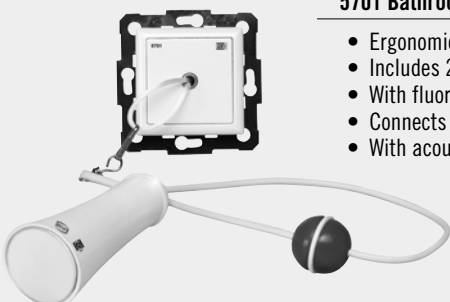
5701 Bathroom pull cord

- Ergonomic design.
- Includes 2 m cord with anti-strangle device.
- With fluorescent ring for easy identification at night.
- Connects to **EGi 5201** module.
- With acoustic alarm signal when pulled.

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Wall module for bed pushbutton | 5103

5103 Wall module for bed pushbutton

- Installation in standard 60 mm box, combinable with many different series of electrical switchgear.
- Functions in combination with **EGi 5202** bed pushbutton.
- With jack type connector to reduce the risk of it being accidentally pulled out. If the bed pushbutton is pulled out an alarm is generated.
- Parallel-connected or series connected to inputs of **EGi 5301** or **5501**. More than one per room can be installed.
- Contact normally closed (to detect cable breakage as an alarm).

Schematics [1]

Common

Contact output normally open (parallel connection)

Contact output normally closed (series connection)
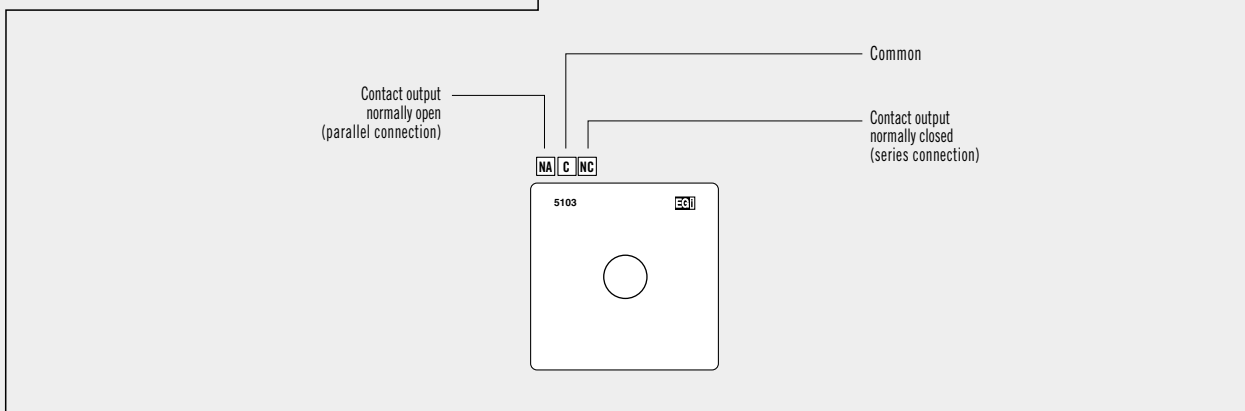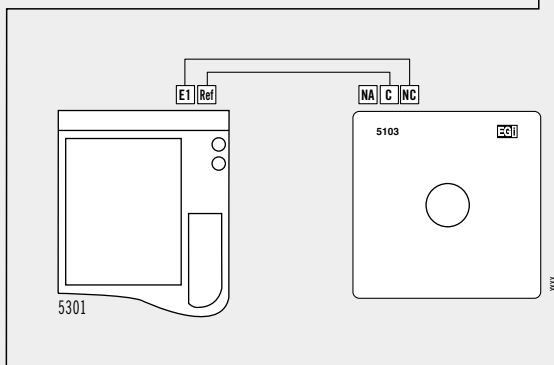
NA C NC

5103   EGi

5103 *Example of connection to 5301 room terminal* [1]

E1 Ref   NA C NC

5103   EGi

5301

5103 *Example of connection to 5501 / 5501.1 room terminals* [2]

E2 Ref   NA C NC

EGi

5501 / 5501.1
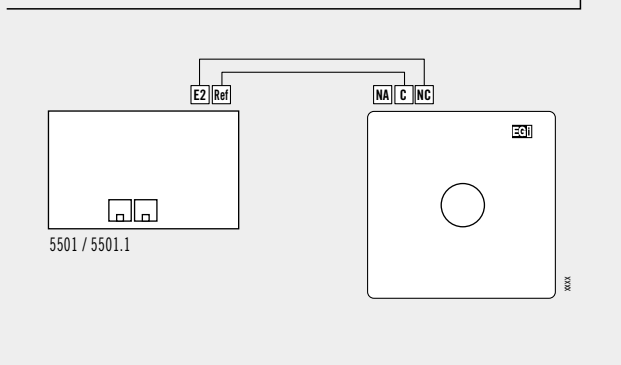
TECHNICAL SPECIFICATIONS	5103
Contact	24 V ⎓ ; 50 mA

Bed pushbutton | 5202
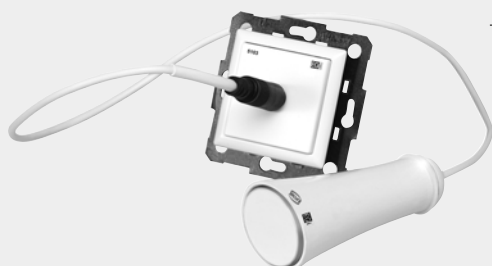
5202 Bed pushbutton

- Ergonomic design.
- With fluorescent ring and pushbutton for easy identification at night.
- It connects to **EGi 5103** module.
- With acoustic alarm signal each time it is pressed.
- With anti-strangle device, thanks to possibility of jack disconnection.

Emergency pushbutton | 5203

5203 Emergency pushbutton

- Installation in standard 60 mm box, combinable with many different series of electrical switchgear.
- When pressed an emergency signal is emitted from common areas or specific rooms.
- Parallel or series-connected to **EGi 5301** or **5501** terminal. More than one per room can be installed.

Schematics [1]
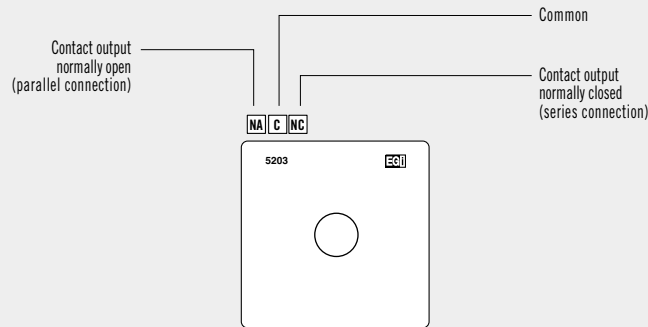
Common

Contact output
normally open
(parallel connection)

Contact output
normally closed
(series connection)

NA | C | NC

5203 · EGi

5203 *Example of connection to 5301 room terminal* [2]

E1 | Ref   NA | C | NC

5301   5203 · EGi

XXXX

5203 *Example of connection to 5501 / 5501.1 room terminals* [3]

E3 | Ref   NA | C | NC

5501 / 5501.1   5203 · EGi

XXXX

TECHNICAL SPECIFICATIONS	5203
Contact	24 V ⎓ ; 50 mA
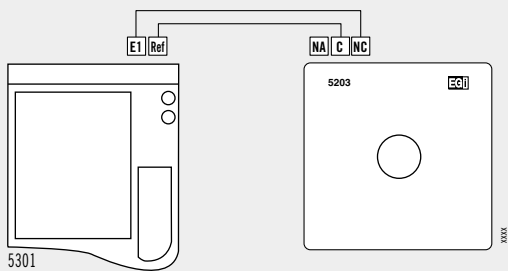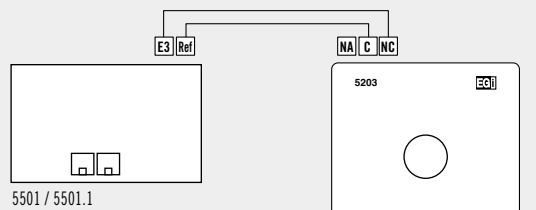
Microphone + preamplifier | 5104

5104 Microphone + preamplifier

- Installation in standard 60 mm box and combinable with many different series of electrical switchgear.
- Operates in combination with the **G26U/16** loudspeaker or with other 16 Ω loudspeakers from the **EGi** range (consult).
- It allows communication between user and care staff as well as full-duplex, hands-free telephone communication.

Schematics [1]

Microphone
Ground
Power supply 5 V

MIC GND 5 V

5104 EGi

5104 **Example of connection to 5501 module** [2]

E4 GND MIC   MIC GND 5 V

5501 / 5501.1   5104 EGi
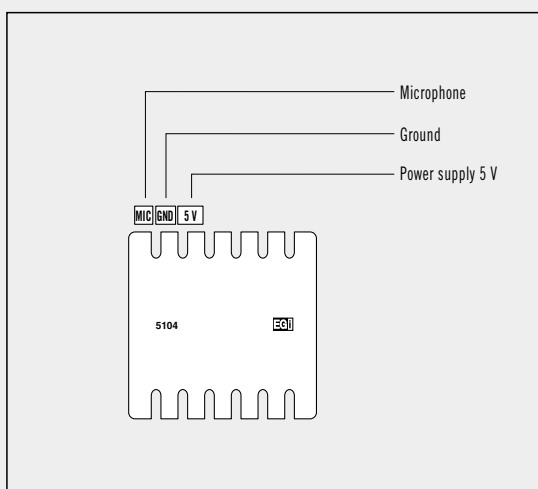
TECHNICAL SPECIFICATIONS	5104
Power supply	5 V ⎓ ; 3.4 mA
Output	1.24 V~

2 W 16 Ω Loudspeaker | G26U/16
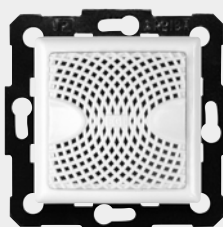
G26U/16 2 W 16 Ω Loudspeaker

TECHNICAL SPECIFICATIONS	5104
Power	2 Wrms
Impedance	16 Ω
Diameter	2"
Frequency response	150 - 16000 Hz
Sensitivity (@ 1 W, 1 m)	83 dB
Covering angle (@ 4 KHz)	150º @ -6 dB

Radio frequency card reader | 5105
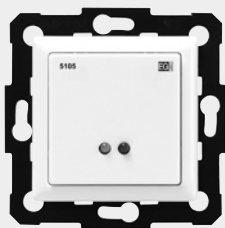
5105 Radio frequency card reader

- Installation in standard 60 mm box and combinable with many different series of electrical switchgear.
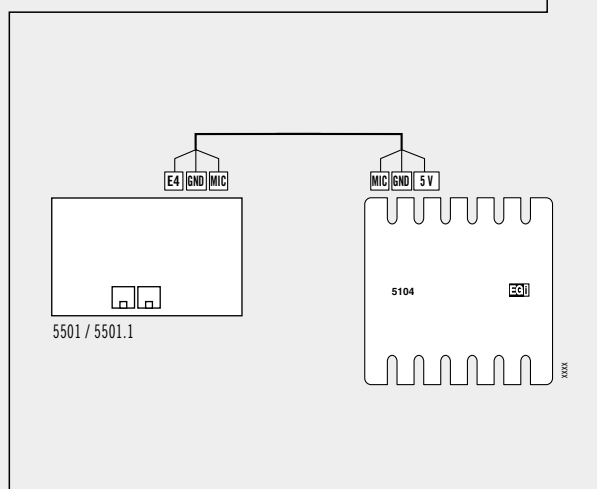- It allows personal radio frequency cards to be read to identify and record the care staff who attend alarm calls or carry out tasks.
- It emits an acoustic reading/identification signal.
- It includes 2 red/green lamps, which indicate operation and reading/identification.
- Reading scope: 5 cm.

Schematics [1]

Data
LEDS control
Clock
Ground
12 V

| DAT | LED | CLK | GND | 12 V |
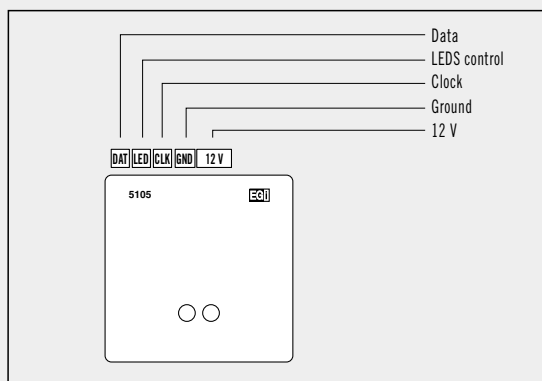
5105
EGi

5105 *Example of connection to 5501 room terminal* [2]

| DAT | LED | CLK | GND | 12 V |

5501
EGi

| DAT | LED | CLK | GND | 12 V |

5105
EGi
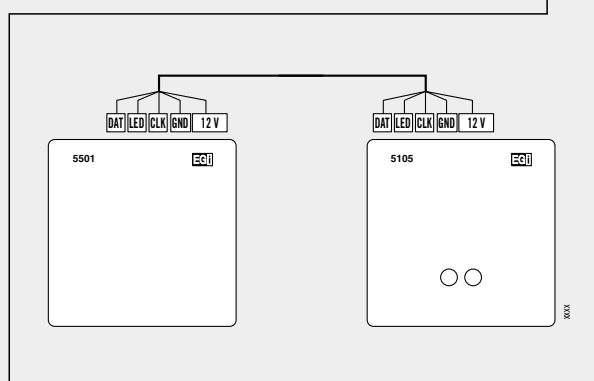
TECHNICAL SPECIFICATIONS	5104
Power supply	12 V ⎓; 41 mA
Output (DAT)	0 V - 5 V

Reader-identifier for control desk | 5106

5106 Reader-identifier for control desk

- It allows care staff to be identified and a session to be opened for each staff member.
- Desktop module.
- It connects directly to the control PC by means of a connection cable which is included (the PC must have a free serial port).
- 230 V~ supply.

230 V~

DB9

CPU
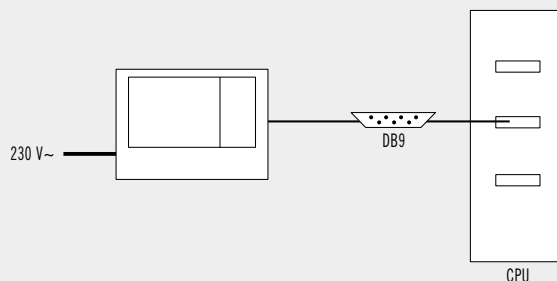
Card for radio frequency reader | 5108

5108 Card for radio frequency reader

- Frequency: 125 KHz.
- 9-digit identification number printed on card.
- Working temperature −20ºC to + 50ºC.
- White colour.

Room module | 5501
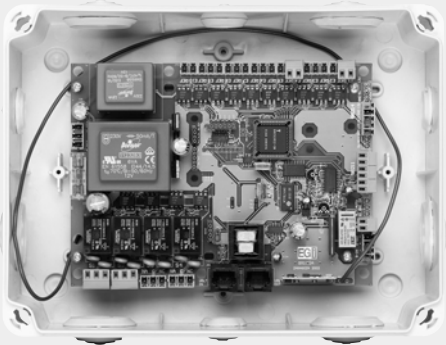
5501 Room module

- It connects to the centraliser through a data/voice network and allows the transmission and reception of one 64,000 baud (telephone quality) full-duplex, bi-directional audio channel and one 16,000 baud full-duplex bi-directional data channel which is used to send the information received by the devices connected to the module and to allow the remote control of its outputs.
- Up to 432 units can be installed with 8 lines or 416 units with 16 lines.
- Over-dimensioned power supply.
- Connection for direct current voltage (12V, 5V, 0V).
- It includes 10 inputs to connect signal elements from **E1** to **E10** (**EGi 5201, 5103, 5203** modules or any dry contact module) and 4 outputs to connect devices such as relay-activated external actuators.
- Input for radio frequency reader (radio frequency identification systems).
- Connection for microphone, preamplified microphone, loudspeaker.
- Radio receiver for reception of **EGi 5101/5102** module signals.
- Non-volatile memory to store configuration.
- With audio input for **EGi** amplifier output. It allows background music to be broadcast. Alarm override.
- Although it is called a room module it can be installed in common areas, at nurses' control desks, in assisted bathrooms or anywhere that a pushbutton, signalling device, identification system, loudspeaker, etc. need to be connected to the system.
- Supplied with 180 x 240 mm flush-mount box.

Schematics [1]

Inputs for dry contact

Opto-coupled digital input

Ground

Ref E10 Ref E9 Ref E8 Ref E7 Ref E6 Ref E5 Ref E4 Ref E3 Ref E2 Ref E1

5104 DAT LED CLK GND 12 V

5104 5 V GND MIC

230 V~

230 V~

230 V~

Note: We recommend that the 230 V~ power supply is by means of an installation with its own, separate circuit, with the appropriate safety systems for a low voltage installation.

Installation loudspeaker output

Audio input

Micro volume adjustment potentiometer

Loudspeaker volume adjustment potentiometer

UTP5 input

UTP5 output

NA C NC | NA C NC | NA C NC | NA C NC

NC relay output

Ground

NA relay output (**NO** - normally open)

Output 1 | Output 2 | Output 3 | Output 4

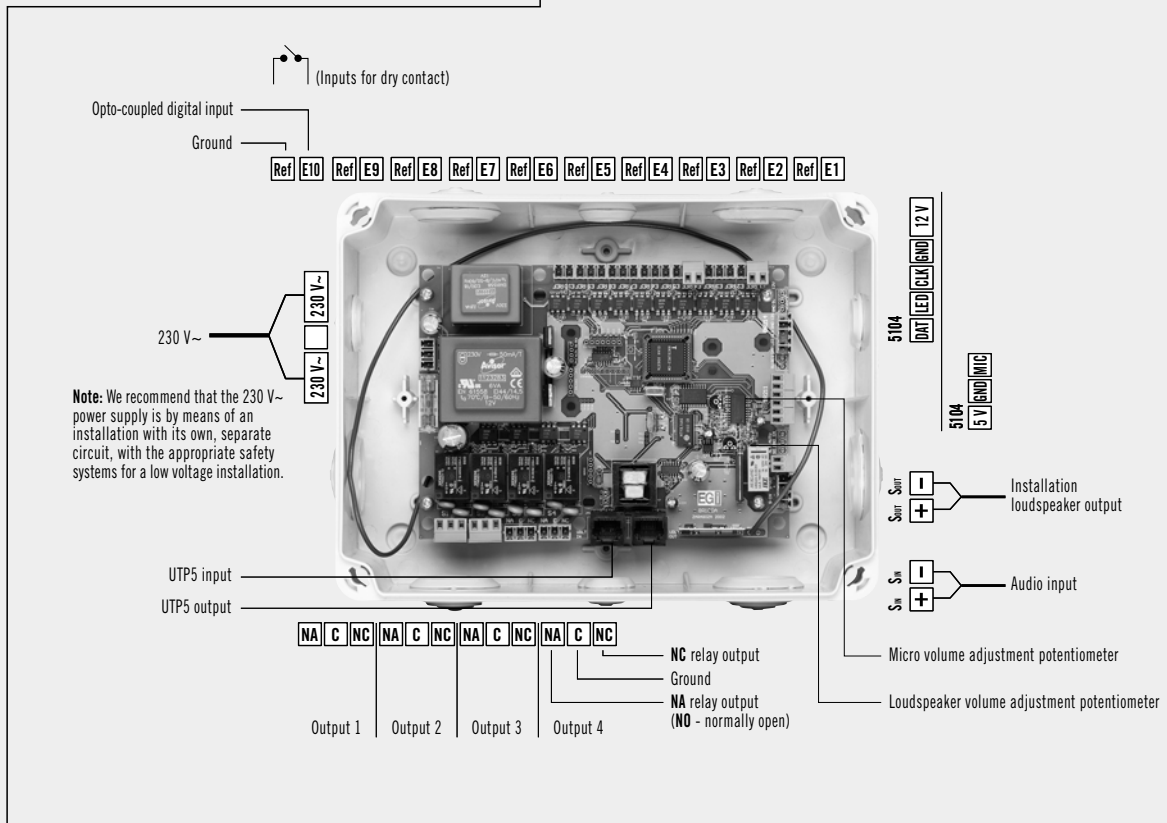| TECHNICAL SPECIFICATIONS	5501
Power supply	230 V~; 50 Hz
Maximum consumption	15 W
Relay outputs (4)	230 V~, 10 A
Audio amplifier	2 W
Radio frequency receiver	433 MHz

Room module | 5501.1
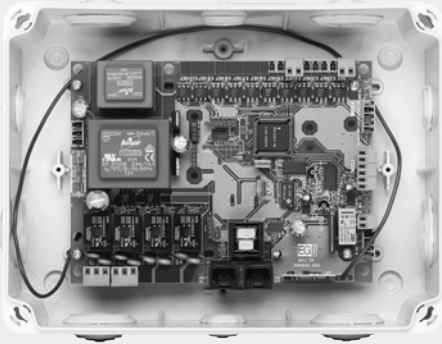
5501.1 Room module

- It connects to the centraliser through a data/voice network and allows the transmission and reception of one 64,000 baud (telephone quality) full-duplex, bi-directional audio channel and one 16,000 baud full-duplex bi-directional data channel which is used to send the information received by the devices connected to the module and to allow the remote control of its outputs.
- Up to 432 units can be installed with 8 lines or 416 units with 16 lines.
- Over-dimensioned power supply.
- Connection for direct current voltage (12V, 5V, 0V).
- It includes 5 inputs to connect signal elements (**EGi 5201, 5103, 5203** or any dry contact module) and 2 outputs to connect devices such as relay-activated external actuators.
- Connection for microphone, preamplified microphone, loudspeaker.
- Radio receiver for reception of **EGi 5101/5102** module signals.
- Non-volatile memory to store configuration.
- With audio input for **EGi** amplifier output. It allows background music to be broadcast. Alarm override.
- Although it is called a room module it can be installed in common areas, at nurses' control desks, in assisted bathrooms or anywhere where a pushbutton, signalling device, identification system, loudspeaker, etc. need to be connected to the system.
- Supplied with 180 x 240 mm flush-mount box.

Schematics [1]

Opto-coupled digital input
Ground
(Inputs for dry contact)

Ref E5   Ref E4   Ref E3   Ref E2   Ref E1

230 V~
230 V~
230 V~
230 V~

Note: We recommend that the 230 V~ power supply is by means of an installation with its own, separate circuit, with the appropriate safety systems for a low voltage installation.

5104
5V GND MIC

S_out S_out Installation loudspeaker output
S_in S_in Audio input

UTP5 input
UTP5 output

NA C NC   NA C NC

NC relay output
Ground
NA relay output
(**NO** - normally open)

Output 1   Output 2

Micro volume adjustment potentiometer
Loudspeaker volume adjustment potentiometer

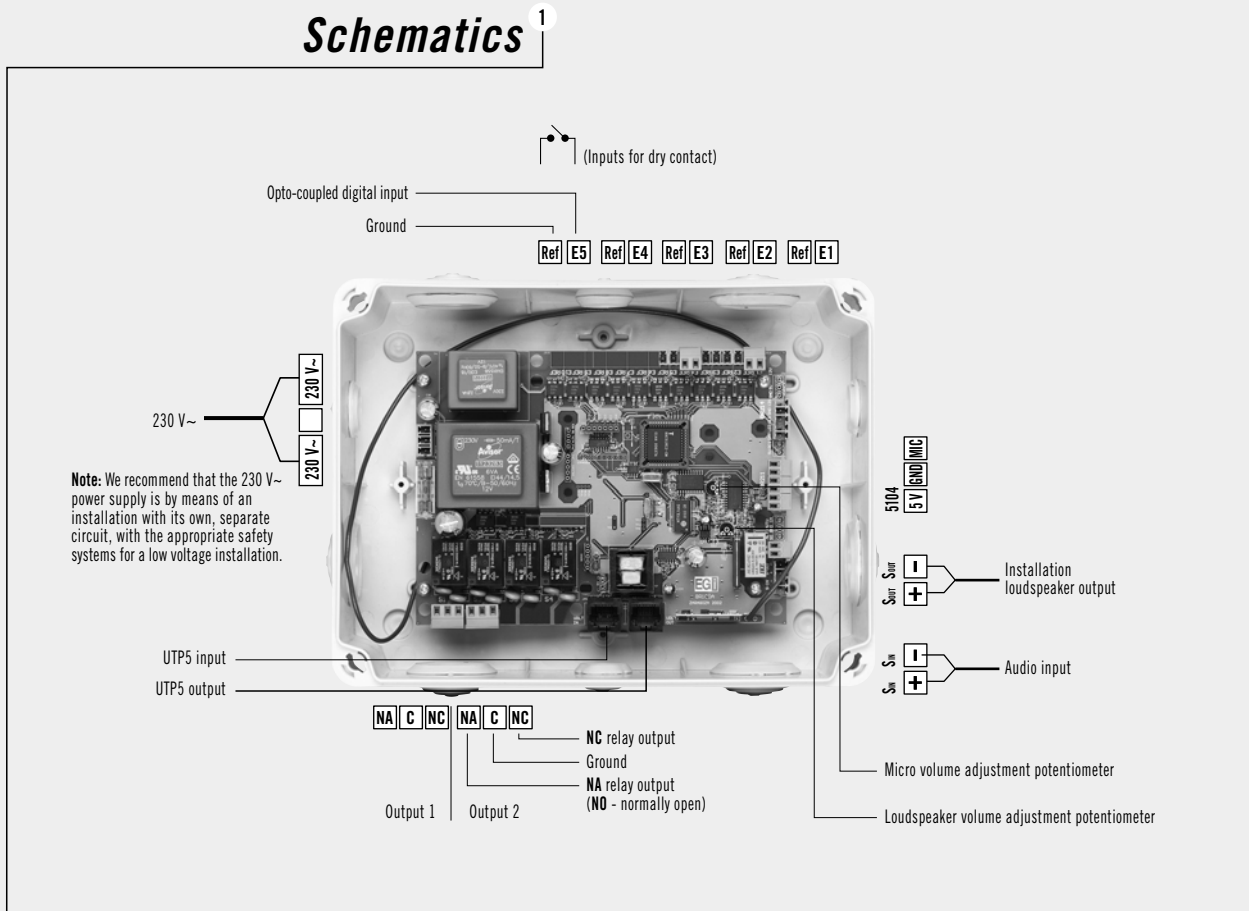| TECHNICAL SPECIFICATIONS	5501.1
Power supply	230 V~; 50 Hz
Maximum consumption	15 W
Relay outputs (2)	230 V~, 10 A
Audio amplifier	2 W
Radio frequency receiver	433 MHz

secura

Secura Centraliser
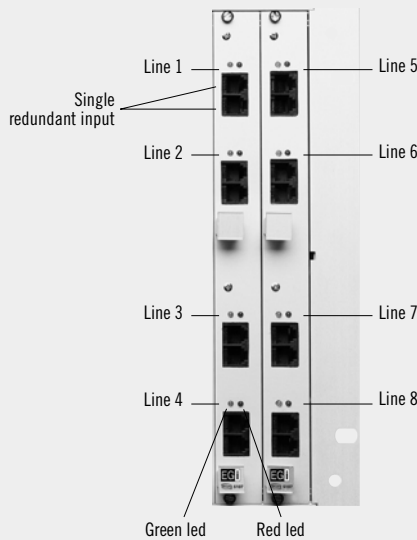
5302 *Power supply + CPU*

5302 Power supply + CPU

- Includes power supply and motherboard with the CPU.
- Mounted on frame for 19 inch rack.
- This frame provides 50 free e/UP to mount modules: **EGi 5107** and **5502**.

TECHNICAL SPECIFICATIONS	5302
Power supply	230 V~; 50 Hz
Maximum consumption	250 W

5107 *Connection board for 8 telephone lines*

Line 1 — Line 5
Single redundant input
Line 2 — Line 6

Line 3 — Line 7

Line 4 — Line 8

Green led   Red led

5107 Connection board for 8 telephone lines

- It links the centraliser and the conventional telephone PABX.
- It allows telephone communication between rooms and care staff's desktop telephones or DECT wireless telephones as well as access of users to external incoming or outgoing calls.
- It includes a double parallel connection for each one of the eight **RJ11** connectors. Takes up 15 e/UP.

State indicated by LEDs

Beside each telephone line's double **RJ11** connector there are 2 LEDs (green and red) which indicate the current state of the line.
The following table summarises the possible states:

Green LED	Red LED	State of line	Description
Off	Off	Disabled	The system configuration does not use this line
On	Off	Idle	The line is connected but not in use
Rapid flashing	Rapid flashing	Line disconnected	Line connection not detected
On	Rapid flashing	Ring	Ring signal being received
On	On	Line in use (Rx)	Line in use (incoming call)
On	Slow flashing	Line in use (Tx)	Line in use (outgoing call)

Note: At redundant single inputs just one **RJ11** connector will be used and the other will remain for use in the event of a failure.
We recommend one **5107** board for every six **5502** boards although this depends on the traffic of calls/alarms.

5502 *Voice board for every 16 rooms/room modules*

RJ45 Connection for UTP5
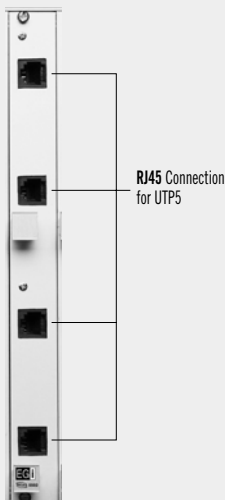
5502 Voice board for every 16 rooms/room modules

- It takes up 5 e/UP.
- Connection must always be carried out from top to bottom, in strict order.

Room
Example of installation with 5301 terminal
(Secura Basic)

Alarm emission using:
5202 bed pushbutton;
5101/5102 wireless
alarm generator pushbutton;
5301 room terminal
red button;
5701 bathroom pull cord.

Full-duplex communication with telephone
programmed as control centre.

5103
5202
5301
5201
5701
BATHROOM
5101
BEDROOM

Bedroom

Bathroom

230 V ~

E1 Ref

Output for RJ11 connection

RJ11

Output for telephone
connection

Optional
telephone

5301

5101

C NC

5103

5202

C NC

5201
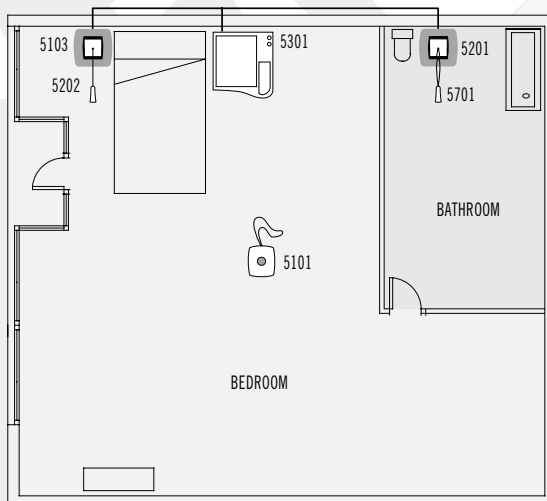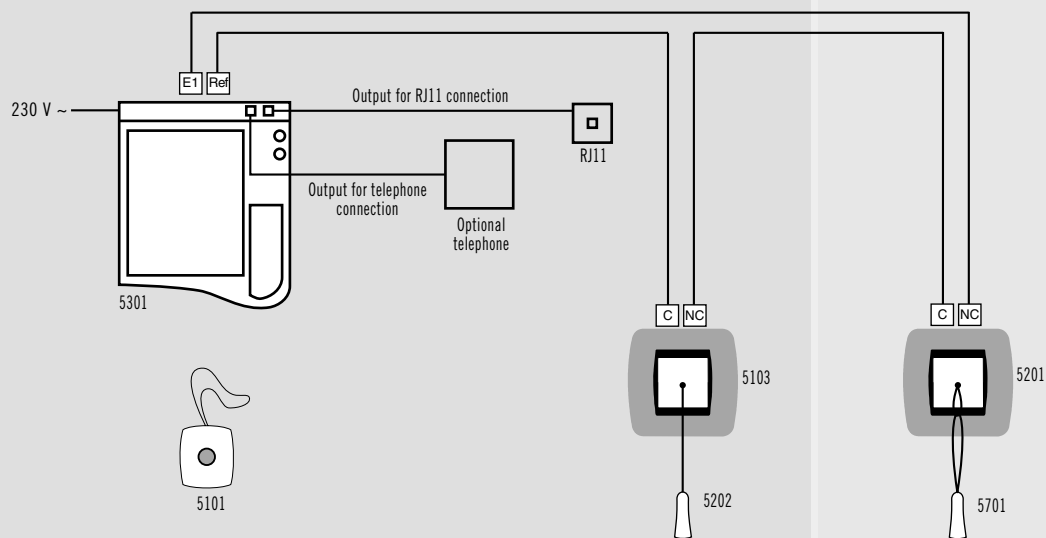
5701

Installation

Note: Before start-up all of the elements must be installed and wired up (including **5202** bed pushbutton and **5701** pull cord) otherwise false alarms will be generated preventing start-up.

Materials

1 Room terminal (includes 5101)	**5301**
1 Wall module for bed pushbutton	**5103**
1 Bed pushbutton	**5202**
1 Front trim	**1801/..**

1 Wall module for bathroom pull cord	**5201**
1 Bathroom pull cord	**5701**
1 Front trim	**1801/..**

secura

Room

Example of installation with 5501.1 terminal
(Secura Medium)

Alarm emission using:
5202 bed pushbutton;
5101/5102 wireless
alarm generator pushbutton;
5701 bathroom pull cord.

Full-duplex communication with telephone
programmed as control centre.

Call identification.

BEDROOM

BATHROOM

5103
G26U/16
5202
5201
5701
5104
5501.1
UTP 5
UTP 5
230 V~
5101

Bedroom

Bathroom

E1 Ref E2 Ref E3 Ref E4 Ref E5 Ref

230 V ~

5501.1

S_{OUT}

S_{IN}

G26U/16

Millennium
audio input

NA C NC

5V CND MIC

Up to 2 control
outputs

UTP5
Input

UTP5
Output

5V CND MIC

C NC

5103

5202

5101

5104

C NC

5201

5701

Note: Before start-up all of the elements must be installed and wired up (including **5202** bed pushbutton and **5701** pull cord) otherwise false alarms will be generated preventing start-up.

Installation

Materials

1 Room module		**5501.1**
1 Wall module for bed pushbutton		**5103**
1 Bed pushbutton		**5202**
1 Microphone + preamplifier		**5104**
1 Wireless alarm generator / pendant		**5101**
1 2 W; 16 Ω Loudspeaker		**G26U/16**
3 Front trim		**1801/..**

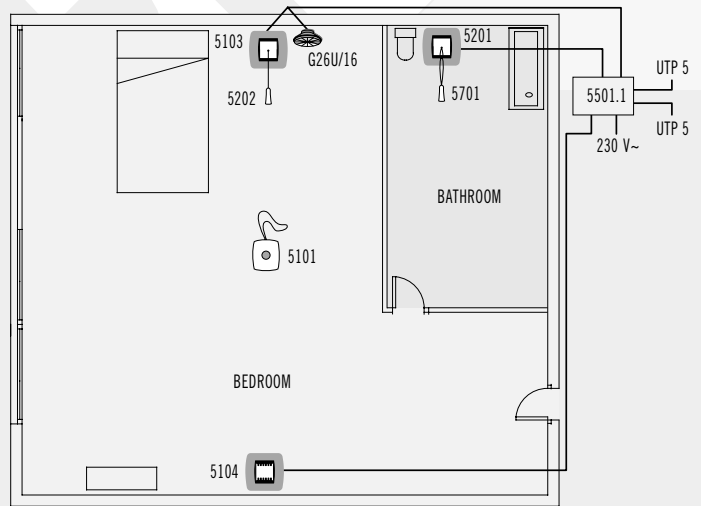|		
1 Wall module for bathroom pull cord		**5201**
1 Bathroom pull cord		**5701**
1 Front trim		**1801/..**

Room
Example of installation with 5501.1 terminal
(Secura Medium)

Alarm emission using:
5202 bed pushbutton;
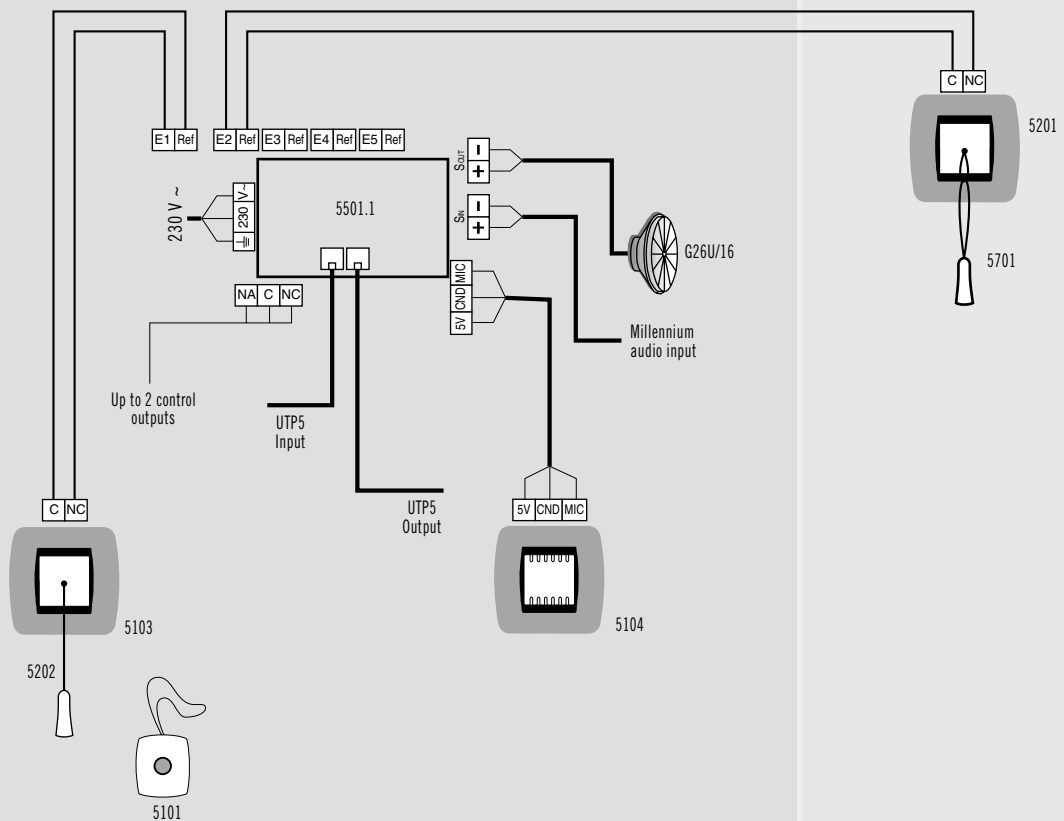**5101/5102** wireless alarm generator pushbutton;
5701 bathroom pull cord.

Full-duplex communication with telephone programmed as control centre.

Identification of call and the bed from which it is made.
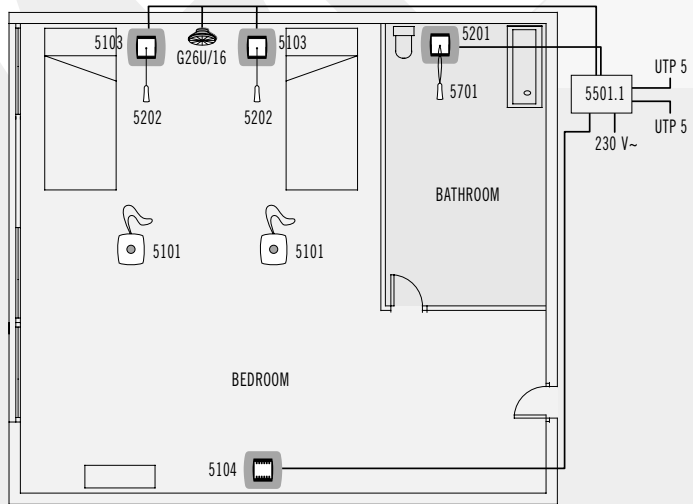
Bedroom | *Bathroom*
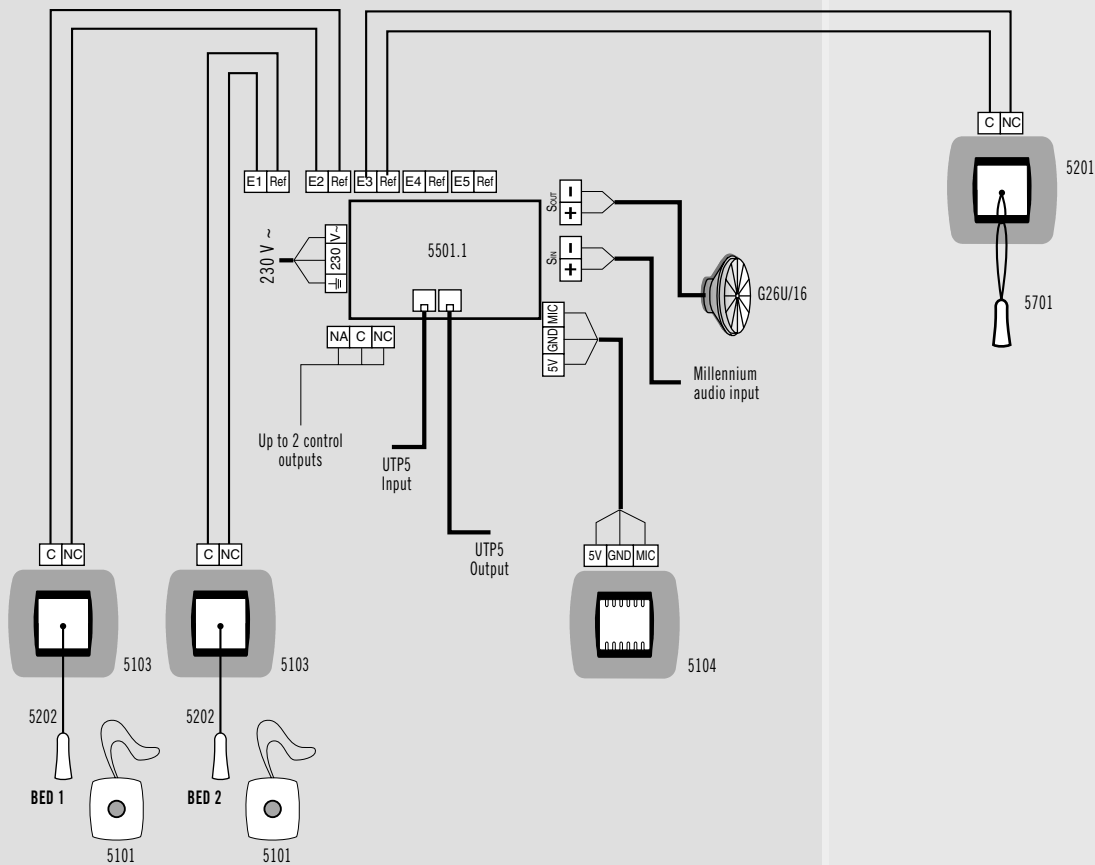
Note: Before start-up all of the elements must be installed and wired up (including **5202** bed pushbutton and **5701** pull cord) otherwise false alarms will be generated preventing start-up.

Materials

1	Room module	**5501.1**
2	Wall modules for bed pushbutton	**5103**
2	Bed pushbuttons	**5202**
1	Microphone + preamplifier	**5104**
1	Wireless alarm generator / pendant	**5101**
1	2 W; 16 Ω Loudspeaker	**G26U/16**
4	Front trim	**1801/..**

|		
1	Wall module for bathroom pull cord	**5201**
1	Bathroom pull cord	**5701**
1	Front trim	**1801/..**

secura

Room
Example of installation with 5501.1 terminal
(Secura Plus)

Alarm emission using:
5202 bed pushbutton;
**5101/5102** wireless alarm generator pushbutton;
5701 bathroom pull cord.

Full-duplex communication with telephone programmed as control centre.

Identification of staff and of attention to calls.

BEDROOM

BATHROOM
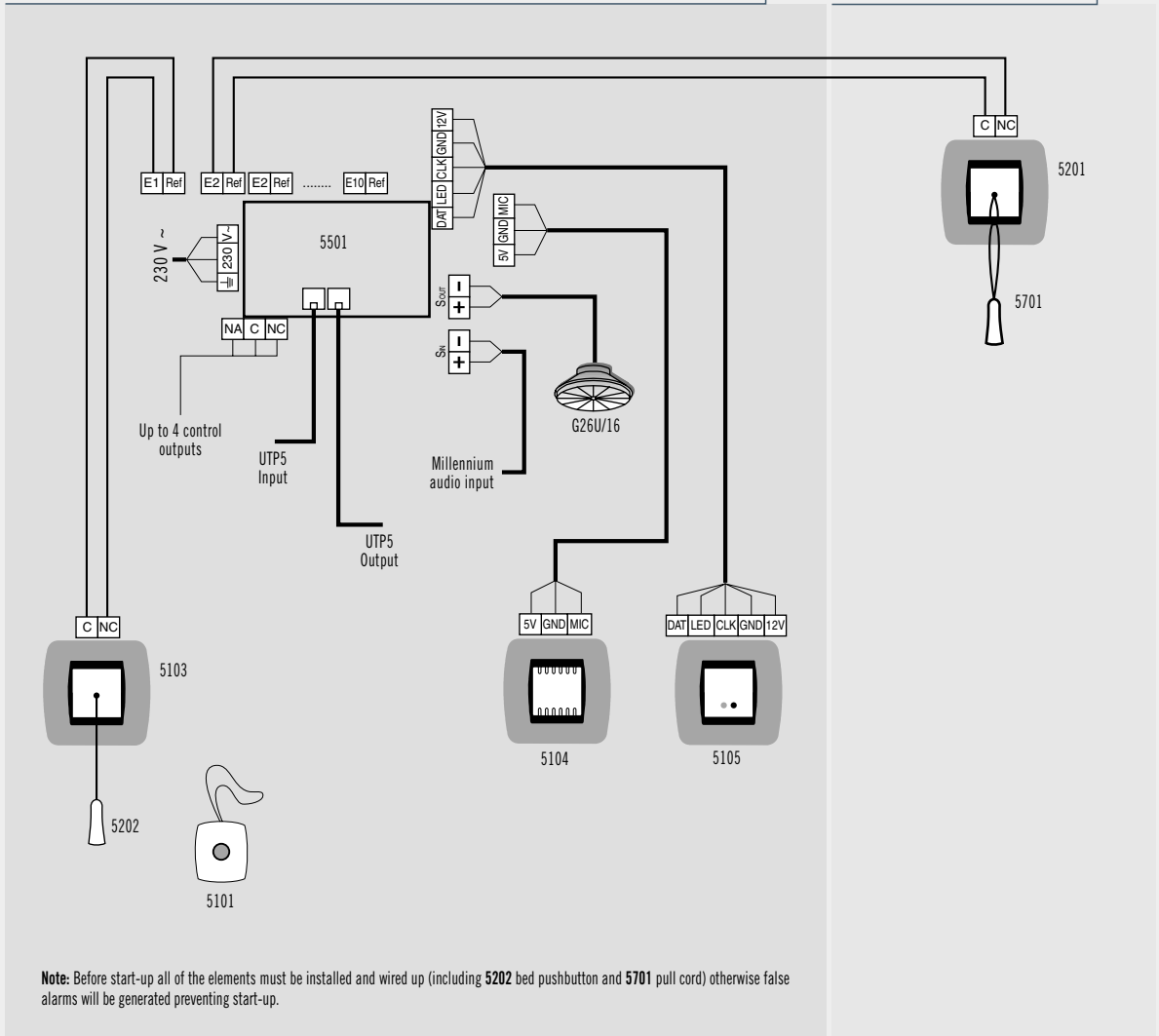
5103
G26U/16
5202
5201
5701
5501
230 V~
UTP 5
UTP 5
5101
5104
5105

Bedroom

Bathroom

E1 Ref | E2 Ref E2 Ref .... E10 Ref
DAT LED CLK GND 12V
5V GND MIC
230 V ~
230 V~
5501
Sout
Sin
NA C NC
Up to 4 control outputs
UTP5 Input
UTP5 Output
G26U/16
Millennium audio input
C NC
5103
5202
5101
5V GND MIC
5104
DAT LED CLK GND 12V
5105
C NC
5201
5701

Note: Before start-up all of the elements must be installed and wired up (including **5202** bed pushbutton and **5701** pull cord) otherwise false alarms will be generated preventing start-up.

Installation

Materials

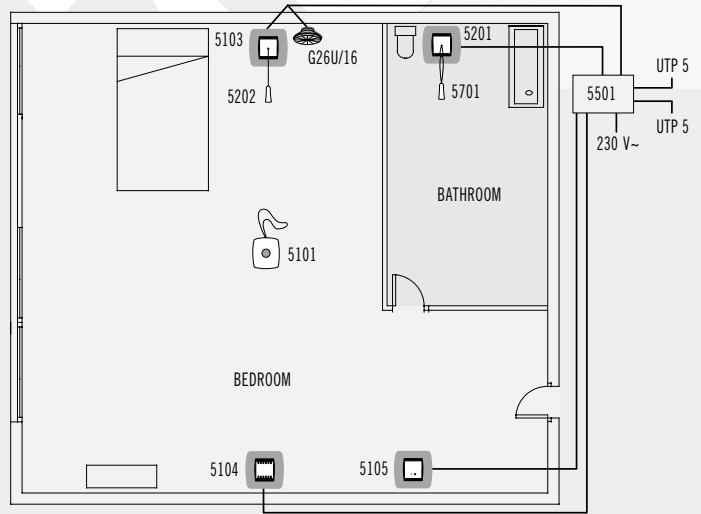|	
1 Room module	**5501**
1 Wall module for bed pushbutton	**5103**
1 Bed pushbutton	**5202**
1 Microphone + preamplifier	**5104**
1 Wireless alarm generator / pendant	**5101**
1 2 W; 16 Ω Loudspeaker	**G26U/16**
4 Front trim	**1801/..**
1 Radio frequency card reader	**5105**

1 Wall module for bathroom pull cord	**5201**
1 Bathroom pull cord	**5701**
1 Front trim	**1801/..**

Secura Plus/Medium General Schematics

Storey control telephone

DECT telephone

Telephone PABX

Centraliser

Supply
+
Base plate

Up to 8 external analogue lines for each
EGi 5107 board

230 V ~

Switch / Hub

Data server PC

PC — Storey PC

(Only Secura Plus)

5302 — 5502 — 5107

5501 5501 5501 5501
5501 5501 5501 5501
5501 5501 5501 5501

Up to four UTP5 cables and each
cable with up to four **5501** installation modules
with **RJ45** connections.

An individual twisted pair
for each **5501** room module

230 V ~

Up to 4 room modules serially-connected

5501   5501   5501   5501

Millennium
audio input

10 inputs,
pull cords,
pushbuttons,
sensors...

5 inputs if
Secura Medium

The state of the relay outputs must be programmed
after installation depending on the room/zone
requirements. (For example, relay 2 comes into
operation when a presence is detected by means of
a detector connected to input 3).

4 relay outputs

2 outputs if
Secura Medium

5104 microphone and preamplifier

G26U/16 loudspeaker
(or another 16 Ω loudspeaker from the **EGi** range)

5105 radio frequency card reader
(Only for Secura Plus)

Room

IMPORTANT: See **page 20** "Connections between **EGi 5501/5501.1** modules".

Note: If only one computer is going to be used the switch is not necessary and the PC is connected directly to **EGi** module **5302**.

Configuration examples

Examples of the configuration of the digital inputs and relay outputs of 5501 and 5501.1 room modules

Input connection	Information output to software	Possible relay outputs
Presence detector.	Someone is moving in the room.	Lights automatically operated; switching on of indirect light linked to a presence sensor for night- time use to prevent falls and dazzling.
Bed pressure sensor.	Someone is in bed.	Lights automatically operated; switching on of indirect light linked to a bed pressure sensor for night- time use, to prevent falls and dazzling when the person gets up.
Temperature sensor.	Climate control management (temperature control): shown individually for each room. A set temperature, linked to the operation of the fan-coil, can be assigned.	Switches fan-coil on/off.
Window open detector.	Window state display. The system can also be configured to stop the fan-coil if a window is opened thus preventing avoidable energy waste.	Switches fan-coil on/off.
Pushbuttons.	To know the state of lights in real time.	Local or remote control of lights.
		Automatic switching on/off, when alarm is emitted, of TV or radio linked to the intercom system (a frequent problem is not being able to talk to a resident when a call/alarm is generated because the TV or radio is on.

NOTE: All of these configurations should be programmed when the installation is set into operation.
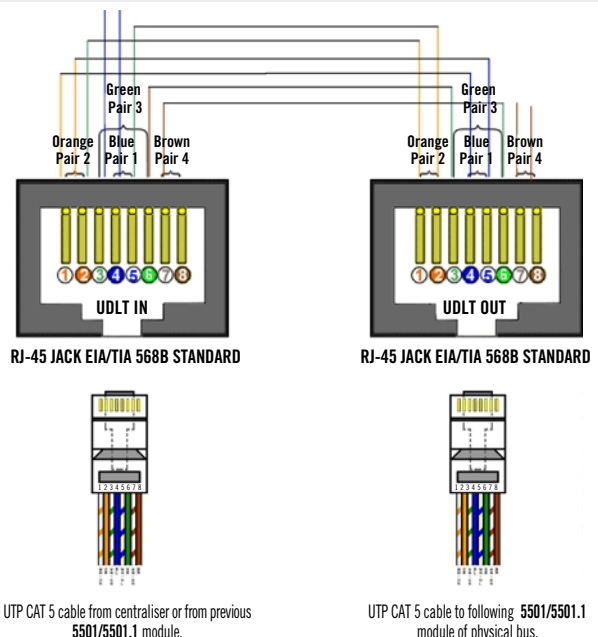
Connections between modules 5501 and 5501.1

The morphology of the UTP CAT 5 cable (with 4 twisted pairs) allows the signal to be distributed by one cable for every 4 rooms. This provides a logical topology, which is very similar to that of the bus between every 4 rooms.

Each **5501/5501.1** module has two RJ45 (UDLT IN UDLT OUT) connectors to which the cable from the centraliser or from the previous **5501/5001.1** module should be connected to the input connector and the cable leading to the following **5501/5501.1** of that bus should be connected to the output connector.

Each **5501/5501.1** module uses the connection to the first of the 4 twisted pairs of the UTP CAT 5 cable of the input connector and connects the rest of the pairs to the 1, 2 and 3 pairs of the output connector.

In this way each **5501/5501.1** module of this logical bus is connected successively following the order of the cable pairs. The position in the chain of logical bus connections determines the pair to be used.

Green Pair 3

Orange Pair 2   Blue Pair 1   Brown Pair 4

UDLT IN

RJ-45 JACK EIA/TIA 568B STANDARD

Green Pair 3

Orange Pair 2   Blue Pair 1   Brown Pair 4

UDLT OUT

RJ-45 JACK EIA/TIA 568B STANDARD

UTP CAT 5 cable from centraliser or from previous **5501/5501.1** module.

UTP CAT 5 cable to following **5501/5501.1** module of physical bus.

Test equipment | 5802

5802 Test equipment

- Tester for **SECURA Medium** and **Plus**.

Schematics [1]

❶ Mains connector

It allows communication between the room board (**5501 or 5501.1**) and the voice and data central unit through the **RJ-45** connector.

❷ Room board selector

It selects the room board of the logical bus that is going to be tested (remember that there can only be 4 room modules per **RJ-45** line).

❸ Control indicators

Power supply LED: **Green** indicates that the test equipment is ON.
Ready LED: **Flashing amber** indicates that the test can begin.
Communication LED: **Green** indicates that there is communication with the room.

❹ Input state display

It informs on the state of inputs.
Green indicates that the input is wired as NC (normally closed).
Off indicates that the input is wired as normally open.

❺ Microphone test

It allows the operation of the room microphone to be tested by means of actuator **5**.
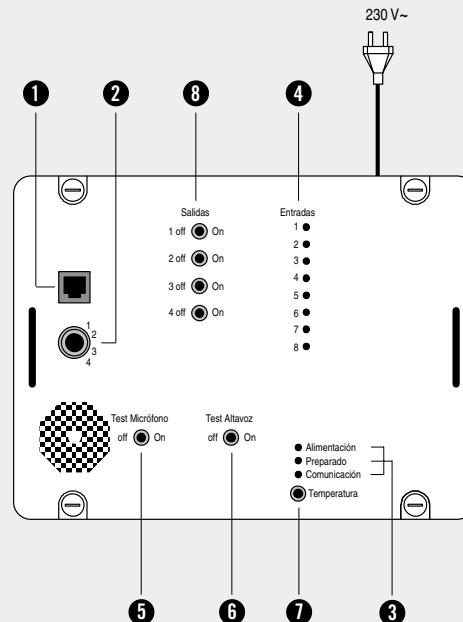
❻ Loudspeaker test

It allows the operation of the room loudspeaker to be tested by means of actuator **6**.

❼ Temperature sensor test

It allows the operation of the room temperature sensor to be tested.

❽ Control of outputs

It allows the room board output relays to be controlled and reports on the state of the outputs by means of an acoustic warning.

Operation [2]

Preparing the equipment

- Connect the **5802** to 230 V~.
- Check that the **Power Supply LED** is **green**. Wait 40 seconds and check that the **Ready LED** is **amber** and flashing.

Checking the operation of the room installation

- Connect the communication cable between the **5802** mains connector and the **UDLT IN RJ-45** of the room plate.
- Select the room plate with **2** (see picture 1).
- Check the state of the communication LED. If the communication is not correct see the **"Operating Problems"** table.
- Check that the state of the inputs is correct and if it is not correct, make a note of this on the **Room Boards Checklist**.
- Change the state of the inputs by using the different devices installed in the room and check that it matches the information provided by the test equipment. Make a note of any anomalies in the **Room Boards Checklist**.
- Carry out the microphone and loudspeaker test from the control desk. Make a note of any anomalies in the **Room Boards Checklist**.
- Change the state of the outputs and check that this matches the information provided by the test equipment. Make a note of any anomalies on the **Room Boards Checklist**.
- Check the operation of the temperature sensor. Make a note of any anomalies on the **Room Boards Checklist**.

Test from the floor control desk

- Connect the communication cable between the **5802** mains connector and the pair corresponding to the room on the floor rack.
- Select the room plate with **2** (see picture 1).
- Check the state of the communication LED. If communication is incorrect consult the **"Operating Problems"** table.
- Check that the state of the inputs is correct and if it is not, make a note of this on in the **Room Boards Checklist**.
- Change the state of the inputs by using the different devices installed in the room and check if this matches the information provided by the test equipment. Make a note of any anomalies on the **Room Boards Checklist**.
- Carry out the microphone and loudspeaker test from the control desk. Make a note of any anomalies on the **Room Boards Checklist**.
- Change the state of the outputs and check that this matches the information provided by the test equipment. Make a note of any anomalies on the **Room Boards Checklist**.
- Check the operation of the temperature sensor. Make a note of any anomalies on the **Room Boards Checklist**.

Test from the floor control desk

- Connect the communication cable between the **5802** mains connector and the pair corresponding to the room on the floor rack.
- Select the room plate with **2** (see fig. 1).
- Check the state of the communication LED. If communication is incorrect consult the **"Operating Problems"** table.
- Check that the state of the inputs is correct and if it is not, make a note of this on the **Room Boards checklist**.
- Change the state of the inputs by using the different devices installed in the room and check if this matches the information provided by the test equipment. Make a note of any anomalies on the **Room Boards Checklist**.
- Carry out the microphone and loudspeaker test from the control desk. Make a note of any anomalies on the **Room Boards Checklist**.
- Change the state of the outputs and check that this matches the information provided by the test equipment. Make a note of any anomalies on the **Room Boards Checklist**.
- Check the operation of the temperature sensor. Make a note of any anomalies on the **Room Boards Checklist**.

OPERATING PROBLEMS		
POSSIBLE CAUSE	**SYMPTOM**	**SOLUTION**
No communication.	Communication LED off.	-Check communication cable connections. -Check power supply to room board.
Failure in operation of loudspeaker.	No sound can be heard.	-Check loudspeaker cable connections, checking cable contact with loudspeaker terminals. -Check room board wiring.
Failure in operation of microphone.	No sound can be heard on test equipment.	-Check microphone wiring. -Check voltage at component terminals. -Check voltage at microphone room board terminals.
Failure in operation of card reader.	The card reader LEDS do not light up.	-Check reader wiring. -Check voltage at component terminals. -Check voltage at reader room board terminals.
Failure in operation of bathroom pull cord	The alarm signal does not reach the test equipment.	-Check bathroom pull cord wiring.
Failure in operation of bed pushbutton.	The alarm signal does not reach the test equipment.	-Check bed pushbutton wiring.
Failure in operation of safety light pushbutton.	No alarm is detected by test equipment.	-Check pushbutton wiring on room board.
Operating failure at TV plug output.	When a change of state is carried out in test equipment the output does not change.	-Check plug wiring on room board.
Failure in reception of alarm signal from user's pendant.	No alarm signal is received by the test equipment.	-Check the position of the RF component on room board.

Room boards checklist

DISTRIBUTOR

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COFME

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