CONCENTO^CARE

Technical Manual

Modular nurse call system
for future-oriented care

00 8814 36

Table of contents

1 Safety notes

It is essential that you read the this chapter carefully before you start work on the nurse call system.

1.1 About this chapter

The CONCENTO^{CARE} products have been designed and produced according to the latest state-of-the-art. Nevertheless, potentially dangerous situations may occur during installation, modification or de-installation of the system or of its components if the executing persons on-site act in a non-professional manner, or if pertinent safety instructions are ignored. Non-compliance with general and special safety instructions may jeopardise the life and well-being of installation personnel or third persons, and such misbehaviour may lead to damage to system components and other equipment.

Information in this chapter is of general nature. Special and more detailed warning messages are presented in the various chapters when safety-hazardous work details or processes are described.

1.2 Organisational measures

Electrical systems shall be installed, modified, serviced and maintained by authorised specialists of the trade only. Among others, these are personnel from the local electric power companies and electricians who are listed on their roster. The registered electrician shall contact the power company to formally request the commissioning of any new electric installation. As such, electric installation personnel shall be responsible for the safety and correct function of the relevant electric systems.

Commercial users of electric installations shall arrange for regular servicing and maintenance of the respective electric equipment. Users and operators shall observe the legal aspects as final responsibility rests with themselves. Any work at the electric system and installation must be executed by trained and authorised specialists of the trade.

The German standard DIN VDE 0834 prescribes, among others, that all work on nurse call systems must only be carried out by appropriately trained and qualified professionals. Nurse call system specialists with regard to this standard are persons who have specialized knowledge for constructing and testing a nurse call system in accordance with the applicable standards and to certify its operational reliability.

Tunstall GmbH makes possible the qualifying of nurse call system specialists.

This manual is directed at electrical installers with the qualification of "Nurse call system specialist".

Before starting any installation work, carefully study this manual - with particular attention to the chapter "Safety notes". Later on, i.e. while working at the system, it will be too late.

Keep this manual and any further documents which you may need readily available during the installation work and whenever effecting any service or maintenance work at the system. Comply with all generally applicable laws as well as special rules and directives for accident prevention and environmental protection.

All parts and any equipment used for the installation shall comply with the technical demands and criteria set forth by Tunstall GmbH. This is always ensured when using original parts

1.3 Symbols used in this manual

When studying this manual, you will come across a number of symbols which direct your attention to specific issues:

WARNING! This symbol refers to an action that could endanger persons (life-threatening or risk of injury).

WARNING! This symbol refers to an action that could endanger persons due to electrical voltage or electric current.

Electrostatically endangered components! This symbol refers to electrostatically endangered components. Avoid contact with these components in order not to destroy them.

CAUTION! This symbol refers to actions which may incur damage to the system or components due to electrical voltage or electrical current.

NOTE! Here supplementary information and tips are available.

In the text passages you will come across symbols which always have the same meaning

- ■ A square before the text means: "This is part of a listing."
- ● A filled-in circle before the text means: "This is what you have to do."
- ✔ A checkmark before the text means: "This is the result of an action."

1.4 Intended use

All CONCENTO^{CARE} products are designed for use in the nurse call system, and here again, only in the manner as described in this technical manual. Any other application of use shall be considered as not authorised, and Tunstall GmbH will not accept any liability for damage resulting from any non-compliance with this rule.

1.5 General safety rules

- Closely observe all safety instructions and warning messages from this manual, pertinent national rules and directives for accident prevention as well as the owner's / operator‘s internal rules and procedures for safety at work and while handling or operating the system
- Refrain from any working method that might put safety at risk.
- Before starting to work, personnel shall make themselves familiar with the working environment which includes a survey of obstacles in the working and operating area.
- Use only original fuses with the correct rating for the specific application
- Only install and wire up the equipment in a de-energized state.
- Installed system parts on which work is to be carried out must be disconnected from the power. First check and ensure that the parts are free of voltage
- If work must be executed at electrically live components, a second person should act as a safety attendant who in case of an emergency can turn the main switch off.
- In case of any fault or malfunction, shut off the electrical power. Do not continue to work until the fault has been corrected.
- Protect all system components from direct wetness
- There are various components of the CONCENTO^{CARE} system fitted with elements sensitive to electrostatics. Any discharge of electrostatic energy may damage such parts. Therefore, avoid any direct contact with these electrostatically sensitive components.
- For further information regarding the installation and functional check refer to the German standard DIN VDE 0834, parts 1 and 2.

1.6 Technical standards

Close observe the following standards which are applicable to nurse call systems:

- DIN VDE 0834-1:2016-06, Call systems in hospitals, nursing homes and similar institutions - Part 1: Requirements for equipment, erection and operation
- DIN VDE 0834-2, Call systems in hospitals, nursing homes and similar institutions - Part 2: - Environmental conditions and electromagnetic compatibility
- DIN EN 60601-1:2013-12, Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
- DIN EN 60601-1-8:2014-04, Medical electrical equipment - Part 1-8: General requirements for basic safety and essential performance - Collateral Standard: General requirements, tests and guidance for alarm systems in medical electrical equipment and medical electrical systems
- DIN EN 60669-2-2:2007-05, Switches for household and similar fixed electrical installations - Part 2-2: Particular requirements - Electromagnetic remote-control switches (RCS)
- DIN EN 62368-1:2016-05, Audio/video, information and communication technology equipment - Part 1: Safety requirements
- DIN EN 80001-1:2011-11,Application of risk management for IT-networks incorporating medical devices - Part 1: Roles, responsibilities and activities
- DIN EN ISO 11197:2009-09, Medical supply units
- DIN VDE 0100-200:2006-06, Low-voltage installations - Part 200: Definitions
- DIN VDE 0100-410:2007-06, Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock
- DIN VDE 0100-560:2013-10, Low-voltage electrical installations - Part 5-56: Selection and erection of electrical equipment - Safety services

Also observe additional national rules for installations.

2 Necessary previous knowledge

2.1 System overview

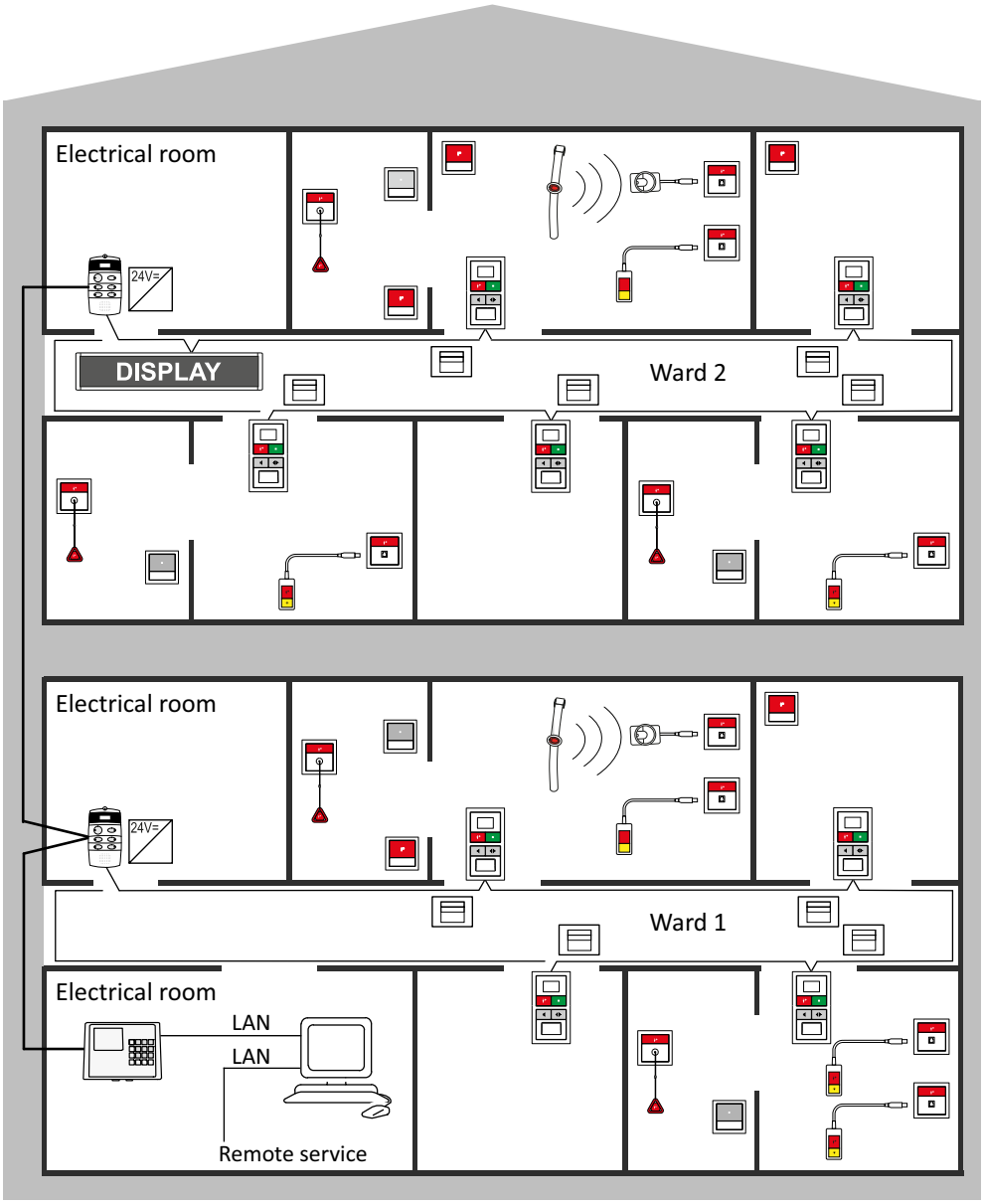


Fig. 1: System overview

2.2 System structure

The nurse call system is controlled decentrally by group controllers. Each group controller controls one ward bus; i.e. one physical group.

The nurse call system is based on a bus system made up of a group bus, ward buses and room buses (RAN). The group bus interconnects the following nurse call system devices: all the group controllers, the Management Interface or the system interface LAN, and the fire alarm interface as an option. The ward bus is connected to a group controller and interconnects all room controllers (display inserts and call/presence inserts) and corridor displays for a physical group. The room bus (RAN) networks the devices in the room with the room controller.

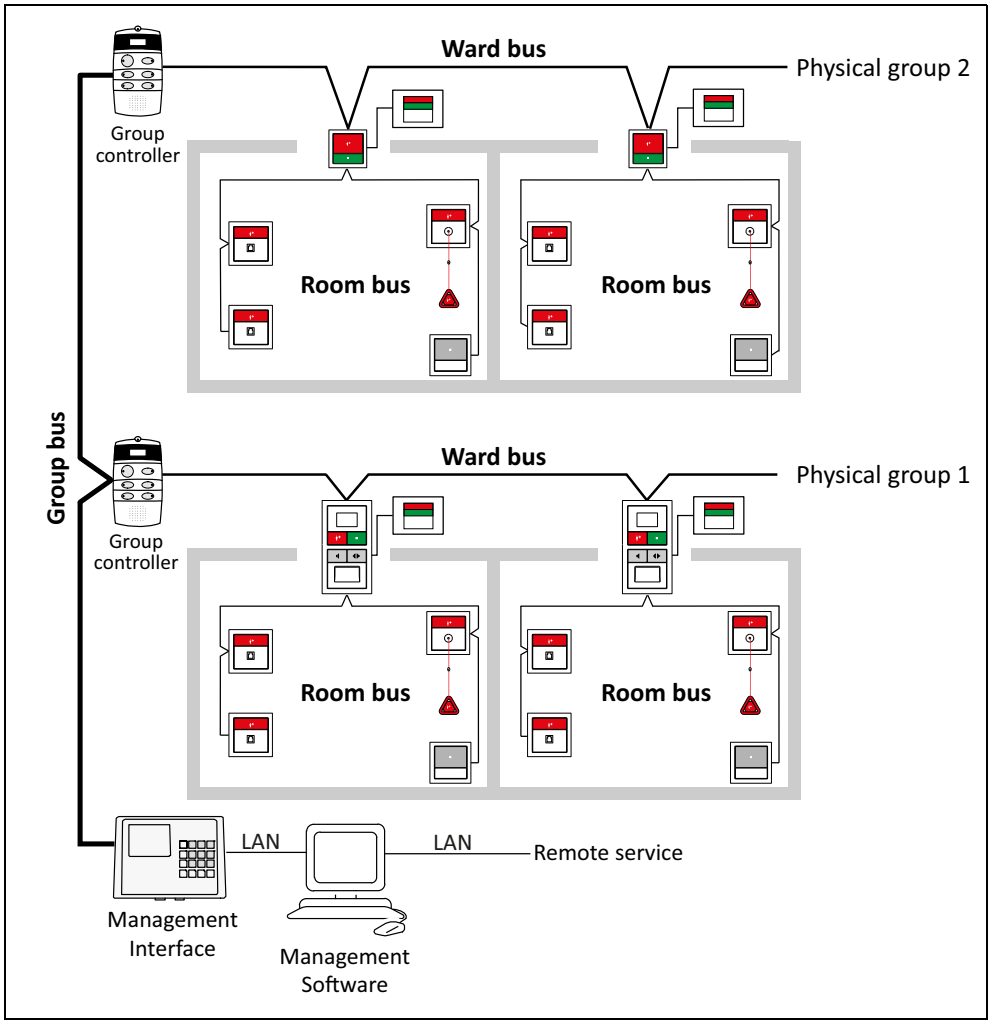


Fig. 2: Bus system

The power for the system is provided by power supply units that are installed at decentralised locations (77 3400 60 or 77 3401 60). The number of power supply units and where they are installed depend on the power required in each case.

The Management Interface (29 0700 00) or - as an option - the system interface LAN (19 0700 05) establishes the data connection between the group bus and the IP infra-structure available at the site. It allows programming and configuration, as

well as call logging for the nurse call system, to be carried out using the ConLog^{CARE} Management Software via this IP connection

2.3 Physical and logical groups

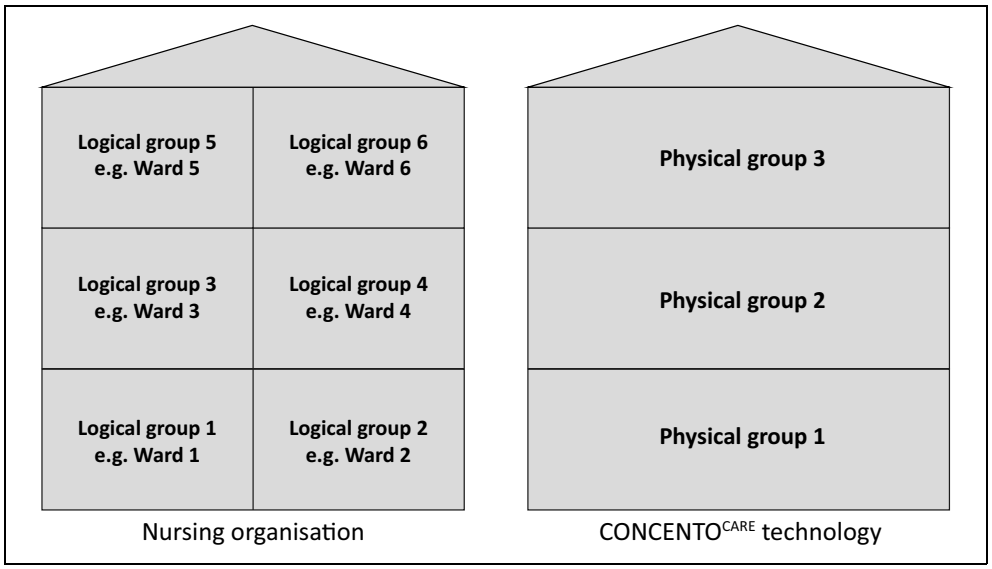


Fig. 3: Distribution of logical groups among physical groups

When configuring CONCENTO^{CARE} nurse call systems, the organisational structure of the institution is distinguished from the technical structure.

An organisational unit is a number of rooms for which the same staff are responsible. In most cases, this is a ward. The organisational unit is called the "logical group". Most logical groups are wards.

A physical unit is a number of rooms that are connected to a ward bus and controlled by a group controller. The physical unit is called "physical group".

A physical group can consist of several logical groups. A logical group can even be distributed over several physical groups.

NOTE! According to the failure safety required in DIN VDE 0834-1: 2016-06, only one group of rooms may be connected to a group controller, which can be looked after by one person with minimum occupation. This organisational unit is called an organisation group

Logical group = organisational unit = (usually) ward

Physical group = physical unit

2.4 System limits

2.4.1 Gruppenbus

- Maximum cable length of group bus: 700 m
- Maximum of 40 users per group bus, consisting of: Management Interface or system interface LAN, group controllers, fire alarm interface.
- Maximum of1 Management Interface or system interface LAN per group bus.

2.4.2 Ward bus

- Maximum cable length per ward bus: 700 m
- Maximum of 40 users per ward bus, consisting of: Display inserts, call/presence inserts, corridor displays.

2.4.3 Room bus (RAN)

- Maximum cable length per room bus (RAN): 50 m
- Maximum of 30 users per room bus (RAN), consisting of: Intercom inserts, presence switch inserts, call switch inserts with connector, call switch inserts, cancel switch inserts, pull cord switch inserts, pneumatic switch inserts, RAN interfaces

2.4.4 Configuration options

- Maximum of 128 logical groups per nurse call system
- Maximum of 32 group couplings
- Maximum of 9 time zones (3 for Monday to Friday, 3 for Saturday, 3 for Sunday)
- A maximum of one display insert can be configured in such a way that it can be used to switch over the current time zone manually.

2.5 Interfaces with external systems

2.5.1 Management Interface / Systemschnittstelle LAN

The Management Interface and the system interface LAN provide the nurse call system interface with the ConLog^{CARE} Management Software. However, they also represent the central switching point for interfaces with external systems.

Radio paging system, DECT system

It is possible to connect an alarm server, a radio paging system or a DECT telephone system to the Management Interface or the system interface LAN. The protocol is based on ESPA 4.4.4. As a result, pending call messages from the nurse call system can be shown on the display of nursing staff's pagers or DECT telephones..

Telephony

A connection between a telephony system and a CONCENTO^{CARE} nurse call system is always established via the Management Interface. The Management Interface has an a/b interface for the purpose of connection to the analogue telephone network. Additionally, synthetic speech announcements are stored in the Management Interface; these guide the user through the call handling process on the telephone.

2.5.2 RAN interface

External call devices in the room must be connected via RAN interfaces (19 0840 00). The RAN interface is connected to the room bus (RAN). The following call types may be initiated by the RAN interface:

- Room call
- Radio call
- Inactivity alarm *)
- Service call
- Technical call
- Door alarm
- Fire alarm
- For further call types refer to page 89

*) It is possible to connect a device that functions as an activity trigger for the "Inactivity alarm" call type.

It is possible to connect a normally closed or normally open contact. Additionally, it is possible to make settings concerning whether the call is automatically cancelled when the call device is reset ("dynamic call") or whether the call has to be cancelled actively in the nurse call system ("static call").

2.6 Light control

In addition to the call button, the pear push switch incl. call and light switch (29 0790 02) has a light button that the resident/patient can use to switch on, switch off or dim a light source. This may be a room light or a reading light, for instance.

The call switch insert with connector (29 0704 00...) is equipped with an appropriate output for actuating a light. The output emits a 24 V signal for as long as the button is held down. The load capacity of the output is 50 mA.

For details refer to chapter "16 Light control" as of page 169.

2.7 Speech communication

The speech communication and data transmission are separate from one another. This means that nurse call systems can be set up with or without speech communication; mixed operation can also be used without problems.

Speech communication is carried out using the intercom inserts. Each intercom insert is operated together with a display insert; they are mounted in neighbouring back boxes. There is also the option of operating an intercom insert with a call/ presence insert. This may make sense in assisted living facilities, for example.

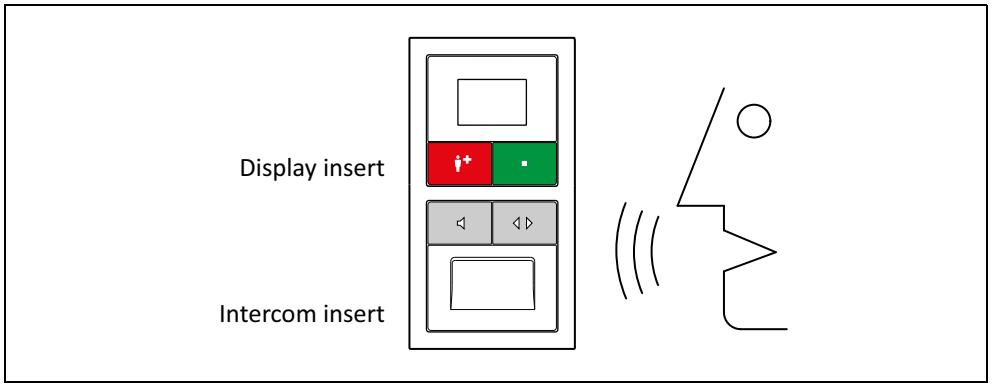


Fig. 4: Intercom insert

One speech channel is available per physical group.

In addition to speech communication within the nurse call system, it is also possible to use speech communication via telephony devices that are connected to the nurse call system via the analogue a/b interface of the Management Interface.

2.8 ConLog^{CARE} Management Software

The ConLog^{CARE} Management Software is used for the central configuration and programming of CONCENTO^{CARE} nurse call systems, and for logging and evaluating all system events associated with them. The ConLog^{CARE} Management Software has a modular structure.

2.8.1 ConLog^{CARE} Basic module

- Central configuration of the entire nurse call system
- Establishment of the logical structure of the nurse call system in logical groups (i.e. wards) and time zones (i.e. shifts).
- Entry of ward and room names
- Programming of the Management Interface, the system interface LAN, the group controllers, display inserts, call/presence inserts with the project-specific settings via the bus system through the Management Interface or the system interface LAN.
- Firmware updates of the Management Interface, group controllers and room controllers
- Administration of the system interfaces for alarm servers / radio paging and telephony
- Administration of call forwarding to Telecare monitoring centres

2.8.2 ConLog^{CARE} "Call recording" module

- Logging all events of the nurse call system with date time stamp
- Recording the raising of calls, call type, call location, call answering, call cancellation
- Distinguishing between remote cancellation and cancellation at call location
- Simple and effective reporting

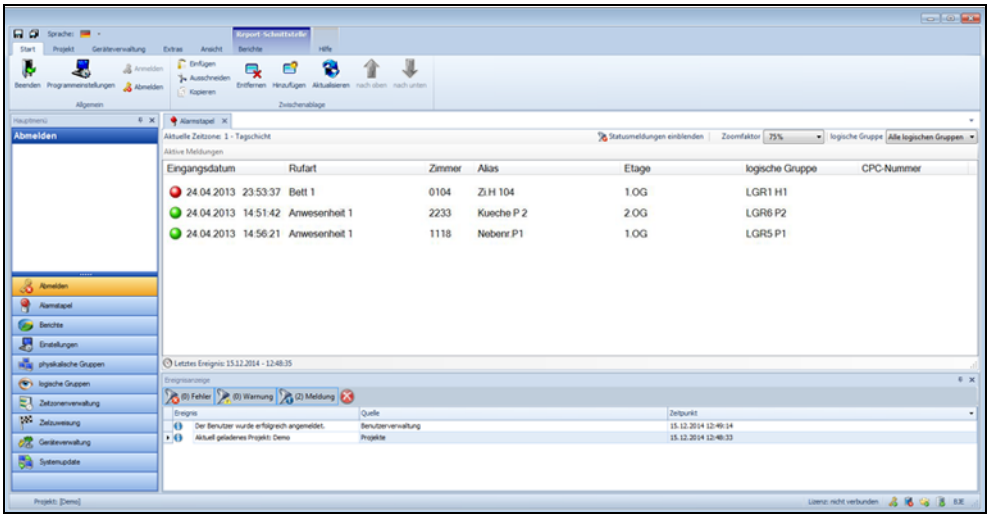


Fig. 5: ConLog^{CARE} Management Software "Call recording" module

2.8.3 System minimum requirements

- Microsoft® Windows® 10, 8, 7 (32 bit, 64 bit)
- 4 GB RAM
- 40 GB hard drive
- DVD drive
- Monitor (1280 x 1024 pixels)
- USB 2.0

2.8.4 Further modules

In addition to the basic module and the "Call recording" module further modules are available:

- The "Client" module is intended for the installation on a further PC and extends the basic module by an additional workstation with the same scope of functions
- The "LifeUpdate" module extends the LifeUpdate included in the basic module by another year.
- The "Additional project" module allows the connection of an additional CONCENTO^{CARE} nurse call system to the basic module.

3 Installation work sequence

Step		
1.	Defining the mounting positions	See chapter "4 Mounting positions" as of page 23.
2.	Installation of back boxes	See chapter "5 Installation of back boxes" as of page 33.
3.	Laying the cables	See chapter "6 Laying the cables" as of page 37.
4.	Mounting and connecting devices	Each device comes with a product leaflet describing the installation and connection. In addition, you will find the product leaflets in the chapter "20 Product leaflets" as of page 189. For further information on the installation refer to the following chapters of this Technical Manual: – chapter "7 Installing the room controllers" as of page 53. – chapter "8 Installing room lamps & corridor displays" as of page 69. – chapter "9 Installing switches" as of page 77. – chapter "10 Installing control units" as of page 97.
5.	Switching on and checking of power supply unit	Each power supply unit is supplied with an instruction manual. Additionally, you find the instruction manual in chapter "20 Product leaflets" as of page 189. For further information refer to chapter "11 Installing power supply units & switching on" as of page 131.
6.	Checking the room installation	See chapter "13.1 Check light call function for each room" as of page 145.
7.	Configuring the nurse call system using the ConLog^{CARE} Management Software	See online help included in ConLog^{CARE} Management Software as well as chapter "12 Configuring the nurse call system" as of page 135.
8.	Commissioning the nurse call system	See online help included in ConLog^{CARE} Management Software.
9.	Functional check of the entire nurse call system	See chapter "13.2 Functional check of the entire nurse call system" as of page 147.

Tab. 1: Installation work sequence

4 Mounting positions

4.1 Room controllers

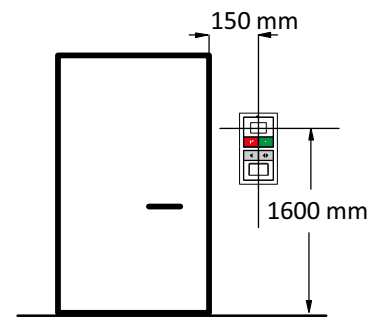
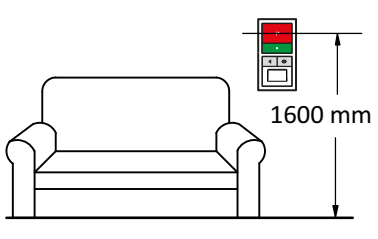
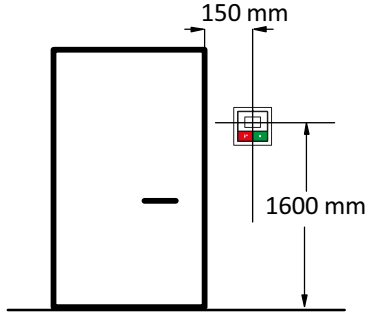
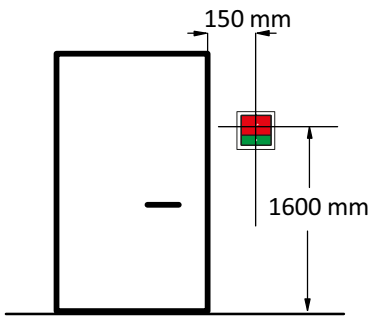
Figure	Description
	**Display insert with intercom insert** *Order no. 29 0700 80... + 29 0701 30...* – Mounting on two connected vertically arranged deep back boxes – Installation preferably in the entrance area to allow nursing staff easy access to the presence button when they are entering and leaving the room. – Unobstructed view of the display must be ensured. – To ensure the display remains legible, the device must not be exposed to direct sunlight. – Mounting height above floor level according to DIN VDE 0834-1 = 150 – 170 cm.
	**Call/presence insert with intercom insert in an apartment** *Order no. 29 0701 00... + 29 0701 30...* – Wall mounting on a deep 1-gang back box – In an apartment of assisted living the room controller should be installed in an acoustically suitable position from where speech contact is possible throughout the entire apartment, for example in the living room. – Mounting height above floor level = 150 – 170 cm.
	**Display insert** *Order no. 29 0700 80...* – Wall mounting on a deep 1-gang back box – Installation preferably in the entrance area to allow nursing staff easy access to the presence button when they are entering and leaving the room. – Unobstructed view of the display must be ensured. – To ensure the display remains legible, the device must not be exposed to direct sunlight. – Mounting height above floor level according to DIN VDE 0834-1 = 150 – 170 cm.

Figure	Description
	**Call/presence insert** *Order no. 29 0701 00...* – Wall mounting on a deep 1-gang back box – Installation preferably in the entrance area to allow nursing staff easy access to the presence button when they are entering and leaving the room. – Mounting height above floor level = 150 – 170 cm. This mounting height allows a later upgrade to a display insert.

4.2 Room lamps, corridor displays

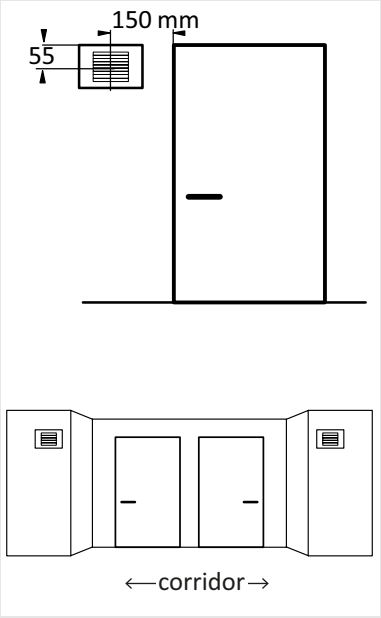
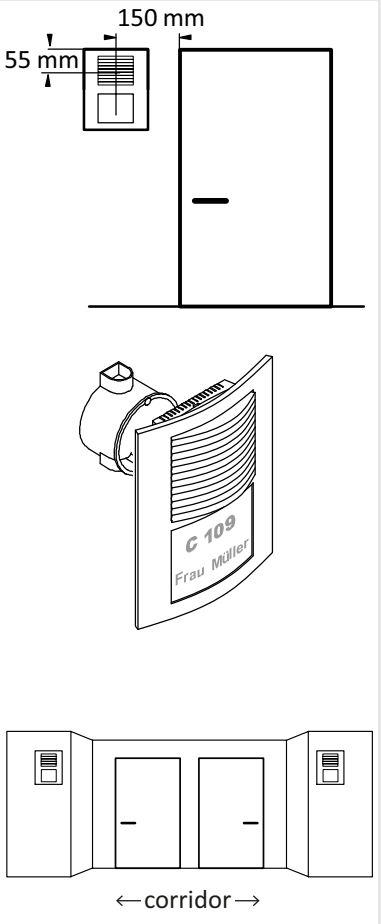
Figure	Description
	**Room lamp universal, 3 sections** *Order no. 77 0180 10, 77 0185 10* – Mounting on a 1-gang back box. – The room lamp must be easily assignable to the room. – If the room door is located in a niche that cannot be seen from the corridor, it is advisable to install the room lamp separately in the corridor. – External sources of light must not prevent the room lamp from being identified. – Mounting height above floor level according to DIN VDE 0834-1 = 150 – 250 cm.
	**Room lamp universal, 3 sections, with doorplate** *Order no. 77 0181 10* – Mounting on a 1-gang back box. Note! The back box is installed behind the lamp and not behind the door-plate. – The room lamp with door plate must be easily assigna-ble to the room – If the room door is located in a niche that cannot be seen from the corridor, it is advisable to install the room lamp separately in the corridor. – External sources of light must not prevent the room lamp from with doorplate being identified. – Mounting height above floor level according to DIN VDE 0834-1 = 150 – 250 cm.

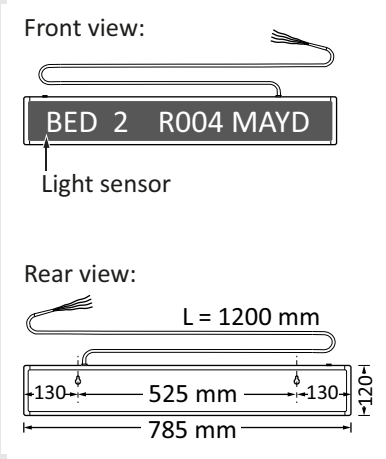
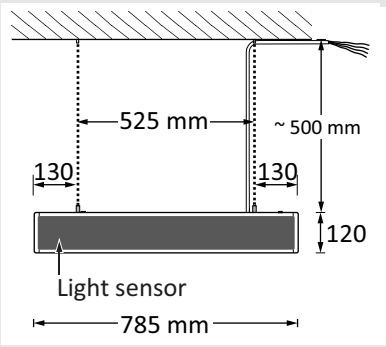
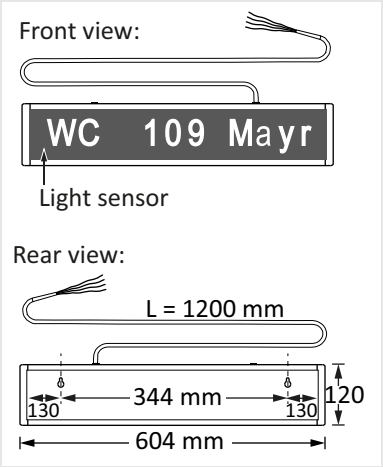
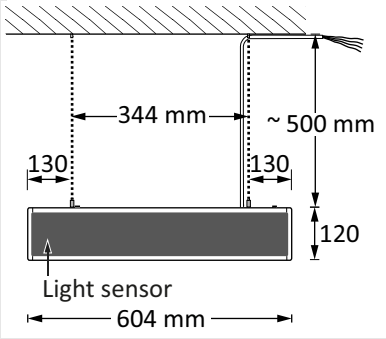
Figure	Description
	**Corridor display, 16-digit** *Order no.: 19 0783 16* – Wall fixing with the help of the keyhole-shaped openings on the back. – Distance to junction box < 1m. – Unobstructed view of the corridor display must be ensured. – External sources of light must not prevent the corridor display from being identified. – Observe the position of the light sensor. The light sensor automatically adjusts the brightness of the corridor display. – Mounting height above floor level according to DIN VDE 0834-1 = 150 – 250 cm.
	**Corridor display, 16-digit, double-sided** *Order no.: 19 0784 16* – Unobstructed view of the corridor display must be ensured. – External sources of light must not prevent the corridor display from being identified. – Observe the position of the light sensor. The light sensor automatically adjusts the brightness of the corridor display. – Attention! A light sensor is only present on the side of the double-sided corridor display shown in the illustration. – Extension set ceiling suspension 0.5 m if required: 19 0780 05 – Mounting height above floor level according to DIN VDE 0834-1 = 150 – 250 cm.

Figure	Description
	**Corridor display, 12-digit** *Order no.: 29 0783 12* – Wall fixing with the help of the keyhole-shaped openings on the back. – Distance to junction box < 1m. – Unobstructed view of the corridor display must be ensured. – External sources of light must not prevent the corridor display from being identified. – Observe the position of the light sensor. The light sensor automatically adjusts the brightness of the corridor display. – Mounting height above floor level according to DIN VDE 0834-1 = 150 – 250 cm.
	**Corridor display, 12-digit, double-sided** *Order no.: 29 0784 12* – Unobstructed view of the corridor display must be ensured. – External sources of light must not prevent the corridor display from being identified. – Observe the position of the light sensor. The light sensor automatically adjusts the brightness of the corridor display. – Attention! A light sensor is only present on the side of the double-sided corridor display shown in the illustration. – Extension set ceiling suspension 0.5 m if required: 19 0780 05 – Mounting height above floor level according to DIN VDE 0834-1 = 150 – 250 cm.

4.3 Switch inserts

For all switch inserts, the following applies:

- In case more than one switch shall be installed one above the other, multi-frames are available.
- Devices of the nurse call system and low-voltage system (e.g., switches or sockets) must not be covered with the same cover plate. A common cover is permissible if the function of insulation and contact protection are retained after the external cover is removed.

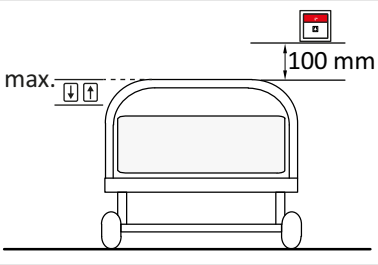
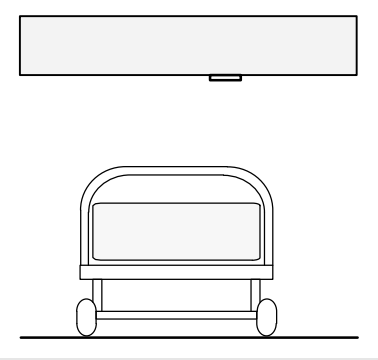
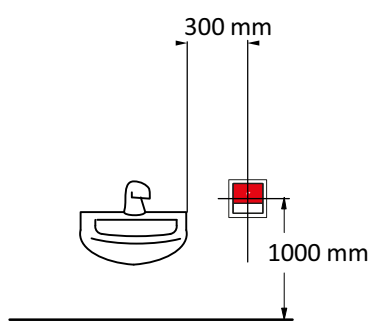
Figure	Description
	**Call switch insert with connector (wall mounting)** *Order no. 29 0704 00...* – Mounting on a 1-gang back box. – Mounting above the highest bed frame setting so that the call button can be easily reached and the bed cannot come into contact with the call switch with connector when moving. – Mounting height above floor level according to DIN VDE 0834-1 = 70 – 150 cm.
	**Call switch insert with connector (mounting in medical supply unit)** *Order no. 29 0704 00...* – Common practice is that the connection sockets are installed by the supplier of the medical supply units. – Mounting height above floor level according to DIN VDE 0834-1 = 160 – 180 cm.
	**Call switch insert** *Order no. 29 0708 00...* – Mounting on a 1-gang back box. – The call switch must be in a place that is easy for the resident/patient to access; e.g. next to the washbasin. – The specific provisions of DIN VDE 0100 must be observed in WC and wet rooms. – Mounting height above floor level according to DIN VDE 0834-1 = 70 – 150 cm.

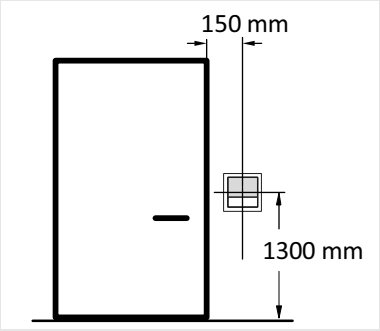
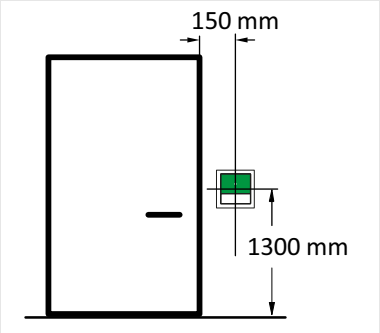
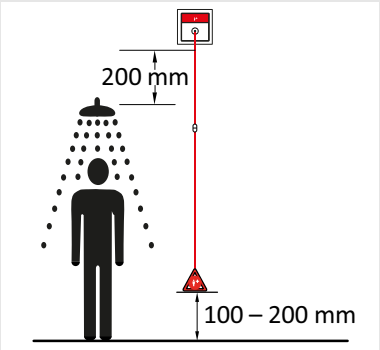
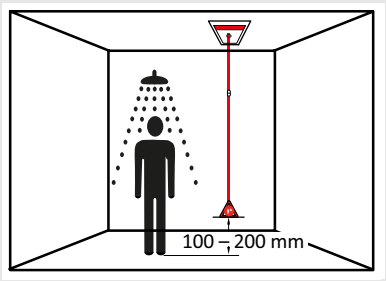
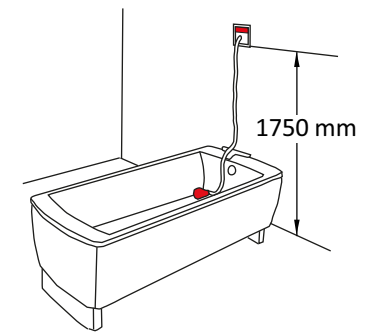
Figure	Description
	**Cancel switch insert** *Order no. 29 0709 00...* – Mounting on a 1-gang back box. – Mounting next to the door in the WC; i.e. in the same room where the WC call is triggered, which must be cancelled with this cancel switch. – The specific provisions of DIN VDE 0100 must be observed in WC and wet rooms. – Mounting height above floor level according to DIN VDE 0834-1 = 70 – 150 cm.
	**Presence switch insert** *Order no. 29 0706 00...* – Mounting on a 1-gang back box. – Installation preferably in the entrance area to allow nursing staff easy access to the presence button when they are entering and leaving the room. – Mounting height above floor level according to DIN VDE 0834-1 = 70 – 150 cm.
	**Pull cord switch insert in bathroom/WC (wall mounting)** *Order no. 29 0707 20...* – Mounting on a 1-gang back box. – The specific provisions of DIN VDE 0100 must be observed in WC and wet rooms. – Pull cord switches in shower stalls must be installed at least 200 mm above the highest possible position of the shower head. – The call handle must be in a place that is easy for the patient to access. – It must also be possible for people lying on the floor to access the pull cord. Therefore, the call handle must be between 100 mm and 200 mm above the floor.

Figure	Description
	**Pull cord switch insert in bathroom/WC (ceiling mounting)** *Order no. 29 0707 20...* – Mounting on a 1-gang back box. – The specific provisions of DIN VDE 0100 must be observed in WC and wet rooms. – The call handle must be in a place that is easy for the patient to access. – It must also be possible for people lying on the floor to access the pull cord. Therefore, the call handle must be between 100 mm and 200 mm above the floor.
	**Pneumatic switch insert** *Order no. 29 0707 50...* – Mounting on a 1-gang back box. – The specific provisions of DIN VDE 0100 must be observed in WC and wet rooms. – The rubber ball must be in a place that is easy for the patient to access.

4.4 System control

4.4.1 Management Interface

- Only in dry rooms, ideally in a distributor (not in patient/resident rooms).
- Always easily accessible to authorised persons (access space at least 60 cm wide).
- The display and operating keys must be accessible.
- Heat dissipation must not be hindered.

4.4.2 System interface LAN

- Only in dry rooms, ideally in a distributor (not in patient/resident rooms).
- Mounting on top-hat rail.
- Always easily accessible to authorised persons (access space at least 60 cm wide).
- Heat dissipation must not be hindered.

4.4.3 Group controller

- Only in dry rooms, ideally in a distributor (not in patient/resident rooms).
- Always easily accessible to authorised persons (access space at least 60 cm wide).
- The display and operating buttons must be accessible.
- Heat dissipation must not be hindered.

4.4.4 Fire alarm interface

- Only in dry rooms, ideally in a distributor (not in patient/resident rooms) or together with the fire alarm system.
- Always easily accessible to authorised persons (access space at least 60 cm wide).
- Heat dissipation must not be hindered.

4.4.5 Distributor for the nurse call system

Distributors for the nurse call system must not also be used for the low-voltage system. A separation between the nurse call system and low-voltage system in one housing does not suffice.

Mounting height above floor level according to DIN VDE 0834-1 = 70 – 220 cm, except switch cabinets.

4.5 Power supply units

The following requirements apply to the power supplies: Power supply unit 6A UPS (77 3400 60), Power supply unit 6A (77 3401 60).

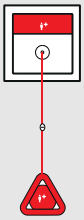
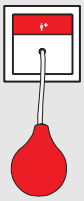
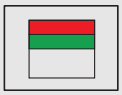
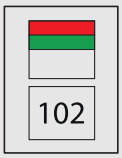
- Wall mounting through keyholes on the rear of the device.
- Dimensions of all devices (HxWxD): 244 x 325 x 178 mm.
- Weight of the power supply units: 77 3400 60: 7,6 kg; 77 3401 60): 2.5 kg.
- Use in an operating area with restricted access.
- Accessible for authorised persons at all times (access space at least 60 cm).
- Mounting above a non-combustible surface only
- Installation only at a height of max. 2 m.
- Installation only in dry rooms.
- Permissible ambient temperature during operation: 0 – +40°C. If this value is exceeded, there is a risk of the device overheating
- A sufficient air circulation must be provided above and below the device. For this reason, the distance to other devices or walls above and below the power supply unit must be at least 50 mm.
- In case of installation into switch cabinets or similar equipment, the heat loss must be dissipated by forced-air ventilation.
- All-pole switch gear must be provided on site for the deactivation of the system.
- A safe separation of the alternating and direct current supply circuits must be observed on site!
- Observe the country-specific regulations (e.g., VDE).

5 Installation of back boxes

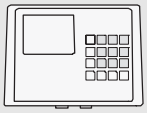
Install the back boxes at the defined mounting positions..

Icon	Order no.	Product name	Back box	
			1-gang solid wall: 17 0100 00 partition wall: 17 5100 00	**1-gang, deep** solid wall: 17 0100 20 partition wall: 17 5100 20
	29 0700 80...	Display insert		✘
	29 0701 00...	Call presence insert		✘
	29 0700 80... 29 0701 30...	Display insert with intercom insert		✘ ✘
	29 0701 00... 29 0701 30...	Call/presence insert with intercom insert		✘ ✘
	29 0706 00...	Presence insert	✘	
	29 0704 00...	Call switch insert with connector	✘	
	29 0708 00...	Call switch insert	✘	
	29 0709 00...	Cancel switch insert	✘	

Tab. 2: Required back boxes

Icon	Order no.	Product name	Back box	
			1-gang solid wall: 17 0100 00 partition wall: 17 5100 00	**1-gang, deep** solid wall: 17 0100 20 partition wall: 17 5100 20
	29 0707 20...	Pull cord switch insert	✘	
	29 0707 50...	Pneumatic switch insert	✘	
	29 0707 50...	RAN interface	Mounting in a back box or on a 35 mm mounting rail	
	77 0180 10	Room lamp universal, 3 sections	✘	
	77 0185 10	Room lamp universal, 3 sections, glass decor	✘	
	77 0181 10	Room lamp universal, 3 sections, with doorplate	✘	
	19 0783 16	Corridor display, 16-digit	Wall mounting using the "Keyholes" on the rear of the device.	
	29 0783 12	Corridor display, 12-digit		
	19 0784 16	Corridor display, 16-digit, double-sided	Ceiling suspension, 50 cm long, variable adjustment.	
	29 0784 12	Corridor display, 12-digit, double-sided		
	Z 00 8202 35	Radio receiver-T UP	✘	

Tab. 2: (Continuation) Required back boxes

Icon	Order no.	Product name	Back box	
			1-gang solid wall: 17 0100 00 partition wall: 17 5100 00	**1-gang, deep** solid wall: 17 0100 20 partition wall: 17 5100 20
	29 0700 00	Management Interface	✘	
	19 0700 05	System interface LAN	Mounting on a 35 mm mounting rail	
	29 0700 10	Group controller	Back box, 2-gang: Solid wall: 17 0410 00 Partition wall: 17 5400 00	
	19 0800 84	Fire alarm interface	Wall mounting via cut-outs in the rear side of the housing	
	77 3400 60	Power supply unit 6A UPS	Wall mounting via keyholes on the back of the unit, for details see instruction manual for the power supply unit (see chapter "20 Product leaflets" as of page 189)	
	77 3401 60	Power supply unit 6A		

Tab. 2: (Continuation) Required back boxes

6 Laying the cables

WARNING! When laying the cables, closely observe the current rules!

6.1 Cable types

A cable guide for CONCENTO^{CARE} has been created with the aim of making it easier to work with installation plans:

Marker	Cable type	Area of use
a	J-Y(St)Y 2x2x0.8	– Room bus (RAN) – Room lamp connection (not a room bus user) – Connection between power supply unit and group controller
c	J-Y(St)Y 4x2x0.8	– Group bus – Ward bus
k	NYM-J 3x1,5	– Stub cable to power supply unit, e.g. for supplying power to the corridor display – Connection between two power supply units at a ward bus – Mid-feed

Tab. 3: Cable legend

6.2 Electromagnetic compatibility (EMC)

All the nurse call system components are significantly below the specified limit values for electromagnetic compatibility (EMC). In isolated cases and under certain conditions, however, faults in the nurse call system may occur as a result of insufficient interference suppression for fluorescent lamps, e.g. in medical supply units.

At the site, appropriate precautions must be taken to prevent these external faults. In some cases, it may be possible to prevent external faults of this kind by installing interference suppressors (varistor circuits). The varistor circuits must be purchased from the manufacturers. Tunstall therefore offers the over-voltage protection circuit 230 V AC (70 0890 97).

The EMC behaviour of different medical supply units may vary significantly. Even two supply units of the same type may behave differently if they are cabled in different ways.

Nurse call systems are usually wide-ranging structures whose EMC behaviour is heavily influenced by the configuration of the cable network.

You should also remember this when retrofitting or modifying existing medical supply units.

6.2.1 Spacing to cables with dangerous voltage

Cables for the nurse call system must not be laid along with the cables of the low-voltage system or with cables of other systems of dangerous voltage in common cables, conduits or cable trays.

Cables for the nurse call system and cables of the low-voltage system must be placed at a minimum spacing of 30 cm. For shorter distances of less than 10 m the spacing may be reduced to 10 cm.

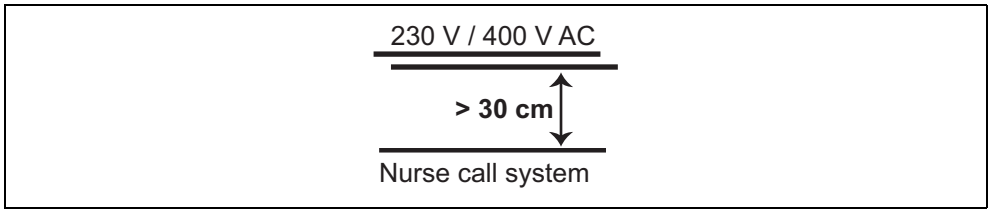


Fig. 6: Spacing to cables of the low-voltage system

For laying nurse call system cables in medical supply units the regulations of ISO 11197 have to be observed.

6.3 Group bus

6.3.1 Group bus properties

Property	Group bus
Cable type	J-Y(St)Y 4x2x0.8
Maximum cable length	700 m
Maximum number of group bus users	40 users
Group bus users	– 1 Group controller (29 0700 10) per physical group – 1 Management Interface (29 0700 00) or 1 System interface LAN (19 0700 05) – 1 Fire alarm interface (19 0800 84)

Tab. 4: Group bus – Properties

6.3.2 Group bus cable

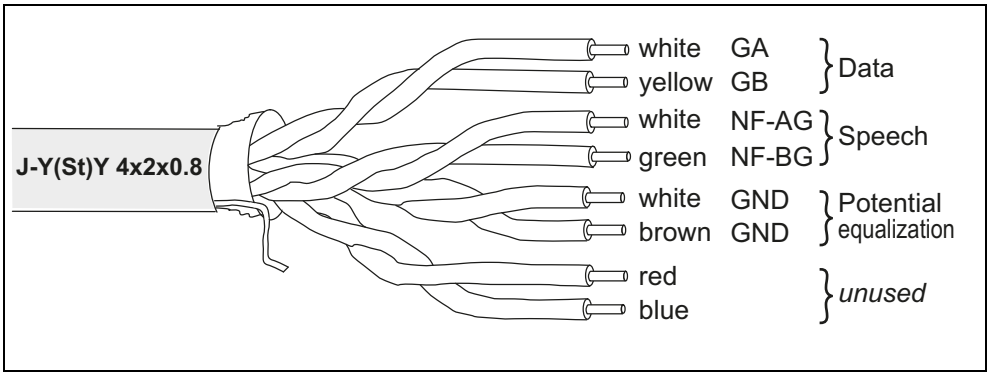


Fig. 7: Group bus wires

The group bus is made up of:

- Data line (1 twisted pair)
- Speech line (1 twisted pair) – in systems without speech unused
- GND line for potential equalization (twice) (1 twisted pair)

DANGER! Risk of functional faults in the nurse call system!
Interchanging wires leads to functional faults in the nurse call system. Use the specified assignment of the wires.

The cable J-Y(St)Y 4x2x0.8 is twisted in pairs. The specified twisted pairs must be kept to, otherwise functional faults will arise in the nurse call system. Wires must

not be mixed up. There is a risk of mix-ups in the case of the white wires in particular.

Proceed as follows to prevent the wires being mixed up:

1. Pull in the cable so that 30 cm is still available for stripping.
2. Strip the cable at the back box input. The twisted pairs are now clearly recognisable.
3. Clearly and permanently identify the twisted pairs immediately and directly at the end of the cable sheath by firmly twisting or some other marking. Permanent identification is important so that the wires cannot be mixed up in the event of a device change later.
4. Only now cut off the wires to the required length and connect them up.

DANGER! Risk of short circuits or cross talk!
The cable shield and the ground wire are not connected and must be removed in the back box up to the cable sheath.

6.3.3 Laying the group bus

NOTE! The group bus must be cabled as a line (bus) configuration. Stub lines **must not** be used for the group bus. All devices must be directly at the bus.

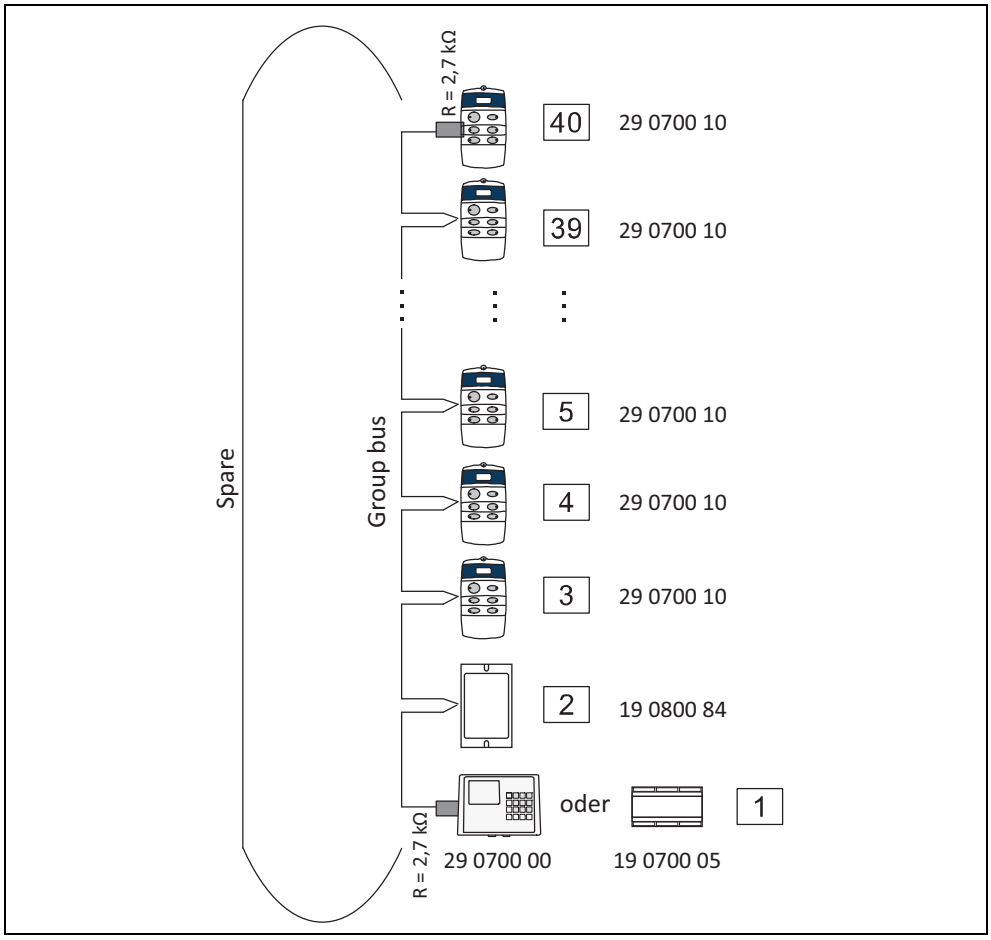


Fig. 8: Group bus topology

Equipment in place at the site (distributors, cable ducts) should be used when installing the group bus.

6.3.4 Terminating resistor

The group bus must be connected at the first and last user with a 2.7 kOhm terminating resistor between GA and GB. The resistor is already present in all devices and only needs to be activated, as described in the installation instructions for the respective device.

6.3.5 Voltage surge protection

If the group bus is to be installed between two buildings, it must be equipped with overvoltage protection at the transition points of both buildings. Standard DIN VDE 0834-1 states that nurse call system cables exiting a building must be equipped with overvoltage protection that is compliant with DIN VDE 0845 (VDE 0845) at the exit point.

For the required information refer to chapter "18 Voltage surge protection" as of page 179.

6.3.6 Potential equalization

All group bus users, in other words, Management Interface (29 0700 00) or system interface LAN (19 0700 05), group controllers (29 0700 10) and fire alarm interface (19 0800 84), must be connected via GND connections (= twisted pair in group bus cable).

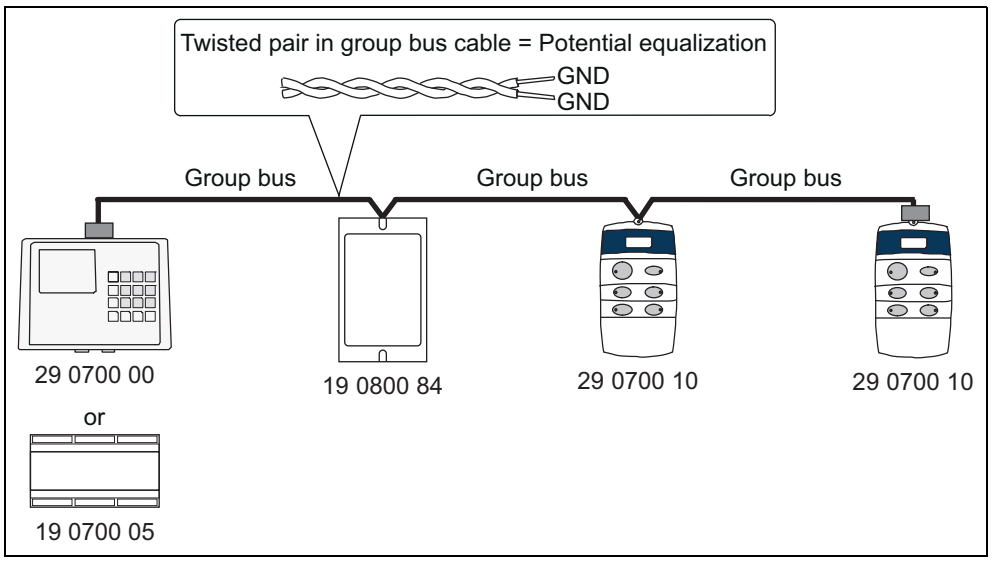


Fig. 9: Potential equalization

6.4 Ward bus

6.4.1 Ward bus properties

Property	Ward bus
Cable type	J-Y(St)Y 4x2x0.8
Maximum cable length	Data line, speech line: 700 m Per power supply line (ring): 300 m
Maximum number of ward bus users	40 users (of which max. 10 corridor displays)
Ward bus users	– Display inserts (29 0700 80...) – Call/presence inserts (29 0701 00...) – Corridor display (29 0783 12, 9 0784 12, 19 0783 16, 19 0784 16)

Tab. 5: Ward bus – Properties

6.4.2 Ward bus cable

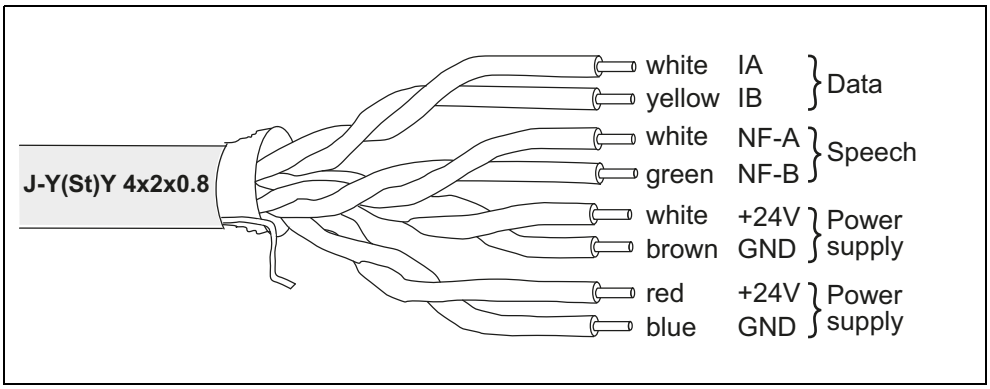


Fig. 10: Ward bus wires

The ward bus is made up of:

- Power supply line (twice, i.e. 2 twisted pairs)
- Data line (1 twisted pair)
- Speech line (1 twisted pair) – in systems without speech unused

DANGER! Risk of functional faults in the nurse call system!
Interchanging wires leads to functional faults in the nurse call system. Use the specified assignment of the wires.

The cable J-Y(St)Y 4x2x0.8 is twisted in pairs. The specified twisted pairs must be kept to, otherwise functional faults will arise in the nurse call system. Wires must

not be mixed up. There is a risk of mix-ups in the case of the white wires in particular.

Proceed as follows to prevent the wires being mixed up:

1. Pull in the cable so that 30 cm is still available for stripping.
2. Strip the cable at the back box input. The twisted pairs are now clearly recognisable.
3. Clearly and permanently identify the twisted pairs immediately and directly at the end of the cable sheath by firmly twisting or some other marking. Permanent identification is important so that the wires cannot be mixed up in the event of a device change later.
4. Only now cut off the wires to the required length and connect them up.

DANGER! Risk of short circuits or cross talk!
The cable shield and the ground wire are not connected and must be removed in the back box up to the cable sheath.

6.4.3 Laying the ward bus

NOTE! The power supply line must be installed in a ring configuration. The data line and speech line must be installed in a line (bus) configuration. The data line and speech line must not have a ring closing point.

This means that the ward bus cable is installed as a ring. Between the first and last bus user, however, only the power supply line is connected.

No stub lines must be installed for the data line and the speech line. All devices must be directly at the bus.

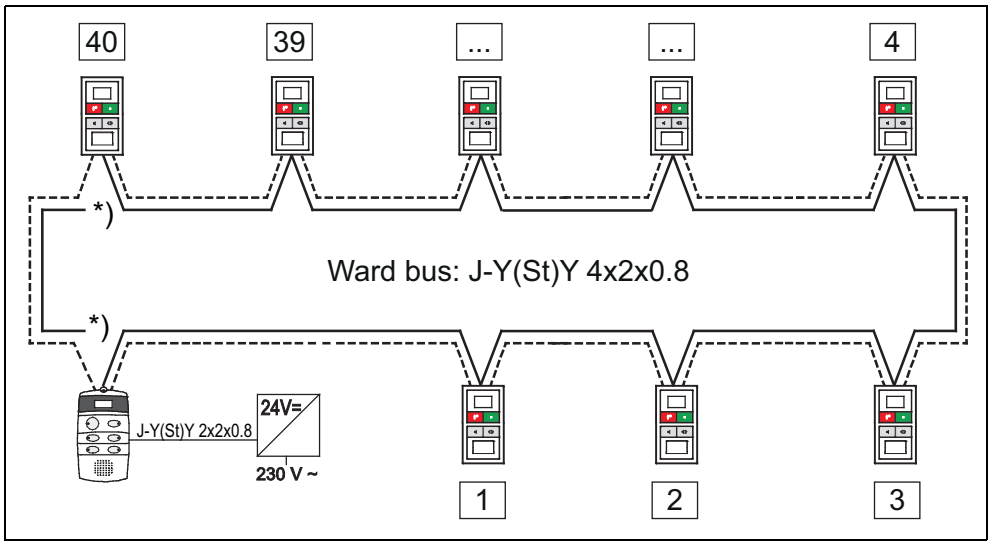


Fig. 11: Stationsbus-Topologie

----------	Ward bus cable consisting of power supply line and data line + speech line
————	Data line + speech line
----------	Power supply line
*)	Only connect the power supply line between the last and the first bus user. No ring closing point in the data line and speech line.

6.4.4 Terminating resistor

The ward bus must be connected at the first and last user with a 2.7 kOhm terminating resistor between IA and IB. The resistor is already present in all devices and only needs to be activated, as described in the installation instructions for the respective device.

6.4.5 Mid-feed

In addition to the power supply line, which is included in the ward bus cable, a mid-feed from the power supply unit is recommended. Cable type for the mid-feed: NYM-J 3x1.5.

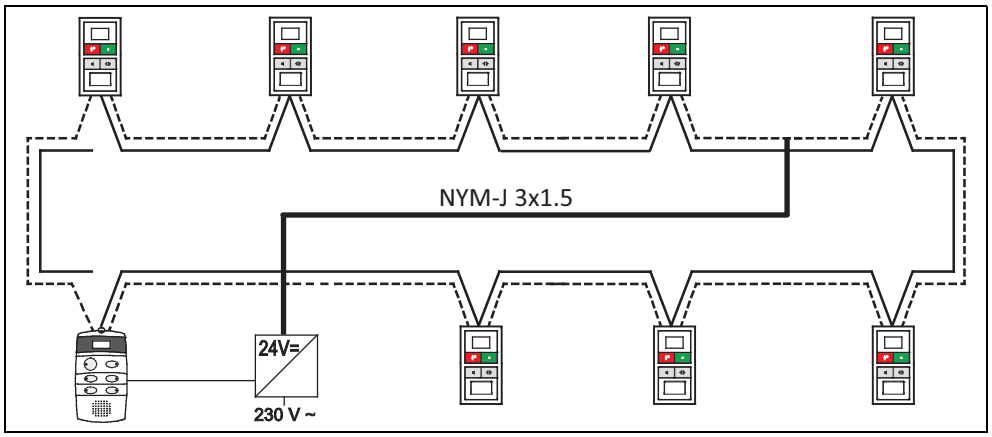


Fig. 12: Mid-feed

----------	Ward bus cable consisting of power supply line and data line + speech line (cable type: J-Y(St)Y 4x2x0.8)
————	Data line + speech line
----------	Power supply line
————	Mid-feed (cable type: NYM-J 3x1.5)

You must ensure that it is not possible to mix up the cables for the extra-low voltage and the low voltage system: use appropriate colour-coding, mark the cables as necessary, and use the appropriate laying method for each case.

6.4.6 Stub cable to the corridor display

The corridor display is a ward bus user, i.e. the corridor display is connected to the data line of the ward bus. However, the power for the corridor display is supplied not via the ward bus but instead via a separate stub line from the power supply unit.

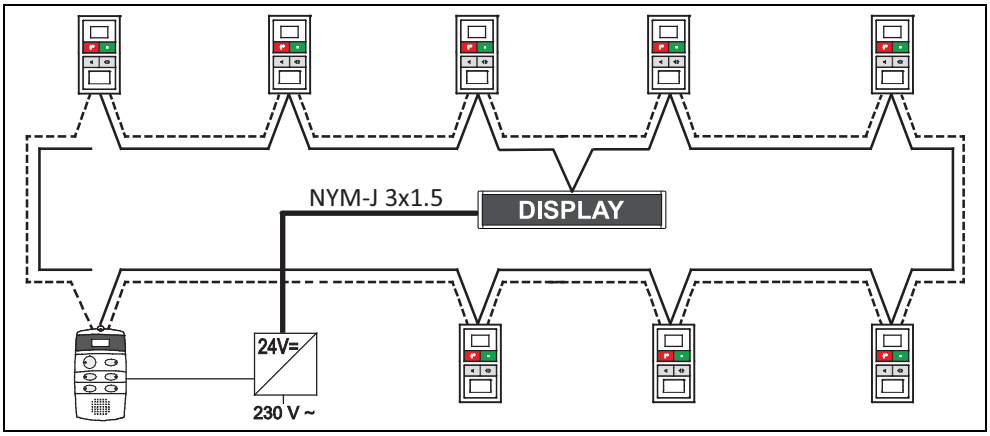


Fig. 13: Stub cable to the corridor display

----------	Ward bus cable consisting of power supply line and data line + speech line (cable type: J-Y(St)Y 4x2x0.8)
————	Data line + speech line
----------	Power supply line
————	Stub cable from the power supply unit to the corridor display (cable type: NYM-J 3x1.5)

6.4.7 Two power supply units on one ward bus

Information for calculating the number of power supply devices required is available in the CONCENTO^{CARE} planning manual, chapter "Power supply" (download from www.tunstall.de).

If two power supply units are required at a ward bus for supplying the devices, a second power supply ring must be installed. The data and speech line may continue to up to 40 ward bus users and a cable length of 700 m.

The GND connection points of the power supply units must be connected using a type NYM-J 3x1.5 cable.

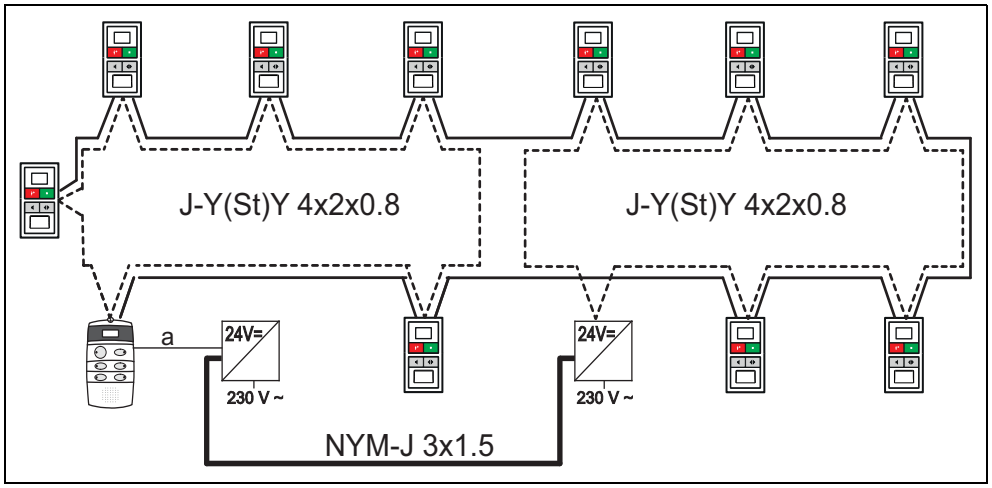


Fig. 14: Two power supply rings per ward bus

----------	Ward bus cable consisting of power supply line and data line + speech line (cable type: J-Y(St)Y 4x2x0.8)
————	Data line + speech line
----------	Power supply line
————	Connection between two power supply units (cable type: NYM-J 3x1.5)

6.5 Room bus (RAN)

6.5.1 Room bus (RAN) properties

Property	Room bus (RAN)
Cable type	J-Y(St)Y 2x2x0.8
Maximum cable length	The total length of all RAN lines connected to a display insert or call/presence insert may not exceed 50 m
Maximum number of room bus users	30 users
Room bus users	– Intercom insert (29 0701 30...) – Call switch inserts with connector (29 0704 00...) – Call switch inserts (29 0708 00...) – Cancel switch insert (29 0709 00... – Presence switch inserts (29 0706 00...) – Pull cord switch inserts (29 0707 20...) – Pneumatic switch inserts (29 0707 50...) – RAN interfaces (19 0840 00)

Tab. 6: Room bus (RAN) – Properties

NOTE! The room lamp is not a room bus user and is connected directly to the display insert or the call/presence insert (Cable type: also J-Y(St)Y 2x2x0.8).

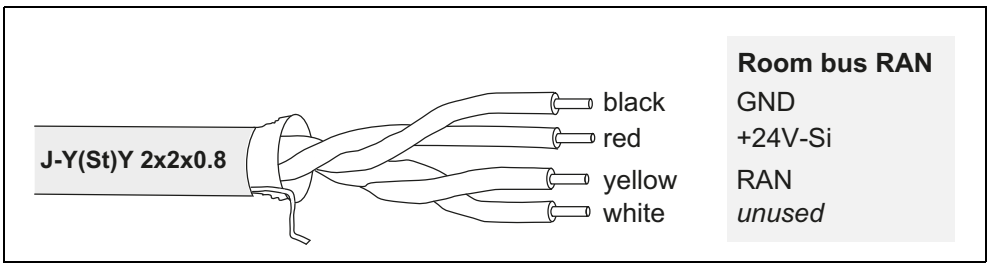


Fig. 15: Room bus (RAN)

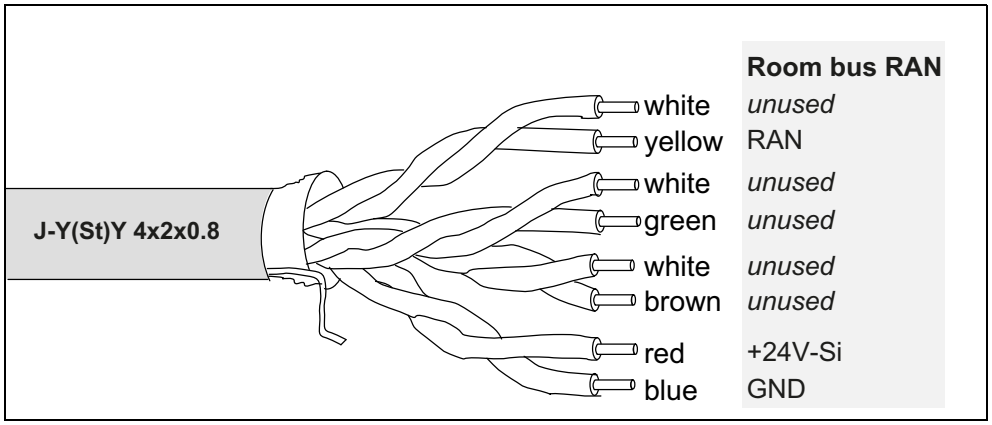


Fig. 16: Room bus (RAN) when using J-Y(St)Y 4x2x0.8 instead of J-Y(St)Y 2x2x0.8

All of the room bus users may be wired using any configuration (star, bus or mesh). Later expansion of the RAN can be realised from any device and independent of the device's particular function.

For a better overview, split the various RAN connections into function groups. This type of arrangement is more service-friendly

DANGER! Risk of malfunctions in the nurse call system!

– The cable shield and the shield wire of the room bus RAN are not connected and must be removed up to the cable sheath.
– The unused wires must not be interconnected.

6.6 Checking the cable network

Check the line network fully for continuity, freeness of short-circuits and earth leakage:

- Group bus: (data line, speech line, GND line)
- Ward bus (data line, speech line, power supply line)
- Room bus

7 Installing the room controllers

7.1 About this chapter

NOTE! Each product is supplied with a product leaflet containing information on mounting and connecting the product. In addition, you find the relevant product leaflet in chapter "20 Product leaflets" as of page 189.
You must observe the instructions and warning notices in the product leaflet.

The following pages only contain information which is frequently required for each product. This includes all connecting diagrams as well as information about configuration. It does not include mounting instructions. Therefore, use this chapter only for reference purposes.

7.2 Display insert and Call/presence insert

7.2.1 Display insert (29 0700 80...)

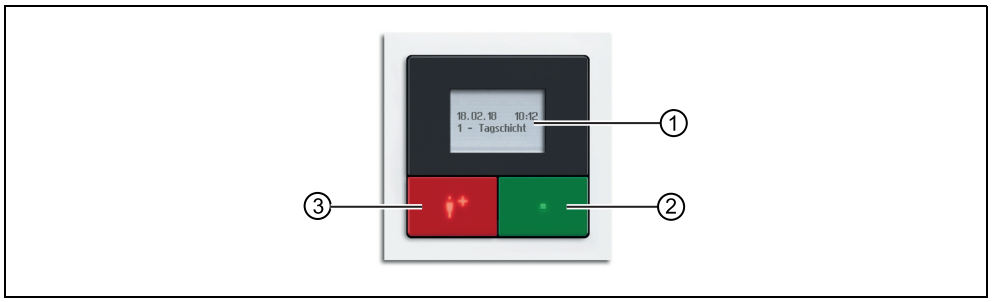


Fig. 17: Display insert (29 0700 80F, frame not included in the scope of supply)

[1]	Display
[2]	Presence button (green)
[3]	Call button (red)

7.2.2 Call/presence insert (29 0701 00...)

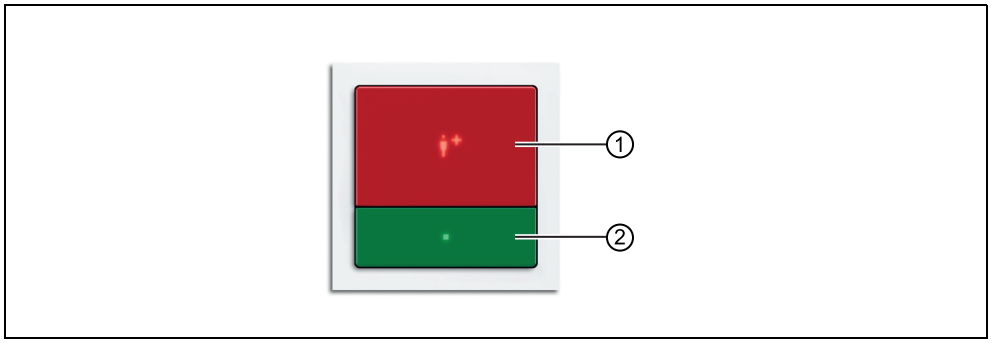


Fig. 18: Call/presence insert (29 0701 00F, frame not included in the scope of supply)

[1]	Call button (red)
[2]	Presence button (green)

7.2.3 Function

The display insert and the call/presence insert are room controllers and form the interface between ward bus and room bus (RAN). During a failure of the ward bus the display insert or the call/presence insert continues to operate independently with the connected devices in the room.

The green presence button serves for switching the presence of the staff on and off. The red call button serves for triggering calls.

An integrated tone generator serves for signalling calls when the presence is activated. With the display insert the calls are shown additionally on the display. The call/presence insert does not have a display.

7.2.4 Connections

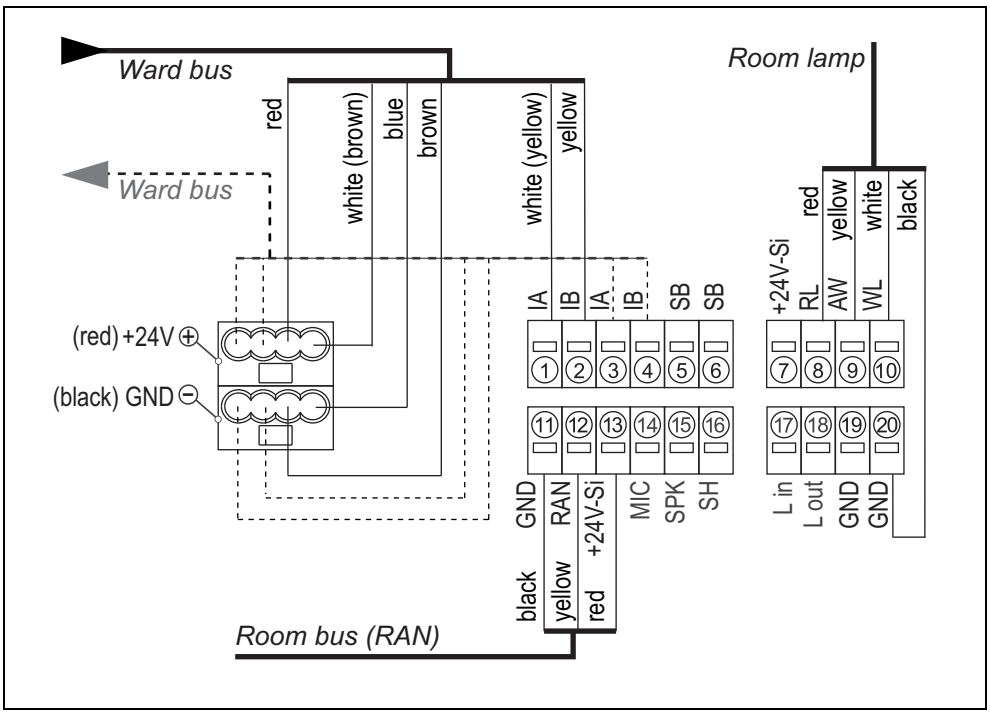


Fig. 19: Display insert / Call/presence insert – Connection plan

7.2.5 Bus termination

If the display insert or call/presence insert is the first or last user to the ward bus, the bus must be terminated. For this, set a wire bridge between connecting points 5 (SB) and 6 (SB).

7.2.6 Wires NF-A and NF-B of the ward bus cable

The wires NF-A and NF-B of the ward bus cable are not connected to the display insert and also not to the call/presence insert.

If an intercom insert is installed in the back box below, the wires NF-A and NF-B are connected to the intercom insert, see chapter "7.3 Intercom insert (29 0701 30...)" as of page 65.

The wires NF-A and NF-B are not used in nurse call systems without speech communication. However, do not cut off the wires. The wires will be required if the nurse call system will be upgraded to speech communication at a later time.

In nurse call systems where both room controllers with Intercom insert and without Intercom insert are installed, the wires NF-A and NF-B must be connected through at the room controllers without intercom insert.

7.2.7 Basic procedure for the configuration

To configure the call/presence insert on the device requires a room programming interface (29 0701 80...) (not included in the scope of supply of the call/presence insert).

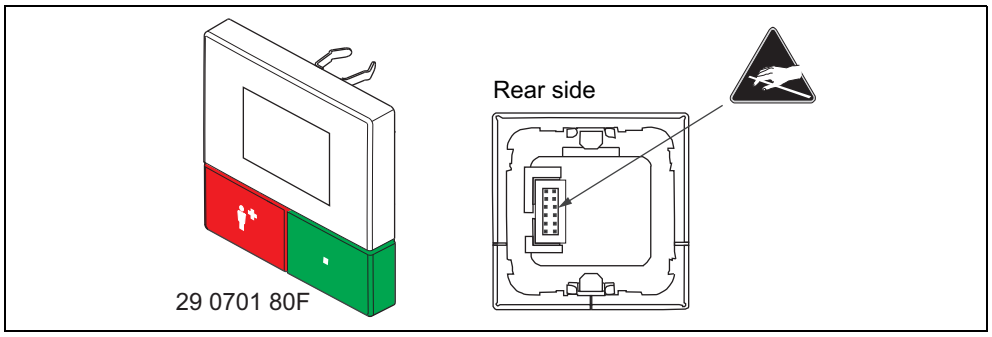


Fig. 20: Room programming interface (29 0701 80...)

The room programming interface instead of the control element is attached for the duration of the configuration.

NOTE! The control element can be changed during operation. The fault message "Module disconnected" is only triggered after approx. 3 seconds.

The configuration of the display insert is carried out on the device with the buttons and the display.

Icons on the display

⌂	Quit, i.e. return to the higher menu level without saving.
▲	Scroll up the list.
▼	Scroll down the list.
✓	(Tick): Set the marked menu item (and save).

Tab. 7: Display insert / Room programming interface – Icons on the display

Button functions during configuration

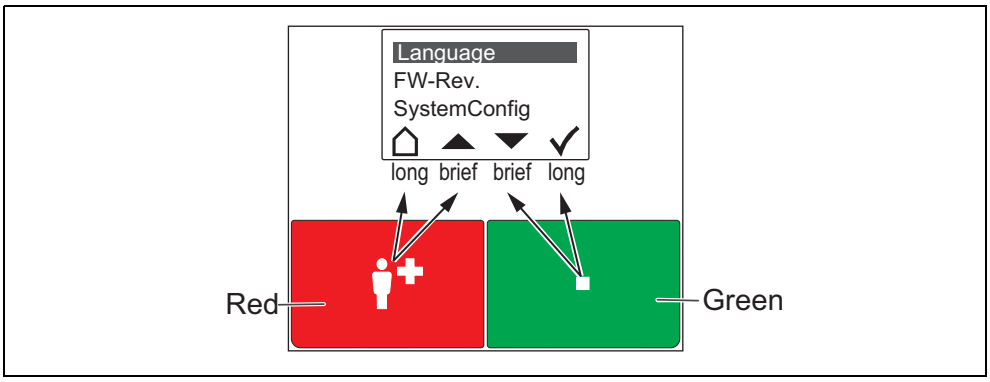


Fig. 21: Display insert / Room programming unit – Button functions in the menu

The red call button and the green presence button each has two functions: One function is triggered with brief press. The other function is triggered with a long press (0.5 seconds).

- The functions of the outer icons in the display are triggered with a long press of the buttons.
- The functions of the inner icons with a brief press.

Calling up the main menu

- Keep the red and green buttons pressed simultaneously (3 seconds) until the main menu is displayed.

Calling up the service menu and performing settings

1. Use the **arrows** to go to "SystemConfig" in the main menu.
2. Press the **Tick**. A password is requested.
3. Press the **arrows** in the following order as password:

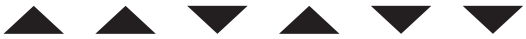


Fig. 22: Display insert / Room programming interface – Password

Terminating the configuration

To terminate the configuration, quit the service menu and the main menu.

- Press the **House** repeatedly until the normal operating display is displayed.

NOTE: If no button is pressed for 60 seconds, the menu is automatically quit without saving.

7.2.8 Configuring necessary settings

The following settings must be made on the device:

- Room type (only for display insert)
- Number of devices connected to the room bus (RAN).

All other settings are carried out with the ConLog^{CARE} Management Software per remote configuration via the bus system. The remote configuration is carried out with the ConLog^{CARE} Management Software and, if required, beforehand with the Plug&Play function of the group controller.

NOTE! As long as the remote configuration or the Plug&Play Setup has not been carried out, the display shows "WAIT FOR CONFIG". The display insert or the call/presence insert is not yet ready for operation.

Setting the room type (only for the display insert)

Settable room types:

- "Room" = Residents room (factory setting)
- "Staff" = like "Room" + announcement option (only with connected intercom insert).
- "Staff+HAB" = like "Staff" + option of switching over time zones.; additional options see page 62

NOTE! Room type "Staff+HAB" can only be set if the nurse call system has already been set to "Manual coupling" with the ConLog^{CARE} Management Software. Only one display insert per nurse call system is permitted to be set as "Staff+HAB"!

This is how you set the room type

1. Use the **arrows** to go to "Room Type" in the service menu.
2. Press the **Tick**.
3. Use the **arrows** to move to the desired room type.
4. Press the **tick** to save the marked room type and return to the higher menu level.

NOTE: For the call/presence insert there is only room type "Room" = factory setting. If this room type is unintentionally changed, it is automatically reset to "Room".

7.2.9 Setting the number of devices on the room bus (RAN)

Devices on the room bus:

- All switch inserts
- Call switches insert with connector
- RAN interfaces
- Intercom insert

NOTE!

– The intercom insert counts as a device on the room bus and must be included in the count.
– The room lamp is not a device on the room bus and must not be included in the count!
– Factory setting = 1 device on the room bus!

7.2.10 This is how you set the number of devices on the room bus

1. Use the **arrows** to go to "RAN" in the service menu.
   NOTE: RAN = Room Area Network = Room bus
2. Press the **Tick**.
3. Use the **arrows** to go to "RAN number".
4. Press the **Tick**.
5. Use the arrows to move to the correct number of devices on the room bus
6. Press the **tick** to save the marked number and return to the higher menu level.

7.2.11 Testing the room bus

The following functions serve to test the room bus.

Testing the status

Check whether the set number of devices on the room bus matches the number of devices on the room bus that are ready for operation

1. Use the **arrows** to go to "RAN" in the service menu.
2. Press the **Tick**.

✔ Display of "Status OK" = The set number matches the number of devices on the room bus that are ready for operation.

✔ Display of "Status ERROR(+)" = More devices ready for operation were recognized on the room bus than have been set.

✔ Display of "Status ERROR(-)" = Less devices ready for operation were recognized on the room bus than have been set.

3. Press **House** to quit the display and return to the higher menu level.

If a fault (ERROR) has been displayed, carry out the following test:

Performing the test

Test whether all devices on the room bus have been connected correctly and are ready for operation:

1. Use the **arrows** to go to "RAN" in the service menu.
2. Press the **Tick**.
3. Use the **arrows** to go to "RAN test".
4. Press the **Tick**.

✔ The LEDs of all devices on the room bus must flash. Devices not flashing have been incorrectly connected or are defective

- Replace defective devices.
- Correctly connect devices that have not been correctly connected

5. Press **House** to end the test and return to the higher menu level. If you do not terminate it, it will be terminated automatically after 5 minutes.

7.2.12 Device tests

The following device tests are available to localize a technical defect in case of a fault:

- Test Lamp
- Test LED
- Test Buzzer

Test Lamp

✔ The three light sections of the room lamp (red, green, white) flash.

Test LED

✔ The LED in the red call button and the green presence button flash.

Test Buzzer

✔ The buzzer for the call tone bleeps

Performing tests

1. Use the **arrows** to go to "Test lamp", "Test LED" or "Test buzzer" in the service menu.
2. Press the **Tick**.

✔ The test starts.

3. Press **House** to end the test and return to the higher menu level. If you do not terminate it, it will be terminated automatically after 5 minutes.

7.2.13 Reset the device to factory settings

If you wish to reset a display insert or a call/presence insert to factory settings, proceed as follows:

1. Use the **arrows** to go to "Factory settings" in the service menu.
2. Press the **tick**. A password is requested.
3. Press the **arrows** in the following order as password:

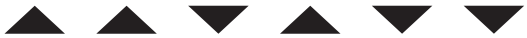


Fig. 23: Display insert / Room programming interface – Password

✔ The display insert or the call/presence insert is now reset to the factory settings. All configuration settings are deleted.

7.2.14 Main menu

NOTE! Factory settings have a dark grey background.

Timezone temp.	Auto	Menu item is available only for room type "Staff". **Function:** Temporarily setting the time zone for this display insert until the time zone of the call system changes automatically or until it is reset to "Auto" on this display insert. The function is used by the nursing staff, see Operating manual (download from www.tunstall.de). **Exception:** Setting "A – All Calls“ is not temporary but remains permanently and is suitable for the doorkeeper, for example.
	A - All Calls	
	1 - Early shift	
	2 - Late shift	
	3 - Night shift	
↓		
Set Timezone	1 - Early shift	Menu item is available only for room type "Staff+HAB". **Function:** Switch over of the nurse call system time zone. The function is used by the nursing staff, see Operating manual (download from www.tunstall.de).
	2 - Late shift	
	3 - Night shift	
↓		
Language	German	Setting the menu language of this device. This setting is overwritten by the set language of the ConLog^{CARE} Management Software during the remote configuration.
	English	
↓		
FW-Rev.		Firmware revision of this device.
↓		
System Config	Password:	Changing over to the service menu. Password: ▲ ▲ ▼ ▲ ▼ ▼

Tab. 8: Display insert / Call presence insert – Main menu

7.2.15 Service menu

NOTE! Factory settings have a dark grey background.

Device ID	Device ID xxxxxxx	ID of the display insert or the call/ presence insert. Factory setting.
Room type	Room	See page 58.
	Staff	
	Staff+HAB	
Status	Messages	Number of messages (call, presence, faults) which are pending in the logical group for display. Timezone: Active time zone is displayed.
	Timezone	
Inactivity	OFF*	Risk of malfunctions in the nurse call system! Special settings. To be changed only after consulting Tunstall GmbH.
	ON	
Timeout NAB	02 minutes*	
Rufüberlauf	03 minutes*	
Call Overflow	03 minutes*	
Ans. Call	Show*	
CallTone Vol.	Level 03*	
RAN	RAN Number 01	See page 59.
	Status	See page 59.
	RAN Test	See page 60.
* Settings marked with a* are overwritten by the ConLog^{CARE} Management Software.		

Tab. 9: Display insert / Call/presence insert – Service menu

↓		
White Lamp	Steady Light 17 - Service call	See chapter "8.2.3 White light section" as of page 71.
	1.0s / 1.0s 10 - WC	
	0.3s / 0.3s 30 - Fire	
↓		
Test Lamp		See chapter "7.2.12 Device tests" as of page 60.
↓		
Test LED		
↓		
Test Buzzer		
↓		
Contrast		Setting the display contrast.
↓		
Restart		Restart this device.
↓		
Factory Settings	Password:	See page 61.
* Settings marked with a* are overwritten by the ConLog^{CARE} Management Software.		

Tab. 9: Display insert / Call/presence insert – Service menu

7.3 Intercom insert (29 0701 30...)

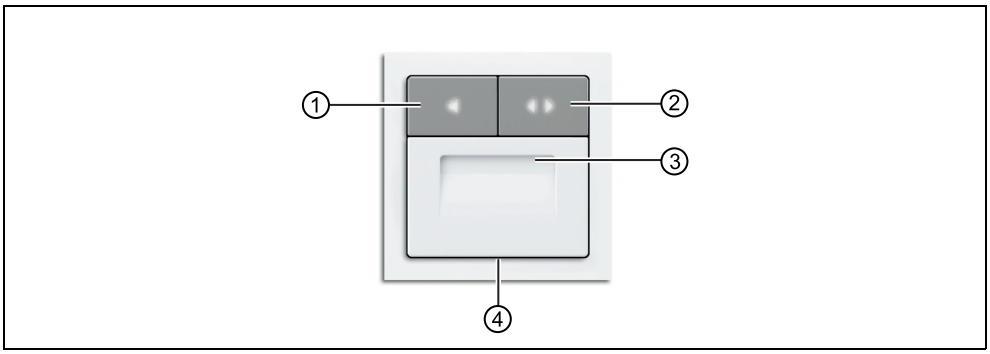


Fig. 24: Intercom insert (29 0701 30F, frame not included in the scope of supply)

[1] Answer button (Icon: loudspeaker) at activated presence for the answering of calls

[2] Remote cancel button (Icon: 2 arrows) for the remote cancelling of answered calls

[3] Loudspeaker for speech communication

[4] Microphone for voice communication

7.3.1 Function

The intercom insert is connected to a room controller, i.e. to a display insert or a call/presence insert. The intercom insert is installed in a back box under the room controller. The back boxes are interconnected. The devices are covered with a 2-gang cover frame.

The intercom insert supplements the room controller with the speech communication function. For the installation with a display insert, additionally for announcements.

7.3.2 Connections

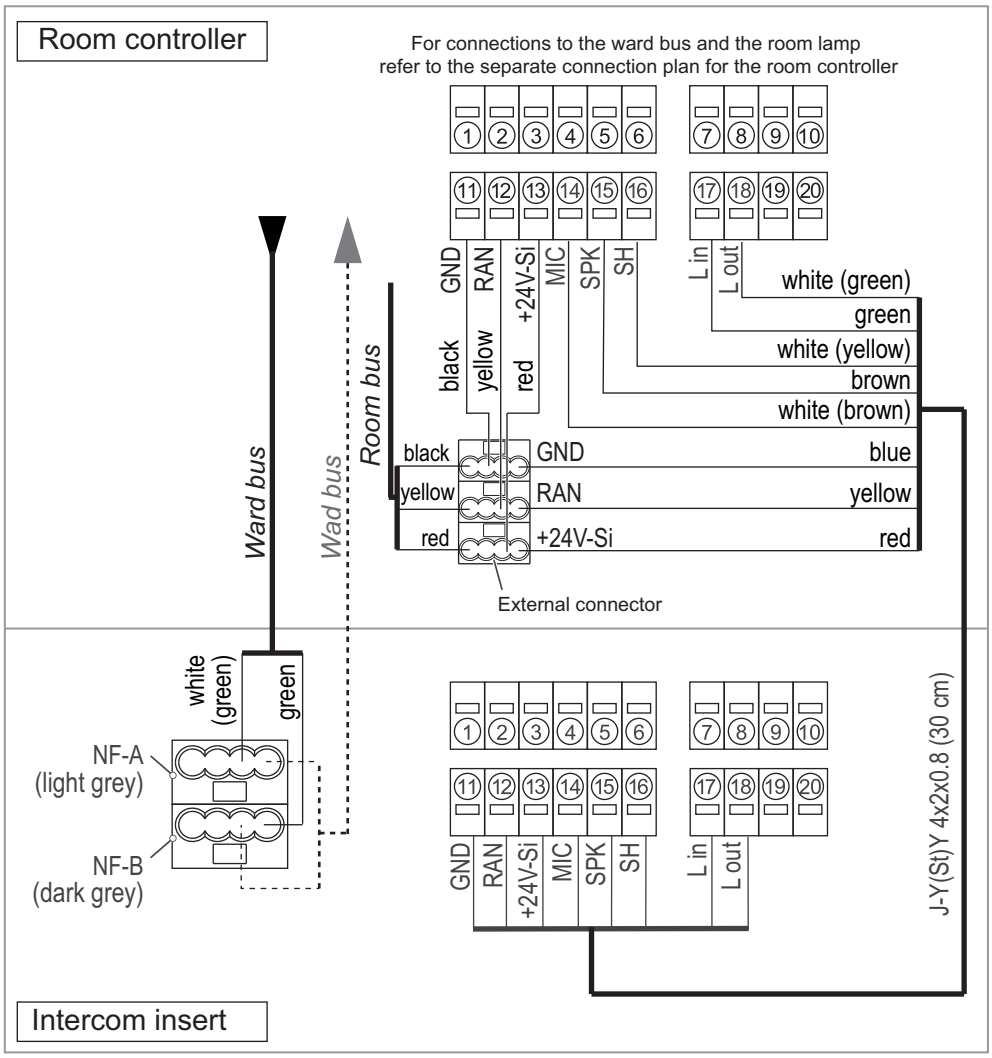


Fig. 25: Intercom insert – Connection plan

Ward bus

Up to wires NF-A and NF-B the ward bus is connected to the room controller. Wires NF-A and NF-B are connected to the intercom insert. These wires serve for speech communication

Room bus (RAN)

The room bus is connected to the room controller.

Room lamp

The room lamp is connected to the room controller.

Connection between room controller and intercom insert

Connect connecting points 11 - 18 of the connecting panel of the room controller 1:1 with connecting points 11 - 18 of the connecting field on the connecting panel of the intercom insert.

8 Installing room lamps & corridor displays

8.1 About this chapter

NOTE! Each product is supplied with a product leaflet containing information on mounting and connecting the product. In addition, you find the relevant product leaflet in chapter "20 Product leaflets" as of page 189.
You must observe the instructions and warning notices in the product leaflet.

The following pages only contain information which is frequently required for each product. This includes all connecting diagrams as well as information about configuration. It does not include mounting instructions. Therefore, use this chapter only for reference purposes.

8.2 Room lamp universal, 3 sections

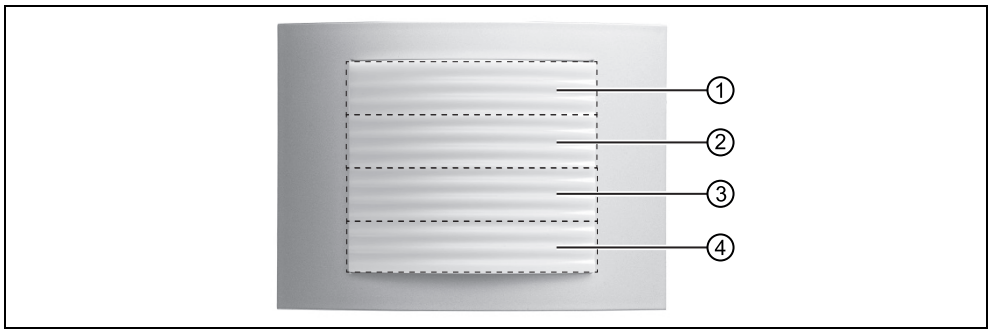


Fig. 26: Room lamp universal, 3 sections (77 0180 10)

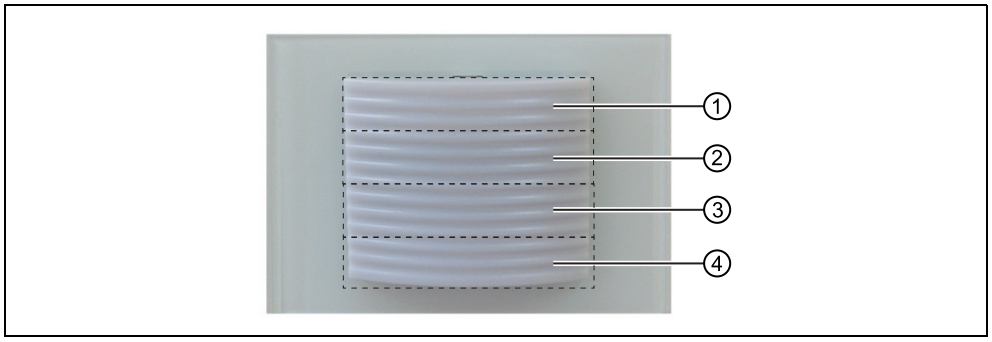


Fig. 27: Room lamp universal, 3 sections, glass decor (77 0185 10)

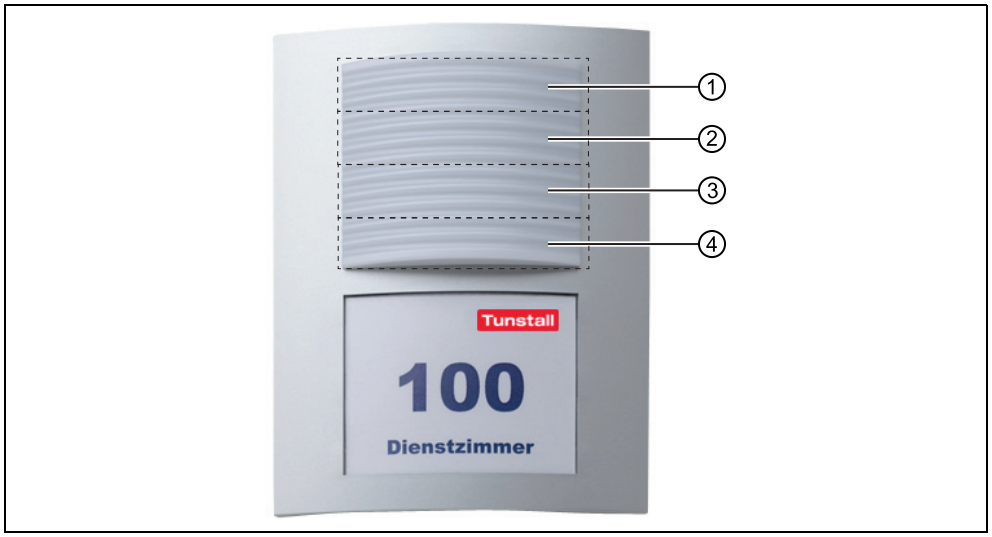


Fig. 28: Room lamp universal, 3 sections, with doorplate (77 0181 10)

[1]	Red: Call
[2]	Green: Presence
[3]	Free
[4]	White: can be configured, see page 71.

8.2.1 Function

The room lamps have three light sections. The red light section lights up or flashes red if any type of call is pending. The green light section lights up when presence is activated. The white light section serves as additional display for certain types of calls, for details see chapter "8.2.3 White light section" as of page 71.

8.2.2 Connection

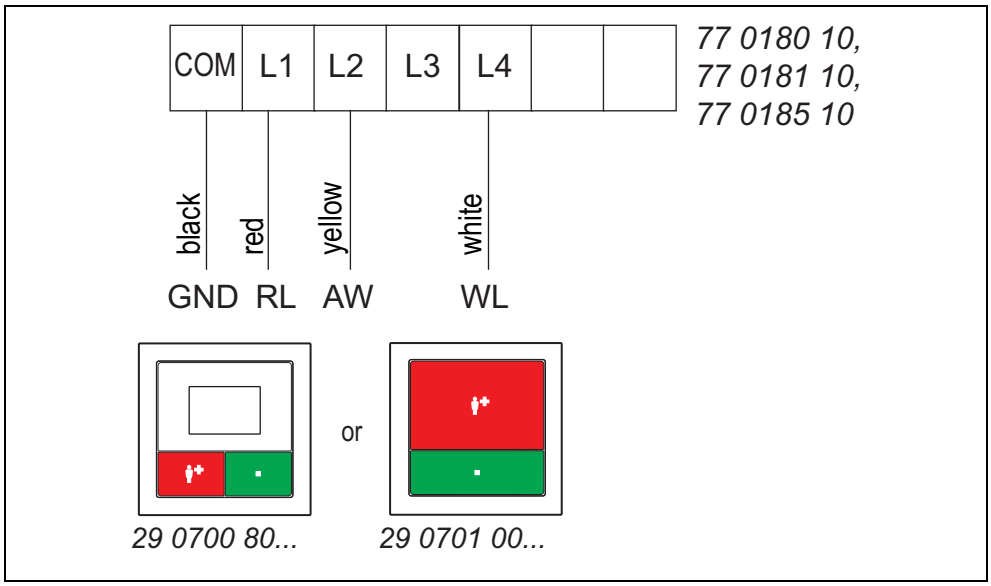


Fig. 29: Room lamp universal, 3 sections – connection plan

8.2.3 White light section

The white light section is a display for special types of calls. The white light section therefore represents a supplement for the red light section.

The white light section only flashes or lights up when a call has been triggered. The white light section goes out as soon as the call has been answered or acknowledged.

Factory setting for the white light section

In the factory setting the white light section serves for the display of a service call (continuous light), a WC call or WC emergency call (flashing at a 1 second interval / 1.0 s) and fire alarm (flashing at a 0.3 second interval / 0.3 s).

White light section	Call type
Continuous light	17 – Serviceruf
Flashing: 1.0 s / 1.0 s	10 – WC call, WC emergency call
Flashing: 0.3 s / 0.3 s	30 – Fire

Tab. 10: White light section - factory setting

Configuration option

The factory setting for the white light section can be adjusted individually for each room. The configuration is carried out in the service menu of the display insert or the call/presence insert in the room, see chapter "7.2.7 Basic procedure for the configuration" as of page 56.

For each type of display (continuous light, flashing at an interval of 1.0 s / 1.0 s, flashing at an interval of 0.3 s / 0.3 s) you can specify which type of call is to be displayed in the white light section. The types of call are displayed in the service menu as follows:

Setting	Call types
10 – WC	WC Call, Emergency WC
02 – EME WC	Emergency WC
13 – ROOM	Room Call, Emergency 1
04 – EME 1	Emergency 1
12 – BED 1	Call Bed 1, Emergency Bed 1
11 – BED 2	Call Bed 2, Emergency Bed 2
14 – BED 3	Call Bed 3, Emergency Bed 3
15 – BED 4	Call Bed 4, Emergency Bed 4
67 – BED 5	Call Bed 5, Emergency Bed 5
68 – BED 6	Call Bed 6, Emergency Bed 6
06 – EME B1	Emergency Bed 1
05 – EME B2	Emergency Bed 2
07 – EME B3	Emergency Bed 3
08 – EME B4	Emergency Bed 4
69 – EME B5	Emergency Bed 5
70 – EME B6	Emergency Bed 6
28 – FUNKR	Funkruf
20 – EMER R	Emergency Radio
16 – INACTI	Inactivity
17 – SERVIC	Service Call
83 – SER B1	Service Call Bed 1
84 – SER B2	Service Call Bed 2
85 – SER B3	Service Call Bed 3
86 – SER B4	Service Call Bed 4
87 – SER B5	Service Call Bed 5
88 – SER B6	Service Call Bed 6

Tab. 11: White light section – settings in the service menu

Setting	Call types
19 – TECH	Technical Call
31 – DIA	Diagnostic Call
77 – DIA B1	Diagnostic Call Bed 1
78 – DIA B2	Diagnostic Call Bed 2
79 – DIA B3	Diagnostic Call Bed 3
80 – DIA B4	Diagnostic Call Bed 4
81 – DIA B5	Diagnostic Call Bed 5
82 – DIA B6	Diagnostic Call Bed 6
30 – FIRE	Fire Alarm
01 – ALARM	Cardiac Alarm

Tab. 11: White light section – settings in the service menu

Configuring the white light section

This is how you set the display for the white light section on the display insert or on the call/presence insert of the room:

1. Use the **arrows** to go to "White lamp" in the service menu
2. Press the **tick**.
3. Use the **arrows** to go to "Steady light".
4. Press the **tick**.
5. Use the **arrows** to go to the desired type of call that is to be displayed with continuous white light on the white light section.
6. Press the **tick** to save the marked number and return to the higher menu level.
7. Use the **arrows** to go to "1.0 s / 1.0 s".
8. Press the **tick**.
9. Use the **arrows** to go to the desired type of call that is to be displayed at an interval of "1.0 s / 1.0 s" on the white light section.
10. Press the **tick** to save the marked number and return to the higher menu level.
11. Use the **arrows** to go to "0.3 s / 0.3 s".
12. Press the **tick**.
13. Use the **arrows** to go to the desired type of call that is to be displayed at an interval of "0.3 s / 0.3 s" on the white light section.
14. Press the **tick** to save the marked number and return to the higher menu level.
15. To complete the configuration and exit the service menu and the main menu, keep pressing **House** until the normal operating display appears.

8.3 Corridor displays

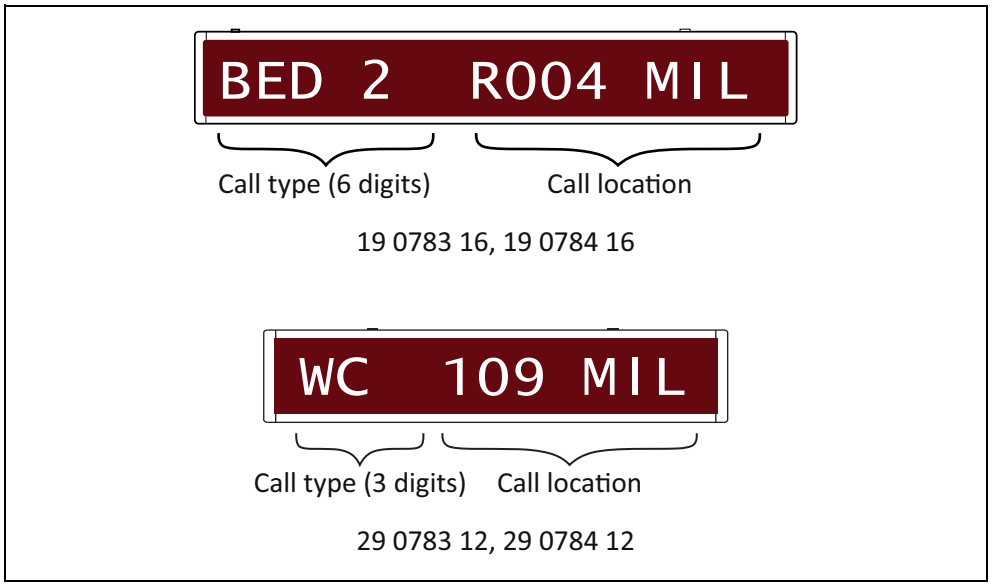


Fig. 30: Signalling on the corridor displays

16-digit and 12-digit corridor displays are available, in single-sided or double-sided versions.

- Corridor display, 16-digit (19 0783 16)
- Corridor display, 16-digit, double-sided (19 0784 16)
- Corridor display, 12-digit (29 0783 12)
- Corridor display, 12-digit, double-sided (29 0784 12)

The single-sided corridor displays are hung on the wall using the keyhole-shaped openings on the rear side.

The double-sided corridor displays are suspended to the ceiling using the ceiling suspension supplied.

8.3.1 Function

The call type is displayed as a short designation. The designation of the call location is defined in the ConLog^{CARE} Management Software when the nurse call system is set up. The designation of the call location can consist of a freely entered text with a maximum length of 25 characters. Texts with more than 9 characters for the 16-digit corridor displays or more than 8 characters for the 12-digit corridor displays are displayed as tickers. Alternatively, the call location can consist of the 3-digit logical group (ward) and the 4-digit room number

The display of answered calls can be disabled system-wide by configuration.

If there are several calls on the ward, the oldest call with the highest priority is displayed for 15 seconds. Then all further calls, the presence messages and any faults

of the nurse call system are scrolled through according to their priority, i.e. each message is displayed for 5 seconds.

If there is no message, the date and time are shown on the 16-digit corridor display. Only the time is shown on the 12-digit corridor display.

8.3.2 Connection

The corridor display is looped into the ward bus with the pre-assembled connecting cable and connected to a power supply of the ward with a stub cable.

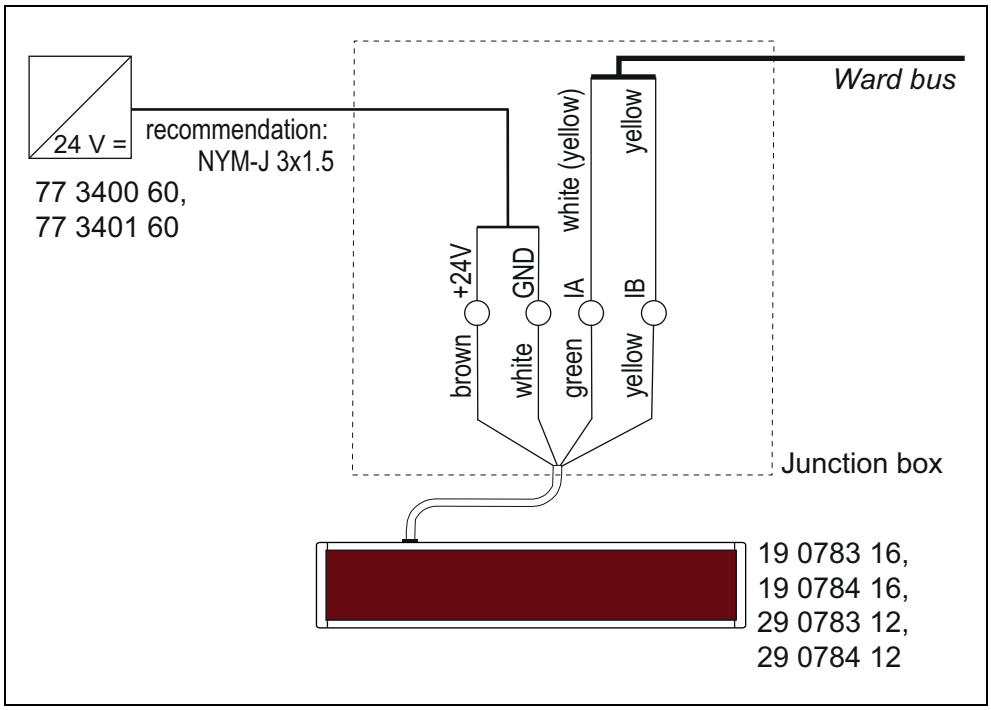


Fig. 31: Corridor displays – connection plan

9 Installing switches

9.1 About this chapter

NOTE! Each product is supplied with a product leaflet containing information on mounting and connecting the product. In addition, you find the relevant product leaflet in chapter "20 Product leaflets" as of page 189.
You must observe the instructions and warning notices in the product leaflet.

The following pages only contain information which is frequently required for each product. This includes all connecting diagrams as well as information about configuration. It does not include mounting instructions. Therefore, use this chapter only for reference purposes.

9.2 Presence switch insert (29 0706 00...)

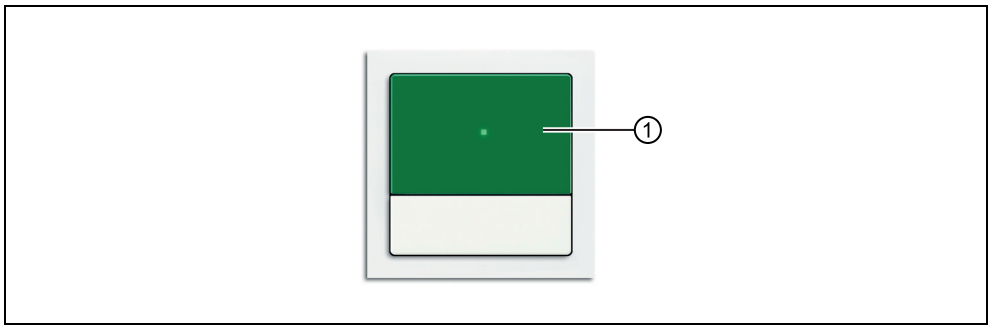


Fig. 32: Anwesenheitstaster insert (29 0706 00F, frame not included in the scope of supply)

[1] Presence button (green)

9.2.1 Function

The green presence button serves for switching the presence of the staff on and off.

9.2.2 Connection

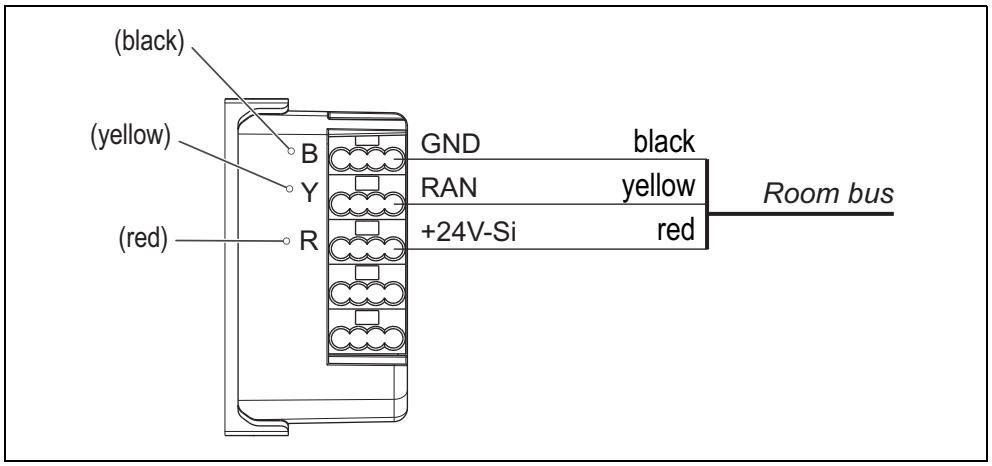


Fig. 33: Presence switch insert – connection plan

9.3 Call switch insert with connector (29 0704 00...)

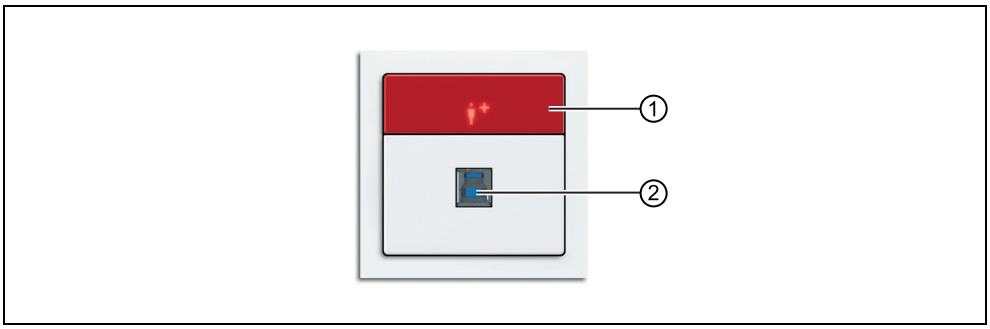


Fig. 34: Call switch insert with connector (29 0704 00F, frame not included in the scope of supply)

[1]	Call button (red)
[2]	Socket for plug-in connection of pear push switch (29 0790 02, 29 0790 00) or a radio receiver-T (Z 00 8202 36)

9.3.1 Function

The red call button serves for triggering calls.

The socket is intended for plug-in connection of pear push switch (29 0790 02, 29 0790 00) or a radio receiver-T (Z 00 8202 36)

The pear push switch incl. call switch (29 0790 00) is used to trigger calls.

The pear push switch incl. call & light switch (29 0790 02) is used to trigger calls and to switch a light source, either with or without dimming function.

9.3.2 Connection

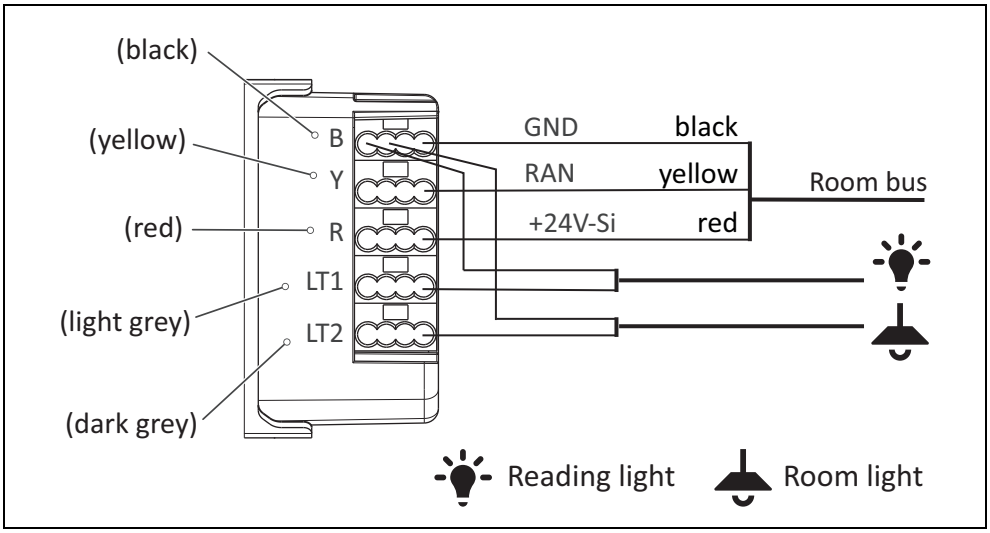


Fig. 35: Call switch insert with connector – connection plan

9.3.3 Light control

For details on the light control see chapter "16 Light control" as of page 169.

9.3.4 Setting bed number (1 – 6)

To specify the call location more accurately in a room with multiple beds, the bed number can be set (bed 1 to 6).

Factory setting of call switch insert with connector = bed 1.

Procedure for setting the bed number

For setting a bed number within the first ten seconds after the power supply is switched on, start with the procedure described in the following. (Alternatively, the terminal block on the switch insert can be pulled off briefly and then re-plugged).

1. Keep the button pressed for 5 seconds.

✔ The LED for the button flashes according to the bed number set:
Bed 1 = once, Bed 2 = twice and so on, if no bed is set (i.e. room call) = LED lights up for 2 seconds.

2. To adjust the bed number, press the button briefly: Bed 1 = once, Bed 2 = twice and so on. If "no bed number " is to be set (i.e. room call), do not press the button.

3. To save the setting, again press the button for 5 seconds. Note: If you do not keep the button pressed, the setting is not saved.

✔ The LED on the button flashes according to the bed number set: Bed 1 = once, Bed 2 = twice and so on, if no bed is set = LED lights up for 2 seconds.

9.4 Pear push switches and accessories

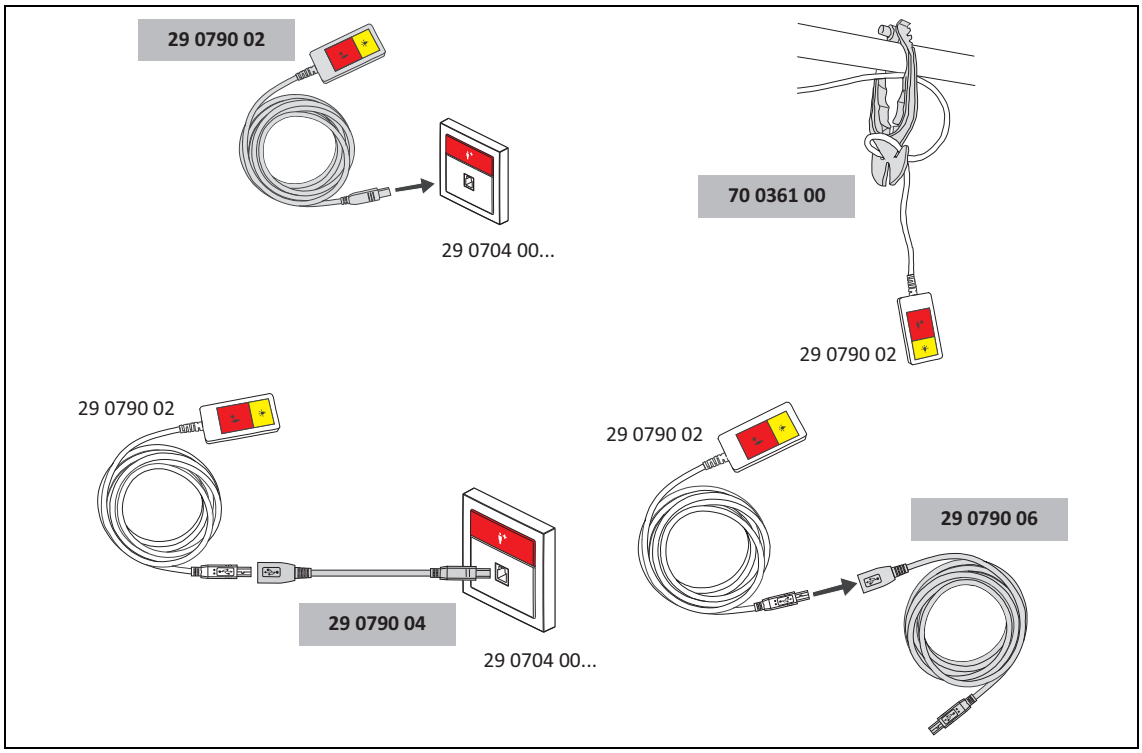


Fig. 36: Pear push switch incl. call & light switch, 3 m (29 0790 02) and accessories – Overview

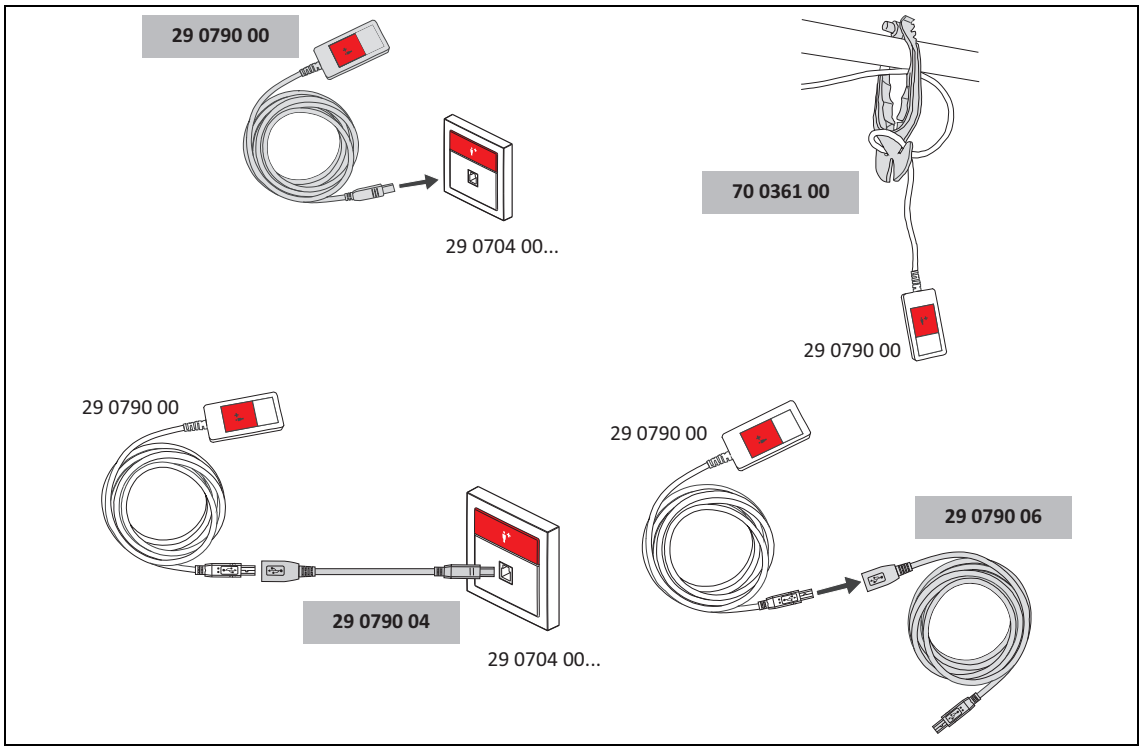


Fig. 37: Pear push switch incl. call switch, 3 m (29 0790 00) and accessories – Overview

9.5 Call switch insert (29 0708 00...)

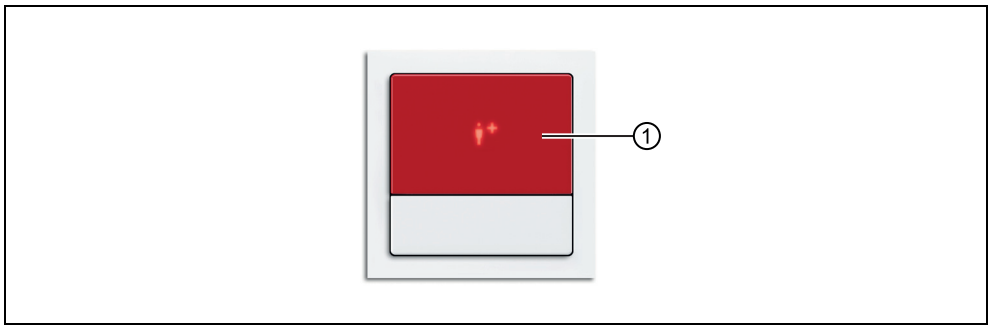


Fig. 38: Call switch insert (29 0708 00F, frame not included in the scope of supply)

[1]	Call button (red)

9.5.1 Function

The red call button serves for triggering calls or WC calls.

9.5.2 Connection

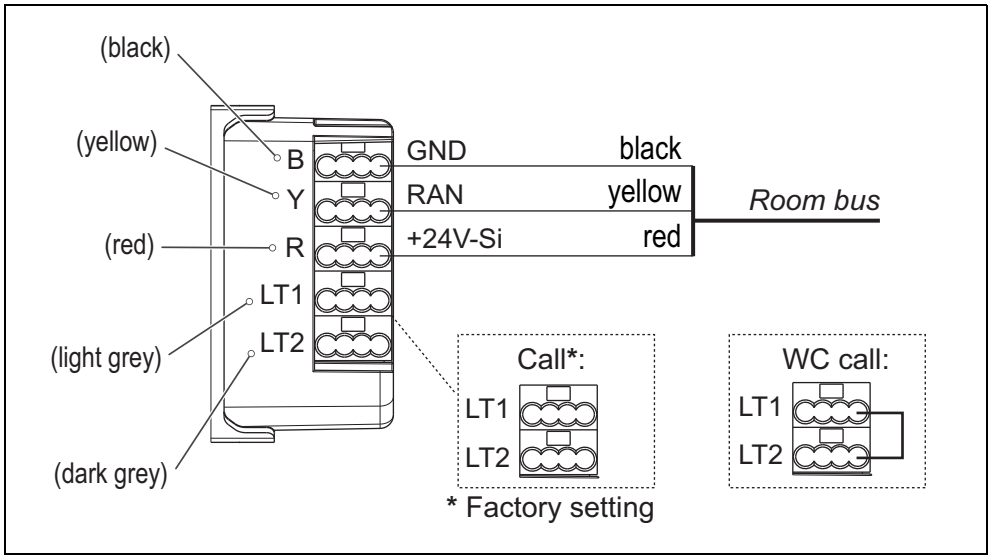


Fig. 39: Ruftaster insert – connection plan

If the call switch insert is to be used for triggering WC calls, a wire bridge must be fitted between connecting points LT1 and LT2. No wire bridge is to be set for triggering standard calls (= factory setting).

9.5.3 Call switch installed at the bed?

If the call switch has been set on "Call", i.e. not on WC call, the call location can be set.

Factory setting = room call, i.e. the call location is not at the bed.

The factory setting is suitable in most cases. However, when the call switch is installed at the bed, the bed numbers (bed 1 to 6) should be set. Here the procedure is the same as for the call switch insert with connector, see chapter "9.3.4 Setting bed number (1 – 6)" as of page 80.

9.6 Cancel switch insert (29 0709 00...)

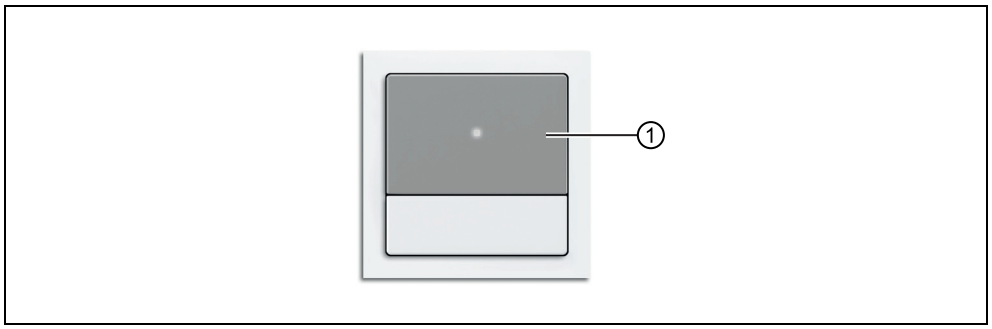


Fig. 40: Cancel switch insert (29 0709 00F, frame not included in the scope of supply)

[1]	Cancel button (grey)

9.6.1 Function

The grey cancel button serves for cancelling WC calls and WC emergency calls locally in the WC area.

9.6.2 Connection

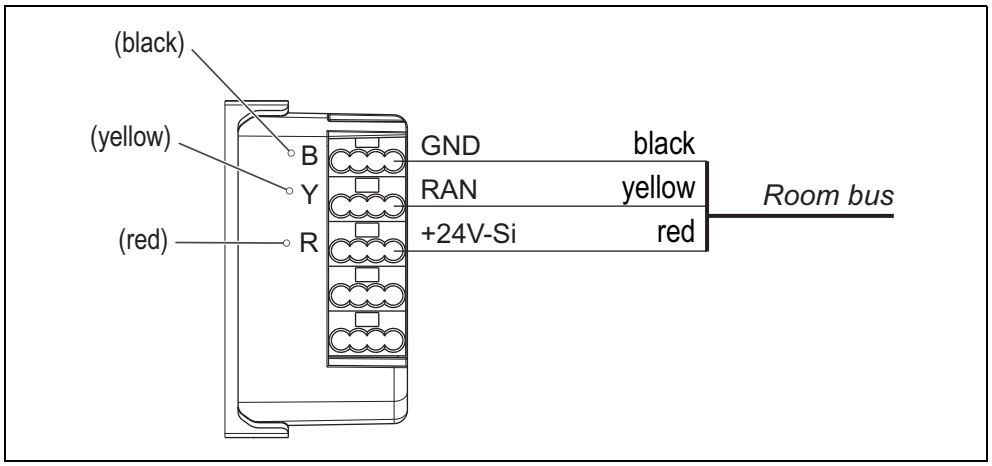


Fig. 41: Call switch insert – connection plan

9.7 Pull cord switch insert (29 0707 20...)

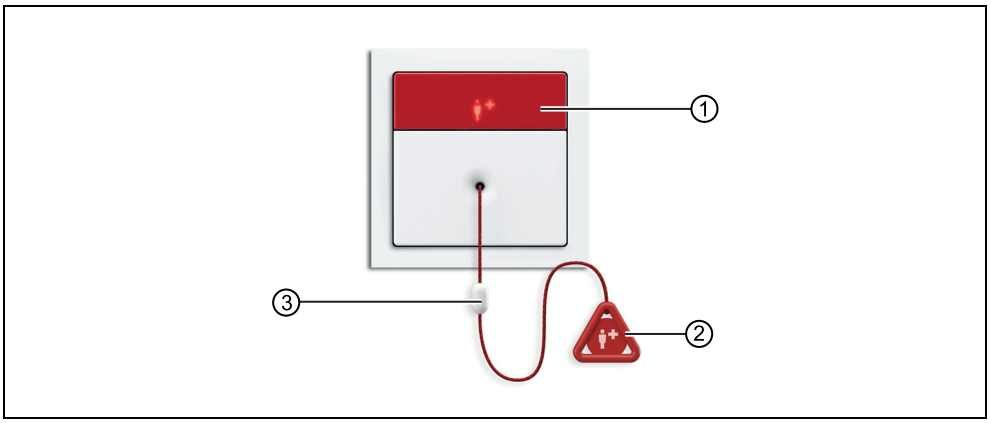


Fig. 42: Pull cord switch insert (29 0707 20F, frame not included in the scope of supply)

[1]	Call button (red)
[2]	Call handle
[3]	Safety release

9.7.1 Function

The pull cord with call handle serves for triggering calls or WC calls by pulling on the cord. Also an additional red call button serves for triggering calls.

A safety release in the pull cord opens when the pulling force exceeds a limit value. The safety release is easily closed again by simply pushing it together.

9.7.2 Connection

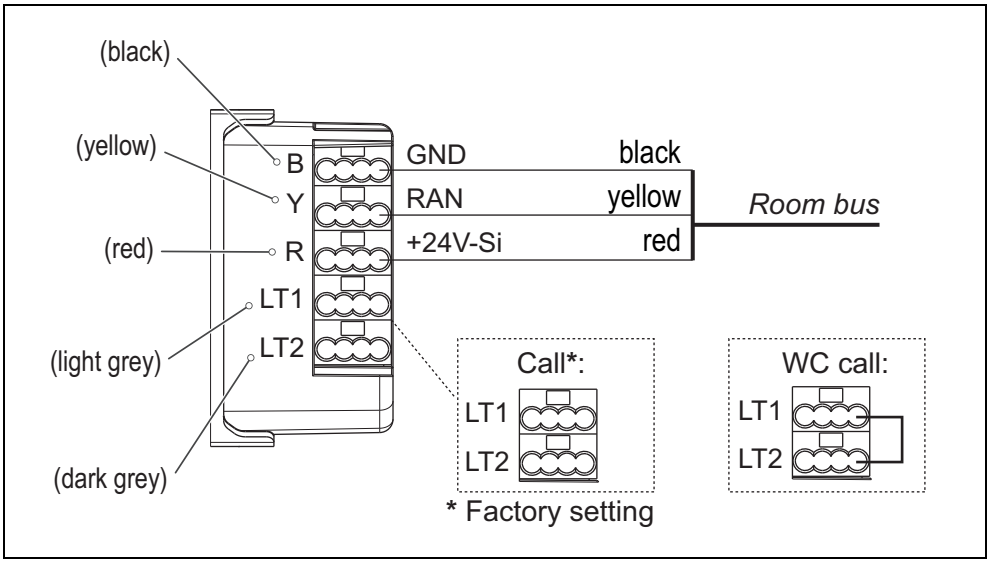


Fig. 43: Pull cord switch insert – connection plan

If the pull cord switch insert is to be used for triggering WC calls, a wire bridge must be fitted between connecting points LT1 and LT2. No wire bridge is to be set for triggering standard calls (= factory setting).

9.7.3 Pull cord switch installed at the bed?

If the pull cord switch has been set on "Call", i.e. not on WC call, the call location can be set.

Factory setting = room call, i.e. the call location is not at the bed.

The factory setting is suitable in most cases. However, when the pull cord switch is installed at the bed, the bed numbers (bed 1 to 6) should be set. Here the procedure is the same as for the call switch insert with connector, see chapter "9.3.4 Setting bed number (1 – 6)" as of page 80.

9.8 Pneumatic switch insert (29 0707 50...)

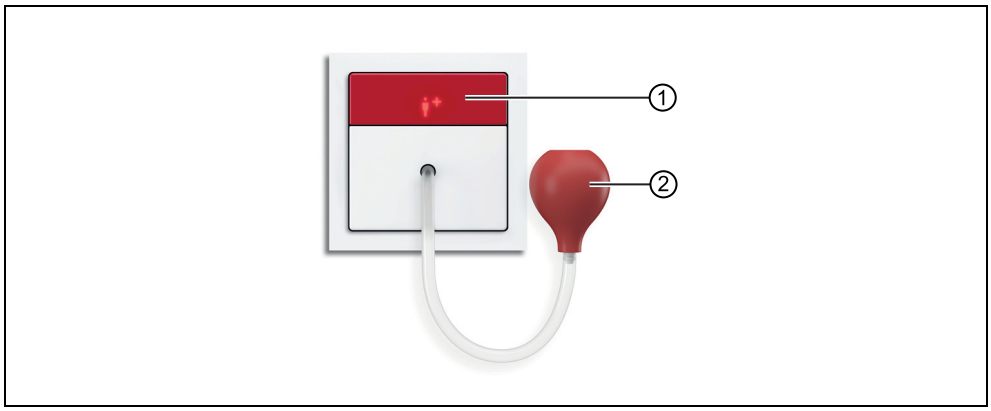


Fig. 44: Pneumatic switch insert (29 0707 50F, frame not included in the scope of supply)

[1]	Call button (red)
[2]	Rubber ball (red)

9.8.1 Function

A call or a WC call is triggered by pressing the red rubber ball which is connected to the pneumatic switch insert via an air hose. Also an additional red call button serves for triggering calls.

9.8.2 Connection

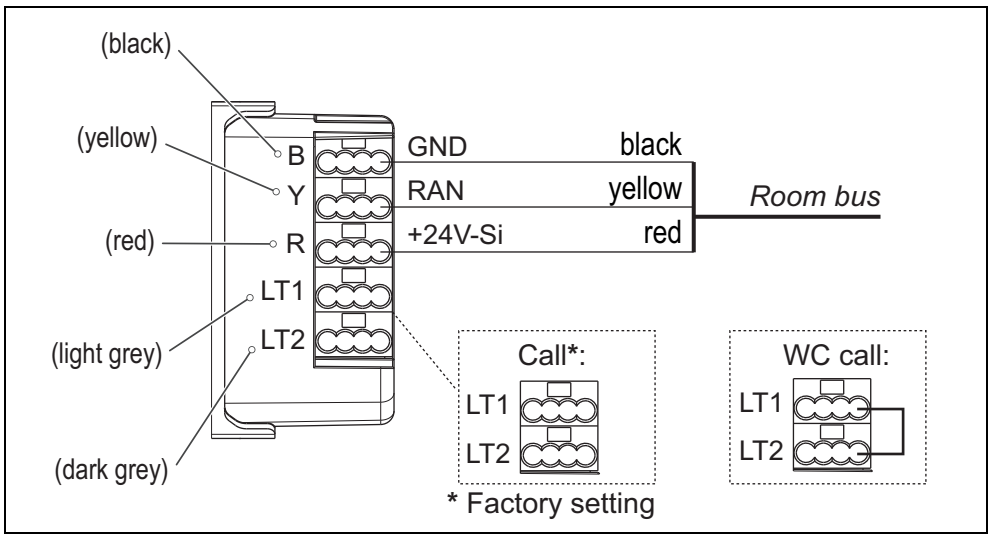


Fig. 45: Pneumatic switch insert – connection plan

If the pneumatic switch insert is to be used for triggering WC calls, a wire bridge must be fitted between connecting points LT1 and LT2. No wire bridge is to be set for triggering standard calls (= factory setting).

9.9 RAN interface (19 0840 00)

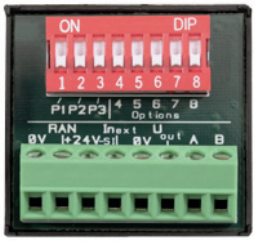


Fig. 46: RAN interface (19 0840 00)

9.9.1 Function

The RAN interface is intended for connecting an external trigger device (normally closed or normally open contact) to the room bus (RAN) of a CONCENTO^{CARE} nurse call system. The trigger device may be used for triggering a call in the nurse call system or as an activity trigger for the inactivity monitoring function.

Additionally an LED of the trigger device can be connected to the RAN interface. The LED lights up as soon as the trigger device is triggered (reassurance light).

9.9.2 Requirements of the trigger device

Property	Trigger device
Minimum switching current of the trigger device	0.1 mA at 5 V DC
LED (reassurance light) Supply voltage Maximum current consumption	 24 V DC 10 mA
Maximum cable length to the RAN interface	5 m
The trigger triggers one of the following events in the nurse call system (further events on request)	– Room call – Call Bed – Radio call – Resident activity (for inactivity monitoring functions) – Service call – Technical call – Door alarm – Fire alarm

Tab. 12: RAN interface – Requirements of the trigger device

9.9.3 Connections

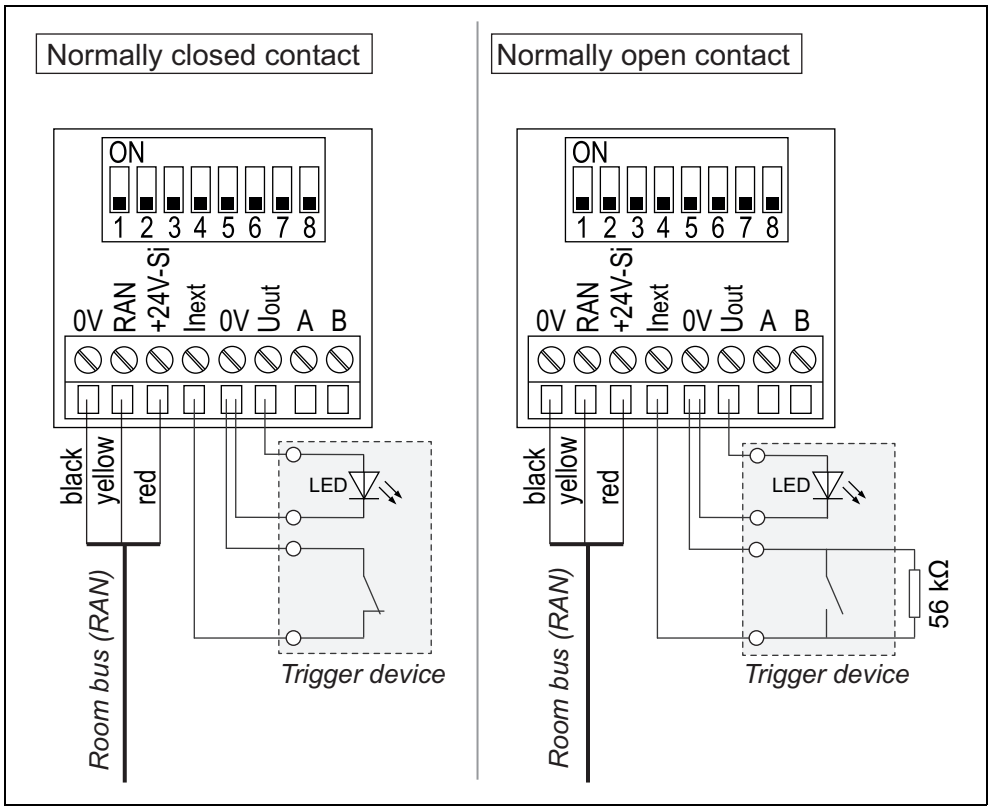


Fig. 47: RAN interface – connection plan

NOTE! When connecting the normally open contact, a 56 kΩ resistor must be connected according to the connection plan (Function: monitoring the contact).

9.9.4 Setting DIP switches numbers 1 – 8

Message to be triggered (selection)	DIP switch no.					
	1	2	3	4	5	6
Standard call types						
Room Call (factory setting)	OFF	OFF	OFF	OFF	OFF	OFF
Call Bed 1	ON	OFF	OFF	OFF	OFF	OFF
Call Bed 2	OFF	ON	OFF	OFF	OFF	OFF
Call Bed 3	ON	ON	OFF	OFF	OFF	OFF
Call Bed 4	OFF	OFF	ON	OFF	OFF	OFF
Call Bed 5	ON	OFF	ON	OFF	OFF	OFF

Tab. 13: RAN interface – DIP switch 1 – 6

Message to be triggered (selection)	DIP switch no.					
	1	2	3	4	5	6
Call Bed 6	OFF	ON	ON	OFF	OFF	OFF
Radio Call	OFF	OFF	OFF	ON	OFF	OFF
Emergency Radio	ON	OFF	OFF	ON	OFF	OFF
Inactivity	OFF	OFF	OFF	OFF	ON	OFF
Service call	OFF	OFF	OFF	ON	ON	OFF
Technical Call	OFF	OFF	OFF	OFF	OFF	ON
Türalarm	OFF	OFF	OFF	ON	OFF	OFF
Fire Alarm	OFF	OFF	OFF	OFF	ON	ON
Special call types (to be used only when standard call types are not suitable).						
Fire Alarm	OFF	OFF	OFF	OFF	ON	ON
External Alarm	OFF	ON	OFF	OFF	OFF	ON
Radio Alarm	OFF	ON	OFF	ON	OFF	OFF
Heating	OFF	OFF	ON	OFF	OFF	ON
Air Condition	ON	OFF	ON	OFF	OFF	OFF
Mains Failure	ON	OFF	OFF	OFF	OFF	ON
Service call Bed 1	ON	OFF	OFF	ON	ON	OFF
Service call Bed 2	OFF	ON	OFF	ON	ON	OFF
Service call Bed 3	ON	ON	OFF	ON	ON	OFF
Service call Bed 4	OFF	OFF	ON	ON	ON	OFF
Service call Bed 5	ON	OFF	ON	ON	ON	OFF
Service call Bed 6	OFF	ON	ON	ON	ON	OFF
Telephone Call	ON	ON	OFF	OFF	OFF	ON
Temperature	OFF	ON	ON	OFF	OFF	ON

Tab. 13: (Continuation) RAN interface – DIP switch 1 – 6

Trigger device contact type	DIP switch no.
	7
Normally closed contact (Factory setting)	OFF
Normally open contact	ON

Tab. 14: RAN interface – DIP switch 7

Cancelling the call that was triggered by the trigger device	DIP switch no.
	8
Manual cancellation in the nurse call system (Factory setting).	OFF
Automatic, if the trigger device has been reset. ON must be set in the case of the activity trigger for the inactivity monitoring.	ON

Tab. 15: RAN interface – DIP switch 8

9.10 Radio receiver-T UP (Z 00 8202 35)

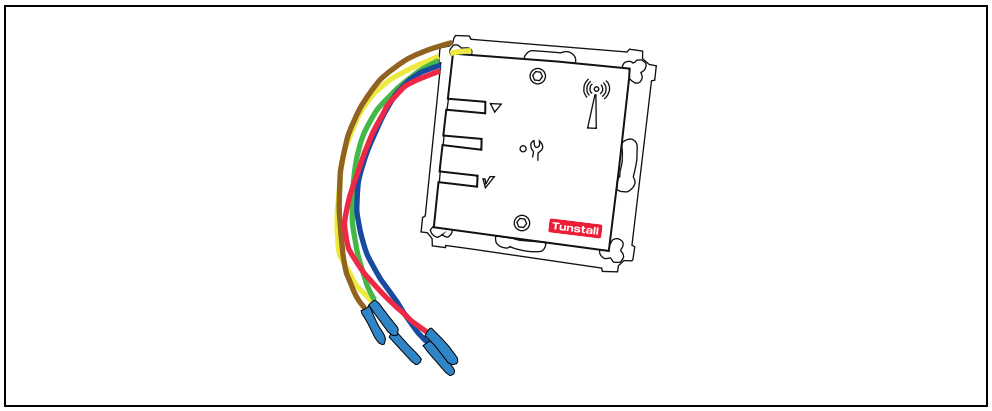


Fig. 48: Radio receiver-T UP (Z 00 8202 35)

9.10.1 Function

Radio receiver on operating frequency 869.2125 MHz (social alarm frequency) for receiving the signals from associated radio transmitters:

- Radio trigger incl. call button: MyAmie (P68007/02, P68007/04)
- Radio trigger incl. call button and fall detection: iVi^{TM} (P68005/47)
- Universal sensor (61005/30)
- Large-surface pneumatic radio switch (75071100)
- Wireless sensor mat (Z00800201)
- Wireless step-on sensor mat CM (Z00800301)
- Wireless step-on sensor mat NM (Z00800302)
- Optical 869 Smoke Alarm (68005/96)
- Motion sensor 869 (61005/35)

Further radio transmitters on request.

NOTE! The radio transmission is not monitored. According to DIN VDE 0834, the transmitters may be used only as complementary call devices in combination with a nurse call system.

Triggering the radio transmitters triggers a call in the nurse call system. The type of call triggered depends on how the DIP switches of the RAN interface are set, via which the radio receiver-T UP is connected to the room bus RAN, see chapter "9.10.3 Set DIP switches for the call type to be triggered" as of page 93.

9.10.2 Connection

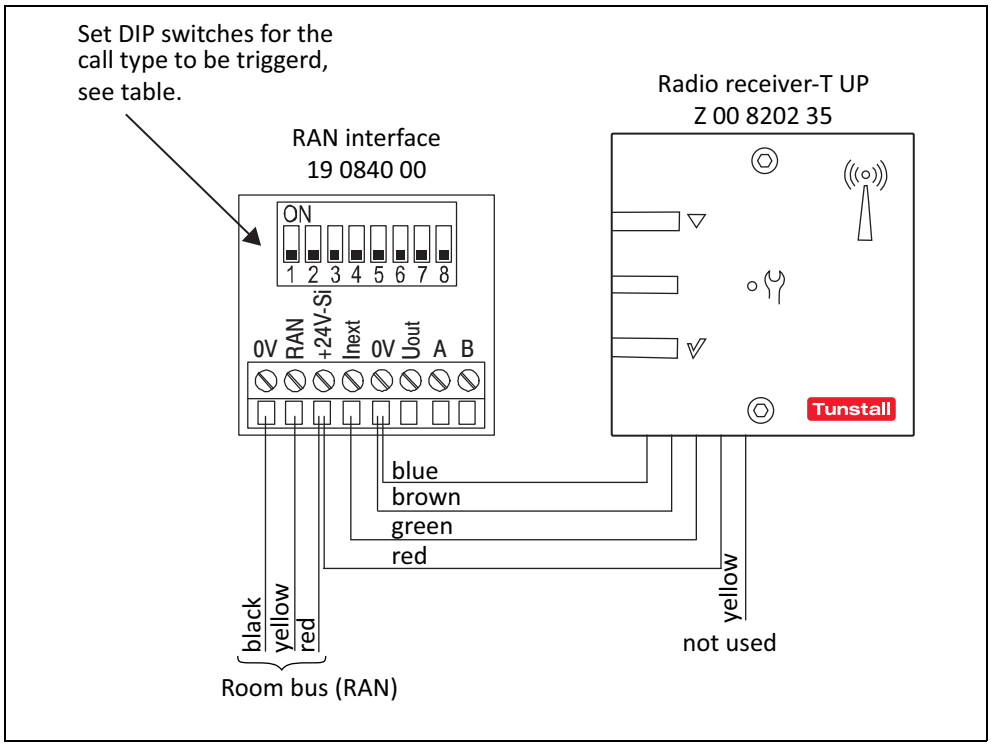


Fig. 49: Radio receiver-T UP – connection plan for CONCENTO^{CARE}

9.10.3 Set DIP switches for the call type to be triggered

Call type to be triggered	DIP-Schalter Nr.							
	1	2	3	4	5	6	7	8
Room Call (factory setting)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Call Bed 1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Call Bed 2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
Call Bed 3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
Radio Call	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
Service	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
Technical Call	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
Door Alarm	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
Fire Alarm	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF

Tab. 16: RAN interface with radio receiver-T UP – DIP switch 1 – 8

The setting of further call types is possible, see chapter "9.9.4 Setting DIP switches numbers 1 – 8" as of page 89.

9.10.4 Check radio coverage on the location of use

The radio range between the radio receiver-T UP and the radio transmitters depends on the structural conditions of the building; the range is up to 30 m. Before handing over a hand-held radio transmitter (MyAmie, iVi) to the user, you must check the radio coverage at the place of use. To do this, walk around the planned place of use and trigger a call over and over again. Inform the user of the radio coverage.

9.10.5 Documents for VarioRec6 U / radio receiver-T UP

The radio receiver-T UP is an OEM product of Lehmann Electronic GmbH. In addition to the Tunstall installation instructions, you must read and observe the following documents from Lehmann Electronic:

- Brief overview VarioRec6 U radio receiver (supplied with the radio receiver-T UP), document no. LE264
- Operating instructions VarioRec6 U, document no. LE265

The product designation VarioRec6 U is a collective term of Lehmann Electronic for various radio receivers. The radio receiver-T UP is only one of these. Not all topics in the VarioRec6 documents apply to the radio receiver-T UP.

Therefore, please observe the following notes:

Available functions

The following functions mentioned in the documents for VarioRec6 U are available on the radio receiver-T UP with the Tunstall radio transmitters:

- Teaching in radio transmitters
- Teaching out radio transmitters
- Teaching out all taught-in radio transmitters
- Acknowledge fault message
- Set master mode
- Care mode
- Set operating display active / inactive
- Reset all parameters to factory settings
- Daily message monitoring
- Vital monitoring

Functions not available

The following functions mentioned in the documents for VarioRec6 U are **not** available on the radio receiver-T UP with the Tunstall radio transmitters

- Radio transmitter for special functions, e.g. radio cancel switch or radio light switch

Error/failure messages during operation

When used with Tunstall radio transmitters, the radio receiver-T UP displays the following error and fault messages mentioned in the documents for VarioRec6 U:

- Transmitter battery low
- System fault
- Reception blockade
- Daily report missing
- Vitality message is missing

9.10.6 Information about low battery level

The radio transmitters contain batteries. When the battery level of a radio transmitter is low, the LED on the radio receiver-T UP will flash in red to inform the nursing staff, that the battery or the radio transmitter must be changed. Please refer to the documents for the VarioRec6 U.

WARNING! The nursing staff must identify and acknowledge a low battery level by watching the LED on the radio receiver-T and/or the signals on the radio transmitter. Radio transmitters with a low battery level must be replaced immediately.

10 Installing control units

10.1 About this chapter

NOTE! Each product is supplied with a product leaflet containing information on mounting and connecting the product. In addition, you find the relevant product leaflet in chapter "20 Product leaflets" as of page 189.
You must observe the instructions and warning notices in the product leaflet.

The following pages only contain information which is frequently required for each product. This includes all connecting diagrams as well as information about configuration. It does not include mounting instructions. Therefore, use this chapter only for reference purposes.

10.2 Management Interface (29 0700 00)

Fig. 50: Management Interface (29 0700 00)

10.2.1 Function

The interface for connection to the group bus offers interfaces for:

- PC with ConLog^{CARE} Management Software via LAN for configuration and logging
- Alarm server/radio paging system or DECT system (ESPA 4.4.4) for the transmission of call and fault messages.
- Analogue telephone network (a/b interface) for handling of calls per telephone via voice messages. In systems with speech also for speech communication.
- Fault signalling devices (fault message relay output).

NOTE! Only 1 management interface or system interface LAN can be connected to the group bus.

10.2.2 Setting jumpers / bus termination

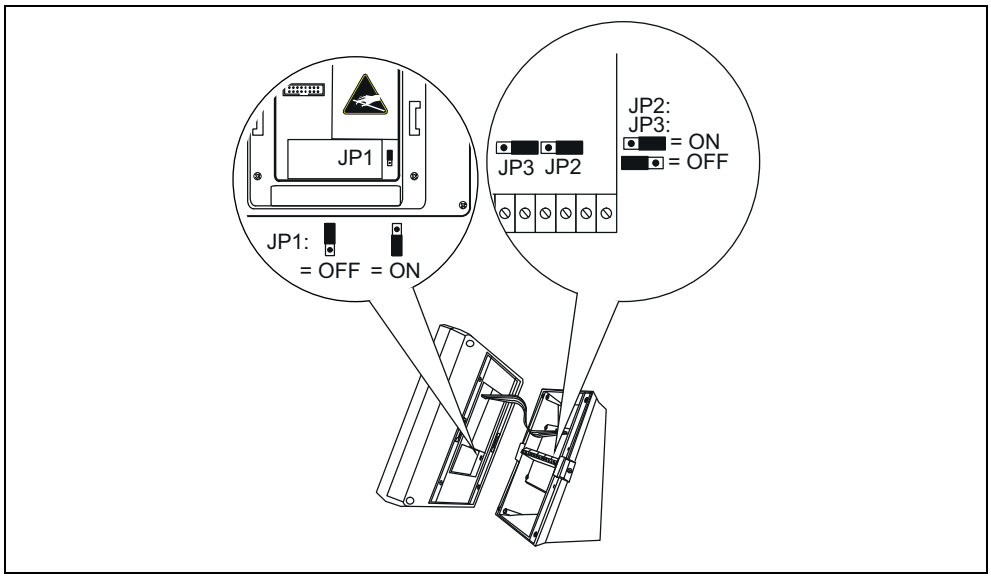


Fig. 51: Management Interface – Jumpers

No.	Position	Setting
JP1	Rear side of the control panel	During operation JP1 must always be set on ON. This activates a lithium battery for the clock module (as power buffer in case of a power failure). Factory setting: OFF.
JP2	Connection field	Do not change factory setting ON.
JP3	Connection field	Bus termination: If the Management Interface is the first or last user on the group bus, the bus must be terminated. For this, set JP3 on ON. No bus termination: Setting OFF. Factory setting: ON.

Tab. 17: Management Interface – Jumpers

10.2.3 Connection

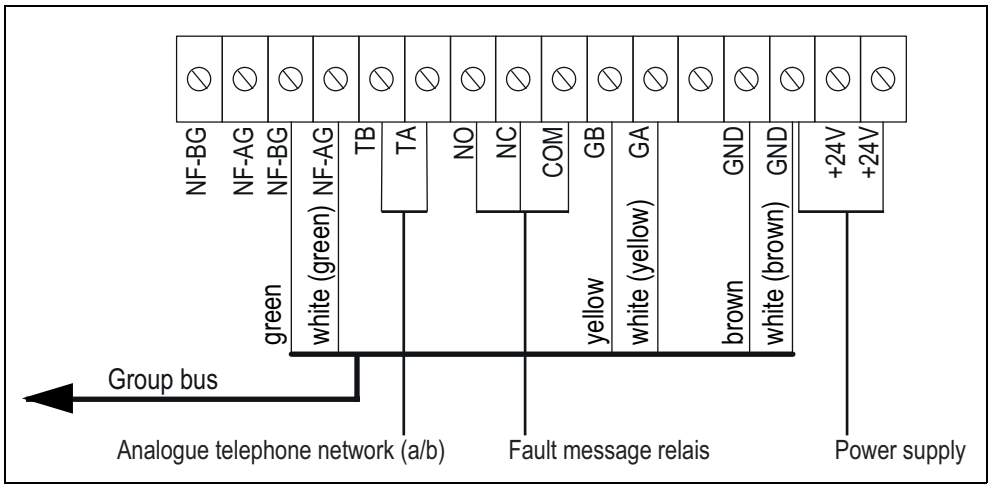


Fig. 52: Management Interface – Connection field

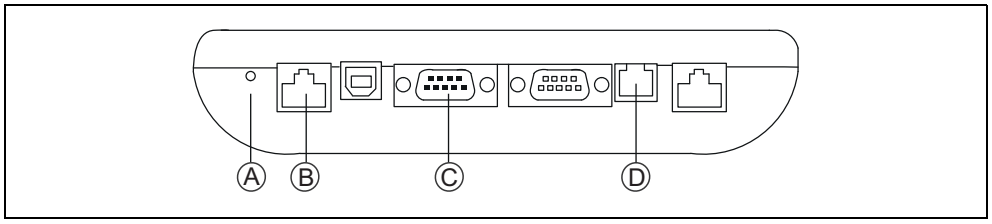


Fig. 53: Management Interface – Female connectors

[A] Reset button

[B] ConLog^{CARE} Management Software

[C] Alarm server/radio paging system or DECT (ESPA 4.4.4)

[D] Analogue telephone network (a/b)

Information on the connections

Connection field (in the base)		
Group bus		NF-AG and NF-BG are not used in systems without speech communication.
Power supply		Connection to the power supply of a physical group. Take current consumption into consideration!
Analogue telephone network (a/b)		Connection to an RJ11 socket [D] is also possible. However, only one option for connection is permitted to be used!
Fault message relay		Potential-free. Switching capacity: 2 A. Switches for 2 seconds when: Fault on the group bus, fault on individual modules of the management interface. Note: The switching behaviour can be configured after prior consultation with Tunstall, see chapter "10.2.8 Service menu level 2" as of page 109.
Female connectors (underside of device):		
A	Reset button	-
B	ConLog^{CARE} Management Software	RJ45 socket for connection to the LAN with the ConLog^{CARE} Management Software.
C	Alarm server/radio paging system or DECT (ESPA 4.4.4)	Sub-D plug, 9-pole (RS232). Maximum cable length: 10 m.
D	Analogue telephone network (a/b)	RJ11 socket.

Tab. 18: Management Interface – Connection

10.2.4 Displays during operation

Text information shown in the display

Date/time	Takeover from ConLog^{CARE} Management Software.
Time zone	Active time zone of nurse call system.
Time zone mode	Automatic or manual time zone setting. Configuration in ConLog^{CARE} Management Software.
Active messages	Number of calls, presences and faults in the nurse call system.
ID	Device ID of the Management Interface. Factory setting.
->???	Management Interface has not been configured with the ConLog^{CARE} Management Software!

Tab. 19: Management Interface – Text indications in the display

Adr	Address of management interface (setting in ConLog^{CARE} Management Software)
LGR	Logical group of the Management Interface (setting in ConLog^{CARE} Management Software)
PGR	Physical group of the Management Interface (setting in ConLog^{CARE} Management Software)
IP/Subnet/Gate-way	IP configuration of management interface in LAN with ConLog^{CARE} Management Software. Setting on Management Interface.

Tab. 19: Management Interface – Text indications in the display

Icon displays

Icons display the status of the modules of the Management Interface an:

- Bus = Connection to the group bus
- Server = Connection to the ConLog^{CARE} Management Software
- PSA = Connection to the radio paging system or DECT system

	Green	OK! Module in Management Interface is switched on and the connection is ready for operation.
	Red	Fault! Module in Management Interface is switched on, but the connection is interrupted or faulty.
	Blue	Module in the Management Interface is switched off.

Tab. 20: Management Interface – Icons in the display

10.2.5 Configuration

The following settings must be made on the Management Interface:

- Setting the IP configuration
- In case of connection to alarm server/radio paging system/DECT: Configuring the paging module (ESPA 4.4.4).
- In case of telephony connection: Configuring the telephone module.
- If used: Testing the fault message relay.

These settings are described in the following. All other settings are made remotely via the bus system using the ConLog^{CARE} Management Software.

NOTE! As long as the remote configuration with the ConLog^{CARE} Management Software has not been carried out, the display shows at the end of line "ID": "-> ???". The Management Interface is not yet ready for operation..

Basic procedure for configuration

The configurations are made in the service menu.

Calling up the service menu

1. Press **Enter** in the operating display

✔ "Password" is displayed.

2. Enter password. (Factory setting, Password = 0000).
3. Press **Enter**.

✔ The main menu appears.

The Management Interface keys have in the service menu the following functions:

Key functions

	Scroll up the list.
	Scroll down the list.
	Select the marked menu item.
	Return to the parent menu. When pressing the main menu simultaneous request to save all changes made.

Tab. 21: Management Interface – Keys

Saving changes and quitting the service menu

The settings described in the following are saved only after quitting the service menu.

1. Press **Clear** in the main menu.

✔ The following message will be displayed: "Save changes? Press 'Enter' to save. Press any key to cancel".

2. To save the changes, press **Enter**.

Note! If no key is pressed within a period of 120 seconds, the service menu is terminated automatically and the changes are not saved.

Changing the language of the service menu

1. Select "Device settings" in the main menu.

✔ Menu "Device settings" is displayed.

2. Select "Language".

✔ The sub-menu "Language" is displayed.

3. Select the desired language.

Setting the IP configuration

The Management Interface is connected with the ConLog^{CARE} Management Software via LAN. For this, the IP configuration must be set.

1. Select "Device settings" in the main menu.

✔ Menu "Device settings" is displayed.

2. Select "IP configuration".

✔ The sub-menu "IP configuration" is displayed.

3. Select "IP address" with **Enter**
4. Enter the IP address in three-digit format.
   Factory setting: 192.168.178.041
   Complete the entry with **Enter**.
5. Move to "Netmask" and select with **Enter**.
6. Enter the subnet mask in three-digit format.
   Factory setting: 255.255.255.000
   Complete the entry with **Enter**.
7. Move to "Gateway" and select with **Enter**.
8. Enter the Gateway in three-digit format.
   Factory setting: 192.168.178.001
   Complete the entry with **Enter**.
9. Move to "Server Port" and select with **Enter**.
10. Enter the Server Port.
    Factory setting: 55005
    Complete the entry with **Enter**.
11. Press **Clear** as often as required until the following message is displayed: "Save changes? Press 'Enter' to save. Press any key to cancel".
12. Press **Enter** to save the set IP configuration

✔ The IP configuration will be saved and the service menu terminated.

13. If a new IP address has been set, a reset of the Management Interface must be carried out. Press the reset button [A] on the left next to the female connectors on the underside of the Management Interface, see fig. 53 on page 100.

✔ The Management Interface is restarted and can then be reached from the ConLog^{CARE} Management Software via LAN.

Configuring the paging module (ESPA 4.4.4)

If an alarm server/a radio paging system or a DECT system has been connected to the Management Interface, proceed as follows

1. Select "Paging module" in the main menu.

✔ The "Paging module" menu is displayed.

2. Select "Paging module On/Off".

✔ The sub menu "Paging module On/Off" is displayed.

3. Select "On" if an alarm server/a radio paging system or DECT system is connected. (Factory setting: "Off".)

Sending a test message to an alarm server/a pager or a DECT telephone

1. Select "Test message" in menu "Paging module".

✔ "Pager address:" is displayed.

2. Enter the address of the recipient of the test message

3. Press **Enter**.

✔ The test message "Test message" is sent.

4. To quit the "Paging module" menu, press **Clear**.

Factory setting: 1200 baud, 7 data bits, 2 stop bits, parity even.

Configuring the telephone module

If the management interface is connected to the analogue telephone network, proceed as follows:

1. Select "Telephone module" in the main menu.

✔ The "Telephone module" menu is displayed.

2. Select "Telephone module On/Off".

✔ The sub-menu "Telephone module On/Off" is displayed.

3. Select "On", if the management interface is connected to the analogue telephone network. (Factory setting: "Off".)

Call a telephone for a test call

1. Select "Test call" in menu "Telephone module".

✔ "Tele. no.:" is displayed.

2. Enter the number of the telephone.

3. Press **Enter**.

✔ The telephone is called and a message which is to be carried out is transmitted.

4. The person that has been called must press button "0" before he or she hangs up.

5. To quit the "Telephone module" menu, press Clear.

Setting the speech format for speech messages on the telephone

For speech messages on the telephone you can set how a call location is to be specified.

Factory setting: "Room 1234“ (room one thousandtwo hundred and thirty four).

Options: "Room 1-2-3-4“ (room one two three four), "Ward 1 Room 2-3-4", "Ward 1 Room 234", "Ward 12 Room 3-4", "Ward 12 Room 34".

Proceed as follows:

1. Select "Telephone module" in the main menu.

✔ The "Telephone module" menu is displayed.

2. Select "Speech format".

✔ Sub-menu "Speech format" is displayed.

3. Select the desired option.

Testing the fault message relay

If a device has been connected to the fault message relay, test the function as follows:

1. Select "System test" in the main menu.

✔ The "System test" menu is displayed.

2. Select "Test Fault Relay".

✔ The fault message relay is switched.

3. To quit the test, press **Enter**.

10.2.6 Holiday Calendar (optional setting)

Time zones for the call system are created in the ConLog^{CARE} Management Software. Details can be found in the documentation of the ConLog^{CARE} Management Software.

As a rule, other time zones are used on Sundays than on weekdays. In many nursing facilities, the same time zones should be used on public holidays as on Sundays. You set this function in the Management Interface.

In the Management Interface the holidays for different German states are stored in so-called holiday calendars. All you have to do is select which public holiday calendar is to be used in the call system.

1. Select "Device Settings" in the main menu.

✔ The "Device Settings" menu is displayed.

2. Select "Holiday Calendar".

✔ Sub-menu "Holiday Calendar" is displayed.

3. Select the desired holiday calendar.

NOTE! A public holiday calendar cannot be used in systems with system interface LAN, i.e. in systems without Management Interface.

10.2.7 Service menu level 1

Password = 0000

NOTE! Factory settings have a dark grey background.

Time / Date	Set time	(entry field)	The setting is overwritten by the ConLog^{CARE} Management Software.
	Set date	(entry field)	
	Auto. daylight saving conversion	ON	
		OFF	
↓			
Paging Module	Paging Module ON/ OFF	ON	Configuring the paging module (ESPA 4.4.4), see page 104.
		OFF	
	Test Message	Pager no. (entry field)	
↓			
Server Interface	Server Connection	ON	EDo not change setting "On"! Connection to the ConLog^{CARE} Management Software.
		OFF	
↓			
Telephone Module	Telephone Module ON/OFF	ON	Configuring the telephone module, se page 105.
		OFF	
	Test Call	Tele. no. (entry field)	
	Speech Format	Room 1-2-3-4	
		Room 1234	
		Ward 1 Room 2-3-4	
		Ward 1 Room 234	
		Ward 12 Room 3-4	
		Ward 12 Room 34	
↓			

Tab. 22: Management Interface – Service menu

System test	Test Paging (ESPA 4.4.4)	Pager no. (entry field)	Paging Module > Test message. Telephone Module > Test Call. For fault message relay test see page 106.
	Test Telephone Call	Tele. no. (entry field)	
	Test Fault Relay		
↓			
Device Settings	Speech	German	Setting the menu language of this device. This setting is overwritten by the set language of the ConLog^{CARE} Management Software during the remote configuration.
		English	
	Holiday Calendar	OFF	See page 106.
		Calendar 1	
		Calendar 2	
		Calendar ...	
	IP Configuration	IP Address 192.168.178.041	See page 104.
		Netmask 255.255.255.000	
		Gateway 192.168.178.001	
		Server Port 55005	
↓			
Menu Settings	Backlight / Powersafe	Dim (sec) (10 – 240) 30	Setting the display back light of the Management Interface.
		Brightness (0 – 3) 1	
		Backlight Off (min) (0 – 9) 5	
↓			
Info	Firmware Revision		Firmware revision of this device.

Tab. 22: Management Interface – Service menu

10.2.8 Service menu level 2

By entering the password "963" instead of "0000" the menu items of level 2 are displayed in addition to the menu items of level 1. Attention! The use of level 2 is only permitted in agreement with Tunstall GmbH.

WARNING! Risk of malfunctions in the nurse call system due to incorrect settings! The Level 2 service menu includes special settings that require special knowledge.

▶ The settings may only be changed after consultation with Tunstall GmbH

NOTE! Factory settings have a dark grey background.

Time / Date	Send time + date	Yes	Compatibility settings.
		No	
		Time only	

↓

* Settings marked with a * are overwritten by the ConLog^{CARE} Management Software.

Tab. 23: Management Interface – Service menu level 2

Paging Module	Baud Rate*	1200	For adaptation of the connection to an alarm server/a radio paging system and telephone systems.
		2400	
		4800	
		9600	
	Data Bits*	7	
		8	
	Stop Bits*	1	
		2	
	Parity*	None	
		Even	
		Odd	
	Timeout (ms)	(50 – 3000) 1500	
	Retransmission (min)*	(OFF, 1 – 9) 9	
	Transmission Attempts	(1 – 9) 3	
	Pollingzyklus (sek)	(0 – 255) 5	
	Alias / Room No.	Alias	
		Room	
↓			
RS485 Inter-face	Baud Rate	19200	Interface parameters for the connection to the group bus or ward bus.
		20000	
		38400	
		57600	
	Update block Timeout (ms)	(10 – 3000) 100	
	Programming Timeout (sec)	(1 – 10) 5	
↓			
Server Inter-face	Baud Rate	19200	Interface parameters for the serial connection to the ConLog^{CARE} Management Software.
		38400	
		57600	
		115200	
	Timeout (ms)	(50 – 3000) 1000	
* Settings marked with a * are overwritten by the ConLog^{CARE} Management Software.			

Tab. 23: Management Interface – Service menu level 2

Telephone Module	Group / Ward bus	Group	Basic setting for the Management Interface in the system.
		Ward	
	Volume Settings	Volume Speech Phrases (0 – 15) 12	For adaptation to the telephone system (only after consultation with Tunstall).
		Gain Modem Speaker (0 – 255) 210	
		Gain Modem Mic (0 – 255) 20	
	Speech Phrases*	ON	For easy handling of voice calls
		OFF	
	Call Delays	Call Delay Telephone (min) (0 – 9) 0*	Voice calls are generally activated with a short delay. A significant call delay is possible.
		Call Delay DECT (min) (0 – 9) 0*	
		Call Delay Common (sec) (0 – 30) 5	
	No. of Call Repeats	(0 – 10) 3*	To optimize calling behaviour and adapt to customer requirements.
	Delay Between Calls (sec)	(5 – 300) 10	
	Max. Talk Time (min)	(1 – 10) 2*	
	On Hook Timeout (sec)	(30 – 120) 60	
	Line Busy Timeout (sec)	(5 – 300) 30	
	No. of Call Repeats on Busy	(0 – 10) 3	
	Transmission Protocol	CPC-PNC	For sending calls to a Telecare monitoring centre

* Settings marked with a * are overwritten by the ConLog^{CARE} Management Software.

Tab. 23: Management Interface – Service menu level 2

System Test	Periodic Call Paging	Activation OFF	For setting up a periodic test call via ESPA 4.4.4.
		Start time	
		Call Address	
		Timespan 24	
		Factor Hour	
	Periodic Call Telephone	Activation OFF	For setting up a periodic test call to a telephone connection.
		Start time	
		Phone Number	
		Timespan 24	
		Factor Hour	
	Periodic Call Monitoring Centre	Activation OFF	For setting up a periodic test call to a Telecare Monitoring Centre.
		Start time	
		Phone Number	
		ID	
		Timespan 24	
		Factor Hour	
↓			
System Set-tings	Manual Coupling		Shows the operating mode for the time zone switching.
	Temp. Time Zone Setting	activated Time Zone 1	Sets the time zone for the connection to external destinations temporarily in the operating mode "Automatic coupling after time". Attention: The temporary setting is reset when the automatic switch-over to another time zone takes place.
		activated Time Zones	
* Settings marked with a * are overwritten by the ConLog^{CARE} Management Software.			

Tab. 23: Management Interface – Service menu level 2

	Settings Fault Relay	Fault Relay Duration (sec) 2	Settings for the fault message relay of the Management Interface.
		Error Bus (OFF, ON, Duration) ON	
		Error Server (OFF, ON, Duration) ON	
		Error Telephone (OFF, ON, Duration) ON	
		Call failed (OFF, Duration) OFF	
		Call Monitoring Centre failed (OFF, Duration) OFF	
	Call Delay Fault Messages (min)	(1 – 1440) 60	Setting for cyclic repetition of fault messages that have not been switched off.
Device Settings	Device ID		Do not change the value!
	Backup Configuration		For backup and restore of the settings.
	Restore Configuration		
↓			
Menu Settings	Timeout Service Menu (sec)	(10 – 540) 120	For automatic quitting the menu. Attention: Changed settings will not be saved.
↓			
Factory settings	Cancel		For restoring the factory settings.
	Reset to Factory Settings		
	Quit Application		
Restart			
* Settings marked with a * are overwritten by the ConLog^{CARE} Management Software.			

Tab. 23: Management Interface – Service menu level 2

10.3 System interface LAN (19 0700 05)

Fig. 54: System interface LAN (19 0700 05)

10.3.1 Function

The system interface LAN for connection to the group bus offers interfaces to:

- PC with ConLog^{CARE} Management Software via LAN for configuration and logging
- Alarm server/radio paging system or DECT system (ESPA 4.4.4) for the transmission of call and fault messages.
- Fault signalling devices (fault message relay output).

NOTE! Only 1 system interface LAN or 1 Management Interface can be connected to the group bus.

10.3.2 Setting the DIP switch

Electrostatically endangered components! The circuit board and the connectors are at risk of being damaged electrostatically.

▶ Avoid direct contact.

▶ Open the cover only to set the DIP switch.

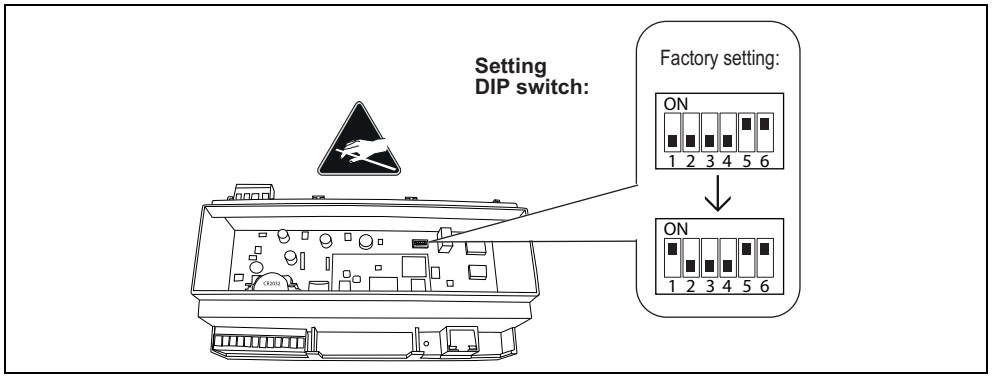


Fig. 55: System interface LAN – DIP switch (behind the cover)

1. Insert a screwdriver successively into the four recesses in the cover of the system interface LAN to unlatch the cover.
2. Lift off cover.
3. Set the DIP switches as follows:
   1: During operation DIP switch 1 must always be set on ON. This activates a lithium battery for the clock module (power buffer during mains failure). Factory setting: OFF.
   2, **3**, **4**: Factory setting OFF must not be changed.
   5, **6**: Factory setting ON must not be changed.
4. Reattach the cover to the original alignment and latch it securely.

10.3.3 Connection

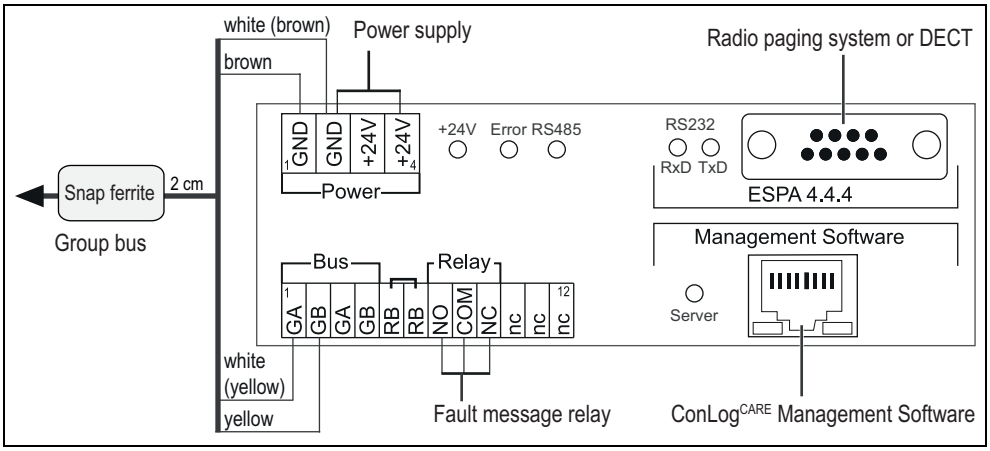


Fig. 56: System interface LAN – Connection

Note on the connections

Connectors	
Group bus	NF-AG and NF-BG are not used in systems without speech communication. These can be installed at the terminals marked with "nc".
Power supply	Connection to the power supply of a physical group. Take current consumption into consideration!
Fault message relay	Potential-free. Switching capacity: 2 A. Switches permanently when: Fault on the group bus, fault on the system interface LAN.

Tab. 24: System interface LAN – Connection

Female connectors	
Radio paging system or DECT (ESPA 4.4.4).	Sub-D plug, 9-pole (RS232). Maximum cable length: 10 m.
Management Software	RJ45 socket for connection to the LAN with the ConLog^{CARE} Management Software.

Tab. 24: System interface LAN – Connection

Bus termination

If the system interface LAN is the first or the last group user, a wire bridge must be set between the two "RB" connection points.

10.3.4 Configuration

The Server interface of the system interface LAN must be configured, if the connection to the ConLog^{CARE} Management Software is different to the factory setting. This setting is described in the following.

All other settings are carried out with the ConLog^{CARE} Management Software per remote configuration via the network connection and are not part of this document..

NOTE! As long as the remote configuration has not yet been carried out with the ConLog^{CARE} Management Software "WAIT FOR CONFIG" is shown in red writing in the web interface.

Using the web interface

The system interface LAN is configured via an integrated web interface. This requires a computer with the use of a Web browser (e.g. Microsoft Internet Explorer from version 11, Mozilla Firefox from version 43).

1. Connect the computer to the RJ45 socket of the system interface LAN via a network cable.
2. Enter the IP address of the system interface LAN in the address line of the Web browser.
   Factory setting: IP Address: 192.168.178.042,
   Netmask: 255.255.255.000, Gateway: 192.168.178.001,
   Server Port: 55005.

✔ The login window of the web interface is called up.

3. Enter your login name and your password.
   (Factory setting = Login: *Administrator*, Password: *admin*).
   Note! Change the password after first login.

4. Click on "Login".

Exiting the web interface

- To exit the web interface, click on "Logout".

Saving the configuration

All settings in the web interface are saved only when the configuration is saved.

- Click on "Save Configuration".

✔ The configuration is saved. The web browser shows: "The Settings have been sent."

Changing the language of the web interface

- Click on the language below the flag in the web interface.

Connection to the ConLog^{CARE} Management Software

When the system interface LAN is connected to the ConLog^{CARE} Management Software, the Server interface of the system interface LAN must be switched on and the connection ready for operation, i.e.:

- The "Server Interface" check box above the fields for setting the IP address must be active (factory setting).
- The display icon for "Server" must be green, see page 118.

Setting the IP address of the Server interface

The network configuration of the system interface LAN must match to the setting in the ConLog^{CARE} Management Software. Factory setting of the system interface LAN: IP Address: 192.168.178.042, Netmask: 255.255.255.000, Gateway: 192.168.178.001, Server Port: 55005.

A different IP address is set as follows:

1. Enter the IP address, netmask, gateway, and server port in the appropriate fields.
2. To save the entered network configuration, click on "Save Configuration".

✔ The network configuration is saved.

3. If a new network configuration has been set, a reset of the system interface LAN must be carried out: Pull off the 4-pole connector for the power supply and plug it in again.

✔ The system interface LAN is restarted and can then be reached from the ConLog^{CARE} Management Software via the network.

10.3.5 Displays in the web interface

Text displays

Date/Time	
Date:	
Time:	
☐ **NTP:**	Takeover from NTP server. (Activate check box "☒ NTP". Enter the IP address of the NTP server in the field beside "NTP:". Safe the configuration.)
Time Zone:	
Device Settings	
Device ID: 002XXXX	ID of the system interface LAN. Factory setting.
Add:	Address of the system interface LAN (setting in the ConLog^{CARE} Management Software)
LGR:	Logical group of the system interface LAN (setting in the ConLog^{CARE} Management Software, Factory setting: 000).
PGR:	Physical group of the system interface LAN (setting in the ConLog^{CARE} Management Software, Factory setting: 00).
Server Interface = Connection to the ConLog^{CARE} Management Software	
☒ **Server Interface**	When the LAN system interface is connected to the ConLog^{CARE} Management Software, the "Server" module must be activated, i.e. the check box must be active.
IP Address, Net-mask, Gateway, Server Port:	IP configuration of the system interface LAN in the LAN with the ConLog^{CARE} Management Software, see page 117.

Tab. 25: System interface LAN – Text displays in the web interface

Paging Module	
☐ **Paging Module**	The paging module must be switched on, if a DECT system or an alarm server/a radio paging system is connected to the system interface LAN. That means, the check box must be checked. Configuration with the ConLog^{CARE} Management Software checks the check box automatically.
Baud Rate, Data Bits, Stop Bits, Parity, Timeout (ms), Retransmission (min), Transmission Attempts, Polling Cycle (sec), Alias / Room No.	Configuration with the ConLog^{CARE} Management Software.
◎ **Target assignment via Management Software**	Factory setting: In the ConLog^{CARE} Management Software is set which calls and which faults of the nurse call system are sent to which recipient addresses.
○ **Manual target assignments**	All calls from the nurse call system are sent to the same recipient address. All nurse call system faults are sent to the same recipient address. (Activate the "Manual target assignments" radio button. Select language. Enter the recipient address for calls in the "Calls" field. Enter the recipient address for faults in the "Faults" field. Save configuration.)
Status display	
„WAIT FOR CONFIG“	Status: "Management Interface has not yet been completely configured by ConLog^{CARE} Management Software".
Time Zone	Active time zone of the nurse call system.
Active Messages	Number of messages (calls, presences and faults) that are pending for display in the entire nurse call system.

Tab. 25: System interface LAN – Text displays in the web interface

Display icons

Icons indicate the status of the modules of the system interface LAN.

- Bus = Connection to the group bus
- Server = Connection to the ConLog^{CARE} Management Software
- PSA = Connection to the alarm server/radio paging system or DECT system

	Green	OK! Module in the system interface LAN is switched on and the connection is ready for operation.
	Red	Fault! Module in the system interface LAN is switched on, but the connection is interrupted or faulty.
	Blue	Module in the system interface LAN is switched off.

Tab. 26: System interface LAN – Display icons in the web interface

10.3.6 LED displays during operation

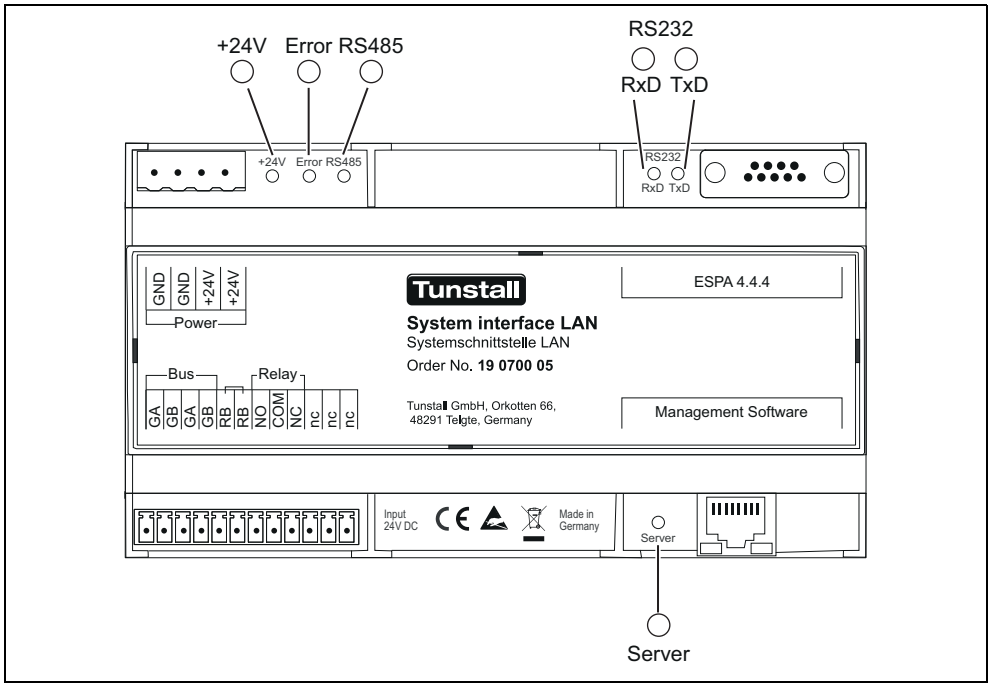


Fig. 57: System interface LAN – LED displays

Green LED "+24V" power supply:	
LED 1 lights up permanently.	Power supply is ok.
LED 1 is off.	Power supply is not ok (< 18 V DC).
Red LED "Error" (parallel to the fault message relay):	
LED 2 is off.	Group bus is OK and system interface LAN is ok.
LED 2 lights up permanently.	Fault on the group bus and/or on the system interface LAN.

Tab. 27: System interface LAN – LED displays during operation

Yellow LED "RS485" polling the group bus:	
LED 5 flashes rhythmically.	Group bus ok.
LED 5 lights up permanently or is off.	Fault on the group bus or no group bus connected.
LEDs "RS232" yellow: "RxD", green: "TxD": ESPA 4.4.4 Data traffic on the connection to the radio paging system or the DECT system:	
LEDs flash.	Data traffic, polling.
LEDs are off.	No data traffic, no polling.
Green LED "Server": Connection to ConLog^{CARE} Management Software:	
LED 2 lights up permanently.	Connection is ok.
LED 2 is off.	No connection.

Tab. 27: System interface LAN – LED displays during operation

10.4 Group controller (29 0700 10)

Fig. 58: Group controller (29 0700 10)

[1] Number of messages (calls, presences, faults) which are pending in the physical group, which the group controller controls, for display.

[2] Time

10.4.1 Function

The group controller serves for controlling a ward bus.

All group controllers are connected together via the group bus. Additionally a Management Interface or a system interface LAN and if required a fire alarm interface are connected to the group bus.

The stand-alone operation of a group controller without group bus is possible.

10.4.2 Stand-alone operation

In stand-alone operation the nurse call system only consists of a group controller with ward bus. A management interface or a system interface LAN is only temporarily connected to configure the call system. Time zones cannot be set up. There is no connection to alarm server/radio paging system, DECT systems or PBX systems.

10.4.3 Connection

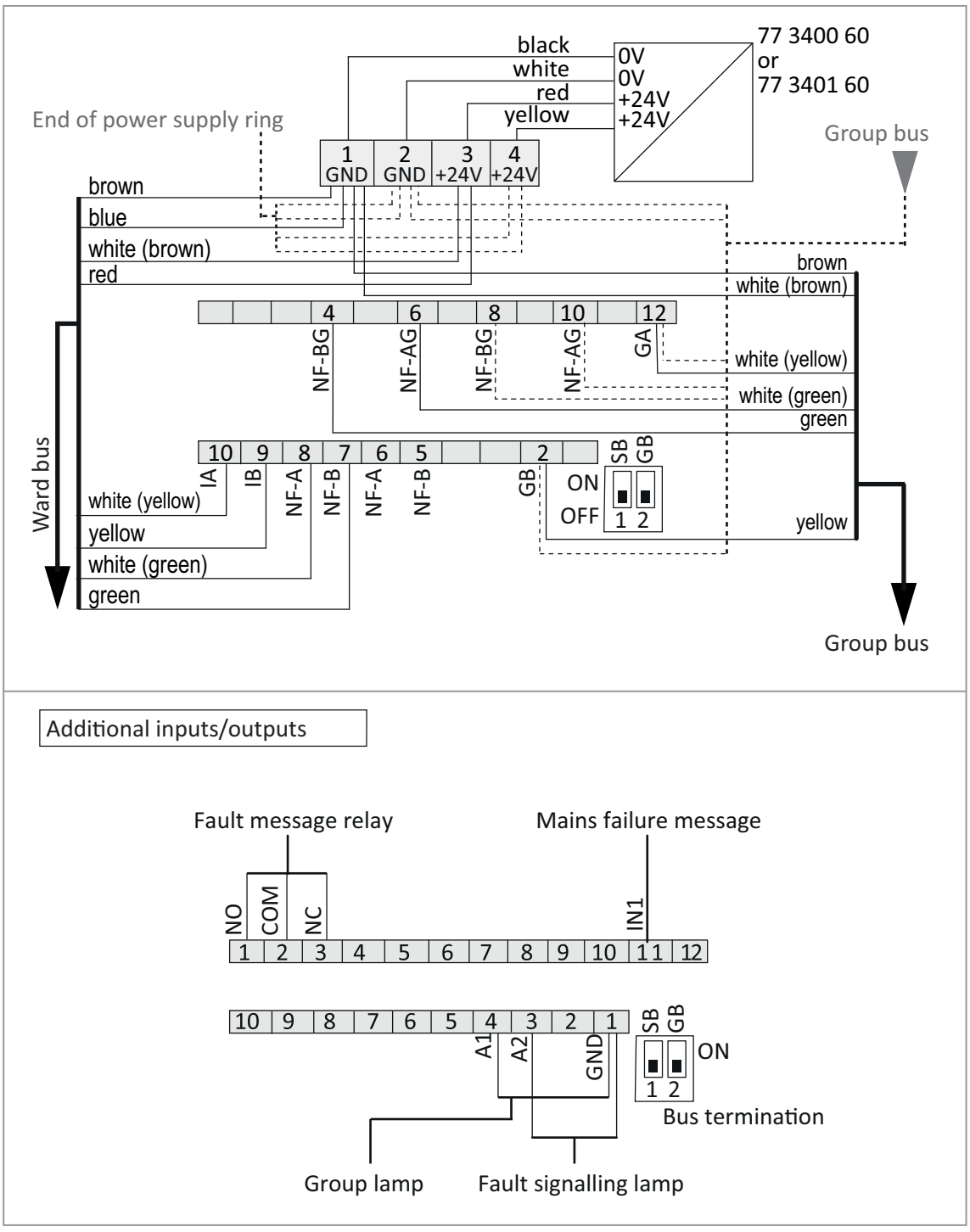


Fig. 59: Group controller – Connection plans

Note to the 4-pole connector: No bridge required in the plug between 1 and 2 (GND) as well as 3 and 4 (+24 V). Bridges are on the circuit board.

Note to the group bus and ward bus: NF-AG, NF-BG, NF-A and NF-B are not used in systems without speech.

Information about the additional inputs/outputs

Input or output	Information
Fault message relay	Potential-free. Switching capacity: 2 A; Switches at: Fault at group controller, group controller not fully programmed. NO = Normally open contact, NC = Normally closed contact
Mains failure message	From the fault message contact of the power supply unit 6A UPS (77 3400 60)
Group lamp	Load capacity of output 300 mA. Switches during messages (calls, presence and faults) on the ward bus.
Fault signalling lamp	Load capacity of output 300 mA. Switches during: Fault on the ward bus

Tab. 28: Group controller – additional inputs and outputs

Bus termination

The two DIP switches on the rear of the group controller serve for setting the bus terminations for group bus and ward bus:

- If the group controller is the first or last user on the ward bus, set the DIP switch 1 (SB) to position ON.
- If the group controller is the first or last subscriber on the group bus, set the DIP switch 2 (GB) to position ON.

10.4.4 Configuring the group controller

Before the group controller is ready for operation, it must be remote-configured with the ConLog^{CARE} Management Software via the bus system. However, the group controller can already carry out the Plug&Play Setup even though it itself has not yet been configured with the ConLog^{CARE} Management Software.

Information about the configuration is available in chapter "12 Configuring the nurse call system" as of page 135.

NOTE! As long as the remote configuration or the Plug&Play Setup has not been carried out, the display shows "WAIT FOR CONFIG". The LED in button 2 (top right) below the display lights up. The fault signalling relay has become operative. The group controller is not yet ready.

10.4.5 LED displays during operation

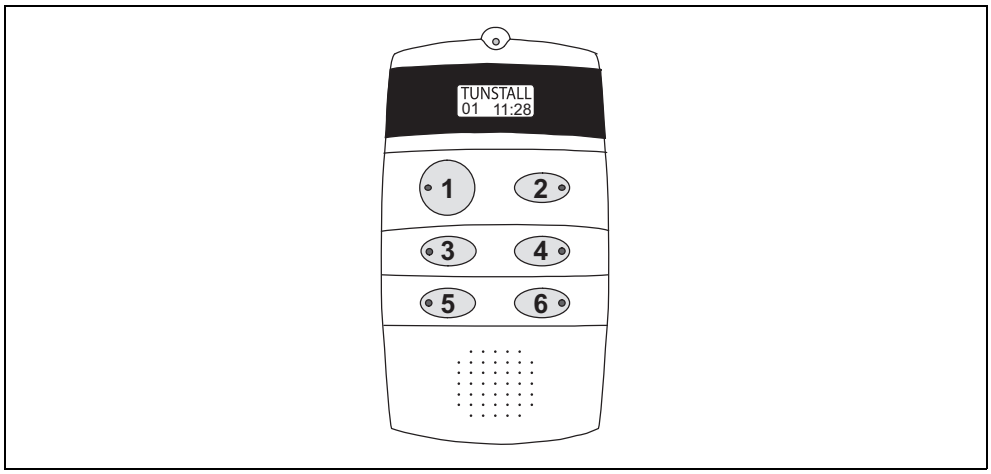


Fig. 60: Designations for the buttons and LEDs on the group controller

Button 1:	**Function of the group controller on the group bus**
LED 1 lights up permanently.	Group controller is the master.
LED 1 is off.	Group controller is slave.
LED 1 flashes (4 s on / 4 s off).	The group controller is the only group bus user or is not connected to the group bus (stand-alone function).
Button 2:	**Operating status of the group controller**
LED 2 is off.	Group controller ok.
LED 2 lights up permanently.	Group controller in fault or not fully configured.
Button 3, Button 4:	
	Evaluation only by Tunstall GmbH.
Button 5:	**Polling the group bus**
LED 5 flashes rhythmically.	Group bus ok.
LED 5 lights up permanently or is off.	Fault on the group bus.
Button 6:	**Polling the ward bus**
LED 6 flashes rhythmically.	Ward bus ok.
LED 6 lights up permanently or is off.	Fault on the ward bus

Tab. 29: Group controller – LED displays during operation

10.4.6 Service menu

The service menu serves as analysis tool and can:

- display the number of programmed ward bus users,
- display the active time zone,
- test group lamp, fault signalling lamp and fault signalling relay,
- simulate a mains failure message,

Operation of the service menu

Function	Action
Starting the service menu	Keep buttons 1 and 2 pressed simultaneously for 10 seconds. The software revision of the group controller is displayed. The service menu is active. The LEDs display the same information as during normal operation, see chapter "10.4.5 LED displays during operation" as of page 125.
Scrolling forward	Press Button 2.
Scrolling back	Press Button 1.
Select menu item	Press Button 4.
Terminating the service menu	Keep buttons 1 and 2 pressed simultaneously for 3 seconds.

Tab. 30: Group controller – operating the service menu

Displaying the number of programmed ward bus users

1. Scroll to "Ward-Dev" in the service menu

✔ The number of ward bus users programmed in the group controller is displayed. This number must match the number of existing ward bus users.

2. If the number displayed does not match the number of existing ward bus users, correct the programming with the ConLog^{CARE} Management Software.

Displaying the active time zone

1. Scroll to "Time zone" in the service menu.

✔ The active time zone is displayed.

Testing group lamp

1. Scroll to "Test Gr-Lamp" in the service menu.
2. Press Button 4.

✔ The connected group lamp lights up for 30 seconds.

Testing the fault signalling lamp

1. Scroll to "Test Er-Lamp" in the service menu.

2. Press Button 4.

✔ The connected fault signalling lamp lights up for 30 seconds.

Testing the function of the fault message relay

1. Scroll to "Test relay" in the service menu.
2. Press Button 4.

✔ The relay is switched over. The relay can be switched back and forth as often as desired by pressing Button 4

3. To ensure the correct status of the relay after the test, the group controller must be reset. To do this, keep buttons 5 and 6 pressed for 5 seconds.

Simulating a mains failure message

1. Scroll to "SimulateMainFail" in the service menu.
2. Press Button 4.

✔ A mains failure message is displayed in the nurse call system (fault) for 30 seconds

10.4.7 Brief service commands

Additional functions are available in case of service aside from the functions in the service menu:

Restarting the group controller (reset)

- To restart the group controller, keep buttons 5 and 6 pressed for 5 seconds.

Restarting the group bus

- To restart the group bus, keep button 5 pressed for 5 seconds.

Restarting the ward bus

- To restart the ward bus, keep button 6 pressed for 5 seconds.

Scrolling through active messages

You can scroll through the messages (calls, presences, faults) which are pending in the physical group:

- To scroll through the messages, press button 4 several times.
- To return to the first display, keep pressing button 4 until the first display appears again.

Deleting the message memory

If you suspect that the group controller wrongly displays a message, you can delete the message memory in the group controller

- To delete the message memory, keep button 3 pressed for 3 seconds.

✔ The message memory is deleted and then reconstructed by means of polling of the bus users. The LED in button 3 and the display are activated for 10 seconds.

10.4.8 Service menu

FW-Rev. x.x.xxxx			Software revision of this device.
↓			
Language	Button 4: Call up the sub-menu	Button 1: Scroll Button 2: Save	Setting the menu language of this device. This setting is overwritten by the set language of the ConLog^{CARE} Management Software during the remote configuration..
↓			
Ward-Dev xx			See page 126.
↓			
Time zone x			See page 126.
↓			
Test Relay	Button 4: Switch over fault message relay.		See page 127.
↓			
Test Gr-Lamp	Button 4: Switch on the group lamp for 30 seconds		See page 126.
↓			
Test Er-Lamp	Button 4: Switch on the fault signalling lamp for 30 seconds.		See page 126.
↓			
Simulate MainFail	Button 4: Simulate mains failure for 30 seconds.		See page 127.
↓			
System Config			Switch to the configuration menu.

Tab. 31: Group controller – Service menu

10.4.9 Configuration menu

NOTE! Factory settings have a dark grey background.

Device ID	ID of the group controller. Factory setting.
Err-Bklt OFF	Risk of malfunctions in the nurse call system! Special settings. To be changed only after consulting Tunstall GmbH.
Overflow 3 Minutes*	
FreshCall 3 Minutes*	
AnsCall Display*	
Ward-Bus OFF	
Grp-Bus OFF	
Ward-Grp OFF	
RAB ROM OFF	
Erase RAB ROM	
PlugPlay Reset	See page 142.
PlugPlay Setup	See page 135.
* Settings marked with a * overwritten by the ConLog^{CARE} Management Software.	

Tab. 32: Group controller – Configuration menu

11 Installing power supply units & switching on

11.1 Power supply unit 6A UPS

Fig. 61: Power supply unit 6A UPS (77 3400 60)

11.2 Power supply unit 6A

Fig. 62: Power supply unit 6A (77 3401 60)

11.3 Instruction manual

NOTE! All information on the installation and operation of the power supply unit can be found in the operating instructions supplied with the power supply unit, which can be found in chapter "20 Product leaflets" as of page 189.

11.4 Requirements of the power supply

For the supply of the nurse call system from a general power supply independent power supply circuits must be created with their own over-current protection units with or without RCD (earth-leakage circuit-breakers).

The power supply devices of the nurse call system must be connected firmly to the general power supply without connectors. An all-pole switching setup must be provided to switch the system off.

DIN VDE 0834 requires a backup power supply to be used. If there is no backup system in place, measures that achieve the same effect must be implemented (UPS).

11.5 Prerequisite for the switch-on of the power supply

The following tasks must have been performed before you switch the power supply on:

- All cables must be laid.
- The cable network must have been checked for continuity and freeness of short-circuit and earth leakage.
- All devices must be connected.

11.6 Checking the power supply

The operating voltage of the call system is +24 V DC.

Carry out the following tests when the power supply unit is operating:

11.6.1 Testing the output voltage of the power supply unit

- Test the +24 V DC output voltage of the power supply unit with a voltmeter.

11.6.2 Testing the +24 V closed-loop network for continuity

- If the +24 V closed-loop network starts at the group controller, because the power supply unit is connected to the group controller via a stub cable, disconnect one end of the closed-loop network from the group controller.
- If the +24 V closed-loop network starts at the power supply unit, disconnect one end of the closed-loop network from the power supply unit.
- Switch on the power supply unit and measure the voltage on the free cable ends with a voltmeter.
- If they are free of voltage, one or both wires (+24 V or GND) are interrupted, or there is a short-circuit

11.6.3 Testing the supply voltage of the ward bus users

Switch on five calls and five presences in the ward to be tested. The supply voltage must not drop below 18 V DC on any display insert or call/presence insert.

11.6.4 Testing the RAN voltage of the room bus

The RAN voltage of the room bus, i.e. the voltage between GND (black terminal) and RAN (yellow terminal), must amount to +8.8 V DC to +9 V DC. If the voltage does not lie in this range, it can have the following causes:

Voltage between GND and RAN = 0 V:

a) Short-circuit between GND and RAN.

b) The RAN wire is not connected to the room controller.

Voltage between GND and RAN = +12 V:

a) The GND wire is not connected to a user.

b) A RAN user is defective

12 Configuring the nurse call system

The nurse call system is configured centrally via the ConLog^{CARE} Management Software. However, it is possible to configure each completely installed physical group beforehand with the so-called Plug&Play Setup without the ConLog^{CARE} Management Software. The Plug&Play Setup is a feature of the group controller.

12.1 Plug&Play Setup

The basic function of the physical group is established via the Plug&Play Setup. The configuration with the ConLog^{CARE} Management Software is prepared at the same time so that the configuration of the entire nurse call system can be carried out faster with the ConLog^{CARE} Management Software.

12.1.1 Limitation of functions in the Plug&Play mode

Physical groups which have been configured with the Plug&Play setup, operate in the so-called Plug&Play mode. The Plug&Play mode has the following limitations of functions when compared to one that has been completely configured with the ConLog^{CARE} Management Software.

- The physical group has no connection to other physical groups. Cross-group functions, such as time zones and call overflow, are not available.
- Call locations (ward names, room names) cannot be displayed as text. The call location consists of the logical group and the room number.
- Types of calls are displayed only in German or English.
- Menu texts are displayed only in German or English.
- Corridor displays do not operate.
- The Management Interface is not operating. This means that transferring of calls to the radio paging system, DECT or telephones is not possible
- The system interface LAN does not operate. This means that transferring of calls to the radio paging system or DECT is not possible.

12.1.2 Prerequisites for carrying out the Plug&Play Setup of a physical group

Before the Plug&Play setup of a physical group can be performed, the following prerequisites must be completed:

- All devices in the rooms of the physical group have been installed. For functional test see page 145.
- The group controller is installed.
- A room programming interface (29 0701 80...) must be attached in rooms with call/presence inserts (29 0701 00...) for the duration of the configuration. You

only need one room programming interface, which is attached each time to the call/presence insert that is currently being configured for the Plug&Play Setup.

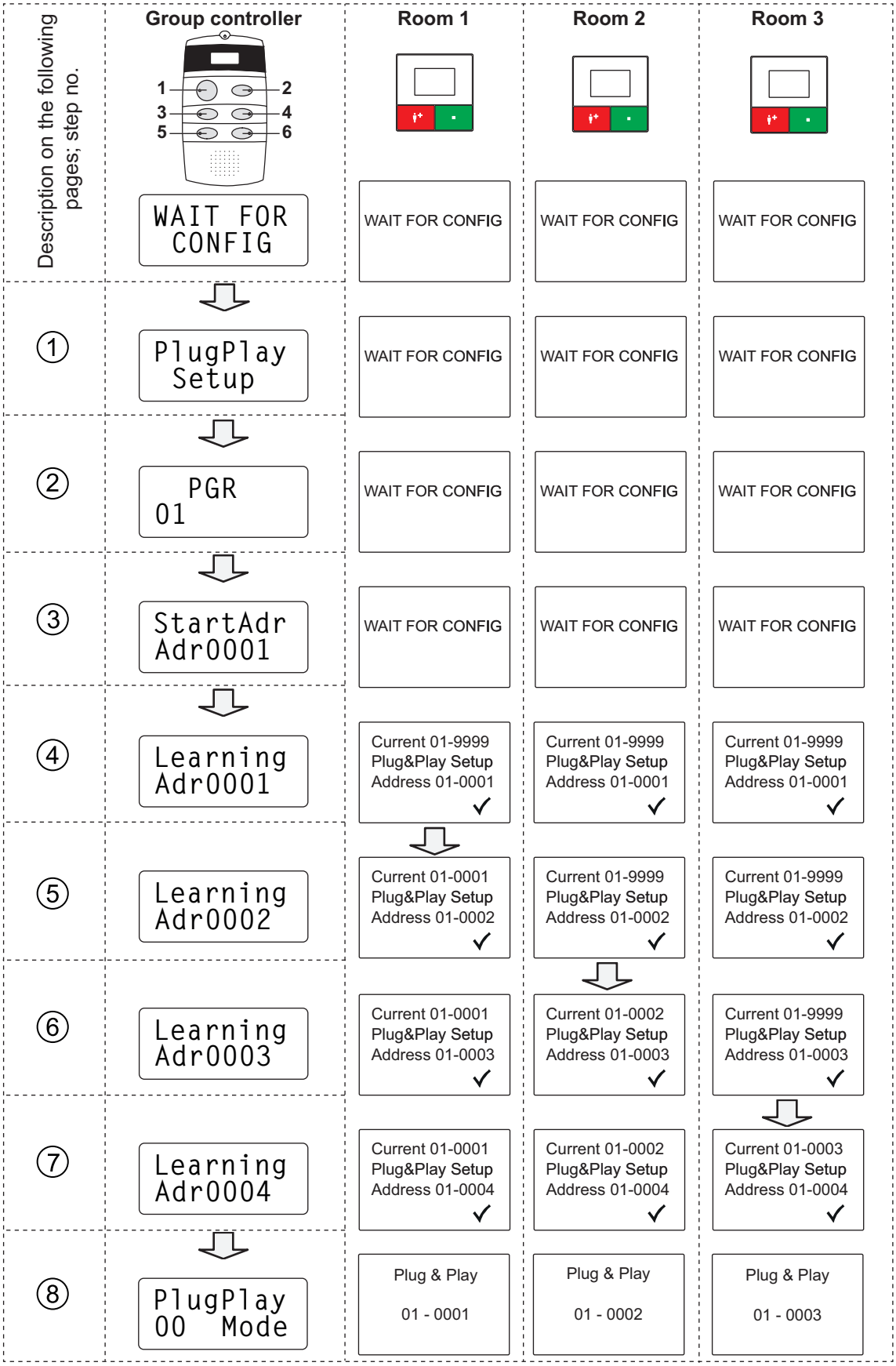


Fig. 63: Plug&Play Setup step by step

12.1.3 Step-by-step Plug&Play Setup

The working steps that have been numbered in the previous page are described in the following.

[1] Calling up the "PlugPlay Setup"

- To start the service menu of the group controller: keep buttons 1 and 2 pressed simultaneously for 10 seconds

✔ The firmware revision of the group controller is displayed. The service menu is active.

- Press button 1 as often as required until "SystemConfig" appears.
- Press button 4 to select "SystemConfig".

✔ "Password" appears

- Enter password: Button 1 > Button 3 > Button 4 > Button 6.

✔ The firmware revision of the group controller is displayed. The service menu is extended by the menu items of the configuration menu.

- Press button 1 as often as required until "PlugPlay Setup" appears.

[2] Start "PlugPlay Setup"

- Press button 4 while "PlugPlay Setup" is displayed on the group controller.

✔ The Plug&Play Setup starts. The display for setting the physical group (PGR) appears.

[3] Creating the physical group (PGR)

Each physical group in the nurse call system must be assigned a unique group number between 01 and 99. This number is displayed as ward number for the call display in the Plug&Play mode. For this reason, and to minimize the effort of a later configuration with the ConLog^{CARE} Management Software, the ward number in the nursing facility should be set here.

✔ In the factory setting of the group controller the display shows "PGR 01". The cursor flashes at the first digit of the group number.

- Press button 1 as often as required until the desired first digit of the group number appears.
- Press button 2 to change to the second digit of the group number.
- Press button 1 as often as required until the desired second digit of the group number appears.
- Press button 2 to change to the next step of the Plug&Play-play Setup.

✔ The physical group is now set. The display for setting the start address (StartAdr) appears.

[4] Setting the start address (StartAdr)

Each room controller, i.e. each room, must be assigned a unique address between 0001 and 8999 in the physical group. This address is displayed as room number for the call display in the Plug&Play mode. For this reason, and to minimize the effort of a later configuration with the ConLog^{CARE} Management Software, the room number in the nursing facility should be used . The lowest room number or address available in the physical group must be set for the start address (StartAdr).

✔ In the factory setting of the group controller the display shows "StartAdr 00001". The cursor flashes at the first digit of the address.

- Press button 1 as often as required until the desired first digit of the address appears.
- Press button 2 to change to the second digit of the address.
- Press button 1 as often as required until the desired second digit of the address appears.
- Press button 2 to change to the third digit of the address.
- Continue this process until the fifth digit has been set.
- Press button 2 to change to the next step of the Plug&Play Setup.

✔ The start address is now set. The group controller sends the start address to all room controllers of the physical group.

[5] Assigning the start address

✔ The group controller sends the start address to all room controllers of the physical group.

✔ The display of the group controller shows:
„Learning
Adr0001“.
0001 = Start address (example)

✔ The

✔ displays of the room controllers show:
„Current 01-9999
Plug&Play Setup
Address 01-0001“
01 = Physical group (example)
0001 = Address sent (example)

- Go to the room controller to which you want to assign the sent address and press the green button on the room controller for 2 seconds.

✔ A confirmation tone sounds. The sent address is assigned to this room control. (Note: If three short tones sound instead of the long one, the assignment was not possible).

✔ The group controller sends the second address (= start address + 1) to all room controllers of the physical group.

[6] Assigning the second address

✔ The group controller sends the second address (= start address + 1) to all room controllers of the physical group.

✔ The display of the group controller shows:
„Learning
Adr0002“.
0002 = 0002 = Second address (example)

✔ The displays of the room controllers to which no address has been assigned show:
„Current 01-9999
Plug&Play Setup
Address 01-0002“
01 = Physical group (example)
0002 = Sent address (example)

✔ The display of the room controller to which an address has been assigned shows:
„Current 01-0001
Plug&Play Setup
Address 01-0002“
0001 = Assigned address (example)
01 = Physical group (example)
0002 = Sent address (example)

- Go to the room controller to which you want to assign the sent address and press the green button on the room control for 2 seconds.

✔ A confirmation tone sounds. The sent address is assigned to this room controller.

✔ The group controller sends the third address (= start address + 2) to all room controllers of the physical group

[7] Assigning additional addresses

The same principle is used to assign all additional addresses in the physical group:

The group controller increases the address each time by 1 and sends the address to all room controllers. Go to the room controller to which you want to assign the address and press the green button for 2 seconds.

✔ The green button of the room controllers to which no address has been assigned yet, flashes slowly (once per second).

✔ The green button of the room controllers to which an address has been assigned, flashes fast (3 times per second).

You can change the address that is sent from the group controller:

- Press button 1 to increase the address. In this way, for example, you can jump addresses which do not correspond to a room number.
- Press button 2 to reduce the address. In this way you can return to an address that you want to assign later.

Addresses which have already been assigned appear with an exclamation mark "!" in the display of the group controller.

NOTE!

Single addresses that have already been assigned cannot be deleted from the system. You can, of course, overwrite the assignment of an address with a different address. However, the overwritten address remains assigned in the system and is displayed in the Plug&Play mode as fault. You can only delete **all** assigned addresses (Plug&Play reset, see page 142) and must then start with the Plug&Play Setup from the beginning.

[8] Ending the Plug&Play Setup

When you have assigned addresses to all room controllers in the physical group, you must end the Plug&Play Setup on the group controller.

✔ The group controller sends an address to all room controllers of the physical group. The display of the group controller shows: "Learning Adr...".

- To end the Plug&Play Setup: press button 4.

✔ "PlugPlay Setup" appears in the display. The Plug&Play Setup is terminated.

- Terminating the service menu: Keep buttons 1 and 2 pressed simultaneously for 3 seconds, or wait for 1 minute until the service menu is terminated automatically (timeout).

✔ Theservice menu is terminated

✔ The physical group is ready for operation in the Plug&Play mode.

✔ The display of the group controller shows:
„PlugPlay
xy Mode“
xy = Number of messages in the physical group (calls, presences, faults))

✔ The displays of the room controllers show:
„Plug & Play
01-0002“
01 = Physical group ~ ward number (example)
0002 = Address of room control ~ room number (example)

Interrupting the Plug&Play Setup

You can interrupt the Plug&Play Setup at any time and continue it later. For this you need to terminate the Plug&Play Setup with button 4 and restart it as normal later. Addresses which have already been assigned are marked with an exclamation mark "!" in the display of the group controller.

12.1.4 Plug&Play Reset

You can delete the Plug&Play configuration of a physical group. This deletes all settings that were made during the Plug&Play Setup. A Plug&Play reset is necessary:

- If you must delete an assigned address from the system, see note on page 141.
- After the physical group has been configured with the ConLog^{CARE} Management Software, see page 143.

Proceed as follows

- To start the service menu of the group controller: keep buttons 1 and 2 pressed simultaneously for 10 seconds.
- ✔ The firmware revision of the group controller is displayed. The service menu is active.
- Press button 1 as often as required until "SystemConfig" appears.
- Press button 4 to select "SystemConfig".
- ✔ "Password" appears
- Enter password: Button 1 > Button 3 > Button 4 > Button 6.
- ✔ The firmware revision of the group controller is displayed. The service menu is extended by the menu items of the configuration menu
- Press button 1 as often as required until "PlugPlay Reset" appears
- To start the Plug&Play reset, press button 4.
- ✔ The display of the group controller shows: "OK". The Plug&Play reset is being carried out.
- To terminate the service menu: Keep buttons 1 and 2 pressed simultaneously for 3 seconds, or wait for 1 minute until the service menu is terminated automatically (timeout).

12.2 Configuration with ConLog^{CARE}

The configuration of the call system with the ConLog^{CARE} Management Software is described in the online Help of the software and is not part of this manual.

In the following you will only find information that is to be observed when a nurse call system is being configured with the ConLog^{CARE} Management Software, which was previously configured with the Plug&Play Setup.

12.2.1 Configuring the nurse call system in the Plug&Play mode with the ConLog^{CARE} Management Software

With the Plug&Play mode each group controller creates a so-called Plug&Play terminal list (= list of the room controllers). This list can be called up from the ConLog^{CARE} Management Software.

This Plug&Play terminal list contains the following for each room controller:

- Device ID
- Device type
- Physical group
- Logical group (identical with physical group)
- Address (= room number)

The ConLog^{CARE} Management Software imports the received Plug&Play terminal lists to the device management and compiles each individual device as inactive device (imported device) with the details of its type and its ID.

The operator of the ConLog^{CARE} Management Software must now only check the details for each room controller and edit them if necessary and then activate the device.

All additional configurations with the ConLog^{CARE} Management Software are described in the online Help of the ConLog^{CARE} Management Software.

As soon as the nurse call system has been configured with the ConLog^{CARE} Management Software, the configuration with the ConLog^{CARE} Management Software has priority over the Plug&Play configuration.

Finally, the Plug&Play terminal lists must be deleted. For this, a Plug&Play reset must be carried out for each group controller, see page 142.

12.2.2 Plug&Play Setup for a nurse call system which has already been configured with the ConLog^{CARE} Management Software

You can carry out the Plug&Play Setup for physical groups which have already been configured with the ConLog^{CARE} Management Software This, for example, could be practical if additional room controllers were installed later in the physical group and which are to be configured later with the ConLog^{CARE} Management Software.

For this, carry out a Plug&Play Setup in which you only assign addresses to the new room controllers.

The newly assigned room controllers then work in the Plug&Play mode until you also configure these newly assigned room controllers with the ConLog^{CARE} Management Software.

All room controllers which have already been configured with the ConLog^{CARE} Management Software beforehand, work during normal operation together with all configured devices with the full range of functions.

If at least one room controller is available in the physical group which has been configured with the Plug&Play Setup, the display of the group controller indicates "PlugPlay mode".

13 Functional checks

13.1 Check light call function for each room

13.1.1 Check the room

Perform the following test for all call devices in the room

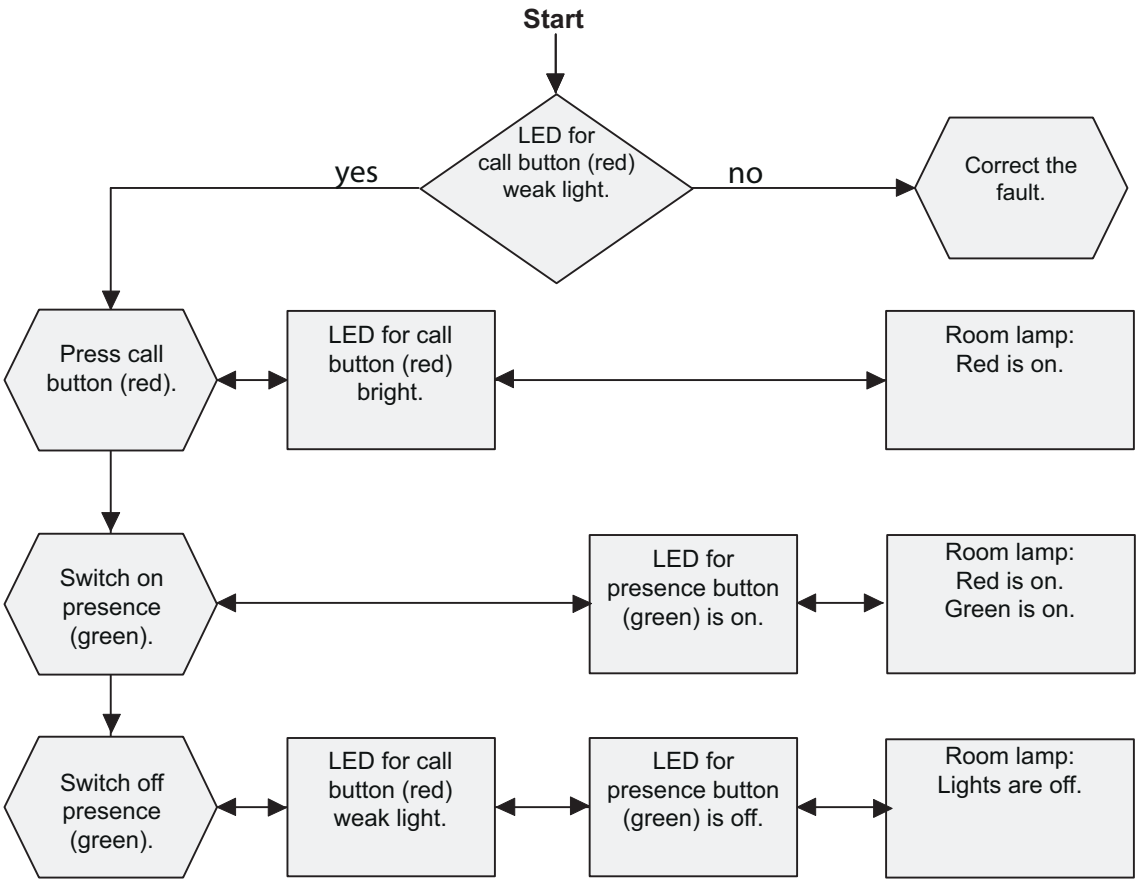


Fig. 64: Check the room

13.1.2 Check function from WC en suite to room

Perform the following test for all call devices in the WC area:

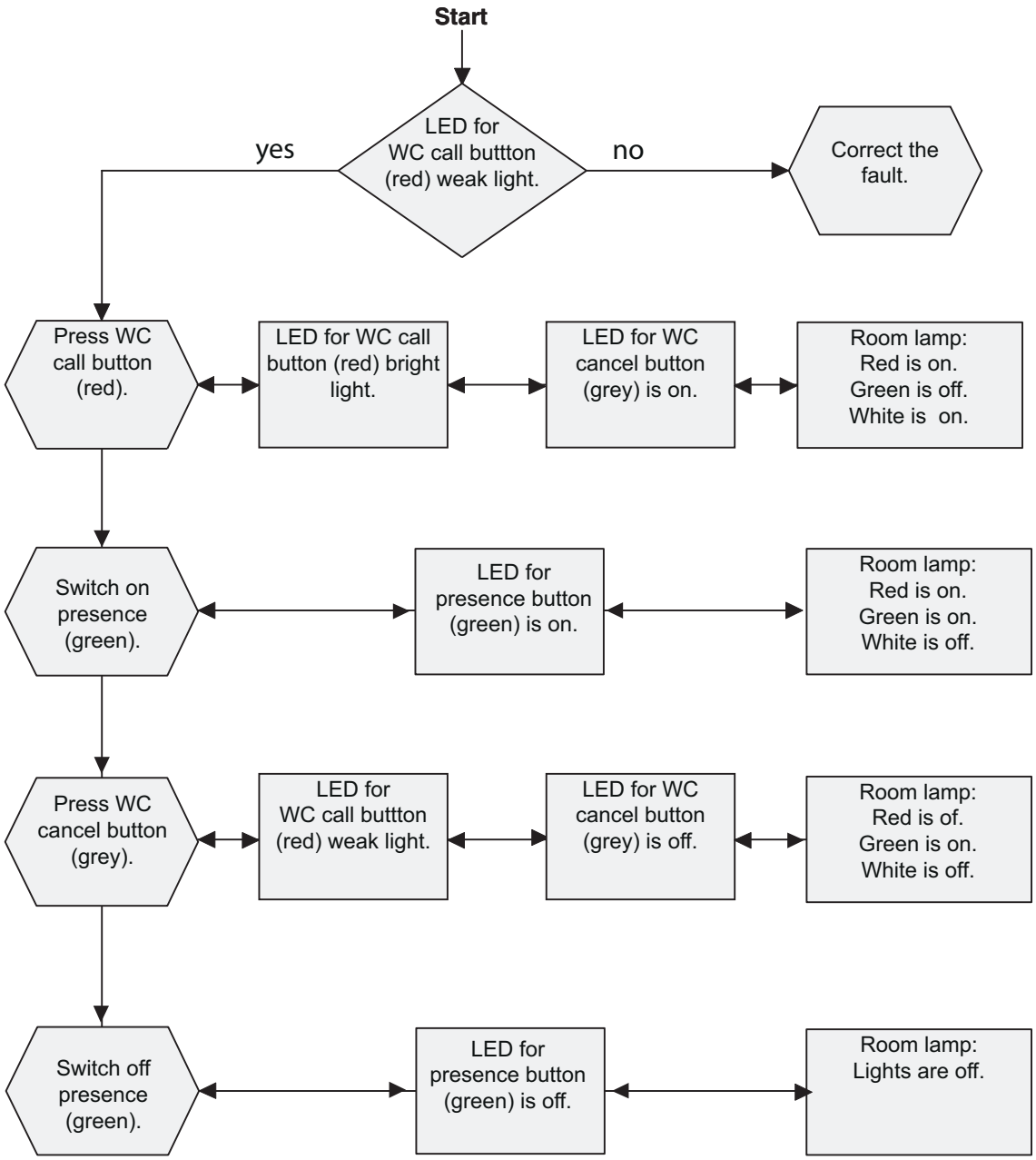


Fig. 65: Check function from WC en suite to room

13.2 Functional check of the entire nurse call system

A functional check must be carried out on the entire nurse call system before it can be operated. To this end, all tests required in the DIN VDE 0834 are to be carried out.

How to test the most important functions of a CONCENTO^{CARE} nurse call system is shown in the following table. Just leave out the tests of devices which are not installed in your nurse call system.

NOTE!

To enable you to carry out the tests you need the operating manual for CONCENTO^{CARE} nurse call systems (download from www.tunstall.de).

Testing the functions within a ward, i.e. of a logic group	
Call signalling	– Are calls displayed correctly on all display devices in the ward? - On the room lamp of the call location - On display inserts when presence is switched on - On call/presence inserts when presence is switched on - On corridor displays - On the alarm stack of the ConLog^{CARE} Management Software – Is the indication of the call locations unambiguous?
Answering calls	– Can a speech connection be established to a call location in another room when the loudspeaker button on the intercom insert is pressed – Is the quality of the speech connection adequate for both communicating parties? – Can the speech connection to the call location be closed by pressing the double-arrow button or loudspeaker button? – Can remote-cancelable call types (e.g. from the bed) be remotely cancelled with the double-arrow button?
Announcements	– Can announcements be made from the following device: Display insert that is installed along with an intercom insert and set to the room type "Staff" or "Staff+HAB". – Can the announcement heard clearly?

Tab. 33: Functional check of the entire nurse call system

Call overflow	Are calls of a ward which have not been answered within the so-called call overflow time (factory setting: 3 minutes) displayed in all wards of the nurse call system?
Display of the active time zone	The active time zone is displayed on the display inserts in the staff rooms. Is the designation of the time zone easy to understand for the nursing staff?
Nurse call systems with automatic time zone switch-over	Does the active time zone change according to the specifications of the nursing facility, e.g. during the change from night shift to early shift?
Nurse call systems with manual time zone switch-over	Can the active time zone be switched over on a display insert (room type: "Staff+HAB")?
Call display, when two or more wards are coupled	Are calls from other wards which are coupled with the current ward displayed in the current ward?
Testing the transfer of calls to the paging system or DECT system	
Display on pagers	– Are calls displayed on the desired pagers in the desired shift, i.e. time zone? – Is the indication of the call locations unambiguous?
Display on DECT telephones	– Are calls displayed on the desired DECT telephones in the desired shift, i.e. time zone? – Is the indication of the call locations unambiguous?
Testing the telephony connection	
Synthetic speech announcements on the telephone	– Do the desired telephones ring in the desired shift, i.e. time zone? – Is the synthetic speech announcement easy to understand when the telephone call is accepted? – Can a speech connection to the call location be established? – Is the quality of the speech connection adequate for both communicating parties? – Can remote-cancelable call types (e.g. from the bed) be remotely cancelled on the telephone?
Call sequence of telephones	When a call sequence has been stored: Is the correct telephone being called when the call has not been accepted on a telephone?

Tab. 33: (Continuation) Functional check of the entire nurse call system

Call forwarding to a PNC telecare monitoring centre?	– Are calls of the nurse call system displayed in the PNC telecare monitoring centre in the desired shift, i.e. time zone? – Can the calls be answered from the PNC telecare monitoring centre? – Is the quality of the speech connection adequate for both communicating parties? – Can remote-cancelable call types (e.g. from the bed) be remotely cancelled from the PNC telecare monitoring centre?

Tab. 33: (Continuation) Functional check of the entire nurse call system

14 Servicing

14.1 Maintenance

Nurse call system specialists must perform annual maintenance of the nurse call system. This comprises:

- Care and cleaning of system parts, cleaning of ventilation openings.
- The batteries of the power supply unit 6A UPS should be replaced every 2 years
- The batteries in uninterruptible power supply provided with system computers must be replaced according to the documentation provided by the manufacturer
- Installation of necessary system updates.
- Readjustment and calibration of parts and devices

WARNING! In all cases in which the nurse call system is switched off entirely or partially, the owner/operator of the system must guarantee another form of monitoring of the affected rooms in the meantime.

After maintenance, the nurse call system must be inspected and any remaining faults must be eliminated.

The work to be performed must be documented in a maintenance book available on the system

14.2 Inspection

Nurse call system specialists must regularly inspect the nurse call system every 3 months, i.e., check for proper function and repair when necessary.

Inspection every 3 months:

- Call switches and mobile devices for triggering calls provided for use by patients/residents
- Signal lamps and acoustic signal generators
- The power supply

Inspection every 12 months:

- All other devices for call triggering, call cancelling and presence registration
- All other display equipment
- All devices for call answering
- All connected devices for recording, forwarding and displaying calls, e.g., connection sockets for the connection of call-triggering devices.

The work to be performed must be documented in a maintenance book available on the system.

14.3 Inspection measures

Device	Inspection interval	Inspection measures
Central electrical room		
Management Interface	12 months	– Are the housing and connections undamaged and free of contamination? – Do the icon displays in the display indicate fault-free operation of the connected systems? See chapter " Text information shown in the display" as of page 101. If necessary, send a test message to the pager or DECT telephone, see page 105, or carry out a test call, see page 105. – Does the device connected to the fault message relay function faultlessly (if available)? Carry out a fault message relay test, see page 106.
System interface LAN	12 months	– Are the housing and connections undamaged and free of contamination? – Do the LEDs of the system interface LAN indicate fault-free operation of the connected systems? See page 120. – Does the device connected to the fault message relay function faultlessly (if available)?
ConLog^{CARE} Basic module	12 months	Has the latest revision of the software been installed?
ConLog^{CARE} Call recording module	12 months	Has the latest revision of the software been installed?
Fire alarm interface	12 months	– Are the housing and connections undamaged and free of contamination? – Is a fault displayed for this group bus user? – Does the connection of the fire alarm system via the fire alarm interface function correctly? – Are the fire alarms coupled into the nurse call system via the fire alarm interface correctly displayed in the nurse call system?

Tab. 34: Inspection measures

Device	Inspection interval	Inspection measures
Electrical room of the ward		
Group controller	12 months	– Are the housing and connections undamaged and free of contamination? – Do the LEDs of the group controller indicate faultless operation of the nurse call system? See chapter "10.4.5 LED displays during operation" as of page 125. – Does the device connected to the fault message relay function faultlessly (if available)? – Does the connected group lamp function faultlessly (if available)? – Does the connected fault signalling lamp function faultlessly (if available)?
Power supply unit 6A UPS	3 months	– Are the housing and connections undamaged and free of contamination? – Are the ventilation openings free of dust deposits? – Do the LED indicators on the front indicate fault-free operation according to the instruction manual (see chapter "20 Product leaflets" as of page 189)? – If devices are connected to the message outputs: do these devices show the same information as the LED displays according to the instruction manual? – We recommend replacing the batteries every 2 years. Details about the service life of the batteries is available in the instruction manual.
Power supply unit 6A	3 months	– Are the housing and connections undamaged and free of contamination? – Are the ventilation openings free of dust deposits? – Do the LED indicators on the front indicate fault-free operation according to the instruction manual (see chapter "20 Product leaflets" as of page 189)? – If devices are connected to the message outputs: do these devices show the same information as the LED displays according to the instruction manual?

Tab. 34: Inspection measures

Device	Inspection interval	Inspection measures
Corridor		
Corridor display	12 months	– Is the housing undamaged and free of contamination? – Does the corridor display show the correct time if no message is pending? – Does the corridor display indicate a fault for the nurse call system? See chapter "19.1 Fault messages on devices for the nursing staff" as of page 183. If yes, rectify the fault. – Does the corridor display indicate a call that was triggered in the ward? – Is the display free of faults and easy to read?
Room lamp	3 months	– Is the housing undamaged and free of contamination? – Does the red light section flash or light up when a call has been triggered in the associated room? – Does the green light section light up when presence is switched on in the room? – Does the white light section flash when a call has been triggered in the WC area of the associated room? (Note: The function of the white light section can be configured differently, see chapter "8.2.3 White light section" as of page 71).

Tab. 34: Inspection measures

Device	Inspection interval	Inspection measures
Patient/Resident room		
Display insert	3 months	– Is the housing undamaged and free of contamination? – Does the display indicate a fault for the nurse call system? See chapter "19.1 Fault messages on devices for the nursing staff" as of page 183. If yes, rectify the fault. – Can the presence be switched on and off with the green presence button? – Does the LED in the presence button light up when the presence is switched on? – While presence is switched on: does the display insert emit a tone sequence when a call is triggered in another room of the ward? Is information about the call shown in the display? – Can a call be triggered with the red call button? – Does the LED in the call button light up faintly to locate the call button in the dark? – Does the LED in the call button light up brightly when a call has been triggered?

Tab. 34: Inspection measures

Device	Inspection interval	Inspection measures
Call/presence insert	3 months	– Is the housing undamaged and free of contamination? – Can the presence be switched on and off with the green presence button? – Does the LED in the presence button light up when the presence is switched on? – While presence is activated: does the call/presence insert emit a tone sequence when a call is triggered in another room of the ward? – Can a call be triggered with the red call button? – Does the LED in the call button light up faintly to locate the call button in the dark? – Does the LED in the call button light up brightly when a call has been triggered?
Intercom insert	3 months	– Is the housing undamaged and free of contamination? – When presence is switched on: can a speech connection be established to a call location in another room when the loudspeaker button on the intercom insert is pressed? – Can the communicating party be heard and understood clearly? – Can the communicating party hear and understand you clearly? – Can you close the speech connection to the call location by pressing the double-arrow button or loudspeaker button?
Presence switch insert	3 months	– Is the housing undamaged and free of contamination? – Can the presence be switched on and off with the green presence button? – Does the LED in the presence button light up when the presence is switched on?

Tab. 34: Inspection measures

Device	Inspection interval	Inspection measures
Call switch insert with connector	3 months	– Is the housing undamaged and free of contamination? – Can a call be triggered with the red call button? – Does the LED in the call button light up faintly to locate the call button in the dark? – Does the LED in the call button light up brightly when a call has been triggered? – Does the female connector fit precisely and securely? – Is the plug connection stable when a pluggable call device (e.g. pear push switch) is connected to the plug connector? – Does the pluggable call device (e.g. pear push switch) function when it is connected to the plug connector? Check, as described for the pluggable call device.
Pear push switch incl. call & light switch	3 months	– Are the housing, the connection cable and the plug undamaged and free of contamination? – Can a call be triggered with the red call button? – Does the LED in the call button light up faintly to locate the pear push switch in the dark? – Does the LED in the call button light up brightly when a call has been triggered? – Can the reading light or room light switched on and of with the yellow light button?
Pear push switch incl. call switch	3 months	– Are the housing, the connection cable and the plug undamaged and free of contamination? – Can a call be triggered with the red call button? – Does the LED in the call button light up faintly to locate the pear push switch in the dark? – Does the LED in the call button light up brightly when a call has been triggered?

Tab. 34: Inspection measures

Device	Inspection interval	Inspection measures
Extension cable for pear push switch	3 months	– Are the plug and the cable undamaged and free of contamination? – Does the pear push switch function when the extension cable for pear push-switch is connected?
Self-releasing adapter for pear push switch	3 months	– Are the plug and the cable undamaged and free of contamination? – Does the pear push-switch function when the self-releasing adapter is connected?
Call switch insert	3 months	– Is the housing undamaged and free of contamination? – Can a call be triggered with the red call button? – Does the LED in the call button light up faintly to locate the call button in the dark? – Does the LED in the call button light up brightly when a call has been triggered?
Cancel switch insert	3 months	– Is the housing undamaged and free of contamination? – Can the WC call be cancelled with the grey cancel button? – Does the LED in the cancel button light up when a WC call was triggered, which is to be cancelled with the cancel button?

Tab. 34: Inspection measures

Device	Inspection interval	Inspection measures
Pull cord switch insert	3 months	– Are the housing and the pull cord undamaged and free of contamination? – Is the cord hanging freely and easy to reach? – Is the safety release on the pull cord securely locked? – Is the pull cord firmly knotted on the call handle? – Can a call be triggered by pulling on the pull cord? – Can a call be triggered with the red call button? – Does the LED in the call button light up faintly to locate the call button in the dark? – Does the LED in the call button light up brightly after a call has been triggered?
Pneumatic switch insert	3 months	– Are the housing and air hose undamaged and free of contamination? – Has it been ensured that the air hose cannot be buckled? – Does the air hose sit securely on the switch insert and on the rubber ball? – Can a call be triggered by pressing the rubber ball? – Can a call be triggered with the red call button? – Does the LED in the call button light up faintly to locate the call button in the dark? – Does the LED in the call button light up brightly when a call has been triggered?
RAN interface	3 months	– Is the connected trigger device undamaged and free of contamination? – If a call device is connected: is a call triggered in the nurse call system when the call device is triggered?

Tab. 34: Inspection measures

Device	Inspection interval	Inspection measures
Radio receiver-T	Recommendation of the manufacturer: Weekly inspection with test call reception under observance of the display elements and call forwarding. If radio reception interference is suspected, the radio range must be checked as during initial start-up. – Are the housing, connection cable and plug undamaged and free of contamination? – Does the LED indicator show a fault? If so, remedy the fault. Example: If the LED on the radio receiver flashes red, the battery of an assigned radio transmitter is low. Make sure the battery is changed. – Function test according to the provided documentation of the manufacturer.	
Radio receiver-T UP	Recommendation of the manufacturer: Weekly inspection with test call reception under observance of the display elements and call forwarding If radio reception interference is suspected, the radio range must be checked as during initial start-up. – Is the housing undamaged and free of contamination? – Does the LED indicator show a fault? If so, remedy the fault. Example: If the LED on the radio receiver flashes red, the battery of an assigned radio transmitter is low. Make sure the battery is changed. – Function test according to the provided documentation of the manufacturer.	
MyAmie	Recommendation of the manufacturer of the radio receiver: Weekly inspection with test call reception under observance of the display elements and call forwarding. – Are the housing and button undamaged and free of contamination? – Replace the neck cord or wrist strap according to the hygiene regulations of the nursing facility. – Can a call be triggered by pressing the call button? – Does the red LED light up after the call button is pressed? If it flashes, the battery is low. Replace MyAmie. – Check whether MyAmie works across the entire intended area of application (range test).	

Tab. 34: Inspection measures

Device	Inspection interval	Inspection measures
iVi™	Recommendation of the manufacturer of the radio receiver: Weekly inspection with test call reception under observance of the display elements and call forwarding. – Are the housing and buttons undamaged and free of contamination? – Replace the neck cord according to the hygiene regulations of the nursing facility. – If the LED flashes orange, a fault is present. Remedy the fault. – Can a call be triggered by pressing the call button? – Function test of the fall trigger according to the operating manual of the iVi. – Does the LED light up red after the call switch is pressed? If it flashes red, the battery is low. Replace the battery. Service life of the battery: approx. 12 months. – Check whether iVi™ works across the entire intended area of application (range test).	
Universal sensor	Recommendation of the manufacturer of the radio receiver: Weekly inspection with test call reception under observance of the display elements and call forwarding. – Are the housing and connection cable undamaged and free of contamination? – Can a call be triggered by a triggering of the connected call device? – Function test according to the documentation for the connected call device. – If the radio receiver of the universal sensor indicates a low battery, the battery must be replaced. – Check whether the universal sensor works across the entire intended area of application (range test).	
Large-surface pneumatic radio switch	Recommendation of the manufacturer of the radio receiver: Weekly inspection with test call reception under observance of the display elements and call forwarding. – Are the housing and the button undamaged and free of contamination? – Can a call be triggered by pressing the red trigger button? – If the radio receiver for the pneumatic switch indicates a low battery, the battery must be replaced. – Check whether the pneumatic switch works across the entire intended area of application (range test).	

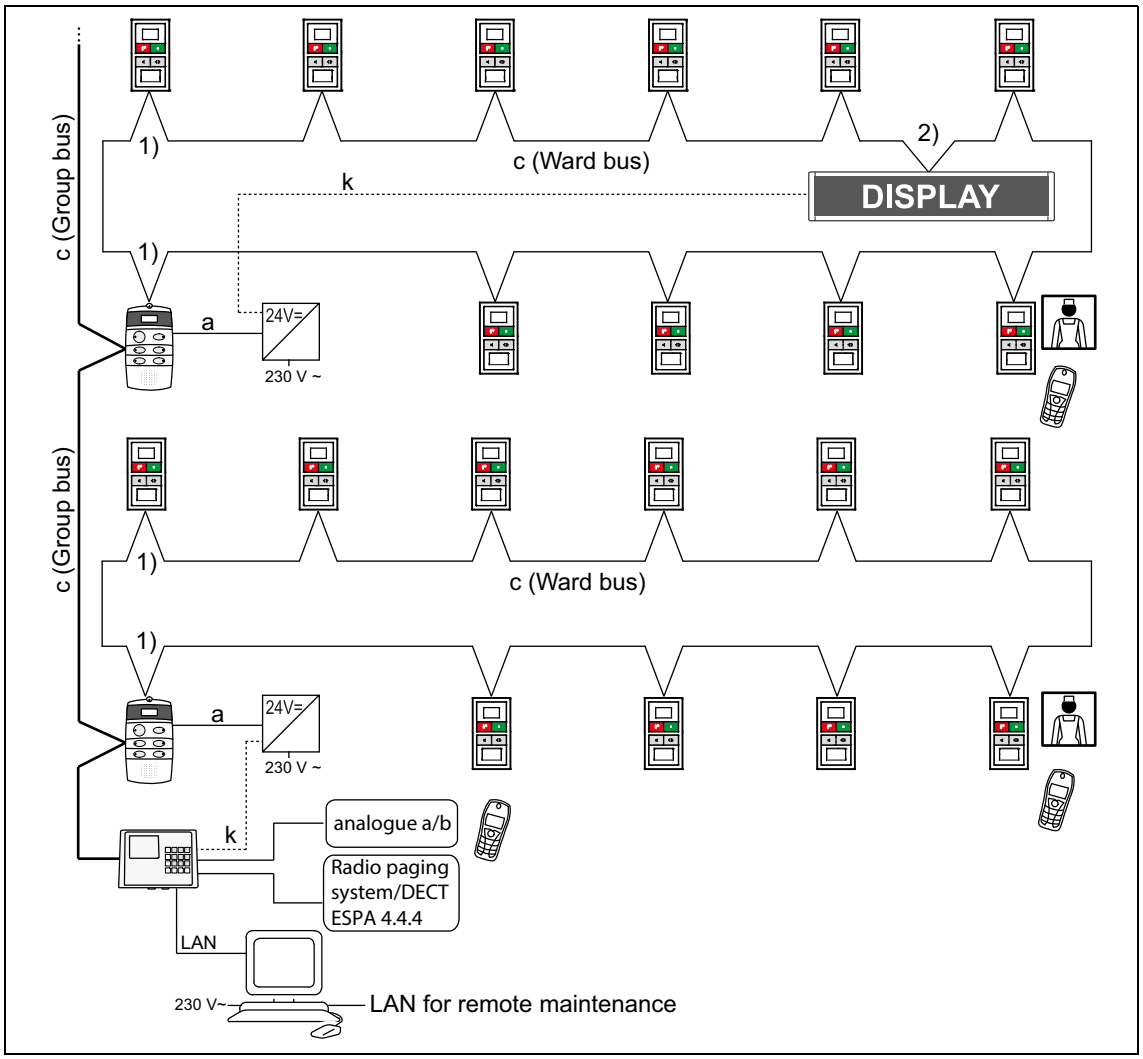
Tab. 34: Inspection measures

Device	Inspection interval	Inspection measures
Wireless sensor mat	Recommendation of the manufacturer of the radio receiver: Weekly inspection with test call reception under observance of the display elements and call forwarding. – Is the mat undamaged and free of contamination? – Is a call triggered when you step on or press the mat? – Has it been guaranteed that no objects are located on the mat? – Is the mat placed in a non-slipping manner? – If the radio receiver for the sensor mat indicates a low battery, the battery must be replaced. – Check whether the sensor mat works across the entire intended area of application (range test).	
Wireless step-on sensor mat	Recommendation of the manufacturer of the radio receiver: Weekly inspection with test call reception under observance of the display elements and call forwarding. – Is the mat undamaged and free of contamination? – Is a call triggered when you step on the mat? – Has it been guaranteed that no objects are located on the mat? – Is the mat placed in a non-slipping manner? – If the radio receiver for the sensor mat indicates a low battery, the battery must be replaced. – Check whether the sensor mat works across the entire intended area of application (range test).	
Optical 869 Smoke Alarm	Recommendation of the manufacturer of the radio receiver: Weekly inspection with test call reception under observance of the display elements and call forwarding. – Function test according to the provided documentation of the manufacturer. – If the radio receiver for the sensor mat indicates a low battery, the smoke alarm must be replaced. – Is a call triggered in the nurse call system when the smoke detector indicates the emission of smoke?	

Tab. 34: Inspection measures

15 Installation examples

15.1 System with speech communication



Display insert(29 0700 80...) with intercom insert (29 0701 30...)

DISPLAY Corridor display (19 0783 16, 19 0784 16, 29 0783 12 or 29 0784 12)

24V= 230 V ~ Power supply unit (77 3400 60 or 77 3401 60)

Management Interface (29 0700 00)

Group controller (29 0700 10)

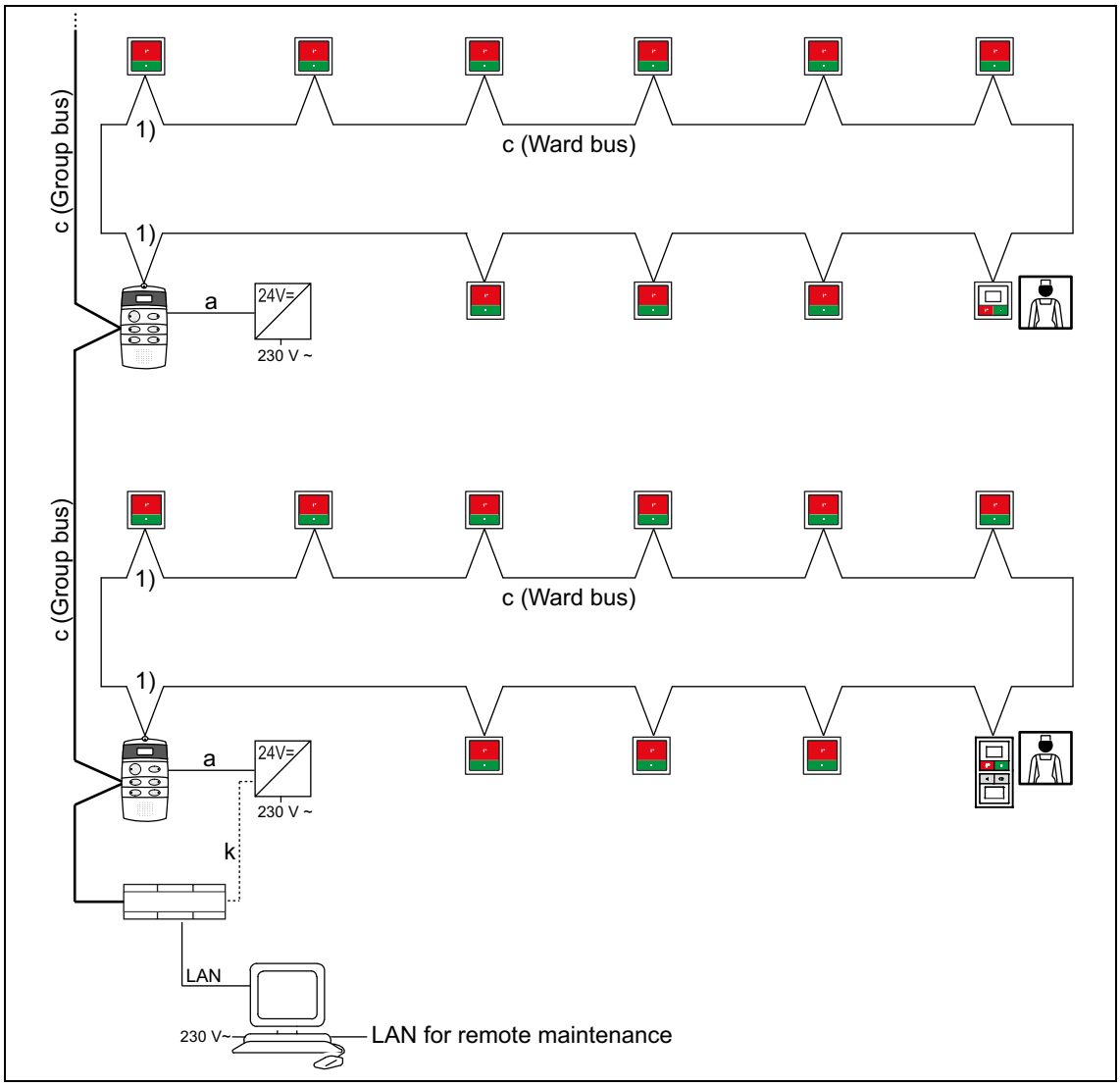
Guide to cables:
a J-Y(St)Y 2x2x0.8 **c** J-Y(St)Y 4x2x0.8 **k** NYM-J 3x1,5

Guide to numbers:
1) Start/end of ward bus. No ring closing point in data line. No ring closing point in speech line.

2) Loop through at the corridor display +24V and GND wires of the ward bus (c). The power is supplied via a stub cable (k) to the power supply unit

Fig. 66: Installation example – System with speech communication

15.2 System without speech communication



Call/presence insert (29 0701 00...)

Power supply unit (77 3400 60 or 77 3401 60)

Display insert (29 0700 80...)

System interface LAN (19 0700 05)

Display insert (29 0700 80...) with Intercom insert (29 0701 30...)

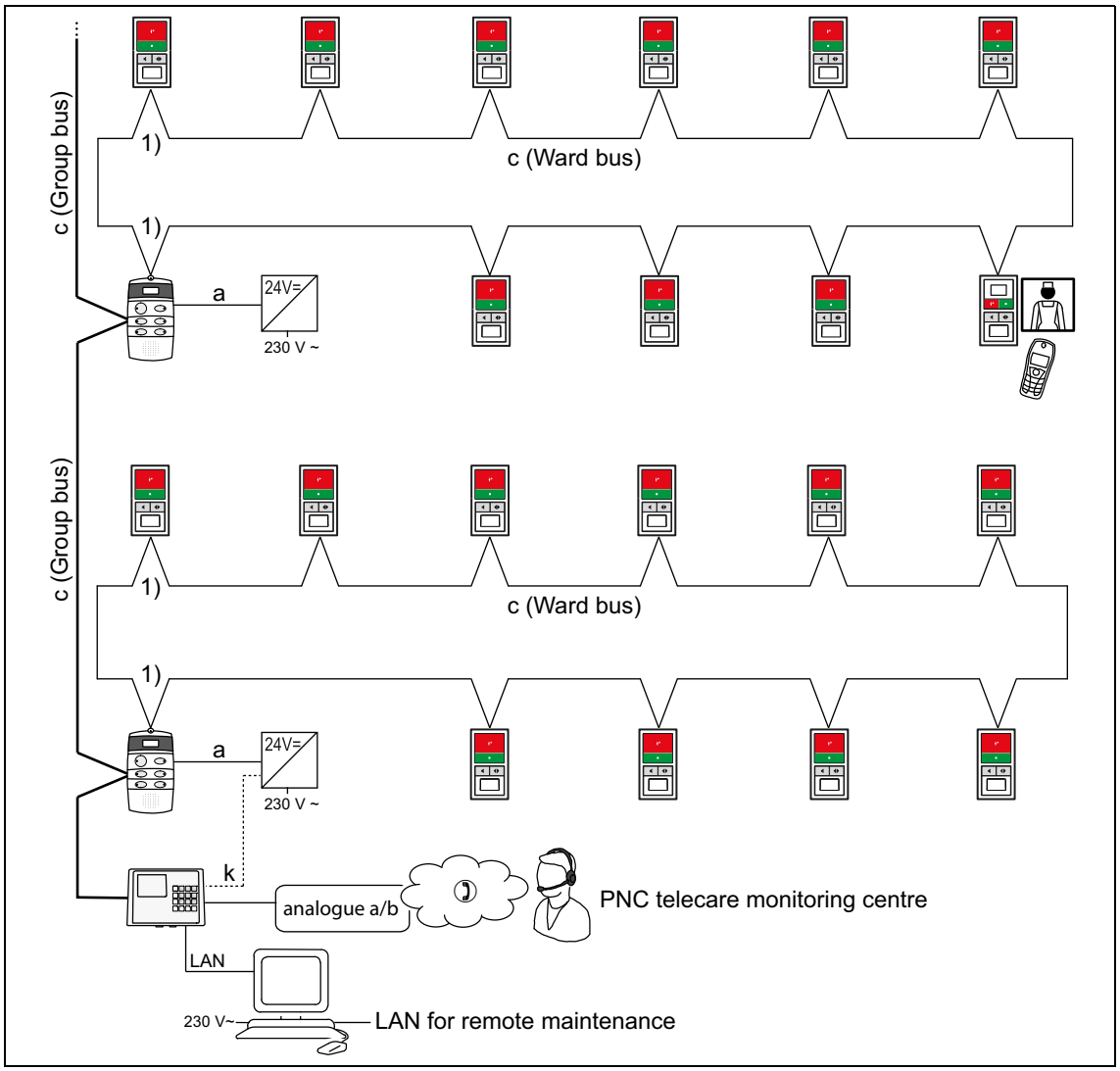
Group controller (29 0700 10)

Guide to cables:
a J-Y(St)Y 2x2x0.8 **c** J-Y(St)Y 4x2x0.8 **k** NYM-J 3x1,5

Guide to numbers:
1) Start/end of ward bus. No ring closing point in data line.

Fig. 67: Installation example – System without speech communication

15.3 Assisted living



Call/presence insert (29 0701 00...) with intercom insert (29 0701 30...)

Display insert (29 0700 80...) with Intercom insert (29 0701 30...)

Power supply unit (77 3400 60 or 77 3401 60)

Management Interface (29 0700 00)

Group controller (29 0700 10)

Guide to cables:

a J-Y(St)Y 2x2x0.8 **c** J-Y(St)Y 4x2x0.8 **k** NYM-J 3x1,5

Guide to numbers:

1) Start/end of ward bus. No ring closing point in data line. No ring closing point in speech line.

Fig. 68: Installation example – Assisted living

16 Light control

In addition to the call switch, the pear push switch incl. call and light switch (29 0790 02) has a light switch with which the resident/patient can switch a light source on and off or dim it. This can be, for example, room light or reading light.

The call button insert with connector (29 0704 00...) is equipped with a corresponding output for light connection. The output emits a 24 V signal as long as the light switch is pressed. The output has a load capacity of 50 mA.

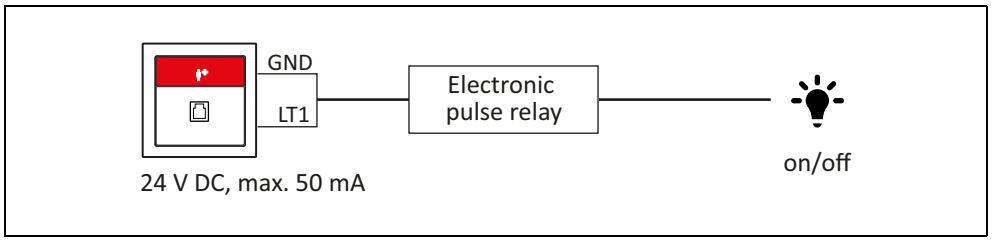


Fig. 69: Switching the light on/off (without dimming)

A dimmable ballast is required to use the dimming function. The control voltage is 24 V DC. An electronic switching relay is connected upstream.

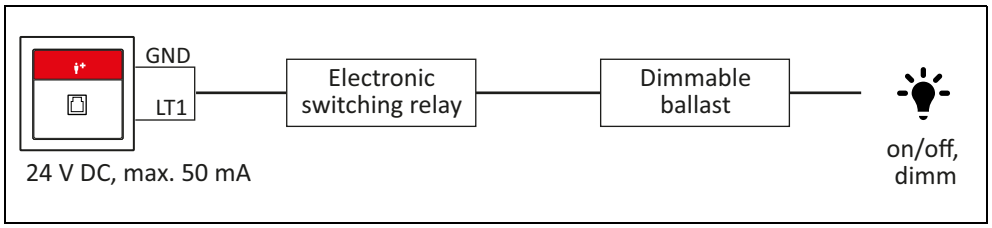
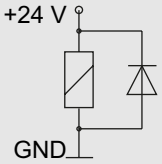


Fig. 70: Switching the light on/off and dimming

The light relays to be used must meet the requirements specified in the following sections.

16.1 Application: Switching the light on/off (without dimming)

	Requirements	
Relay type	– Pulse relay (electronic) – recommendation – Pulse relay (mechanical	
Nominal control voltage	24 V DC	
Control voltage range	20 – 26 V DC	
Max. current consumption	50 mA	
Freewheeling diode		When using a mechanical relay a freewheeling diode must be connected (e.g. 1N4007) directly at the relay connectors.
Potential separation	When installing the galvanic separation of the electric circuits must be ensured. It is necessary to comply with the German standard DIN VDE 0834.	

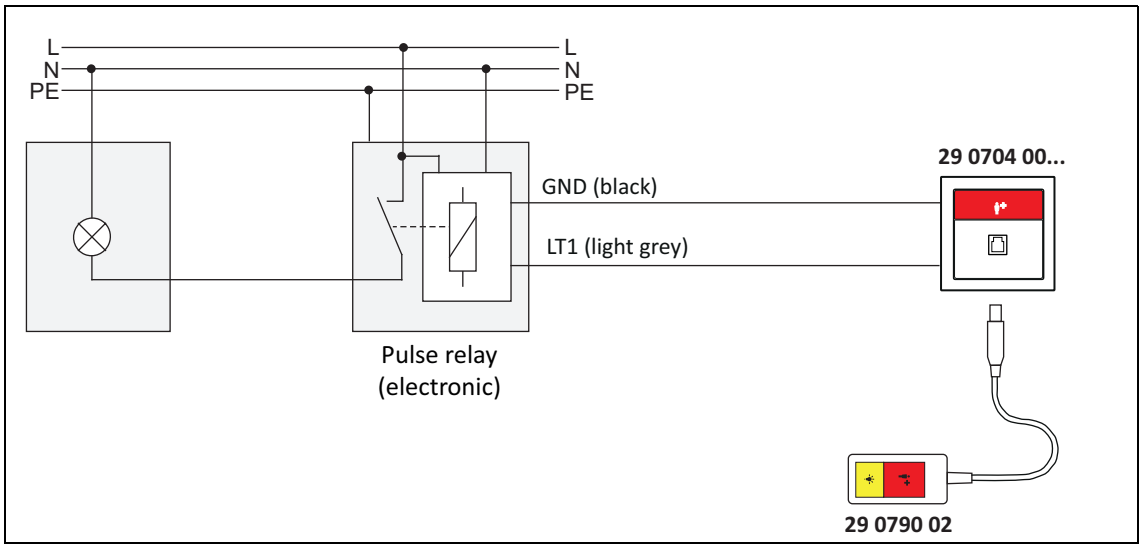


Fig. 71: Connection example with electronic pulse relay

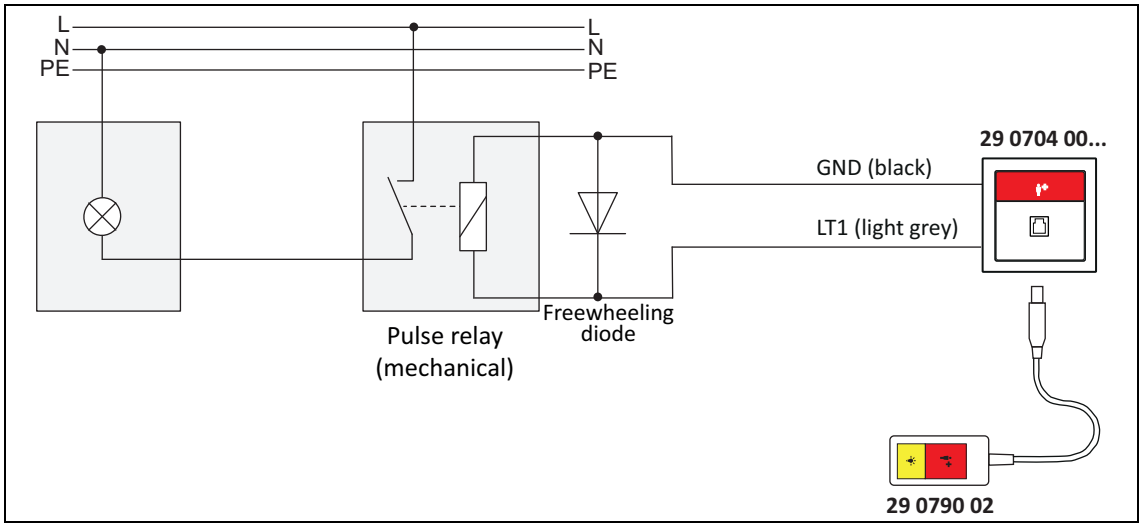
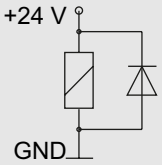


Fig. 72: Connection example with mechanical pulse relay

16.2 Application: Dimming the light

	Requirments	
Relay type	– Switching relay (electronic) – Recommendation – Switching relay (mechanical)	
Nominal control voltage	24 V DC	
Control voltage range	20 – 26 V DC	
Control voltage range	50 mA	
Freewheeling diode		When using a mechanical relay a freewheeling diode must be connected (e.g. 1N4007) directly at the relay connector.
Potential separation	When installing the galvanic separation of the electric circuits must be ensured. It is necessary to comply with the German standard DIN VDE 0834.	
Ballast	An appropriate dimmable ballast is required to use the dimming, e.g. OSRAM DALI.	

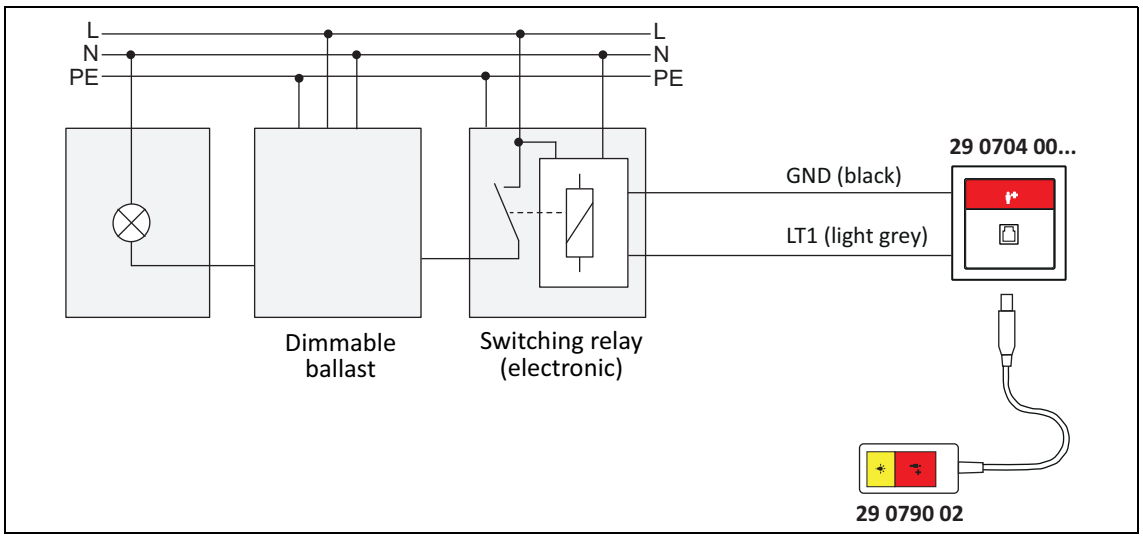


Fig. 73: Connection example with electronic switching relay

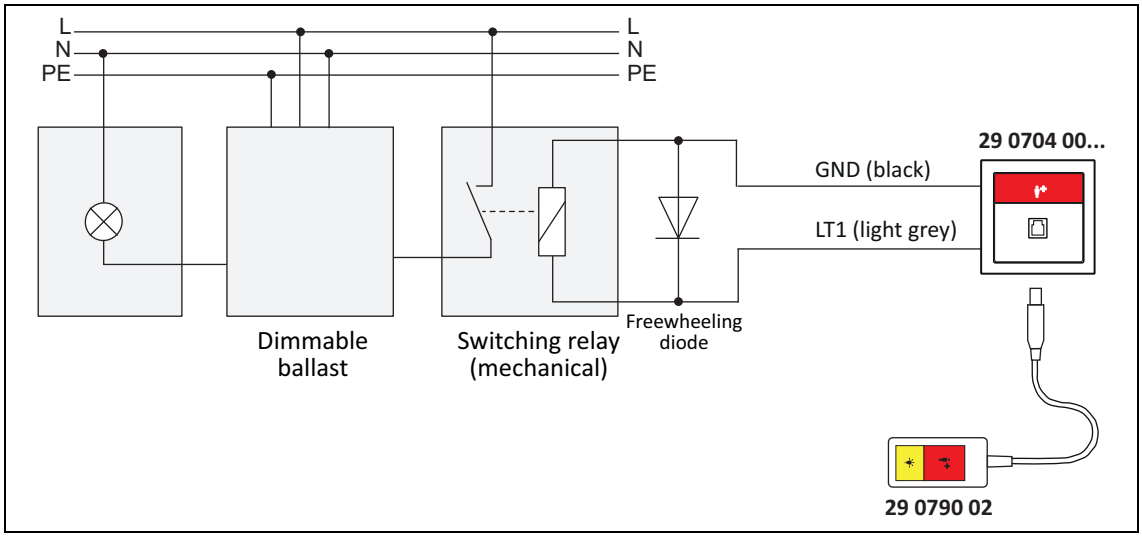


Fig. 74: Connection example with mechanical switching relay

17 Electrical safety

17.1 System separation

DIN VDE 0834:2016-06 stipulates that nurse call systems must meet the requirements of EN 60601-1 (2 x MOPP) with regard to electrical safety. MOPP (Means of Patient Protection) is a protective measure designed to reduce the risk of electric shock to the patient. 2 x MOPP corresponds to 4 kV isolation.

The CONCENTO^{CARE} nurse call systems are constructed according to the principle of system separation, i.e. the entire nurse call system is constructed according to EN 60601-1. The power supply units are equipped with a 4 kV isolation. External devices may only be connected to the nurse call system via a safe separation (2 x MOPP) according to EN 60601-1. If such a separation point is not located in the device, a separate separator must be inserted between them.

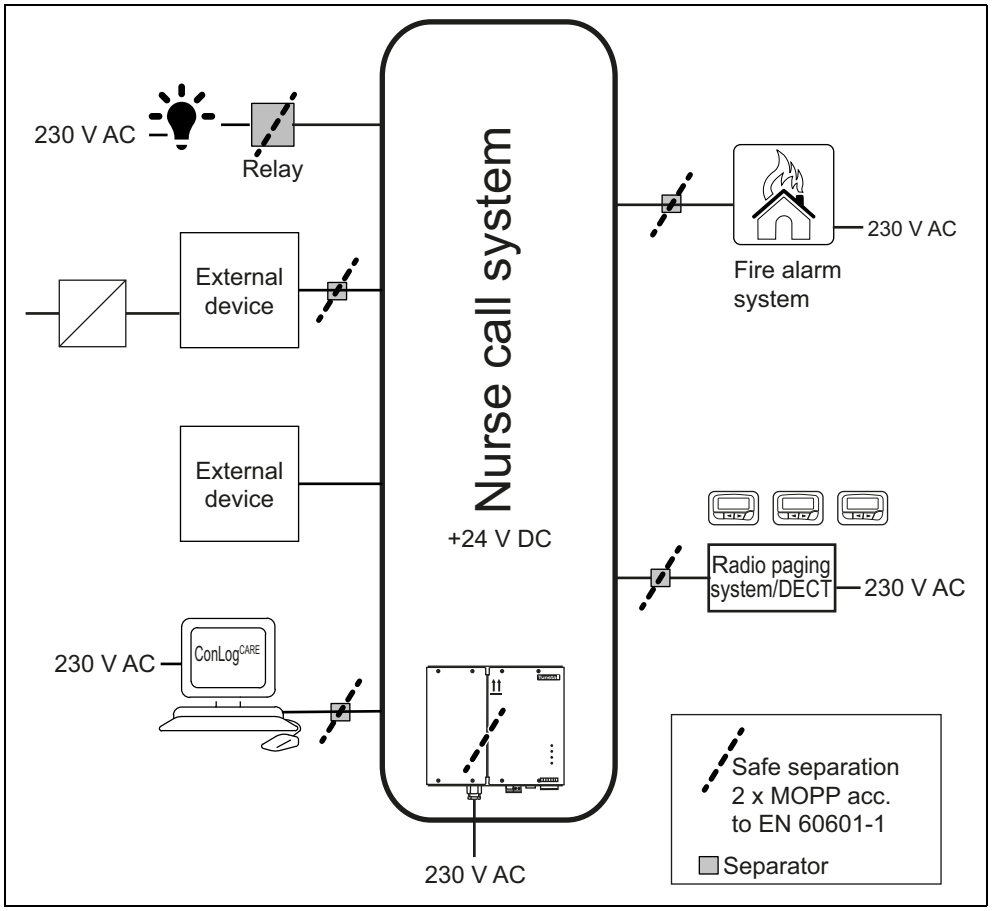


Fig. 75: System separation principle

17.2 Connection of system-external devices

System-external device must be connected to the nurse call system only through interfaces that guarantee safe separation according to EN 60601-1 (2 x MOPP).

17.2.1 Light control relays

When selecting the light control relays, safe separation according to EN 60601-1 (2 x MOPP) must be observed. For details refer to chapter "4.4 Switching lighting using the pear push switch" as of page 39.

17.2.2 RAN interface

If an external device is connected to a RAN interface (19 0840 00), a separator according to EN 60601-1 (2 x MOPP) must be inserted between the device and the interface.

17.2.3 Management Interface / System interface LAN

LAN connection

If the Management Interface or the system interface LAN is connected via the LAN connection to the PC of the ConLog^{CARE} Management Software or to the building network, a separator in accordance with EN 60601-1 (2 x MOPP) must be inserted between them. The network isolator LAN (76 5000 00) is suitable as a separator.

RS-232

If a radio paging system or a DECT system is connected to the Management Interface or system interface LAN, a separator in accordance with EN 60601-1 (2 x MOPP) must be inserted between them. The interface isolator RS232 (76 5010 00) is suitable as a separator.

a/b connection (Management Interface only)

If the a/b connection of the Management Interface is used to connect to the analogue telephone network or to connect a PBX, a separator in accordance with EN 60601-1 (2 x MOPP) must be inserted between them.

Fault message output

If a device not supplied with power from the nurse call system is connected to the fault message output of the Management Interface or the system interface LAN, a separator according to EN 60601-1 (2 x MOPP) must be inserted.

17.2.4 Group controller

Fault message output

If a device not supplied with power from the nurse call system is connected to the fault message output of the group controller, a separator according to EN 60601-1 (2 x MOPP) must be inserted.

17.2.5 Fire alarm interface

A separator according to EN 60601-1 must be connected between the fire alarm system and the nurse call system. If the fire alarm system does not provide a separator, the interface isolator RS232 (76 5010 00) is suitable as the separator.

18 Voltage surge protection

The German standard DIN VDE 0834-1 regulates that all cables of the nurse call system which are to emerge from the building shall be provided with voltage surge protection according to EN 50468 at the emerging point.

For the voltage surge protection you have especially to follow:

EN 61663-2: Lightning protection - Telecommunication lines - Part 2 Lines using metallic conductors (IEC 61663-2: 2001).

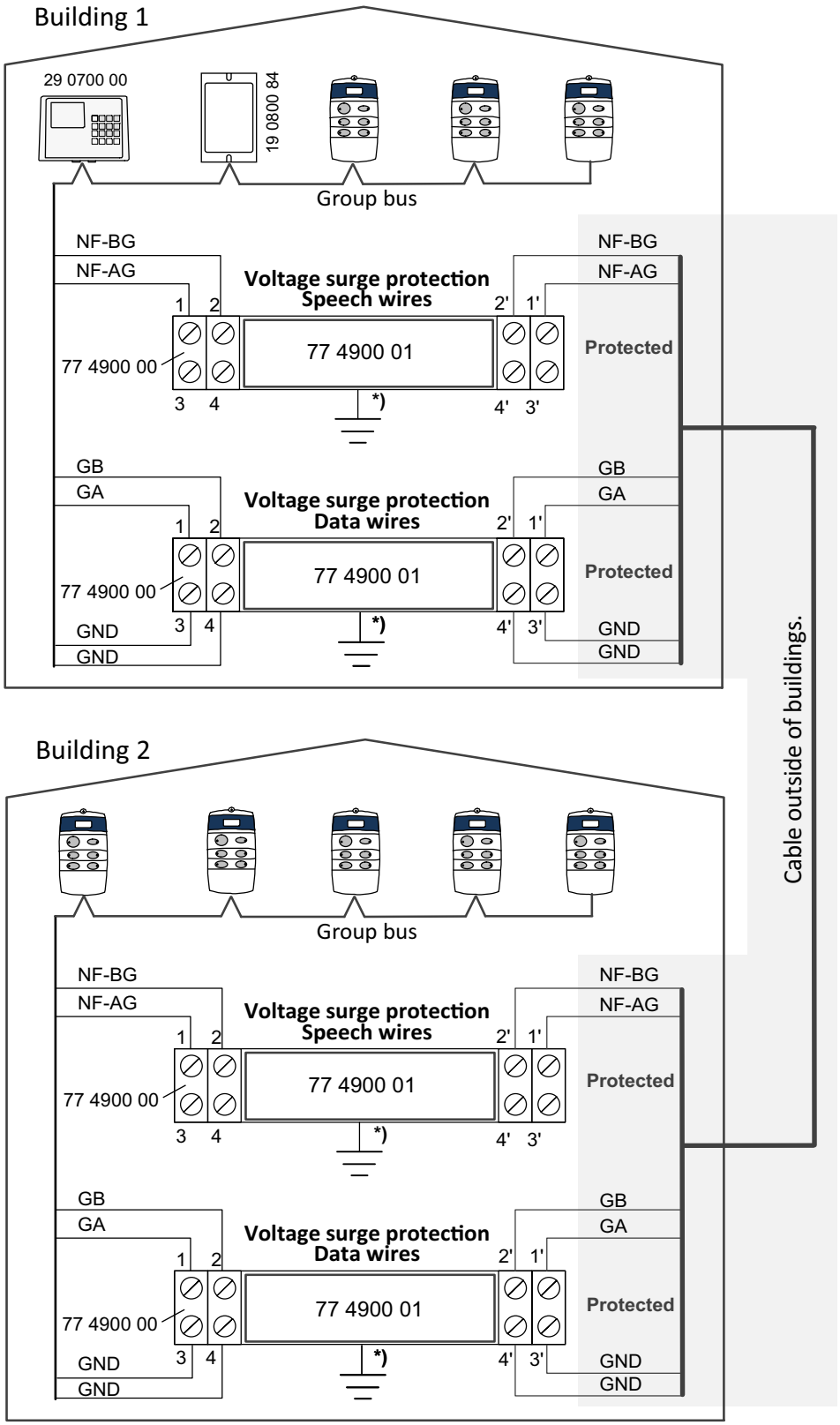
In the following the structure of the voltage surge protection is presented for cables of the CONCENTO^{CARE} nurse call system, which are laid between two buildings.

NOTE! For the described fine protection of the CONCENTO^{CARE} nurse call system it is provided that a basic surge protection to absorb the higher energies has been completed according to the valid regulations. The installation of a fine protection would be useless without this upstream protection.

The voltage surge protection has to be installed in the main building connection point. This should be installed directly where the cables enter the building.

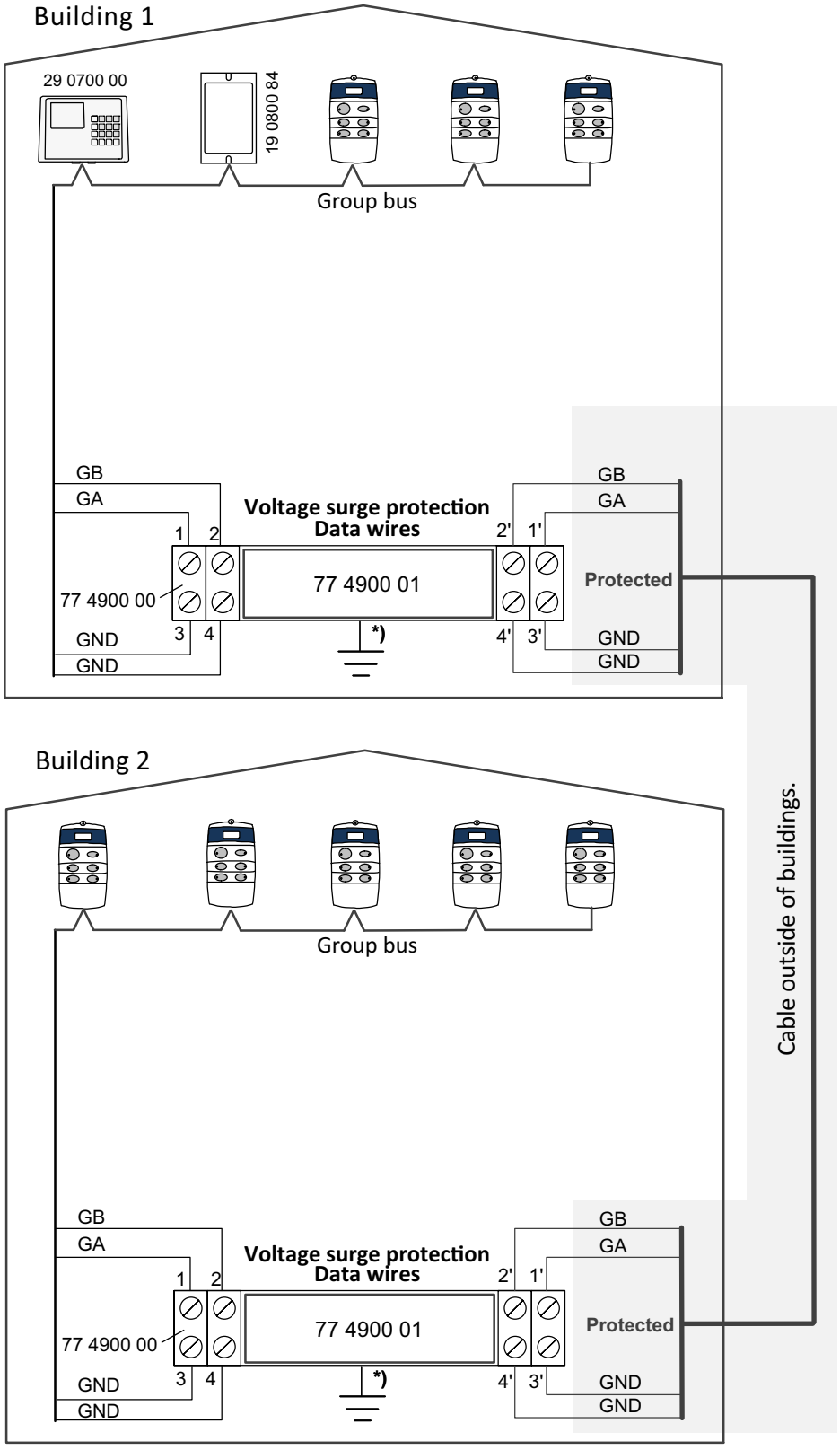
The voltage surge protection is required in the buildings between which the cables are laid.

On the following pages, the structure of the voltage surge protection is shown in diagrams. Note: The modules shown are examples; modules from other manufacturers can also be used.



*) Mounting on earthed top hat rail

Fig. 76: Voltage surge protection in nurse call systems with speech



*) Mounting on earthed top hat rail.

Fig. 77: Voltage surge protection in nurse call systems without speech

19 Rectification of faults

In case of faults a nurse call system specialist must inspect the nurse call system immediately and repair them.

Repair work must be carried out in such a way that the period of the interruption of the functions on devices and system components is kept as brief as possible. After completion of the repair work, a functional test of the devices or system components whose function was defective must be carried out.

WARNING! As long as the nurse call system is completely or partly shut down, the owner/operator of the system must guarantee another form of monitoring of the affected rooms in the meantime.

The works carried out must be documented in the maintenance book available on the system.

NOTE! An operations maintenance book must be kept which is permanently available at the nurse call system. All events of faults occurring in the nurse call system, including details on the cause and, if applicable, the causer of each fault, as well as all necessary and carried out maintenance activities performed shall be recorded continuously by the owner/operator, an instructed person assigned by the owner/operator, or the nurse call system specialist instructed to perform such activities, in the operations maintenance book.

19.1 Fault messages on devices for the nursing staff

Faults, along with their location, are shown on the displays of the following devices:

- Display insert, if presence is switched on (fault type display 6-digit)
- Corridor display (fault type display 6-digit for 16-digit corridor display, 3-digit for 12-digit corridor displays)

There is no acoustic indication of the faults. Faults are displayed in the same way as calls, i.e. initially only in the specific ward concerned or, in the case of group couplings, in the coupled wards. If the fault is not resolved within a specified time (which is set using the ConLog^{CARE} Management Software), it is displayed in all the wards of the building.

All fault messages of the nurse call system can be viewed in the basic module of the ConLog^{CARE} Management Software: Heading "Status messages" of the alarm stack. Of course, the fault messages are also logged in the "Call recording" module of the ConLog^{CARE} Management Software.

The fault messages are automatically deleted in the nurse call system when the cause of the fault has been rectified.

Message	Fault indicator	Meaning of the message	Action
Module disconnected 6-digit: MODULE 3-digit: MOD	Display insert or call/presence insert	The control element of the display insert or call/ presence insert has been disconnected or is defective.	Reattach the control element. Replace defective control element.
External Alarm 6-digit: EXTERN 3-digit: EXT	Management Interface	The telephone system or the subscriber line which is connected to the Management Interface has failed.	Repair telephone system or subscriber line.
Fault Intercom 6-digit: FLT IN 3-digit: FIN	Display insert or call/presence insert	Intercom insert is defective.	Replace defective intercom insert.
Fault Pneumatic Switch 6-digit: FLT PS 3-digit: FPS	Display insert or call/presence insert	Pneumatic switch insert is defective or the connection to the pneumatic switch insert interrupted.	Replace defective pneumatic switch insert or restore connection.
Fault pager 6-digit: PAGER 3-digit: F-P	Management Interface or system interface LAN	The radio paging system or DECT system which is connected to the ESPA 4.4.4 interface of the Management Interface or the system interface LAN has failed.	Repair radio paging system or DECT system.
Fault RAN 6-digit: FLT RA 3-digit: FRA	Display insert or call/presence insert	The number of devices on the room bus ready for operation does not match the number set on the display insert or call/ presence insert ("RAN number").	Have the RAN status displayed and carry out a RAN test as described in the documents of the display insert or call/presence insert. Rectify error.
Fault Switch w. Connector 6-digit: FLT SC 3-digit: FSC	Display insert or call/presence insert	The call switch insert with connector is defective or the connection to the call switch insert with connector is interrupted.	Replace defective call switch insert with connector or restore connection.

Tab. 35: Fault messages on devices for the nursing staff

Message	Fault indicator	Meaning of the message	Action
Fault Server 6-digit: SERVER 3-digit: SRV	Management Interface or system interface LAN	The connection of the Management Interface or system interface LAN to the ConLog^{CARE} Management Software is interrupted, or the server service of the ConLog^{CARE} Management Software has not started or the nurse call system PC is faulty or switched off.	Repair the ConLog^{CARE} Management Software and LAN connection to the Management Interface or the system interface LAN or restart the ConLog^{CARE} Management software.
Fault Switch 6-digit: FLT SW 3-digit: FSW	Display insert or call/presence insert	Call switch or cancel switch or presence switch insert is defective or the connection to the switch insert is interrupted.	Identify the defective switch insert with a RAN test in the display insert or call/presence insert. Replace defective switch insert or restore the connection.
Fault Universal Interface 6-digit: FLT UI 3-digit: FUI	Display insert or call/presence insert	RAN interface is defective or the connection to the RAN interface is interrupted.	Replace the defective RAN interface or restore the connection.
Fault Pull Cord Switch 6-digit: FLT PC 3-digit: FPC	Display insert or call/presence insert	Pull cord switch insert is defective or the connection to the pull cord switch insert is interrupted.	Replace the defective pull cord switch insert or restore the connection.
Mains Failure 6-digit: MAINS 3-digit: M-F	Group controller	The power supply unit 6A UPS works in battery mode. The primary power supply of the power supply unit 6A UPS has failed.	The batteries take over the power supply of the physical group for approx. 36 minutes.
Fault Terminal 6-digit: FLT TE 3-digit: FTE	Group controller	A device on the group bus or on the ward bus has failed. Possible devices:: Display insert, call/ presence insert, corridor display, group controller, system interface LAN, Management Interface	Identify defective device by means of the location indication in the fault message. Repair or replace defective device.

Tab. 35: (Continuation) Fault messages on devices for the nursing staff

19.2 Fault displays on devices for technicians

19.2.1 Management Interface

- The fault message relay switches at: fault on group bus, malfunction of individual modules of the Management Interface, fault in telephone connection.
- If an alarm server/radio paging system or DECT system is connected, individual pagers or DECT telephones can be configured to receive fault messages. The type of faults are displayed as 6-digit text the same as for the display insert, see from page 183.
- The fault signals are sent to a connected PNC telecare monitoring centre if it has been configured in the Management Software.

19.2.2 System interface LAN

- The fault message relay switches at: fault on the group bus, fault of the system interface LAN.
- If an alarm server/radio paging system or DECT system is connected, individual pagers or DECT telephones can be configured to receive fault messages. The type of faults are displayed as 6-digit text the same as for the display insert, see from page 183.

19.2.3 Group controller

The following displays on the group controller indicate fault-free operation:

- LED 2 is off (Group controller is ok).
- LED 5 flashes rhythmically (group bus is ok).
- LED 6 flashes rhythmically (ward bus is ok).

Any deviating displays indicate existing faults, for details see page 125.

- The fault message relay switches when the group controller has not been fully programmed.
- The output to a fault signalling light switches when there is a fault at the specific ward bus.
- The input for the fault message contact of the power supply unit 6A UPS leads to a mains power failure message on devices for the nursing staff.

19.2.4 Power supply unit 6A UPS

The information displayed by the signalling terminals and LEDs can be found in the instruction manual for the power supply unit, see chapter "20 Product leaflets" as of page 189.

19.2.5 Power supply unit 6A

The information displayed by the signalling terminals and LEDs can be found in the instruction manual for the power supply unit, see chapter "20 Product leaflets" as of page 189.

20 Product leaflets

Each device is furnished with a product leaflet with information on mounting and connection details. In addition, we have collated the relevant product leaflets in this chapter of the technical manual:

WARNING! Do not install the power supply unit until the other installation work has been completed. Work in a voltage-free state. Otherwise a short circuit may occur!

NOTE! The table of contents for the “Product leaflets” chapter is located at the end of this technical manual.

DE - Installationsanleitung

Display-Einsatz

Vorgesehen zum Anschluss an den Stationsbus einer CONCENTO^{CARE} Rufanlage. An den Display-Einsatz wird die Zimmerleuchte und der Zimmerbus angeschlossen. Bei Ausfall des Stationsbusses arbeitet der Display-Einsatz mit den angeschlossenen Zimmergeräten autark weiter.

Der Display-Einsatz kann zusammen mit einem Intercom-Einsatz für Sprechkommunikation benutzt werden, dessen Unterputz-Einsatz mit dem Unterputz-Einsatz des Display-Einsatzes verbunden ist.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

A Produktbeschreibung

Die rote Ruftaste [8] dient zum Auslösen von Rufen. Eine LED in der Ruftaste leuchtet schwach zum Finden der Taste im Dunkeln (Findelicht). Die LED leuchtet hell, sobald ein Ruf ausgelöst wird (Beruhigungslicht).

Die grüne Anwesenheitstaste [7] dient zum Ein- und Ausschalten der Anwesenheit des Personals. Die LED leuchtet, wenn die Anwesenheit eingeschaltet ist (Erinnerungslicht).

Das Display [9] sowie der integrierte Tongeber dienen zur Anzeige von Rufen, wenn die Anwesenheit eingeschaltet ist. Die Tasten und das Display werden darüber hinaus zur Konfiguration des Gerätes genutzt.

EN - Installation Instructions

Display insert

Intended for connection to the ward bus of a CONCENTO^{CARE} nurse call system. The room lamp and the room bus are connected to the display insert. During a failure of the ward bus, the display insert continues to operate independently with the connected devices in the room.

The display insert can be used in combination with an intercom insert for speech communication whose flush-mounted insert is connected to the flush-mounted insert of the display insert.

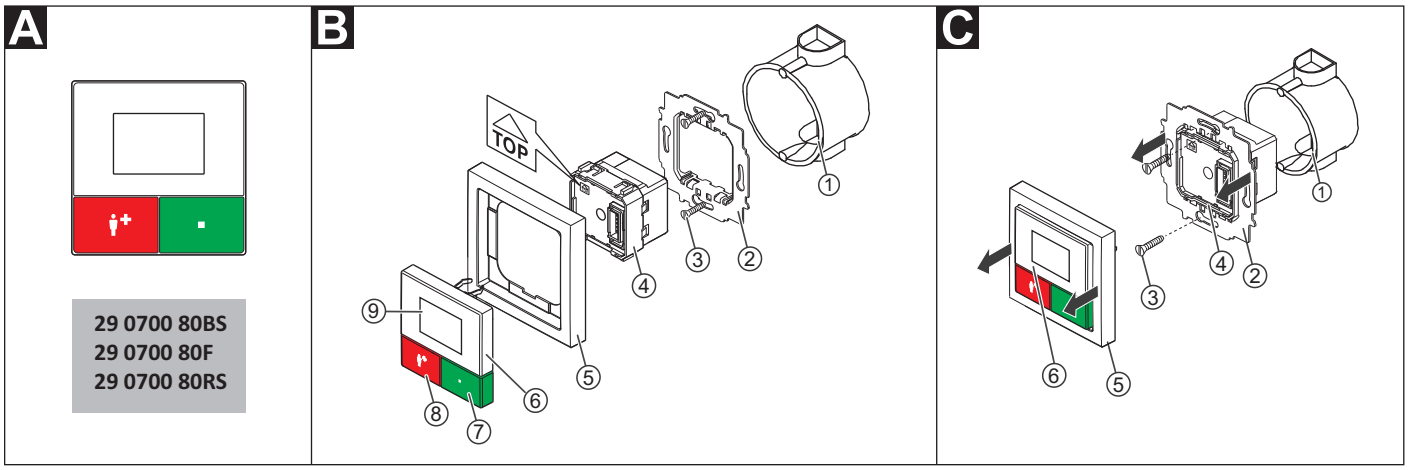
NOTE! The complete installation of the system is described in the Technical Manual.

A Product description

The red call button [8] serves for triggering calls. An LED in the call button lights up faintly to locate the button in the dark (location light). The LED lights up brightly as soon as a call is triggered (reassurance light).

The green presence button [7] serves for switching the presence of the staff on and off. The LED lights up when the presence is switched on (reminder light).

The display [9] and the integrated beeper serves for displaying calls when the presence is switched on. The buttons and the display are additionally used to configure the device.



[1] *Einbaudose, 1-teilig (Empfehlung: tiefe Dose, Mauerwerk: 17 0100 20, Hohlwand: 17 5100 20)
[2] Tragring
[3] *Schrauben der Einbaudose
[4] Basismodul
[5] *Abdeckrahmen, 1-fach
[6] Bedienelement
[7] Anwesenheitstaste (grün)
[8] Ruftaste (rot)
[9] Display

* Nicht im Lieferumfang enthalten, separat bestellen.

[1] *Back box, 1-gang (deep box recommended, solid wall: 17 0100 20, partition wall: 17 5100 20)
[2] Mounting plate
[3] *Back box screws
[4] Basic module
[5] *Cover frame, 1-gang
[6] Control element
[7] Presence button (green)
[8] Call button (red)
[9] Display

* Not included in the scope of delivery, please order separately.

B Montage

Wandmontage auf einteilige Einbaudose.

1. Tragring [2] auf der Unterputzdose [1] festschrauben. Die vier quadratischen Aussparungen im Tragring befinden sich oben und unten.
2. Adern vorbereiten und durch den Tragring [2] führen (siehe Abschnitt „Anschluss“).
3. Basismodul [4] gemäß Abschnitt „Anschluss“ anschließen.
4. Basismodul [4] durch den Tragring [2] schieben, bis es einrastet. Die Markierung „TOP“ zeigt nach oben.
5. Abdeckrahmen [5] an der korrekten Position vor dem Tragring [2] an der Wand anhalten.
6. Bedienelement [6] auf den Tragring mit Basismodul aufstecken, so dass die Rasthaken des Bedienelements in die quadratischen Aussparungen des Tragrings kommen und die Stiftleiste des Bedienelements auf dem Basismodul einrastet.

Bevor der Display-Einsatz funktionsbereit ist, muss er konfiguriert werden, siehe Abschnitt „Konfigurationsanleitung“.

B Mounting

Wall mounting on one-gang back box.

1. Bolt the mounting plate [2] to the back box [1]. The four square recesses in the mounting plate are located at the top and bottom.
2. Prepare the wires and feed them through the mounting plate [2] (see section "Connection").
3. Connect the basic module [4] according to section "Connection".
4. Push the basic module [4] through the mounting plate [2] until it latches. The mark "TOP" points toward the top.
5. Hold the cover frame [5] in the correct position in front of the mounting plate [2] on the wall.
6. Plug the control element [6] onto the mounting plate with basic module so that the latching hooks of the control element enter the square recesses of the mounting plate and the plug connector of the control element latches into the basic module.

The display insert must first be configured before it is ready for operation, see section "Configuration Instructions".

DE - Installationsanleitung

C Demontage

1. Den Abdeckrahmen [5] zusammen mit dem Bedienelement [6] vom Tragring [2] abziehen.
2. Die Schrauben [3] lösen, mit denen der Tragring auf der Einbaudose [1] befestigt ist.
3. Den Tragring [2] zusammen mit dem Basismodul [4] aus der Einbaudose [1] entnehmen.
4. Zum Abklemmen der Adern beachten Sie Abb. **E**.

Bei der Demontage verbleibt das Basismodul [4] auf dem Tragring [2], kann aber im ausgebauten Zustand wieder getrennt werden.

D Anschluss

1. Die Anschlusskabel in der Einbaudose auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan am seitlichen Klemmenblock (rot, schwarz) und am Anschlussfeld auf der Unterseite des Basismoduls anschließen. Alle Klemmen sind Steckklemmen.
   Hinweis: Der seitliche Klemmenblock (rot, schwarz) kann vorübergehend abgezogen werden.
3. Busabschluss: Wenn es sich bei dem Display-Einsatz um den ersten oder letzten Teilnehmer am Stationsbus handelt, muss der Bus abgeschlossen werden. Hierzu eine Drahtbrücke zwischen den Anschlusspunkten 5 (SB) und 6 (SB) setzen.

Hinweis: Die Anschlüsse für den optionalen Intercom-Einsatz sind in der Installationsanleitung des Intercom-Einsatzes beschrieben.

EN - Installation Instructions

C Dismantling

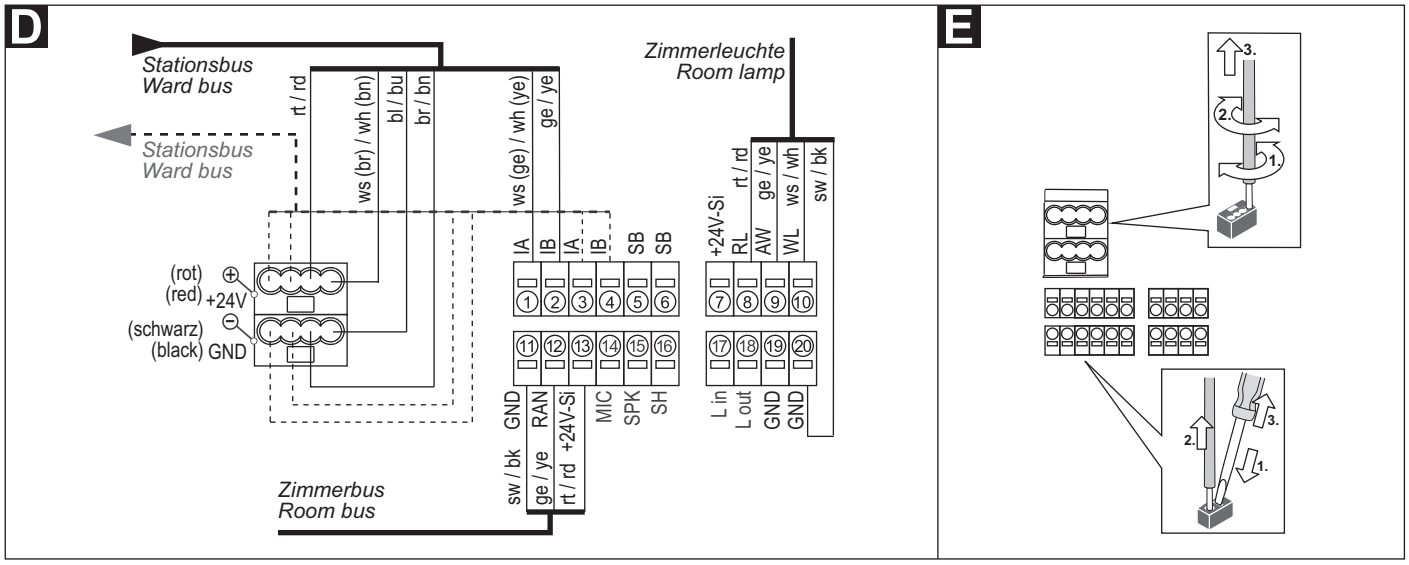
1. Pull the cover frame [5] together with the control element [6] off the mounting plate [2].
2. Loosen the screws [3] with which the mounting plate is fixed to the back box [1].
3. Remove the mounting plate [2] together with the basic module [4] from the back box [1].
4. For disconnection the wires, refer to fig. **E**.

Although the basic module [4] remains on the mounting plate [2] during dismantling, it can, however, be separated again in a dismantled state.

D Connection

1. Strip the connection cables in the back box to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires to the lateral terminal block (red, black) and to the connection field on the underside of the basic module according to the connection diagram. All terminals are plug-in terminals.
   Note: The lateral terminal block (red, black) can be pulled off temporarily.
3. Bus termination: If the display insert is the first or last user on the ward bus, the bus must be terminated. For this, set a wire bridge between connection points 5 (SB) and 6 (SB).

Note: The connections for the optional intercom insert are described in the installation instructions of the intercom insert.



Technische Daten

Spannungsversorgung	24 V=
Ruhestromaufnahme	38 mA
Anschluss Stationsbus Zimmerbus Zimmerleuchte	Leitungstyp: J-Y(St)Y 4x2x0,8 J-Y(St)Y 2x2x0,8 J-Y(St)Y 2x2x0,8
Abisolierlänge	6 mm
Einbautiefe	32 mm
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

Technical data

Power Supply	24 V=
Standby current consumption	38 mA
Connection Ward bus Room bus Room lamp	Cable type: J-Y(St)Y 4x2x0.8 J-Y(St)Y 2x2x0.8 J-Y(St)Y 2x2x0.8
Skinning length	6 mm
Installation depth	32 mm
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

DE - Konfigurationsanleitung

Am Display-Einsatz müssen die folgenden Einstellungen vorgenommen werden:

- Raumtyp,
- Anzahl der Geräte, die am Zimmerbus angeschlossen sind.

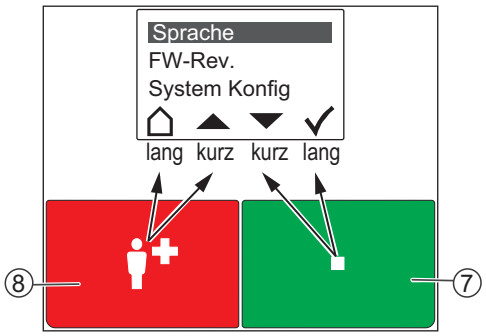
Diese Einstellungen werden im Folgenden beschrieben. Alle anderen Einstellungen werden per Fernkonfiguration über das Bussystem mit der Management Software vorgenommen und sind nicht Bestandteil dieses Dokuments.

HINWEIS! Solange die Fernkonfiguration nicht durchgeführt wurde, zeigt das Display „WAIT FOR CONFIG“. Der Display-Einsatz ist noch nicht funktionsbereit.

Displayanzeigen

- ⌂ Abbrechen, d.h. zurück zur höheren Menüebene ohne zu speichern.
- ▲ In der Liste nach oben wandern.
- ▼ In der Liste nach unten wandern.
- ✓ Markierten Menüpunkt einstellen (und speichern).

Tastenfunktionen



Die rote Ruftaste [8] und die grüne Anwesenheitstaste [7] haben jeweils zwei Funktionen: Eine Funktion wird durch kurzes Drücken ausgelöst. Die andere Funktion wird durch langes Drücken (0,5 Sek.) ausgelöst.

- Die Funktionen der äußeren Symbole im Display werden durch langes Drücken der Tasten ausgelöst.
- Die Funktionen der inneren Symbole durch kurzes Drücken.

1 - Hauptmenü aufrufen

- Rote und grüne Taste gleichzeitig so lange (3 Sek.) gedrückt halten, bis das Hauptmenü erscheint.

2 - Sprache einstellen

1. Im Hauptmenü mit den Pfeilen zu „*Sprache*“ wandern.
2. **Häkchen** drücken.
3. Mit den Pfeilen zur gewünschten Sprache wandern.
4. **Häkchen** drücken, um die markierte Sprache zu speichern.

Hinweis: Die eingestellte Sprache wird bei der Fernkonfiguration durch die Management Software automatisch auf die ausgewählte Sprache der Management Software umgestellt.

3 - Servicemenü aufrufen und Einstellungen vornehmen

1. Im Hauptmenü mit den Pfeilen zu „*System Konfig*“ wandern.
2. **Häkchen** drücken. Ein Passwort wird gefordert.
3. Als Passwort die Pfeile in folgender Reihenfolge drücken:
   ▲ ▲ ▼ ▲ ▼ ▼

Raumtyp einstellen

HINWEIS! Der Raumtyp „*Dienstzimmer HAB*“ ist nur einstellbar, wenn die Rufanlage bereits mit der Management Software auf „manuelle Zusammenschaltung“ eingestellt wurde. Nur ein Raum pro Rufanlage darf als „*Dienstzimmer HAB*“ eingestellt werden!

1. Im Servicemenü mit den Pfeilen zu „*Raumtyp*“ wandern.
2. **Häkchen** drücken.

... Fortsetzung auf der nächsten Seite ...

EN - Configuration Instructions

The following settings must be made on the display insert:

- Room type,
- The number of devices that are connected to the room bus.

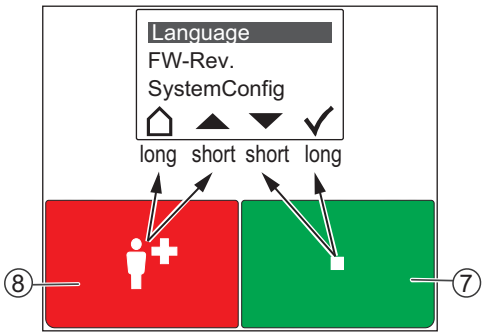
These settings are described in the following. All other settings are carried out with the management software per remote configuration via the bus system and are not part of this document.

NOTE! As long as the remote configuration has not been carried out, the display shows "WAIT FOR CONFIG". The display insert is not yet ready for operation.

Displays

- ⌂ Quit, i.e. return to the higher menu level without saving.
- ▲ Scroll up the list.
- ▼ Scroll down the list.
- ✓ Set the marked menu item (and save).

Button functions



The red call button [8] and the green presence button [7] each has two functions: One function is triggered with brief press. The other function is triggered with a long press (0.5 seconds).

- The functions of the outer icons in the display are triggered with a long press of the buttons.
- The functions of the inner icons with a brief press.

1 - Calling up the main menu

- Keep the red and green buttons pressed simultaneously (3 seconds) until the main menu is displayed.

2 - Setting the language

1. Use the arrows to go to "*Language*" in the main menu.
2. Press the **Tick**.
3. Use the arrows to move to the desired language.
4. Press the Tick to save the marked language.

Note: During the remote configuration, the language that has been set is automatically changed by the management software to the selected language of the management software.

3 - Calling up the service menu and performing settings

1. Use the arrows to go to "*SystemConfig*" in the main menu.
2. Press the **Tick**. A password is requested.
3. Press the arrows in the following order as password:
   ▲ ▲ ▼ ▲ ▼ ▼

Setting the room type

NOTE! Room type "*Staff+HAB*" can only be set if the nurse call system has already been set to "Manual coupling" with the management software. Only one room per nurse call system is permitted to be set as "*Staff+HAB*"!

1. Use the arrows to go to "*Room Type*" in the service menu.
2. Press the **Tick**.

... Continued on the next page ...

DE - Konfigurationsanleitung

3. Mit den Pfeilen zum gewünschten Raumtyp wandern:
- „*Zimmer*“ = Bewohner-Zimmer (Werkseinstellung)
- „*Dienstzimmer*“ = wie „*Zimmer*“ + Durchsagemöglichkeit (nur bei angeschlossenem Intercom-Einsatz)
- „*Dienstzimmer HAB*“ = wie „*Dienstzimmer*“ + Möglichkeit Zeitzonen umzuschalten.

4. **Häkchen** drücken, um den markierten Raumtyp zu speichern.

Anzahl der Geräte am Zimmerbus einstellen

Geräte am Zimmerbus = Taster-Einsätze, Ruftaster mit Steckvorrichtung, RAN-Schnittstellen, Intercom-Einsatz.

HINWEIS! Auch der Intercom-Einsatz ist ein Gerät am Zimmerbus und muss mitgezählt werden. Die Zimmerleuchte ist kein Gerät am Zimmerbus!

Werkseinstellung = 1 Gerät am Zimmerbus!

1. Im Servicemenü mit den Pfeilen zu „*RAN*“ wandern.
2. **Häkchen** drücken.
3. Mit den Pfeilen zu „*RAN Anzahl*“ wandern.
4. **Häkchen** drücken.
5. Mit den Pfeilen zu der korrekten Anzahl Geräte am Zimmerbus wandern.
6. **Häkchen** drücken, um die markierte Anzahl zu speichern.

4 - Zimmerbus prüfen

Folgende Funktionen dienen zur Prüfung des Zimmerbusses:

Status prüfen

Prüfung, ob die eingestellte Anzahl der Geräte am Zimmerbus mit der Anzahl funktionsbereiter Geräte am Zimmerbus übereinstimmt.

1. Im Servicemenü mit den Pfeilen zu „*RAN*“ wandern.
2. Häkchen drücken.
- Anzeige „*Status OK*“ = Die eingestellte Anzahl stimmt mit der Anzahl funktionsbereiter Geräte am Zimmerbus überein.
- Anzeige „*Status ERROR(+)*“ = Mehr funktionsbereite Geräte am Zimmerbus erkannt als eingestellt sind.
- Anzeige „*Status ERROR(-)*“ = Weniger funktionsbereite Geräte am Zimmerbus erkannt als eingestellt sind.

3. **Haus** drücken, um die Anzeige zu verlassen.

Wenn ein Fehler (ERROR) angezeigt wurde, Test wie folgt durchführen:

Test durchführen

Test, ob alle Geräte am Zimmerbus korrekt angeschlossen und funktionsbereit sind:

1. Im Servicemenü mit den Pfeilen zu „*RAN*“ wandern.
2. **Häkchen** drücken.
3. Mit den Pfeilen zu „*RAN Test*“ wandern.
4. **Häkchen** drücken.
- Die LEDs aller Geräte am Zimmerbus müssen blinken. Geräte, die nicht blinken, sind falsch angeschlossen oder defekt.
- Defekte Geräte austauschen.
- Falsch angeschlossene Geräte korrekt anschließen.

5. **Haus** drücken, um das Servicemenü zu verlassen.

5 - Konfiguration beenden

Zum Beenden der Konfiguration das Servicemenü und das Hauptmenü verlassen.

- **Haus** so oft drücken, bis die normale Betriebsanzeige angezeigt wird.

Hinweis: Wenn 60 Sekunden keine Taste gedrückt wird, wird das Menü automatisch verlassen.

EN - Configuration Instructions

3. Use the arrows to move to the desired room type:
- "*Room*" = Residents room (factory setting)
- "*Staff*" = like "*Room*" + announcement option (only with connected intercom insert).
- "*Staff+HAB*" = like "*Staff*" + option of switching over time zones.

4. Press the **Tick** to save the marked room type.

Setting the number devices on the room bus

Devices on the room bus = Switch inserts, call switches with connection socket, RAN interfaces, intercom insert.

NOTE! Also the intercom insert counts as a device on the room bus and must be included in the count. The room lamp is not a device on the room bus!

Factory setting = 1 device on the room bus!

1. Use the arrows to go to "*RAN*" in the service menu.
2. Press the **Tick**.
3. Use the arrows to go to "*RAN number*".
4. Press the **Tick**.
5. Use the arrows to move to the correct number of devices on the room bus.
6. Press the **Tick** to save the marked number.

4 - Testing the room bus

The following functions serve to test the room bus:

Testing the status

Check whether the set number of devices on the room bus matches the number of devices on the room bus that are ready for operation.

1. Use the arrows to go to "*RAN*" in the service menu.
2. Press the **Tick**.
- Display of "*Status OK*" = The set number matches the number of devices on the room bus that are ready for operation.
- Display of "*Status ERROR(+)*" = More devices ready for operation were recognized on the room bus than have been set.
- Display of "*Status ERROR(-)*" = Less devices ready for operation were recognized on the room bus than have been set.

3. Press **House** to quit the display.

If a fault (ERROR) has been displayed, carry out the test as follows:

Performing the test

Test whether all devices on the room bus have been connected correctly and are ready for operation:

1. Use the arrows to go to "*RAN*" in the service menu.
2. Press the **Tick**.
3. Use the arrows to go to "*RAN test*".
4. Press the **Tick**.
- The LEDs of all devices on the room bus must flash. Devices not flashing have been connected incorrectly or are defective.
- Replace defective devices.
- Connect devices correctly that have not been connected correctly.

5. Press **House** to quit the service menu.

5 - Quitting the configuration

To terminate the configuration, quit the service menu and the main menu.

- Keep pressing **House** until the normal operating display appears.

Note: If no button is pressed within a period of 60 seconds, the menu is quit automatically.

DE - Installationsanleitung

Ruf-/Anwesenheits-Einsatz

Vorgesehen zum Anschluss an den Stationsbus einer CONCENTO^{CARE} Rufanlage. An den Ruf-/Anwesenheits-Einsatz wird die Zimmerleuchte und der Zimmerbus angeschlossen.

Bei Ausfall des Stationsbusses arbeitet der Ruf-/Anwesenheits-Einsatz mit den angeschlossenen Zimmergeräten autark weiter.

Der Ruf-/Anwesenheits-Einsatz kann zusammen mit einem Intercom-Einsatz für Sprechkommunikation benutzt werden, dessen Unterputz-Einsatz mit dem Unterputz-Einsatz des Ruf-/Anwesenheits-Einsatzes verbunden ist.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

A Produktbeschreibung

Die rote Ruftaste [7] dient zum Auslösen von Rufen. Eine LED in der Ruftaste leuchtet schwach zum Finden der Taste im Dunkeln (Findelicht). Die LED leuchtet hell, sobald ein Ruf ausgelöst wird (Beruhigungslicht).

Die grüne Anwesenheitstaste [8] dient zum Ein- und Ausschalten der Anwesenheit des Personals. Die LED leuchtet, wenn die Anwesenheit eingeschaltet ist (Erinnerungslicht). Ein integrierter Tongeber dient zur Anzeige von Rufen, wenn die Anwesenheit eingeschaltet ist.

EN - Installation Instructions

Call/presence insert

Intended for connection to the ward bus of a CONCENTO^{CARE} nurse call system. The room lamp and the room bus are connected to the call/presence insert.

During a failure of the ward bus the call/presence insert continues to operate independently with the connected devices in the room.

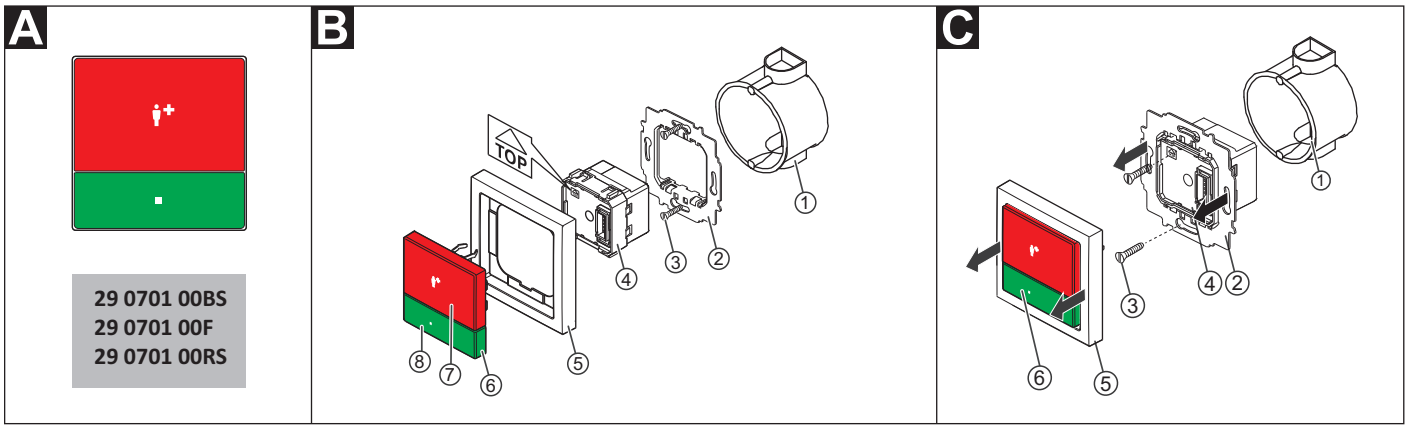
The call/presence insert can be used in combination with an intercom insert for speech communication whose flush-mounted insert is connected to the flush-mounted insert of the call/presence insert.

NOTE! The complete installation of the system is described in the Technical Manual.

A Product description

The red call button [7] serves for triggering calls. An LED in the call button lights up faintly to locate the button in the dark (location light). The LED lights up brightly as soon as a call is triggered (reassurance light).

The green presence button [8] serves for switching the presence of the staff on and off. The LED lights up when the presence is switched on (reminder light). An integrated tone generator serves for displaying calls when the presence is switched on.



[1] *Einbaudose, 1-teilig (Empfehlung: tiefe Dose, Mauerwerk: 17 0100 20, Hohlwand: 17 5100 20)
[2] Tragring
[3] *Schrauben der Einbaudose
[4] Basismodul
[5] *Abdeckrahmen, 1-fach
[6] Bedienelement
[7] Ruftaste (rot)
[8] Anwesenheitstaste (grün)

* Nicht im Lieferumfang enthalten, separat bestellen.

[1] *Back box, 1-gang (deep box recommended, solid wall: 17 0100 20, partition wall: 17 5100 20)
[2] Mounting plate
[3] *Back box screws
[4] Basic module
[5] *Cover frame, 1-gang
[6] Control element
[7] Call button (red)
[8] Presence button (green)

* Not included in the scope of delivery, please order separately.

B Montage

Wandeinbau auf einteilige Einbaudose.

1. Tragring [2] auf der Einbaudose [1] festschrauben. Die vier quadratischen Aussparungen im Tragring befinden sich oben und unten.
2. Adern vorbereiten und durch den Tragring [2] führen (siehe Abschnitt „Anschluss“).
3. Basismodul [4] gemäß Abschnitt „Anschluss“ anschließen.
4. Basismodul [4] durch den Tragring [2] schieben, bis es einrastet. Die Markierung „TOP“ zeigt nach oben.
5. Abdeckrahmen [5] an der korrekten Position vor dem Tragring [2] an der Wand anhalten.
6. Bedienelement [6] auf den Tragring mit Basismodul aufstecken, so dass die Rasthaken des Bedienelements in die quadratischen Aussparungen des Tragrings kommen und die Stiftleiste des Bedienelements auf dem Basismodul einrastet.

Bevor der Ruf-/Anwesenheits-Einsatz funktionsbereit ist, muss er konfiguriert werden, siehe Abschnitt „Konfigurationsanleitung“.

B Mounting

Wall mounting on one-gang back box.

1. Bolt the mounting plate [2] to the back box [1]. The four square recesses in the mounting plate are located at the top and bottom.
2. Prepare the wires and feed them through the mounting plate [2] (see section "Connection").
3. Connect the basic module [4] according to section "Connection".
4. Push the basic module [4] through the mounting plate [2] until it latches. The mark "TOP" points toward the top.
5. Hold the cover frame [5] in the correct position in front of the mounting plate [2] on the wall.
6. Plug the control element [6] onto the mounting plate with basic module so that the latching hooks of the control element enter the square recesses of the mounting plate and the plug connector of the control element latches into the basic module.

The call/presence insert must first be configured before it is ready for operation, see section "Configuration Instructions".

DE - Installationsanleitung

C Demontage

1. Den Abdeckrahmen [5] zusammen mit dem Bedienelement [6] vom Tragring [2] abziehen.
2. Die Schrauben [3] lösen, mit denen der Tragring auf der Einbaudose [1] befestigt ist.
3. Den Tragring [2] zusammen mit dem Basismodul [4] aus der Einbaudose [1] entnehmen.
4. Zum Abklemmen der Adern beachten Sie Abb. **E**.

Bei der Demontage verbleibt das Basismodul [4] auf dem Tragring [2], kann aber im ausgebauten Zustand wieder getrennt werden.

D Anschluss

1. Die Anschlusskabel in der Einbaudose [1] auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan am seitlichen Klemmenblock (rot, schwarz) und am Anschlussfeld auf der Unterseite des Basismoduls [4] anschließen. Alle Klemmen sind Steckklemmen.
   Hinweis: Der seitliche Klemmenblock (rot, schwarz) kann vorübergehend abgezogen werden.
3. Busabschluss: Wenn es sich bei dem Ruf-/Anwesenheits-Einsatz um den ersten oder letzten Teilnehmer am Stationsbus handelt, muss der Bus abgeschlossen werden. Hierzu eine Drahtbrücke zwischen den Anschlusspunkten 5 (SB) und 6 (SB) setzen.

Hinweis: Die Anschlüsse für den optionalen Intercom-Einsatz sind in der Installationsanleitung des Intercom-Einsatzes beschrieben.

EN - Installation Instructions

C Dismantling

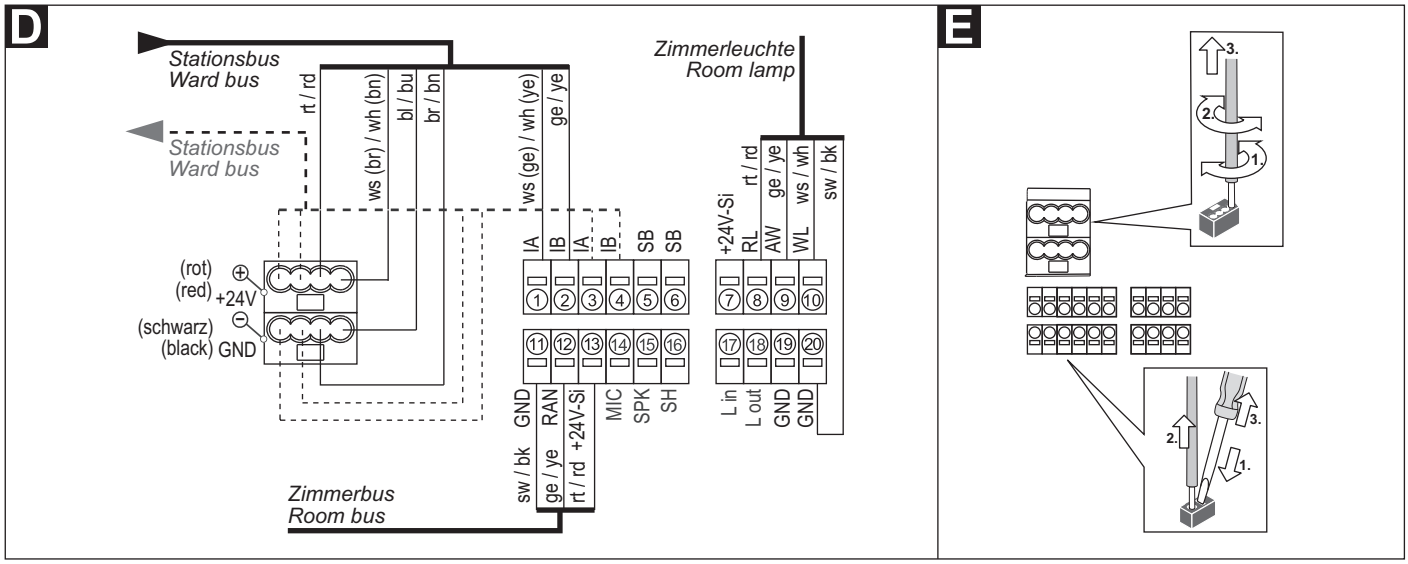
1. Pull the cover frame [5] together with the control element [6] off the mounting plate [2].
2. Loosen the screws [3] which fix the mounting plate to the back box [1].
3. Remove the mounting plate [2] together with the basic module [4] from the back box [1].
4. For disconnecting the wires, refer to fig. **E**.

Although the basic module [4] remains on the mounting plate [2] during dismantling, it can, however, be separated again in a dismantled state.

D Connection

1. Strip the connection cables in the back box [1] to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires to the lateral terminal block (red, black) and to the connection field on the underside of the basic module [4] according to the connection diagram. All terminals are plug-in terminals. **Note:** The lateral terminal block (red, black) can be pulled off temporarily.
3. Bus termination: If the call/presence insert is the first or last user on the ward bus, the bus must be terminated. For this, set a wire bridge between connection points 5 (SB) and 6 (SB).

Note: The connections for the optional intercom insert are described in the installation instructions of the intercom insert.



Technische Daten

Spannungsversorgung	24 V=
Ruhestromaufnahme	36 mA
Anschluss Stationsbus Zimmerbus Zimmerleuchte	Leitungstyp: J-Y(St)Y 4x2x0,8 J-Y(St)Y 2x2x0,8 J-Y(St)Y 2x2x0,8
Abisolierlänge	6 mm
Einbautiefe	32 mm
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

Technical data

Power Supply	24 V=
Standby current consumption	36 mA
Connection Ward bus Room bus Room lamp	Cable type: J-Y(St)Y 4x2x0.8 J-Y(St)Y 2x2x0.8 J-Y(St)Y 2x2x0.8
Skinning length	6 mm
Installation depth	32 mm
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

Konfiguration

Am Ruf-/Anwesenheits-Einsatz muss eingestellt werden, wie viele Geräte am Zimmerbus angeschlossen sind. Wie Sie hierzu vorgehen, wird auf den folgenden Seiten beschrieben. Alle anderen Einstellungen werden per Fernkonfiguration über das Bussystem mit der Management Software vorgenommen und sind nicht Bestandteil dieses Dokuments.

Configuration

The number of devices connected to the room bus must be set on the call/presence insert. How to do this is described on the following pages. All other settings are carried out with the management software per remote configuration via the bus system and are not part of this document.

DE - Konfigurationsanleitung

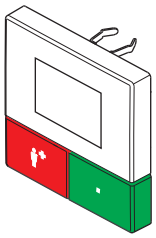
Zur Konfiguration des Ruf-/Anwesenheits-Einsatzes am Gerät wird eine Zimmer-Programmierschnittstelle benötigt (nicht im Lieferumfang des Ruf-/Anwesenheits-Einsatzes).

EN - Configuration Instructions

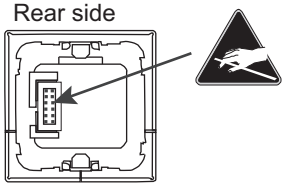
To configure the call/presence insert on the device requires a room programming interface (not included in the scope of supply of the call/presence insert).

Zimmer-Programmierschnittstelle
Room programming interface

29 0701 80BS
29 0701 80F
29 0701 80RS



Rückseite
Rear side



Die Zimmer-Programmierschnittstelle wird für die Dauer der Konfiguration statt des Bedienelements aufgesteckt.

The room programming interface instead of the control element [6] is attached for the duration of the configuration.

Zimmer-Programmierschnittstelle montieren

1. Das Bedienelement [6] des Ruf-/Anwesenheits-Einsatzes zusammen mit dem Abdeckrahmen [5] vom Tragring [2] abziehen, siehe Abb. **C**.
   Hinweis: Bei 2-teiligen Abdeckrahmen, d.h. zum Beispiel bei Installation mit einem Intercom-Einsatz, kann der Abdeckrahmen auf dem Tragring verbleiben.
2. Die Zimmer-Programmierschnittstelle auf den Tragring [2] mit Basismodul [4] aufstecken.

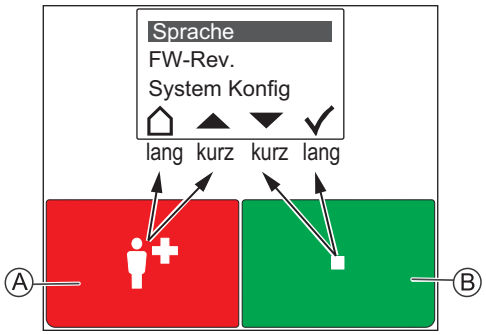
HINWEIS! Solange die Fernkonfiguration nicht durchgeführt wurde, zeigt das Display einer angeschlossenen Zimmer-Programmierschnittstelle "WAIT FOR CONFIG". Der Ruf-/Anwesenheits-Einsatz ist noch nicht funktionsbereit.

Mounting the room programming interface

1. Pull the control element [6] together with the cover frame [5] off the mounting plate [2], see fig. **C**.
   Note: With a 2-gang cover frame, i.e. when installed with an Intercom insert for example, the cover frame can remain on the mounting plate.
2. Plug the room programming interface onto the mounting plate [2] with basic module [4].

NOTE! As long as the remote configuration has not been carried out, the display of a connected room programming interface shows "WAIT FOR CONFIG". The call/presence insert is not yet ready for operation.

Tastenfunktionen

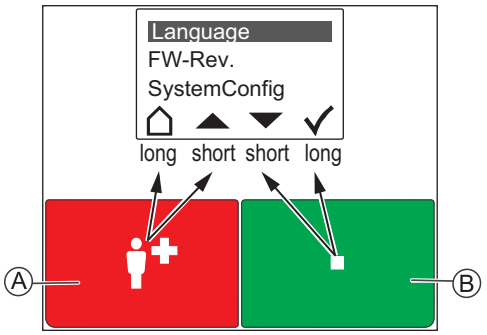


Die rote Taste [A] und die grüne Taste [B] haben jeweils zwei Funktionen: Eine Funktion wird durch kurzes Drücken ausgelöst. Die andere Funktion wird durch langes Drücken (0,5 Sek.) ausgelöst.

- Die Funktionen der äußeren Symbole im Display werden durch langes Drücken der Tasten ausgelöst.
- Die Funktionen der inneren Symbole durch kurzes Drücken.

⌂ Abbrechen, d.h. zurück zur höheren Menüebene ohne zu speichern.
▲ In der Liste nach oben wandern.
▼ In der Liste nach unten wandern.
✓ Markierten Menüpunkt einstellen (und speichern).

Button functions



The red button [A] and the green button [B] each has two functions: One function is triggered with brief press. The other function is triggered with a long press (0.5 seconds).

- The functions of the outer icons in the display are triggered with a long press of the buttons.
- The functions of the inner icons with a brief press.

⌂ Quit, i.e. return to the higher menu level without saving.
▲ Scroll up the list.
▼ Scroll down the list.
✓ Set the marked menu item (and save).

1 - Hauptmenü aufrufen

- Rote und grüne Taste gleichzeitig so lange (3 Sek.) gedrückt halten, bis das Hauptmenü erscheint.

1 - Calling up the main menu

- Keep the red and green buttons pressed simultaneously (3 seconds) until the main menu is displayed.

2 - Menüsprache einstellen

1. Im Hauptmenü mit den Pfeilen zu „*Sprache*“ wandern.
2. **Häkchen** drücken.
3. Mit den Pfeilen zur gewünschten Sprache wandern.
4. **Häkchen** drücken, um die markierte Sprache zu speichern.

Hinweis: Die eingestellte Sprache wird bei der Fernkonfiguration durch die Management Software automatisch auf die ausgewählte Sprache der Management Software umgestellt.

2 - Setting the menu language

1. Use the arrows to go to "*Language*" in the main menu.
2. Press the **Tick**.
3. Use the arrows to move to the desired language.
4. Press the **Tick** to save the marked language.

Note: During the remote configuration, the language that has been set is automatically changed by the management software to the selected language of the management software.

DE - Konfigurationsanleitung

3 - Servicemenü aufrufen und Einstellungen vornehmen

1. Im Hauptmenü mit den Pfeilen zu „*System Konfig*“ wandern.
2. **Häkchen** drücken. Ein Passwort wird gefordert.
3. Als Passwort die Pfeile in folgender Reihenfolge drücken:
   ▲ ▲ ▼ ▲ ▼ ▼

Anzahl der Geräte am Zimmerbus einstellen

Geräte am Zimmerbus = Taster-Einsätze, Ruftaster mit Steckvorrichtung, RAN-Schnittstellen, Intercom-Einsatz.

HINWEIS! Auch der Intercom-Einsatz ist ein Gerät am Zimmerbus und muss mitgezählt werden. Die Zimmerleuchte ist kein Gerät am Zimmerbus!

Werkseinstellung = 1 Gerät am Zimmerbus!

1. Im Servicemenü mit den Pfeilen zu „*RAN*“ wandern.
2. **Häkchen** drücken.
3. Mit den Pfeilen zu „*RAN Anzahl*“ wandern.
4. **Häkchen** drücken.
5. Mit den Pfeilen zu der korrekten Anzahl Geräte am Zimmerbus wandern.
6. **Häkchen** drücken, um die markierte Anzahl zu speichern.

4 - Zimmerbus prüfen

Folgende Funktionen dienen zur Prüfung des Zimmerbusses:

Status prüfen

Prüfung, ob die eingestellte Anzahl der Geräte am Zimmerbus mit der Anzahl funktionsbereiter Geräte am Zimmerbus übereinstimmt.

1. Im Servicemenü mit den Pfeilen zu „*RAN*“ wandern.
2. Häkchen drücken.

- Anzeige „*Status OK*“ = Die eingestellte Anzahl stimmt mit der Anzahl funktionsbereiter Geräte am Zimmerbus überein.
- Anzeige „*Status ERROR(+)*“ = Mehr funktionsbereite Geräte am Zimmerbus erkannt als eingestellt sind.
- Anzeige „*Status ERROR(-)*“ = Weniger funktionsbereite Geräte am Zimmerbus erkannt als eingestellt sind.

3. **Haus** drücken, um das Servicemenü zu verlassen.

Wenn ein Fehler (ERROR) angezeigt wurde, Test wie folgt durchführen:

Test durchführen

Test, ob alle Geräte am Zimmerbus korrekt angeschlossen und funktionsbereit sind:

1. Im Servicemenü mit den Pfeilen zu „*RAN*“ wandern.
2. **Häkchen** drücken.
3. Mit den Pfeilen zu „*RAN Test*“ wandern.
4. **Häkchen** drücken.

- Die LEDs aller Geräte am Zimmerbus müssen blinken. Geräte, die nicht blinken, sind falsch angeschlossen oder defekt.
- Defekte Geräte austauschen.
- Falsch angeschlossene Geräte korrekt anschließen.

5. **Haus** drücken, um das Servicemenü zu verlassen.

5 - Konfiguration beenden

Zum Beenden der Konfiguration das Servicemenü und das Hauptmenü verlassen.

- **Haus** so oft drücken, bis die normale Betriebsanzeige angezeigt wird.

Zimmer-Programmierschnittstelle demontieren

1. Die Zimmer-Programmierschnittstelle vom Tragring [2] abziehen.
2. Den Abdeckrahmen [5] an der korrekten Position vor dem Tragring [2] positionieren und halten.
3. Das Bedienelement [6] auf den Tragring [2] mit Basismodul [4] aufstecken.

EN - Configuration Instructions

3 - Calling up the service menu and performing settings

1. Use the arrows to go to "*SystemConfig*" in the main menu.
2. Press the **Tick**. A password is requested.
3. Press the arrows in the following order as password:
   ▲ ▲ ▼ ▲ ▼ ▼

Setting the number devices on the room bus

Devices on the room bus = Switch inserts, call switches with connection socket, RAN interfaces, intercom insert.

NOTE! Also the intercom insert counts as a device on the room bus and must be included in the count. The room lamp is not a device on the room bus!

Factory setting = 1 device on the room bus!

1. Use the arrows to go to "*RAN*" in the service menu.
2. Press the **Tick**.
3. Use the arrows to go to "*RAN number*".
4. Press the **Tick**.
5. Use the arrows to move to the correct number of devices on the room bus.
6. Press the **Tick** to save the marked number.

4 - Testing the room bus

The following functions serve to test the room bus:

Testing the status

Check whether the set number of devices on the room bus matches the number of devices on the room bus that are ready for operation.

1. Use the arrows to go to "*RAN*" in the service menu.
2. Press the **Tick**.

- Display of "*Status OK*" = The set number matches the number of devices on the room bus that are ready for operation.
- Display of "*Status ERROR(+)*" = More devices ready for operation were recognized on the room bus than have been set.
- Display of "*Status ERROR(-)*" = Less devices ready for operation were recognized on the room bus than have been set.

3. Press **House** to quit the service menu.

If a fault (ERROR) has been displayed, carry out the test as follows:

Performing the test

Test whether all devices on the room bus have been connected correctly and are ready for operation:

1. Use the arrows to go to "*RAN*" in the service menu.
2. Press the **Tick**.
3. Use the arrows to go to "*RAN test*".
4. Press the **Tick**.

- The LEDs of all devices on the room bus must flash. Devices not flashing have been connected incorrectly or are defective.
- Replace defective devices.
- Connect devices correctly that have not been connected correctly.

5. Press **House** to quit the service menu.

5 - Quitting the configuration

To terminate the configuration, quit the service menu and the main menu.

- Keep pressing **House** until the normal operating display appears.

Dismantling the room programming interface

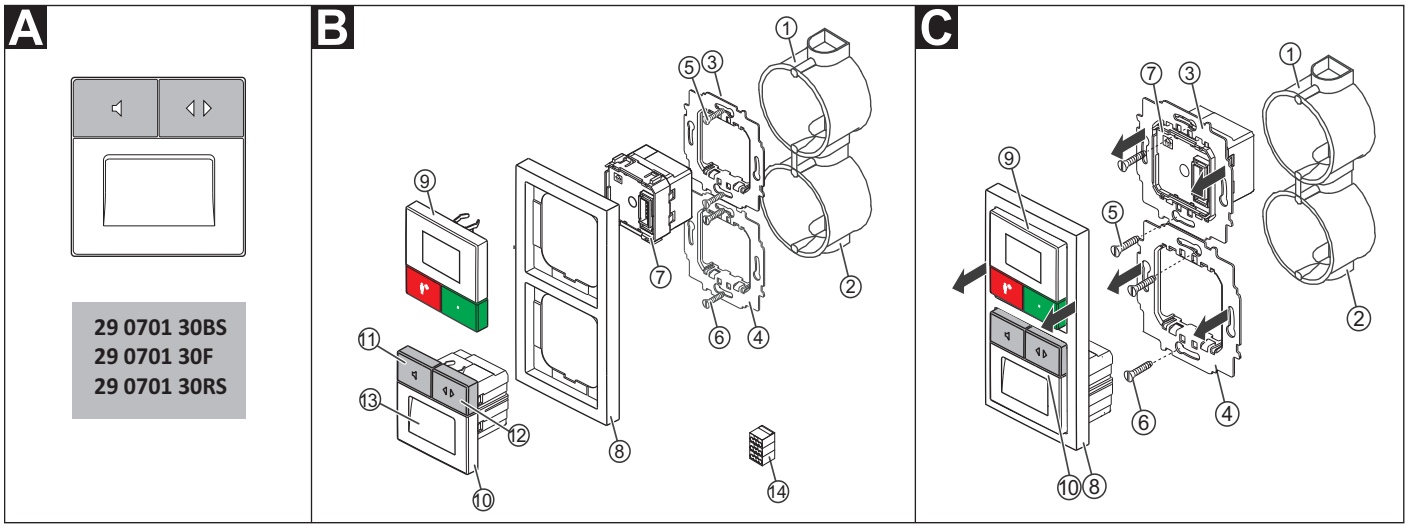
1. Pull the room programming interface from the mounting plate [2].
2. Position and hold the cover frame [5] in the correct position in front of the mounting plate [2].
3. Plug the control element [6] onto the mounting plate [2] with basic module [4].

DE - Installationsanleitung

Intercom-Einsatz

Der Intercom-Einsatz ist vorgesehen zum Anschluss an eine Raumsteuerung, d.h. einen Display-Einsatz oder einen Ruf-/Anwesenheits-Einsatz, in einer CONCENTO^{CARE} Rufanlage. Der Intercom-Einsatz ergänzt die Raumsteuerung um die Funktion der Sprechkommunikation. Bei der Installation mit Display-Einsatz zusätzlich für Durchsagen.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.



[1] *Einbaudose, 1-teilig, für die Raumsteuerung (Empfehlung: tiefe Dose)
[2] *Einbaudose, 1-teilig, für den Intercom-Einsatz (Empfehlung: tiefe Dose, Mauerwerk: 17 0100 20, Hohlwand: 17 5100 20)
[3] *Tragring der Raumsteuerung
[4] Tragring des Intercom-Einsatzes
[5] *Schrauben der Einbaudose für die Raumsteuerung
[6] *Schrauben der Einbaudose für den Intercom-Einsatz
[7] *Basismodul der Raumsteuerung
[8] *Abdeckrahmen, 2-fach
[9] *Bedienelement der Raumsteuerung
[10] Intercom-Einsatz
[11] Abfragetaste (Symbol: Lautsprecher) bei eingeschalteter Anwesenheit zum Abfragen von Rufen
[12] Fernabstelltaste (Symbol: 2 Pfeile) zum Fernabstellen von abgefragten Rufen
[13] Mikrofon und Lautsprecher für Sprechkommunikation
[14] Externer Klemmenblock (schwarz, gelb, rot) für den Zimmerbus

***** Nicht im Lieferumfang enthalten, separat bestellen.

B Montage

Wandeinbau auf zwei verbundene einteilige Einbaudosen:

1. Tragringe [3] [4] auf Stoß auf den Einbaudosen [1] [2] festschrauben. Die vier quadratischen Aussparungen im Tragring befinden sich oben und unten.
2. Adern in der Einbaudose für die Raumsteuerung [1] vorbereiten und anschließen (siehe Abschnitt **D**).
3. Basismodul [7] durch den Tragring [3] schieben, bis es einrastet. Die Markierung „TOP“ zeigt nach oben.
4. Abdeckrahmen [8] an der korrekten Position vor den beiden Tragringen positionieren und halten.
5. Bedienelement [9] auf den Tragring mit Basismodul aufstecken, so dass die Rasthaken des Bedienelements in die quadratischen Aussparungen des Tragrings kommen und die Stiftleiste des Bedienelements auf dem Basismodul einrastet.
6. Adern für den Intercom-Einsatz [10] anschließen (siehe Abschnitt **E**).
7. Intercom-Einsatz [10] auf den Tragring [4] aufstecken, so dass die Rasthaken des Intercom-Einsatzes in die quadratischen Aussparungen des Tragrings kommen.

EN - Installation Instructions

Intercom insert

The intercom insert is intended for connection to a room control device, i.e. a display insert or a call/presence insert in a CONCENTO^{CARE} nurse call system. The intercom insert supplements the room control with the speech communication function. For the installation with display insert, additionally for announcements.

NOTE! The complete installation of the system is described in the Technical Manual.

[1] *Back box, 1-gang, for the room control device (deep box recommended)
[2] *Back box, 1-gang, for the intercom insert (deep box recommended, solid wall: 17 0100 20, partition wall: 17 5100 20)
[3] *Mounting plate of the room control device
[4] Mounting plate of the intercom insert
[5] *Screws of the back box for the room control device
[6] *Screws of the back box for the intercom insert
[7] *Basic module of room control
[8] *Cover frame, 2-gang
[9] *Control element of the room control device
[10] Intercom insert
[11] Answer button (Icon: loudspeaker) at activated presence for the answering of calls
[12] Remote cancel button (Icon: 2 arrows) for the remote cancelling of answered calls
[13] Microphone and loudspeaker for speech communication
[14] External terminal block (black, yellow, red) for the room bus

* Not included in the scope of delivery, please order separately.

B Mounting

Wall installation on two connected one-gang back boxes:

1. Bolt mounting plates [3] [4] butt-jointed on the back boxes [1] [2]. The four square recesses in the mounting plate are located at the top and bottom.
2. Prepare and connect the wires in the back box for the room control device [1] (see section **D**).
3. Push the basic module [7] through the mounting plate [3] until it latches. The mark "TOP" points toward the top.
4. Position and hold the cover frame [8] in the correct position before the two mounting plates.
5. Plug the control element [9] onto the mounting plate with basic module so that the latching hook of the control element enters the square recesses of the mounting plate and the plug connector of the control element latches into the basic module.
6. Connect the wires for the intercom insert [10] (see section **E**).
7. Plug the intercom insert [10] onto the mounting plate [4] so that the latching hook of the intercom insert fits into the square recesses of the mounting plate.

DE - Installationsanleitung

C Demontage

1. Den Abdeckrahmen [8], das Bedienelement der Raumsteuerung [9] sowie den Intercom-Einsatz [10] gemeinsam abziehen. Hierzu im unteren Drittel des Bedienelements [9] anfassen. Wenn sich der Abdeckrahmen nicht von der Wand löst, vorsichtig mit Schraubendreher abhebeln.
2. Die Schrauben [5] mit denen der Tragring [3] der Raumsteuerung auf der Einbaudose [1] befestigt ist, lösen.
3. Tragring [3] zusammen mit dem Basismodul [7] abnehmen. Das Basismodul [7] bleibt auch nach der Demontage mit dem Tragring verbunden, kann aber im ausgebauten Zustand wieder getrennt werden.
4. Die Schrauben lösen, mit denen der Tragring [4] des Intercom-Einsatzes auf der Unterputzdose befestigt ist.
5. Tragring [4] abnehmen.

D Anschluss Basismodul Raumsteuerung

1. Den Stationsbus (bis auf NF-A und NF-B) und die Zimmerleuchte an das Basismodul der Raumsteuerung anschließen gemäß der Installationsanleitung zu der Raumsteuerung.
2. Die Adern NF-A und NF-B vom Stationsbus durch die Verbindung der Einbaudosen zum Intercom-Einsatz verlegen.
3. Die Anschlusspunkte 11 – 18 des Anschlussfelds gemäß Abb. **D** an eine ca. 30 cm lange Leitung J-Y (ST)Y 4x2x0,8 anschließen.
4. Den Zimmerbus an die externe Klemme anschließen.
5. Die Leitung J-Y (ST)Y 4x2x0,8 durch die Verbindung der Einbaudosen zum Intercom-Einsatz verlegen.

E Anschluss Intercom-Einsatz

1. Die Adern NF-A und NF-B vom Stationsbus am seitlichen Klemmenblock (hellgrau, dunkelgrau) des Intercom-Einsatzes anschließen. Der Klemmenblock kann vorübergehend abgezogen werden.
2. Die Anschlusspunkte 11 – 18 des Anschlussfelds der Raumsteuerung (Abb. **D**) 1:1 mit den Anschlusspunkten 11 – 18 des Anschlussfelds auf der Unterseite des Intercom-Einsatzes (Abb. **E**) verbinden.

EN - Installation Instructions

C Dismantling

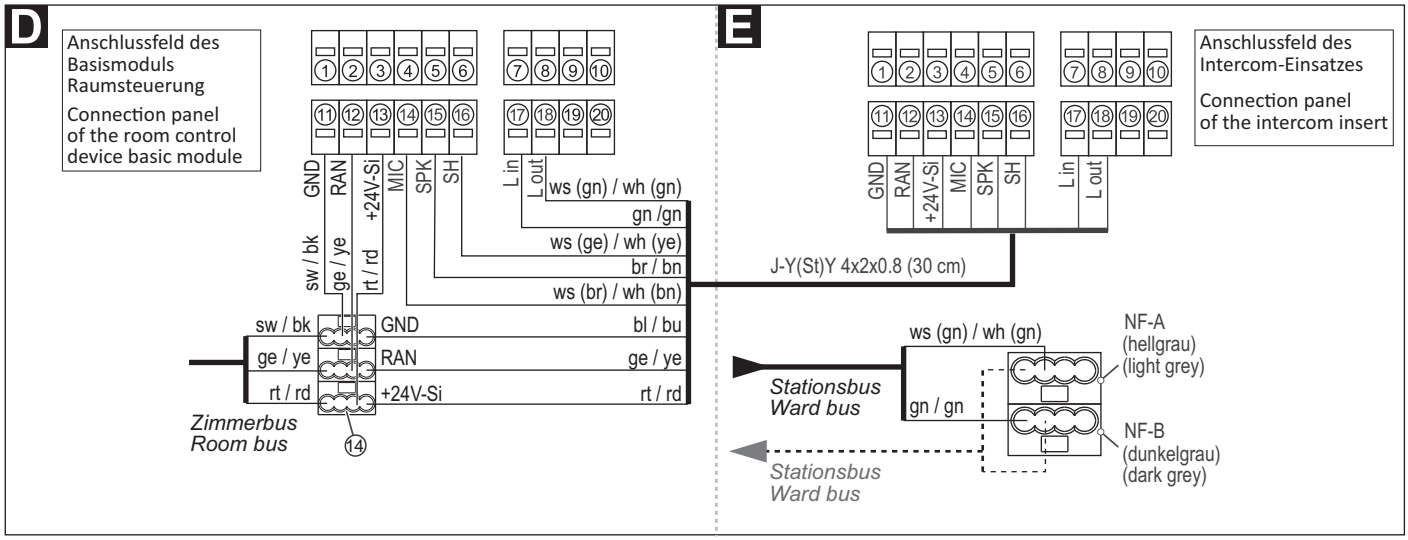
1. Pull the cover frame [8], the control element of the room control [9] and the intercom insert [10] off together. To do this, grip the lower third of the control element [9]. If the cover frame does not come loose, carefully lever it off with a screwdriver.
2. Loosen the screws [5] with which the mounting plate [3] of the room control is fixed to the back box [1].
3. Remove the mounting plate [3] together with the basic module [7]. Although the basic module [7] remains connected to the mounting plate after dismantling, it can, however, be separated again in a dismantled state.
4. Loosen the screws with which the mounting plate [4] of the intercom insert is fixed to the flush-mounted box.
5. Remove the mounting plate [4].

D Connection of basic module of room control

1. Connect the ward bus (up to NF-A and NF-B) and the room lamp to the basic module of the room control according to the installation instructions of the room control.
2. Install wires NF-A and NF-B from the ward bus through the connection of the back box to the intercom insert.
3. Connect the connecting points 11 – 18 of the connection panel according to fig. **D** to a J-Y (ST)Y 4x2x0.8 cable approx. 30 cm long.
4. Connect the room bus to the external terminal block.
5. Install cable J-Y (ST)Y 4x2x0.8 through the connection of the back boxes to the intercom insert.

E Connection of intercom insert

1. Connect wires NF-A and NF-B from the ward bus to the lateral terminal block (light grey, dark grey) of the intercom insert. The terminal block can be pulled off temporarily.
2. Connect connecting points 11 - 18 of the connection panel of the room control (fig. **D**) 1:1 with connecting points 11 - 18 of the connection field on the underside of the intercom insert (fig. **E**).



Nennspannung	24 V=
Ruhestromaufnahme	35 mA
Anschluss Stationsbus Raumsteuerung	Leitungstyp: J-Y(St)Y 4x2x0,8 J-Y(St)Y 2x2x0,8 (30 cm)
Abisolierlänge	6 mm
Einbautiefe	32 mm
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

Nominal voltage	24 V=
Standby current consumption	35 mA
Connection Ward bus Room control	Cable type: J-Y(St)Y 4x2x0.8 J-Y(St)Y 2x2x0.8 (30 cm)
Skinning length	6 mm
Installation depth	32 mm
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

DE - Installationsanleitung

Anwesenheitstaster-Einsatz

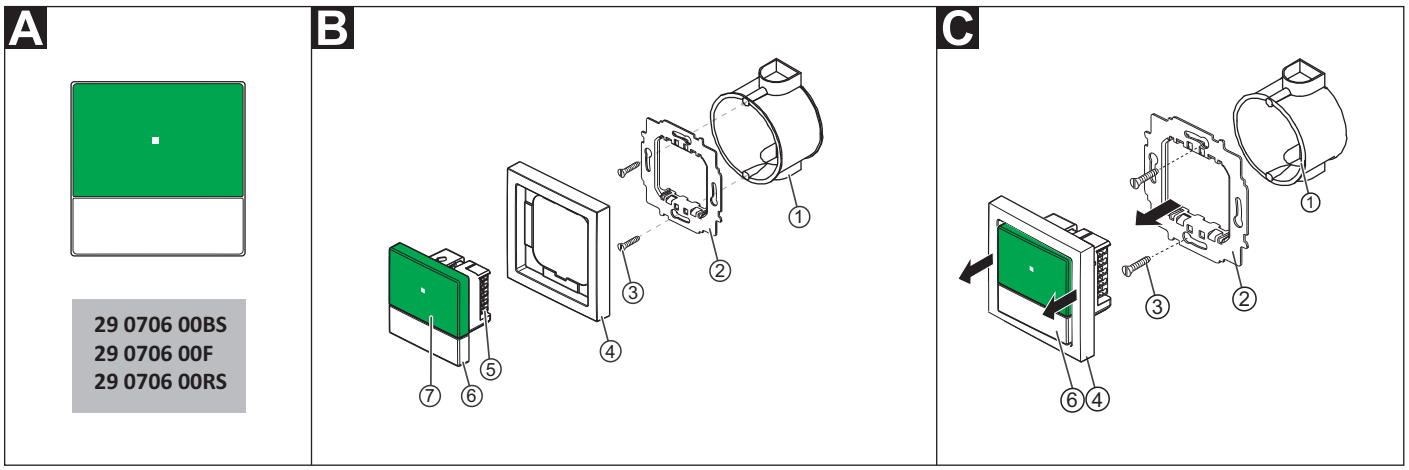
Vorgesehen zum Anschluss an den Zimmerbus einer CONCENTO^{CARE} Rufanlage.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

A Produktbeschreibung

Eine grüne Anwesenheitstaste dient zum Ein- und Ausschalten der Anwesenheit des Personals.

Eine LED in der Anwesenheitstaste leuchtet, wenn die Anwesenheit eingeschaltet ist (Erinnerungslicht).



[1] *Einbaudose, 1-teilig (Mauerwerk: 17 0100 00, Hohlwand: 17 5100 00)
[2] Tragring
[3] *Schrauben der Einbaudose
[4] *Abdeckrahmen, 1-fach
[5] Klemmenblock (Steckklemmen)
[6] Anwesenheitstaster-Einsatz
[7] Anwesenheitstaste (grün)

* Nicht im Lieferumfang enthalten, separat bestellen.

B Montage

Wandeinbau auf einteilige Einbaudose.

1. Tragring [2] auf der Einbaudose [1] festschrauben. Die vier quadratischen Aussparungen im Tragring befinden sich oben und unten.
2. Adern vorbereiten und durch den Tragring [2] führen (siehe Abschnitt „Anschluss“).
3. Anwesenheitstaster-Einsatz [6] gemäß Abschnitt „Anschluss“ anschließen.
4. Abdeckrahmen [4] vor dem Tragring [2] an der Wand anhalten.
5. Anwesenheitstaster-Einsatz [6] auf den Tragring aufstecken, so dass die Rasthaken des Taster-Einsatzes in die quadratischen Aussparungen des Tragrings kommen.

C Demontage

1. Den Abdeckrahmen [4] zusammen mit dem Taster-Einsatz [6] vom Tragring [2] abziehen.
2. Zum Abklemmen der Adern beachten Sie Abb. **E**.

EN - Installation Instructions

Presence switch insert

Intended for connection to the room bus of a CONCENTO^{CARE} nurse call system.

NOTE! The complete installation of the system is described in the Technical Manual.

A Product description

A green presence button serves for switching the presence of the staff on and off.

An LED in the presence switch lights up when the presence is switched on (reminder light).

[1] *Back box, 1-gang (solid wall: 17 0100 00, partition wall: 17 5100 00)
[2] Mounting plate
[3] *Back box screws
[4] *Cover frame, 1-gang
[5] Terminal block (plug-in terminals)
[6] Presence switch insert
[7] Presence button (green)

* Not included in the scope of delivery, please order separately.

B Mounting

Wall mounting on one-gang back box.

1. Bolt the mounting plate [2] to the back box [1]. The four square recesses in the mounting plate are located at the top and bottom.
2. Prepare the wires and feed them through the mounting plate [2] (see section "Connection").
3. Connect the switch insert [6] according to section "Connection".
4. Hold the cover frame [4] in front of the mounting plate [2] on the wall.
5. Plug the presence switch insert [6] onto the mounting plate so that the latching hook of the switch insert fits into the square recesses of the mounting plate.

C Dismantling

1. Pull the cover frame [4] together with the switch insert [6] off the mounting plate [2].
2. For disconnecting the wires, refer to fig. **E**.

DE - Installationsanleitung

D Anschluss

1. Das Anschlusskabel durch den Tragring herausziehen und auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan anschließen.

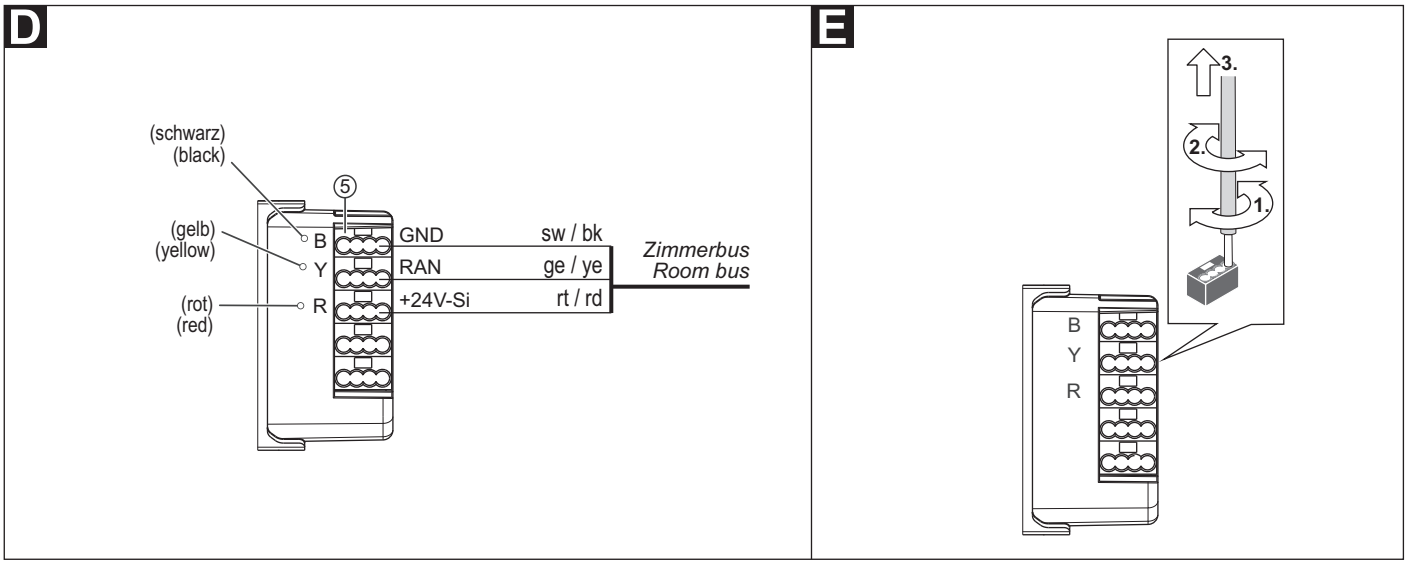
Hinweis: Der Klemmenblock [5] kann vorübergehend abgezogen werden.

EN - Installation Instructions

D Connection

1. Pull the connection cable out through the mounting plate and strip it to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires according to the connection diagram.

Note: The terminal block [5] can be pulled off temporarily.



Technische Daten

Nennspannung	24 V=
Ruhestromaufnahme	8 mA
Anschluss Zimmerbus	Leitungstyp: J-Y(St)Y 2x2x0,8
Abisolierlänge	6 mm
Einbautiefe	24 mm
Schutzart	IP 22
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 95 %

Technical data

Nominal voltage	24 V=
Standby current consumption	8 mA
Room bus connection	Cable type: J-Y(St)Y 2x2x0.8
Skinning length	6 mm
Installation depth	24 mm
Degree of protection	IP 22
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 95 %

DE - Installationsanleitung

Ruftaster-Einsatz mit Steckvorrichtung

Vorgesehen zum Anschluss an den Zimmerbus einer CONCENTO^{CARE} Rufanlage.

Die Steckvorrichtung ist vorgesehen zum Anschluss eines Birntasters, Best.-Nr. 29 0790 xx. Birntaster dienen zum Auslösen von Rufen. Birntaster mit Lichttasten können außerdem zum Schalten von Licht verwendet werden, wahlweise mit oder ohne Dimmfunktion.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

A Produktbeschreibung

Die rote Ruftaste [7] dient zum Auslösen von Rufen. Eine LED in der Ruftaste leuchtet schwach zum Finden der Taste im Dunkeln (Findelicht). Die LED leuchtet hell, sobald ein Ruf ausgelöst wird (Beruhigungslicht).

Lichtansteuerung

Am Ruftaster-Einsatz mit Steckvorrichtung sind zwei Ausgänge zur Lichtansteuerung vorhanden (LT1 und LT2). Wenn beide Ausgänge benutzt werden, ist LT1 für Leselicht und LT2 für Raumlicht vorgesehen. Die Ausgänge geben ein 24 V=-Signal für die Dauer des Lichttastendrucks aus.

Hinweis: Birntaster, Best.-Nr. 29 0790 02, benutzt nur LT1. Dieser kann wahlweise für Leselicht oder Raumlicht verwendet werden.

EN - Installation Instructions

Call switch insert with connector

Intended for connection to the room bus of a CONCENTO^{CARE} nurse call system.

The connector is intended for the connection of a pear push switch, order no. 29 0790 xx. Pear push switches serve for triggering calls. Pear push switches incl. light switches can also be used to switch light, either with or without dimming function.

NOTE! The complete installation of the system is described in the Technical Manual.

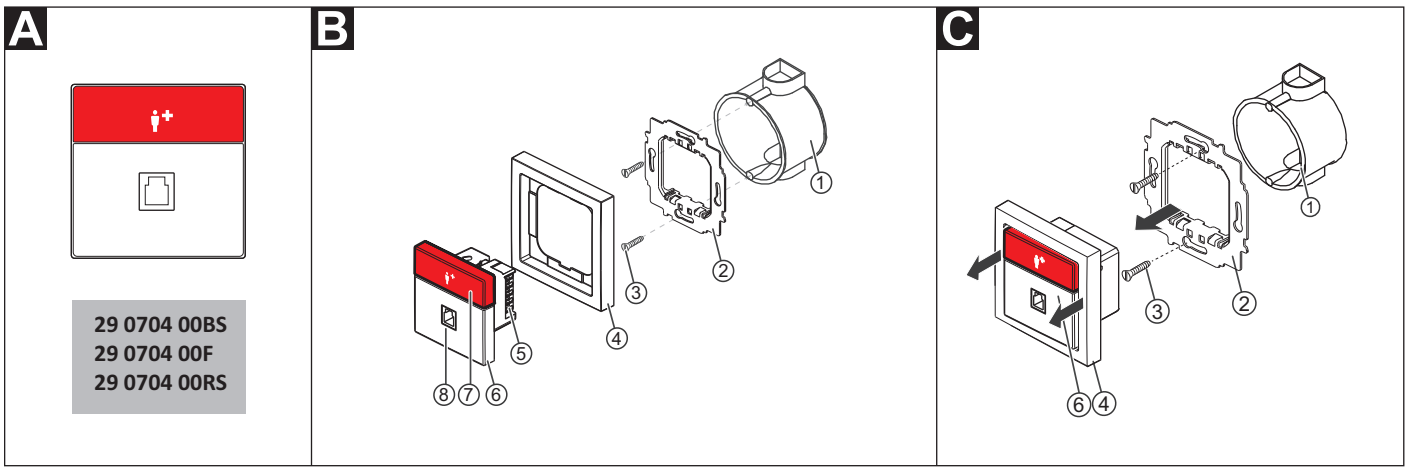
A Product description

The red call button [7] serves for triggering calls. An LED in the call button lights up faintly to locate the button in the dark (location light). The LED lights up brightly as soon as a call is triggered (reassurance light).

Light activation

The call switch insert with connector has two outputs for the activation of lights (LT1 and LT2). If both outputs are used, LT1 is intended for reading light and LT2 for room light. The outputs output a 24 V= signal for the duration the light button is pressed.

Note: Pear push switch, order no. 29 0790 02, only uses LT1. This can be used either for reading light or room light.



[1] *Einbaudose, 1-teilig (Mauerwerk: 17 0100 00, Hohlwand: 17 5100 00)
[2] Tragring
[3] *Schrauben der Einbaudose
[4] *Abdeckrahmen, 1-fach
[5] Klemmenblock (Steckklemmen)
[6] Ruftaster-Einsatz mit Steckvorrichtung
[7] Ruftaste (rot)
[8] Steckvorrichtung

* Nicht im Lieferumfang enthalten, separat bestellen.

[1] *Back box, 1-gang (solid wall: 17 0100 00, partition wall: 17 5100 00)
[2] Mounting plate
[3] *Back box screws
[4] *Cover frame, 1-gang
[5] Terminal block (plug-in terminals)
[6] Call switch insert with connector
[7] Call button (red)
[8] Connector

* Not included in the scope of delivery, please order separately.

B Montage

Wandeinbau auf einteilige Einbaudose:

1. Tragring [2] auf der Einbaudose [1] festschrauben. Die vier quadratischen Aussparungen im Tragring befinden sich oben und unten.
2. Adern vorbereiten und durch den Tragring [2] führen (siehe Abschnitt „Anschluss“).
3. Ruftaster-Einsatz [6] gemäß Abschnitt “Anschluss” anschließen.
4. Abdeckrahmen [4] vor dem Tragring [2] an der Wand anhalten.
5. Ruftaster-Einsatz [6] auf den Tragring aufstecken, so dass die Rasthaken des Ruftaster-Einsatzes in die quadratischen Aussparungen des Tragrings [2] kommen.

C Demontage

1. Den Abdeckrahmen [4] zusammen mit dem Ruftaster-Einsatz [6] vom Tragring [2] abziehen.
2. Zum Abklemmen der Adern beachten Sie Abb. **E**.

B Mounting

Wall installation on one-gang back box:

1. Bolt the mounting plate [2] to the back box [1]. The four square recesses in the mounting plate are located at the top and bottom.
2. Prepare the wires and feed them through the mounting plate [2] (see section "Connection").
3. Connect the call switch insert [6] according to section "Connection".
4. Hold the cover frame [4] in front of the mounting plate [2] on the wall.
5. Plug the call switch insert [6] onto the mounting plate so that the latching hook of the call switch insert fits into the square recesses of the mounting plate [2].

C Dismantling

1. Pull the cover frame [4] together with the call switch insert [6] off the mounting plate [2].
2. For disconnecting the wires, refer to fig. **E**.

DE - Installationsanleitung

D Anschluss

1. Das Anschlusskabel durch den Tragring herausziehen und auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan anschließen.

Hinweis: Birntaster (29 0790 02) verwendet nur LT1!
Birntaster (29 0790 00) verwendet weder LT1 noch LT2.

Hinweis: Der Klemmenblock [5] kann vorübergehend abgezogen werden.

Bettennummer (1 – 6) einstellen

Um in einem Mehrbettzimmer den Rufort näher zu bestimmen, kann die Bettennummer (Bett 1 bis 6) eingestellt werden.

- Werkseinstellung = Bett 1.

Zum Einstellen einer Bettennummer innerhalb der ersten 10 Sekunden nach Einschalten der Spannungsversorgung mit dem im Folgenden beschriebenen Vorgang beginnen. (Alternativ kann auch der Klemmenblock [5] kurz abgezogen und dann wieder aufgesteckt werden.)

1. Ruftaste [7] für 5 Sekunden gedrückt halten.

✓ Die LED der Ruftaste blinkt entsprechend der eingestellten Bettennummer: Bett 1 = 1-mal, Bett 2 = 2-mal usw., kein Bett eingestellt = LED leuchtet 2 Sekunden.

2. Zum Verändern der Bettennummer die Ruftaste [7] kurz betätigen: Bett 1 = 1-mal, Bett 2 = 2-mal usw. Um „keine Bettennummer“ einzustellen, die Ruftaste nicht betätigen.
3. Zum Speichern der Einstellung die Ruftaste [7] für 5 Sekunden erneut gedrückt halten. Hinweis: Wenn die Ruftaste nicht gedrückt gehalten wird, wird die Einstellung nicht gespeichert.

✓ Die LED der Ruftaste blinkt entsprechend der eingestellten Bettennummer: Bett 1 = 1-mal, Bett 2 = 2-mal usw., kein Bett eingestellt = LED leuchtet 2 Sekunden.

EN - Installation Instructions

D Connection

1. Pull the connection cable out through the mounting plate and strip it to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires according to the connection diagram.

Note: Pear push switch (29 0790 02) uses LT1 only!
Pear push switch (29 0790 00) does not use LT1 or LT2.

Note: The terminal block [5] can be pulled off temporarily.

Setting the bed number (1 – 6)

To specify the call location more accurately in a room with multiple beds, the bed number can be set (bed 1 to 6).

- Factory setting = Bed 1.

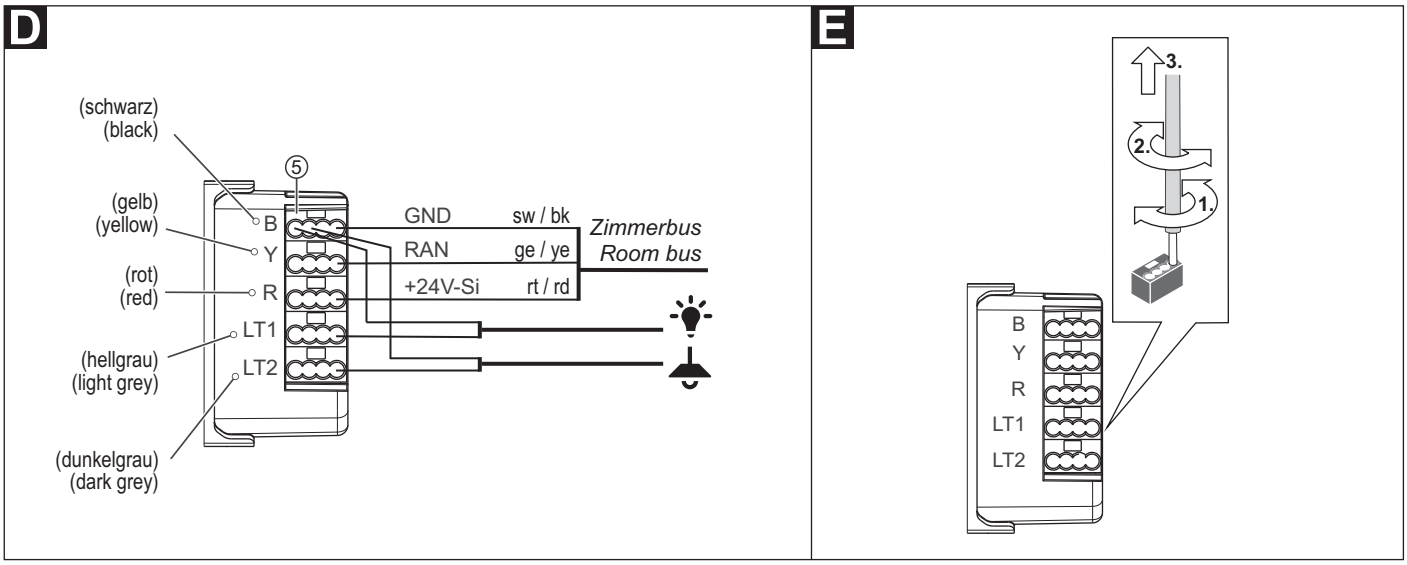
For setting a bed number within the first ten seconds after the power supply is switched on, start with the procedure described in the following. (Alternatively, the terminal block [5] can be pulled off briefly and then re-plugged).

1. Keep the call button [7] pressed for 5 seconds.

✓ The LED on the call button flashes according to the bed number set: Bed 1 = once, Bed 2 = twice and so on, if no bed is set = LED lights up for 2 seconds.

2. To change the bed number, briefly press the call button [7]: Bed 1 = once, Bed 2 = twice and so on. If "no bed number" is to be set, do not press the call button.
3. To save the setting, again press the call button [7] for 5 seconds. Note: If you do not keep the call button pressed, the setting is not saved.

✓ The LED on the call button flashes according to the bed number set: Bed 1 = once, Bed 2 = twice and so on, if no bed is set = LED lights up for 2 seconds.



Technische Daten

Nennspannung	24 V=
Ruhestromaufnahme	9 mA
Anschluss Zimmerbus	Leitungstyp: J-Y(St)Y 2x2x0,8
Abisolierlänge	6 mm
Einbautiefe	24 mm
Lichtsteuerausgänge (LT1, LT2)	Ausgangsspannung: 24 V= Ausgangsstrom: je max. 50 mA
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

Technical data

Nominal voltage	24 V=
Standby current consumption	9 mA
Room bus connection	Cable type: J-Y(St)Y 2x2x0.8
Skinning length	6 mm
Installation depth	24 mm
Light control outputs (LT1, LT2)	Output voltage: 24 V =; Output current: each a max. of 50 mA
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

DE - Installationsanleitung

Ruftaster-Einsatz

Vorgesehen zum Anschluss an den Zimmerbus einer CONCENTO^{CARE} Rufanlage.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

A Produktbeschreibung

Die rote Ruftaste [7] dient zum Auslösen von Rufen oder WC-Rufen. Eine LED in der Ruftaste leuchtet schwach zum Finden der Taste im Dunkeln (Findelicht). Die LED leuchtet hell, sobald ein Ruf ausgelöst wird (Beruhigungslicht).

EN - Installation Instructions

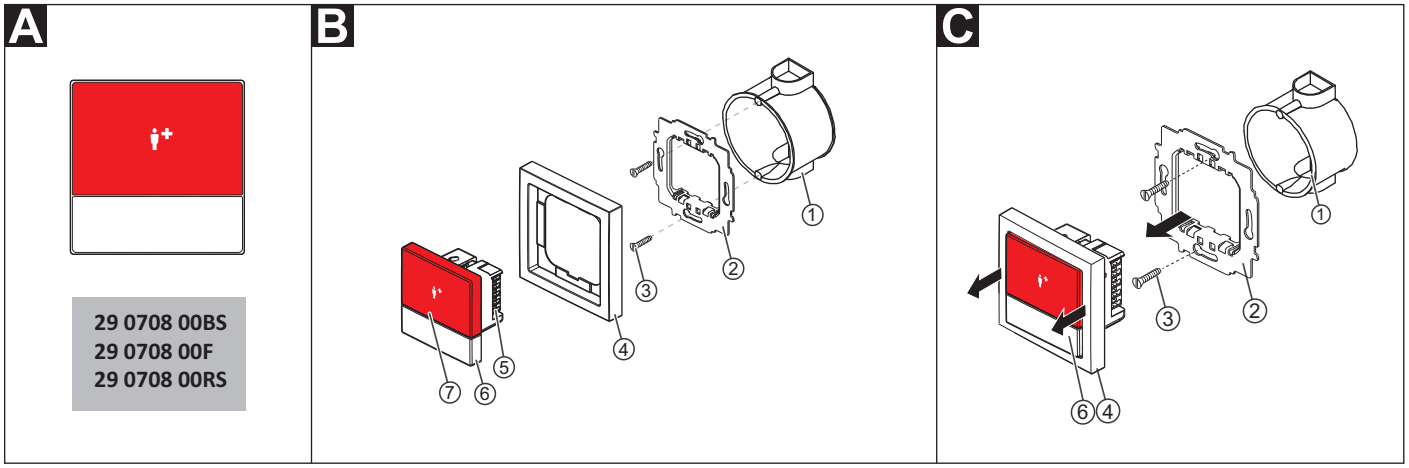
Call switch insert

Intended for connection to the room bus of a CONCENTO^{CARE} nurse call system.

NOTE! The complete installation of the system is described in the Technical Manual.

A Product description

The red call button [7] serves for triggering calls or WC calls. An LED in the call button lights up faintly to locate the button in the dark (location light). The LED lights up brightly as soon as a call is triggered (reassurance light).



[1] *Einbaudose, 1-teilig (Mauerwerk: 17 0100 00, Hohlwand: 17 5100 00)
[2] Tragring
[3] *Schrauben der Einbaudose
[4] *Abdeckrahmen, 1-fach
[5] Klemmenblock (Steckklemmen)
[6] Ruftaster-Einsatz
[7] Ruftaste (rot)

* Nicht im Lieferumfang enthalten, separat bestellen.

B Montage

Wandeinbau auf einteilige Einbaudose.

1. Tragring [2] auf der Einbaudose [1] festschrauben. Die vier quadratischen Aussparungen im Tragring befinden sich oben und unten.
2. Adern vorbereiten und durch den Tragring [2] führen (siehe Abschnitt „Anschluss“).
3. Ruftaster-Einsatz [6] gemäß Abschnitt „Anschluss“ anschließen.
4. Abdeckrahmen [4] vor dem Tragring [2] an der Wand anhalten.
5. Ruftaster-Einsatz [6] auf den Tragring aufstecken, so dass die Rasthaken des Ruftaster-Einsatzes in die quadratischen Aussparungen des Tragrings kommen.

C Demontage

1. Den Abdeckrahmen [4] zusammen mit dem Taster-Einsatz [6] vom Tragring [2] abziehen.
2. Zum Abklemmen der Adern beachten Sie Abb. **E**.

[1] *Back box, 1-gang (solid wall: 17 0100 00, partition wall: 17 5100 00)
[2] Mounting plate
[3] *Back box screws
[4] *Cover frame, 1-gang
[5] Terminal block (plug-in terminals)
[6] Call switch insert
[7] Call button (red)

* Not included in the scope of delivery, please order separately.

B Mounting

Wall mounting on one-gang back box.

1. Bolt the mounting plate [2] to the back box [1]. The four square recesses in the mounting plate are located at the top and bottom.
2. Prepare the wires and feed them through the mounting plate [2] (see section "Connection").
3. Connect the call switch insert [6] according to section "Connection".
4. Hold the cover frame [4] in front of the mounting plate [2] on the wall.
5. Plug the call switch insert [6] onto the mounting plate so that the latching hook of the switch insert fits into the square recesses of the mounting plate.

C Dismantling

1. Pull the cover frame [4] together with the switch insert [6] off the mounting plate [2].
2. For disconnecting the wires, refer to fig. **E**.

DE - Installationsanleitung

D Anschluss

1. Das Anschlusskabel durch den Tragring herausziehen und auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan anschließen.

Hinweis: Der Klemmenblock [5] kann vorübergehend abgezogen werden.

3. Wenn der Ruftaster-Einsatz zur Auslösung von WC-Rufen verwendet werden soll, muss eine Drahtbrücke zwischen den Anschlusspunkten LT1 und LT2 gesetzt werden. Zur Auslösung von normalen Rufen darf keine Drahtbrücke gesetzt sein (= Werkseinstellung).

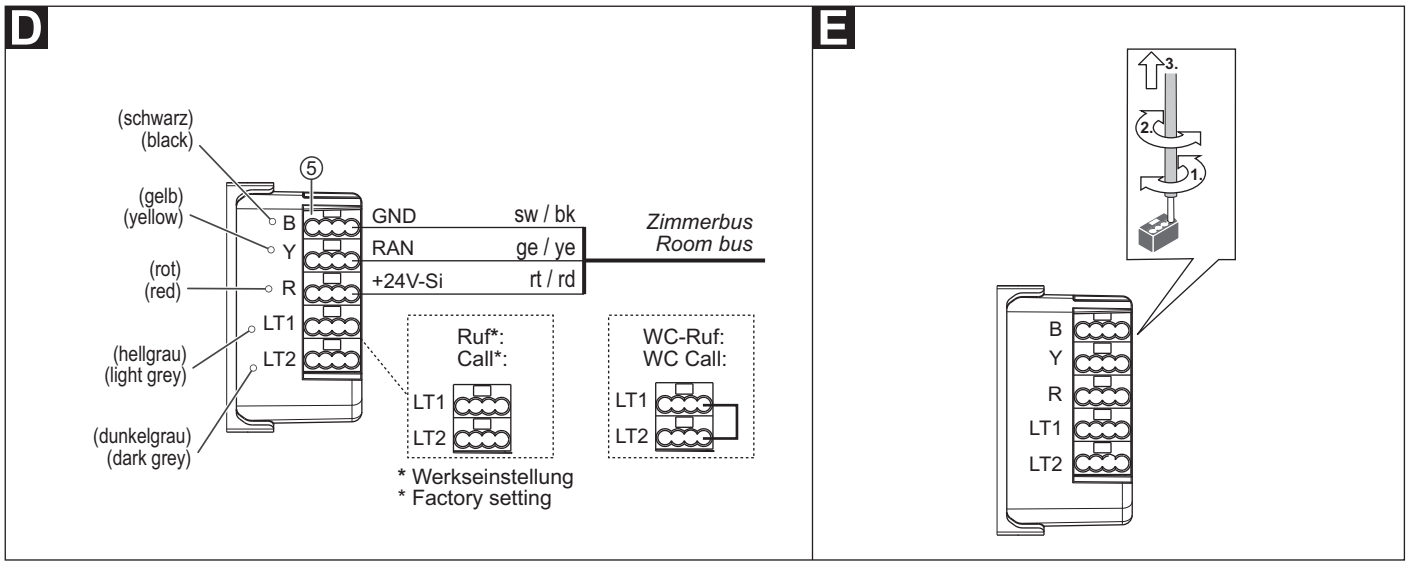
EN - Installation Instructions

D Connection

1. Pull the connection cable out through the mounting plate and strip it to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires according to the connection diagram.

Note: The terminal block [5] can be pulled off temporarily.

3. If the call switch insert is to be used for triggering WC calls, a wire bridge must be fitted between connection points LT1 and LT2. No wire bridge is to be set for triggering standard calls (= factory setting).



Technische Daten

Nennspannung	24 V=
Ruhestromaufnahme	9 mA
Anschluss Zimmerbus	Leitungstyp: J-Y(St)Y 2x2x0,8
Abisolierlänge	6 mm
Einbautiefe	24 mm
Schutzart	IP 22
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 95 %

Technical data

Nominal voltage	24 V=
Standby current consumption	9 mA
Room bus connection	Cable type: J-Y(St)Y 2x2x0.8
Skinning length	6 mm
Installation depth	24 mm
Degree of protection	IP 22
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 95 %

DE - Installationsanleitung

Abstelltaster-Einsatz

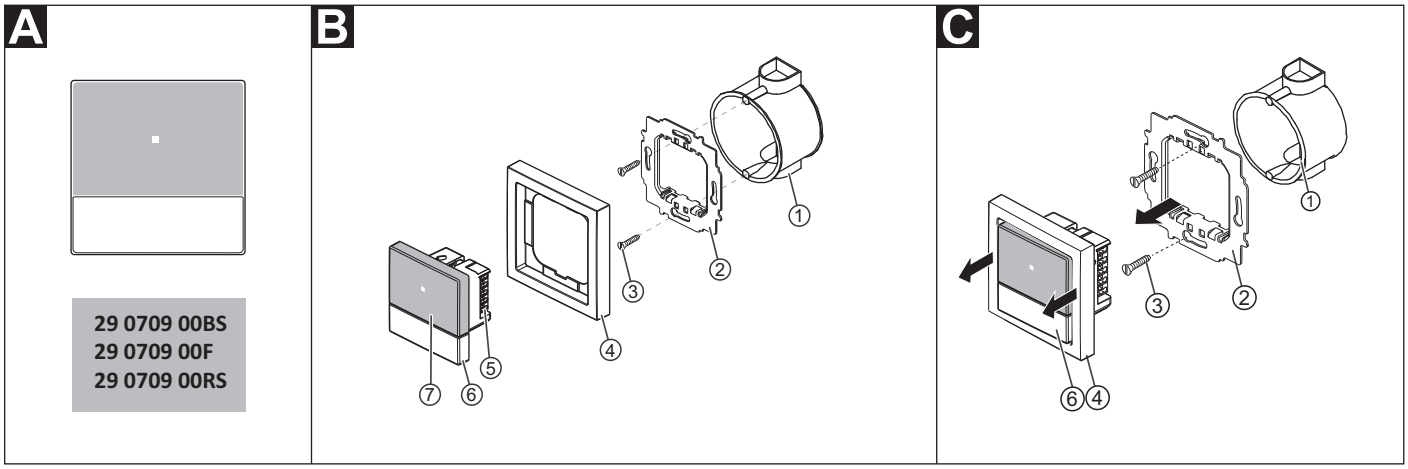
Vorgesehen zum Anschluss an den Zimmerbus einer CONCENTO^{CARE} Rufanlage.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

A Produktbeschreibung

Eine graue Abstelltaste dient zum Abstellen von WC-Rufen und WC-Notrufen vor Ort im WC-Bereich.

Eine LED in der Abstelltaste leuchtet, wenn ein WC-Ruf oder WC-Notruf ausgelöst wurde, der mit der Abstelltaste abgestellt werden muss (Erinnerungslicht).



[1] *Einbaudose, 1-teilig (Mauerwerk: 17 0100 00, Hohlwand: 17 5100 00)
[2] Tragring
[3] *Schrauben der Einbaudose
[4] *Abdeckrahmen, 1-fach
[5] Klemmenblock (Steckklemmen)
[6] Abstelltaster-Einsatz
[7] Abstelltaste (grau)

***** Nicht im Lieferumfang enthalten, separat bestellen.

B Montage

Wandeinbau auf einteilige Einbaudose.

1. Tragring [2] auf der Einbaudose [1] festschrauben. Die vier quadratischen Aussparungen im Tragring befinden sich oben und unten.
2. Adern vorbereiten und durch den Tragring [2] führen (siehe Abschnitt „Anschluss“).
3. Abstelltaster-Einsatz [6] gemäß Abschnitt „Anschluss“ anschließen.
4. Abdeckrahmen [4] vor dem Tragring [2] an der Wand anhalten.
5. Abstelltaster-Einsatz [6] auf den Tragring aufstecken, so dass die Rasthaken des Taster-Einsatzes in die quadratischen Aussparungen des Tragrings kommen.

C Demontage

1. Den Abdeckrahmen [4] zusammen mit dem Taster-Einsatz [6] vom Tragring [2] abziehen.
2. Zum Abklemmen der Adern beachten Sie Abb. **E**.

EN - Installation Instructions

Cancel switch insert

Intended for connection to the room bus of a CONCENTO^{CARE} nurse call system.

NOTE! The complete installation of the system is described in the Technical Manual.

A Product description

A grey cancel button serves for cancelling WC calls and WC emergency calls locally in the WC area.

An LED in the cancel switch lights up when a WC call or WC emergency call was triggered, which has to be cancelled with the cancel button (reminder light).

[1] *Back box, 1-gang (solid wall: 17 0100 00, partition wall: 17 5100 00)
[2] Mounting plate
[3] *Back box screws
[4] *Cover frame, 1-gang
[5] Terminal block (plug-in terminals)
[6] Cancel switch insert
[7] Cancel button (grey)

* Not included in the scope of delivery, please order separately.

B Mounting

Wall mounting on one-gang back box.

1. Bolt the mounting plate [2] to the back box [1]. The four square recesses in the mounting plate are located at the top and bottom.
2. Prepare the wires and feed them through the mounting plate [2] (see section "Connection").
3. Connect the cancel switch insert [6] according to section "Connection".
4. Hold the cover frame [4] in front of the mounting plate [2] on the wall.
5. Plug the cancel switch insert [6] onto the mounting plate so that the latching hook of the switch insert fits into the square recesses of the mounting plate.

C Dismantling

1. Pull the cover frame [4] together with the switch insert [6] off the mounting plate [2].
2. For disconnecting the wires, refer to fig. **E**.

DE - Installationsanleitung

D Anschluss

1. Das Anschlusskabel durch den Tragring herausziehen und auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan anschließen.

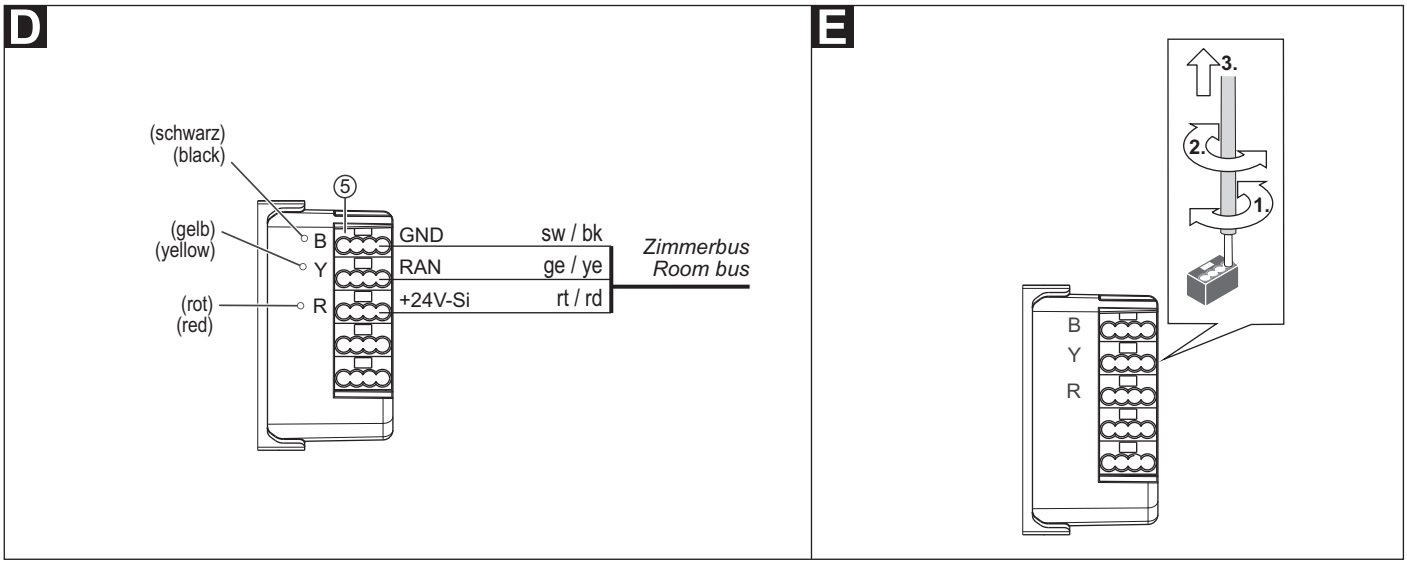
Hinweis: Der Klemmenblock [5] kann vorübergehend abgezogen werden.

EN - Installation Instructions

D Connection

1. Pull the connection cable out through the mounting plate and strip it to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires according to the connection diagram.

Note: The terminal block [5] can be pulled off temporarily.



Technische Daten

Nennspannung	24 V=
Ruhestromaufnahme	8 mA
Anschluss Zimmerbus	Leitungstyp: J-Y(St)Y 2x2x0,8
Abisolierlänge	6 mm
Einbautiefe	24 mm
Schutzart	IP 22
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 95 %

Technical data

Nominal voltage	24 V=
Standby current consumption	8 mA
Room bus connection	Cable type: J-Y(St)Y 2x2x0.8
Skinning length	6 mm
Installation depth	24 mm
Degree of protection	IP 22
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 95 %

DE - Installationsanleitung

Zugtaster-Einsatz

Vorgesehen zum Anschluss an den Zimmerbus einer CONCENTO^{CARE} Rufanlage.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

A Produktbeschreibung

Die Zugschnur [7] dient zum Auslösen von Rufen oder WC-Rufen durch Zugbetätigung. Zusätzlich dient eine rote Ruftaste [9] zur Rufauslösung. Eine LED in der Ruftaste [9] leuchtet schwach zum Finden der Taste im Dunkeln (Findelicht). Die LED leuchtet hell, sobald ein Ruf ausgelöst wird (Beruhigungslicht).

Ein Sicherheitsverschluss in der Zugschnur [7] öffnet sich, wenn die Zugkraft einen Grenzwert von 25 N überschreitet. Durch einfaches Zusammenstecken wird der Sicherheitsverschluss wieder geschlossen.

EN - Installation Instructions

Pull cord switch insert

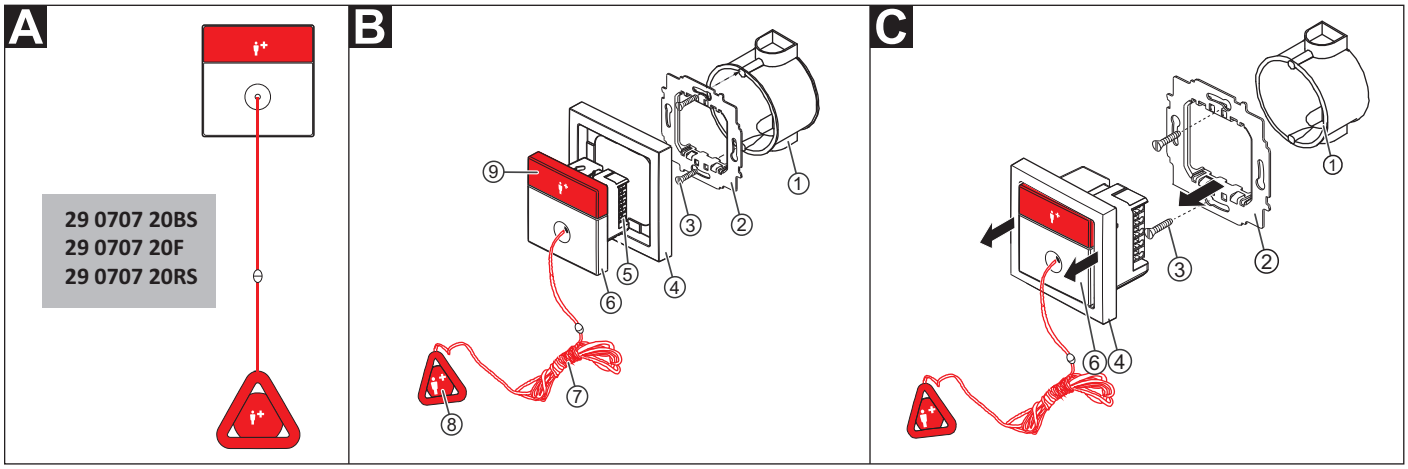
Intended for connection to the room bus of a CONCENTO^{CARE} nurse call system.

NOTE! The complete installation of the system is described in the Technical Manual.

A Product description

The pull cord [7] serves for triggering calls or WC calls by pulling on the cord. Also an additional red call button [9] serves for triggering calls. An LED in the call button [9] lights up faintly to locate the button in the dark (location light). The LED lights up brightly as soon as a call is triggered (reassurance light).

A safety release in the pull cord [7] opens when the pulling force exceeds a limit value of 25 N. The safety release is easily closed again by simply pushing it together.



[1] *Einbaudose, 1-teilig (Mauerwerk: 17 0100 00, Hohlwand: 17 5100 00)
[2] Tragring
[3] *Schrauben der Einbaudose
[4] *Abdeckrahmen, 1-fach
[5] Klemmenblock (Steckklemmen)
[6] Zugtaster-Einsatz
[7] Zugschnur (2,50 m) inkl. Sicherheitsverschluss
[8] Rufgriff
[9] Ruftaste (rot)

***** Nicht im Lieferumfang enthalten, separat bestellen.

[1] *Back box, 1-gang (solid wall: 17 0100 00, partition wall: 17 5100 00)
[2] Mounting plate
[3] *Back box screws
[4] *Cover frame, 1-gang
[5] Terminal block (plug-in terminals)
[6] Pull cord switch insert
[7] Pull cord (2.50 m) incl. safety release)
[8] Call handle
[9] Call button (red)

* Not included in the scope of delivery, please order separately.

B Montage

Achtung! Zugtaster in Duschzellen müssen mindestens 20 cm über der höchst möglichen Position des Duschkopfes installiert werden.

Decken- oder Wandeinbau auf einteilige Einbaudose:

1. Tragring [2] auf der Einbaudose [1] festschrauben. Die vier quadratischen Aussparungen im Tragring befinden sich oben und unten.
2. Adern vorbereiten und durch den Tragring führen (siehe Abschnitt „Anschluss“).
3. Zugtaster-Einsatz [6] gemäß Abschnitt „Anschluss“ anschließen.
4. Abdeckrahmen [4] vor dem Tragring an der Wand anhalten.
5. Zugtaster-Einsatz [6] auf den Tragring aufstecken, so dass die Rasthaken des Zugtaster-Einsatzes in die quadratischen Aussparungen des Tragrings kommen. Die Ruftaste befindet sich oben.
6. Der Rufgriff [8] muss sich zwischen 10 und 20 cm über dem Fußboden befinden. Der Sicherheitsverschluss muss sich oberhalb der Stelle der Zugschnur befinden, an der für die Rufauslösung gezogen wird. Um diese Eigenschaften der Zugschnur [7] zu erhalten, kürzen Sie die Zugschnur [7] am Sicherheitsverschluss oder im Rufgriff und verknoten sie dort neu.

C Demontage

1. Den Abdeckrahmen [4] zusammen mit dem Zugtaster-Einsatz [6] vom Tragring [2] abziehen.
2. Zum Abklemmen der Adern beachten Sie Abb. **E**.

B Mounting

Caution! Pull cord switches in shower stalls must be installed at least 20 cm above the highest possible position of the shower head.

Ceiling or wall installation on one-gang back box:

1. Bolt the mounting plate [2] to the back box [1]. The four square recesses in the mounting plate are located at the top and bottom.
2. Prepare the wires and feed them through the mounting plate (see section "Connection").
3. Connect the pull cord switch insert [6] according to section "Connection".
4. Hold the cover frame [4] in front of the mounting plate on the wall.
5. Plug the pull cord switch insert [6] onto the mounting plate so that the latching hook of the pull cord switch insert fits into the square recesses of the mounting plate. The call button is located on top.
6. The call handle [8] must be located between 10 and 20 cm above the floor. The safety release must be located above the position of the pull cord where it will be pulled to trigger a call. To maintain these characteristics of the pull cord [7], shorten the pull cord [7] at the safety release or in the call handle and re-knot it there again.

C Dismantling

1. Pull the cover frame [4] together with the pull cord switch insert [6] off the mounting plate [2].
2. For disconnecting the wires, refer to fig. **E**.

DE - Installationsanleitung

D Anschluss

1. Das Anschlusskabel durch den Tragring herausziehen und auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan anschließen.

Hinweis: Der Klemmenblock [5] kann vorübergehend abgezogen werden.

3. Wenn der Zugtaster-Einsatz zur Auslösung von WC-Rufen verwendet werden soll, muss eine Drahtbrücke zwischen den Anschlusspunkten LT1 und LT2 gesetzt werden. Zur Auslösung von normalen Rufen darf keine Drahtbrücke gesetzt sein (= Werkseinstellung).

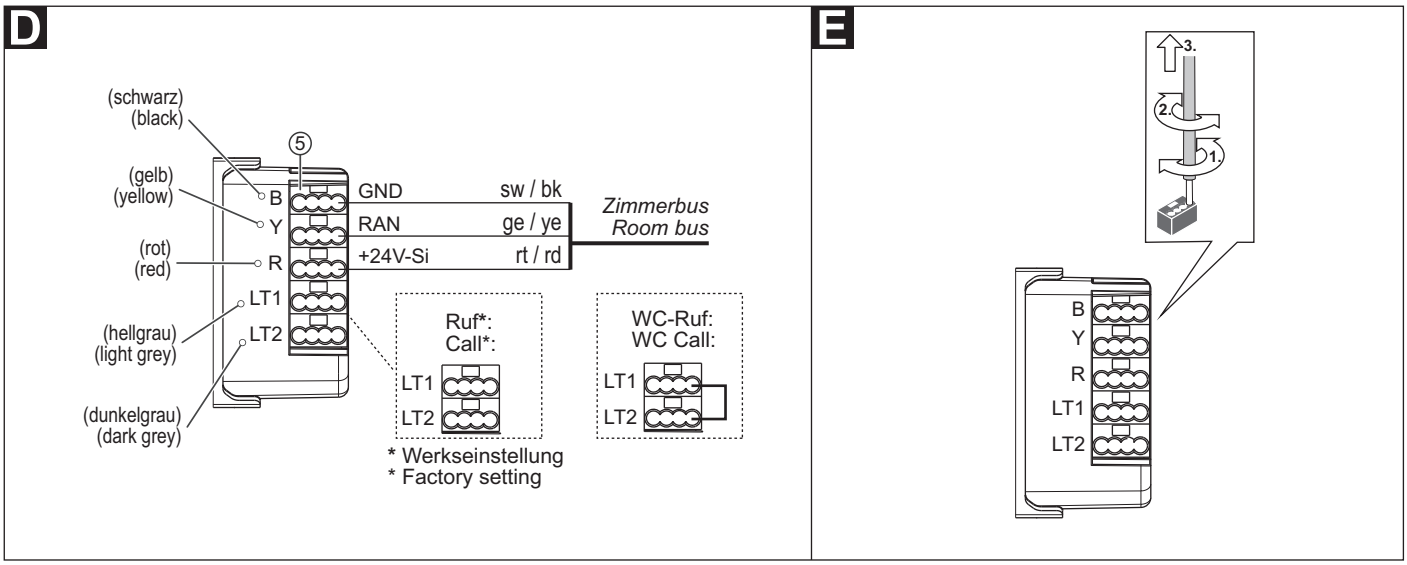
EN - Installation Instructions

D Connection

1. Pull the connection cable out through the mounting plate and strip it to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires according to the connection diagram.

Note: The terminal block [5] can be pulled off temporarily.

3. If the pull cord switch insert is to be used for triggering WC calls, a wire bridge must be fitted between connection points LT1 and LT2. No wire bridge is to be set for triggering standard calls (= factory setting).



Technische Daten

Nennspannung	24 V=
Ruhestromaufnahme	9 mA
Anschluss Zimmerbus	Leitungstyp: J-Y(St)Y 2x2x0,8
Abisolierlänge	6 mm
Einbautiefe	24 mm
Schutzart	IP 22
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 95 %

Technical data

Nominal voltage	24 V=
Standby current consumption	9 mA
Room bus connection	Cable type: J-Y(St)Y 2x2x0.8
Skinning length	6 mm
Installation depth	24 mm
Degree of protection	IP 22
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 95 %

DE - Installationsanleitung

Pneumatiktaster-Einsatz

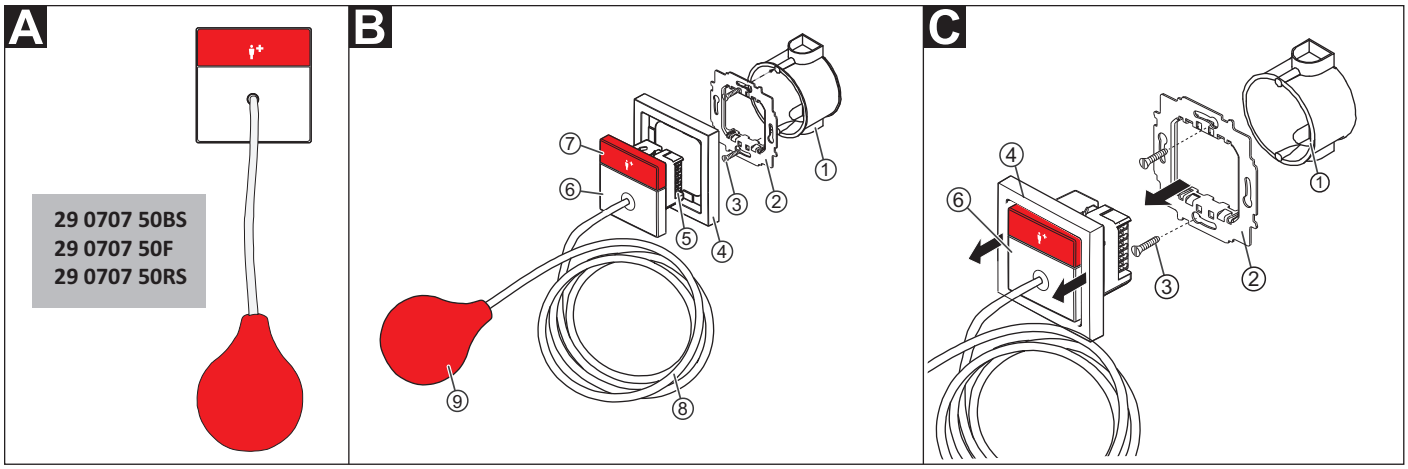
Vorgesehen zum Anschluss an den Zimmerbus einer CONCENTO^{CARE} Rufanlage.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

A Produktbeschreibung

Durch Drücken des roten Gummiballs [9], der über einen Luftschlauch [8] am Pneumatiktaster-Einsatz [6] angeschlossen ist, wird ein Ruf oder ein WC-Ruf ausgelöst.

Zusätzlich dient eine rote Ruftaste [7] zur Rufauslösung. Eine LED in der Ruftaste leuchtet schwach zum Finden der Taste im Dunkeln (Findelicht). Die LED leuchtet hell, sobald ein Ruf ausgelöst wird (Beruhigungslicht).



[1] *Einbaudose, 1-teilig (Mauerwerk: 17 0100 00, Hohlwand: 17 5100 00)
[2] Tragring
[3] *Schrauben der Einbaudose
[4] *Abdeckrahmen, 1-fach
[5] Klemmenblock (Steckklemmen)
[6] Pneumatiktaster-Einsatz
[7] Ruftaste (rot)
[8] Luftschlauch (2 m) aus Silikon
[9] Gummiball

***** Nicht im Lieferumfang enthalten, separat bestellen.

B Montage

Wandeinbau auf einteilige Einbaudose:

1. Tragring [2] auf der Einbaudose [1] festschrauben. Die vier quadratischen Aussparungen im Tragring befinden sich oben und unten.
2. Adern vorbereiten und durch den Tragring [2] führen (siehe Abschnitt „Anschluss“).
3. Pneumatiktaster-Einsatz [6] gemäß Abschnitt „Anschluss“ anschließen.
4. Abdeckrahmen [4] vor dem Tragring an der Wand anhalten.
5. Pneumatiktaster-Einsatz [6] auf den Tragring [2] aufstecken, so dass die Rasthaken des Pneumatiktaster-Einsatzes in die quadratischen Aussparungen des Tragrings [2] kommen. Die Ruftaste befindet sich oben.
6. Sicherstellen, dass der Luftschlauch [8] fest auf den Stutzen am Pneumatiktaster-Einsatz [6] aufgesteckt ist.

C Demontage

1. Den Abdeckrahmen [4] zusammen mit dem Pneumatiktaster-Einsatz [6] vom Tragring [2] abziehen.
2. Zum Abklemmen der Adern beachten Sie Abb. **E**.

EN - Installation Instructions

Pneumatic switch insert

Intended for connection to the room bus of a CONCENTO^{CARE} nurse call system.

NOTE! The complete installation of the system is described in the Technical Manual.

A Product description

A call or a WC call is triggered by pressing the red rubber ball [9], which is connected to the pneumatic switch insert [6] via an air hose [8].

Also an additional red call button [7] serves for triggering calls. An LED in the call button lights up faintly to locate the button in the dark (location light). The LED lights up brightly as soon as a call is triggered (reassurance light).

[1] *Back box, 1-gang (solid wall: 17 0100 00, partition wall: 17 5100 00)
[2] Mounting plate
[3] *Back box screws
[4] *Cover frame, 1-gang
[5] Terminal block (plug-in terminals)
[6] Pneumatic switch insert
[7] Call button (red)
[8] Air hose (2 m) made of silicone
[9] Rubber ball

* Not included in the scope of delivery, please order separately.

B Mounting

Wall installation on one-gang back box:

1. Bolt the mounting plate [2] to the back box [1]. The four square recesses in the mounting plate are located at the top and bottom.
2. Prepare the wires and feed them through the mounting plate [2] (see section "Connection").
3. Connect the pneumatic switch insert [6] according to section "Connection".
4. Hold the cover frame [4] in front of the mounting plate on the wall.
5. Plug the pneumatic switch insert [6] onto the mounting plate [2] so that the latching hook of the pneumatic switch insert fits into the square recesses of the mounting plate [2]. The call button is located on top.
6. Ensure that the air hose [8] is firmly plugged onto the nozzle on the pneumatic switch insert [6].

C Dismantling

1. Pull the cover frame [4] together with the pneumatic switch insert [6] off the mounting plate [2].
2. For disconnecting the wires, refer to fig. **E**.

DE - Installationsanleitung

D Anschluss

1. Das Anschlusskabel durch den Tragring herausziehen und auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan anschließen.

Hinweis: Der Klemmenblock [5] kann vorübergehend abgezogen werden.

3. Wenn der Pneumatiktaster-Einsatz zur Auslösung von WC-Rufen verwendet werden soll, muss eine Drahtbrücke zwischen den Anschlusspunkten LT1 und LT2 gesetzt werden. Zur Auslösung von normalen Rufen darf keine Drahtbrücke gesetzt sein (= Werkseinstellung).

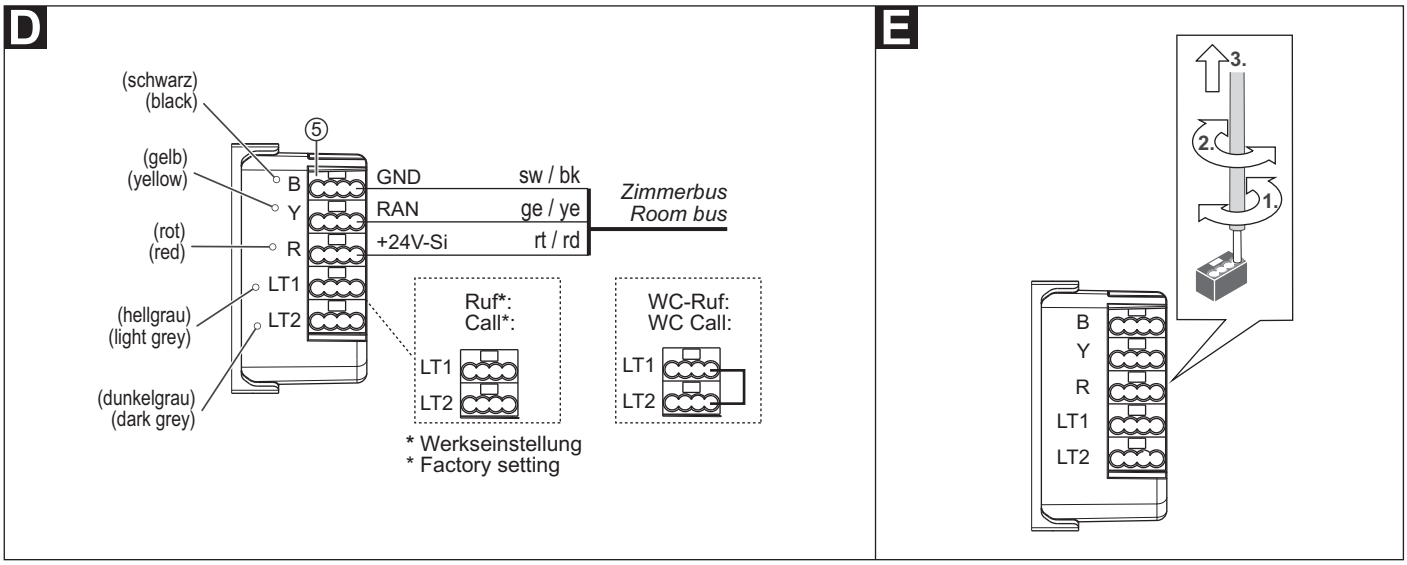
EN - Installation Instructions

D Connection

1. Pull the connection cable out through the mounting plate and strip it to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires according to the connection diagram.

Note: The terminal block [5] can be pulled off temporarily.

3. If the pneumatic switch insert is to be used for triggering WC calls, a wire bridge must be fitted between connection points LT1 and LT2. No wire bridge is to be set for triggering standard calls (= factory setting).



Technische Daten

Nennspannung	24 V=
Ruhestromaufnahme	14 mA
Anschluss Zimmerbus	Leitungstyp: J-Y(St)Y 2x2x0,8
Abisolierlänge	6 mm
Einbautiefe	24 mm
Schutzart	IP 22
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 95 %

Technical data

Nominal voltage	24 V=
Standby current consumption	14 mA
Room bus connection	Cable type: J-Y(St)Y 2x2x0.8
Skinning length	6 mm
Installation depth	24 mm
Degree of protection	IP 22
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 95 %

DE - Installationsanleitung

RAN-Schnittstelle

Die RAN-Schnittstelle dient zum Anschluss eines externen Auslösegerätes (Öffner- oder Schließerkontakt) an den Zimmerbus (RAN) einer CONCENTO^{CARE} oder CONCENTO^{PLUS} Rufanlage. Das Auslösegerät löst dadurch einen Ruf in der Rufanlage aus. Zusätzlich kann eine LED des Auslösegerätes an die RAN-Schnittstelle angeschlossen werden. Die LED leuchtet, sobald das Auslösegerät ausgelöst wird (Beruhigungslicht).

Nur CONCENTO^{CARE}: Das Auslösegerät kann optional als Aktivitätstrigger für die Passivalarmfunktion verwendet werden.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

VORSICHT! Die Leiterplatte ist mit elektrostatisch gefährdeten Bauteilen bestückt. Direkte Berührung der Bauteile vermeiden.

EN - Installation Instructions

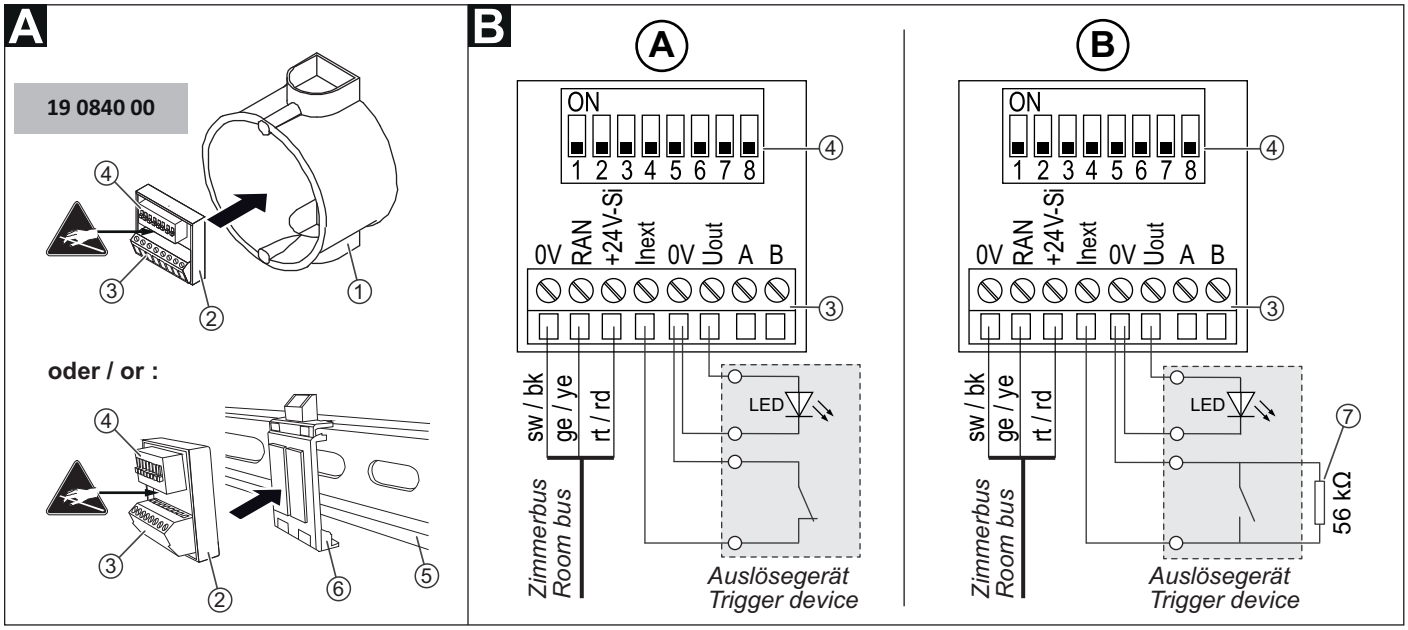
RAN interface

The RAN interface is intended for connecting an external trigger device (normally closed or normally open contact) to the room bus (RAN) of a CONCENTO^{CARE} or CONCENTO^{PLUS} nurse call system. Thus the trigger device will trigger calls in the nurse call system. It is also possible to connect a LED of the trigger device to the RAN interface. The LED lights up as soon as the trigger device is triggered (reassurance light).

CONCENTO^{CARE} only: The triggering device can optionally be used as an activity trigger for the inactivity alarm function.

NOTE! The complete installation of the system is described in the Technical Manual.

CAUTION! The PCB is equipped with components that are at risk of being damaged electrostatically. Avoid direct contact.



[1] *Einbaudose
[2] RAN-Schnittstelle
[3] Anschlussklemme (Schraubklemme)
[4] DIP-Schalter, 8-polig
[5] *Hutschiene, 35 mm
[6] Hutschienenclip mit zwei Klebepads
[7] Widerstand 56 kΩ

***** Nicht im Lieferumfang enthalten, separat bestellen.

[1] *Back box
[2] RAN interface
[3] Connector (screw-type terminal)
[4] DIP switch, 8-pole
[5] *Top hat rail, 35 mm
[6] Top hat rail clip with two adhesive pads
[7] Resistor 56 kΩ

* Not included in the scope of delivery, please order separately.

A Montage

Montage in der Nähe des Auslösegerätes (max. 5 m Leitungslänge) in einer Einbaudose oder auf 35 mm Hutschiene:

Einbaudosen-Installation

RAN-Schnittstelle [2] einfach in die Einbaudose [1] hineinlegen. Nach erfolgtem Anschluss, Einbaudose mit Blindzentralscheibe oder Leitungsauslass abdecken.

Hutschienen-Installation

RAN-Schnittstelle [2] auf Klebepads des Hutschienenclips [6] aufkleben und dann zusammen mit dem Hutschienenclip auf die Hutschiene [5] aufschnappen.

Demontage

Unterputzdosen-Installation: RAN-Schnittstelle [2] aus der Einbaudose entnehmen.

Hutschienen-Installation: Hutschienenclip [6] zusammen mit RAN-Schnittstelle [2] von der Hutschiene [5] lösen.

A Mounting

Mounting in the vicinity of the trigger device (max. 5 m cable length), either in a back box or on a 35 mm top hat rail:

Back box installation

Simply insert the RAN interface [2] in the back box [1]. After the connection has been made, cover the back box with a blank plate or a line outlet.

Top hat rail installation

Stick the RAN interface [2] onto the adhesive pads on the top hat rail clip [6] and then snap both it and the top hat rail clip onto the top hat rail [5].

Dismantling

Back box installation: Remove the RAN interface [2] from the back box.

Top hat rail installation: Detach both the top hat rail clip [6] and the RAN interface [2] from the top hat rail [5].

DE - Installationsanleitung

B Anschluss

1. Die Anschlusskabel auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.

- **Öffnerkontakt**: Adern gemäß Anschlussplan (A) anschließen.
- **Schließerkontakt**: Adern gemäß Anschlussplan (B) anschließen. 56 kΩ-Widerstand gemäß Anschlussplan (B) anschließen (Funktion: Überwachung des Kontakts).

DIP-Schalter [4], Nummer 1 – 8 setzen

Auszulösende Rufart ***	DIP-Schalter Nr.					
	1	2	3	4	5	6
Raumruf **	OFF	OFF	OFF	OFF	OFF	OFF
Ruf Bett 1	ON	OFF	OFF	OFF	OFF	OFF
Ruf Bett 2	OFF	ON	OFF	OFF	OFF	OFF
Ruf Bett 3	ON	ON	OFF	OFF	OFF	OFF
Funkruf	OFF	OFF	OFF	ON	OFF	OFF
Passivalarm	OFF	OFF	OFF	OFF	ON	OFF
Serviceruf	OFF	OFF	OFF	ON	ON	OFF
Technischer Ruf	OFF	OFF	OFF	OFF	OFF	ON
Türalarm	OFF	OFF	OFF	ON	OFF	ON
Feueralarm	OFF	OFF	OFF	OFF	ON	ON

Kontaktart des Auslösegerätes	DIP-Schalter Nr.
	7
Öffnerkontakt **	OFF
Schließerkontakt	ON

Abstellen des Rufes, der durch das Auslösegerät ausgelöst wurde	DIP-Schalter Nr.
	8
Manuelle Abstellung in der Rufanlage. **	OFF
Automatische Abstellung, wenn das Auslösegerät zurückgesetzt wurde. Bei Aktivitätstrigger für Passivalarm muss ON eingestellt sein.	ON

** = Werkseinstellung

*** = Weitere Rufarten auf Anfrage

Technische Daten

Nennspannung	24 V=
Ruhestromaufnahme	8 mA
Anschlussquerschnitt	0,14 – 0,5 mm²
Abisolierlänge	4,5 mm
Minimaler Schaltstrom des Auslösegerätes	0,1 mA bei 5 V DC
LED (Beruhigungslicht): - Versorgungsspannung - Maximale Stromaufnahme	 24 V= 10 mA
Maximale Leitungslänge zum Auslösegerät	5 m
Abmessungen (HxBxT)	32 x 34 x 16 mm
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

EN - Installation Instructions

B Connection

1. Strip the connection cables to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.

- **Normally closed contact**: Connect the wires according to connection diagram (A).
- **Normally open contact**: Connect the wires according to connection diagram (B). Connect the 56 kΩ resistor according to connection diagram (B) (function: monitoring the contact).

Setting DIP switches [4], numbers 1 – 8

Call type to be triggered ***	DIP switch no.					
	1	2	3	4	5	6
Room call **	OFF	OFF	OFF	OFF	OFF	OFF
Call bed 1	ON	OFF	OFF	OFF	OFF	OFF
Call bed 2	OFF	ON	OFF	OFF	OFF	OFF
Call bed 3	ON	ON	OFF	OFF	OFF	OFF
Radio call	OFF	OFF	OFF	ON	OFF	OFF
Inactivity alarm	OFF	OFF	OFF	OFF	ON	OFF
Service call	OFF	OFF	OFF	ON	ON	OFF
Technical call	OFF	OFF	OFF	OFF	OFF	ON
Door alarm	OFF	OFF	OFF	ON	OFF	ON
Fire alarm	OFF	OFF	OFF	OFF	ON	ON

Trigger device contact type	DIP switch no.
	7
Normally closed contact **	OFF
Normally open contact	ON

Cancelling the call that was triggered by the trigger device	DIP switch no.
	8
Manual cancellation in the nurse call system. **	OFF
Automatic cancellation, if the trigger device has been reset. ON must be set in the case of the activity trigger for the inactivity alarm.	ON

** = Factory setting

*** = Further call types on request.

Technical data

Nominal voltage	24 V=
Standby current consumption	8 mA
Connection cross section	0.14 – 0.5 mm²
Skinning length	4.5 mm
Minimum switching current of the trigger device	0.1 mA at 5 V DC
LED (reassurance light): - Supply voltage - Maximum power consumption	 24 V= 10 mA
Maximum length of cable to trigger device	5 m
Dimensions (HxWxD)	32 x 34 x 16 mm
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

DE - Installationsanleitung

77 0180 10: Zimmerleuchte Universal, 3-teilig
77 0185 10: Zimmerleuchte Universal, 3-teilig, Glasdekor

zur Anzeige von allen Rufarten (rot), Anwesenheit Personal 1 (grün) sowie zusätzliche Anzeige für WC-Ruf (weiß).

77 0180 00: Zimmerleuchte Universal, 4-teilig
77 0185 00: Zimmerleuchte Universal, 4-teilig, Glasdekor

wie 77 0180 10, jedoch zusätzlich Anwesenheit Personal 2 (gelb).

77 0182 10: Zimmerleuchte Universal, 2-teilig
77 0185 00: Zimmerleuchte Universal, 2-teilig, Glasdekor

zur Anzeige von Anwesenheit Personal 1 (grün) und Telefonruf (weiß).

77 0182 50: Zimmerleuchte Universal, 1-teilig
77 0185 50: Zimmerleuchte Universal, 1-teilig, Glasdekor

zur Anzeige von allen Rufarten (rot).

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

VORSICHT! Die LED-Module sind mit elektrostatisch gefährdeten Bauteilen bestückt. Direkte Berührung vermeiden.

EN - Installation Instructions

77 0180 10: Room lamp universal, 3 sections
77 0185 10: Room lamp universal, 3 sections, glass decor

for signalling of all call types (red), presence of staff 1 (green) as well as additional display for WC call (white).

77 0180 00: Room lamp universal, 4 sections
77 0185 00: Room lamp universal, 4 sections, glass decor

as 77 0180 10, but additionally presence of staff 2 (yellow).

77 0182 10: Room lamp universal, 2 sections
77 0185 00: Room lamp universal, 2 sections, glass decor

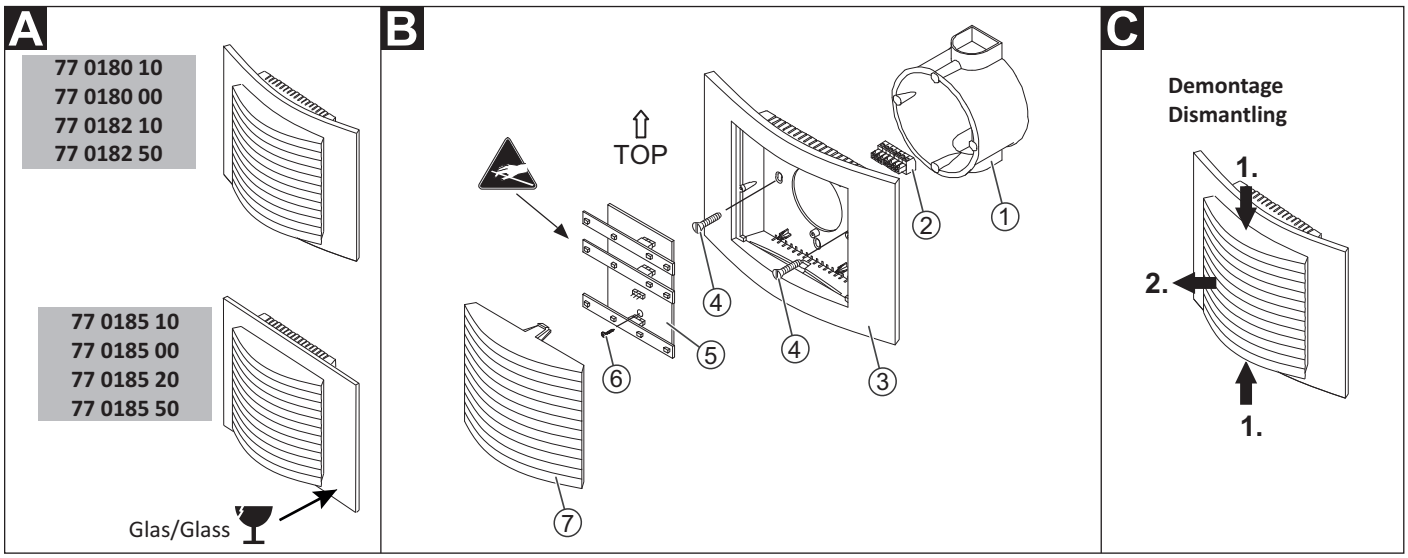
for signalling presence of staff 1 (green) and telephone call (white).

77 0182 50: Room lamp universal, 1 section
77 0185 50: Room lamp universal, 1 section, glass decor

for signalling of all call types (red).

NOTE! The complete installation of the system is described in the Technical Manual.

CAUTION! The LED modules include electrostatic sensitive components. Avoid touching.



[1] *Einbaudose, 1-teilig (Mauerwerk: 17 0100 00, Hohlwand: 17 5100 00)
[2] *Anschlussklemme, 7-polig (70 0807 07)
[3] Gehäuse
[4] *Schrauben der Einbaudose
[5] Leiterplatte mit LED-Modulen
[6] Befestigungsschraube für die Leiterplatte
[7] Lichtkuppel mit Trenneinsatz

* Nicht im Lieferumfang enthalten, separat bestellen.

[1] *Back box, 1-gang (solid wall: 17 0100 00, partition wall: 17 5100 00)
[2] *Connector, 7-pole (70 0807 07)
[3] Housing
[4] *Back box screws
[5] PCB with LED modules
[6] Fastening screw for the PCB
[7] Light dome with insert module

* Not included in the scope of delivery, please order separately.

B Montage

Im Auslieferungszustand ist die Zimmerleuchte zusammengebaut und muss wie folgt auseinander gebaut werden, siehe Abb. **D**:

- Lichtkuppel [7] von oben und unten leicht zusammendrücken und dann abziehen.

Wandeinbau auf einteilige Einbaudose [1] mit Schraubbefestigung auf die seitlichen Löcher der Einbaudose, siehe Abb. **B**:

1. Adern vorbereiten und an Anschlussklemme [2] anschließen (siehe Abschnitt „Anschluss“).
2. Anschlussklemme [2] von hinten auf die Leiterplatte [5] (in der Rückwand des Gehäuses [3]) aufstecken.
3. Gehäuse [3] mit den Schrauben [4] auf der Einbaudose [1] festschrauben. Der Pfeil in der Gehäuserückwand zeigt nach oben.
4. Lichtkuppel mit Trenneinsatz [7] auf den Dekorrahmen drücken, bis sie hörbar einrastet.

Für eine Montage auf den vertikalen Löchern der Einbaudose muss die Leiterplatte ausgebaut werden:

1. Befestigungsschraube [6] der Leiterplatte lösen und die Leiterplatte entnehmen (erst unten, dann oben).
2. Montage der Leiterplatte in umgekehrter Reihenfolge.

B Mounting

At the point of delivery the room lamp is assembled and must be dismantled as follows, see fig. **D**:

- Lightly press the light dome [7] together from top and bottom. Then pull off the light dome [7].

Wall installation on a one-gang back box [1] fixed with screws on the lateral holes of the back box, see fig. **B**:

1. Prepare the wires and connect them to the connector [2] (see section "Connection").
2. Plug the connector [2] from the rear onto the PCB [5] (in the rear of the housing [3]).
3. Bolt the housing [3] to the back box [1] with the screws [4]. The arrow on the rear of the housing points toward the top.
4. Press the light dome with insert module [7] onto the decorative frame.

To mount the PCB on the vertical holes of the back box, the PCB must be removed temporarily:

1. Loosen the fastening screw [6] of the PCB and remove the PCB (first bottom, then top).
2. The PCB is installed in the reverse order.

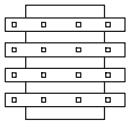
DE - Installationsanleitung

Anschluss

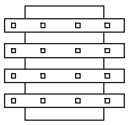
1. Das Anschlusskabel in der Einbaudose auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan an der Anschlussklemme [2] anschließen.
3. Bei Bedarf: LED-Module auf die Leiterplatte (in der Gehäuserückwand) stecken, siehe „Farben der LED-Module“.

Hinweis: Die Farbe eines LED-Moduls ist an einem Farbklecks derselben Farbe auf der Oberfläche des LED-Moduls zu erkennen.

Farben der LED-Module

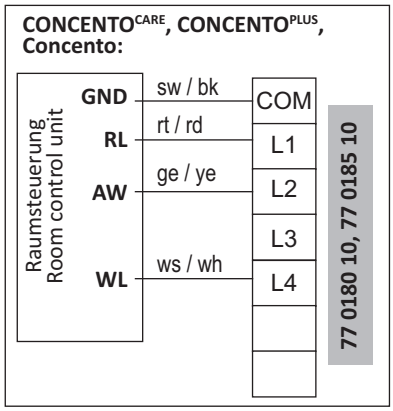


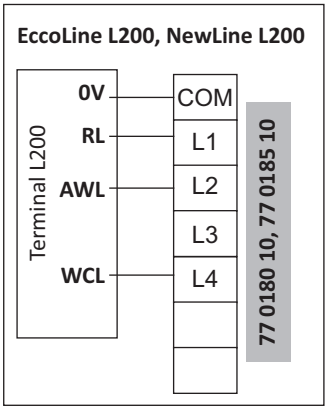
Anschluss-punkt	77 0180 10 77 0185 10	77 0180 00 77 0185 00
L1	Rot: Rufe	Rot: Rufe
L2	Grün: Personal 1	Grün: Personal 1
L3	Kein LED-Modul	Gelb: Personal 2
L4	Weiß: WC-Ruf	Weiß: WC-Ruf

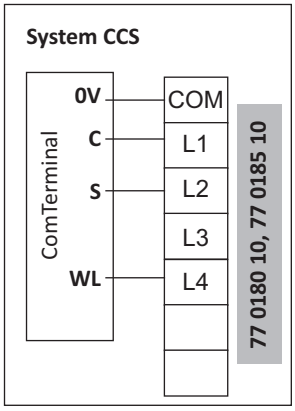


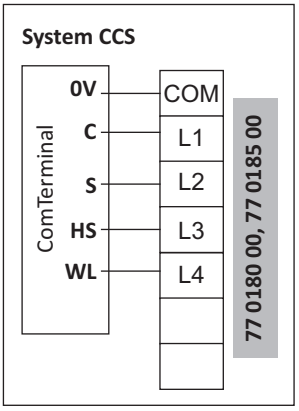
Anschluss-punkt	77 0182 10 77 0185 00	77 0182 50 77 0185 50
L1	Kein LED-Modul	Rot: Rufe
L2	Grün: Personal 1	Kein LED-Modul
L3	Kein LED-Modul	Kein LED-Modul
L4	Weiß: Telefonruf	Kein LED-Modul

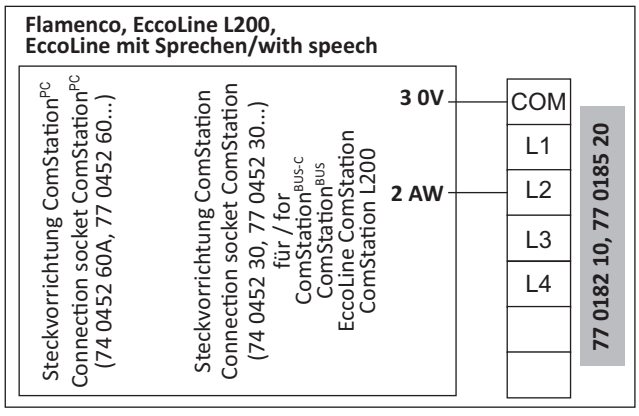
Anschlusspläne

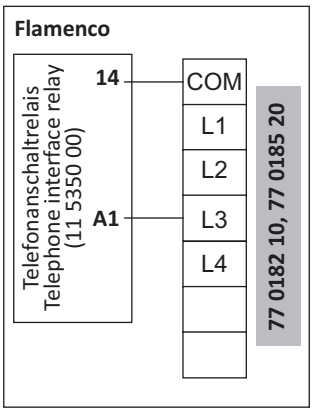












Technische Daten

Nennspannung	24 V DC
Ruhestromaufnahme	0 mA
Stromaufnahme	30 mA je Leuchtfeld
Abisolierlänge	7 mm
Abmessungen (HxBxT)	110 x 150 x 40 mm
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

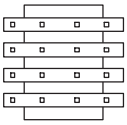
EN - Installation Instructions

Connection

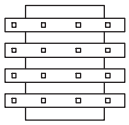
1. Strip the connection cable in the back box to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires to the connector [2] according to the connection diagram.
3. If required: Plug the LED module onto the PCB (on the rear of the housing) according to section „LED module colours“.

Note: The colour of an LED module can be identified by a colour spot of the same colour on the surface of the LED module.

LED module colours



Connection point	77 0180 10 77 0185 10	77 0180 00 77 0185 00
L1	Red: Calls	Red: Calls
L2	Green: Staff 1	Green: Staff 1
L3	No LED module	Yellow: Staff 2
L4	White: WC call	White: WC call



Connection point	77 0182 10 77 0185 00	77 0182 50 77 0185 50
L1	No LED module	Red: Calls
L2	Green: Staff 1	No LED module
L3	No: LED module	No LED module
L4	White: Phone call	No LED module

Connection diagrams

Technical data

Nominal voltage	24 V DC
Standby current consumption	0 mA
Current consumption	30 mA per light section
Skinning length	7 mm
Dimensions (HxWxD)	110 x 150 x 40 mm
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

DE - Installationsanleitung

77 0181 10: Zimmerleuchte Universal, 3-teilig, mit Türschild

zur Anzeige von allen Rufarten (rot), Anwesenheit Personal 1 (grün) sowie zusätzliche Anzeige für WC-Ruf (weiß). Türschild als Beschriftungsfeld für die Raumbezeichnung.

77 0181 00: Zimmerleuchte Universal, 4-teilig, mit Türschild

wie 77 0180 10, jedoch zusätzlich Anwesenheit Personal 2 (gelb).

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

VORSICHT! Die LED-Module sind mit elektrostatisch gefährdeten Bauteilen bestückt. Direkte Berührung vermeiden.

EN - Installation Instructions

77 0181 10: Room lamp universal, 3 sections, with doorplate

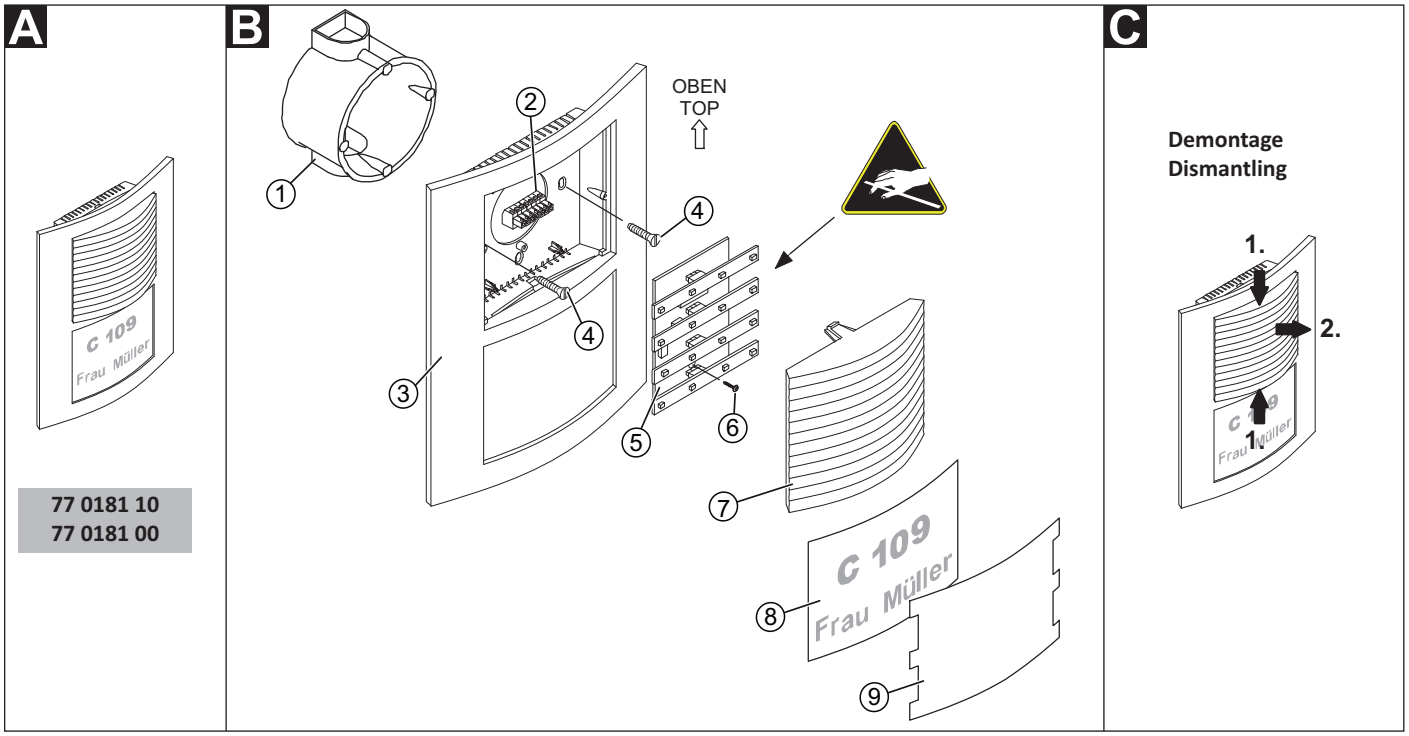
for signalling of all call types (red), presence of staff 1 (green) as well as additional display for WC call (white). Doorplate as label field for room designation.

77 0181 00: Room lamp universal, 4 sections, with doorplate

as 77 0180 10, but additionally presence of staff 2 (yellow).

NOTE! The complete installation of the system is described in the Technical Manual.

CAUTION! The LED modules include electrostatic sensitive components. Avoid touching.



[1] *Einbaudose, 1-teilig (Mauerwerk: 17 0100 00, Hohlwand: 17 5100 00)
[2] *Anschlussklemme, 7-polig (70 0807 07)
[3] Gehäuse
[4] *Schrauben der Einbaudose
[5] Leiterplatte mit LED-Modulen
[6] Befestigungsschraube für die Leiterplatte
[7] Lichtkuppel mit Trenneinsatz
[8] *Namensschild (Höhe x Breite: 70 x 92 mm)
[9] Schutzabdeckung

***** Nicht im Lieferumfang enthalten, separat bestellen.

[1] *Back box, 1-gang (solid wall: 17 0100 00, partition wall: 17 5100 00)
[2] *Connector, 7-pole (70 0807 07)
[3] Housing
[4] *Back box screws
[5] PCB with LED modules
[6] Fastening screw for the PCB
[7] Light dome with insert module
[8] *Label strip (height x width: 70 x 92 mm)
[9] Protection cover

* Not included in the scope of delivery, please order separately.

B Montage

Im Auslieferungszustand ist die Zimmerleuchte zusammengebaut und muss wie folgt auseinander gebaut werden, siehe Abb. **D**:

- Lichtkuppel [7] von oben und unten leicht zusammendrücken und dann abziehen.

Wandeinbau auf einteilige Einbaudose [1] mit Schraubbefestigung auf die seitlichen Löcher der Einbaudose, siehe Abb. **B**:

1. Adern vorbereiten und an Anschlussklemme [2] anschließen (siehe Abschnitt „Anschluss“).
2. Anschlussklemme [2] von hinten auf die Leiterplatte [5] (in der Rückwand des Gehäuses [3]) aufstecken.
3. Gehäuse [3] mit den Schrauben [4] auf der Einbaudose [1] festschrauben. Der Pfeil in der Gehäuserückwand zeigt nach oben.
4. Lichtkuppel mit Trenneinsatz [7] auf den Dekorrahmen drücken, bis sie hörbar einrastet.
5. Namensschild [8] und Schutzabdeckung [9] einlegen.

Für eine Montage auf den vertikalen Löchern der Einbaudose muss die Leiterplatte ausgebaut werden:

1. Befestigungsschraube [6] der Leiterplatte lösen und die Leiterplatte entnehmen (erst unten, dann oben).
2. Montage der Leiterplatte in umgekehrter Reihenfolge.

B Mounting

At the point of delivery the room lamp is assembled and must be dismantled as follows, see fig. **D**:

- Lightly press the light dome [7] together from top and bottom. Then pull off the light dome [7].

Wall installation on a one-gang back box [1] fixed with screws on the lateral holes of the back box, see fig. **B**:

1. Prepare the wires and connect them to the connector [2] (see section "Connection").
2. Plug the connector [2] from the rear onto the PCB [5] (in the rear of the housing [3]).
3. Bolt the housing [3] to the back box [1] with the screws [4]. The arrow on the rear of the housing points toward the top.
4. Press the light dome with insert module [7] onto the decorative frame.
5. Insert the label strip [8] and the protection cover [9].

To mount the PCB on the vertical holes of the back box, the PCB must be removed temporarily:

1. Loosen the fastening screw [6] of the PCB and remove the PCB (first bottom, then top).
2. The PCB is installed in the reverse order.

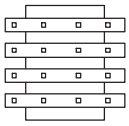
DE - Installationsanleitung

Anschluss

1. Das Anschlusskabel in der Einbaudose auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan an der Anschlussklemme [2] anschließen.
3. Bei Bedarf: LED-Module auf die Leiterplatte (in der Gehäuserückwand) stecken, siehe „Farben der LED-Module“.

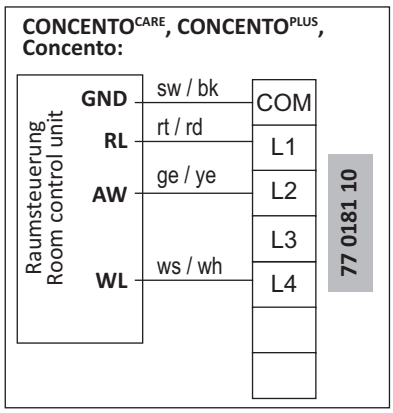
Hinweis: Die Farbe eines LED-Moduls ist an einem Farbklecks derselben Farbe auf der Oberfläche des LED-Moduls zu erkennen.

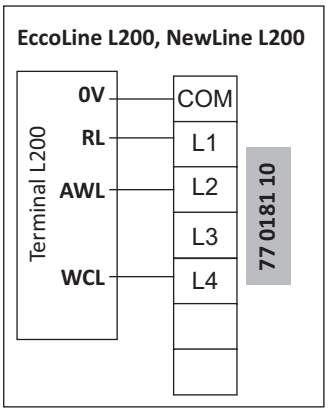
Farben der LED-Module

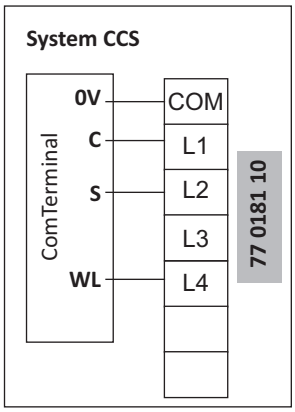


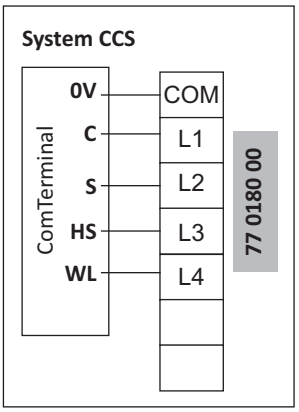
Anschluss-punkt	77 0181 10	77 0181 00
L1	Rot: Rufe	Rot: Rufe
L2	Grün: Personal 1	Grün: Personal 1
L3	Kein LED-Modul	Gelb: Personal 2
L4	Weiß: WC-Ruf	Weiß: WC-Ruf

Anschlusspläne









Technische Daten

Nennspannung	24 V DC
Ruhestromaufnahme	0 mA
Stromaufnahme	30 mA je Leuchtfeld
Abisolierlänge	7 mm
Abmessungen (HxBxT)	190 x 150 x 40 mm
Beschriftungsfeld (HxB)	70 x 92 mm
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

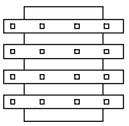
EN - Installation Instructions

Connection

1. Strip the connection cable in the back box to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires to the connector [2] according to the connection diagram.
3. If required: Plug the LED module onto the PCB (on the rear of the housing) according to section „LED module colours“.

Note: The colour of an LED module can be identified by a colour spot of the same colour on the surface of the LED module.

LED module colours



Connection point	77 0181 10	77 0181 00
L1	Red: Calls	Red: Calls
L2	Green: Staff 1	Green: Staff 1
L3	No LED module	Yellow: Staff 2
L4	White: WC call	White: WC call

Connection diagrams

Technical data

Nominal voltage	24 V DC
Standby current consumption	0 mA
Current consumption	30 mA per light section
Skinning length	7 mm
Dimensions (HxWxD)	190 x 190 x 40 mm
Label field (HxW)	70 x 92 mm
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

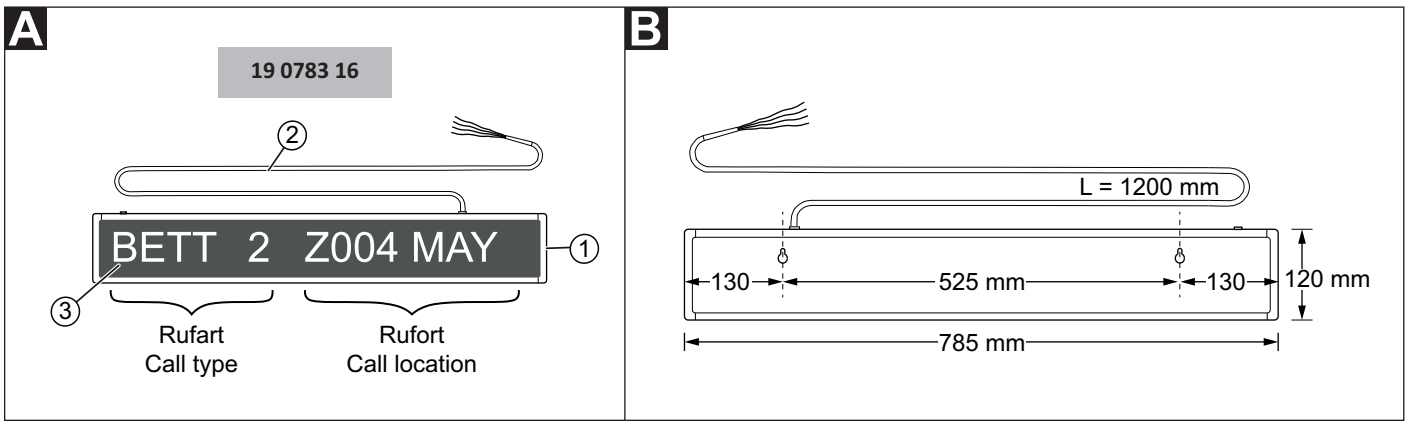
DE - Installationsanleitung

Flurdisplay, 16-stellig

Das Flurdisplay ist vorgesehen zum Anschluss an den Stationsbus einer CONCENTO^{CARE} oder CONCENTO^{PLUS} Rufanlage. Die Spannungsversorgung erfolgt nicht über den Stationsbus, sondern über eine separate Stichleitung von einem Netzgerät der Station.

Das Flurdisplay ist 16-stellig und zeigt Rufe mit Rufart und Rufort an.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.



[1] Flurdisplay
[2] Anschlussleitung (~ 1200 mm)
[3] Lichtsensor

A Wandmontage

1. Flurdisplay mit Hilfe der schlüssellochförmigen Öffnungen auf der Rückseite an der Wand aufhängen (Entfernung zur Abzweigdose < 1 m).
2. Adern des vormontierten Anschlusskabels gemäß Abschnitt „Anschluss“ anschließen.

B Demontage

1. Die Abzweigdose öffnen und Anschlüsse abklemmen.
2. Das Flurdisplay von der Aufhängung abnehmen.

EN - Installation Instructions

Corridor display, 16-digit

The corridor display is intended for connection to the ward bus of a CONCENTO^{CARE} or CONCENTO^{PLUS} nurse call system. The power is supplied not via the ward bus but via a separate stub line from a power supply unit of the ward.

The corridor display is 16-digit and displays calls with call type and call location.

NOTE! The complete installation of the system is described in the Technical Manual.

[1] Corridor display
[2] Connection cable (~ 1200 mm)
[3] Light sensor

A Wall mounting

1. Hang the corridor display on the wall with the aid of the keyhole-shaped openings on the rear (distance to the junction box < 1 m).
2. Connect the wires of the pre-assembled connecting cable according to section "Connection".

B Dismantling

1. Open the junction box and disconnect the connections.
2. Remove the corridor display from the suspension.

DE - Installationsanleitung

C Anschluss

Das Flurdisplay wird mit dem vormontierten Anschlusskabel in den Stationsbus eingeschliffen und mit einer NYM-Stichleitung an ein Netzgerät der Station angeschlossen:

1. Die Enden des Anschlusskabels des Flurdisplays sind verzinnt. Die anderen Anschlusskabel in der Abzweigdose auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan an einer Verbindungsdosenklemme oder Lüsterklemme anschließen.

Hinweis! Das Anschlusskabel des Flurdisplays darf bei Bedarf gekürzt werden.

Busabschluss

Wenn das Flurdisplay der erste oder letzte Teilnehmer am Stationsbus ist, müssen Sie an der Verbindungsklemme des Anschlusskabels einen 2,7 kOhm Widerstand zwischen IA und IB setzen.

D Adresse einstellen

In der Werkseinstellung hat das Flurdisplay die Adresse 9980.

Wenn zwei oder mehrere Flurdisplays an einem Stationsbus angeschlossen werden, muss an dem zweiten und an den weiteren Flurdisplays eine andere Adresse eingestellt werden. Einstellbar sind die Adressen 9980 bis 9989.

Zum Einstellen der Adresse drücken Sie die tiefliegende Taste (unter Schutzkappe) oben am Flurdisplay mit einem Kugelschreiber. Drücken Sie die Taste gemäß Abb. **D**.

10 s = 10 Sekunden, 3 s = 3 Sekunden, 1x = einmal kurz drücken.

Timeout: Wenn die Taste länger als 1 Min. nicht gedrückt wird, wird der Vorgang automatisch beendet ohne zu speichern.

EN - Installation Instructions

C Connection

The corridor display is looped into the ward bus with the pre-assembled connection cable and connected to a power supply unit of the ward with a NYM stub line.

1. The ends of the connection cable of the corridor display are tinned. Strip the other connecting cables in the junction box to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires to a connection box terminal or luster terminal according to the connecting diagram.

Note! The connecting cable of the corridor display can be shortened if necessary.

Bus termination

If the corridor display is the first or the last ward bus user, you have to set a 2.7 kOhm resistor between IA and IB at the connection point.

D Setting the address

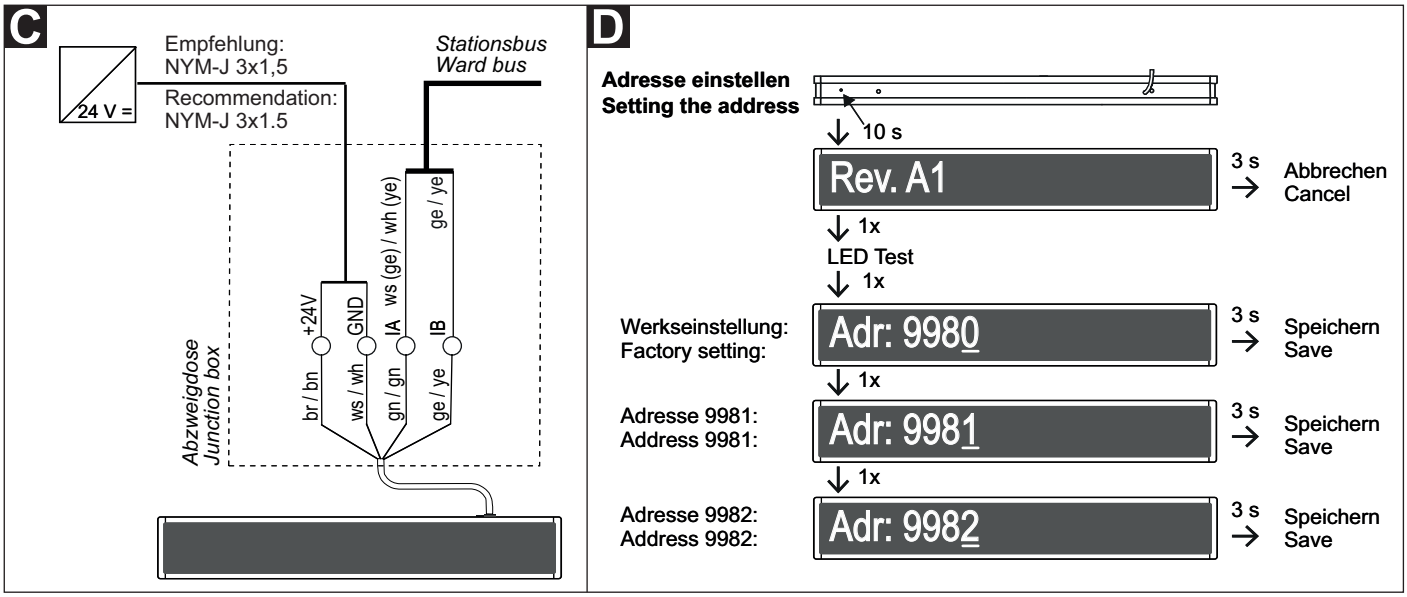
In the factory settings the corridor display has the address: 9980.

When two or more corridor displays are connected to a single ward bus, the second and further displays must be set to other addresses. Available addresses are from 9980 to 9989.

To set up the address, press the deep-set button (under the protection cover) at the top of the corridor display using a ballpoint pen. Press the button according to fig. **D**.

10 s = 10 seconds, 3 s = 3 seconds, 1x = Short-press once.

Timeout: If the button is not pressed for longer than 1 minute, the procedure is terminated automatically without saving.



Technische Daten

Spannungsversorgung	24 V DC
Stromaufnahme bei Ruf	300 mA
Abmessungen (HxBxT)	125 x 785 x 55 mm
Gewicht	ca. 1800 g
Gehäusematerial	Alu, lackiert
Material Frontscheibe	Acrylglas
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

Technical data

Power supply	24 V DC
Current consumption for call	300 mA
Dimensions (HxWxD)	125 x 785 x 55 mm
Weight	Approx. 1800 g
Housing material	Lacquered aluminium
Front glass material	Acrylic glass
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

DE - Installationsanleitung

Flurdisplay, 16-stellig, doppelseitig

Das Flurdisplay ist vorgesehen zum Anschluss an den Stationsbus einer CONCENTO^{CARE} oder CONCENTO^{PLUS} Rufanlage. Die Spannungsversorgung erfolgt nicht über den Stationsbus, sondern über eine separate Stichleitung von einem Netzgerät der Station.

Das Flurdisplay ist 16-stellig und zeigt Rufe mit Rufart und Rufort an.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

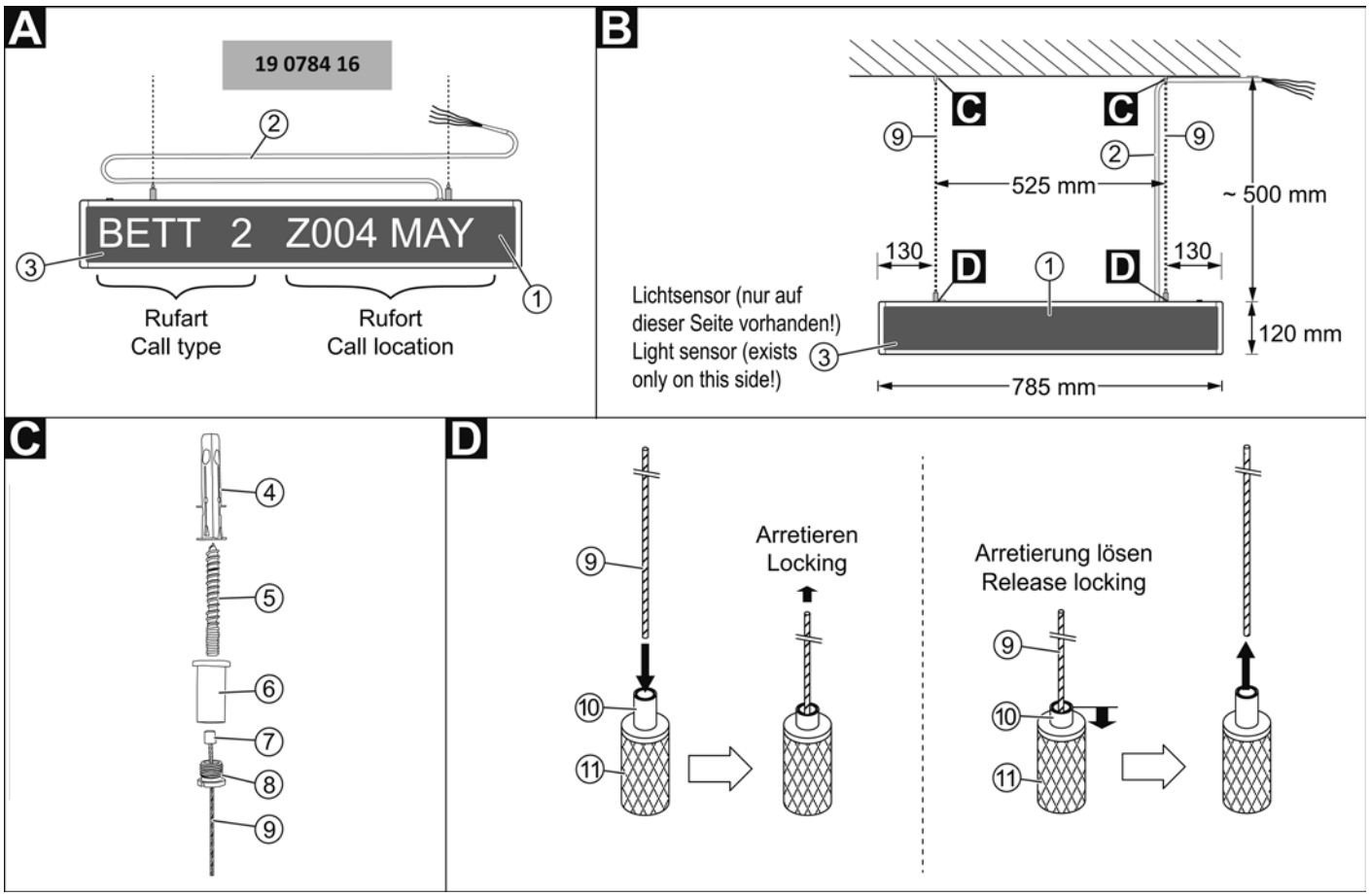
EN - Installation Instructions

Corridor display, 16-digit, double-sided

The corridor display is intended for connection to the ward bus of a CONCENTO^{CARE} or CONCENTO^{PLUS} nurse call system. The power is supplied not via the ward bus but via a separate stub line from a power supply unit of the ward.

The corridor display is 16-digit and displays calls with call type and call location.

NOTE! The complete installation of the system is described in the Technical Manual.



[1] Flurdisplay
[2] Anschlussleitung (~ 1200 mm)
[3] Lichtsensor
[4] Dübel (Ø 8 mm)
[5] Stockschraube
[6] Deckenbefestiger
[7] Nippel
[8] Schraubkappe
[9] Drahtseil (~ 500 mm)
[10] Oberes Bauteil des Drahtseilhalters
[11] Drahtseilhalter

[1] Corridor display
[2] Connection cable (~ 1200 mm)
[3] Light sensor
[4] Dowel (Ø 8 mm)
[5] Hanger bolt
[6] Ceiling fastener
[7] Fitting
[8] Screw cap
[9] Wire rope (~ 500 mm)
[10] Head element of the wire rope holder
[11] Wire rope holder

B Montage

Deckenaufhängung maximal 1 m entfernt von der Abzweigdose.
Achtung! Beim Ausrichten des Flurdisplays die Position des Lichtsensors berücksichtigen.

1. Zwei Löcher in die Decke bohren (Abstand: 525 mm). Die Dübel [4] einsetzen.
2. Je Drahtseil: Drahtseil [9] mit Nippel [7], Deckenbefestiger [6], Schraubkappe [8] und Stockschraube [5] gemäß Abb. **C** verschrauben.
3. Je Drahtseil: Das Drahtseil [9] bis zur gewünschten Position in den Drahtseilhalter [11] schieben. Um das Drahtseil [9] zu arretieren, daran ziehen. Ein Klemm-Mechanismus wird aktiviert. Abb. **D**.

Hinweis! Um eine versehentlich aktivierte Arretierung zu lösen, drücken Sie das obere Bauteil [10] des Drahtseilhalters [11] herunter. Der Klemm-Mechanismus wird entriegelt.

4. Die beiden Stockschrauben [5] des vormontierten Flurdisplays in die Dübel [4] in der Decke eindrehen.

B Mounting

Ceiling suspension, not more than 1 m distance to junction box.
Attention! Take into account the light sensor position when aligning the corridor display.

1. Drill two holes in the ceiling (distance: 525 mm). Insert the dowels [4].
2. Each wire rope: Bolt together the wire rope [9] with fitting [7], ceiling fastener [6], screw cap [8] and hanger bolt [5] according to fig. **C**.
3. Each wire rope: Slide the wire rope [9] into the wire rope holder [11] up to the desired position. To lock the wire rope [9], pull it. A gripping mechanism is activated. Fig. **D**.

Note! To release an inadvertently activated locking, press the head element [10] of the wipe rope holder [11]. The gripping mechanism will be released.

4. Screw the two hanger bolts [5] of the pre-mounted corridor display into the dowels [4] in the ceiling.

DE - Installationsanleitung

E Anschluss

Das Flurdisplay wird mit dem vormontierten Anschlusskabel in den Stationsbus eingeschliffen und mit einer NYM-Stichleitung an ein Netzgerät der Station angeschlossen:

1. Die Enden des Anschlusskabels des Flurdisplays sind verzinnt. Die anderen Anschlusskabel in der Abzweigdose auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan an einer Verbindungsdosenklemme oder Lüsterklemme anschließen.

Hinweis! Das Anschlusskabel des Flurdisplays darf bei Bedarf gekürzt werden.

Busabschluss

Wenn das Flurdisplay der erste oder letzte Teilnehmer am Stationsbus ist, müssen Sie an der Verbindungsklemme des Anschlusskabels einen 2,7 kOhm Widerstand zwischen IA und IB setzen.

F Adresse einstellen

In der Werkseinstellung hat das Flurdisplay die Adresse 9980.

Wenn zwei oder mehrere Flurdisplays an einem Stationsbus angeschlossen werden, muss an dem zweiten und an den weiteren Flurdisplays eine andere Adresse eingestellt werden. Einstellbar sind die Adressen 9980 bis 9989.

Zum Einstellen der Adresse drücken Sie die tiefliegende Taste (unter Schutzkappe) oben am Flurdisplay mit einem Kugelschreiber. Drücken Sie die Taste gemäß Abb. **F**.

10 s = 10 Sekunden, 3 s = 3 Sekunden, 1x = einmal kurz drücken.

Timeout: Wenn die Taste länger als 1 Min. nicht gedrückt wird, wird der Vorgang automatisch beendet ohne zu speichern.

EN - Installation Instructions

E Connection

The corridor display is looped into the ward bus with the pre-assembled connection cable and connected to a power supply unit of the ward with a NYM stub line.

1. The ends of the connection cable of the corridor display are tinned. Strip the other connecting cables in the junction box to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires to a connection box terminal or luster terminal according to the connecting diagram.

Note! The connecting cable of the corridor display can be shortened if necessary.

Bus termination

If the corridor display is the first or the last ward bus user, you have to set a 2.7 kOhm resistor between IA and IB at the connection point.

F Setting the address

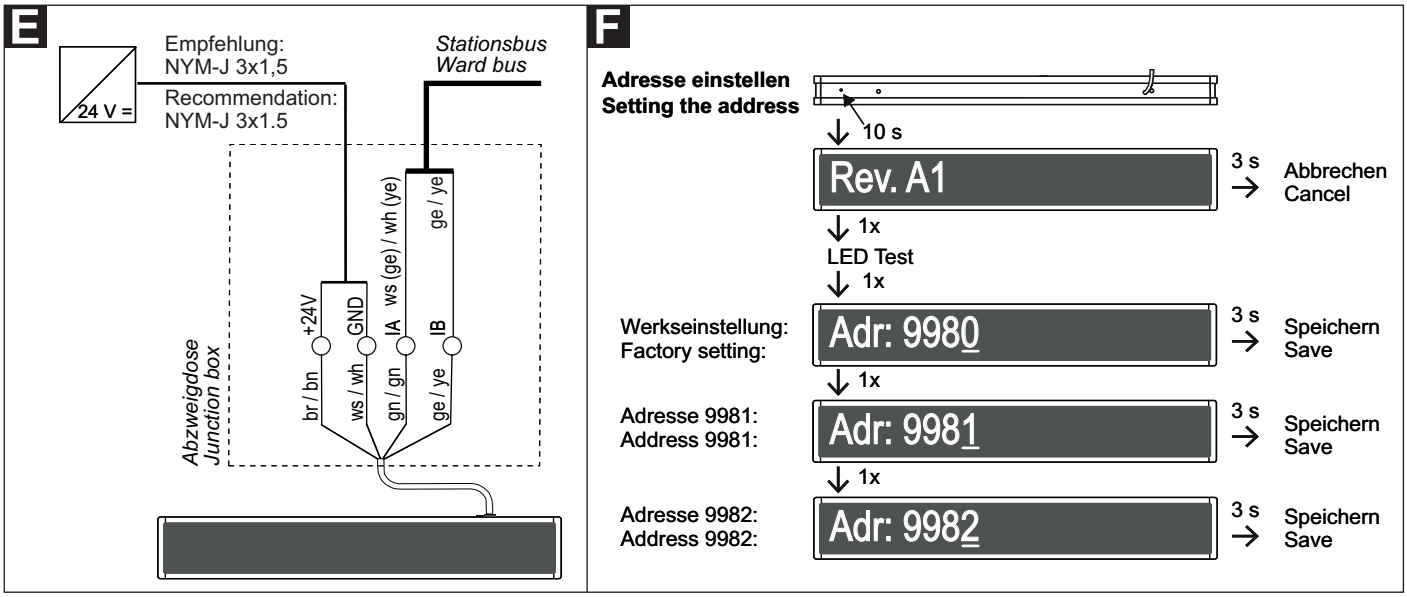
In the factory settings the corridor display has the address: 9980.

When two or more corridor displays are connected to a single ward bus, the second and further displays must be set to other addresses. Available addresses are from 9980 to 9989.

To set up the address, press the deep-set button (under the protection cover) at the top of the corridor display using a ballpoint pen. Press the button according to fig. **F**.

10 s = 10 seconds, 3 s = 3 seconds, 1x = Short-press once.

Timeout: If the button is not pressed for longer than 1 minute, the procedure is terminated automatically without saving.



Technische Daten

Spannungsversorgung	24 V DC
Stromaufnahme bei Ruf	350 mA
Abmessungen (HxBxT)	145 x 785 x 55 mm
Gewicht	ca. 2500 g
Gehäusematerial	Alu, lackiert
Material Frontscheibe	Acrylglas
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

Technical data

Power supply	24 V DC
Current consumption for call	350 mA
Dimensions (HxWxD)	145 x 785 x 55 mm
Weight	Approx. 2500 g
Housing material	Lacquered aluminium
Front glass material	Acrylic glass
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

DE - Installationsanleitung

Flurdisplay, 12-stellig

Das Flurdisplay ist vorgesehen zum Anschluss an den Stationsbus einer CONCENTO^{CARE} Rufanlage. Die Spannungsversorgung erfolgt nicht über den Stationsbus, sondern über eine separate Stichleitung von einem Netzgerät der Station.

Das Flurdisplay ist 12-stellig und zeigt Rufe mit Rufart und Rufort an.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

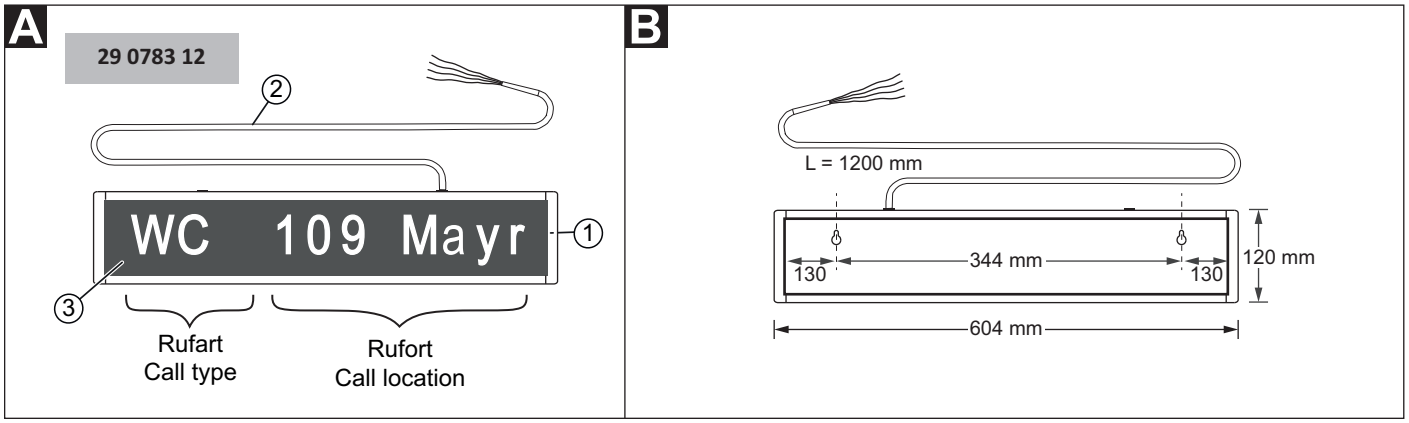
EN - Installation Instructions

Corridor display, 12-digit

The corridor display is intended for connection to the ward bus of a CONCENTO^{CARE} nurse call system. The power is supplied not via the ward bus but via a separate stub line from a power supply unit of the ward.

The corridor display is 12-digit and displays calls with call type and call location.

NOTE! The complete installation of the system is described in the Technical Manual.



[1] Flurdisplay
[2] Anschlussleitung (~ 1200 mm)
[3] Lichtsensor

[1] Corridor display
[2] Connection cable (~ 1200 mm)
[3] Light sensor

A Wandmontage

1. Flurdisplay mit Hilfe der schlüssellochförmigen Öffnungen auf der Rückseite an der Wand aufhängen (Entfernung zur Abzweigdose < 1 m).
2. Adern des vormontierten Anschlusskabels gemäß Abschnitt „Anschluss“ anschließen.

B Demontage

1. Die Abzweigdose öffnen und Anschlüsse abklemmen.
2. Das Flurdisplay von der Aufhängung abnehmen.

A Wall mounting

1. Hang the corridor display on the wall with the aid of the keyhole-shaped openings on the rear (distance to the junction box < 1 m).
2. Connect the wires of the pre-assembled connection cable according to section "Connection".

B Dismantling

1. Open the junction box and disconnect the connections.
2. Remove the corridor display from the suspension.

DE - Installationsanleitung

C Anschluss

Das Flurdisplay wird mit dem vormontierten Anschlusskabel in den Stationsbus eingeschliffen und mit einer Stichleitung an eine Spannungsversorgung der Station angeschlossen:

1. Die Enden des Anschlusskabels des Flurdisplays sind verzinnt. Die anderen Anschlusskabel in der Abzweigdose auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan an einer Verbindungsdosenklemme oder Lüsterklemme anschließen.

Hinweis! Das Anschlusskabel des Flurdisplays darf bei Bedarf gekürzt werden.

D Adresse einstellen

In der Werkseinstellung hat das Flurdisplay die Adresse 9980.

Wenn zwei oder mehrere Flurdisplays an einem Stationsbus angeschlossen werden, muss an dem zweiten und an den weiteren Flurdisplays eine andere Adresse eingestellt werden. Einstellbar sind die Adressen 9980 bis 9989.

Zum Einstellen der Adresse drücken Sie die tiefliegende Taste (unter Schutzkappe) oben am Flurdisplay mit einem Kugelschreiber. Drücken Sie die Taste gemäß Abb. **D**.

10 s = 10 Sekunden, 3 s = 3 Sekunden, 1x = einmal kurz drücken.

Timeout: Wenn die Taste länger als 1 Min. nicht gedrückt wird, wird der Vorgang automatisch beendet ohne zu speichern.

EN - Installation Instructions

C Connection

The corridor display is looped into the ward bus with the pre-assembled connection cable and connected to a power supply unit of the ward with a stub line.

1. The ends of the connecting cable of the corridor display are tinned. Strip the other connecting cables in the junction box to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires to a connection box terminal or luster terminal according to the connecting diagram.

Note! The connecting cable of the corridor display can be shortened if necessary.

D Setting the address

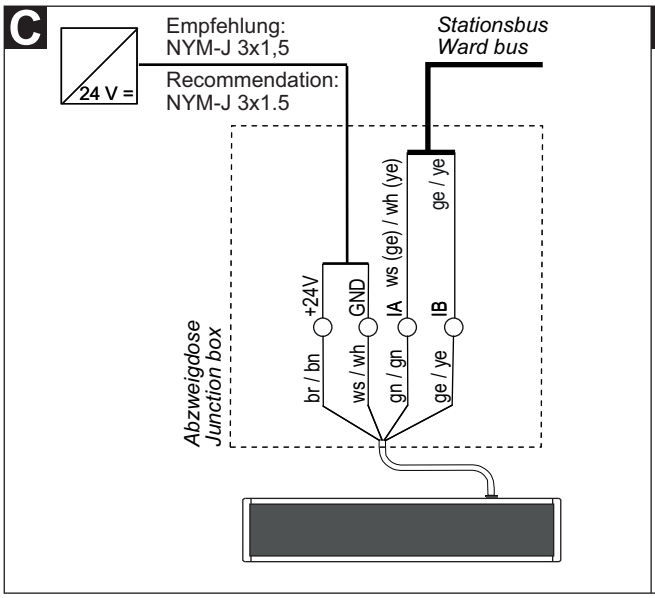
In the factory settings the corridor display has the address: 9980.

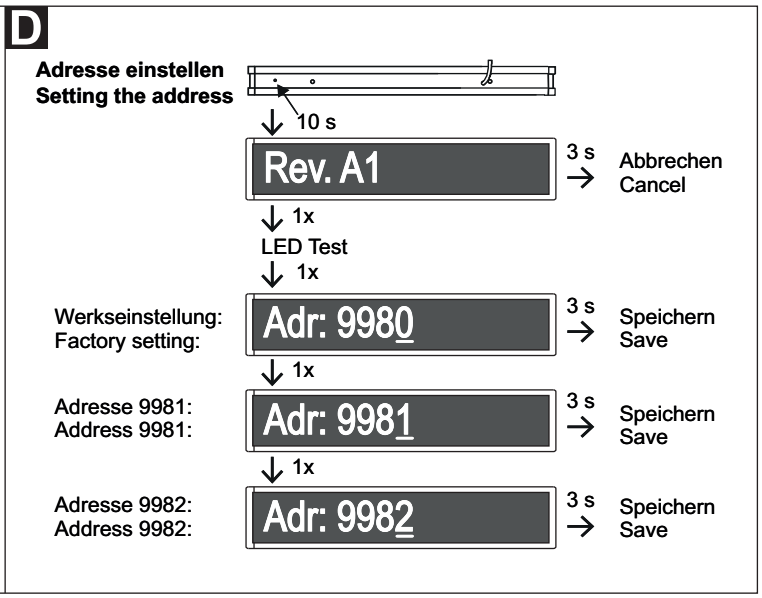
When two or more corridor displays are connected to a single ward bus, the second and further displays must be set to other addresses. Available addresses are from 9980 to 9989.

To set up the address, press the deep-set button (under the protection cover) at the top of the corridor display using a ballpoint pen. Press the button according to fig. **D**.

10 s = 10 seconds, 3 s = 3 seconds, 1x = Short-press once.

Timeout: If the button is not pressed for longer than 1 minute, the procedure is terminated automatically without saving.





Technische Daten

Spannungsversorgung	24 V DC
Stromaufnahme bei Ruf:	300 mA
Abmessungen (HxBxT)	125 x 604 x 55 mm
Gewicht	1600 g
Gehäusematerial	Alu, lackiert
Material Frontscheibe	Acrylglas
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

Technical data

Power supply	24 V DC
Current consumption for call:	300 mA
Dimensions (HxWxD)	125 x 604 x 55 mm
Weight	1600 g
Housing material	Lacquered aluminium
Front glass material	Acrylic glass
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

DE - Installationsanleitung

Flurdisplay, 12-stellig, doppelseitig

Das Flurdisplay ist vorgesehen zum Anschluss an den Stationsbus einer CONCENTO^{CARE} Rufanlage. Die Spannungsversorgung erfolgt nicht über den Stationsbus, sondern über eine separate Stichleitung von einem Netzgerät der Station.

Das Flurdisplay ist 12-stellig und zeigt Rufe mit Rufart und Rufort an.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

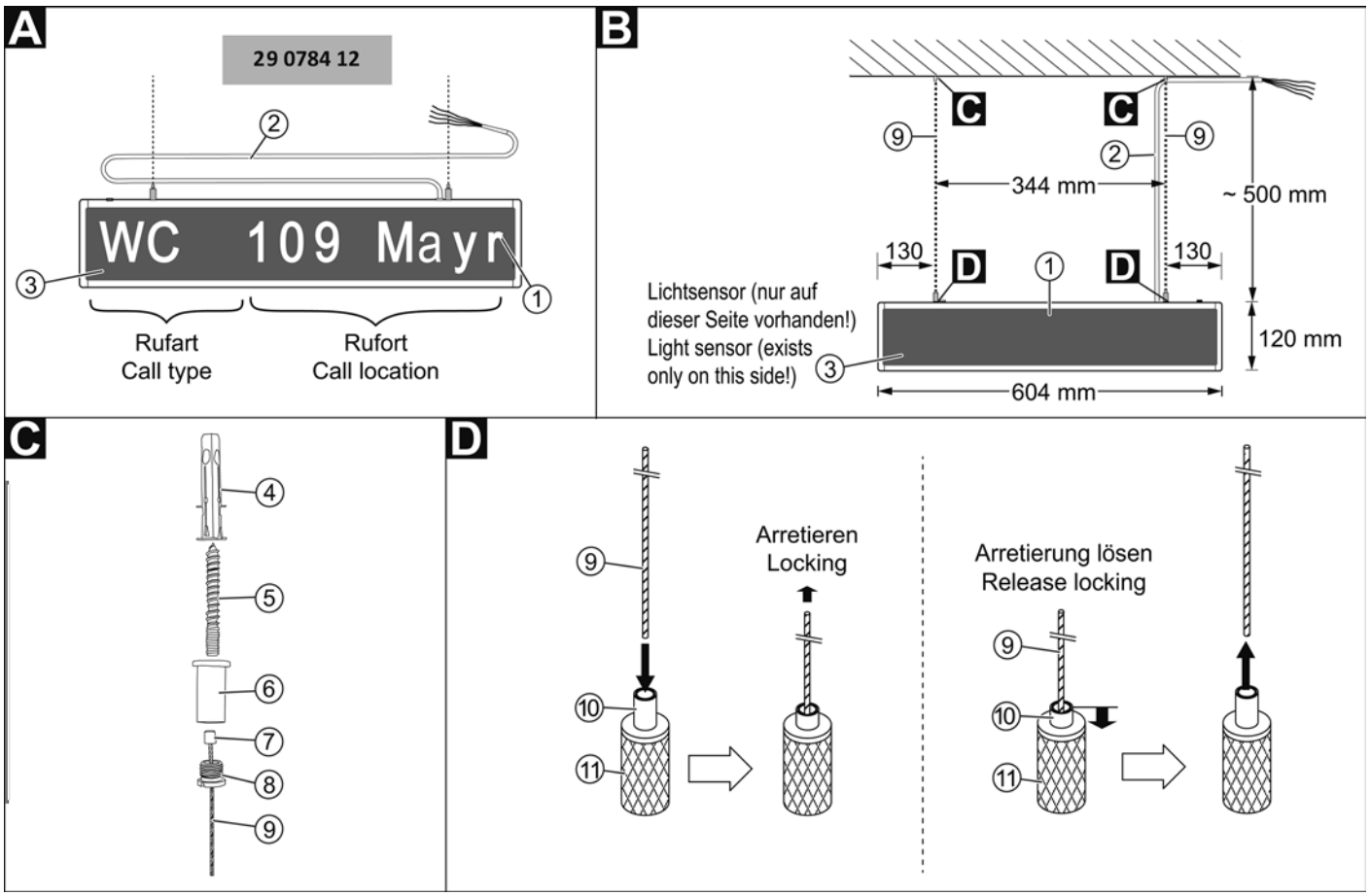
EN - Installation Instructions

Corridor display, 12-digit, double-sided

The corridor display is intended for connection to the ward bus of a CONCENTO^{CARE} nurse call system. The power is supplied not via the ward bus but via a separate stub line from a power supply unit of the ward.

The corridor display is 12-digit and displays calls with call type and call location.

NOTE! The complete installation of the system is described in the Technical Manual.



[1] Flurdisplay
[2] Anschlussleitung (~ 1200 mm)
[3] Lichtsensor
[4] Dübel (Ø 8 mm)
[5] Stockschraube
[6] Deckenbefestiger
[7] Nippel
[8] Schraubkappe
[9] Drahtseil (~ 500 mm)
[10] Oberes Bauteil des Drahtseilhalters
[11] Drahtseilhalter

[1] Corridor display
[2] Connection cable (~ 1200 mm)
[3] Light sensor
[4] Dowel (Ø 8 mm)
[5] Hanger bolt
[6] Ceiling fastener
[7] Fitting
[8] Screw cap
[9] Wire rope (~ 500 mm)
[10] Head element of the wire rope holder
[11] Wire rope holder

B Montage

Deckenaufhängung maximal 1 m entfernt von der Abzweigdose.
Achtung! Beim Ausrichten des Flurdisplays die Position des Lichtsensors berücksichtigen.

1. Zwei Löcher in die Decke bohren (Abstand: 344 mm). Die Dübel [4] einsetzen.
2. Je Drahtseil: Drahtseil [9] mit Nippel [7], Deckenbefestiger [6], Schraubkappe [8] und Stockschraube [5] gemäß Abb. **C** verschrauben.
3. Je Drahtseil: Das Drahtseil [9] bis zur gewünschten Position in den Drahtseilhalter [11] schieben. Um das Drahtseil [9] zu arretieren, daran ziehen. Ein Klemm-Mechanismus wird aktiviert. Abb. **D**.

Hinweis! Um eine versehentlich aktivierte Arretierung zu lösen, drücken Sie das obere Bauteil [10] des Drahtseilhalters [11] herunter. Der Klemm-Mechanismus wird entriegelt.

4. Die beiden Stockschrauben [5] des vormontierten Flurdisplays in die Dübel [4] in der Decke eindrehen.

B Mounting

Ceiling suspension, not more than 1 m distance to junction box.
Attention! Take into account the light sensor position when aligning the corridor display.

1. Drill two holes in the ceiling (distance: 344 mm). Insert the dowels [4].
2. Each wire rope: Bolt together the wire rope [9] with fitting [7], ceiling fastener [6], screw cap [8] and hanger bolt [5] according to fig. **C**.
3. Each wire rope: Slide the wire rope [9] into the wire rope holder [11] up to the desired position. To lock the wire rope [11], pull it. A gripping mechanism is activated. Fig. **D**.

Note! To release an inadvertently activated locking, press the head element [10] of the wipe rope holder [11]. The gripping mechanism will be released.

4. Screw the two hanger bolts [5] of the pre-mounted corridor display into the dowels [4] in the ceiling.

DE - Installationsanleitung

E Anschluss

Das Flurdisplay wird mit dem vormontierten Anschlusskabel in den Stationsbus eingeschliffen und mit einer NYM-Stichleitung an ein Netzgerät der Station angeschlossen:

1. Die Enden des Anschlusskabels des Flurdisplays sind verzinnt. Die anderen Anschlusskabel in der Abzweigdose auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan an einer Verbindungsdosenklemme oder Lüsterklemme anschließen.

Hinweis! Das Anschlusskabel des Flurdisplays darf bei Bedarf gekürzt werden.

Busabschluss

Wenn das Flurdisplay der erste oder letzte Teilnehmer am Stationsbus ist, müssen Sie an der Verbindungsklemme des Anschlusskabels einen 2,7 kOhm Widerstand zwischen IA und IB setzen.

F Adresse einstellen

In der Werkseinstellung hat das Flurdisplay die Adresse 9980.

Wenn zwei oder mehrere Flurdisplays an einem Stationsbus angeschlossen werden, muss an dem zweiten und an den weiteren Flurdisplays eine andere Adresse eingestellt werden. Einstellbar sind die Adressen 9980 bis 9989.

Zum Einstellen der Adresse drücken Sie die tiefliegende Taste (unter Schutzkappe) oben am Flurdisplay mit einem Kugelschreiber. Drücken Sie die Taste gemäß Abb. **F**.

10 s = 10 Sekunden, 3 s = 3 Sekunden, 1x = einmal kurz drücken.

Timeout: Wenn die Taste länger als 1 Min. nicht gedrückt wird, wird der Vorgang automatisch beendet ohne zu speichern.

EN - Installation Instructions

E Connection

The corridor display is looped into the ward bus with the pre-assembled connection cable and connected to a power supply unit of the ward with a NYM stub line.

1. The ends of the connection cable of the corridor display are tinned. Strip the other connecting cables in the junction box to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires to a connection box terminal or luster terminal according to the connecting diagram.

Note! The connecting cable of the corridor display can be shortened if necessary.

Bus termination

If the corridor display is the first or the last ward bus user, you have to set a 2.7 kOhm resistor between IA and IB at the connection point.

F Setting the address

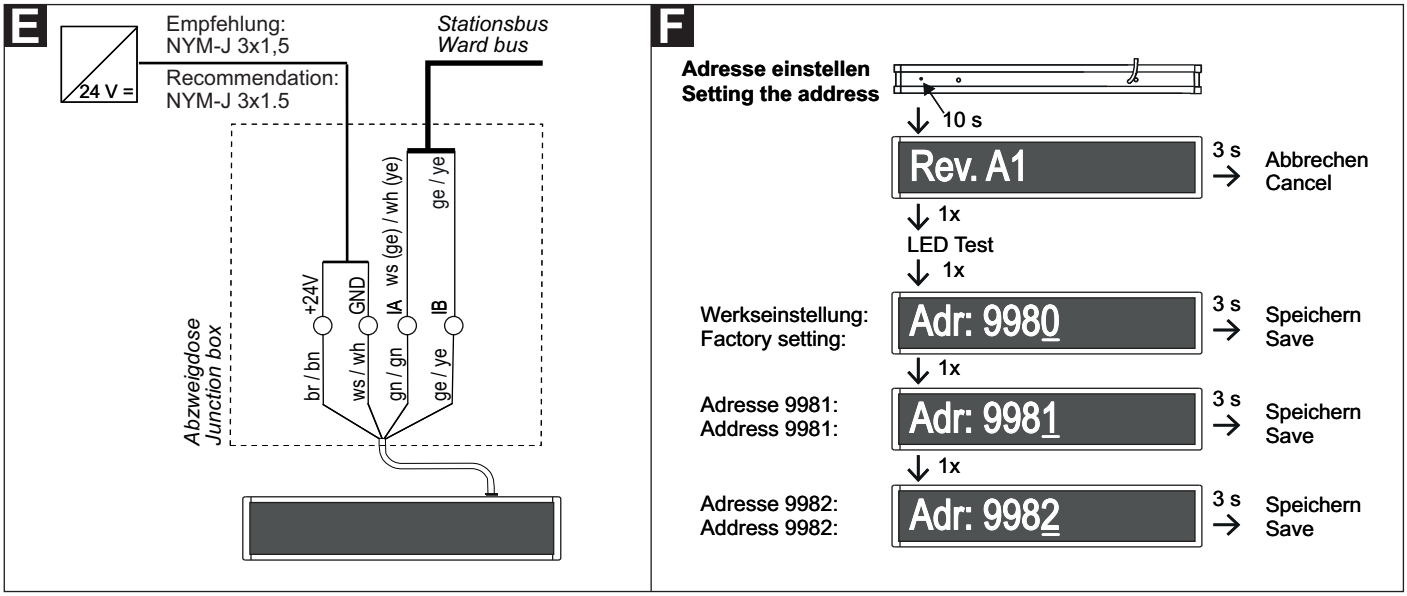
In the factory settings the corridor display has the address: 9980.

When two or more corridor displays are connected to a single ward bus, the second and further displays must be set to other addresses. Available addresses are from 9980 to 9989.

To set up the address, press the deep-set button (under the protection cover) at the top of the corridor display using a ballpoint pen. Press the button according to fig. **F**.

10 s = 10 seconds, 3 s = 3 seconds, 1x = Short-press once.

Timeout: If the button is not pressed for longer than 1 minute, the procedure is terminated automatically without saving.



Technische Daten

Spannungsversorgung	24 V DC
Stromaufnahme bei Ruf	350 mA
Abmessungen (HxBxT)	145 x 604 x 55 mm
Gewicht	1850 g
Gehäusematerial	Alu, lackiert
Material Frontscheibe	Acrylglas
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

Technical data

Power supply	24 V DC
Current consumption for call	350 mA
Dimensions (HxWxD)	145 x 604 x 55 mm
Weight	1850 g
Housing material	Lacquered aluminium
Front glass material	Acrylic glass
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

DE - Installationsanleitung

Birntaster und Zubehör

29 0790 02 - Birntaster mit Ruf- und Lichttaste, 3 m

Der Birntaster mit Ruftaste ist ein wassergeschützter Taster mit flexibler Anschlussleitung (3 m), einer roten Ruftaste und einer gelben Lichttaste zum Schalten einer Lichtquelle. Er wird steckbar an einen Ruftaster mit Steckvorrichtung (29 0704 00...) angeschlossen.

Bei entsprechendem Anschluss der Lichtquelle ist zusätzlich zur Lichtschaltung eine Dimmfunktion möglich. Langes Drücken der Lichttaste führt dann zum Dimmen des Lichts.

Technische Daten

Nennspannung	24 V=
Gehäusematerial	ABS
Schutzart	IP 67
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 95 %

70 0361 00 - Geräte- und Kabelhalter

Der Geräte- und Kabelhalter dient zur Befestigung von Patientengeräten wie z.B. Birntastern am "Bettgalgen".

Bei Zugbelastung öffnet sich der Geräte- und Kabelhalter und schützt somit das Gerät vor Beschädigung. Er ist geeignet für Leitungen oder Schläuche mit einem Durchmesser von 4 - 6 und 9 mm.

Durch den symmetrischen Aufbau können zur Verdoppelung der Haltekraft zwei Geräte- und Kabelhalter spiegelverkehrt zusammengesetzt werden.

29 0790 04 - Birntaster Abwurfvorrichtung

Die Birntaster Abwurfvorrichtung wird zwischen den Stecker eines Birntasters (29 0790 xx) und die Buchse eines Ruftasters mit Steckvorrichtung (29 0704 00...) gesteckt.

Die Verbindung trennt bei Beanspruchung durch Zug automatisch und schützt die Geräte somit vor Beschädigung. Länge: 20 cm.

29 0790 06 - Birntasterverlängerung, 3 m

Die Birntasterverlängerung dient zur Verlängerung der Anschlussleitung für einen Birntaster (29 0790 xx) auf 6 m.

EN - Installation Instructions

Pear push switch and accessories

29 0790 00 - Pear push switch incl. call & light switch, 3m

The pear push switch incl. call and light switch is a water-protected push-button with a flexible connecting cable (3 m), a red call button and a yellow light push-button for switching a light source. It is connected to a call switch with connector (29 0704 00...).

When connected to an appropriate light source an additional dimming function is also possible. A long press of the light push-button then causes the light to dim.

Technical data

Nominal voltage	24 V=
Housing material	ABS
Degree of protection	IP 67
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 95 %

70 0361 00 - Equipment and cable clamp

The equipment and cable clamp serves for fixing patient devices such as pear push switches on the "Bed-gallows".

When put under tensile load the equipment and cable clamp opens and so protects the device against damage. It is suitable for conduits or hoses with a diameter of 4 - 6 and 9 mm.

The symmetric structure allows two equipment and cable clamps to be mounted mirror-inverted to double the holding force.

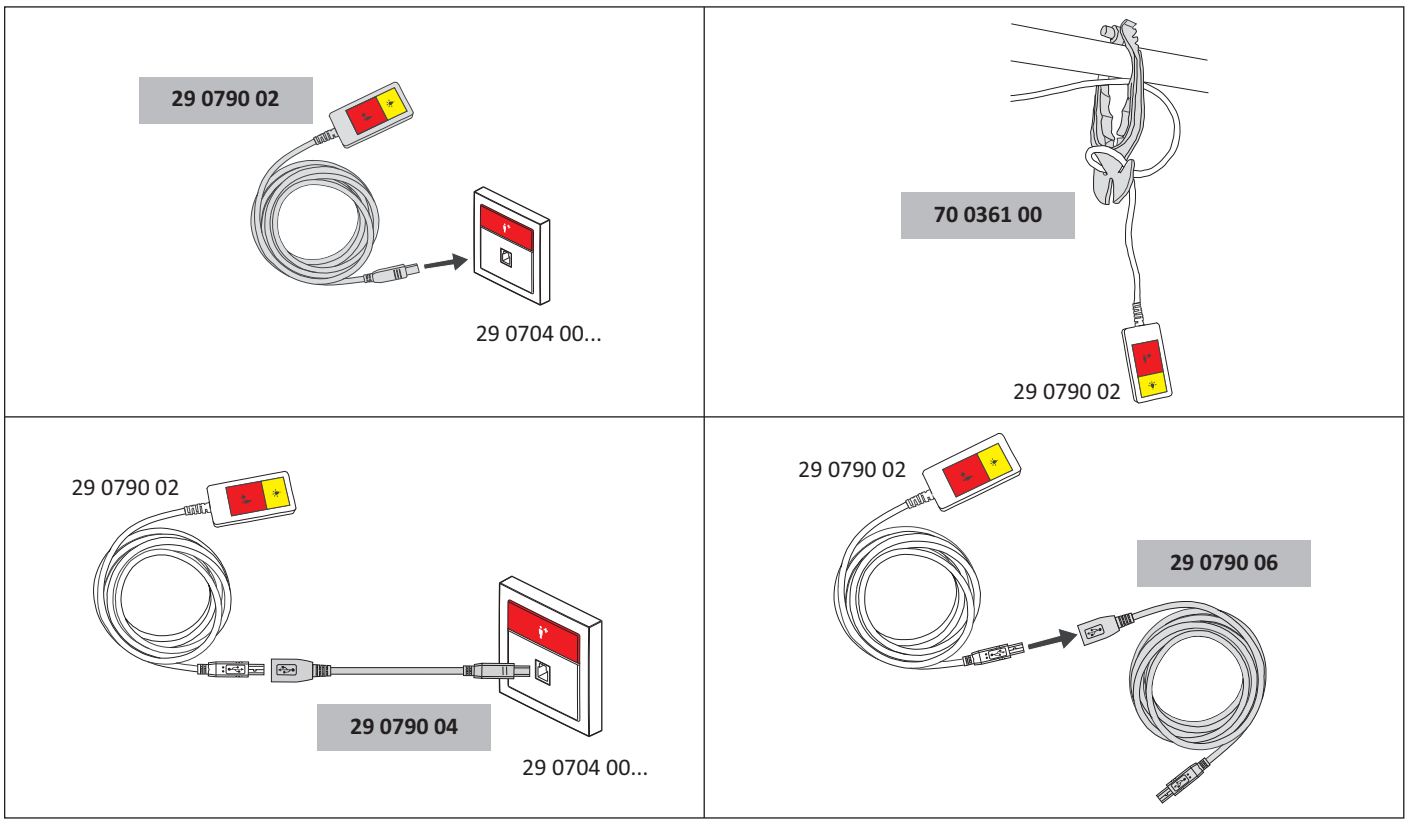
29 0790 04 - Self-releasing adapter for pear push switch

The self-releasing adapter for the pear push switch is plugged between the plug of a pear push switch (29 0790 xx) and the socket of a call switch with connector (29 0704 00...).

When under load, the connection separates automatically under tension and so protects the device against damage. Length: 20 cm.

29 0790 06 - Extension cable for pear push switch, 3 m

The extension cable for the pear push switch serves as extension for the connecting cable of pear push switch (29 0790 xx) to 6 m.



DE - Installationsanleitung

Birntaster und Zubehör

29 0790 00 - Birntaster mit Ruftaste, 3 m

Der Birntaster mit Ruftaste ist ein wassergeschützter Taster mit flexibler Anschlussleitung (3 m) und roter Ruftaste. Er wird steckbar an einen Ruftaster mit Steckvorrichtung (29 0704 00...) angeschlossen.

Technische Daten

Nennspannung	24 V=
Gehäusematerial	ABS
Schutzart	IP 67
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 95 %

70 0361 00 - Geräte- und Kabelhalter

Der Geräte- und Kabelhalter dient zur Befestigung von Patientengeräten wie z.B. Birntastern am "Bettgalgen".

Bei Zugbelastung öffnet sich der Geräte- und Kabelhalter und schützt somit das Gerät vor Beschädigung. Er ist geeignet für Leitungen oder Schläuche mit einem Durchmesser von 4 - 6 und 9 mm.

Durch den symmetrischen Aufbau können zur Verdoppelung der Haltekraft zwei Geräte- und Kabelhalter spiegelverkehrt zusammengesetzt werden.

29 0790 04 - Birntaster Abwurfvorrichtung

Die Birntaster Abwurfvorrichtung wird zwischen den Stecker eines Birntasters (29 0790 xx) und die Buchse eines Ruftasters mit Steckvorrichtung (29 0704 00...) gesteckt.

Die Verbindung trennt bei Beanspruchung durch Zug automatisch und schützt die Geräte somit vor Beschädigung. Länge: 20 cm.

29 0790 06 - Birntasterverlängerung, 3 m

Die Birntasterverlängerung dient zur Verlängerung der Anschlussleitung für einen Birntaster (29 0790 xx) auf 6 m.

EN - Installation Instructions

Pear push switch and accessories

29 0790 00 - Pear push switch incl. call switch, 3 m

The pear push switch incl. call switch is a water-protected push-button with a flexible connecting cable (3 m) and a red call button. It is connected to a call switch with connector (29 0704 00...).

Technical data

Nominal voltage	24 V=
Housing material	ABS
Degree of protection	IP 67
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 95 %

70 0361 00 - Equipment and cable clamp

The equipment and cable clamp serves for fixing patient devices such as pear push switches on the "Bed-gallows".

When put under tensile load the equipment and cable clamp opens and so protects the device against damage. It is suitable for conduits or hoses with a diameter of 4 - 6 and 9 mm.

The symmetric structure allows two equipment and cable clamps to be mounted mirror-inverted to double the holding force.

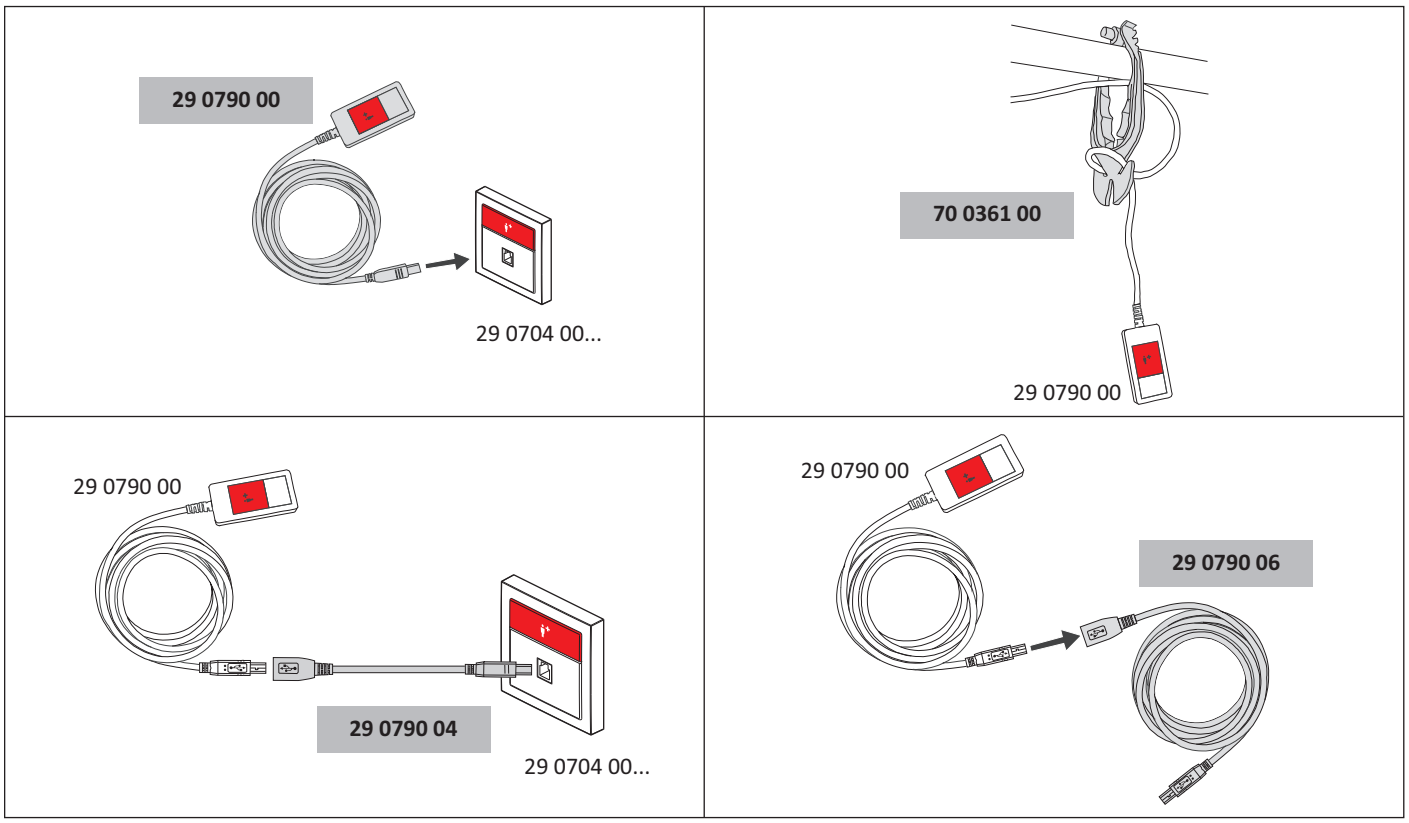
29 0790 04 - Self-releasing adapter for pear push switch

The self-releasing adapter for the pear push switch is plugged between the plug of a pear push switch (29 0790 xx) and the socket of a call switch with connector (29 0704 00...).

When under load, the connection separates automatically under tension and so protects the device against damage. Length: 20 cm.

29 0790 06 - Extension cable for pear push switch, 3 m

The extension cable for the pear push switch serves as extension for the connecting cable of pear push switch (29 0790 xx) to 6 m.



DE - Wichtige Informationen

Funkempfänger-T, Bestell-Nr. Z 00 8202 31

Steckbarer Anschluss an:

Ruftaster mit Steckvorrichtung: 19 0704 00, 10 0704 00

Ruftaster mit 2 Steckvorrichtungen: 19 0704 20, 10 0704 20

Funkempfänger-T, Bestell-Nr. Z 00 8202 32

Steckbarer Anschluss an:

Steckvorrichtung L200: 73 0455 00 (Rev. 4), 73 0400 00

Steckvorrichtung L200 Kanal: 73 045 00 (Rev. 4)

Funkempfänger-T, Bestell-Nr. Z 00 8202 33

Steckbarer Anschluss an:

Steckvorrichtung Kombi: 70 0425 00, 70 0424 00

Steckvorrichtung Kombi, TVL: 70 0425 50, 70 0424 50

Steckvorrichtung Kombi Universal: 70 0449 00

Steckvorrichtung Kombi Kanal: 70 0435 00, 70 0434 00

Steckvorrichtung Kombi Kanal, TVL: 70 0434 50, 70 0435 50

Steckvorrichtung Kombi Kanal Universal: 70 0448 00

Steckvorrichtung mit Ruftaste: 70 0171 60A, 70 0171 60C, 70 0171 60F, 70 0171 03, 70 0171 00

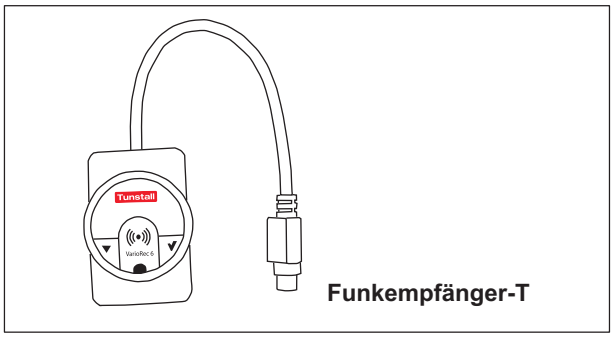
Steckvorrichtung mit Ruftaste, Kanal: 70 0171 50

Steckvorrichtung Rufgeräte: 70 0400 00

Funkempfänger-T, Bestell-Nr. Z 00 8202 36

Steckbarer Anschluss an:

Ruftaster-Einsatz mit Steckvorrichtung: 29 0704 00...



Funkempfänger-T

Der Funkempfänger-T dient zum Empfang der Signale von folgenden Funksendern:

- Funksender mit Ruftaste: MyAmie (P68007/02, P68007/04), siehe Seite 3.
- Funksender mit Ruftaste und Sturzerkennung: iVi^{TM} (P68005/47)
- Universalsensor (61005/30)
- Funk-Trittsensormatte (Z00800301, Z00800302)
- Funk-Sensormatte 869 MHz (Z00800201)
- Großflächen-Funk-Pneumatiktaster (75071100)
- Funk-Rauchmelder (68005/96)

Die Verwendung weiterer Funksender ist möglich. Wenden Sie sich hierzu an Tunstall GmbH.

Der Funksender-T wird steckbar angeschlossen an eine Steckvorrichtung der Rufanlage in die Buchse für Birntaster. Das Auslösen der Funksender löst den Ruf in der Rufanlage aus, den ein Birntaster an derselben Steckvorrichtung auslösen würde.

Hinweis! Die Funkübertragung ist nicht überwacht. Die Funksender dürfen deshalb nur als zusätzliche Rufgeräte in Verbindung mit der Rufanlage eingesetzt werden.

EN - Important Information

Radio receiver-T, order no. Z 00 8202 31

Plug-in connection to:

Call switch with connection socket: 19 0704 00, 10 0704 00

Call switch with 2 connect. sockets: 19 0704 20, 10 0704 20

Radio receiver-T, order no. Z 00 8202 32

Plug-in connection to:

Connection socket L200: 73 0455 00 (rev. 4) , 73 0400 00

Connection socket L200 bedhead unit: 73 045 00 (rev. 4)

Radio receiver-T, order no. Z 00 8202 33

Plug-in connection to:

Connection socket combi: 70 0425 00, 70 0424 00

Connection socket combi, TVL: 70 0425 50, 70 0424 50

Connection socket combi universal: 70 0449 00

Conn. socket combi, bedhead unit: 70 0435 00, 70 0434 00

C. socket combi, bedhead unit, TVL: 70 0434 50, 70 0435 50

C. socket combi, bedhead unit, universal: 70 0448 00

Connection socket with call switch: 70 0171 60A, 70 0171 60C, 70 0171 60F, 70 0171 03, 70 0171 00

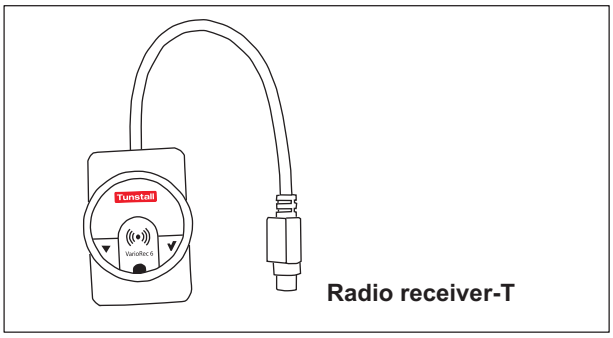
Connection socket with call switch, bedhead unit: 70 0171 50

Connection socket call devices: 70 0400 00

Radio receiver-T, order no. Z 00 8202 36

Plug-in connection to:

Call switch insert with connector: 29 0704 00...



Radio receiver-T

The radio receiver-T is able to receive signals from the following radio transmitters:

- Radio trigger including call button: MyAmie (P68007/02, P68007/04), see page 3.
- Radio trigger incl call button and fall detection: iVi^{TM} (P68005/47)
- Universal sensor (61005/30)
- Wireless step-on sensor mat (Z00800301, Z00800302)
- Radio sensor mat 869 MHz (Z00800201)
- Large surface radio pneumatic switch (75071100)
- Radio smoke detector (68005/96)

The use of further radio transmitters is possible. For this you have to contact Tunstall GmbH.

The radio receiver-T is plug connected to a connection socket of the nurse call system in the socket for pear push switch. Activating the radio transmitter will raise the call in the nurse call system that would be raised by a pear push switch in the same socket.

NOTE! The radio transmission is not monitored. That's why the radio transmitters may only be used as additional call devices in the nurse call system.

DE - Wichtige Informationen

Funkreichweite am Einsatzort prüfen

Die Funkreichweite zwischen dem Funkempfänger-T und den Funksendern hängt ab von den baulichen Gegebenheiten und beträgt bis zu 30 m. Bevor Sie einen tragbaren Funksender (MyAmie, iVi) an den Benutzer aushändigen, müssen Sie die Funkreichweite am Verwendungsort prüfen. Hierzu gehen Sie am geplanten Verwendungsort umher und lösen immer wieder einen Ruf aus. Informieren Sie den Benutzer über die Funkreichweite.

Dokumente zu VarioRec6 / Funkempfänger-T

Der Funkempfänger-T ist ein OEM-Produkt der Firma Lehmann Electronic GmbH. Sie müssen neben dieser Installationsanleitung auch folgende Dokumente der Firma Lehmann Electronic lesen und beachten:

- Kurzübersicht VarioRec6 Funkempfänger (im Lieferumfang des Funkempfängers-T), Dokument-Nr. LE235
- Bedienungsanleitung VarioRec6, Dokument-Nr. LE243

Die Produktbezeichnung VarioRec6 ist ein Oberbegriff der Firma Lehmann Electronic für verschiedene Funkempfänger. Der Funkempfänger-T ist nur einer von diesen. Für den Funkempfänger-T treffen nicht alle Themen der Dokumente für VarioRec6 zu. Beachten Sie deshalb die folgende Hinweise:

Verfügbare Funktionen

Folgende Funktionen, die in den Dokumenten für VarioRec6 genannt werden, sind am Funkempfänger-T mit den Tunstall-Funksendern verfügbar:

- Funksender einlernen
- Funksender auslernen
- Alle eingelernten Funksender auslernen
- Störmeldung quittieren
- Mastermodus setzen
- Pflegemodus
- Betriebsanzeige aktiv / deaktiv setzen
- Alle Parameter auf Werkseinstellungen zurücksetzen
- Tagesmeldungs-Überwachung
- Vitalüberwachung

Nicht verfügbare Funktionen

Folgende Funktionen, die in den Dokumenten für VarioRec6 genannt werden, sind am Funkempfänger-T mit den Tunstall-Funksendern **nicht** verfügbar:

- Funksender für Sonderfunktionen, wie z.B. Funk-Abstelltaster oder Funk-Lichttaster

Fehler-/Störungsmeldungen im Betrieb

Bei Verwendung mit Tunstall Funksendern zeigt der Funkempfänger-T folgende Fehler- und Störmeldungen an, die in den Dokumenten für VarioRec6 genannt werden:

- Senderbatterie schwach
- Systemfehler
- Empfangsblockade
- Tagesmeldung fehlt
- Vitalmeldung fehlt

EN - Important Information

Check radio coverage on the location of use

The radio range between the radio receiver-T and the radio transmitters depends on the structural conditions of the building; the range is up to 30 m. Before handing over a handheld radio transmitter (MyAmie, iVi) to the user, you must check the radio coverage at the place of use. To do this, walk around the planned place of use and trigger a call over and over again. Inform the user of the radio coverage.

Documents for VarioRec6 / radio receiver-T

The radio receiver-T is an OEM product of Lehmann Electronic GmbH. In addition to these installation instructions, you must read and observe the following documents from Lehmann Electronic:

- Brief overview VarioRec6 radio receiver (supplied with the radio receiver-T), document no. LE235
- Operating instructions VarioRec6, document no. LE243

The product designation VarioRec6 is a collective term of Lehmann Electronic for various radio receivers. The radio receiver-T is only one of these. Not all topics in the VarioRec6 documents apply to the radio receiver-T. Therefore, please observe the following notes:

Available functions

The following functions mentioned in the documents for VarioRec6 are available on the radio receiver-T with the Tunstall radio transmitters:

- Teaching in radio transmitters
- Teaching out radio transmitters
- Teaching out all taught-in radio transmitters
- Acknowledge fault message
- Set master mode
- Care mode
- Set operating display active / inactive
- Reset all parameters to factory settings
- Daily message monitoring
- Vital monitoring

Functions not available

The following functions mentioned in the documents for VarioRec6 are **not** available on the radio receiver-T with the Tunstall radio transmitters:

- Radio transmitter for special functions, e.g. radio cancel switch or radio light switch

Error/failure messages during operation

When used with Tunstall radio transmitters, the radio receiver-T displays the following error and fault messages mentioned in the documents for VarioRec6:

- Transmitter battery low
- System fault
- Reception blockade
- Daily report missing
- Vitality message is missing

DE - Wichtige Informationen

Information über schwache Batterie

Die Funksender enthalten Batterien. Wenn die Batterie eines Funksenders schwach ist, blinkt die LED an dem Funkempfänger-T rot, um dem Pflegepersonal anzuzeigen, dass die Batterie bzw. der Funksender gewechselt werden muss, siehe Dokumente zu VarioRec6.

ACHTUNG! Das Pflegepersonal muss eine schwache Batterie an der LED des Funkempfängers-T und/oder an dem Funksender erkennen und quittieren. Funksender mit einer schwachen Batterie müssen umgehend ausgetauscht werden.

Hinweis: Bei Verwendung der Funksender mit einem Hausnotrufgerät wird bei schwacher Batterie ein sog. Hintergrundruf zu einer Servicezentrale gesendet. Dieser Ruf wird **nicht** ausgelöst, wenn die Funksender mit dem Funkempfänger-T benutzt werden!

LED am MyAmie, Bestell.-Nr. P68007/02, P68007/04

Der MyAmie dient zur Rufauslösung durch Drücken der Ruftaste. Die LED am MyAmie bestätigt das Drücken der Ruftaste und zeigt gleichzeitig den Zustand der Batterie des MyAmie an:

- LED leuchtet (ca. 3 Sekunden) nach Drücken der Ruftaste: Batterie ist in Ordnung. Ein Ruf wird ausgelöst.
- LED blinkt nach Drücken der Ruftaste: Batterie ist fast leer. Ein Ruf wird ausgelöst. Die LED am Funkempfänger-T blinkt rot, um anzuzeigen, dass die Batterie schwach ist und der MyAmie gewechselt werden muss.
- LED bleibt dunkel nach Drücken der Ruftaste: Batterie ist leer oder MyAmie ist defekt! Es wird kein Ruf ausgelöst! Der MyAmie muss sofort gewechselt werden.

EN - Important Information

Information about low battery level

The radio transmitters contain batteries. When the battery level of a radio transmitter is low, the LED on the radio receiver-T will flash in red to inform the nursing staff, that the battery or the radio transmitter must be changed. Please refer to the documents for the VarioRec6.

ATTENTION! The nursing staff must identify and acknowledge a low battery level by watching the LED on the radio receiver-T and/or the signals on the radio transmitter. Radio transmitters with a low battery level must be replaced immediately.

Note: If the radio transmitters are used with a social alarm unit a call is raised to a monitoring centre in case of a low battery level. This call is **not** raised when the radio transmitters are used with the radio receiver-T!

LED on the MyAmie, order no. P68007/02, P68007/04

The MyAmie is used to raise calls by pressing the call button.

The LED on the MyAmie confirms, that the button is pressed, and indicates the battery level at the same time:

- LED is on (for approx. 3 seconds) after the call button has been pressed: Battery is okay. A call is raised.
- LED is flashing after the call button has been pressed: The battery level is low. A call is raised. The LED on the radio receiver-T is flashing red to indicate, that the battery is low and the MyAmie must be changed.
- LED remains dark after the call button has been pressed: The battery is empty or the MyAmie is defective! No call will be raised! The MyAmie must be changed immediately.

DE - Installationsanleitung

Funkempfänger-T UP, Best.-Nr. Z 00 8202 35

Der Funkempfänger-T UP ist vorgesehen zum Anschluss an ein Raumterminal im System Flamenco^{IP}, Flamenco, CONCENTO^{CARE} oder CONCENTO^{PLUS}. Er dient zum Empfang der Signale von folgenden Funksendern:

- Funksender mit Ruftaste: MyAmie (P68007/02, P68007/04)
- Funksender mit Ruftaste und Sturzerkennung: iVi^{TM} (P68005/47)
- Universalsensor (61005/30)
- Funk-Trittsensormatte (Z00800301, Z00800302)
- Funk-Sensormatte 869 MHz (Z00800201)
- Großflächen-Funk-Pneumatiktaster (75071100)
- Funk-Rauchmelder (68005/96)

Die Verwendung weiterer Funksender ist möglich. Wenden Sie sich hierzu an Tunstall GmbH.

Das Auslösen der Funksender löst einen Ruf in der Rufanlage aus. Die ausgelöst Rufart hängt davon ab, wie der Funkempfänger angeschlossen ist, siehe folgende Abschnitte.

Hinweis! Die Funkübertragung ist nicht überwacht. Die Funksender dürfen deshalb nur als zusätzliches Rufgerät in Verbindung mit der Rufanlage eingesetzt werden.

Der Funkempfänger-T UP ist vorgesehen zur Unterputzmontage. Benötigt wird ein Rahmen mit 55 mm Innenmaß.

Potentialfreier Anschluss als Öffner- oder Schließerkontakt.

HINWEIS! Die vollständige Installation der Rufanlage ist in dem entsprechenden Technischen Handbuch beschrieben.

ACHTUNG! Die Leiterplatte ist mit elektrostatisch gefährdeten Bauteilen bestückt. Vermeiden Sie deshalb eine direkte Berührung.

EN - Installation Instructions

Radio receiver-T UP, order no. Z 00 8202 35

The radio receiver-T UP is suitable for connection to a room terminal in a Flamenco^{IP}, Flamenco, CONCENTO^{CARE}, or CONCENTO^{PLUS} nurse call system. It receives signals from the following radio transmitters:

- Radio trigger including call button: MyAmie (P68007/02, P68007/04)
- Radio trigger including call button and fall detection: iVi^{TM} (P68005/47)
- Universal sensor (61005/30)
- Wireless step-on sensor mat (Z00800301, Z00800302)
- Radio sensor mat 869 MHz (Z00800201)
- Large surface radio pneumatic switch (75071100)
- Radio smoke detector (68005/96)

The use of further radio transmitters is possible. For this you have to contact Tunstall GmbH.

Activating the radio trigger will raise a call in the nurse call system. The type of call triggered depends on how the radio receiver is connected.

NOTE! The radio transmission is not monitored. That's why the radio transmitters may only be used as an additional call device in the nurse call system.

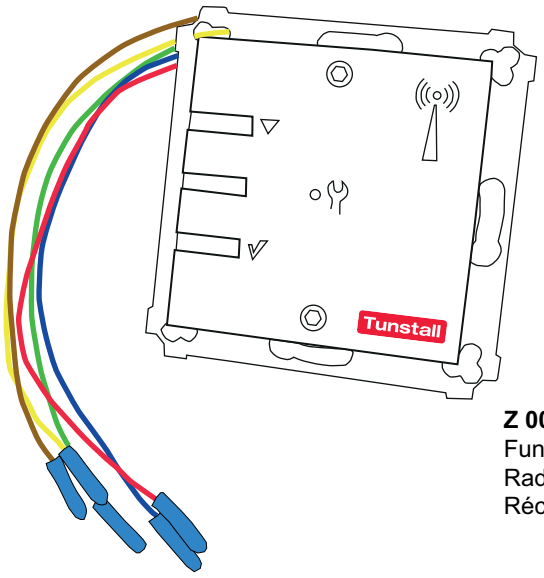
The radio receiver-T UP is intended for flush-mounting. A frame with 55 mm inner dimension is required.

Potential-free connection as normally closed or normally open contact.

NOTE! The complete installation of the nurse call system is described in the respective Technical Manual.

CAUTION! The printed circuit board includes electrostatic sensitive components. Avoid touching.

A



Z 00 8202 35
Funkempfänger-T UP
Radio receiver-T UP
Récepteur radio-T UP

DE - Installationsanleitung

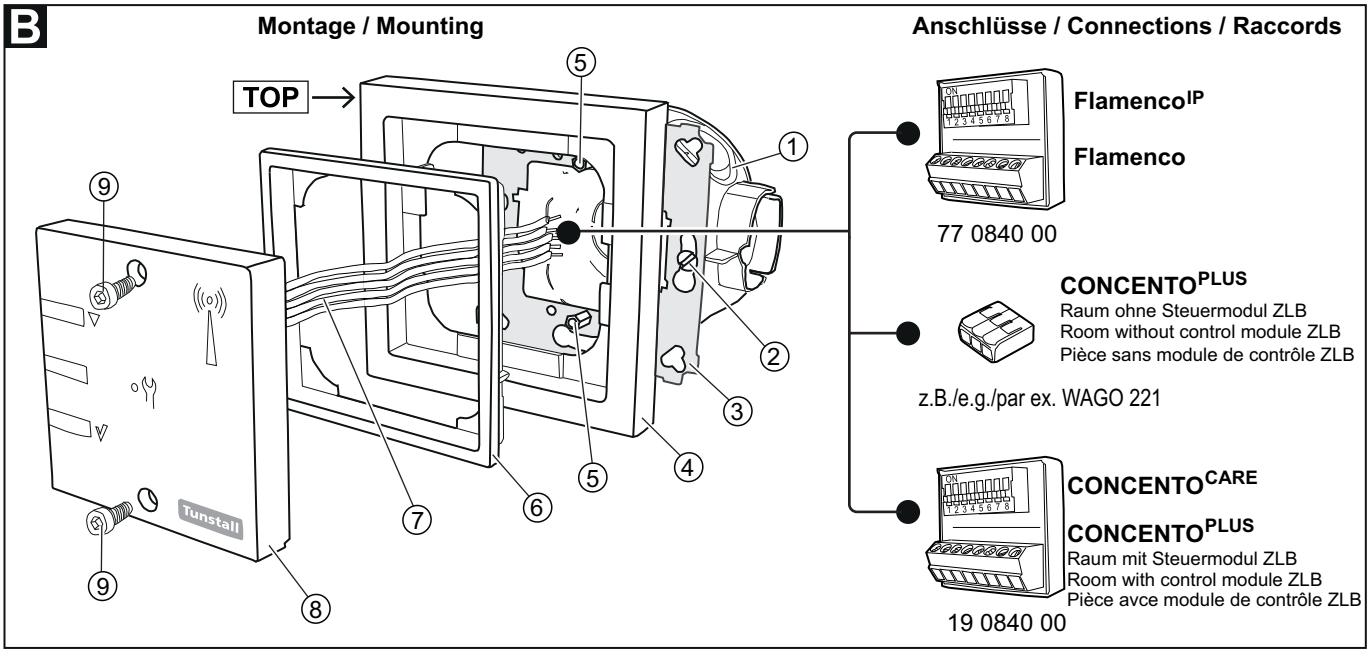
1. Montage (siehe Abb. B)

1. Das Anschlusskabel der Rufanlage in der Einbaudose [1] auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Die beiden Innensechskantschrauben [9] mit einem Inbusschlüssel (Typ: H2) herausdrehen, bis sich der Funkempfänger-Einsatz [8] von dem Tragring [3] löst.
3. Funkempfänger-Einsatz [8] von dem Tragring [3] trennen.
4. Tragring [3] mit den Schrauben [2] der Einbaudose auf der Einbaudose [1] festschrauben.
5. Anschlussadern [7] des Funkempfängers durch den Zwischenrahmen [6] (wenn ein Zwischenrahmen benutzt wird), den Rahmen [4] und den Tragring [3] in die Einbaudose [1] einführen.
6. Die Anschlussadern [7] gemäß Abbildung anschließen:
   Abb. **C**: System Flamenco^{IP} oder Flamenco: Anschluss über RAN-Schnittstelle 77 0840 00.
   Abb. **D**: System CONCENTO^{PLUS}, Raum ohne Steuermodul ZLB: Anschluss über 3-polige Anschlussklemme, z.B. WAGO 221.
   Abb. **E**: System CONCENTO^{CARE} oder CONCENTO^{PLUS}, Raum mit Steuermodul ZLB: Anschluss über RAN-Schnittstelle 19 0840 00.
7. Den Funkempfänger-Einsatz [8] in den Rahmen [4] und den Zwischenrahmen [6] einlegen und mit den beiden Innensechskantschrauben [9] auf den Abstandsbolzen mit Innengewinde [5] festschrauben.
8. Funkempfänger-T UP programmieren, wie in den Dokumenten für VarioRec6 U beschrieben, siehe Abschnitt 5 in dieser Installationsanleitung.

EN - Installation Instructions

1. Mounting (see fig. B)

1. Strip the nurse call system's connection cable in the back box [1] to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Unscrew the two socket head screws [9] using an Allen key (H2 type) until the radio receiver insert [8] detaches from the mounting plate [3].
3. Remove the radio receiver insert [8] from the mounting plate [3].
4. Use the back box screws [2] to screw the mounting plate [3] onto the back box [1].
5. Insert the connection wires [7] of the radio receiver through the intermediate frame [6] (if an intermediate frame is used), the frame [4], and the mounting plate [3] into the back box [1].
6. Connect the connection wires [7] according to figure:
   Fig. **C**: Flamenco^{IP} or Flamenco system: Connection via RAN interface 77 0840 00.
   Fig. **D**: CONCENTO^{PLUS} system, Room without Control Module ZLB: Connection via 3 pole connector, e.g. WAGO 221.
   Fig. **E**: CONCENTO^{CARE} or CONCENTO^{PLUS} system, Room with control module ZLB: Connection via RAN interface 19 0840 00.
7. Insert the radio receiver insert [8] into the frame [4] and the intermediate frame [6] and screw it onto the spacing bolt with core thread [5] using the two socket head screws [9].
8. Program radio receiver-T UP as described in the documents for VarioRec6 U, see section 5 in these installation instructions.



[1] * Einbaudose, 1-teilig (Mauerwerk: 17 0100 00, Hohlwand: 17 5100 00)
[2] * Zwei Schrauben der Einbaudose
[3] Tragring
[4] * Rahmen, z.B. 77 0210 53
[5] Zwei Abstandsbolzen mit Innengewinde
[6] * Zwischenrahmen, z.B. 77 0210 56; nicht bei allen Rahmentypen erforderlich.
[7] Fünf Anschlussadern
[8] Funkempfänger-Einsatz
[9] Zwei Innensechskantschrauben (H2)
* Nicht im Lieferumfang des Funkempfängers enthalten

[1] * Back box, 1-gang (solid wall: 17 0100 00, partition wall: 17 5100 00)
[2] * Two back box screws
[3] Mounting plate
[4] * Frame, e.g. 77 0210 53
[5] Two spacing bolts with core thread
[6] * Intermediate frame, e.g. 77 0210 56; not required for all frame types.
[7] Five connection wires
[8] Radio receiver insert
[9] Two socket head screws (H2)
* Not included with radio receiver delivery

DE - Installationsanleitung

2. Funkreichweite am Einsatzort prüfen

Die Funkreichweite zwischen dem Funkempfänger-T UP und den Funksendern hängt ab von den baulichen Gegebenheiten und beträgt bis zu 30 m. Bevor Sie einen tragbaren Funksender (MyAmie, iVi) an den Benutzer aushändigen, müssen Sie die Funkreichweite am Verwendungsort prüfen. Hierzu gehen Sie am geplanten Verwendungsort umher und lösen immer wieder einen Ruf aus. Informieren Sie den Benutzer über die Funkreichweite.

3. Demontage (siehe Abb. B)

1. Die beiden Innensechskantschrauben [9] mit einem Inbusschlüssel herausdrehen, bis sich der Funkempfänger-Einsatz [8] von dem Tragring [3] löst.
2. Die Anschlussadern [7] lösen.
3. Den Funkempfänger-Einsatz [8] zusammen mit dem Rahmen [4] und dem Zwischenrahmen [6] (wenn vorhanden) abnehmen.
4. Die Schrauben [2] am Tragring [3] soweit herausdrehen, bis Sie den Tragring [3] abnehmen können.

4. Anschlüsse

EN - Installation Instructions

2. Check radio coverage on the location of use

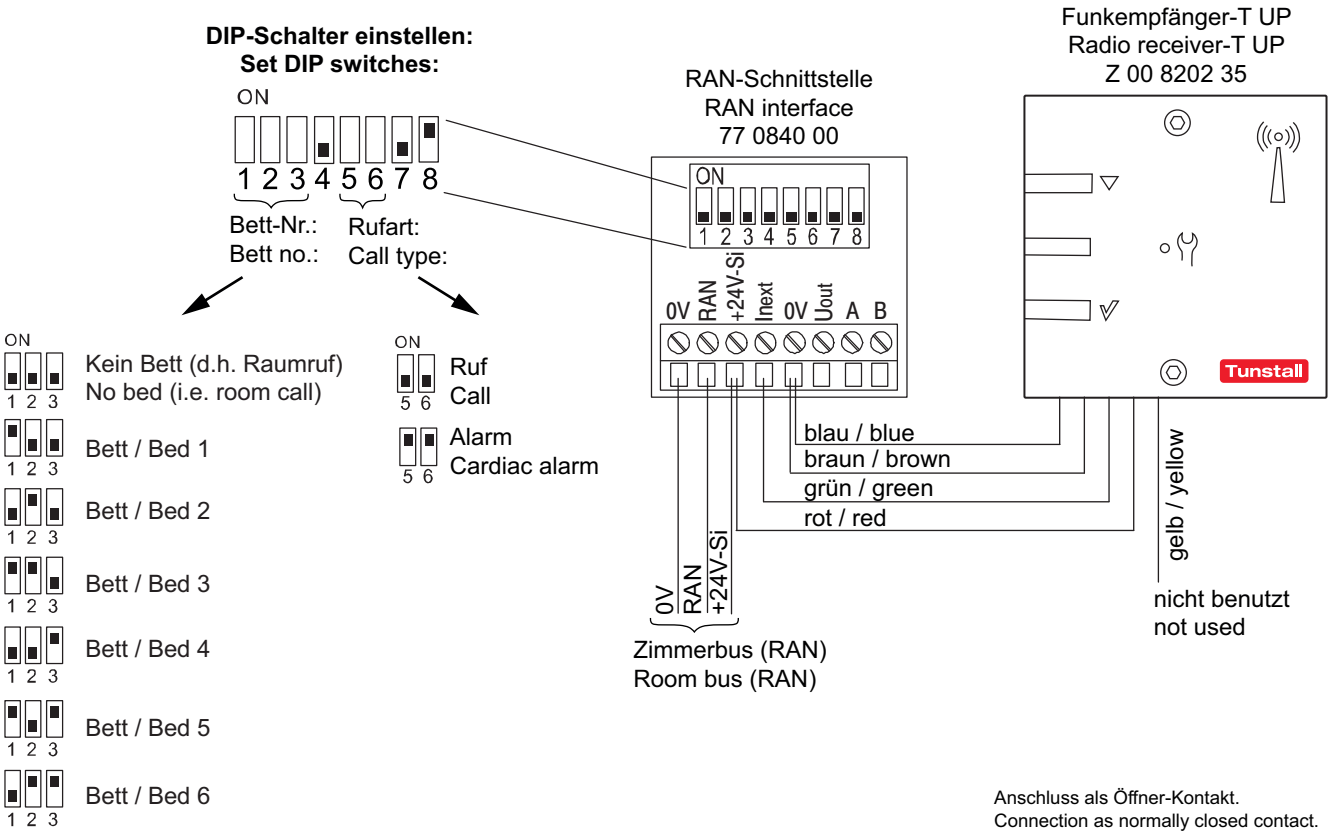
The radio range between the radio receiver-T UP and the radio transmitters depends on the structural conditions of the building; the range is up to 30 m. Before handing over a handheld radio transmitter (MyAmie, iVi) to the user, you must check the radio coverage at the place of use. To do this, walk around the planned place of use and trigger a call over and over again. Inform the user of the radio coverage.

3. Dismantling (see fig. B)

1. Unscrew the two socket head screws [9] until the radio receiver insert [8] detaches from the mounting plate [3].
2. Disconnect the connection wires [7].
3. Remove the radio receiver insert [8] together with the frame [4] and the intermediate frame [6] (if present).
4. Unscrew the screws [2] on the mounting plate [3] until you can remove the mounting plate [3].

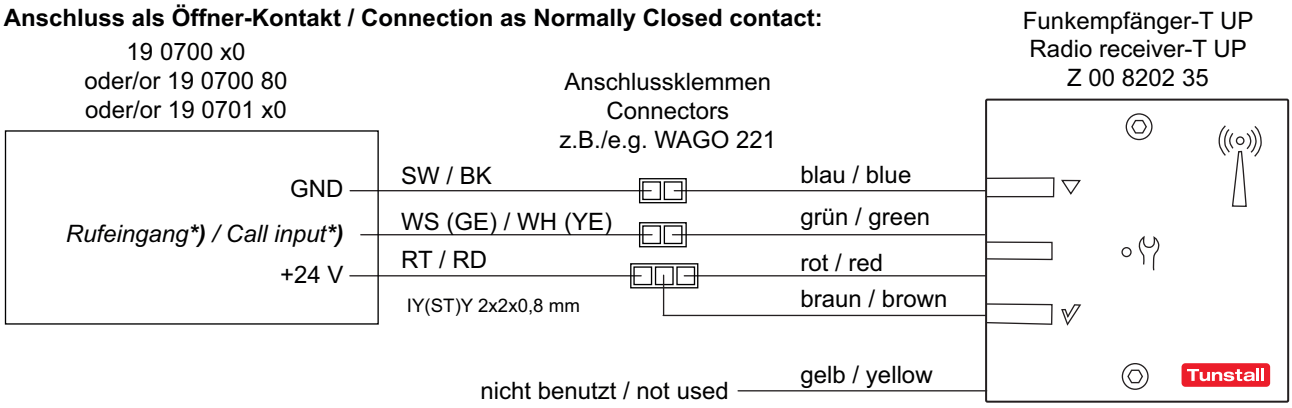
4. Connections

C **Anschluss an Flamenco^{IP} oder Flamenco**
Connection to Flamenco^{IP} or Flamenco

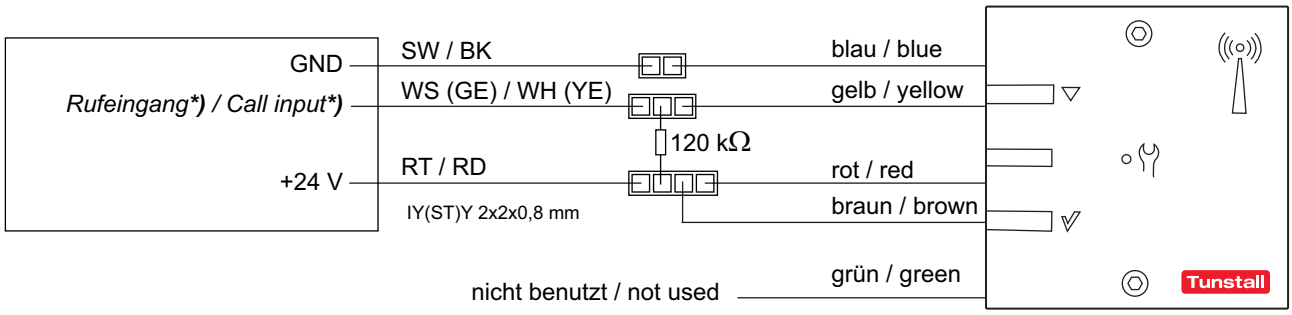


D Anschluss an CONCENTO^{PLUS}, Raum ohne Steuermodul ZLB
Connection to CONCENTO^{PLUS}, room without control module ZLB

Anschluss als Öffner-Kontakt / Connection as Normally Closed contact:



Anschluss als Schließer-Kontakt / Connection as Normally Open contact:

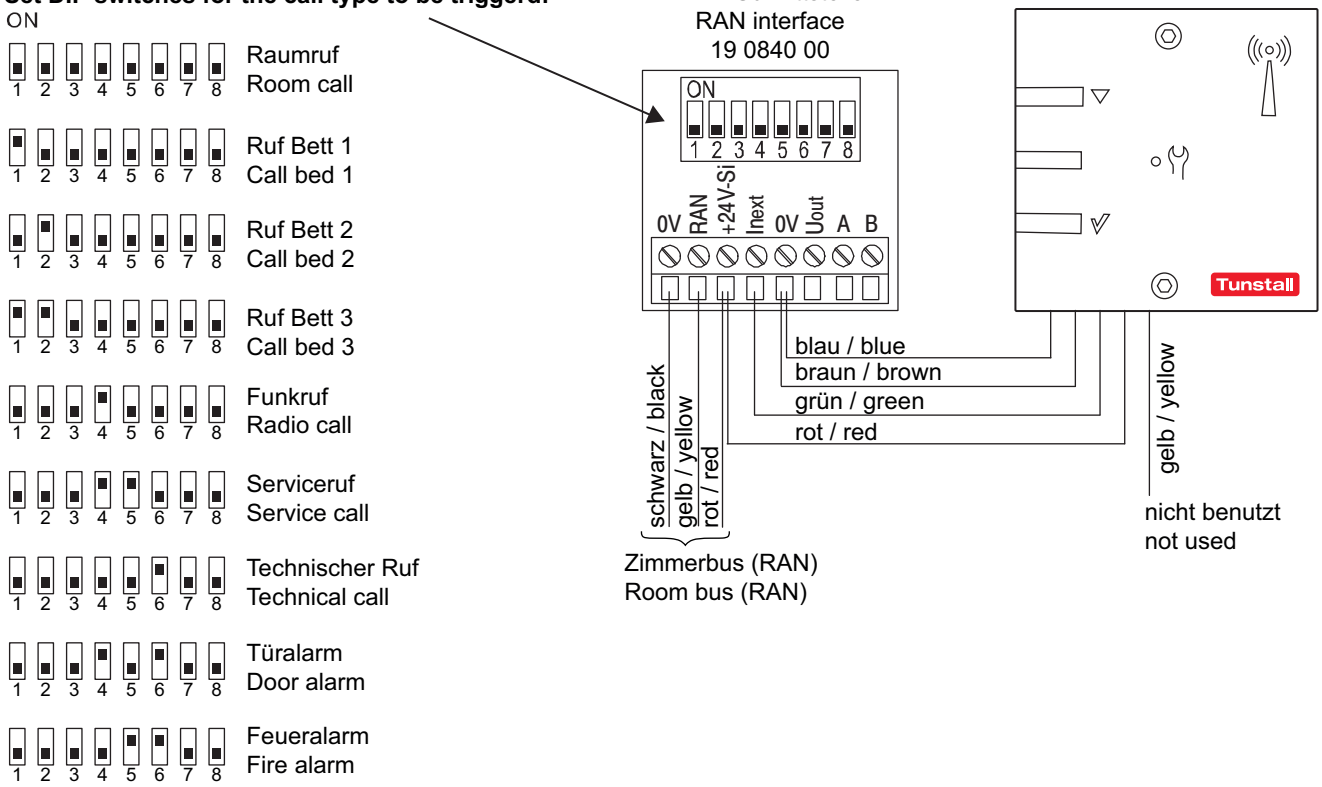


	*) Verwendbare Rufeingänge	Konfigurierbare Rufarten	Konfigurationsort
Terminal SD6 P 19 0700 20 Terminal S4 P 19 0700 70 Terminal S4 B 19 0700 40	R1 (Werkseinstellung: Ruf Bett 1) R2 (Werkseinstellung: Ruf Bett 2) R3 (Werkseinstellung: Ruf Bett 3) R4 R5 R6 R7	14: Ruf Bett 3 13: Raumruf 17: Serviceruf 19: Technischer Ruf 22: Feueralarm 28: Funkruf 33: Türalarm (Weitere Rufarten möglich) Weiterhin einstellen: Öffner-oder Schließer- Kontakt, Statischer Ruf	Terminal SD6 P: mit Conlog oder am Gerät Terminal S4 P: mit Conlog Terminal S4 B: mit Conlog Displaymodul: am Gerät
Displaymodul 19 0700 80	R1 (Werkseinstellung: Ruf Bett 1) R2 (Werkseinstellung: Ruf Bett 2) R3 R4		
RAB 19 0701 00 Steuermodul ZL 19 0701 10	R1: Ruf Bett 1 R2: Ruf Bett 2		

	*) Available call inputs	Configurable call types	Configuration tool
Terminal SD6 P 19 0700 20 Terminal S4 P 19 0700 70 Terminal S4 B 19 0700 40	R1 (Factory setting: Call bed 1) R2 (Factory setting: Call bed 2) R3 (Factory setting: Call bed 3) R4 R5 R6 R7	14: Call bed 3 13: Room call 17: Service call 19: Technical call 22: Fire alarm 28: Radio call 33: Door alarm (Further call types available) Other settings: NC or NO contact, static call	Terminal SD6 P: Conlog or on the device Terminal S4 P: Conlog Terminal S4 B: Conlog Display module: on the device
Display module 19 0700 80	R1 (Factory setting: Call bed 1) R2 (Factory setting: Call bed 2) R3 R4		
RAB 19 0701 00 Control module ZL 19 0701 10	R1: Call bed 1 R2: Call bed 2		

E **Anschluss an CONCENTO^{CARE} oder CONCENTO^{PLUS}, Raum mit Steuermodul ZLB**
Connection to CONCENTO^{CARE} or CONCENTO^{PLUS}, room with control module ZLB

Auszulösende Rufart am DIP-Schalter einstellen:
Set DIP switches for the call type to be triggerd:



5. Dokumente zu VarioRec6 U / Funkempfänger-T UP

Der Funkempfänger-T UP ist ein OEM-Produkt der Firma Lehmann Electronic GmbH. Sie müssen neben dieser Installationsanleitung auch folgende Dokumente der Firma Lehmann Electronic lesen und beachten:

- Kurzübersicht VarioRec6 U Funkempfänger (im Lieferumfang des Funkempfängers-T UP), Dok.-Nr. LE264
- Bedienungsanleitung VarioRec6 U, Dokument-Nr. LE265

Die Produktbezeichnung VarioRec6 U ist ein Oberbegriff von Lehmann Electronic für verschiedene Funkempfänger. Der Funkempfänger-T UP ist nur einer von diesen. Für den Funkempfänger-T UP treffen nicht alle Themen der Dokumente für VarioRec6 U zu. Beachten Sie deshalb folgende Hinweise:

Verfügbare Funktionen

Folgende Funktionen, die in den Dokumenten für VarioRec6 U genannt werden, sind am Funkempfänger-T UP mit den Tunstall-Funksendern verfügbar:

- Funksender einlernen
- Funksender auslernen
- Alle eingelernten Funksender auslernen
- Störmeldung quittieren
- Mastermodus setzen
- Pflegemodus
- Betriebsanzeige aktiv / deaktiv setzen
- Alle Parameter auf Werkseinstellungen zurücksetzen
- Tagesmeldungs-Überwachung
- Vitalüberwachung

5. Documents for VarioRec6 U / radio receiver-T UP

The radio receiver-T UP is an OEM product of Lehmann Electronic GmbH. In addition to these installation instructions, you must read and observe the following documents from Lehmann Electronic:

- Brief overview VarioRec6 U radio receiver (supplied with the radio receiver-T UP), document no. LE264
- Operating instructions VarioRec6 U, document no. LE265

The product designation VarioRec6 U is a collective term of Lehmann Electronic for various radio receivers. The radio receiver-T UP is only one of these. Not all topics in the VarioRec6 documents apply to the radio receiver-T UP. Therefore, please observe the following notes:

Available functions

The following functions mentioned in the documents for VarioRec6 U are available on the radio receiver-T UP with the Tunstall radio transmitters:

- Teaching in radio transmitters
- Teaching out radio transmitters
- Teaching out all taught-in radio transmitters
- Acknowledge fault message
- Set master mode
- Care mode
- Set operating display active / inactive
- Reset all parameters to factory settings
- Daily message monitoring
- Vital monitoring

DE - Installationsanleitung

Nicht verfügbare Funktionen

Folgende Funktionen, die in den Dokumenten für VarioRec6 U genannt werden, sind am Funkempfänger-T UP mit den Tunstall-Funksendern **nicht** verfügbar:

- Funksender für Sonderfunktionen, wie z.B. Funk-Abstelltaster oder Funk-Lichttaster

Fehler-/Störungsmeldungen im Betrieb

Bei Verwendung mit Tunstall Funksendern zeigt der Funkempfänger-T UP folgende Fehler- und Störmeldungen an, die in den Dokumenten für VarioRec6 U genannt werden:

- Senderbatterie schwach
- Systemfehler
- Empfangsblockade
- Tagesmeldung fehlt
- Vitalmeldung fehlt

6. Information über schwache Batterie

Die Funksender enthalten Batterien. Wenn die Batterie eines Funksenders schwach ist, blinkt die LED an dem Funkempfänger-T UP rot, um dem Pflegepersonal anzuzeigen, dass die Batterie bzw. der Funksender gewechselt werden muss, siehe Dokumente zu VarioRec6 U.

ACHTUNG! Das Pflegepersonal muss eine schwache Batterie an der LED des Funkempfängers-T UP und/oder an dem Funksender erkennen und quittieren. Funksender mit einer schwachen Batterie müssen umgehend ausgetauscht werden.

Hinweis: Bei Verwendung der Funksender mit einem Hausnotrufgerät wird bei schwacher Batterie ein sog. Hintergrundruf zu einer Servicezentrale gesendet. Dieser Ruf wird **nicht** ausgelöst, wenn die Funksender mit dem Funkempfänger-T UP benutzt werden.

LED am MyAmie, Bestell.-Nr. P68007/02, P68007/04

Der MyAmie dient zur Rufauslösung durch Drücken der Ruftaste. Die LED am MyAmie bestätigt das Drücken der Ruftaste und zeigt gleichzeitig den Zustand der Batterie des MyAmie an:

- LED leuchtet (ca. 3 Sekunden) nach Drücken der Ruftaste: Batterie ist in Ordnung. Ein Ruf wird ausgelöst.
- LED blinkt nach Drücken der Ruftaste: Batterie ist fast leer. Ein Ruf wird ausgelöst. Die LED am Funkempfänger-T UP blinkt rot, um anzuzeigen, dass die Batterie schwach ist und der MyAmie gewechselt werden muss.
- LED bleibt dunkel nach Drücken der Ruftaste: Batterie ist leer oder MyAmie ist defekt! Es wird kein Ruf ausgelöst! Der MyAmie muss sofort gewechselt werden.

EN - Installation Instructions

Functions not available

The following functions mentioned in the documents for VarioRec6 U are **not** available on the radio receiver-T UP with the Tunstall radio transmitters:

- Radio transmitter for special functions, e.g. radio cancel switch or radio light switch

Error/failure messages during operation

When used with Tunstall radio transmitters, the radio receiver-T UP displays the following error and fault messages mentioned in the documents for VarioRec6 U:

- Transmitter battery low
- System fault
- Reception blockade
- Daily report missing
- Vitality message is missing

6. Information about low battery level

The radio transmitters contain batteries. When the battery level of a radio transmitter is low, the LED on the radio receiver-T UP will flash in red to inform the nursing staff, that the battery or the radio transmitter must be changed. Please refer to the documents for the VarioRec6 U.

ATTENTION! The nursing staff must identify and acknowledge a low battery level by watching the LED on the radio receiver-T and/or the signals on the radio transmitter. Radio transmitters with a low battery level must be replaced immediately.

Note: If the radio transmitters are used with a social alarm unit a call is raised to a monitoring centre in case of a low battery level. This call is **not** raised when the radio transmitters are used with the radio receiver-T UP.

LED on the MyAmie, order no. P68007/02, P68007/04

The MyAmie is used to raise calls by pressing the call button.

The LED on the MyAmie confirms, that the button is pressed, and indicates the battery level at the same time:

- LED is on (for approx. 3 seconds) after the call button has been pressed: Battery is okay. A call is raised.
- LED is flashing after the call button has been pressed: The battery level is low. A call is raised. The LED on the radio receiver-T UP is flashing red to indicate, that the battery is low and the MyAmie must be changed.
- LED remains dark after the call button has been pressed: The battery is empty or the MyAmie is defective! No call will be raised! The MyAmie must be changed immediately.

DE - Installationsanleitung

Management Interface

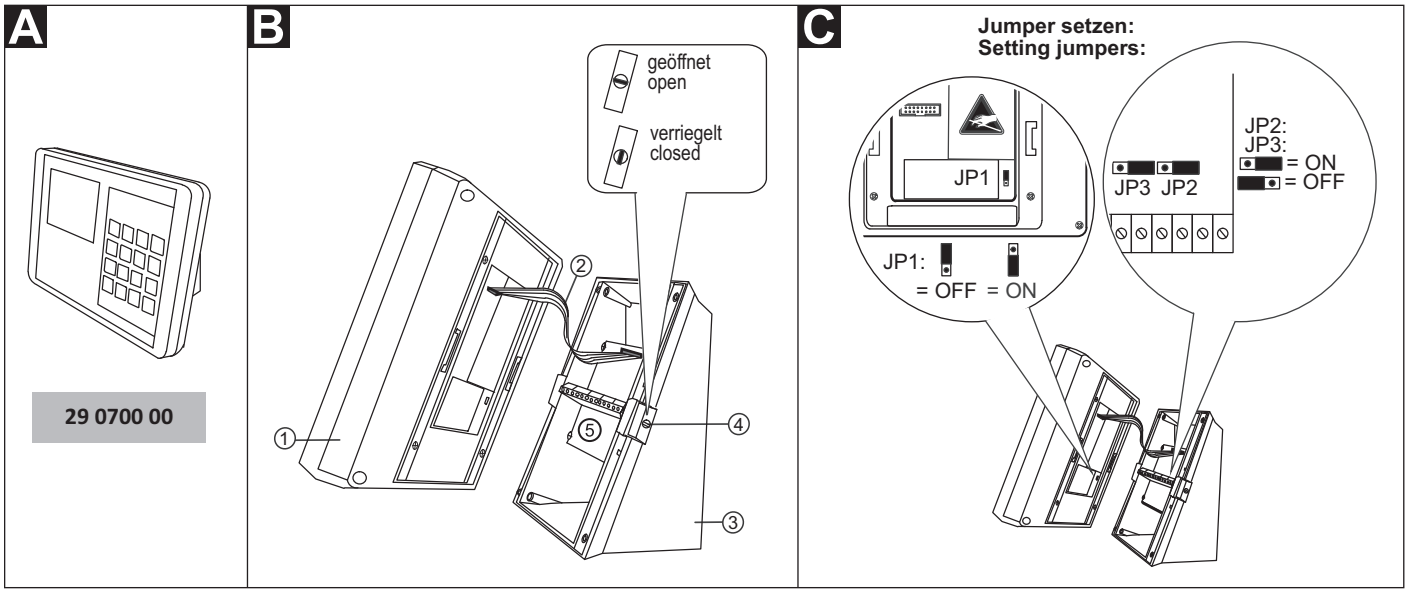
Interface zum Anschluss an den Gruppenbus einer CONCENTO^{CARE} Rufanlage bietet Schnittstellen zu:

- PC mit Management Software über LAN für Konfiguration und Protokollierung.
- DECT-Anlage oder Personensuchanlage PSA (ESPA 4.4.4) zur Übertragung von Ruf- und Systemmeldungen.
- Analoges Telefonnetz (a/b-Schnittstelle) zur Rufbearbeitung per Telefon über Sprachansagen. In Systemen mit Sprechen auch zur Sprechkommunikation.
- Störmeldeeinrichtungen (Störmelderelaisausgang).

Hinweis: Es ist nur 1 Management Interface oder 1 Systemschnittstelle LAN am Gruppenbus anschließbar.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

A Produktbeschreibung



[1] Bedienpanel
[2] Flachkabel
[3] Sockel
[4] Befestigungsklipp mit integriertem Drehriegel-Verschluss
[5] Anschlussfeld im Sockel

B Demontage und Abklemmen

Im Auslieferungszustand ist das Management Interface zusammengebaut und muss zunächst demontiert werden:

1. Stecker, die an den Steckbuchsen auf der Unterseite des Management Interface angeschlossen sind, abziehen.
2. Drehriegel-Verschlüsse [4] rechts und links am Sockel [3] mit einem Schraubendreher in Position „geöffnet“ drehen.
3. Bedienpanel [1] mit beiden Händen festhalten und gleichzeitig beide Befestigungsklipps [4] eindrücken.
4. **Achtung!** Bedienpanel [1] und Sockel [3] sind durch ein Flachkabel [2] miteinander verbunden. Bedienpanel [1] vorsichtig vom Sockel [3] abnehmen.
5. Flachkabel [2] vom Sockel [3] abziehen.
6. Adern im Anschlussfeld [5] des Sockels [3] abklemmen (Schraubklemmen).

EN - Installation Instructions

Management Interface

Interface for connection to the group bus of a CONCENTO^{CARE} nurse call system offers interfaces for:

- PC with management software via LAN for configuration and logging.
- DECT system or radio paging system (ESPA 4.4.4) for the transmission of call and system messages.
- Analogue telephone network (a/b interface) for handling of calls per telephone via speech messages. In speech communication systems also for speech communication.
- Fault message facilities (fault message relay output).

Note: Only 1 management interface or system interface LAN can be connected to the group bus.

NOTE! The complete installation of the system is described in the Technical Manual.

A Product description

[1] Control panel
[2] Flat ribbon cable
[3] Base
[4] Retaining clip with integrated rotary lock
[5] connection field in the base

B Dismantling and disconnecting

At the point of delivery the management interface is assembled and must first be dismantled:

1. Pull off the plugs that are connected to the female connectors on the underside of the management interface.
2. Turn the rotary locks [4] at the right and left on the base [3] to the "open" position with a screwdriver.
3. Hold the control panel [1] with both hands and simultaneously press in both retaining clips [4].
4. **Caution!** The control panel [1] and the base [3] are joined by means of a flat ribbon cable [2]. Carefully remove the control panel [1] from the base [3].
5. Pull the flat ribbon cable [2] from the base [3].
6. Disconnect the wires in the connection field [5] of the base [3] (screw-type terminals).

DE - Installationsanleitung

B Montage

Wandmontage auf einteilige Einbaudose oder auf Kabelkanal:

1. Jumper setzen (Siehe Abschnitt „Jumper setzen“).
2. Adern zum Anschluss an das Anschlussfeld [5] im Sockel [3] gemäß Abschnitt „Anschluss“ vorbereiten.
3. Sockel [3] an den vier Montagelöchern mit Schrauben und Dübeln an der Wand befestigen.
4. Anschlussleitungen durch den Ausbruch im Sockel [3] führen.
5. Adern gemäß Abschnitt „Anschluss“ an den Anschlussklemmen im Sockel [3] anschließen.
6. Flachkabel [2] anschließen.
7. Bedienpanel [1] auf Sockel [3] drücken, bis es hörbar einrastet.
8. Beide Drehriegel-Verschlüsse [4] mit einem Schraubendreher in Position "verriegelt" drehen.
9. Anschlusskabel mit Stecker gemäß Abschnitt "Anschluss" an Steckbuchsen auf der Unterseite des Management Interface anschließen.

Bevor das Management Interface funktionsbereit ist, muss es konfiguriert werden, siehe nächste Seite.

C Jumper setzen

- Jumper gemäß der folgenden Übersicht setzen:

Nr.	Lage	Einstellung
JP1	Rückseite Bedienpanel	Im Betrieb muss JP1 immer auf ON stehen. Hierdurch wird eine Li-Batterie für das Uhrenmodul aktiviert (zur Spannungspufferung bei Netzausfall). Werkseinstellung: OFF.
JP2	Anschlussfeld	Werkseinstellung ON nicht verändern.
JP3	Anschlussfeld	Busabschluss: Wenn das Management Interface der erste oder letzte Teilnehmer am Gruppenbus ist, muss der Bus abgeschlossen werden. Hierzu JP3 auf ON setzen. Kein Busabschluss: Einstellung OFF. Werkseinstellung: ON.

Technische Daten

Spannungsversorgung	24 V=
Ruhestromaufnahme	240 mA
Anschluss: Gruppenbus Spannungsversorgung	Leitungstyp: J-Y(St)Y 4x2x0,8 NYM-J 3x1,5 mm²
Störmelderelais	Leiterquerschnitt max. 1,5 mm²
Abisolierlänge	6 mm
Abmessungen (HxBxT)	135 x 190 x 90 mm
Gehäusematerial	ABS
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

EN - Installation Instructions

B Mounting

Wall mounting on a one-gang back box or on cable duct:

1. Set the jumpers (see section "Setting jumpers").
2. Prepare the wires for connection to the connection field [5] in the base [3] according to section "Connection".
3. Mount the base [3] to the wall on the four mounting holes with screws and dowels.
4. Feed the connection lines through the break-out in the base [3].
5. Connect the wires to the connection terminals in the base [3] according to section "Connection".
6. Connect the flat ribbon cable [2].
7. Press the control panel [1] onto the base [3] until it latches in audibly.
8. Turn both rotary locks [4] to the "locked" position with a screwdriver.
9. Connect the connection cables with plug to the female connectors on the underside of the management interface according to section "Connection".

Before the management interface is ready for operation it must be configured, see the following page.

C Setting jumpers

- Set the jumpers according to the following overview:

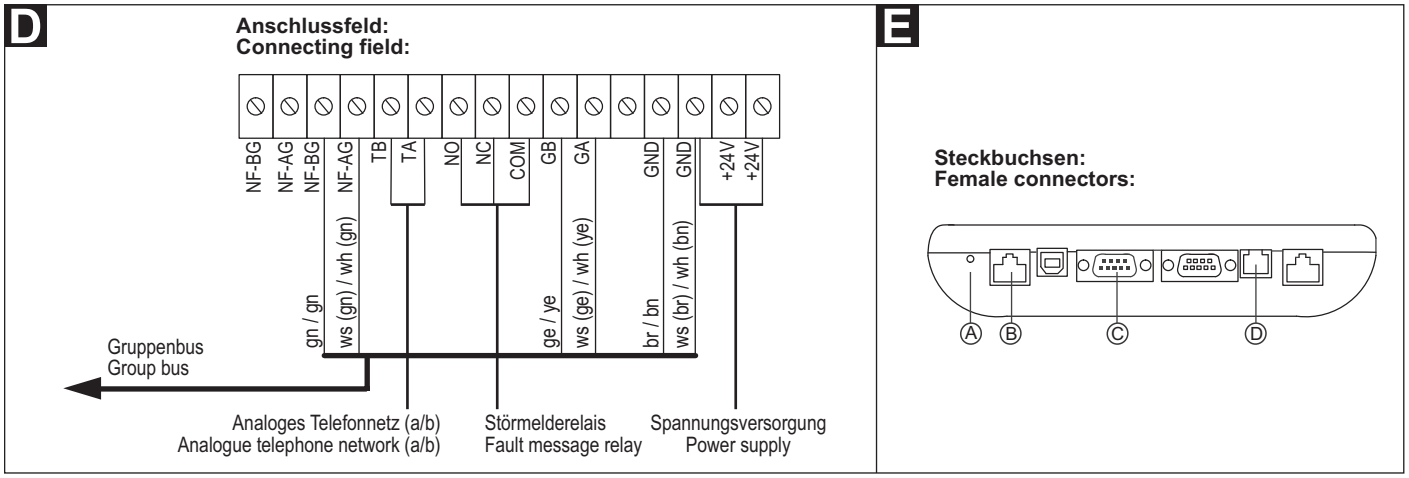
Nr.	Position	Setting
JP1	Rear side of the control panel	During operation JP1 must always be set on ON. This activates a lithium battery for the clock module (as power buffer in case of a power failure). Factory setting: OFF.
JP2	Connection field	Do not change factory setting ON.
JP3	Connection field	Bus termination: If the management interface is the first or last subscriber on the group bus, the bus must be terminated. For this, set JP3 on ON. No bus termination: Setting OFF. Factory setting: ON.

Technical data

Power supply	24 V=
Standby current consumption	240 mA
Connection: Group bus Power supply	Cable type: J-Y(St)Y 4x2x0.8 NYM-J 3x1.5 mm²
Fault message relay	Wire cross-section max. 1.5 mm²
Skinning length	6 mm
Dimensions (HxWxD)	135 x 190 x 90 mm
Housing material	ABS
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

DE - Installationsanleitung

D E Anschluss



Hinweise zu den Anschlüssen:

D Anschlussfeld (im Sockel)	
Gruppenbus	NF-AG und NF-BG werden in Systemen ohne Sprechen nicht benutzt.
Spannungsversorgung	Anschluss an die Spannungsversorgung einer physikalischen Gruppe. Strombedarf berücksichtigen!
Analoges Telefonnetz (a/b)	Anschluss auch an RJ11-Buchse [D] möglich. Jedoch nur eine Anschlussmöglichkeit darf benutzt werden!
Störmelderelais	Potentialfrei. Schaltleistung: 2 A. Schaltet für 2 Sekunden bei: Störung am Gruppenbus, Störung einzelner Module des Management Interface.

E Steckbuchsen (Geräteunterseite)		
A	Reset-Taste	-
B	Management Software	RJ45-Buchse für Anschluss an das LAN mit Management Software.
C	PSA oder DECT (ESPA 4.4.4)	Sub-D-Stecker, 9-polig (RS232). Maximale Leitungslänge: 10 m.
D	Analoges Telefonnetz (a/b)	RJ11-Buchse.

D Leitungen am Anschlussfeld im Sockel anschließen

1. Die Anschlusskabel auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan an den Anschlussklemmen (Schraubklemmen) anschließen.

E Leitungen an den Steckbuchsen auf der Geräteunterseite anschließen

1. Wenn die Adern am Anschlussfeld im Gerätesockel angeschlossen sind und das Gehäuse wieder verschlossen ist, die Stecker auf der Geräteunterseite gemäß Anschlussplan einstecken.

EN - Installation Instructions

D E Connection

Information on the connections:

D connection field (in the base):	
Group bus	NF-AG and NF-BG are not used in systems without speech communication.
Power Supply	Connection to the power supply of a physical group. Take current consumption into consideration!
Analogue telephone network (a/b)	Connection to an RJ11 socket [D] is also possible. However, only one option for connection is permitted to be used!
Fault message relay	Potential-free. Switching capacity: 2 A. Switches for 2 seconds when: Fault on the group bus, fault on individual modules of the management interface.

E Female connectors (underside of device):		
A	Reset button	-
B	Management software	RJ45 socket for connection to the LAN with the management software.
C	Radio paging system or DECT (ESPA 4.4.4).	Sub-D plug, 9-pole (RS232). Maximum cable length: 10 m.
D	Analogue telephone network (a/b)	RJ11 socket.

D Connection of lines to the connection field in the base

1. Strip the connection cables to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires to the connection terminals (screw-type terminals) according to the connection diagram.

E Connection of lines to the female connectors at the underside of the device

1. After the wires have been connected to the connection field in the base of the device and the housing has been locked, insert the plugs at the underside of the device according to the connection diagram.

DE - Konfigurationsanleitung

Management Interface - Konfiguration

Am Management Interface müssen folgende Einstellungen vorgenommen werden:

- IP-Adresse einstellen,
- Schnittstellen konfigurieren.

Diese Einstellungen werden im Folgenden beschrieben.

Alle anderen Einstellungen werden per Fernkonfiguration über das Bussystem mit der Management Software vorgenommen und sind nicht Bestandteil dieses Dokuments.

HINWEIS! Solange die Fernkonfiguration noch nicht durchgeführt wurde, zeigt das Display am Ende der Zeile „ID“: „-> ???“. Das Management Interface ist noch nicht funktionsbereit.

Displayanzeigen

Datum/Uhrzeit	Übernahme aus Management Software.
Zeitzone	Aktive Zeitzone der Rufanlage
Zeitzonen-Modus	Automatische oder manuelle Zeitzoneneinstellung. Konfiguration in Management Software.
Aktive Meldungen	Anzahl Rufe, Anwesenheiten und Störungen in der Rufanlage
ID	Geräte-ID des Management Interface. Werkseinstellung.
->???	Management Interface wurde noch nicht durch Management Software konfiguriert!
Adr	Adresse des Management Interface (Einstellung in Management Software)
LGR	Logische Gruppe des Management Interface (Einstellung in Management Software)
PGR	Physikalische Gruppe des Management Interface (Einstellung in Management Software)
IP/Subnet/ Gateway	IP-Konfiguration des Management Interface im LAN mit Management Software. Einstellung am Management Interface.

Symbolanzeigen

Symbole zeigen den Zustand der Module des Management Interface:

- Bus = Verbindung zum Gruppenbus
- Server = Verbindung zur Management Software
- Tel. = Verbindung zum analogen Telefonnetz
- PSA = Verbindung zu Personensuchanlage oder DECT-Anlage

	Grün	OK! Modul im Management Interface eingeschaltet und Verbindung betriebsbereit.
	Rot	Störung! Modul im Management Interface eingeschaltet, aber Verbindung unterbrochen oder gestört.
	Blau	Modul im Management Interface ausgeschaltet.

Servicemenü benutzen

Im Servicemenü werden die Konfigurationen durchgeführt.

Servicemenü aufrufen:

1. In der Betriebsanzeige **Enter** drücken.
✓ Die Anzeige „Kennwort:“ erscheint.
2. Kennwort eingeben. (Werkseinstellung, Kennwort = 0000).
3. **Enter** drücken.
✓ Das Hauptmenü erscheint.

Die Tasten des Management Interface haben im Servicemenü die in folgender Abbildung gezeigten Funktionen.

EN - Configuration Instructions

Management Interface - Configuration

The following settings must be made on the management interface:

- Setting the IP address,
- Configuring interfaces.

These settings are described in the following.

All other settings are carried out with the management software per remote configuration via the bus system and are not part of this document.

NOTE! As long as the remote configuration has not been carried out, the display shows at the end of line "ID": "-> ???". The management interface is not yet ready for operation.

Displays

Date/time	Takeover from management software.
Time zone	Active time zone of nurse call system.
Time zone mode	Automatic or manual time zone setting. Configuration in management software.
Active messages	Number of calls, presences and faults in the nurse call system.
ID	Device ID of the management interface. Factory setting.
->???	Management interface has not been configured with the management software!
Add	Address of management interface (setting in management software)
LGR	Logic group of management interface (setting in management software)
PGR	Physical group of management interface (setting in management software)
IP/Subnet/ Gateway	IP configuration of management interface in LAN with management software. Setting on management interface.

Icon displays

Icons display the status of the modules of the management interface.

- Bus = Connection to the group bus
- Server = Connection to management software
- Tel. = Connection to the analogue telephone network
- PSA = Connection to the paging system or DECT system

	Green	OK! Module in management interface is switched on and the connection is ready for operation.
	Red	Fault! Module in management interface is switched on, but the connection is interrupted or faulty.
	Blue	Module in the management interface is switched off.

Use of the service menu

The configurations are carried out in the service menu.

Calling up the service menu:

1. Press **Enter** in the operating display.
✓ "Password" is displayed.
2. Enter password. (Factory setting, Password = 0000).
3. Press Enter.
✓ The main menu appears.

The Management Interface buttons have in the service menu the functions shown in the following figure.

DE - Konfigurationsanleitung

Tasten am Management Interface

	In der Liste nach oben wandern.
	In der Liste nach unten wandern.
	Markierten Menüpunkt anwählen.
	Zum übergeordneten Menü zurückkehren. Beim Drücken im Hauptmenü gleichzeitig Aufforderung zum Speichern aller durchgeführten Änderungen.

Änderungen speichern und Servicemenü beenden

Die im Folgenden beschriebenen Einstellungen werden erst beim Beenden des Servicemenüs gespeichert.

1. Im Hauptmenü **Clear** drücken.
2. Folgende Meldung wird angezeigt: *„Änderungen speichern? 'Enter' zum Speichern. Beliebige Taste zum Verwerfen“*.
3. Um die Änderungen zu speichern, **Enter** drücken.

Hinweis! Wenn 120 Sekunden keine Taste gedrückt wird, wird das Servicemenü automatisch beendet ohne die Änderungen zu speichern.

Sprache des Servicemenüs ändern

1. Im Hauptmenü *„Geräteeinstellungen“* anwählen.
✓ Das Menü „Geräteeinstellungen“ erscheint.
2. *„Sprache“* anwählen.
✓ Das Untermenü „Sprache“ erscheint.
3. Gewünschte Sprache anwählen.

IP-Konfiguration einstellen

Das Management Interface wird über LAN mit der Management Software verbunden. Dafür muss eine IP-Konfiguration eingestellt werden.

1. Im Hauptmenü *„Geräteeinstellungen“* anwählen.
✓ Das Menü *„Geräteeinstellungen“* erscheint.
2. *„IP-Konfiguration“* anwählen.
✓ Das Untermenü *„IP-Konfiguration“* erscheint.
3. *„IP-Adresse“* mit **Enter** anwählen.
4. IP-Adresse im dreistelligen Format eingeben.
Werkseinstellung: *192.168.178.041*
Eingabe mit **Enter** abschließen.
5. Zu *„Netmask“* wandern und mit **Enter** anwählen.
6. Subnetzmaske im dreistelligen Format eingeben.
Werkseinstellung: *255.255.255.000*
Eingabe mit **Enter** abschließen.
7. Zu *„Gateway“* wandern und mit **Enter** anwählen.
8. Gateway im dreistelligen Format eingeben.
Werkseinstellung: *192.168.178.001*
Eingabe mit **Enter** abschließen.
9. Zu *„Server Port“* wandern und mit **Enter** anwählen.
10. Server Port eingeben. Werkseinstellung: *55005*
Eingabe mit **Enter** abschließen.
11. So oft **Clear** drücken, bis folgende Meldung angezeigt wird: *“Änderungen speichern? 'Enter' zum Speichern. Beliebige Taste zum Verwerfen“*.
12. Um die eingestellte IP-Konfiguration zu speichern, **Enter** drücken.
✓ Die IP-Konfiguration wird gespeichert, das Servicemenü ist beendet.
13. Wenn eine neue IP-Adresse eingestellt wurde, muss ein Reset des Management Interface durchgeführt werden. Hierzu Reset-Taste [A] links neben den Steckbuchsen auf der Unterseite des Management Interface drücken, siehe Abb. **E**.
✓ Das Management Interface wird neu gestartet und kann ab dann von der Management Software über das LAN erreicht werden.

EN - Configuration Instructions

Buttons on the Management Interface

	Scroll up the list.
	Scroll down the list.
	Select the marked menu item.
	Return to the parent menu. When pressing the main menu simultaneous request to save all changes made.

Saving changes and quitting the service menu

The settings described in the following are saved only after quitting the service menu.

1. Press **Clear** in the main menu.
✓ The following message will be displayed: "*Save changes? Press 'Enter' to save. Press any key to cancel*".
2. To save the changes, press **Enter**.

Note! If no button is pressed within a period of 120 seconds, the service menu is terminated automatically and the changes are not saved.

Changing the language of the service menu

1. Select "*Device settings*" in the main menu.
✓ Menu "*Device settings*" is displayed.
2. Select "*Language*".
✓ The sub-menu "*Language*" is displayed.
3. Select the desired language.

Setting the IP configuration

The management interface is connected with the management software via LAN. For this, the IP configuration must be set.

1. Select "*Device settings*" in the main menu.
✓ Menu "*Device settings*" is displayed.
2. Select "*IP configuration*".
✓ The sub-menu "*IP configuration*" is displayed.
3. Select "*IP address*" with **Enter**.
4. Enter the IP address in three-digit format.
Factory setting: *192.168.178.041*
Complete the entry with **Enter**.
5. Move to "*Netmask*" and select with **Enter**.
6. Enter the subnet mask in three-digit format.
Factory setting: *255.255.255.000*
Complete the entry with **Enter**.
7. Move to "*Gateway*" and select with **Enter**.
8. Enter the Gateway in three-digit format.
Factory setting: *192.168.178.001*
Complete the entry with **Enter**.
9. Move to "*Server Port*" and select with **Enter**.
10. Enter the Server Port. Factory setting: *55005*
Complete the entry with **Enter**.
11. Press **Clear** as often as required until the following message is displayed: "*Save changes? Press 'Enter' to save. Press any key to cancel*".
12. Press **Enter** to save the set IP configuration.
✓ The IP configuration will be saved and the service menu terminated.
13. If a new IP address has been set, a reset of the management interface must be carried out. Press the reset button [A] on the left next to the female connectors on the underside of the management interface, see the fig. **E**.
✓ The management interface is restarted and can then be reached from the management software via LAN.

DE - Konfigurationsanleitung

Störmelderelais testen

Wenn an das Störmelderelais ein Gerät angeschlossen ist, testen Sie wie folgt die Funktionalität:

1. Im Hauptmenü „*Systemtest*“ anwählen.
✓ Das Menü „*Systemtest*“ erscheint.
2. „*Störmelderelais-Test*“ anwählen.
✓ Das Störmelderelais wird geschaltet.
3. Zum Beenden des Tests **Enter** drücken.

PSA-Modul konfigurieren (ESPA 4.4.4)

Wenn eine DECT-Anlage oder eine Personensuchanlage PSA an das Management Interface angeschlossen ist, wie folgt vorgehen:

1. Im Hauptmenü „*PSA-Modul*“ anwählen.
✓ Das Menü „*PSA-Modul*“ erscheint.
2. „PSA-Modul Ein/Aus“ anwählen.
✓ Das Untermenü „*PSA-Modul Ein/Aus*“ erscheint.
3. „*Ein*“ anwählen, wenn eine Personensuchanlage oder DECT-Anlage angeschlossen ist. (Werkseinstellung: „*Aus*“.)

Testnachricht an einen Pager oder ein DECT-Telefon senden

1. Im Menü „*PSA-Modul*“ „*Testnachricht senden*“ anwählen.
✓ Die Anzeige „*Pageradresse:*“ erscheint.
2. Adresse des Empfängers für die Testnachricht eingeben.
3. **Enter** drücken.
✓ Die Testnachricht „*Testmessage*“ wird gesendet.
4. Um das Menü „*PSA-Modul*“ zu verlassen, **Clear** drücken.

Werkseinstellung: 1200 Baud, 7 Datenbits, 2 Stopbits, Parität even.

Telefon-Modul konfigurieren

Wenn das Management Interface an das analoge Telefonnetz angeschlossen ist, wie folgt vorgehen:

1. Im Hauptmenü „*Telefon-Modul*“ anwählen.
✓ Das Menü „*Telefon-Modul*“ erscheint.
2. „*Telefon-Modul Ein/Aus*“ anwählen.
✓ Das Untermenü „*Telefon-Modul Ein/Aus*“ erscheint.
3. „*Ein*“ anwählen, wenn das Management Interface an das analoge Telefonnetz angeschlossen ist. (Werkseinstellung: „Aus“.)

Testanruf bei einem Telefon

1. Im Menü „T*elefon-Modul*“ „*Testanruf*“ anwählen.
✓ Die Anzeige „*Tel.-Nr.:*“ erscheint.
2. Telefonnummer des Telefons eingeben.
3. **Enter** drücken.
✓ Das Telefon wird angerufen und dann eine zu befolgende Sprachansage übertragen.
4. Bevor die angerufene Person auflegt, muss sie die Taste “0” drücken.
5. Um das Menü „*Telefon-Modul*“ zu verlassen, **Clear** drücken.

Sprachformat für Sprachansagen am Telefon einstellen

Für die Sprachansagen am Telefon können Sie einstellen, wie ein Rufort angegeben wird. Werkseinstellung: „Zimmer 1234“ (Zimmer eintausendzweihundertvierunddreißig), Optionen: „Zimmer 1-2-3-4“ (Zimmer eins zwei drei vier), „Station 1 Zimmer 2-3-4“, „Station 1 Zimmer 234“, „Station 12 Zimmer 3-4“, „Station 12 Zimmer 34“.

Wie folgt vorgehen:

1. Im Hauptmenü „*Telefon-Modul*“ anwählen.
✓ Das Menü „*Telefon-Modul*“ erscheint.
2. „*Sprachformat*“ anwählen.
✓ Das Untermenü „*Sprachformat*“ erscheint.
3. Die gewünschte Option anwählen.

EN - Configuration Instructions

Testing the fault message relay

If a device has been connected to the fault message relay, test the function as follows:

1. Select "*System test*" in the main menu.
✓ The "*System test*" menu is displayed.
2. Select "*Test Fault Relay*".
✓ The fault message relay is switched.
3. To quit the test, press **Enter**.

Configuring the paging module (ESPA 4.4.4)

If a DECT system or a radio paging system has been connected to the management interface, proceed as follows:

1. Select "*Paging module*" in the main menu.
✓ The "*Paging module*" menu is displayed.
2. Select "*Paging module On/Off*".
✓ The sub menu "*Paging module On/Off*" is displayed.
3. Select "*On*" if a radio paging system or DECT system is connected. (Factory setting: "*Off*".)

Sending a test message to a pager or a DECT telephone

1. Select "*Test message*" in menu "*Paging module*".
✓ "*Pager address:*" is displayed.
2. Enter the address of the recipient of the test message.
3. Press **Enter**.
✓ The test message "*Test message*" is sent.
4. To quit the "*Paging module*" menu, press **Clear**.

Factory setting: 1200 baud, 7 data bits, 2 stop bits, parity even.

Configuring the telephone module

If the management interface is connected to the analogue telephone network, proceed as follows:

1. Select "*Telephone module*" in the main menu.
✓ The "*Telephone module*" menu is displayed.
2. Select "*Telephone module On/Off*".
✓ The sub-menu "*Telephone module On/Off*" is displayed.
3. Select "*On*", if the management interface is connected to the analogue telephone network. (Factory setting: "*Off*".)

Test call for a telephone

1. Select "*Test call*" in menu "*Telephone module*".
✓ "*Tele. no.*:" is displayed.
2. **Enter** the number of the telephone.
3. Press **Enter**.
✓ The telephone is called and a message which is to be carried out is transmitted.
4. The person that has been called must press button "0" before he or she hangs up.
5. To quit the "*Telephone module*" menu, press **Clear**.

Setting the speech format for speech messages on the telephone

For speech messages on the telephone you can set how a call location is to be specified. Factory setting: "Room 1234“ (room one thousand two hundred and thirty four), Options: "Room 1-2-3-4“ (room one two three four), "Ward 1 Room 2-3-4", "Ward 1 Room 234", "Ward 12 Room 3-4", "Ward 12 Room 34".

Proceed as follows:

1. Select "*Telephone module*" in the main menu.
✓ The "*Telephone module*" menu is displayed.
2. Select "*Speech format*".
✓ Sub-menu "*Speech format*" is displayed.
3. Select the desired option.

DE - Installationsanleitung

Systemschnittstelle LAN

Systemschnittstelle LAN zum Anschluss an den Gruppenbus einer CONCENTO^{CARE} oder CONCENTO^{PLUS} Rufanlage bietet Schnittstellen zu:

- PC mit Management Software über LAN für Konfiguration und Protokollierung.
- DECT-Anlage oder Personensuchanlage PSA (ESPA 4.4.4) zur Übertragung von Ruf- und Systemmeldungen.
- Störmeldeeinrichtungen (Störmelderelaisausgang).

Es ist nur eine Systemschnittstelle LAN oder ein Management Interface am Gruppenbus anschließbar.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

VORSICHT! Die Leiterplatte und die Anschlussklemmen sind elektrostatisch gefährdet:
- Direkte Berührung vermeiden.
- Deckel nur für das Einstellen des DIP-Schalters öffnen.

EN - Installation Instructions

System Interface LAN

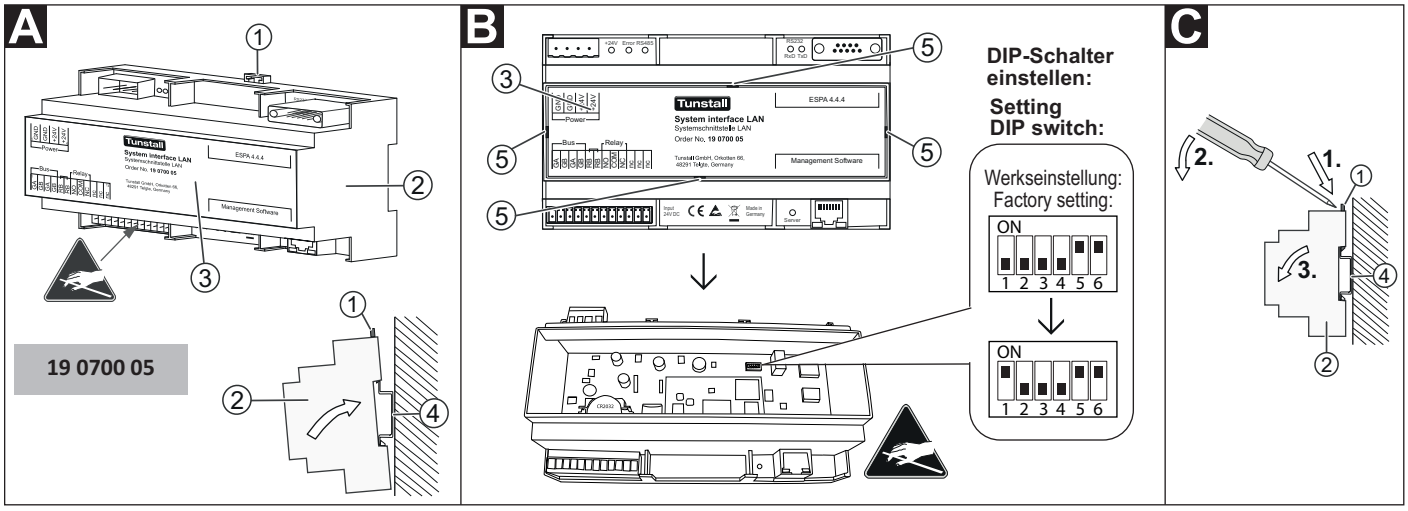
The system interface LAN for connection to the group bus of a CONCENTO^{CARE} or a CONCENTO^{PLUS} nurse call system offers interfaces for:

- PC with Management Software via LAN for configuration and logging.
- DECT system or radio paging system (ESPA 4.4.4) for the transmission of calls and system messages.
- Fault message facilities (fault message relay output).

Only one LAN system interface or one management interface can be connected to the group bus.

NOTE! The complete installation of the system is described in the Technical Manual.

CAUTION! The circuit board and the connectors are at risk of being damaged electrostatically:
- Avoid direct contact.
- Open the cover only to set the DIP switch.



[1] Oberer, schwarzer Befestigungsclip
[2] Systemschnittstelle LAN
[3] Deckel
[4] *Hutschiene
[5] Aussparungen zur Entriegelung des Deckels

* Nicht im Lieferumfang enthalten, separat bestellen.

[1] Top black retaining clip
[2] System interface LAN
[3] Cover
[4] *Mounting rail
[5] Recesses for unlatching the cover

* Not included in the scope of delivery, please order separately.

A Hutschienenmontage

1. DIP-Schalter einstellen (Siehe Abschnitt „DIP-Schalter einstellen“).
2. Systemschnittstelle LAN auf die Hutschiene aufschnappen, bis sie einrastet.
3. Adern zum Anschluss an die Anschlussklemmen und Anschlusskabel mit Stecker gemäß Abschnitt „Anschluss“ vorbereiten und anschließen.

Hinweis: Bevor die Systemschnittstelle LAN funktionsbereit ist, muss sie konfiguriert werden, siehe „Konfigurationsanleitung“.

B DIP-Schalter einstellen

1. Einen Schraubendreher nacheinander in die vier Aussparungen [5] im Deckel [3] der Systemschnittstelle LAN [2] stecken und den Deckel [3] dadurch entriegeln.
2. Deckel [3] abheben.
3. DIP-Schalter wie folgt einstellen:
   1: Im Betrieb muss DIP-Schalter **1** immer auf ON stehen. Hierdurch wird eine Li-Batterie für das Uhrenmodul aktiviert (zur Spannungspufferung bei Netzausfall). Werkseinstellung: OFF.
   2, 3, 4: Werkseinstellung OFF darf nicht verändert werden.
   5, 6: Werkseinstellung ON darf nicht verändert werden.
4. Deckel [3] wieder in der ursprünglichen Ausrichtung aufsetzen und verschließen, bis er einrastet.

A Mounting rail installation

1. Set the DIP switch (see section "Setting the DIP switch").
2. Latch the system interface LAN onto the mounting rail until it is secured.
3. Prepare the wires and connect them to the connectors, and connect the connection cables according to section "Connection".

Note: The system interface LAN must first be configured before it is ready for operation, see "Configuration instructions“.

B Setting the DIP switch

1. Insert a screwdriver successively into the four recesses [5] in the cover [3] of the system interface LAN [2] to unlatch the cover [3].
2. Lift off cover [3].
3. Set the DIP switches as follows:
   1: During operation DIP switch 1 must always be set on ON. This activates a lithium battery for the clock module (power buffer during mains failure). Factory setting: OFF.
   2, 3, 4: Factory setting OFF must not be changed.
   5, 6: Factory setting ON must not be changed.
4. Reattach the cover [3] to the original alignment and latch it securely.

DE - Installationsanleitung

C Demontage

1. Stecker, die an den Steckbuchsen angeschlossen sind, abziehen.
2. Einen Schraubendreher in die sichtbare Öffnung des oberen, schwarzen Befestigungsclips [1] stecken und dann den Clip nach oben herausschieben, bis sich die Systemschnittstelle LAN [2] von der Hutschiene [4] löst.
3. Adern von den Anschlussklemmen abklemmen (Schraubklemmen).

D Anschluss

Anschlussklemmen	
Gruppenbus	CONCENTO^{CARE}: NF-AG und NF-BG werden in Systemen ohne Sprechen nicht benutzt. Diese können an den mit „nc“ bezeichneten Klemmen aufgelegt werden. CONCENTO^{PLUS}: GSA bis GSD werden in Systemen ohne Sprechen nicht benutzt.
Spannungsversorgung	Anschluss an die Spannungsversorgung einer physikalischen Gruppe. Strombedarf berücksichtigen!
Störmelderelais	Potentialfrei. Schaltleistung: 2 A. Schaltet dauerhaft bei: Störung am Gruppenbus, Störung an der Systemschnittstelle LAN.
Steckbuchsen	
PSA oder DECT (ESPA 4.4.4)	Sub-D-Stecker, 9-polig (RS232). Maximale Leitungslänge: 10 m.
Management Software	RJ45-Buchse für Anschluss an das LAN mit Management Software.

Leitungen an den Anschlussklemmen anschließen

1. Die Anschlusskabel auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß Anschlussplan **D** an den Anschlussklemmen (Schraubklemmen) anschließen.
3. **Busabschluss:** Wenn die Systemschnittstelle LAN der erste oder letzte Teilnehmer am Gruppenbus ist, muss eine Drahtbrücke zwischen den beiden Anschlusspunkten „RB“ gesetzt werden.
4. Klappferrit am Gruppenbuskabel befestigen.

Leitungen an den Steckbuchsen anschließen

- Die Stecker gemäß Anschlussplan **D** einstecken.

EN - Installation Instructions

C Dismantling

1. Pull off the plugs that are connected to the female connectors.
2. Insert a screwdriver into the visible opening of the top, black retaining clip [1] and then push the clip out upwards until the system interface LAN [2] comes loose from the mounting rail [4].
3. Disconnect the wires from the connectors (screw-type terminals).

D Connection

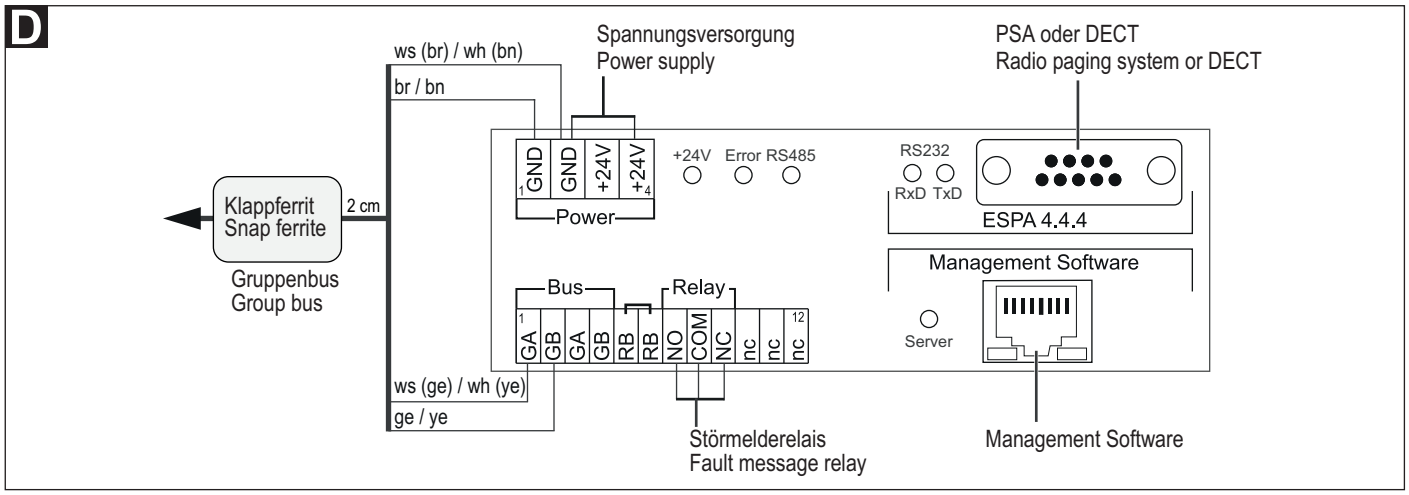
Connectors	
Group bus	CONCENTO^{CARE}: NF-AG and NF-BG are not used in systems without speech communication. These can be installed at the terminals marked with "nc". CONCENTO^{PLUS}: GSA up to GSD are not used in systems without speech communication.
Power Supply	Connection to the power supply of a physical group. Take current consumption into consideration!
Fault message relay	Potential-free. Switching capacity: 2 A. Switches permanently when: Fault on the group bus, fault on the system interface LAN.
Female connectors	
Radio paging system or DECT (ESPA 4.4.4).	Sub-D plug, 9-pole (RS232). Maximum cable length: 10 m.
Management software	RJ45 socket for connection to the LAN with the management software.

Connection of lines to the connectors

1. Strip the connection cables to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires to the connectors (screw-type terminals) according to the connection diagram **D**.
3. **Bus termination**: If the system interface LAN is the first or the last group user, a wire bridge must be set between the two "RB" connection points.
4. Fasten the snap ferrite to the group bus cable.

Connection of lines to the female connectors

- Insert the plug according to the connection diagram **D**.



DE - Konfigurationsanleitung

Systemschnittstelle LAN - Konfiguration

Die Server-Schnittstelle der Systemschnittstelle LAN muss konfiguriert werden, wenn die Anbindung der Management Software von der Werkseinstellung abweicht. Diese Einstellung wird im Folgenden beschrieben. Alle anderen Einstellungen werden per Fernkonfiguration über die Netzwerkanbindung mit der Management Software vorgenommen und sind nicht Bestandteil dieses Dokuments.

HINWEIS! Solange die Fernkonfiguration mit der Management Software noch nicht durchgeführt wurde, wird im Webinterface „WAIT FOR CONFIG“ in roter Schrift angezeigt.

Webinterface benutzen

Die Konfiguration der Systemschnittstelle LAN erfolgt über ein integriertes Webinterface. Hierzu wird ein Computer unter Verwendung eines Webbrowsers benötigt (z.B. Microsoft Internet Explorer ab Vers. 11, Mozilla Firefox ab Vers. 43).

Webinterface aufrufen

1. Den Computer über ein Netzwerkkabel an die RJ45-Buchse der Systemschnittstelle LAN anschließen.
2. In die Adresszeile des Webbrowsers die IP-Adresse der Systemschnittstelle LAN eingeben.
   Werkseinstellung: IP-Adresse: 192.168.178.042,
   Netmask: 255.255.255.000, Gateway: 192.168.178.001,
   Server Port: 55005.

✓ Das Anmeldefenster des Webinterface wird aufgerufen.

3. Ihren Login-Namen und Ihr Kennwort eingeben.
   (Werkseinstellung = *Login*: Administrator, Kennwort: *admin*).
   Hinweis! Kennwort nach der ersten Anmeldung ändern.
4. „Anmelden“ anklicken.

Webinterface verlassen

- Zum Verlassen des Webinterface „Abmelden“ anklicken.

Konfiguration speichern

Alle Einstellungen im Webinterface werden erst beim Speichern der Konfiguration gespeichert.

- „*Konfiguration speichern*“ anklicken.

✓ Die Konfiguration wird gespeichert. Der Webbrowser zeigt: „*Die Einstellungen wurden übertragen.*“

Symbolanzeigen im Webinterface

Symbole zeigen den Zustand der Module der Systemschnittstelle LAN an:

- Bus = Verbindung zum Gruppenbus
- Server = Verbindung zur Management Software
- PSA = Verbindung zu Personensuchanlage oder DECT-Anlage

	Grün	OK! Modul in der Systemschnittstelle LAN eingeschaltet und Verbindung betriebsbereit.
	Rot	Störung! Modul in der Systemschnittstelle LAN eingeschaltet, aber Verbindung unterbrochen oder gestört
	Blau	Modul in der Systemschnittstelle LAN ausgeschaltet.

Sprache des Webinterface ändern

- Im Webinterface die Landessprache unter der entsprechenden Flagge anklicken.

EN - Configuration Instructions

System Interface LAN - Configuration

The Server interface of the system interface LAN must be configured, if the connection to the Management Software is different to the factory setting. This setting is described in the following. All other settings are carried out with the Management Software per remote configuration via the network connection and are not part of this document.

NOTE! As long as the remote configuration has not yet been carried out with the ConLogPLUS Management Software "WAIT FOR CONFIG" is shown in red writing in the web interface.

Use of the web interface

The system interface LAN is configured via an integrated web interface. This requires a computer with the use of a Web browser (e.g. Microsoft Internet Explorer from version 11, Mozilla Firefox from version 43).

Calling up the web interface

1. Connect the computer to the RJ45 socket of the system interface LAN via a network cable.
2. Enter the IP address of the system interface LAN in the address line of the Web browser.
   Factory setting: IP Address: 192.168.178.042,
   Netmask: 255.255.255.000, Gateway: 192.168.178.001,
   Server Port: 55005.

✓ The login window of the web interface is called up.

3. Enter your login name and your password.
   (Factory setting = *Login*: Administrator, Password: *admin*).
   NOTE! Change the password after first login.
4. Click on "Login".

Exiting the web interface

- To exit the web interface, click on "Logout".

Saving the configuration

All settings in the web interface are saved only when the configuration is saved.

- Click on "*Save Configuration*".

✓ The configuration is saved. The web browser shows: "*The Settings have been sent.*"

Display icons in the web interface

Icons indicate the status of the modules of the system interface LAN.

- Bus = Connection to the group bus
- Server = Connection to Management Software
- PSA = Connection to the radio paging system or DECT system

	Green	OK! Module in the system interface LAN is switched on and the connection is ready for operation.
	Red	Fault! Module in the system interface LAN is switched on, but the connection is interrupted or faulty
	Blue	Module in the system interface LAN is switched off.

Changing the language of the web interface

- Click on the language below the flag in the web interface.

DE - Konfigurationsanleitung

Verbindung zu der Management Software

Wenn die Systemschnittstelle LAN mit der Management Software verbunden ist, muss die Server-Schnittstelle der Systemschnittstelle LAN eingeschaltet sein und die Verbindung betriebsbereit sein, d.h.:

- Die Checkbox „Server-Schnittstelle“ über den Feldern zum Einstellen der IP-Adresse muss aktiv sein (Werkseinstellung).
- Die Symbolanzeige für „Server“ muss grün sein, siehe Abschnitt „Symbolanzeigen im Webinterface“.

IP-Adresse der Server-Schnittstelle einstellen

Die Netzwerkkonfiguration der Systemschnittstelle LAN muss mit der Einstellung in der Management Software übereinstimmen. In der Werkseinstellung hat die Systemschnittstelle LAN die IP-Adresse, die im Abschnitt „Webinterface aufrufen“ auf der vorigen Seite genannt wurde. Eine abweichende IP-Adresse stellen Sie wie folgt ein:

1. IP-Adresse, Netmask, Gateway und Server Port in die Felder eingeben.
2. Um die eingestellte Netzwerkkonfiguration zu speichern, „*Konfiguration speichern*“ anklicken.

✓ Die Netzwerkkonfiguration wird gespeichert.

3. Wenn eine neue Netzwerkkonfiguration eingestellt wurde, muss ein Reset der Systemschnittstelle LAN durchgeführt werden. Hierzu die 4-polige Anschlussklemme für die Spannungsversorgung abziehen und anschließend wieder aufstecken.

✓ Die Systemschnittstelle LAN wird neu gestartet und kann ab dann von der Management Software über das Netzwerk erreicht werden.

LED-Anzeigen im Betrieb

Grüne LED „+24V“ Spannungsversorgung:	
LED leuchtet dauerhaft.	Spannungsversorgung ok.
LED ist aus.	Spannungsversorgung nicht ok (< 18 V=).
Rote LED „Error“ (parallel zum Störmelderelais):	
LED ist aus.	Gruppenbus ok und Systemschnittstelle LAN ok.
LED leuchtet dauerhaft.	Störung am Gruppenbus und/oder an der Systemschnittstelle LAN.
Gelbe LED „RS485“ Polling des Gruppenbusses:	
LED blinkt rhythmisch	Gruppenbus ok.
LED leuchtet dauerhaft oder ist aus.	Störung am Gruppenbus oder kein Gruppenbus angeschlossen.
LEDs „RS232“ Gelb: „RxD“, Grün: „TxD“: ESPA 4.4.4 Datenverkehr auf der Verbindung zu PSA- oder DECT-Anlage:	
LEDs blinken.	Datenverkehr, Polling.
LEDs sind aus.	Kein Datenverkehr, kein Polling.
Grüne LED „Server“: Verbindung zu Management Software:	
LED leuchtet dauerhaft.	Verbindung ok.
LED ist aus.	Keine Verbindung.

Technische Daten

Spannungsversorgung	24 V=
Ruhestromaufnahme	150 mA
Anschluss Gruppenbus Spannungsversorgung	Leitungstyp: J-Y(St)Y 4x2x0,8 NYM-J 3x1,5 mm²
Zusätzliche Ein-/Ausgänge	Leiterquerschnitt max. 1,5 mm²
Abisolierlänge	6 mm
Abmessungen (HxBxT)	90 x 160 x 58 mm
Reiheneinbaugerät	9 TE
Gehäusematerial	Polycarbonat
Schutzklasse	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

EN - Configuration Instructions

Connection to the Management Software

When the system interface LAN is connected to the Management Software, the Server interface of the system interface LAN must be switched on and the connection ready for operation, i.e.:

- The "Server Interface" checkbox above the fields for setting the IP address must be active (factory setting).
- The display icon for "Server" must be green, see section "Display icons in the web interface".

Setting the IP address of the Server interface

The network configuration of the system interface LAN must match to the setting in the Management Software. In the factory settings the system interface LAN has the IP address which was listed in section "Calling up web interface" on the previous page. A different IP address is set as follows:

1. Enter the IP address, netmask, gateway, and server port in the appropriate fields.
2. To save the set network configuration, click on "*Save Configuration*".

✓ The network configuration will be saved.

3. If a new network configuration has been set, a reset of the system interface LAN must be carried out: Pull off the 4-pole connector for the power supply and plug it in again.

✓ The system interface LAN is restarted and can then be reached from the Management Software via the network.

LED displays during operation

Green LED "+24V" power supply:	
LED lights up permanently.	Power supply is ok.
LED is off.	Power supply is not ok (< 18 V=).
Red LED "Error" (parallel to the fault message relay):	
LED is off.	Group bus is OK and system interface LAN is ok.
LED lights up permanently.	Fault on the group bus and/or on the system interface LAN.
Yellow LED "RS485" polling the group bus:	
LED flashes rhythmically	Group bus is ok.
LED lights up permanently or is off.	Fault on the group bus or no group bus connected.
LEDs "RS232" yellow: "RxD", green: "TxD": ESPA 4.4.4 Data traffic on the connection to the radio paging system or the DECT system:	
LEDs flash.	Data traffic, polling.
LEDs are off.	No data traffic, no polling.
Green LED "ConLog": Connection to Management Software:	
LED lights up permanently.	Connection is ok.
LED is off.	No connection.

Technical data

Power supply	24 V=
Standby current consumption	150 mA
Connection Group bus Power supply	Cable type: J-Y(St)Y 4x2x0.8 NYM-J 3x1.5 mm²
Fault message relay	Wire cross-section max. 1.5 mm²
Skinning length	6 mm
Dimensions (HxWxD)	90 x 160 x 58 mm
Modular DIN rail component	9 TE
Housing material	Polycarbonate
	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

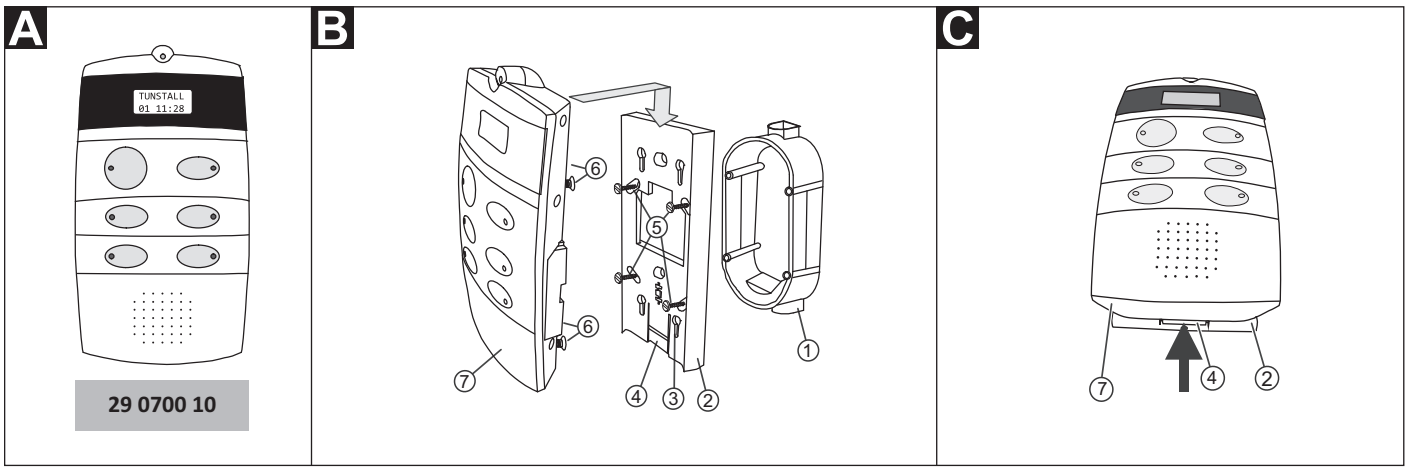
DE - Installationsanleitung

Gruppencontroller

Der Gruppencontroller dient zur Steuerung eines Stationsbusses einer CONCENTO^{CARE} Rufanlage (max. 40 Stationsbusteilnehmer).

Alle Gruppencontroller werden über den Gruppenbus miteinander verbunden. Zusätzlich kann am Gruppenbus ein Management Interface oder eine Systemschnittstelle LAN sowie ein Brandmeldeinterface angeschlossen sein (max. 40 Gruppenbusteilnehmer). Der Stand-alone-Betrieb eines Gruppencontrollers ohne Gruppenbus ist möglich.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.



[1] *Einbaudose, 2-teilig (Mauerwerk: 17 0410 00, Hohlwand: 17 5400 00)
[2] Montageplatte
[3] Schlüssellöcher zur Aufnahme des Gruppencontrollers
[4] Rasthaken der Montageplatte
[5] *Vier Schrauben der Einbaudose
[6] Vier herausstehende Schrauben
[7] Gruppencontroller

***** Nicht im Lieferumfang enthalten, separat bestellen.

Zusätzlich sind 3 Schraubklemmen im Lieferumfang: 4-polige Anschlussklemme, 10-polige Anschlussklemme, 12-polige Anschlussklemme.

B Montage

Wandeinbau auf 2-teilige Einbaudose:

1. Adern vorbereiten und gemäß Abschnitt „Anschluss“ anschließen. DIP-Schalter gemäß Abschnitt „Anschluss“ einstellen.
2. Die drei angeschlossenen Anschlussklemmen durch die Öffnung der Montageplatte [2] führen.
3. Montageplatte [2] mit den vier Schrauben der Einbaudose [5] auf der Einbaudose [1] festschrauben.
4. Die drei angeschlossenen Anschlussklemmen auf das Anschlussfeld des Gruppencontrollers [7] stecken.
5. Gruppencontroller [7] auf die Montageplatte [2] aufsetzen, so dass die vier herausstehenden Schrauben [6] in die Schlüssellöcher [3] der Montageplatte gesteckt werden.
6. Gruppencontroller [7] herunterschieben, bis er hörbar einrastet.

Hinweis: Bevor der Gruppencontroller funktionsbereit ist, muss er über das Bussystem mit der Management Software fernkonfiguriert werden. Solange die Fernkonfiguration nicht durchgeführt wurde, zeigt das Display „WAIT FOR CONFIG“. Die LED in der Taste 2 (oben rechts) unter dem Display leuchtet. Das Störmelderelais ist angezogen.

C Demontage

1. Mit dem Daumen der einen Hand den Rasthaken [4] auf der Unterseite des Gruppencontrollers in Richtung Wand drücken, so dass die Verriegelung gelöst wird. Gleichzeitig mit der anderen Hand den Gruppencontroller [7] 1 cm hochschieben und von der Montageplatte [2] abnehmen.
2. Anschlussklemmen vom Anschlussfeld auf der Rückseite des Gruppencontrollers abziehen.

EN - Installation Instructions

Group controller

The group controller serves for controlling a ward bus of a CONCENTO^{CARE} nurse call system (max. 40 ward bus users).

All group controllers are interconnected via the group bus. Also one management interface or one system interface LAN and one fire alarm interface can be connected to the group bus (maximum of 40 group bus users). The stand-alone operation of a group controller without group bus is possible.

NOTE! The complete installation of the system is described in the Technical Manual.

[1] *Back box, 2-gang (solid wall: 17 0410 00, partition wall: 17 5400 00)
[2] Mounting plate
[3] Keyholes for attaching the group controller
[4] Latching hook of mounting plate
[5] *Four screws of the back box
[6] Four projecting screws
[7] Group controller

***** Not included in the scope of delivery, please order separately.

Additionally there are 3 screw-type terminals included in the scope of supply: 4-pole connector, 10-pole connector, 12-pole connector.

B Mounting

Wall installation on 2-gang back box:

1. Prepare the wires and connect them according to section "Connection". Set the DIP switch according to section "Connection".
2. Feed the three connected connectors through the opening of the mounting plate [2].
3. Fix the mounting plate [2] to the back box [1] with the four screws of the back box [5].
4. Plug the three connected connectors onto the connection panel of the group controller [7].
5. Set the group controller [7] onto the mounting plate [2] so that the 4 projecting screws [6] are inserted into the keyholes [3] of the mounting plate.
6. Push the group controller [7] down until it latches in audibly.

Note: Before the group controller is ready for operation, it must be remote-configured with the management software via the bus system. As long as the remote configuration has not been carried out, the display shows "WAIT FOR CONFIG". The LED in button 2 (top right) below the display lights up. The fault message relay has become operative.

C Dismantling

1. Press the latching hook [4] on the underside of the group controller in the direction of the wall with the thumb of one hand to loosen the lock. At the same time push up the group controller [7] 1 cm with the other hand and remove it from the mounting plate [2].
2. Pull off the connectors from the connection panel on the rear of the group controller.

DE - Installationsanleitung

D E Anschluss

1. Die Anschlusskabel in der Einbaudose auf geeignete Länge abmanteln. Kabelschirm und Beidraht bis zum Kabelmantel entfernen. Adern abisolieren.
2. Adern gemäß den Anschlussplänen **D** und **E** an den drei Anschlussklemmen anschließen.

Hinweis zur 4-poligen Anschlussklemme: Keine Brücke zwischen 1 und 2 (GND) sowie 3 und 4 (+24 V) im Stecker notwendig. Brücken sind auf der Leiterplatte.

Hinweis zu Gruppenbus und Stationsbus: NF-AG, NF-BG, NF-A und NF-B werden in Systemen ohne Sprechkommunikation nicht benutzt.

Informationen zu den zusätzlichen Ein-/Ausgängen

Störmelderelais	Potentialfrei. Schaltleistung: 2 A; Schaltet bei: Störung am Gruppencontroller, Gruppencontroller nicht vollständig programmiert. NO = Schließer-Kontakt, NC = Öffner-Kontakt.
Netzausfallmeldung	Vom Störmeldekontakt des Netzgeräts.
Gruppenleuchte	Ausgang mit 300 mA belastbar. Schaltet bei: Rufen, Anwesenheiten und Störungen am Stationsbus.
Störmeldeleuchte	Ausgang mit 300 mA belastbar. Schaltet bei: Störung am Stationsbus.

EN - Installation Instructions

D E Connection

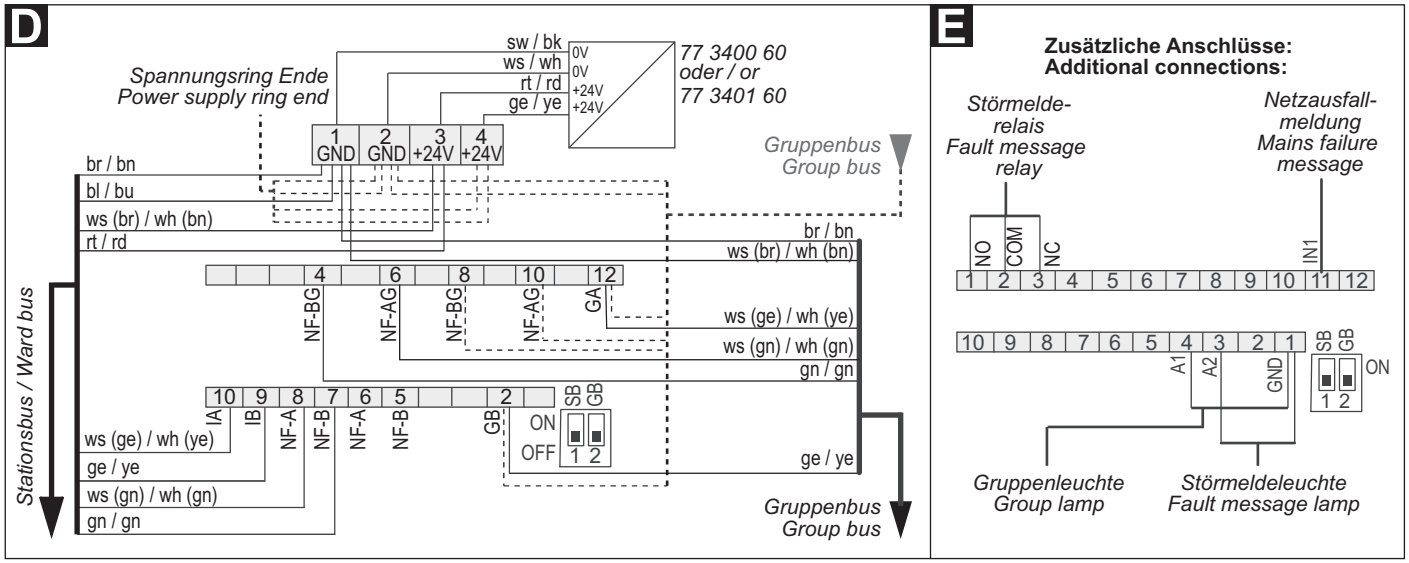
1. Strip the connection cables in the back box to a suitable length. Remove the cable shield and drain wire up to the cable sheath. Strip the wires.
2. Connect the wires to the three connectors according to the connection diagrams **D** and **E**.

Note about the 4-pole connector: No bridge required in the plug between 1 and 2 (GND) and 3 and 4 (+24 V). Bridges are on the circuit board.

Note about the group bus and ward bus: NF-AG, NF-BG, NF-A and NF-B are not used in systems without speech communication.

Information about the additional inputs/outputs

Fault message relay	Potential-free. Switching capacity: 2 A; Switches at: Fault at group controller, group controller not fully programmed. NO = Normally open contact, NC = Normally closed contact.
Mains failure message	From the fault message contact of the power supply unit.
Group lamp	Load capacity of output 300 mA. Switches during: Calls, presence and faults on the ward bus.
Fault message lamp	Load capacity of output 300 mA. Switches during: Fault on the ward bus.



3. Die beiden DIP-Schalter auf der Rückseite des Gruppencontrollers dienen zum Einstellen der Busabschlüsse für Gruppenbus und Stationsbus:

- Wenn der Gruppencontroller der erste oder letzte Teilnehmer am Stationsbus ist, DIP-Schalter 1 (SB) in Position ON setzen.
- Wenn der Gruppencontroller der erste oder letzte Teilnehmer am Gruppenbus ist, DIP-Schalter 2 (GB) in Position ON setzen.

3. The two DIP switches on the rear of the group controller serve for setting the bus terminations for group bus and ward bus:

- If the group controller is the first or last user on the ward bus, set the DIP switch 1 (SB) to position ON.
- If the group controller is the first or last user on the group bus, set the DIP switch 2 (GB) to position ON.

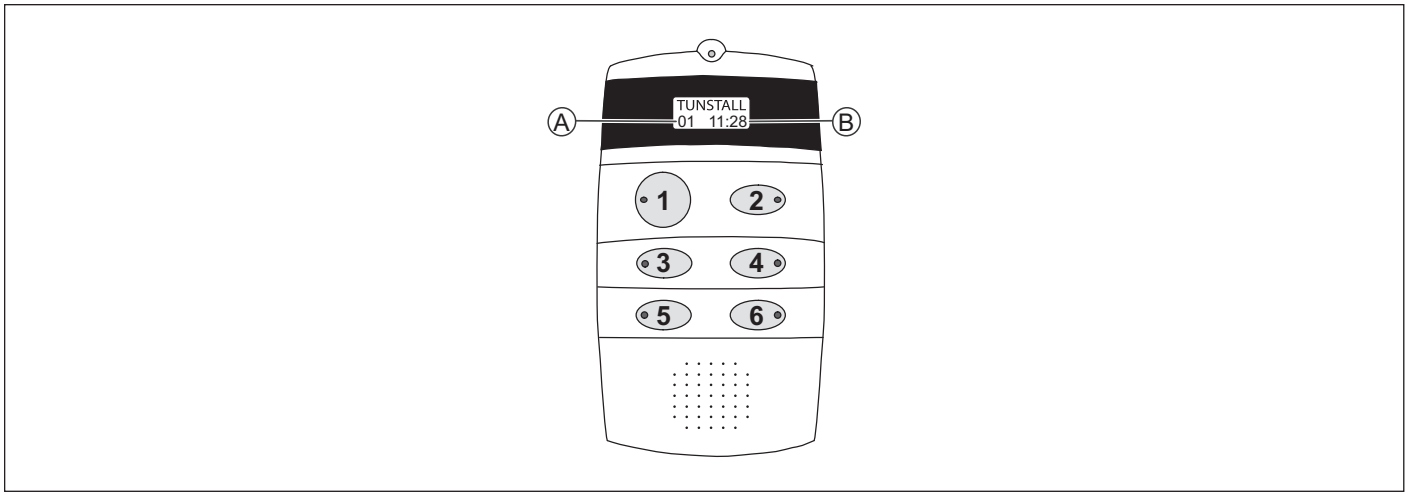
Technische Daten

Spannungsversorgung	24 V=
Ruhestromaufnahme	ca. 60 mA
Anschluss Gruppenbus Stationsbus Netzgerät	Leitungstyp: J-Y(St)Y 4x2x0,8 J-Y(St)Y 4x2x0,8 J-Y(St)Y 2x2x0,8
Zusätzliche Ein-/Ausgänge	Leiterquerschnitt max. 1,5 mm²
Abisolierlänge	6 mm
Abmessungen (HxBxT)	190 x 102 x 50 mm
Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

Technical data

Power supply	24 V=
Standby current consumption	Approx. 60 mA
Connection Group bus Ward bus Power supply unit	Cable type: J-Y(St)Y 4x2x0.8 J-Y(St)Y 4x2x0.8 J-Y(St)Y 2x2x0.8
Additional inputs/outputs	Wire cross-section max. 1.5 mm²
Skinning length	6 mm
Dimensions (HxWxD)	190 x 102 x 50 mm
Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

Gruppencontroller - Betrieb



Displayanzeigen im Betrieb

1. Um das Display für 10 Sek. einzuschalten, **Taste 1** oder **2** kurz drücken.

✓ Folgendes wird angezeigt: [A] = Anzahl aktiver Meldungen (Rufe, Anwesenheiten, Störungen) am Stationsbus, [B] = Uhrzeit.

2. **Taste 4** drücken, um durch die Details der aktiven Meldungen (Rufe, Anwesenheiten, Störungen) zu blättern.

LED-Anzeigen im Betrieb

Taste 1: Funktion des Gruppencontrollers am Gruppenbus	
LED 1 leuchtet dauerhaft.	Gruppencontroller ist der Master.
LED 1 ist aus.	Gruppencontroller ist ein Slave.
LED 1 blinkt (4 s ein / 4 s aus).	Gruppencontroller ist einziger Gruppenbusteilnehmer oder nicht am Gruppenbus angeschlossen.
Taste 2: Betriebszustand des Gruppencontrollers	
LED 2 ist aus.	Gruppencontroller ok.
LED 2 leuchtet dauerhaft.	Gruppencontroller in Störung oder nicht vollständig konfiguriert.
Taste 3, Taste 4	
	Auswertung nur durch Tunstall.
Taste 5: Polling des Gruppenbusses	
LED 5 leuchtet dauerhaft oder ist aus.	Störung am Gruppenbus.
LED 5 blinkt rhythmisch	Gruppenbus ok.
Taste 6: Polling des Stationsbusses	
LED 6 leuchtet dauerhaft oder ist aus.	Störung am Stationsbus.
LED 6 blinkt rhythmisch.	Stationsbus ok.

Servicemenü

Das Servicemenü dient als Analysewerkzeug und kann:

- die Anzahl programmierter Stationsbusteilnehmer anzeigen,
- die aktive Zeitzone anzeigen,
- Gruppenleuchte, Störmeldeleuchte und Störmelderelais testen,
- eine Netzausfallmeldung simulieren.

Group controller - Operation

Displays during operation

1. To switch on the display for 10 seconds, briefly press **button 1** or **2**.

✓ The following is displayed: [A] = Number of active messages (calls, presences, faults) on the ward bus, [B] = Time

2. Press **button 4** to scroll through the details of the active messages (calls, presences, faults).

LED displays during operation

Button 1: Function of the group controller on the group bus	
LED 1 lights up permanently.	Group controller is the master.
LED 1 is off.	Group controller is a slave.
LED 1 flashes (4 s on / 4 s off).	The group controller is the only group bus user or is not connected to the group bus.
Button 2: Operating status of the group controller	
LED 2 is off.	Group controller is ok.
LED 2 lights up permanently.	Group controller is faulty or not fully configured.
Button 3, Button 4	
	Evaluation only by Tunstall.
Button 5: Polling the group bus	
LED 5 lights up permanently or is off.	Fault on the group bus.
LED 5 flashes rhythmically	Group bus is ok.
Button 6: Polling the ward bus	
LED 6 lights up permanently or is off.	Fault on the ward bus.
LED 6 flashes rhythmically.	Ward bus is ok.

Service menu

The service menu serves as analysis tool and can:

- display the number of programmed ward bus users,
- display the active time zone,
- test group lamp, fault message lamp and fault message relay,
- simulate a mains failure message.

DE - Betriebsanleitung

Bedienung des Servicemenüs

Servicemenü starten	**Taste 1** und **2** gleichzeitig 10 Sekunden gedrückt halten. Die Software-Version des Gruppencontrollers wird angezeigt. Das Servicemenü ist aktiv. Die LEDs zeigen die gleichen Informationen an wie im normalen Betrieb, siehe Tabelle oben.
Vorwärts blättern	**Taste 2** drücken.
Zurück blättern	**Taste 1** drücken.
Servicemenü beenden	Taste 1 und 2 gleichzeitig 3 Sekunden gedrückt halten.
Hinweis: Wenn 60 Sekunden keine Taste gedrückt wird, wird das Servicemenü automatisch beendet. Bereits vorgenommene Einstellungen werden nicht gespeichert.	

Sprache des Servicemenüs ändern

1. Im Servicemenü zu „*Sprache*“ blättern.
2. **Taste 4** drücken, um „*Sprache*“ auszuwählen.
3. **Taste 1** so oft drücken, bis die gewünschte Sprache erscheint.
4. **Taste 2** drücken, um die neue Einstellung zu übernehmen. Die Einstellung wird erst beim Beenden des Servicemenüs gespeichert.

Anzahl programmierter Stationsbusteilnehmer anzeigen

1. Im Servicemenü zu „*SB-Teiln*“ blättern.

✓ Die Anzahl der in dem Gruppencontroller einprogrammierten Stationsbusteilnehmer wird angezeigt. Diese Zahl muss mit der Zahl vorhandener Stationsbusteilnehmer übereinstimmen.

2. Wenn die angezeigte Zahl nicht mit der Zahl vorhandener Stationsbusteilnehmer übereinstimmt, die Programmierung mit der Management Software korrigieren.

Aktive Zeitzone anzeigen

1. Im Servicemenü zu „*Zeitzone*“ blättern.

✓ Die aktive Zeitzone wird angezeigt.

Funktion des Störmelderelais testen

1. Im Servicemenü zu „*Test Relais*“ blättern.
2. **Taste 4** drücken.

✓ Das Relais wird umgeschaltet. Das Relais kann beliebig oft durch Drücken der **Taste 4** hin und her geschaltet werden.

3. Um nach dem Test den korrekten Zustand des Relais sicherzustellen, muss ein Reset des Gruppencontrollers durchgeführt werden. Dafür für 5 Sekunden die **Tasten 5** und **6** gedrückt halten.

Gruppenleuchte testen

1. Im Servicemenü zu „*Test Gr-Lampe*“ blättern.
2. **Taste 4** drücken.

✓ Die angeschlossene Gruppenleuchte leuchtet 30 Sekunden.

Störmeldeleuchte testen

1. Im Servicemenü zu „Test St-Lampe“ blättern.
2. **Taste 4** drücken.

✓ Die angeschlossene Störmeldeleuchte leuchtet 30 Sekunden.

Netzausfallmeldung simulieren

1. Im Servicemenü zu „*Simulier Netzausf*“ blättern.
2. **Taste 4** drücken.

✓ Für 30 Sekunden wird eine Netzausfallmeldung (Störung) in der Rufanlage angezeigt.

EN - Operating Instructions

Operation of the service menu

Starting the service menu	Keep **buttons 1** and **2** pressed simultaneously for 10 seconds. The software version of the group controller is displayed. The service menu is active. The LEDs display the same information as during normal operation, see the table above.
Scrolling forward	Press **button 2**.
Scrolling back	Press **button 1**.
Quitting the service menu	Keep **buttons 1** and **2** pressed simultaneously for 3 seconds.
Note: If no button is pressed within a period of 60 seconds, the service menu is terminated automatically. Settings already made are not saved.	

Changing the language of the service menu

1. Scroll to "*Language*" in the service menu.
2. Press **Button 4** to select "*Language*".
3. Keep pressing **Button 1** until the desired language appears.
4. Press **Button 2** to apply the new setting. The setting is saved only after quitting the service menu.

Displaying the number of programmed ward bus subscribers

1. Scroll to "*Ward-Dev*" in the service menu.

✓ The number of ward bus users programmed in the group controller is displayed. This number must match the number of existing ward bus users.

2. If the number displayed does not match the number of existing ward bus users, correct the programming with the management software.

Displaying the active time zone

1. Scroll to "*Time zone*" in the service menu.

✓ The active time zone is displayed.

Testing the function of the fault message relay

1. Scroll to "*Test Relais*" in the service menu.
2. Press **Button 4.**

✓ The relay is switched over. The relay can be toggled as often as desired by pressing **Button 4**.

3. To ensure the correct status of the relay after the test, the group controller must be reset. To do this, keep **Buttons 5** and **6** pressed for 5 seconds.

Testing group lamp

1. Scroll to "*Test Gr-Lamp*" in the service menu.
2. Press **Button 4**.

✓ The connected group lamp lights up for 30 seconds.

Testing the fault message lamp

1. Scroll to "*Test Er-Lamp*" in the service menu.
2. Press **Button 4**.

✓ The connected fault message lamp lights up for 30 seconds.

Simulating a mains failure message

1. Scroll to "*Simulate MainFail*" in the service menu.
2. Press **Button 4**.

✓ A mains failure message is displayed in the nurse call system (fault) for 30 seconds.

Power supply unit UPS

Order no. 77 3400 00

Power supply unit 6A UPS

Order no. 77 3400 60

Instruction manual

Content

1 Notes on the instruction manual

Please read through this manual carefully and observe the information it contains. This will assist you in preventing injuries and damage to property, and ensure both reliable operation and a long service life for the device.

Please keep this manual in a safe place.

If you pass the device on, also pass on this manual along with it.

Tunstall GmbH accepts no liability for any failure to observe the instructions in this manual.

If you require additional information or have questions about the device, please contact Tunstall GmbH or visit our Internet site at:

www.tunstall.de

2 Safety

The device has been constructed according to the latest valid regulations governing technology and is operationally reliable. It has been tested and left the factory in a technically safe and reliable state.

However, residual hazards remain. Read and adhere to the safety instructions to prevent hazards of this kind. Tunstall GmbH accepts no liability for any failure to observe the safety instructions.

2.1 Symbols used

The following symbols point to particular hazards involved in the use of the device or provide practical instructions:

WARNING!

This symbol, in connection with the signal word "WARNING", indicates a dangerous situation which may lead to death or serious injury.

This symbol indicates a dangerous situation due to electric current. If this kind of sign is ignored, serious injuries or even death may be the result.

This symbol indicates a dangerous situation due to leaking batteries. If this kind of sign is ignored, burns or poisoning may be the result.

2.2 Target group/Qualifications of personnel

Installation, commissioning and maintenance of the device must only be carried out by trained and properly qualified electrical installers.

The electrical installer must have read and understood the manual and follow the instructions provided.

The electrical installer must adhere to the valid national regulations in his/her country governing the installation, functional test, repair and maintenance of electrical products.

The electrical installer must be familiar with and correctly apply the "five safety rules" (DIN VDE 0105, EN 50110):

1. Disconnect the power
2. Secure against being reconnected
3. Ensure there is no power
4. Connect to earth and short-circuit
5. Cover or barricade adjacent live parts

2.3 Safety instructions

WARNING!

» It is essential that you read the following safety instructions carefully before you start work. The information that follows is of a general nature. You will find specific warnings at the points in the text that describe the potentially dangerous actions.

» Electrical systems may only be constructed, extended, modified and maintained by an authorised group of personnel.

» **The power supply unit is intended for the use in an operating area with restricted access.**

» **The power supply unit is suitable for installation at a maximum height of 2 meters only.**

» **The power supply unit is suitable for mounting above a non-combustible surface only.**

» Work must only be carried out when the system has been disconnected from the power. Before starting installation and service work, the input voltage must be disconnected and secured to prevent it being reconnected. If this is not oberserved, touching live parts can result in death or serious injury.

» The supply voltage must be connected in accordance with the regulations that apply in the country concerned (in Germany's case, these are VDE 0100 and VDE 0160).

» Protective and isolation equipment for disconnecting the input voltage must be provided.

» If the values specified in the technical data are exceeded, there is the risk of the device overheating, which may result in the supply voltage device being destroyed and the electrical safety being impaired.

» Safe isolation of the AC and DC supplies must be ensured at the premises.

» General safety instructions on handling batteries must be observed. In particular, it is important to ensure that sufficient ventilation is available to prevent the build-up of explosive hydrogen and air mixtures.

3 Information on protection of the environment

The products comply with legal requirements, in particular the laws governing electronic and electrical devices and the REACH regulation (EU Directive 2012/19/EU WEEE and 2011/65/EU RoHS), (EU REACH Directive and Law for the Execution of the Regulation (EC) No. 1907/2006).

The device contains valuable raw materials which can be recycled. Used electric and electronic devices must not be disposed of with domestic waste.

» Always dispose of the packaging material and electric devices and their components via authorised collecting depots or disposal companies.

3.1 Disposing of batteries

Lead-acid AGM batteries contain harmful substances. These have the potential to damage the environment and pose a risk to human health.

The bin icon means that these batteries must not be disposed of in household waste.

The "PB" designation under the bin indicates that the battery contains lead.

End users are legally required to take used batteries to a suitable collecting depot.

If batteries are being disposed of in the Federal Republic of Germany, the Batteries Act (in the most recent version of April 2017) must be observed. When disposing of batteries elsewhere in the EU, refer to the national implementation of Directive 2006/66 EC that applies in each case. When disposing of batteries in other economic regions, observe the regulations that apply in those cases.

Used batteries contain valuable raw materials that can be recycled.

4 Device description

The power supply unit UPS, order no. 77 3400 00, as well as the power supply unit 6A UPS, order no. 77 3400 60, consists of a power supply unit and an uninterruptible power supply (UPS) within the same housing.

An output voltage of 24 V DC is generated from an input voltage of 115 – 230 V AC. If the mains input voltage fails, the connected DC load continues to be supplied without interruption by two lead-acid batteries.

The bridging time depends on the connected load and the batteries' state of health.

5 Mounting

The power supply unit is designed for wall mounting using the mounting material supplied with it. You should check the mounting wall beforehand to verify whether it is suitable for fixing the power supply onto it:

Weight of the power supply unit UPS: 8.1 kg

Weight of the power supply unit 6A UPS: 7.6 kg

Dimensions: 244 x 325 x 178 mm

Insufficient air convection may result in the power supply unit being destroyed. For this reason, you must observe the following points:

» The ventilation openings on the device must be located at the top and bottom.
» You must ensure that air can circulate sufficiently above and below the device. Therefore, there must be a distance of at least 50 mm between the device and other devices or walls.
» Do not cover the ventilation outlets under any circumstances.

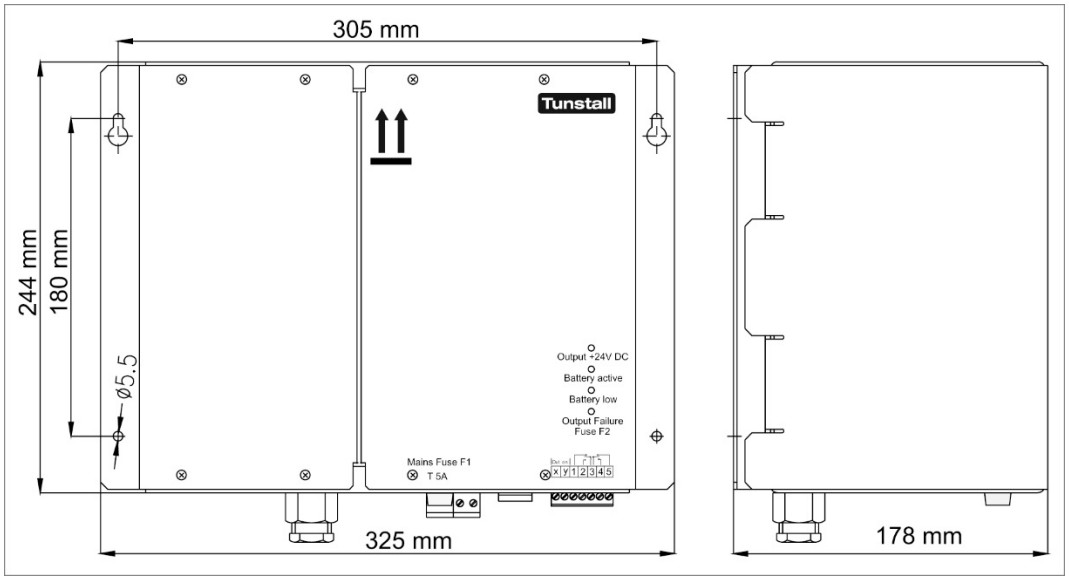


Fig. 1*: Dimensional drawing*

6 Connections and commissioning

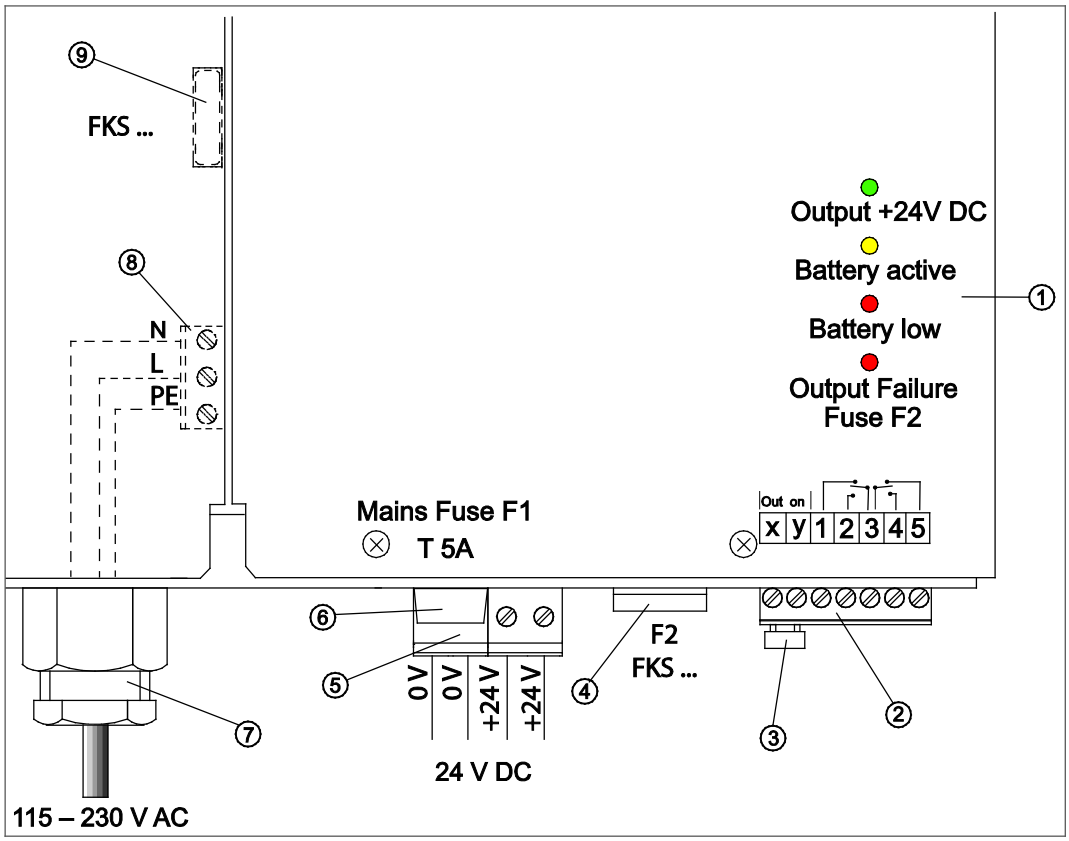


Fig. 2: Connections, fuses and LED displays

1	**LED displays**	6	**Mains fuse F1: (20 x 5) T 5A** (spare part order no.: 00 0130 41)
2	**Signalling outputs** Plug-in screw-type terminal, 7-pole (spare part order no.: 00 0211 39)	7	**Cable screw gland for mains connection cable**
3	**Insertion bridge for control terminals "x" and "y"** (spare part order no.: 00 0223 56)	8	**Mains connection** Plug-in screw-type terminal, 3-pole (spare part order no.: 00 0211 40)
4	**Power supply unit UPS (77 3400 00): Output fuse F2: FKS 15A** (spare part order no.: 00 0132 02) Power supply unit 6A UPS (77 3400 60): **Output fuse F2: FKS 10A** (spare part order no.: 00 0130 29)	9	**Power supply unit UPS (77 3400 00): Internal battery fuse: FKS 20A** (spare part order no.: 00 0132 03) Power supply unit 6A UPS (77 3400 60): **Internal battery fuse: FKS 15A** (spare part order no.: 00 0132 02)
5	**24 V connection** Plug-in screw-type terminal, 4-pole (spare part order no.: 00 0211 41)		

Tab.1: Connections, fuses and LED displays

6.1.1 Output terminals (5) 24 V DC

The **power supply unit UPS (77 3400 00)** provides a controlled output voltage of 24 V DC, max. 12.5 A. If a load current of approx. 13 A is exceeded, the power supply unit switches off the output voltage and performs periodic start attempts until the overcurrent or short-circuit is eliminated.

The **power supply unit 6A UPS (77 3400 60)** provides a controlled output voltage of 24 V DC, max. 6 A. If a load current of approx. 7 A is exceeded, the power supply unit switches off the output voltage and performs periodic start attempts until the overcurrent or short-circuit is eliminated.

» Connect the load to terminals "+24 V" and "0 V" (provided twice).

6.1.2 Signalling outputs (2) and LED displays (1)

The five signalling terminals 1 – 5 on the 7-pole terminal (2) use potential-free relay contacts to indicate the device status. These contacts may be subjected to a maximum load of 30 V DC/1 A.

LED lights up	Status	Output voltage	Switched contacts (NO)
Green "Output +24 V DC"	The power supply unit is in operation.	+24 V DC	3 – 5
Yellow "Battery active"	Battery operation	+20 V [1] – 24 V DC	3 – 4
Red "Battery low"	Battery defective, empty or low.	-	3 – 2
Red "Output Failure Fuse F2"	F2 failure. Output fuse F2 has been removed or is defective.	0 V	3 – 4

Tab.2: Signalling outputs and LED displays

[1] At an output voltage of around 20 V, the power supply unit automatically switches off completely (deep discharge protection).

6.1.3 Mains connection (8)

Risk of electric shock!

When carrying out the following steps, you must ensure that the mains connection cable to be connected to the power supply is disconnected from the mains.

If this is not oberserved, touching live parts can result in death or serious injury.

1. Remove the four fastening screws from the left housing cover and remove the cover by pulling it towards you. Do not disconnect the existing earth connection between housing cover and housing.

- It will now be possible to access the terminal (8) for the mains connectioin.

2. Guide the mains connection cable through the cable screw gland (7) and into the device, then connect it to the terminal for the mains supply (8) as indicated on the imprint.

Risk of electric shock!

You must ensure that the processes of connection and mounting the protective conductor connection are carried out safely.

3. Secure the mains connection cable to prevent it being pulled out: use the cable screw gland (7), for example.
4. If the battery fuse (9) is not inserted in the fuse holder, insert it now.
5. Replace the left housing cover and screw in the four fastening screws tightly.

6.1.4 Commissioning

1. Activate the UPS function at control terminals x + y (3).

The device is activated for UPS operation at control terminals "x" and "y" (3).

» To activate the UPS function, attach the 7-pole terminal (2) provided together with the insertion bridge (3), or close control terminals "x" and "y" using a potential-free normally open contact.

- The UPS function is now activated. Note: The UPS function is not ready until the mains voltage has been switched on at least once. The current through the insertion bridge is approximately 1 mA in this case.

2. Switch on the mains voltage.

Once all the connections have been established as described and the UPS function has been activated, switch on the mains voltage:

» Switch on the mains voltage.

- 24 V DC is applied to the outputs. The green "Output +24V DC" LED (1) lights up when the power supply unit is in operation.

3. Test the UPS function.

The UPS function is ready when the mains voltage has been switched on at least once. Perform a functional test:

» Switch off the mains voltage.

- The connected nurse call system is supplied by the batteries until the mains voltage is switched on or until the deep discharge protection disconnection function is activated.
- The yellow "Battery active" LED (1) lights up.

» Switch the mains voltage back on.

7 Decommissioning

7.1 Temporarily switching off the power supply

1. Switch off the mains voltage.
2. Revoke the UPS function enabling (remove the insertion bridge (3)); otherwise, the load will continue to be supplied by the batteries until the deep discharge protection disconnection function is activated.

7.2 Decommissioning the power supply unit for storage purposes

If the power supply unit is not going to be used for some time, the power supply unit batteries must be fully charged first to prevent self-discharge causing damage to them.

Before decommissioning:

1. To charge the batteries, connect the power supply unit to the input voltage (115 – 230 V) at least 4 hours before decommissioning.
2. Revoke the UPS function enabling (remove the insertion bridge (3); otherwise, the load will continue to be supplied by the batteries until the deep discharge protection disconnection function is activated.
3. Disconnect the power supply unit UPS from the mains.

If the batteries are being stored for an extended period, they must be recharged every 6 months.

8 Replacing batteries

8.1 Battery life

The power supply unit is equipped with maintenance-free, valveregulated lead-acid (VRLA) AGM batteries. Based on their EUROBAT classification, these batteries have a service life of 3 – 5 years. Their usable life is highly dependent on temperature (up to 20°C: 4 – 6 years; see Fig. 3). The capacity of the batteries is around 60% after 3 – 5 years.

We recommend replacing the batteries every 2 years as part of regular maintenance.

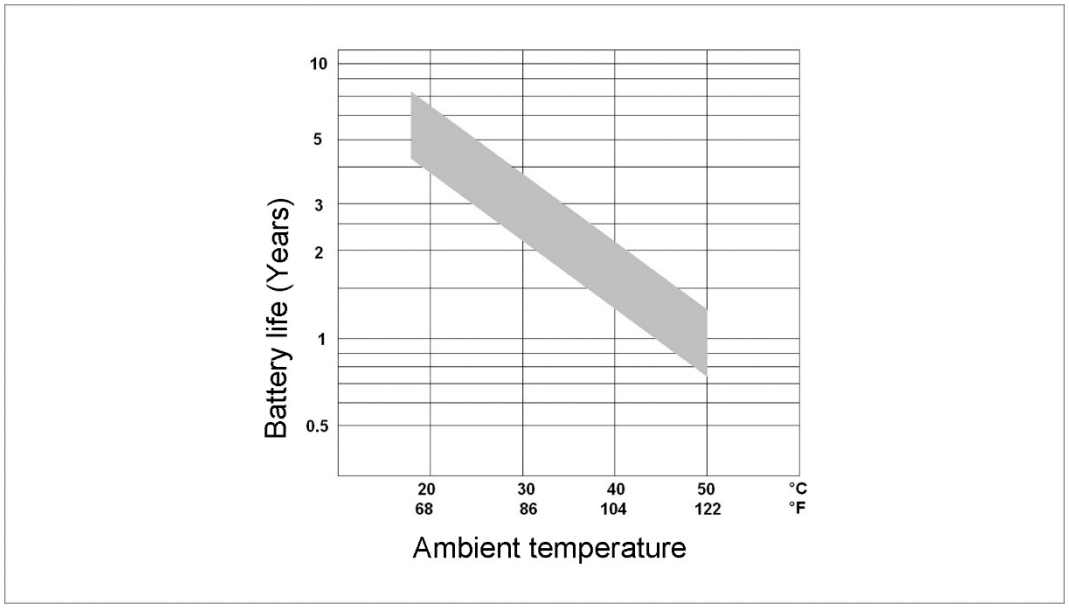


Fig. 3*: Battery life as a function of the ambient temperature*

If the system is not going to be used for some time, the batteries must be fully charged first to prevent self-discharge causing damage to them; see Chapter 7.2, page 13.

8.2 Replacing batteries

Lead-acid AGM batteries contain hazardous, poisonous substances. When handling the batteries, and during transport and disposal, local regulations must be adhered to.

WARNING!

Batteries are subject to the risk of an excessively high short-circuit current. To prevent this, do not connect anything between the battery contacts and other conductive parts.

» For this reason, you should remove any watches, bracelets, rings and other metal objects before starting work on the open power supply unit.

» Only use tools with handles that have standard insulation.

The batteries must only be replaced with the original battery set (order no. 00 0648 85). Other batteries may result in problems because of their connections and dimensions.

Risk of electric shock!

Before opening the housing of the power supply unit you must disconnect it from the power. If this is not oberserved, touching live parts can result in death or serious injury.

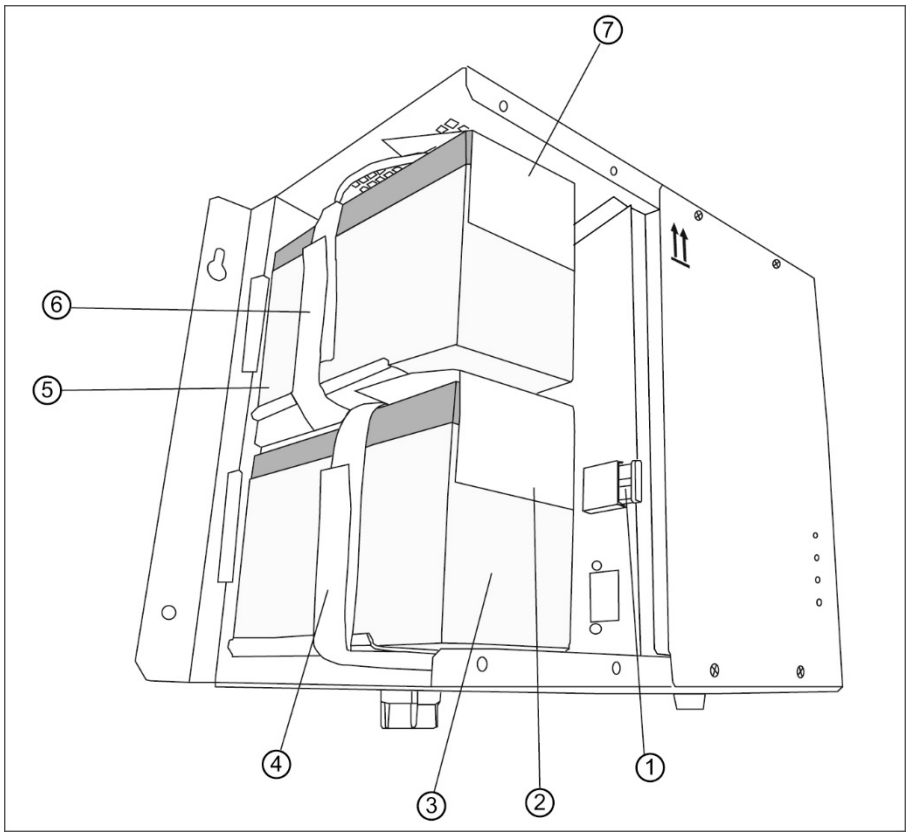


Fig. 4: Installation position of the batteries

1	**Power supply unit UPS (77 3400 00):** **Internal battery fuse: FKS 20A** (spare part order no.: 00 0132 03) Power supply unit 6A UPS (77 3400 60): **Internal battery fuse: FKS 15A** (spare part order no.: 00 0132 02)	4	Hook and loop strap on the bottom battery
		5	Top battery
2	Plastic cover for the bottom battery	6	Hook and loop strap on the top battery
3	Bottom battery	7	Plastic cover for the top battery

Tab.3: Einbauposition der Akkus

1. Disconnect the power supply unit from the power.
2. Remove the four fastening screws from the left cover and remove the cover by pulling it towards you.
3. Remove the battery fuse (1).
4. Document the installation direction and connection polarity of the used batteries.
5. Remove the used batteries. To do this, detach each of the hook and loop straps first.
6. Insert the new batteries, using the same installation direction as the ones that have been removed. Ensure that the connection polarity is correct. Reversing the polarity of the batteries may result in the power supply unit being destroyed. Ensure the plastic cover for the batteries is attached correctly.
7. Secure the hook and loop strap again to hold the batteries in place.
8. Insert the battery fuse (1) in the fuse holder.
9. Replace the housing cover.
10. It necessary to perform a functional test of the power supply unit.

9 Technical data

Input	
Nominal voltage	115 – 230 V AC
Nominal voltage range	90 – 264 V AC
Input frequency	47 – 63 Hz
Output	
Nominal current	Power supply unit UPS (77 3400 00): 12.5 A DC Power supply unit 6A UPS (77 3400 60): 6 A DC
Output voltage in mains operation	24 V DC +/- 3%
Output voltage in battery operation	typ. 27 – 20 V DC
Rated output power	Power supply unit UPS (77 3400 00): 300 W Power supply unit 6A UPS (77 3400 60): 144 W
Ripple for nominal output current	< 240 mVeff
Battery capacity	7 Ah
Charging current	typ. 600 mA, temperature-dependent
Bridging time for nominal current	Power supply unit UPS (77 3400 00): approx. 17 min Power supply unit 6A UPS (77 3400 60): approx. 36 min
Battery voltage thresholds	
Switching threshold for warning prior to battery switch-off	typ. 22 V
Switching threshold for deep discharge protection	typ. 20 V
EMC CE-certified	EN 55022; EN 61000-3-2, -3; EN 61000-4-2, -3, -4, -5, -6, -11
Safety	EN 62368-1
Output	Safety Extra Low Voltage SELV
Testing voltage PRI – SEC	4 kV
Protection class	Class I
Degree of protection	IP 20
General	
Device revision	E2
Permissible ambient temperature in operation	0 ... +40 °C
Permissible ambient temperature during storage and transport	-25 ... + 40 °C (for optimum battery life: cool and dry)

Power supply unit

Order no. 77 3401 00

Power supply unit 6A

Order no. 77 3401 60

Instruction manual

Content

1 Notes on the instruction manual

Please read through this manual carefully and observe the information it contains. This will assist you in preventing injuries and damage to property, and ensure both reliable operation and a long service life for the device.

Please keep this manual in a safe place.

If you pass the device on, also pass on this manual along with it.

Tunstall GmbH accepts no liability for any failure to observe the instructions in this manual.

If you require additional information or have questions about the device, please contact Tunstall GmbH or visit our Internet site at:

www.tunstall.de

2 Safety

The device has been constructed according to the latest valid regulations governing technology and is operationally reliable. It has been tested and left the factory in a technically safe and reliable state.

However, residual hazards remain. Read and adhere to the safety instructions to prevent hazards of this kind. Tunstall GmbH accepts no liability for any failure to observe the safety instructions.

2.1 Symbols used

The following symbols point to particular hazards involved in the use of the device or provide practical instructions:

WARNING!

This symbol, in connection with the signal word "WARNING", indicates a dangerous situation which may lead to death or serious injury.

This symbol indicates a dangerous situation due to electric current. If this kind of sign is ignored, serious injuries or even death may be the result.

2.2 Target group/Qualifications of personnel

Installation, commissioning and maintenance of the device must only be carried out by trained and properly qualified electrical installers.

The electrical installer must have read and understood the manual and follow the instructions provided.

The electrical installer must adhere to the valid national regulations in his/her country governing the installation, functional test, repair and maintenance of electrical products.

The electrical installer must be familiar with and correctly apply the "five safety rules" (DIN VDE 0105, EN 50110):

1. Disconnect the power
2. Secure against being reconnected
3. Ensure there is no power
4. Connect to earth and short-circuit
5. Cover or barricade adjacent live parts

2.3 Safety instructions

WARNING!

» It is essential that you read the following safety instructions carefully before you start work. The information that follows is of a general nature. You will find specific warnings at the points in the text that describe the potentially dangerous actions.

- » Electrical systems may only be constructed, extended, modified and maintained by an authorised group of personnel.
- » **The power supply unit is intended for the use in an operating area with restricted access.**
- » **The power supply unit is suitable for installation at a maximum height of 2 meters only.**
- » **The power supply unit is suitable for mounting above a non-combustible surface only.**
- » Work must only be carried out when the system has been disconnected from the power. Before starting installation and service work, the input voltage must be disconnected and secured to prevent it being reconnected. If this is not oberserved, touching live parts can result in death or serious injury.
- » The supply voltage must be connected in accordance with the regulations that apply in the country concerned (in Germany's case, these are VDE 0100 and VDE 0160).
- » Protective and isolation equipment for disconnecting the input voltage must be provided.
- » If the values specified in the technical data are exceeded, there is the risk of the device overheating, which may result in the supply voltage device being destroyed and the electrical safety being impaired.
- » Safe isolation of the AC and DC supplies must be ensured at the premises.

3 Information on protection of the environment

The products comply with legal requirements, in particular the laws governing electronic and electrical devices and the REACH regulation (EU Directive 2012/19/EU WEEE and 2011/65/EU RoHS), (EU REACH Directive and Law for the Execution of the Regulation (EC) No. 1907/2006).

The device contains valuable raw materials which can be recycled. Used electric and electronic devices must not be disposed of with domestic waste.

» Always dispose of the packaging material and electric devices and their components via authorised collecting depots or disposal companies.

4 Device description

The power supply unit, order no. 77 3401 00, as well as the power supply unit 6A, order no. 77 3401 60, generates an output voltage of 24 V DC from an input voltage of 115 – 230 V AC.

Two LEDs on the front face indicate the status at the output terminals.

5 Mounting

The power supply unit is designed for wall mounting using the mounting material supplied with it. You should check the mounting wall beforehand to verify whether it is suitable for fixing the power supply onto it:

Weight of the power supply unit, order no. 77 3401 00: 2.9 kg

Weight of the power supply unit 6A, order no. 77 3401 60: 2.5 kg

Dimensions: 244 x 325 x 178 mm.

Insufficient air convection may result in the power supply unit being destroyed. For this reason, you must observe the following points:

» The ventilation openings on the device must be located at the top and bottom.

» You must ensure that air can circulate sufficiently above and below the device. Therefore, there must be a distance of at least 50 mm between the device and other devices or walls.

» Do not cover the ventilation outlets under any circumstances.

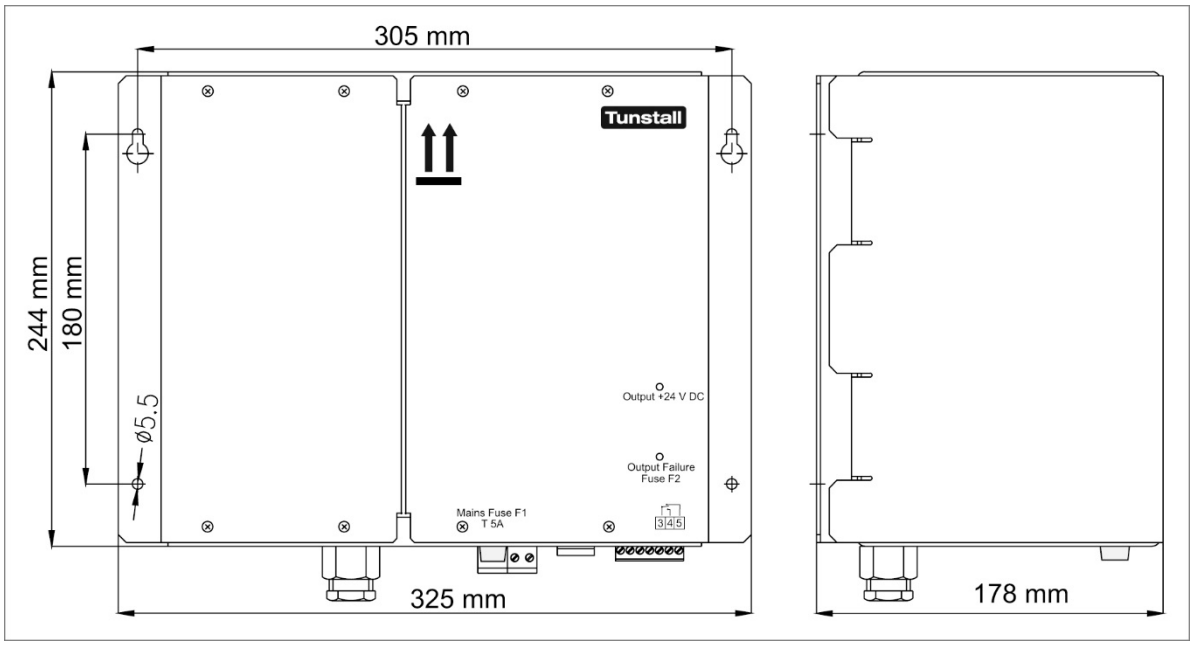


Fig. 1*: Dimensional drawing*

6 Connections and commissioning

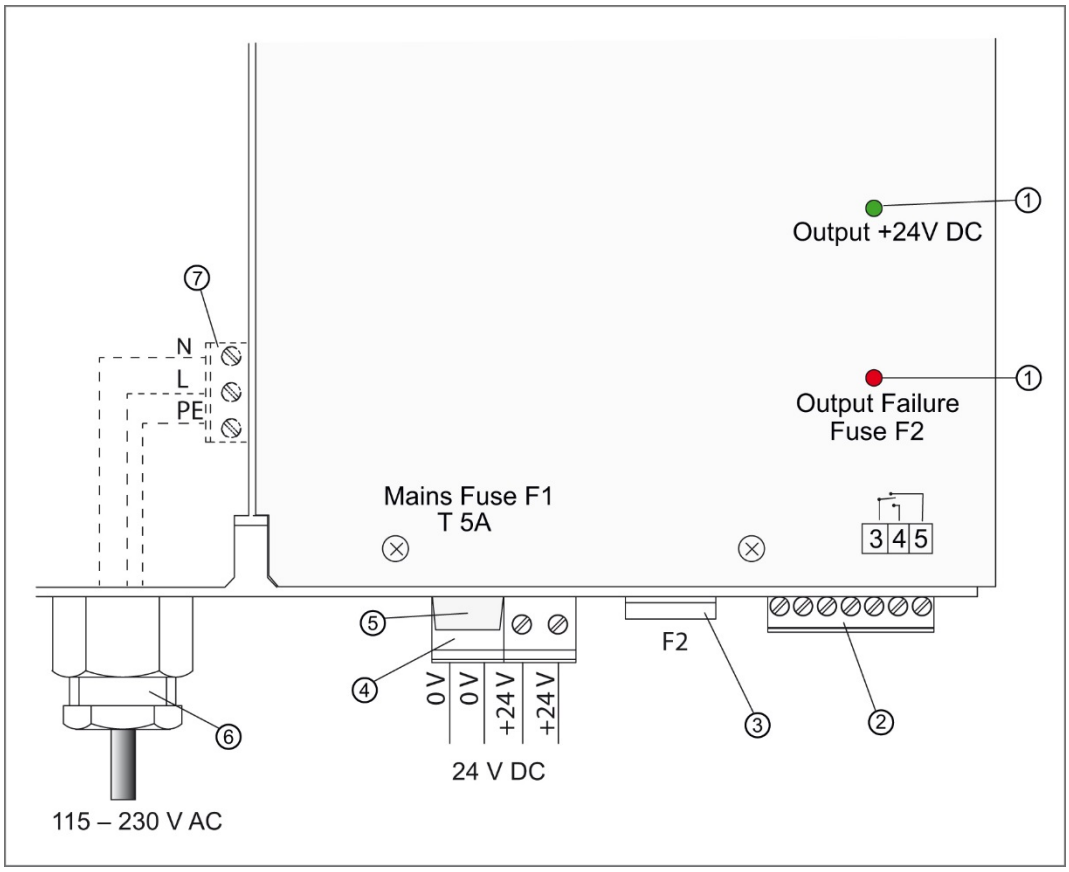


Fig. 2: Connections, fuses and LED displays

1	**LED displays**	4	**24 V connection** Plug-in screw-type terminal, 4-pole (spare part order no.: 00 0211 41)
2	**Signalling outputs** Plug-in screw-type terminal, 7-pole (spare part order no.: 00 0211 39)	5	**Mains fuse F1: (20 x 5) T 5A** (spare part order no. 00 0130 41)
3	**Power supply unit (77 3401 00):** **Output fuse F2: FKS 15A** (spare part order no.: 00 0132 02) **Power supply unit 6A (77 3401 60):** **Output fuse F2: FKS 10A** (spare part order no.: 00 0130 29)	6	**Cable screw gland for mains connection cable**
		7	**Mains connection** Plug-in screw-type terminal, 3-pole (spare part order no. 00 0211 40)

Tab.1: Connections, fuses and LED displays

6.1.1 Output terminals (4) 24 V DC

The **power supply unit, order no. 77 3401 00,** provides a controlled output voltage of 24 V DC, max. 12,5 A. If a load current of approx. 13 A is exceeded, the power supply unit switches off the output voltage and performs periodic start attempts until the overcurrent or short-circuit is eliminated.

The **power supply unit 6A, order no. 77 3401 60,** provides a controlled output voltage of 24 V DC, max. 6 A. If a load current of approx. 7 A is exceeded, the power supply unit switches off the output voltage and performs periodic start attempts until the overcurrent or short-circuit is eliminated.

» Connect the load to terminals "+24 V" and "0 V" (provided twice).

6.1.2 Signalling outputs (2) and LED displays (1)

The signalling outputs and the LED displays indicate the device status. The signaling outputs use potential-free relay contacts to indicate the device status. These contacts may be subjected to a maximum load of 30 V DC/1 A.

LED display	Status	Output voltage	Switched contacts (NO)
Green LED „Output +24 V DC“ is on.	Power supply unit is in operation.	+24 V DC	3 – 5
Green LED „Output +24 V DC“ is off.	No mains.	0 V	3 – 4
Red LED „Output Failure Fuse F2“ is on.	F2 failure. Output fuse F2 has been removed or is defective.	0 V	3 – 4

Tab.2: Signalling outputs and LED displays

6.1.3 Mains connection (7)

Risk of electric shock!

When carrying out the following steps, you must ensure that the mains connection cable to be connected to the power supply is disconnected from the mains.

If this is not oberserved, touching live parts can result in death or serious injury.

1. Remove the four fastening screws from the left housing cover and remove the cover by pulling it towards you. Do not disconnect the existing earth connection between housing cover and housing.

- It will now be possible to access the terminal (7) for the mains connection.

2. Guide the mains connection cable through the cable screw gland (6) and into the device, then connect it to the terminal for the mains supply (7) as indicated on the imprint.

Risk of electric shock!

You must ensure that the processes of connection and mounting the protective conductor connection are carried out safely.

3. Secure the mains connection cable to prevent it being pulled out: use the cable screw gland (6), for example.
4. Replace the left housing cover and screw in the four fastening screws tightly.

6.1.4 Commissioning

» Once all the connections have been established as described, switch on the mains voltage.

- 24 V DC is applied to the outputs. The green "Output +24V DC" LED (1) lights up when the power supply unit is in operation.

7 Technical data

Input	
Nominal voltage	115 – 230 V AC
Nominal voltage range	90 – 264 V AC
Input frequency	47 – 63 Hz
Output	
Nominal current	Power supply unit (77 3401 00): 12.5 A DC Power supply unit 6A (77 3401 60): 6 A DC
Output voltage in mains operation	24 V DC +/- 3%
Rated output power	Power supply unit (77 3401 00): 300 W Power supply unit 6A (77 3401 60): 144 W
Ripple for nominal output current	< 240 mVeff
EMC CE-certified	EN 55022; EN 61000-3-2, -3; EN 61000-4-2, -3, -4, -5, -6, -11
Safety	EN 62368-1
Output	Safety Extra Low Voltage (SELV)
Testing voltage PRI – SEC	4 kV
Protection class	Class I
Degree of protection	IP 20
General	
Device revision	E1
Permissible ambient temperature in operation	0 ... +40 °C
Permissible ambient temperature during storage and transport	-25 ... + 50 °C

DE - Installationsanleitung

Zimmer-Programmierschnittstelle

Die Zimmer-Programmierschnittstelle ist eine Schnittstelle zur Konfiguration von Ruf-/Anwesenheits-Einsätzen (29 0701 00...) in CONCENTO^{CARE} Rufanlagen. Die Schnittstelle wird für die Dauer der Konfiguration auf das Basismodul des Ruf-/Anwesenheits-Einsatzes aufgesteckt.

HINWEIS! Die vollständige Installation des Systems ist im Technischen Handbuch beschrieben.

Modelle

Zimmer-Programmierschnittstelle	Passt auf Ruf-/Anwesenheits-Einsatz
29 0701 80BS	29 0701 00BS
29 0701 80F	29 0701 00F
29 0701 80RS	29 0701 00RS

Bedienung

Wie Sie die Zimmer-Programmierschnittstelle bedienen, entnehmen Sie der Installationsanleitung zu dem Ruf-/Anwesenheits-Einsatz.

EN - Installation Instructions

Room programming interface

The room programming interface is an interface for configuring call/presence inserts (29 0701 00...) in CONCENTO^{CARE} nurse call systems. The interface is plugged onto the basic module of the call/presence insert for the duration of the configuration.

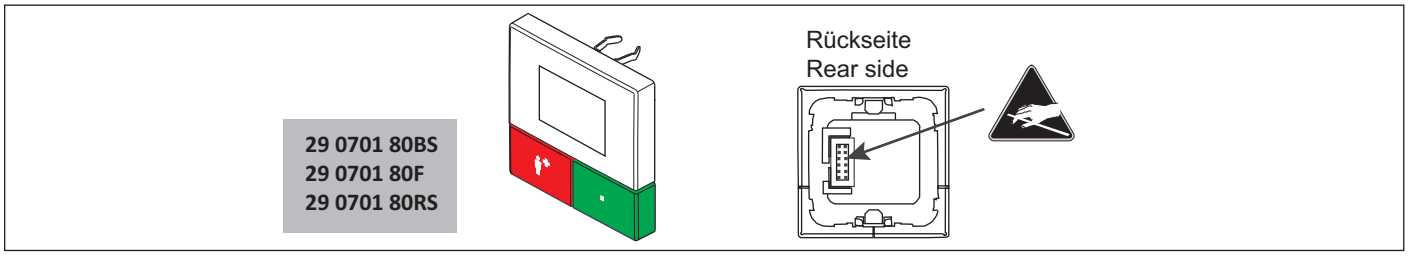
NOTE! The complete installation of the system is described in the Technical Manual.

Designs

Room programming interface	Fits to call/presence insert
29 0701 80BS	29 0701 00BS
29 0701 80F	29 0701 00F
29 0701 80RS	29 0701 00RS

Operation

For information on how to operate the room programming interface, refer to the installation instructions for the call/presence insert.



Technische Daten

Schutzart	IP 20
Umgebungstemperatur	+5 °C – +40 °C
Relative Luftfeuchtigkeit	0 % – 85 %

Technical data

Degree of protection	IP 20
Ambient temperature	+5°C – +40°C
Relative humidity	0 % – 85 %

Table of contents for product leaflets

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