
CEREDA
SYSTEMS
#nursecallevolved
ZELO FL24 - INTELLIGENT. SECURE. DECENTRALIZED.
cereda-systems.de

Experienced team

In-house development

Optimized manufacturing

Nationwide service

Strong partners

Preface

#nursecallevolved

Cereda Systems GmbH develops and manufactures intelligent and user-friendly call systems for senior citizens' facilities, clinics, and facilities for people with disabilities.

Our company was formed from the merger of famalux Systemtechnik GmbH and Winkel GmbH. With decades of experience, our innovative solutions have made a lasting impact on the market. What began with analog technology has long since arrived in the digital world. For example, the intelligent magnetic connection for handheld buttons was designed by our development team over 12 years ago and is now an established standard in the industry.

With well over 2,000 installations, we are one of the market leaders in Germany. Our systems are used wherever reliable and efficient communication between caregivers and those they care for is essential. We work with specialist planners, installers, and system providers to implement projects precisely tailored to your needs.

This catalog provides a comprehensive overview of our solutions and the associated components. Our Cereda call systems meet the requirements of DIN VDE 0834 and are tested for electromagnetic compatibility (EMC) in accordance with EU EMC Directive 2014/30/EC.

Let us advise you individually – we will develop a bespoke solution for you.

Get in touch:

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We look forward to hearing from you!

Note on gender usage

For better readability, the masculine form is used for personal designations and personal nouns in this technical system catalog. These formulations refer to all genders and are used solely for the sake of linguistic simplicity. The spelling chosen does not imply any value judgment and represents equal treatment of all persons.

Sustainable investment

Flexible planning

Cost-effective implementation

Safe operation

Efficient use

Overview of contents

The system catalog is divided into chapters. These are based on a switchboard-free system structure.

The call system consists of:

Room electronics
see Chapter 1

Call modules, display units, and room signal lights
see Chapter 2

Accessories
see Chapter 3

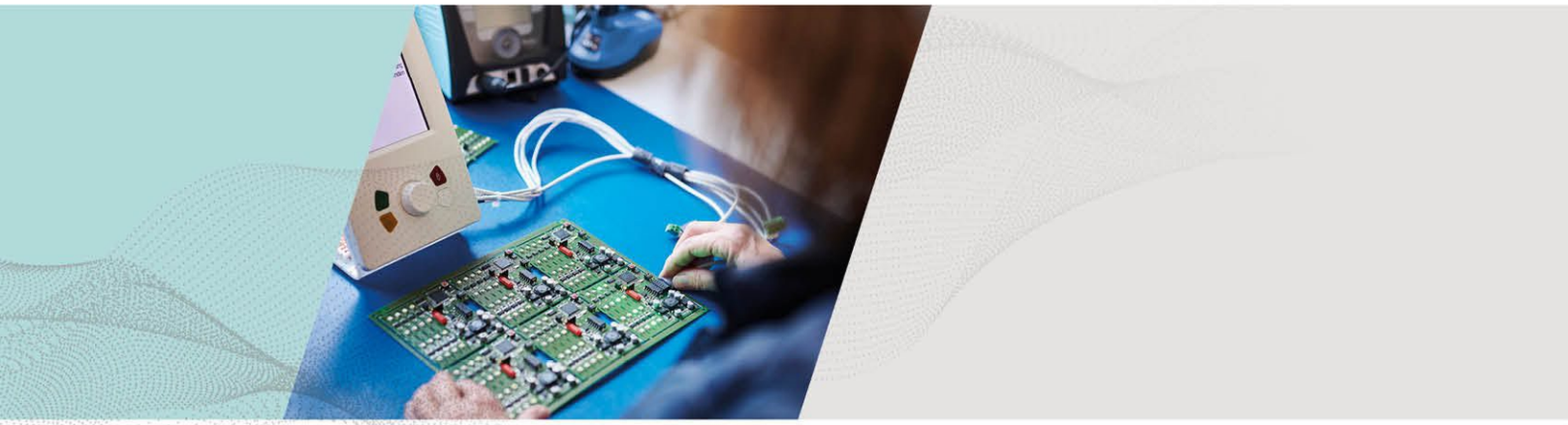
Group signal lights and large-area displays
see Chapter 4

Interfaces, power supply and emergency power supply, software licenses
see Chapter 5

Protection for disoriented persons
see Chapter 6

Information on planning and installation
see Chapter 7

The table of contents below includes all components.



Chapter 1 - Room electronics

Each room that is to be equipped with a call facility is usually fitted with room electronics. Depending on requirements, this may be:

- integrated into the room signal light,
- installed behind the cancellation button on the door, or
- mounted on a top-hat rail.

All room electronics are equipped with a unique and non-changeable serial number. It is delivered pre-programmed and ready to use, and can manage up to four room areas.

Decentralized intelligence

Integrated call management

All call management routines and monitoring functions are integrated directly into the memory and processor of the room electronics. This eliminates the need for separate group switchboards, control units, or servers.

Switchboard-free operation

No limitation

Any topology

System bus

The system bus connects all room electronics, central components, and interfaces with each other and is based on CAN bus technology.

- Only two wires are required for data transmission.
- The wiring is usually carried out using a JY(St)Y 4x2x0.8 telecommunications cable.
- Alternatively, the system bus can be implemented using fiber optic cables or polymer optical fiber (POF).

The system bus can be flexibly configured as a bus, star, branch, or tree structure. Each room electronic device contains a system bus repeater that refreshes the signal and keeps data transmission stable.

Pre-addressing

Power supply

The power supply is connected in parallel to the system bus and ensures that the connected components operate reliably.

Plug connections

Room bus

All call buttons, cancellation buttons, pull cord switches, room signal lights, and displays installed in the room are connected to the room electronics via the two-wire room bus.

Plug & play

Room electronics with room signal light and door sign | FZZ-0010

for connecting a room to the system bus, for use in the hallway outside the room

Function

- Mutual monitoring of all electronics and connected call modules
- Connected call and display modules are detected automatically
- Triggered calls are displayed in:
  - Red - normal call
  - Green - attendance
  - Flashing green/red - emergency call
  - Red/white - call from wet room/bathroom
  - Blue and yellow - doctor and/or special calls
- Use as a door sign

Features

- Built into surface-mounted plastic housing
- Labeling area
- Integrated room signal light in red, yellow, green, blue, and white
- Connection for 2-wire system bus
- Integrated system bus repeater
- Integrated terminating resistors via DIP
- Connection for power supply
- Connection for 2-wire room bus
- Slot for radio receiver board
- Line monitoring, fault detection
- Up to 4 rooms (e.g., bathroom, hallway, bedroom, toilet) can be configured
- Individually programmable name display
- Wall mounting via 60 mm flush-mounted box

Scope of delivery

- Plug-in terminals

Technical specifications

Dimensions (WxHxD):	145 x 115 x 35 mm
Weight:	200 g
Color:	White
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 50 mA
	Operation: max. 100 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 10–90%, non-condensing

Required components

See Chapter 2	Page 15

Optional accessories

Radio receiver board FFP-0010	Page 41

Room electronics in flush-mounted housing | FZZ-0028

for connecting a room to the system bus, installation in a flush-mounted box or sub-distribution

Function

- Mutual monitoring of all electronics and connected call modules
- Connected call and display modules are detected automatically

Features

- Encapsulated flush-mounted design
- Connection for 2-wire system bus
- Integrated system bus repeater
- Integrated terminating resistors via DIP
- Connection for power supply
- Connection for 2-wire room bus
- Line monitoring, fault detection
- Up to 4 rooms (e.g., bathroom, hallway, bedroom, toilet) can be configured
- Individually programmable name display
- Installation in flush-mounted box

Scope of delivery

- Plug-in terminals

Technical specifications

Dimensions (WxHxD):	45 x 35 x 22 mm
Weight:	100 g
Color:	White
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 40 mA
	Operation: max. 80 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

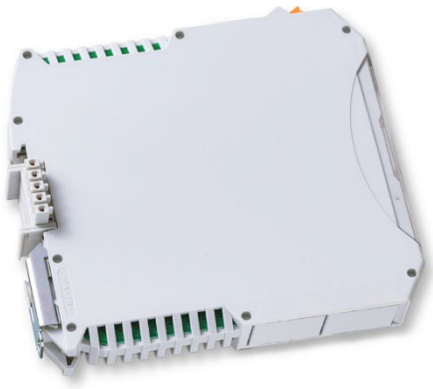
See Chapter 2	Page 15

Optional accessories

Coupler CAN2POF FIX-0061	Page 71
Radio receiver board FFP-0050	Page 41

Room electronics in top-hat rail housing | FZZ-0020

for connecting a room via 2-wire cabling, use in main or sub-distribution boards



Function

- Use of existing 2-wire cabling (e.g., via the telephone network)
- Mutual monitoring of all electronics and connected call modules
- Connected call and display modules are detected automatically

Features

- Built into top-hat rail housing
- Connection for 2-wire system bus
- Connection for power supply
- Two connections for 2-wire room bus
- Max. cable length 150 m
- Loop-through system bus and power supply connection in the base
- Line monitoring, fault detection
- Up to 4 rooms (e.g., bathroom, hallway, bedroom, WC) can be configured
- Individually programmable name display

Scope of delivery

- Terminating resistors

Technical specifications

Dimensions (WxHxD):	18 x 105 x 112 mm, 1 TE
Weight:	180 g
Color:	Light gray
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 50 mA
	Operation: max. 100 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Distributor for 7 top-hat rail modules	MEK-1057
Distributor for 17 top-hat rail modules	MEK-1058
See Chapter 2	Page 15

Optional accessories

Radio receiver board FFP-0050	Page 41

Chapter 2 - Call modules

Call units, room signal lights, and display units are installed in or above standard 60 mm flush-mounted boxes.

Any topology

- All call units are equipped with a 55 mm cover panel.
- The room display has an integrated front panel.
- Each unit has a unique and unchangeable serial number.

Pre-addressing

Room bus

The connection to the room electronics is made via the room bus as a two-wire CAN bus.

Plug connections

- The wiring is usually carried out using a JY(St)Y 2x2x0.6 telecommunications cable.

Plug & play

Power supply

Power is supplied directly via the room bus, so no additional power supply is required.

Magnetic plug contact

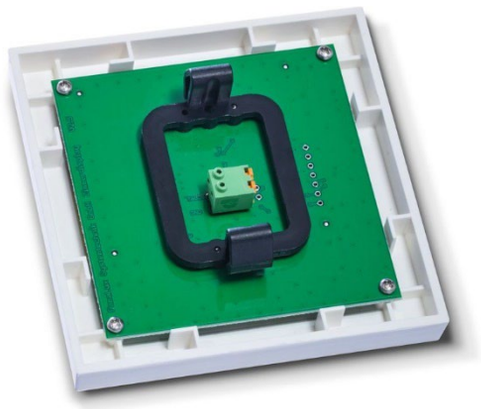
Multifunctional magnetic plug contact

The call button on the bed is equipped with a multifunctional magnetic plug contact.

- Thanks to its special design, the magnetic plug contact is protected against confusion with connections from other trades.
- Accidental pulling or shearing – for example, due to height-adjustable beds – lead to non-destructive release and automatically trigger a tear-off alarm.
- Various control units and components are available for the magnetic plug contact – for more information, see Chapter 3 – Accessories.

Room display with call/attendance and function button | FTD-0001

for use in the entrance area of the room in conjunction with the room electronics



Function

- Triggering a call using the red button
- When attendance is set, the red button triggers an emergency call; special emergency call by pressing and holding the button can be configured
- Setting attendance using the green button
- Simultaneous acknowledgment when a call is pending
- The red button has an orientation light and a constant red light that acts as a reassurance light after activation
- Constant green light when the green button is pressed
- Call forwarding in plain text via LCD display and buzzer
- Programmable special functions via yellow button (e.g., flag light)

Features

- LCD display with 5 lines of 12 characters each
- Three buttons with orientation light in green, yellow, and red
- Buzzer
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- No cover frame required
- Line monitoring, fault detection
- Individually programmable name display

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

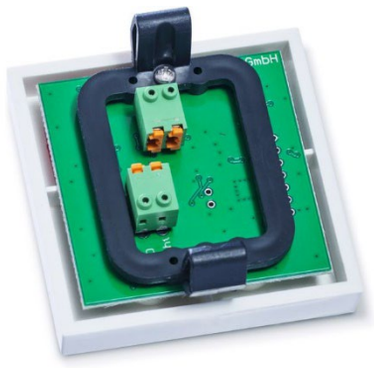
Dimensions (WxHxD):	86 x 86 x 10 mm
Weight:	122 g
	Color: Pure white, similar to RAL 9010
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 1 mA
	Operation: max. 5 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0061	Page 31
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Call/attendance button | FTX-0010

for use in the entrance area of the room in conjunction with the room electronics



Function

- Triggering a call using the red button
- When attendance is set, pressing the red button triggers an emergency call; special emergency call by pressing and holding the button can be configured
- Setting attendance using the green button
- Simultaneous acknowledgment when a call is pending
- The red button has an orientation light and a constant red light that serves as a reassurance light after activation.
- Constant green light when the green button is pressed
- Acoustic call forwarding via buzzer

Features

- Two buttons with orientation lights in green and red
- Buzzer
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display
- Connection for freely programmable lighting control via open collector output

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

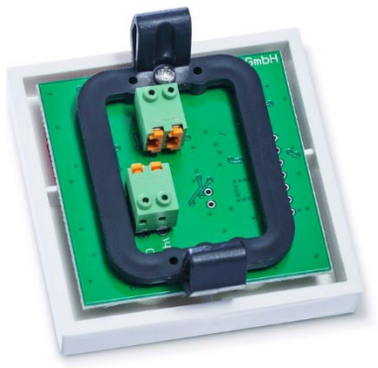
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Call button | FTX-0001

for use in conjunction with room electronics



Function

- Triggering a call using the red button
- When attendance is set, an emergency call is triggered by pressing the red button
- The red button has an orientation light and a constant red light that serves as a reassurance light after activation.

Features

- Button with a red orientation light
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display
- Connection for freely programmable lighting control via open collector output

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

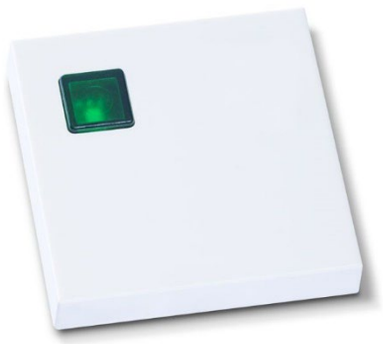
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

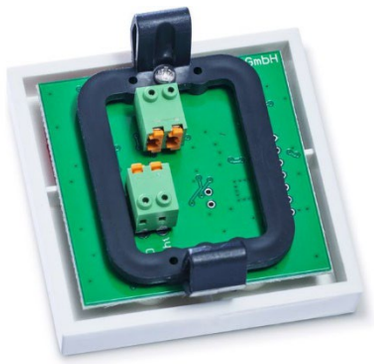
Required components

Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Attendance/cancellation button | FTX-0007

for use in the entrance area of the room in conjunction with the room electronics





Function

- Setting attendance using the green button
- Simultaneous acknowledgment when a call is pending
- Constant green light when the green button is pressed
- Acoustic call forwarding via buzzer

Features

- A button with a green orientation light
- Buzzer
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display
- Connection for freely programmable lighting control via open collector output

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

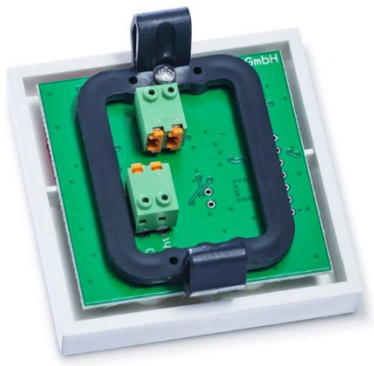
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Call button with magnetic plug contact | FTM-0010

for use at the bed in conjunction with room electronics



Function

- Triggering a call using the red button
- When attendance is set, an emergency call is triggered by pressing the red button
- The red button has an orientation light and a constant red light that serves as a reassurance light after activation.
- Triggering a call or emergency call via connected peripheral devices

Features

- Button with a red orientation light
- Multifunctional magnetic plug contact for connecting:
  - Manual trigger/handheld button
  - External devices
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display
- Connection for freely programmable lighting control via open collector output

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	31 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

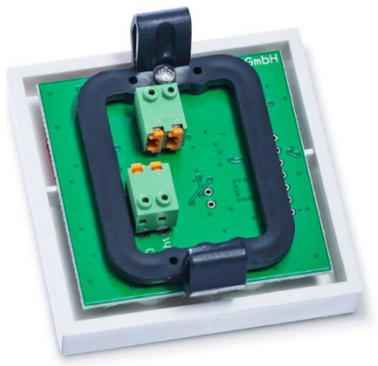
Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Optional accessories

Handheld button FTH-000x	Page 36
Handheld button with light switch FTH-010x	Page 37
Handheld button with attendance button FTH-020x	Page 38
Connection box FTM-009x	Page 39
Radio box FTM-0093	Page 40

Call/cancellation button with magnetic plug contact | FTM-0020

for use on doors or beds in conjunction with room electronics



Function

- Triggering a call using the red button
- When attendance is set, an emergency call is triggered by pressing the red button
- Green button configurable for attendance function and/or acknowledgment
- The red button has an orientation light and a constant red light that serves as a reassurance light after activation.
- Triggering a call or emergency call via connected peripheral devices
- Constant green light when the green button is pressed
- Acoustic call forwarding via buzzer

Features

- Two buttons with orientation lights in green and red
- Multifunctional magnetic plug contact for connecting:
  - Manual trigger/handheld button
  - External devices
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display
- Connection for freely programmable lighting control via open collector output

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	31 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

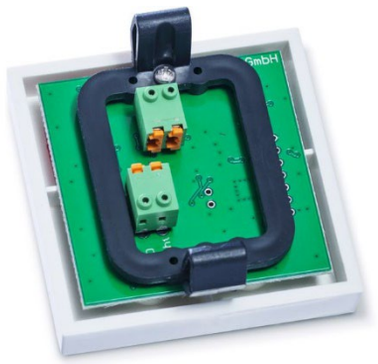
Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Optional accessories

Handheld button FTH-000x	Page 36
Handheld button with light switch FTH-010x	Page 37
Connection box FTM-009x	Page 39
Radio box FTM-0093	Page 40

Doctor call/cancellation button | FTX-0004

for use in conjunction with room electronics



Function

- Triggering a doctor call with higher priority using the blue button
- Green button configurable for attendance function and/or acknowledgment
- The blue button has an orientation light and a constant light that serves as a reassurance light after activation

Features

- Two buttons with orientation lights in green and blue
- Buzzer
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display
- Connection for freely programmable lighting control via open collector output

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

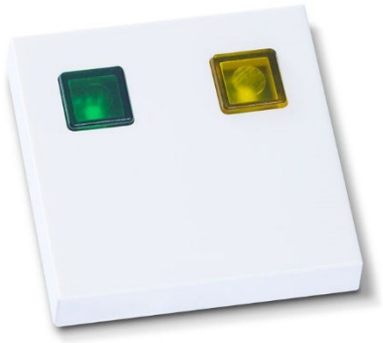
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

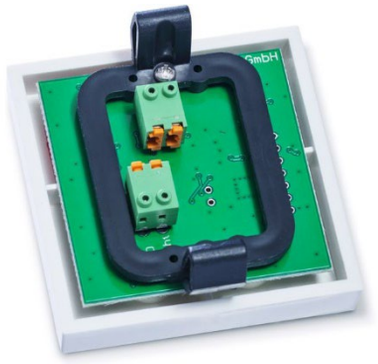
Required components

Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Call for help or flag/attendance/cancellation button | FTX-0008

for use in conjunction with room electronics





Function

- Yellow button configurable for call for help and/or flag function
- Green button configurable for attendance function and/or acknowledgment
- The yellow button has an orientation light and a constant light that serves as a reassurance light after activation

Features

- Two buttons with orientation lights in green and yellow
- Buzzer
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display
- Connection for freely programmable lighting control via open collector output

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

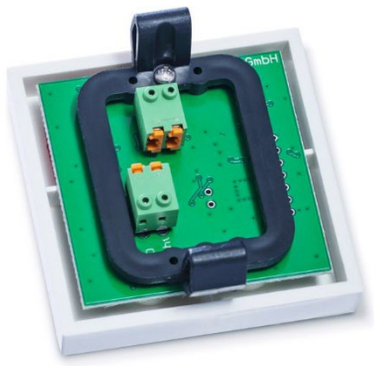
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Vital sign call button | FTX-0020

for use in conjunction with room electronics



Function

- Regular vital sign report via the yellow button
- Automatic vital sign call if no vital sign report is detected
- Logging in and out during absences using the white button

Features

- Two buttons with orientation lights in white and yellow
- Buzzer
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display
- Connection for freely programmable lighting control via open collector output

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

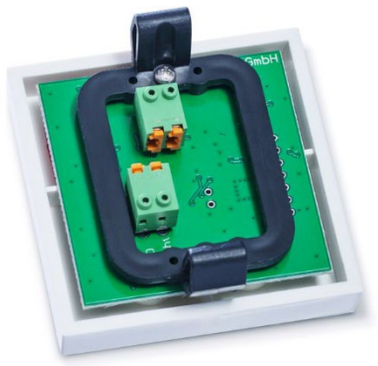
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Call/cancellation button for bathroom/WC | FTX-0012

for use in the sanitary area of the room in conjunction with the room electronics



Function

- Triggering a WC call using the red button
- When attendance is set, an emergency call is triggered by pressing the red button
- Acknowledging the WC call using the gray button
- The red button has an orientation light and a constant red light that serves as a reassurance light after activation.
- Acoustic call forwarding via buzzer

Features

- Two buttons with orientation lights in gray and red
- Buzzer
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display
- Connection for freely programmable lighting control via open collector output

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

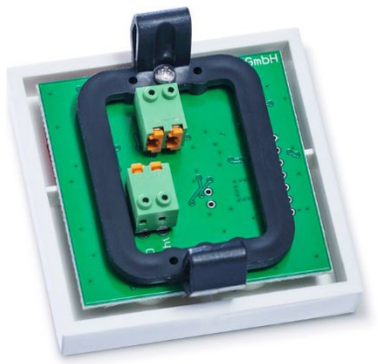
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Cancellation button | FTX-0002

for use in conjunction with room electronics or a technology module



Function

- Acknowledging calls using the gray button
- Acoustic call forwarding via buzzer

Features

- Gray button
- Buzzer
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display
- Connection for freely programmable lighting control via open collector output

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

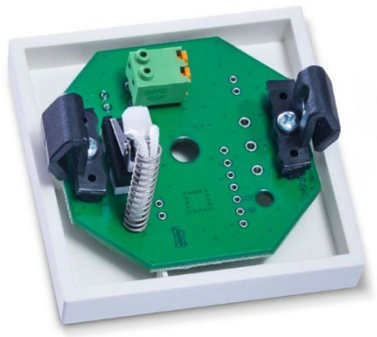
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Pull cord switch | FTZ-0010

for use in sanitary areas in conjunction with room electronics



Function

- Triggering a WC call using a pull cord
- When attendance is set, a WC emergency call is triggered
- Constant red light as a reassurance light after activation

Features

- Pull cord with two handles in red
- LED as a reassurance light
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display

Scope of delivery

- Front panel
- Plug-in terminals
- Red pull cord with two handles
- Special lengths on request

Technical specifications

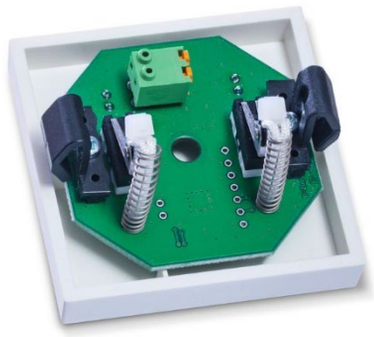
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Pull cord length:	200 cm
	Special lengths on request
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.2 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0062	Page 32
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Double pull cord switch | FTZ-0022

for use in sanitary areas in conjunction with room electronics



Function

- Triggering WC call using two pull cords
- When attendance is set, a WC emergency call is triggered
- Constant red light as a reassurance light after activation

Features

- Two red pull cords, each with two handles
- LED as a reassurance light
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display

Scope of delivery

- Front panel
- Plug-in terminals
- Two red pull cords, each with two handles

Technical specifications

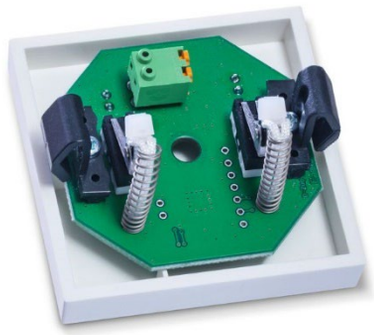
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Length of pull cords:	200 cm
	Special lengths on request
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.2 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0062	Page 32
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Combination pull cord switch with shut-off function | FTZ-0020

for use in sanitary areas in conjunction with room electronics



Function

- Triggering a WC call using a pull cord
- The green pull cord can be configured for the attendance function and/or acknowledgment of the WC call
- When attendance is set, a WC emergency call is triggered
- Constant red light as a reassurance light after activation
- Acoustic call forwarding via buzzer

Features

- Red pull cord with two handles
- Green pull cord with handle
- LED as a reassurance light
- Buzzer
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display

Scope of delivery

- Front panel
- Plug-in terminals
- Red pull cord with two handles
- Green pull cord with one handle
- Special lengths on request

Technical specifications

Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Length of red pull cord:	200 cm
	Special lengths on request
Length of green pull cord:	100 cm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.2 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0062	Page 32
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Pneumatic button | FTP-0010

for use in sanitary areas in conjunction with room electronics

Function

- Triggering a WC/bathroom call using the red rubber ball
- When attendance is set, a WC/bathroom emergency call is triggered
- Constant red light as a reassurance light after activation

Features

- Red rubber ball with tube
- Pneumatic switching element
- LED as a reassurance light
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display

Scope of delivery

- Front panel
- Plug-in terminals
- Red rubber ball
- Transparent tube

Technical specifications

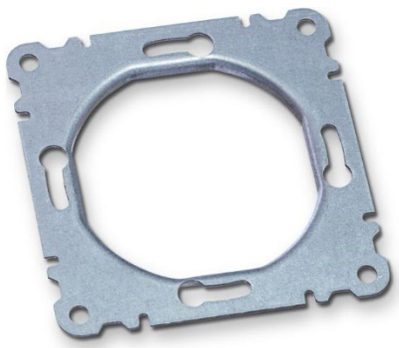
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Tube length:	300 cm
Weight:	123 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.2 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0062	Page 32
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Metal support frame | HRX-0004

for mounting the call modules in 60 mm flush-mounted boxes



Function

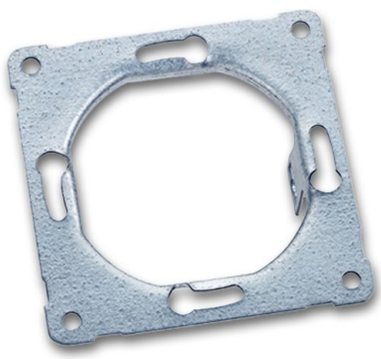
- Installation of call modules in 60 mm flush-mounted boxes or surface-mounted housings
- Screw connection with the flush-mounted box or the surface-mounted housing
- Locking clip for secure hold

Technical specifications

Material:	galvanized sheet metal
Dimensions (WxHxD):	70 x 70 x 1 mm

Metal support frame | HRX-0061

for mounting the display modules in 60 mm flush-mounted boxes



Function

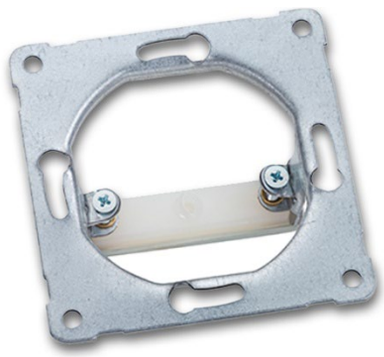
- Mounting the display in 60 mm flush-mounted boxes or surface-mounted housing
- Screw connection with the flush-mounted box or the surface-mounted housing
- Locking clip for secure hold

Technical specifications

Material:	galvanized sheet metal
Dimensions (WxHxD):	70 x 70 x 1 mm

Metal support frame | HRX-0062

for mounting pull cord and pneumatic switches in 60 mm flush-mounted boxes



Function

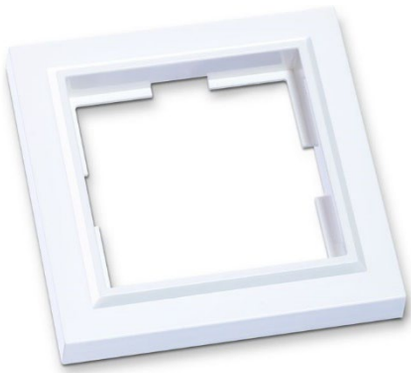
- Installation of pull cord and pneumatic switches in 60 mm flush-mounted boxes or surface-mounted housing
- Screw connection with the flush-mounted box or surface-mounted housing
- Spreader claws for alternative fastening in plastered flush-mounted boxes
- Locking clip for secure hold

Technical specifications

Material:	galvanized sheet metal
Dimensions (WxHxD):	70 x 70 x 1 mm

Cover frame | HRX-0001, HRX-0002, HRX-0003

for mounting the call modules in 60 mm flush-mounted boxes



Function

- For covering and securely fixing call, pull cord, and pneumatic switches in 60 mm flush-mounted boxes

Technical specifications

Dimensions (WxHxD):	80 x 80 x 10 mm

Order details

Single, pure white, similar to RAL 9010	HRX-0001
Double, pure white, similar to RAL 9010	HRX-0002
Triple, pure white, similar to RAL 9010	HRX-0003

Dummy cover | HRX-0009

to cover a flush-mounted box

Function

- For secure covering of unused flush-mounted boxes and for visually clean installations

Technical specifications

Dimensions (WxHxD):	55 x 55 x 10 mm
Dimensions (WxHxD):	With frame: 80 x 80 x 10 mm
Color: Pure white, similar to RAL 9010	

Required components

Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32

Surface-mounted frame | HRX-0005, HRX-0011, HRX-0012, HRX-0010

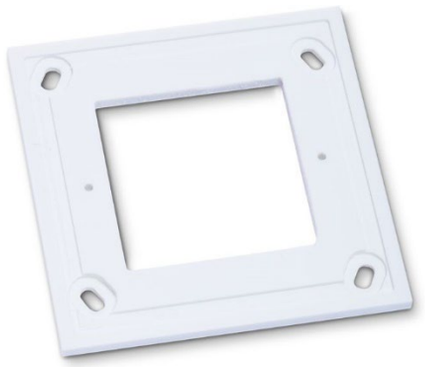
for mounting call modules, display modules, room electronics, and technology modules

Order details

for call module, single, incl. cover frame	HRX-0005
for display module	HRX-0011
for display module with flush-mounted room electronics	
for room electronics or technology module	HRX-0010

Adapter for flush-mounted boxes and flush-mounted enclosures | HRX-002x

for mounting call modules and display modules



Function

- Adapters enable call and display modules to be installed precisely in various flush-mounted boxes and flush-mounted enclosures

Order details

E2 adapter for call module	HRX-0021
E3 adapter for call module	HRX-0022
E1 adapter for display module	HRX-0025
E2 adapter for display module	HRX-0026
E3 adapter for display module	HRX-0027
Adapter for Clino Phone installation kits	on request

Cover plates for flush-mounted boxes | HRX-0015, HRX-0016, HRX-0017

for closing flush-mounted boxes

Function

- Cover plates are used to close unused flush-mounted boxes and ensure a clean appearance

Order details

E1 cover plate	HRX-0015
E2 cover plate	HRX-0016
E3 cover plate	HRX-0017

Individually applicable

Plug & play

Radio technology

Chapter 3 - Accessories

Multifunctional magnetic plug contact

Various control devices are available for the multifunctional magnetic plug contact.

- When a manual trigger is used, two devices can be operated independently of each other with the aid of a Y adapter. The call type and tear-off report are detected and reported separately.
- The radio box allows easy connection of radio units, such as body-worn transmitters or pressure mats.

Radio communication

To expand the call system, each room signal light—with or without integrated electronics—can be equipped or retrofitted with a radio receiver. Alternatively, the radio receiver can be connected via the room bus.

- In addition to room radio calls, mobile and selective radio calls can be triggered by residents or patients, depending on the configuration. These contain location information to enable precise alerting.
- Different sensors can also be integrated into the system via radio.

Connection of external devices

Multi-channel radio transmitters are available for connecting sensor mattresses and smart care beds.

- These enable selective recording of bed calls with different call types, which can be forwarded directly to the responsible care staff.

Manual trigger/handheld button with magnetic plug contact | FTH-000x

for use at the bedside for convenient call triggering

Function

- Triggering a call using the red button
- When attendance is set, an emergency call is triggered by pressing the red button
- The red button has an orientation light and a constant red light that serves as a reassurance light after activation.
- Connection to any call module with multifunctional magnetic plug contact
- No damage to the cable or call module if the cable is pulled too hard or due to height-adjustable beds
- Easy reconnection thanks to different polarity of the magnets

Features

- Button with a red orientation light
- Cable with magnetic plug contact
- Integrated magnet in the housing for attachment to metal wall brackets or metal furniture
- Plug & play
- Line monitoring, tear-off detection

Note

- Special lengths on request

Technical specifications

Dimensions (WxHxD):	50 x 100 x 25 mm
Weight:	174 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%, via magnetic
Current consumption at U_N:	Idle: max. 0.2 mA
	Operation: max. 3 mA
Protection class:	IP54
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Call button with magnetic plug contact FTM-0010	Page 20
Call/cancellation button with magnetic plug contact FTM-	

Optional accessories

Wall bracket, round, 40/45 mm	
self-adhesive	FTH-0001
screw-in, without fastening material	FTH-0002
Y-adapter	FTH-0099

Order details

with 3 m connection cable	FTH-0003
with 5 m connection cable	FTH-0005
with 10 m connection cable	FTH-0010

Manual trigger/handheld button with magnetic plug contact | FTH-010x

for use at the bed for convenient call triggering and for controlling the light switch

Function

- Triggering a call using the red button
- When attendance is set, an emergency call is triggered by pressing the red button
- The red button has an orientation light and a constant red light that serves as a reassurance light after activation.
- Control of reading and/or room lighting
- Connection to any call module with multifunctional magnetic plug contact
- No damage to the cable or call module if the cable is pulled too hard or due to height-adjustable beds
- Easy reconnection thanks to different polarity of the magnets

Features

- Two buttons with orientation lights in red and yellow
- Programmable for two light sources
- Cable with magnetic plug contact
- Integrated magnet in the housing for attachment to metal wall brackets or metal furniture
- Plug & play
- Line monitoring, tear-off detection

Note

- Special lengths on request

Technical specifications

Dimensions (WxHxD):	50 x 100 x 25 mm
Weight:	174 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%, via magnetic
Current consumption at U_N:	Idle: max. 0.2 mA
	Operation: max. 3 mA
Protection class:	IP54
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Call button with magnetic plug contact FTM-0010	Page 20
Call/cancellation button with magnetic plug contact FTM-	

Optional accessories

Wall bracket, round, 40/45 mm	
self-adhesive	FTH-0001
screw-in, without fastening material	FTH-0002
Y-adapter for magnetic plug contact	FTH-0099

Order details

with 3 m connection cable	FTH-0103
with 5 m connection cable	FTH-0105
with 10 m connection cable	FTH-0110

Manual trigger/handheld button with magnetic plug contact | FTH-020x

for use at the bed and convenient triggering and cancellation of calls

Function

- Triggering a call using the red button
- Setting attendance using the green button
- Simultaneous acknowledgment when a call is pending
- When attendance is set, an emergency call is triggered by pressing the red button
- The red button has an orientation light and a constant red light that serves as a reassurance light after activation.
- Connection to any call module with multifunctional magnetic plug contact
- No damage to the cable or call module if the cable is pulled too hard or due to height-adjustable beds
- Easy reconnection thanks to different polarity of the magnets

Features

- Two buttons with orientation lights in red and green
- Cable with magnetic plug contact
- Integrated magnet in the housing for attachment to metal wall brackets or metal furniture
- Plug & play
- Line monitoring, tear-off detection

Note

- Special lengths on request

Technical specifications

Dimensions (WxHxD):	50 x 100 x 25 mm
Weight:	174 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%, via magnetic
Current consumption at U_N:	Idle: max. 0.2 mA
	Operation: max. 3 mA
Protection class:	IP54
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Call button with magnetic plug contact FTM-0010	Page 20
Call/cancellation button with magnetic plug contact FTM-	

Optional accessories

Wall bracket, round, 40/45 mm	
self-adhesive	FTH-0001
screw-in, without fastening material	FTH-0002
Y-adapter for magnetic plug contact	FTH-0099

Order details

with 3 m connection cable	FTH-0203
with 5 m connection cable	FTH-0205
with 10 m connection cable	FTH-0210

Connection box | FTM-009x

for connecting external devices for triggering calls

Function

- Connection to any call module with multifunctional magnetic plug contact
- Connection of external devices via potential-free contact
- Transmission of plain text names and room numbers
- Manual triggers can also be connected via the integrated magnetic plug contact
- Removal of the box is automatically detected and reported as a fault

Features

- Plug & play
- Own intelligence and independent recognition of room numbers
- Message is stored in plain text in the box
- RJ10 socket for connecting external devices
- Normally open or normally closed contact programmable
- Removal detection
- Up to 3 connection or radio boxes can be combined
- With option of double galvanic isolation according to DIN VDE 0834 (2 x MOPP)

Safety notice

- In the case of a connection box without galvanic isolation, the protective measures specified in 2 x MOPP
  (Means of Patient Protection) in accordance with DIN VDE 0834 and DIN EN 60601 must be observed on the external device!

Important warning notice

- According to DIN VDE 0834, call systems are not medical devices.
- Alarm forwarding via unidirectional interfaces does not comply with the standard (DIN EN 60601-1-8).
- By connecting to medical electrical equipment, the operator creates a new intended use that is outside the manufacturer's specifications (MPBetreibV, DIN EN ISO 14971).
- Connection with a call system is therefore not permitted.
- We strongly advise against such a connection and accept no liability for any risks or damage resulting from it.

Technical specifications

Dimensions (WxHxD):	85 x 60 x 20 mm
Weight:	71.8 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%, via magnetic
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 0.3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Call button with magnetic plug contact FTM-0010	Page 20
Call/cancellation button with magnetic plug contact FTM-	

Order details

without galvanic isolation	FTM-0091
with double galvanic isolation	FTM-0090

Radio box | FTM-0093

for connecting radio call transmitters

Function

- Connection to any call module with multifunctional magnetic plug contact
- Registration and reception of a radio unit
- Transmission of plain text names and room numbers
- Call acknowledgment via attendance/cancellation button in the room
- Manual triggers can also be connected via an integrated magnetic plug contact
- Removal of the box is detected and reported as a fault

Features

- Integrated radio receiver
- Integrated, highly sensitive ceramic antenna
- Plug & play
- Own intelligence and independent recognition of room numbers
- Message is stored in plain text in the box
- Removal detection
- Up to 3 diagnostic connection or radio boxes can be combined

Technical specifications

Dimensions (WxHxD):	85 x 60 x 20 mm
Weight:	71.8 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%, via magnetic
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 0.3 mA
Frequency:	868.3 MHz
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

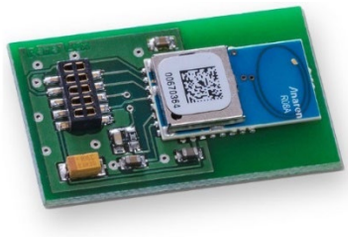
Call button with magnetic plug contact FTM-0010	Page 20
Call/cancellation button with magnetic plug contact FTM-	

Optional accessories

Body-worn transmitter with lanyard HFF-0010	Page 42
Body-worn transmitter with wristband HFF-0020	Page 43
Radio pressure mat, yellow HHX-0017	Page 45
Radio large-area button HHX-0040	Page 46
Radio motion detector HFF-0100	Page 47
Radio sound detector HHF-0301	Page 49
Radio fall detector HHF-0400	Page 50
Radio transmitter, installation in external devices HFF-0014	
Compatible accessories from other manufacturers	Page

Radio receiver board | FFP-0010, FFP-0050

for installation in room electronics/room signal lights or connection to room bus



Function

- Connection of radio units in the room
- Optional installation of an internal positioning system (IPS)
- Registration and reception of up to 14 radio units
- Distinguishes between up to 14 different radio units in the room
- Reception and evaluation of mobile body-worn transmitters HFF-0010, HFF-0020, and HFF-0012 throughout the entire building as mobile/selective radio calls
- Transmission of plain text names and room numbers as well as location information for mobile calls

Features

- For room electronics, room signal lights
- or for connection to room bus
- Highly sensitive ceramic antenna
- Plug & play
- Own intelligence and independent recognition of room numbers
- Tested according to:
  - EN 300 220-2 V.2.4.1
  - EN 301 489-1 V.1.6.1
  - EN 60950-1:2006
  - EN 62311:2008

Technical specifications

Dimensions (WxHxD):	30 x 29 x 10 mm
Operating voltage U_N:	10 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 0.1 mA
	Operation: max. 0.1 mA
Frequency:	868.3 MHz
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Room electronics FZZ-0010	Page 12
Room signal light FAE-0001	Page 63

Optional accessories

Body-worn transmitter with lanyard HFF-0010	Page 42
Body-worn transmitter with wristband HFF-0020	Page 43
Radio door monitoring HHF-0015	Page 44
Radio pressure mat, yellow HHX-0017	Page 45
Radio large-area button HHX-0040	Page 46
Radio motion detector HFF-0100	Page 47
Radio smoke alarm HFF-0200	Page 48
Radio sound detector HHF-0301	Page 49
Radio fall detector HHF-0400	Page 50
Radio transmitter, installation in external devices HFF-0014	
Radio acknowledgment button, mobile HFF-0012	Page 52
Radio touch switch, capacitive HFF-0016	Page 53
Radio call button HFF-0017	Page 54
Radio cancellation button HFF-0018	Page 55
Compatible accessories from other manufacturers	Page

Order details

for room electronics FZZ-0010	FFP-0010
or room signal light FAE-0001	
for room bus, including connection board	FFP-0050

Body-worn transmitter with lanyard | HFF-0010

for triggering room radio calls and selective/mobile radio calls throughout the entire building

Function

- Fixed assignment to a radio receiver in the room
- Triggering a room radio call via the red button
- Acknowledgment of the room radio call via the green button in the room
- If received outside the room, the call is processed as a selective/mobile radio call
- Transmission of plain text names and room numbers as well as location information for selective/mobile radio calls
- Acknowledgment of selective/mobile radio calls via mobile radio acknowledgment buttons

Features

- Battery operation
- Integrated radio transmitter
- Control LED
- Lanyard with safety fastening and safety clasp
- Plug & play
- Individually programmable name display
- Battery monitoring

Scope of delivery

- Battery
- Lanyard
- Safety fastening
- Safety clasp

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (ØxH):	41 x 13 mm
Weight:	16 g
Color:	Anthracite, similar to RAL 7016
Operating voltage U_N:	3 V DC, 1 x CR2032 battery
Frequency:	868.3 MHz
Range:	Outdoors: up to 100 m
	Indoors: up to 30 m
Protection class:	IP 65
Ambient temperature:	During operation: -20...+60° C
	In storage: -20...+60° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio box FTM-0093	Page 40
Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

Optional accessories

Radio acknowledgment button, mobile HFF-0012	Page 52

Body-worn transmitter with wristband | HFF-0020

for triggering room radio calls and selective/mobile radio calls throughout the entire building

Function

- Fixed assignment to a radio receiver in the room
- Triggering a room radio call via the red button
- Acknowledgment of the room radio call via the green button in the room
- If received outside the room, the call is processed as a selective/mobile radio call
- Transmission of plain text names and room numbers as well as location information for selective/mobile radio calls
- Acknowledgment of selective/mobile radio calls via mobile radio acknowledgment buttons

Features

- Battery operation
- Integrated radio transmitter
- Control LED
- Plug & play
- Individually programmable name display
- Battery monitoring

Scope of delivery

- Battery
- Bracelet

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (ØxH):	46 x 14 mm
Weight:	16 g
Color:	Anthracite, similar to RAL 7016
Operating voltage U_N:	3 V DC, 1 x CR2032 battery
Frequency:	868.3 MHz
Range:	Outdoors: up to 100 m
	Indoors: up to 30 m
Protection class:	IP 65
Ambient temperature:	During operation: -20...+60° C
	In storage: -20...+60° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio box FTM-0093	Page 40
Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

Optional accessories

Radio acknowledgment button, mobile HFF-0012	Page 52

Radio door monitoring | HFF-0015

for triggering a room radio call when the door is opened

Function

- Fixed assignment to the radio receiver of a room
- Triggering a room radio call with a delay of 10 seconds after the door is opened
- Freely programmable time window for activity
- Acknowledging the room radio call using the green button in the room or the radio cancellation button
- Transmission of plain text names and room numbers

Features

- Battery operation
- Integrated radio transmitter
- Control LED
- Plug & play
- Individually programmable name display
- Battery monitoring

Scope of delivery

- Radio transmitter
- Battery

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (WxHxD):	38 x 46 x 14 mm
Weight:	17 g
Color:	White, similar to RAL 9010
Operating voltage U_N:	3 V DC, 1 x CR2032 battery
Frequency:	868.3 MHz
Range:	Indoors: up to 30 m
Protection class:	IP 20
Ambient temperature:	During operation: -20...+60° C
	In storage: -20...+60° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

Optional accessories

Radio cancellation button HFF-0018	Page 55

Radio pressure mat | HHX-0017

For triggering a radio room call when the bed is left

Function

- Fixed assignment to the radio receiver of a room
- Triggering a radio room call when the bed is left and the mat stepped on
- Call transfer is suppressed when attendance is set
- Acknowledgment of the room radio call via the green button in the room
- Transmission of plain text names and room numbers

Features

- Battery operation
- Integrated radio transmitter
- Control LED
- Plug & play
- Individually programmable name display
- Battery monitoring

Scope of delivery

- Radio transmitter
- Battery

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (WxHxD):	1100 x 700 x 9 mm
Weight:	8.2 kg
Color:	Yellow
Operating voltage U_N:	3 V DC, 1 x CR2032 battery
Frequency:	868.3 MHz
Range:	Indoors: up to 30 m
Protection class:	IP 54
Ambient temperature:	During operation: -20...+60° C
	In storage: -20...+60° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio box FTM-0093	Page 40
Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

Radio large-area button | HHX-0040

for triggering a room radio call

Function

- Fixed assignment to the radio receiver of a room
- Triggering a room radio call by pressing the large button
- Acknowledgment of the room radio call via the green button in the room
- Transmission of plain text names and room numbers

Features

- Battery operation
- Integrated radio transmitter
- Control LED
- Plug & play
- Individually programmable name display
- Battery monitoring

Scope of delivery

- Battery

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (ØxH):	113 x 35 mm
Weight:	205 g
Color:	Red
Operating voltage U_N:	3 V DC, 1 x CR2450 battery
Frequency:	868.3 MHz
Range:	Indoors: up to 30 m
Protection class:	IP 44
Ambient temperature:	During operation: -20...+60° C
	In storage: -20...+60° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio box FTM-0093	Page 40
Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

Optional accessories

Wall bracket	HHX-0041

Radio motion sensor | HFF-0100

for triggering a room radio call when movement is detected in the detection area

Function

- Fixed assignment to the radio receiver of a room
- Triggering a room radio call with a delay of 3 seconds when movement is detected in the detection area
- Call transfer is suppressed when attendance is set
- Freely programmable time window for activity
- Acknowledgment of the room radio call via the green button in the room
- Transmission of plain text names and room numbers

Features

- Flush-mounted version for installation in 60 mm switch box
- Battery operation
- Integrated radio transmitter
- Configurable detection range
- Control LED
- Individually programmable name display
- Battery monitoring

Scope of delivery

- Radio transmitter
- Battery

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	45 g
Color:	White, similar to RAL 9003
Operating voltage U_N:	6 V DC, 2 x CR2032 battery
Frequency:	868.3 MHz
Range:	Indoors: up to 30 m
Protection class:	IP 20
Ambient temperature:	During operation: -20...+60° C
	In storage: -20...+60° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Cover frame in accordance with 55 switch range	
Radio box FTM-0093	Page 40
Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

Optional accessories

Housing with stand	HFF-0101

Radio smoke detector | HFF-0200

for triggering a radio room call in the event of smoke development

Function

- Fixed assignment to the radio receiver of a room
- Triggering a radio room call in the event of smoke development
- Acknowledgment of the room radio call via the green button in the room
- Transmission of plain text names and room numbers

Features

- Battery operation
- Integrated radio transmitter
- Scope of application DIN 14676
- Standard DIN 14604 construction type A
- LED light ring
- Integrated alarm buzzer
- Individually programmable name display
- Battery monitoring

Scope of delivery

- Radio transmitter
- Battery

Technical specifications

Dimensions (ØxH):	125 x 48 mm
Installation height: max. 6 m	
Weight:	275 g
Color:	White, similar to RAL 9003
Operating voltage U_N:	3 V DC, 1 x CR2032 battery
	9 V DC, 1 x U9VL-J-P battery
Frequency:	868.3 MHz
Range:	Indoors: up to 30 m
Protection class:	IP 42
Acoustic signal:	85 dB(A)
Ambient temperature:	During operation: -5...+55° C
	In storage: -20...+65° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio box FTM-0093	Page 40
Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

Radio sound detector | HFF-0301

for acoustic room monitoring with automatic triggering of a room radio call

Function

- Fixed assignment to the radio receiver of a room
- Triggering a room radio call with adjustable volume and time window
- Acknowledgment of the room radio call via the green button in the room
- Transmission of plain text names and room numbers
- Resetting the sound alarm on the device after triggering

Features

- Battery operation
- Integrated radio transmitter
- Control LED
- Individually programmable name display
- Battery monitoring

Scope of delivery

- Radio transmitter
- Battery

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (WxHxD):	110 x 146 x 50 mm
Sensor range:	approx. 3 m
Weight:	180 g
Color:	Gray
Operating voltage U_N:	3 V DC, 1 x CR2032 battery
	9 V DC, 1 x U9VL-J-P battery
Frequency:	868.3 MHz
Range:	Indoors: up to 30 m
Protection class:	IP 20
Ambient temperature:	During operation: 5...+40°C
	In storage: -5...+40° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio box FTM-0093	Page 40
Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

cogvisAI 1.8 radio fall sensor | HFF-0400

for detecting falls with automatic triggering of a radio room call

Function

- Fixed assignment to the radio receiver of a room
- Scanning the monitored area
- Detection of standing up and sitting down movements for fall prevention (virtual bed rail)
- Automatic fall detection with immediate alarm via the call system
- Detection of unusual movements and absences
- Call transfer is suppressed when attendance is set
- Acknowledgment of the room radio call via the green button in the room
- Transmission of plain text names and room numbers

Features

- Intelligent 3D sensor
- Operation via external USB power supply
- Integrated Wi-Fi connection
- Web service for administration
- Integrated radio transmitter for alarm connection
- Individually programmable name display
- Easy location change thanks to interchangeable adapter

Scope of delivery

- Radio transmitter
- Web interface for administration and configuration

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (WxHxD):	255 x 120 x 80 mm
Sensor range:	up to 7 m
Weight:	600 g
Color:	White
Operating voltage U_N:	5 V DC, USB power supply
Frequency:	868.3 MHz
Range:	Indoors: up to 30 m
Wi-Fi:	802.11b/g/n at 2.4 GHz
Protection class:	IP 20
Ambient temperature:	During operation: 15...+25° C
	In storage: 0...+50°C
Humidity:	During operation: 5...95% non-condensing
	In storage: 5...95% non-condensing

Optional accessories

Interchangeable adapter	HFF-0400-MW
Button for deactivation	HFF-0400-AT

Required accessories

Software license cogvisAI 1.8	HFF-0400-SL
Radio box FTM-0093	Page 40
Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41
On-site WiFi access required	

Radio transmitter | HFF-0014

for installation in external devices

Function

- Fixed assignment to the radio receiver of a room
- Potential-free connection of up to two alarm sources as switches or buttons (normally open/normally closed)
- Triggering of up to 4 different room radio calls
- Acknowledgment of room radio call via green button in the room configurable
- Freely programmable time window for activity
- Call suppression configurable when attendance is set
- Transmission of plain text names and room numbers

Features

- Battery operation
- Integrated radio transmitter
- Screw terminals
- Two channels
- Individually programmable name display
- Battery monitoring

Scope of delivery

- Battery

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (WxHxD):	33 x 36 x 14.5 mm
Weight:	10 g
Color:	White
Operating voltage U_N:	3 V DC, 1 x CR2032 battery
Frequency:	868.3 MHz
Range:	Outdoors: up to 100 m
	Indoors: up to 30 m
Protection class:	IP 20
Ambient temperature:	During operation: -20...+60° C
	In storage: -20...+60° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio box FTM-0093	Page 40
Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

Radio acknowledgment button, mobile | HFF-0012

for acknowledging mobile/selective radio calls

Function

- Acknowledgment of mobile/selective radio calls by pressing the button and pressing the button on the triggering body-worn transmitter

Features

- Designed as a key ring
- Battery operation
- Integrated radio transmitter
- Control LED
- Individually programmable name display
- Battery monitoring

Scope of delivery

- Battery

Note

- Room radio calls are acknowledged in the room by pressing the green attendance/silence button
- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (WxHxD):	36 x 55 x 16 mm
Weight:	17 g
Color:	Gray
Operating voltage U_N:	3 V DC, 1 x CR2032 battery
Frequency:	868.3 MHz
Range:	Outdoors: up to 100m
	Indoors: up to 30 m
Protection class:	IP 54
Ambient temperature:	During operation: -20...+60° C
	In storage: -20...+60° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

Radio touch switch, capacitive | HFF-0016

for people with motor impairments

Function

- Fixed assignment to the radio receiver of a room
- Triggering a room radio call by placing a finger on the button
- Acknowledgment of the room radio call via the green button in the room
- Alternatively, can be acknowledged via radio cancellation button
- Transmission of plain text names and room numbers

Features

- Surface-mounted housing
- Battery operation
- Integrated radio transmitter
- Individually programmable name and room display
- Battery monitoring

Scope of delivery

- Battery

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (WxHxD):	80 x 80 x 9.4 mm
Weight:	44 g
Color:	White with red button
Operating voltage U_N:	3 V DC, 1 x CR2032 battery
Frequency:	868.3 MHz
Range:	Indoors: up to 30 m
Protection class:	IP 20
Ambient temperature:	During operation: -20...+60° C
	In storage: -20...+60° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

Optional accessories

Radio cancellation button HFF-0018	Page 55

Radio call button | HFF-0017

for supplying areas without cabling

Function

- Fixed assignment to the radio receiver of a room
- Triggering a room radio call using the button
- Acknowledgment of the room radio call via the green button in the room
- Alternatively, can be acknowledged via radio cancellation button
- Transmission of plain text names and room numbers

Features

- Surface-mounted housing
- Battery operation
- Integrated radio transmitter
- Individually programmable name and room display
- Battery monitoring

Scope of delivery

- Battery

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (WxHxD):	80 x 80 x 9.4 mm
Weight:	44 g
Color:	White with red button
Operating voltage U_N:	3 V DC, 1 x CR2032 battery
Frequency:	868.3 MHz
Range:	Indoors: up to 30 m
Protection class:	IP 20
Ambient temperature:	During operation: -20...+60° C
	In storage: -20...+60° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41

Optional accessories

Radio cancellation button HFF-0018	Page 55

Radio cancellation button | HFF-0018

for supplying areas without cabling

Function

- Fixed assignment to the radio receiver of a room
- Acknowledging a room radio call by pressing a button
- Transmission of plain text names and room numbers

Features

- Surface-mounted housing
- Battery operation
- Integrated radio transmitter
- Individually programmable name and room display
- Battery monitoring

Scope of delivery

- Battery

Note

- Accessories in accordance with HeimMinBauV; not included in DIN VDE 0834

Technical specifications

Dimensions (WxHxD):	80 x 80 x 9.4 mm
Weight:	44 g
Color:	White
Operating voltage U_N:	3 V DC, 1 x CR2032 battery
Frequency:	868.3 MHz
Range:	Indoors: up to 30 m
Protection class:	IP 20
Ambient temperature:	During operation: -20...+60° C
	In storage: -20...+60° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required accessories

Radio receiver board FFP-0010	Page 41
Radio receiver board FFP-0050	Page 41
Radio call button HFF-0017	Page 54

Chapter 4 – Displays and indicators

Group signal lights and large-area displays are mounted at central locations in corridors and connected directly to the system bus.

Direct connection

- Each module has a unique and unchangeable serial number.
- All call management and monitoring routines are integrated directly into the modules' memory and processor.
- No separate group control units, control units, or servers are required.

Flexible cabling

System bus

The connection is made via the system bus, which offers various cabling options:

- A JY(St)Y 4x2x0.8 remote cable is used as standard.
- Alternatively, the system bus can be implemented using fiber optic cables or polymer optical fiber (POF).
- The system bus can be flexibly configured as a bus, star, or tree structure.

Clear information

Power supply

The power supply is connected in parallel to the system bus.

Duty room terminal | DZT-0010

for use in duty rooms

Function

- Display of calls in plain text via LCD display
- Acoustic signal via buzzer when attendance is set
- Constant green light when the green button is pressed
- Triggering calls using the red button
- Constant red light when the red button is pressed
- Programmable special functions via yellow button and white button

Features

- LCD color display with 320 x 240 pixels
- Display of up to 4 calls with additional information on call type, call location, call group, and time
- Automatic scrolling
- Four buttons with orientation lights in green, red, yellow, and white
- Rotary knob for manual scrolling through calls
- Buzzer
- Connection for 2-wire system bus
- Integrated system bus repeater
- Connection for power supply
- Connection for 2-wire room bus
- Wall mounting via 60 mm flush-mounted box
- Line monitoring, fault detection
- Individually programmable name display

Scope of delivery

- Plug-in terminals

Technical specifications

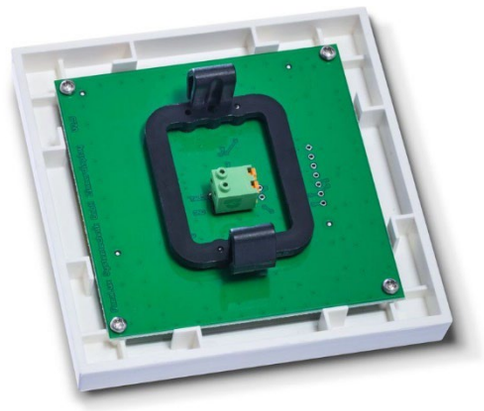
Dimensions (WxHxD):	141 x 256 x 43 mm
Weight:	600 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 125 mA
	Operation: max. 150 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Optional accessories

Table mount	DZT-0100
Surface-mounted mounting adapter	DZT-0110

Duty room display | FTD-0010

for use in duty rooms in conjunction with room electronics



Function

- Clear text display of calls on the LCD display
- Acoustic signaling via buzzer when attendance is set
- Constant green light when the green button is pressed
- Triggering calls using the red button
- Constant red light when the red button is pressed
- Yellow button for programmable special functions (e.g., shift selection)

Features

- LCD display with 5 lines of 12 characters each
- Three buttons with orientation lights: green and red, plus either yellow or blue
- Buzzer
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- No cover frame required
- Line monitoring, fault detection
- Individually programmable name display

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

Dimensions (WxHxD):	86 x 86 x 10 mm
Weight:	122 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 1 mA
	Operation: max. 5 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

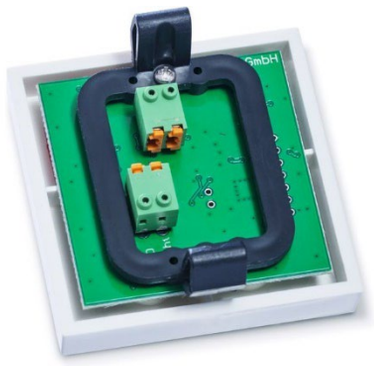
Support frame HRX-0061	Page 31
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Optional accessories

Housing with stand and support frame	HFF-0102

Visitor button | FTX-0003

for use in conjunction with the duty room terminal or display and room electronics



Function

- Triggering a call using the red button
- Orientation light and red reassurance light after activation

Features

- Button with a red orientation light
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display
- Connection for freely programmable lighting control via open collector output

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

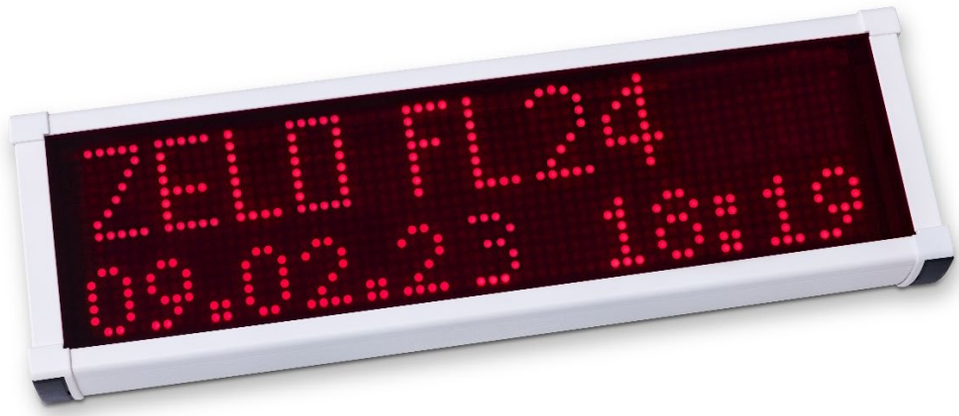
Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Large-area display | FAG-0005, FAG-0006, FAG-0010, FAG-0020

for use in corridors



Function

- Display of calls, messages, and alarms from its own floor, other floors, groups, or the entire building
- Can be used as a direction indicator (optional)
- In standby mode, display of date, time, or custom text

Features

- Available in single-sided or double-sided versions
- Aluminum housing
- Ceiling or wall mounting
- High-performance LED elements behind red glass panel
- Automatic brightness control
- Connection for 2-wire system bus
- Connection for 24V DC power supply
- Line monitoring, fault detection

Scope of delivery

- Plug-in terminals

Technical specifications

Color: Pure white, similar to RAL 9010	
Protection class:	IP20
Operating voltage U_N:	10 V DC +15% / -25%
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing
Design 2 x 6 digits, single-sided	**FAG-0005**
Dimensions (WxHxD):	280 x 170 x 70mm
Weight:	1.8 kg
Current consumption at U_N:	65 mA
Design 2 x 6 digits, double-sided	**FAG-0006**
Dimensions (WxHxD):	280 x 170 x 70mm
Weight:	2.3 kg
Current consumption at U_N:	130 mA
Design 2 x 12 digits, single-sided	**FAG-0010**
Dimensions (WxHxD):	540 x 170 x 70mm
Weight:	3.1 kg
Current consumption at U_N:	85 mA
Design 2 x 12 digits, double-sided	**FAG-0020**
Dimensions (WxHxD):	540 x 170 x 70mm
Weight:	3.7 kg
Current consumption at U_N:	170 mA

Required accessories

Wall bracket, for single-sided version	FAB-0010
Ceiling mount	FAB-0011

Floor display | FAE-0010, FAE-0020

for use in corridors

Function

- Display of calls, messages, and alarms from its own floor, other floors, groups, or the entire building
- Can be used as a direction indicator (optional)

Features

- 4-piece version in aluminum surface-mounted housing
- Alternatively available as an 8-piece version
- Connection for 2-wire system bus
- Connection for 24V DC power supply
- Line monitoring, fault detection
- Wall mounting via 60 mm flush-mounted box

Scope of delivery

- Plug-in terminals

Technical specifications

Color:	White
Operating voltage U_N:	24 V DC +15% / -25%
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

4-piece version	**FAE-0010**
Dimensions (WxHxD):	158 x 215 x 34 mm
Weight:	300 g
Current consumption at U_N:	Idle: max. 10 mA
	Operation: max. 50 mA

8-piece version	**FAE-0020**
Dimensions (WxHxD):	158 x 425 x 34 mm
Weight:	600 g
Current consumption at U_N:	Idle: max. 10 mA
	Operation: max. 90 mA

Room signal light | FAE-0001

for use in the hallway outside the room in conjunction with the room electronics

Function

- The room signal light indicates triggered calls in the following colors:
  - Red - normal call
  - Green - attendance
  - Flashing green/red - emergency call
  - Red/white - call from wet room/bathroom
  - Yellow - freely programmable special call
  - Blue - freely programmable special call

Features

- Built into surface-mounted plastic housing
- Labeling area for use as a door sign
- Integrated room signal light in red, yellow, green, blue, and white
- Connection for 2-wire room bus
- Slot for radio receiver board
- Line monitoring, fault detection
- Wall mounting via 60 mm flush-mounted box

Optional circuit board design

- For installation in existing housings of the product series Winkel x000, ZELO 5, and ZELO 6

Scope of delivery

- Plug-in terminals

Technical specifications

Dimensions (WxHxD):	145 x 115 x 35 mm
Weight:	200 g, including housing
Color:	White
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 50 mA
	Operation: max. 100 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 10...90% non-condensing

Required components

Room electronics FZZ-0010	Page 12
Room electronics FZZ-0028	Page 13
Room electronics FZZ-0020	Page 14

Order details

Room signal light incl. housing	FAE-0001
Room signal light as circuit board	FAE-0101

Door sign | FAT-0010

for use in the hallway outside the room

Function

- For labeling and marking rooms
- Suitable for room electronics FZZ-0010 or room signal light FAE-0001

Features

- Surface-mounted plastic housing
- Large, easily replaceable labeling area

Technical specifications

Dimensions (WxHxD):	145 x 115 x 35 mm
Weight:	96 g
Color:	White

Chapter 5 – Interfaces and central components

Coupler for system bus

Various couplers are available for segmenting the call system and transmitting the system bus via different media:

- Telecommunications cable
- Fiber optic cable
- Polymer optical fiber (POF)

Remote access

Call system server for administration and logging

Logging

The call system server is integrated into the system bus via double galvanic isolation (2 × MOPP) and the CAN2USB coupler or the CAN2LAN coupler.

- The call system operates completely independently of the server.
- The server is used exclusively for administration and logging purposes.

Mobile forwarding

- Remote access to all connected components is possible via a secure internet connection.

Integration of BMA

- Firmware upgrades can also be performed during operation or remotely, if necessary.

Power supply and emergency power supply

External systems ESPA

Power is supplied in accordance with DIN VDE 0834 via separate units for each call system zone.

Fault messages

The emergency power supply for the call system server is provided by a separate 230V AC UPS.

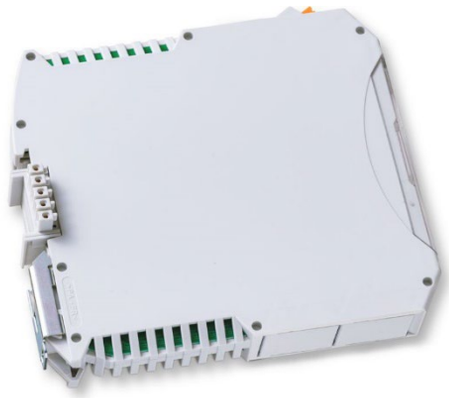
Interface modules

Interface modules enable connection and communication with external systems and are connected directly to the system bus.

- The power supply is provided in parallel.
- Each module has a unique and unchangeable serial number.
- All call management and monitoring routines are integrated directly into the module – separate group control panels, control units, or servers are not required.

Isolation coupler for 2 system bus lines | FIX-0130

for connecting the call system server or connecting separate buildings



Function

- Enables secure connection of the call system server through double galvanic isolation in accordance with DIN EN 60601 (2 x MOPP)
- Connects separate buildings securely to the system bus
- Intended for installation in the power supply wall cabinet

Features

- Top-hat rail housing
- Two control LEDs for status indication in red and green
- Connections for 2 system bus lines
- Connection for power supply
- Loop-through system bus and power supply connection in the base
- Galvanic isolation according to DIN EN 60601 – 2 x MOPP

Scope of delivery

- Terminating resistors

Note

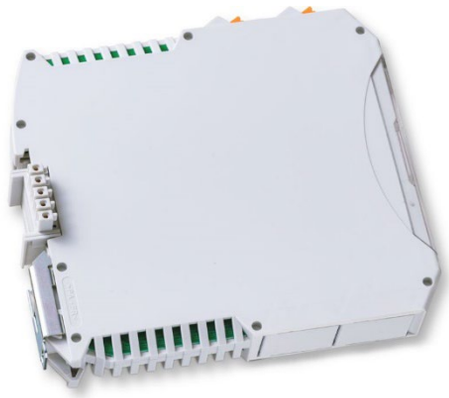
- Included in the call system server package as standard

Technical specifications

Dimensions (WxHxD):	18 x 105 x 112 mm, 1 TE
Weight:	103 g
Color:	Light gray
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	max. 10 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Line coupler for 4 system bus lines | FIX-0131

for the use of bus-shaped line networks and division of the call system into physical segments



Function

- The line coupler divides the system into physical segments and provides a separate system bus line for each section (e.g., floor or building section)
- Installed in the wall cabinet of the power supply

Features

- Top-hat rail housing
- Two control LEDs for status indication in red and green
- Connections for 4 system bus lines
- Connection for power supply
- Loop-through system bus and power supply connection in the base

Scope of delivery

- Terminating resistors

Technical specifications

Dimensions (WxHxD):	18 x 105 x 112 mm, 1 TE
Weight:	91 g
Color:	Light gray
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	max. 10 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Star coupler for 16 rooms | FIX-0132

for use with star-shaped cable networks with 2 DA per room

Function

- The star coupler provides a separate system bus line for each room and enables a star-shaped network topology
- Intended for installation in the power supply wall cabinet or in separate wall distributors

Features

- Top-hat rail housing
- Two control LEDs for status indication in red and green
- Connections for 16 rooms
- Connection for power supply
- Loop-through system bus and power supply connection in the base

Scope of delivery

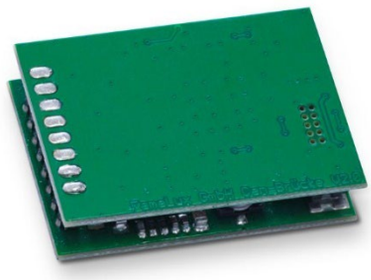
- Terminating resistors

Technical specifications

Dimensions (WxHxD):	23 x 105 x 113 mm, 1.5 TE
Weight:	115 g
Color:	Light gray
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	max. 10 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

System bus repeater | FIX-0133

for signal refreshment of the system bus



Function

- Use in distribution systems during renovation and modernization of existing call systems
- For targeted implementation of line branches within the system bus
- When the pipe cross-section is changed
- Stabilization of the signal level for reliable transmission

Features

- Connection for 2-wire system bus
- Integrated terminating resistors: fixed or configurable via DIP switch
- Connection for power supply
- Integrated line monitoring and automatic fault detection

Scope of delivery

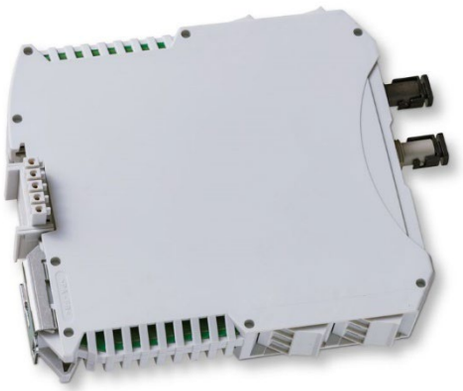
- Plug-in terminals

Technical specifications

Dimensions (WxHxD):	49 x 42 x 12 mm
Weight:	16 g
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	max. 10 mA
Protection class:	none
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Coupler CAN2LWL | FIX-0060

for connecting sections and buildings via fiber optic cables



Function

- Transmission of the system bus via fiber optic cable (FOC, multimode)

Features

- Top-hat rail housing
- Two control LEDs in red and green
- Connection for 2-wire system bus
- Connection for power supply
- Connection for ST duplex connector, multimode fiber optic cable
- Loop-through system bus and power supply connection in the base

Scope of delivery

- Terminating resistors

Note

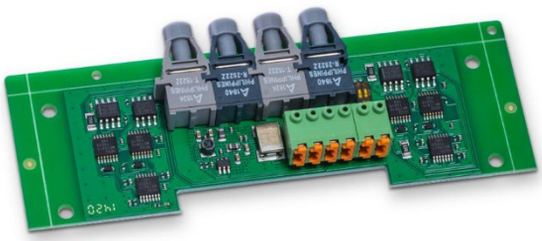
- Used in pairs as a bridge for fiber optic transmission

Technical specifications

Dimensions (WxHxD):	18 x 105 x 112 mm, 1 TE
Weight:	95 g
Color:	Light gray
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	max. 10 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Coupler CAN2POF | FIX-0061

for use with POF system cables



Function

- For connecting the FZZ-0028 room electronics to the system bus via POF system cable.
- Suitable for installation in existing flush-mounted boxes

Features

- Compact connection board for POF system cables
- Connection for 2-wire system bus
- Connection for power supply
- Direct connection to the room electronics FZZ-0028

Scope of delivery

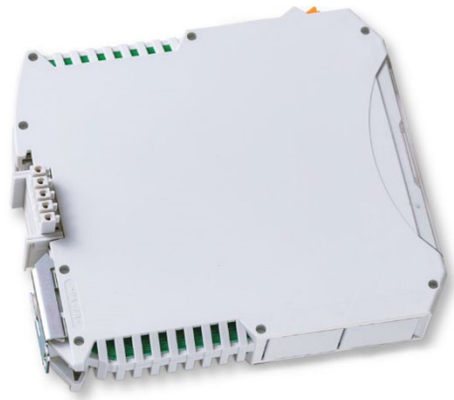
- Plug-in terminals

Technical specifications

Dimensions (WxHxD):	100 x 13 x 43 mm
Weight:	19 g
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	max. 10 mA
Protection class:	none
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Reset button set | FTX-0110

for systems without call system server



Function

- To reset the system parameters and restore operation after a fault
- Use in wall cabinets for power supply or separate surface-mounted housing

Features

- Room electronics in top-hat rail housing
  - Connection for 2-wire system bus
  - Connection for power supply
  - Connection for 2-wire room bus
  - Loop-through system bus and power supply connection in the base
- Reset button for surface mounting
  - Two buttons with orientation lights in gray and blue
  - Connection for 2-wire room bus
- Line monitoring, fault detection
- Individually programmable name display

Scope of delivery

- Top-hat rail electronics FZZ-0020
- Reset button FTX-0111
- Support frame HRX-0004
- Surface-mounted frame HRX-0005
- Plug-in terminals

Technical specifications

Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Reset button

Dimensions (WxHxD):	80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA

Top-hat rail electronics

Dimensions (WxHxD):	18 x 105 x 112 mm, 1 TE
Weight:	180 g
Color:	Light gray
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 50 mA
	Operation: max. 100 mA

Interface CAN2USB | FIX-0010

for connecting the call system server to the system bus

Function

- Enables connection between the system bus and the call system server for administration and logging

Features

- 9-pin SUB-D9M plug for connection to the system bus
- USB 1.1 Type A connection for connecting the call system server

Note

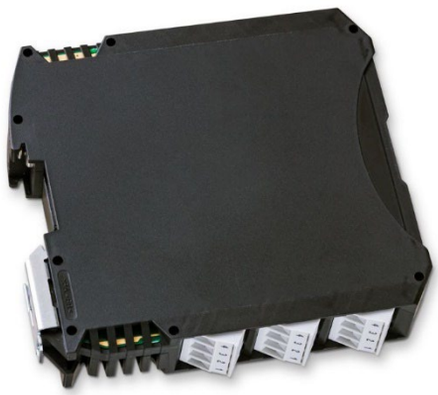
- Included in the call system server package as standard

Technical specifications

Dimensions (WxHxD):	80 x 50 x 22 mm
Weight:	90 g
Color: Blue/gray	
Operating voltage U_N:	5 V DC, via USB
Current consumption at U_N:	100 mA
Protection class:	IP20
Ambient temperature:	During operation: -20...+70° C
	In storage: -20...+70° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Interface CAN2LAN | FIX-0011

for connecting a virtualized telephone system server to the system bus via LAN/WAN



Function

- Enables connection of a virtualized call system server to the system bus via LAN/WAN for administration and logging

Features

- Top-hat rail housing
- Connection for 2-wire system bus for communication with the call system
- Power supply via external plug-in power supply unit
- RJ45 network connection (10/100 Mbit/s) for integration into LAN/WAN networks

Scope of delivery

- Plug-in power supply

Technical specifications

Dimensions (WxHxD):	22.5 x 99 x 114.5 mm
Weight:	157 g
Color:	Black
Operating voltage U_N:	12..24 V DC
Current consumption at U_N:	max. 230 mA
Protection class:	IP20
Ambient temperature:	During operation: -40...+85°C
	In storage: --40...+85°C
Humidity:	During operation: 10...95% non-condensing
	In storage: 10...95% non-condensing

Required component

Isolation coupler FIX-0130	Page 66

ESPA 4.4.4 output interface | FIX-0020

for forwarding calls to alarm servers and DECT systems or third-party devices via ESPA 4.4.4 protocol

Function

- Enables calls, alarms, and messages to be forwarded from the system bus to DECT systems, alarm servers, or third-party systems
- Supports programmable groups and escalation levels for targeted alarm distribution

Features

- Surface-mounted aluminum housing
- Labeling area
- Integrated red room signal light
- Connection for 2-wire system bus
- Connection for power supply
- Integrated RS232 connection with 9-pin SUB-D9F socket for connecting external systems
- Configurable transmission parameters
- Double galvanic isolation according to DIN EN 60601 (2 x MOPP)
- Wall mounting via 60 mm flush-mounted box

Scope of delivery

- Plug-in terminals

Note

- Alarm server including administration must be provided by the customer

Technical specifications

Dimensions (WxHxD):	145 x 115 x 35 mm
Weight:	210 g
Color:	White
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 50 mA
	Operation: max. 70 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Recommended accessories

ESPA connection cable, 5 m	FIX-0028
ESPA connection cable, 10m	FIX-0029

Interface ESPA 4.4.4 input | FIX-004x

for connection to fire alarm systems or third-party systems via ESPA 4.4.4 protocol

Function

- Enables direct connection of fire alarm systems or third-party systems to the call system
- Alarms and messages are transmitted via ESPA 4.4.4
- An optional maintenance mode allows temporary call suppression

Features

- Installed in surface-mounted aluminum housing
- Labeling area
- Integrated red room signal light
- Connection for 2-wire system bus
- Connection for power supply
- Integrated RS232 connection with 9-pin SUB-D9F socket for connecting external systems
- Configurable transmission parameters
- Double galvanic isolation according to DIN EN 60601 (2 x MOPP)
- Wall mounting via 60 mm flush-mounted box

Scope of delivery

- Plug-in terminals
- With optional maintenance switch

Technical specifications

Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Interface

Dimensions (WxHxD):	145 x 115 x 35 mm
Weight:	210 g
Color:	White
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 50 mA
	Operation: max. 70 mA

Maintenance button

Dimensions (WxHxD):	80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA

Recommended accessories

ESPA connection cable, 5 m	FIX-0028
ESPA connection cable, 10m	FIX-0029

Order details

Interface ESPA 4.4.4 Input	FIX-0040
Interface incl. BMA maintenance switch	FIX-0041
BMA maintenance switch (retrofit)	FTX-0100

Technical module | FIX-005x

for coupling with external systems via alarm contacts

Function

- Enables the connection of external devices to the call system for feeding in alarm and fault messages
- Supports configuration as normally open or normally closed and offers an optional acknowledgment option via pushbutton

Features

- Installed in surface-mounted aluminum housing
- Labeling area
- Integrated red room signal light
- Connection for 2-wire system bus
- Connection for power supply
- Connection for 2-wire room bus
- Terminal blocks for 1 or 4 alarm contacts
- Configurable as normally open or normally closed
- Double galvanic isolation according to DIN EN 60601 (2 x MOPP)
- Individually programmable name display
- Wall mounting via 60 mm flush-mounted box

Scope of delivery

- Plug-in terminals

Technical specifications

Dimensions (WxHxD):	145 x 115 x 35 mm
Weight:	200 g
Color:	White
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 50 mA
	Operation: max. 60 mA
Inputs:	8...48V DC/AC, NO/NC
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Optional component

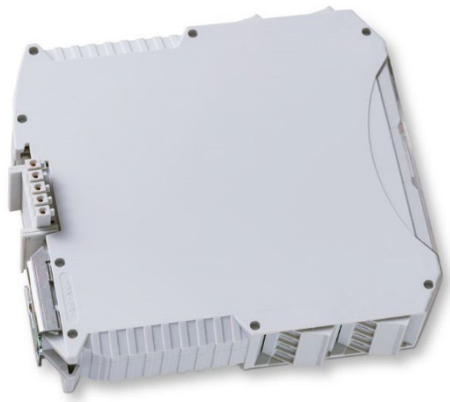
FTX-0002 cancellation button	Page 26

Order details

Technology module, 1 input	FIX-0051
Technology module, 4 inputs	FIX-0050

Technical module for power supply monitoring | FIX-0052

for detecting emergency power operation in accordance with DIN VDE 0834



Function

- Monitors emergency power operation in accordance with DIN VDE 0834 and generates a technical message when activated
- Direct integration into the wall cabinet of the power supply

Features

- Top-hat rail housing
- Connection for 2-wire system bus
- Connection for power supply
- Terminal blocks for 4 alarm contacts
- Individually programmable name display
- Loop-through system bus and power supply connection in the base

Scope of delivery

- Terminating resistors

Note

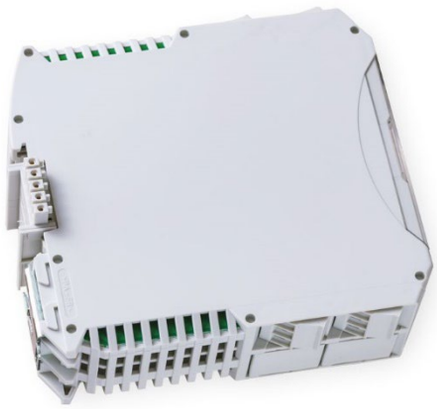
- Included as standard in the power supply cabinets

Technical specifications

Dimensions (WxHxD):	18 x 105 x 112 mm, 1 TE
Weight:	96 g
Color:	White
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 50 mA
	Operation: max. 60 mA
Inputs:	4 x 8...48V DC/AC, NO/NC
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Technical module, 2 outputs | FIX-0057

for controlling external systems



Function

- Control of external systems by issuing 2 alarm messages
- Flexible use as individual or collective alarm via integrated relays

Features

- Top-hat rail housing
- Connection for 2-wire system bus
- Connection for power supply
- Terminal blocks for alarm outputs
- Two potential-free relays, each with one changeover contact
- Double galvanic isolation according to DIN EN 60601 (2 x MOPP)
- Loop-through system bus and power supply connection in the base

Scope of delivery

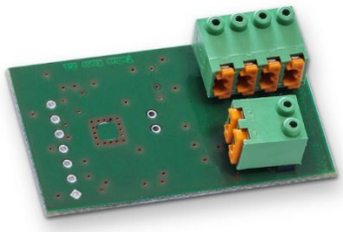
- Terminating resistors

Technical specifications

Dimensions (WxHxD):	36 x 105 x 114 mm, 2 TE
Weight:	175 g
Color:	White
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 50 mA
	Operation: max. 60 mA
Relay outputs as changeover contacts:	< 250 V AC / 10 A
	< 50 V DC / 10 A
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Connection board | FIX-005x

for connecting external devices or buttons



Function

- Enables connection of external buttons or devices via the room bus
- Supports normally open and normally closed contacts for flexible integration of existing components

Features

- Connection for 2-wire room bus
- Connection for 2 potential-free inputs

Scope of delivery

- Plug-in terminals

Safety notice

- Only suitable for potential-free connection!
- Not for use in accordance with DIN VDE 0834

Technical specifications

Dimensions (WxHxD):	42 x 25 x 15 mm
Weight:	8 g
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.1 mA
	Operation: max. 30 mA
Protection class:	none
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Order details

for normally closed contacts	FIX-0053
for normally open contacts	FIX-0055

Connection board | FIX-0056

for connecting external room signal lights

Function

- Enables existing room signal lights or illuminated door signs to be connected to the room bus
- Supports up to four separate LED chambers

Features

- Connection for 2-wire room bus
- Connection for up to 4 chambers

Scope of delivery

- Plug-in terminals

Safety notice

- Only suitable for LED light sources!

Technical specifications

Dimensions (WxHxD):	35 x 15 x 32 mm
Weight:	9 g
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.1 mA
	Operation: max. 30 mA
Outputs:	4 x switched GND
Load per output:	max. 70 mA, approx. 1.7 W
Protection class:	none
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Power supply cabinet with UPS | FEV-0006, FEV-0010

for supplying power to the call system

Function

- Wall cabinet with integrated power supply unit and UPS for reliable power supply to the call system
- The emergency power supply is designed in accordance with DIN VDE 0834 for at least one hour at full load

Features

- Wall cabinet in metal design
- Integrated medical power supply unit in accordance with EN 60601
- Top-hat rail with mounted modules
- Battery charger and batteries as required
- Fuse outputs
- Active fan

Scope of delivery

- Wall cabinet
- Top-hat rail
- Power supply unit
- Power supply monitoring
- Battery charger
- Batteries
- Automatic circuit breakers
- Includes installation and internal wiring of components

Notes

- Note the noise generated by the integrated fan
- Take into account call system zones in accordance with DIN VDE 0834

Technical specifications

Dimensions (HxWxD):	490 x 500 x 210 mm
Color:	Gray, similar to RAL 7032
Input voltage:	230 V AC +15% / -25%
Output voltage:	24 V DC +20% / -10%
Emergency power:	1 hour
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 20...90% non-condensing
	In storage: 10...95% non-condensing

Version 6 A (60 bus participants)	**FEV-0006**
Weight:	15.2 kg
Fuse outputs:	3

Version 10 A (100 bus participants)	**FEV-0010**
Weight:	18.8 kg
Fuse outputs:	5

Required components

Isolation coupler, 2 lines FIX-0130	Page 66
Line coupler, 4 lines FIX-0131	Page 67
Star coupler, 16 lines FIX-0132	Page 68

Call system server package | FPC-1010, FPC-1020

for administration and convenient operation of the call system at a single location

Function

- Location and client management with central configuration
- Automated time synchronization and shift planning
- Complete call documentation and alarm messages via email
- Remote maintenance and administration for maximum operational reliability

Features

- Server 24/7 with Windows 11 Pro 64-bit
- Intel J6412 processor (4 cores, 2GHz)
- Main memory 8 GB
- 240 GB SSD
- 3 x 2.5 Gbit/s LAN (RJ-45)
- 1 x COM port (RS232/422/485)
- 3 x USB 3.0, 3 x USB 2.0
- Compact housing with passive cooling
- Optional: 19" housing with active fan

Scope of delivery

- Industrial server 24/7
- Power supply unit
- Vesa bracket 100x100
- Keyboard, monitor, mouse
- CAN2USB interface FIX-0010
- Isolation coupler (2 x MOPP) FIX-0130
- Software license server FSW-1005

Technical specifications

Protection class:	IP20
Ambient temperature:	During operation: 15...+22° C
	In storage: 0...+40° C
Humidity:	During operation: 0...40% non-condensing
	In storage: 0...95% non-condensing

Compact housing	**FPC-1010**
Dimensions (WxHxD):	126.5 x 45 x 150 mm
Weight:	5.7 kg
Operating voltage U_N:	12 V DC
Current consumption at U_N:	max. 5 A

19" housing	**FPC-1020**
Dimensions (WxHxD):	437 x 43 x 249 mm
Weight:	10.4 kg
Operating voltage U_N:	230 V DC
Power consumption:	max. 120 W

Required component

Software license configuration FSW-1010	Page 84

Recommended component

UPS 400 VA for servers	FPC-0100

Recommended service agreements

Service level 1 & updates
Service level 2 & updates

Software license server | FSW-1005

Basic license for installation on provided servers

Function

- Automatic time synchronization and status monitoring
- Sending technical fault and alarm messages via email server
- Remote access and administration
- Use with Windows 11, 64-bit for decentralized operation
- Use in a virtualized environment for centralized operation to manage multiple locations

Note

- Included in server packages FPC-1010 and FPC-0020 for decentralized operation
- Software license configuration FSW-1010 required for each location
- Details about virtualized server environments upon request

Required components

Isolation coupler FIX-0130	Page 66
Software license configuration FSW-1010	Page 84

For decentralized operation on provided servers

Interface CAN2USB FIX-0010	Page 73

For centralized operation on virtualized server

Interface CAN2LAN FIX-0011	Page 74

Recommended service agreements

Service level & updates via software license FSW-1010

Software license configuration | FSW-1010

Required for configuration for each location and system

Function

- Management and parameterization of all connected modules
- Creation and management of schedules for services, shifts, and operating modes
- Detailed control of floor lights and signal indicators

Scope of delivery

- One software license client FSW-1020 for administration

Note

- Required for each location and system for operating the system

Required components

Call system server FPC-1010 or FPC-1020	Page 83
or software license server FSW-1005	Page 84

Recommended service agreements

Service level 1 & updates
Service level 2 & updates

Software licence client | FSW-1020

for accessing the call system server via a network connection

Function

- Editing and adjusting the system configuration on the server
- Analysis and evaluation of all documented calls and events
- Real-time display of call activity on a monitor

Note

- Concurrent user license: The software can be installed on multiple workstations, but one license is required for each workstation used simultaneously

Required components

Call system server FPC-1010 or FPC-1020	Page 83
or software license server FSW-1005	Page 84
Software license configuration FSW-1010	Page 84

Software license REST API | FSW-1060

Interface module for integrating the call system with external systems

Function

- Enables connection of the motica APP for mobile call display on smart devices
- Supports REST API for custom system integrations

Note

- Further connections on request

Required components

Call system server FPC-1010 or FPC-1020	Page 83
or software license server FSW-1005	Page 84
Software license configuration FSW-1010	Page 84

Recommended service agreements

Service level & updates via software license FSW-1010

Compact software license (<30 rooms) | FSW-1100

for configuring and operating small systems

Function

- Compact software solution for smaller systems
- Setup and administration of all connected modules
- Setting and adjusting schedules for services and shifts
- Control and management of floor lights

Note

- Configuration is carried out via a service notebook
- There is no automatic documentation or history of call events
- The FPC-1010 call system server is required for comprehensive logging

Required component

Reset button set FTX-0110	Page 72

Optional component

Call system server FPC-1010	Page 83

Recommended service agreements

Service level 1 & updates
Service level 2 & updates

Building services service point | FHS-0010

for displaying fault messages and checking components

Function

- Enables central display and verification of technical fault messages
- Suitable for installation in technical rooms, reception areas, or building services rooms

Features

- Ready-to-connect and pre-wired wall unit

Scope of delivery

- Room electronics
- Room display
- Indicator light
- Call button magnetic plug contact

Surface-mounted channel

- Indicator light only for call systems with light control

Technical specifications

Dimensions (WxHxD):	175 x 500 x 110 mm
Weight:	1.5 kg
Color:	White similar to RAL 9010
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 60 mA
	Operation: max. 120 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Building services service case | FHS-0020

tailored to the project

Function

- Practical service case for building services with preconfigured components
- Enables quick and independent replacement of buttons, displays, and other modules
- Ideal for maintenance and repair work directly on site

Scope of delivery

- Robust plastic case
- 1 x room electronics
- 2 x manual trigger
- 1 x room display
- 10 x buttons (individually adapted to the object)
- Small items
  (e.g., plug-in terminals, fastening materials)

Chapter 6 - Protection of disoriented persons

3D technology

Magnetic closure

Door signal

Person signal

Entry/exit function

The system for protecting disoriented persons consists of monitoring units that are installed in the door area and connected directly to the system bus.

Loop antennas enable targeted monitoring of access areas.

Mobile transmitters are available for residents, patients, and staff.

Resident and patient transmitters have a patented special closure that can only be unlocked with a magnetic key.

All call and monitoring functions are integrated directly into the modules – no separate control center is required.

System bus & power supply

- Cabling via JY(St)Y 4x2x0.8 telecommunications cable or, alternatively, fiber optic cable/POF optical fiber.
- Flexible configuration as bus, star, branch, or tree structure.
- Power is supplied in parallel to the system bus.

DESO interface, door signal | FIX-0120

for coupling simple disorientation protection systems from other manufacturers

Function

- Connection of a protection system for disorientated persons to the system bus
- Automatic alarm signal when door is opened
- Optional: Connection of a cancellation button for acknowledgment

Features

- Installed in surface-mounted aluminum housing
- Labeling area
- Integrated red room signal light
- Connection for 2-wire system bus
- Connection for power supply
- Connection for 2-wire room bus
- Terminal blocks for alarm contacts
- Configurable as normally open or normally closed
- Double galvanic isolation according to DIN EN 60601 (2 x MOPP)
- Individually programmable name display
- Wall mounting via 60 mm flush-mounted box

Scope of delivery

- Plug-in terminals

Technical specifications

Dimensions (WxHxD):	145 x 115 x 35 mm
Weight:	200 g
Color:	White
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 50 mA
	Operation: max. 60 mA
Inputs:	4 x 8...48V DC/AC, NO/NC
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Recommended components

Cancellation button DESO FTX-0030	Page 92

Interface DESO, Martin Schutzengel | FIX-0121

for connecting the protection system for disorientated persons

Function

- Connection of the DESO HF/LF complete unit to the system bus
- Automatic alarm message with person identification via data interface
- Optional: Connection of a cancellation button for acknowledgment

Features

- Installed in surface-mounted aluminum housing
- Labeling area
- Integrated red room signal light
- Connection for 2-wire system bus
- Connection for power supply
- Connection for 2-wire room bus
- Integrated RS232 connection with 9-pin SUB-D9F socket
- Configurable transmission parameters
- Individually programmable name display
- Wall mounting via 60 mm flush-mounted box

Scope of delivery

- Plug-in terminals

Technical specifications

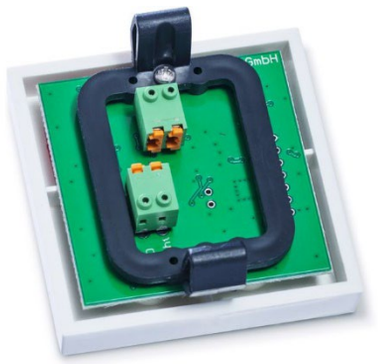
Dimensions (WxHxD):	145 x 115 x 35 mm
Weight:	200 g
Color:	White
Operating voltage U_N:	24 V DC +15% / -25%
Current consumption at U_N:	Idle: max. 50 mA
	Operation: max. 60 mA
Input:	RS232, 9-pin SUB-D9F socket
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Recommended components

Cancellation button DESO FTX-0030	Page 92

Cancellation button DESO | FTX-0030

for use in door areas in conjunction with DESO interface



Function

- Manual acknowledgment of DESO alarms directly at the door area

Features

- Gray button
- Connection for 2-wire room bus
- Installation in 60 mm flush-mounted box
- Alternative mounting within common switch ranges (see Appendix A)
- Line monitoring, fault detection
- Individually programmable name display

Scope of delivery

- Front panel
- Plug-in terminals

Technical specifications

Dimensions (WxHxD):	Without frame: 55 x 55 x 10 mm
	With frame: 80 x 80 x 10 mm
Weight:	25 g
Color: Pure white, similar to RAL 9010	
Operating voltage U_N:	10 V DC +15% / -25%
	About room bus
Current consumption at U_N:	Idle: max. 0.3 mA
	Operation: max. 3 mA
Protection class:	IP20
Ambient temperature:	During operation: 0...+40°C
	In storage: 0...+50°C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Support frame HRX-0004	Page 31
Cover frame HRX-0001	Page 32
DESO interface, door signaling | FIX-0120	Page 90
Interface DESO, Martin Schutzengel FIX-0121	Page 91

DESO HF/LF complete unit | V100-410

for use in doorways and passageways

Function

- Protection of a door or passageway using an invisible LF field
- When this field is entered, the dementia transponder sends its information to the RF receiver unit
- Depending on the configuration, either a door message or a specific person message is sent to the call system
- With optional lock operation, direction detection and an entry/exit function are possible
- The message is suppressed if a person with an accompanying transponder enters the area at the same time

Features

- Compact housing with integrated receiver and reader unit
- Optional weatherproof housing for outdoor areas
- Optional separate receiver and reader units
- Connection for external HF and LF antennas
- Contact output or data output for the call system

Note

- Power supply from the call system is mandatory

Technical specifications

Dimensions (WxHxD):	175 x 135 x 30 mm
Weight:	380 g
Color:	Light gray
Operating voltage U_N:	24 V DC +8% / -50%
Current consumption at U_N:	max. 150 mA
LF frequency:	125 KHz
HF frequency:	868 MHz
Protection class:	IP42
Ambient temperature:	During operation: -40...+75° C
	In storage: 0...+75° C
Humidity:	During operation: 10...90% non-condensing
	In storage: 5...95% non-condensing

Required components

Interface DESO FIX-0121	Page 91
Transponder V420-1xx	Page 94

Optional accessories

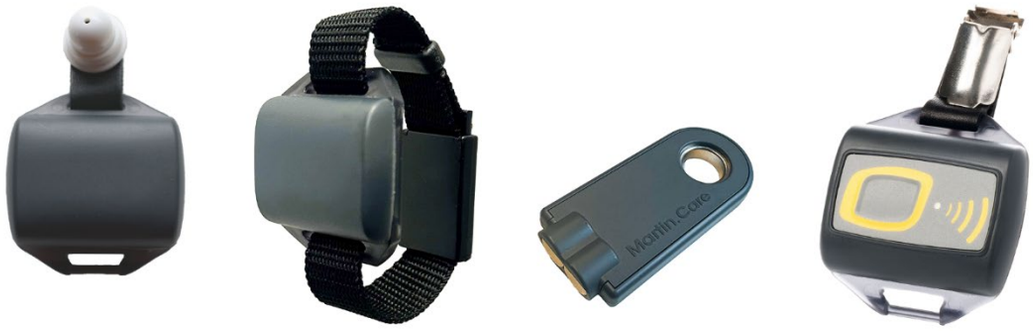
DESO reed contact	S530-002
DESO radio reed contact	V530-007-008
HF auxiliary antenna	on request
LF auxiliary antenna	on request
LF loop antenna	on request

Order details

DESO HF/LF complete unit	V100-410
DESO HF receiver unit	V100-411
DESO LF reader unit	V100-413
DESO HF/LF complete unit, external, IP64	V120-212

Dementia transponder | V420-117, V420-121, V420-127

for detecting disoriented people



Function

- When this field is entered, the dementia transponder sends its information to the RF receiver unit
- Depending on the configuration, either a door message or a specific person message is sent to the call system
- With optional lock operation, direction detection and an entry/exit function are possible
- The message is suppressed if a person with an accompanying transponder enters the area at the same time

Features

- Transponder in protected housing
- 3D LF receiving antenna
- Various carrying options available
- Patented magnetic closure
- Integrated battery monitoring
- Replaceable battery

Scope of delivery

- Mounting depending on model

Technical specifications

Protection class:	IP 67
Power supply:	1 x 3V CR2032
LF frequency:	125 KHz
HF frequency:	868 MHz

Required components

Interface DESO, Martin Schutzengel FIX-0121	Page: 91
DESO HF/LF complete unit V100-410	Page: 93

Required accessories

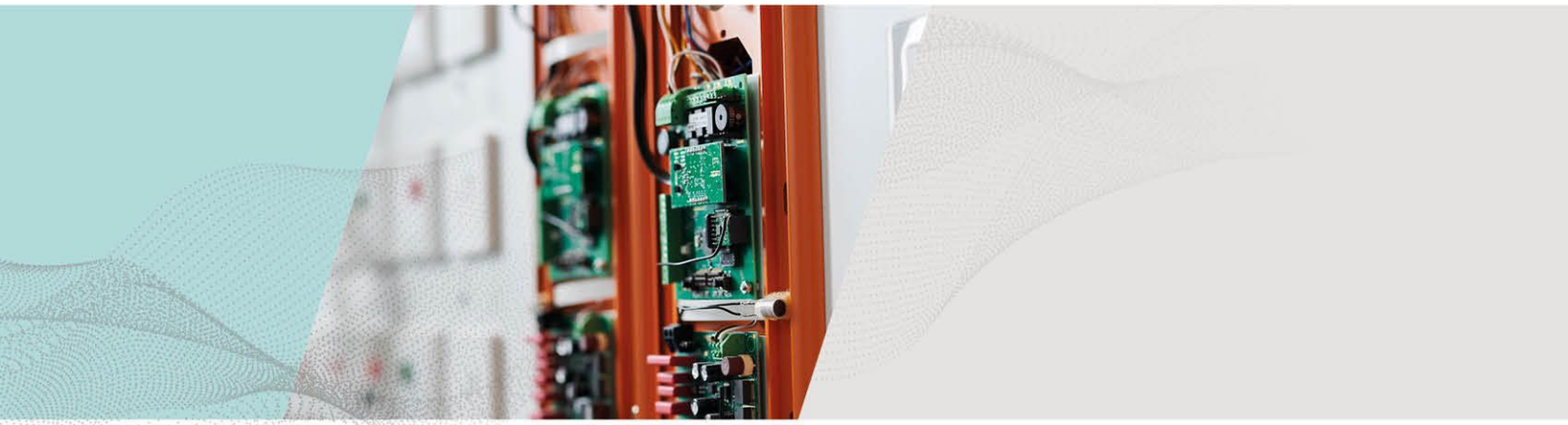
Universal magnetic key	S730-003

Optional components

Accompanying transponder with clip	V420-103

Order details

Transponder with safety closure	V420-117
Transponder with color tag	V420-121
Transponder with dial face print	V420-127



Chapter 7 – Planning and installation instructions

The call system must be designed as a stand-alone system in accordance with the current DIN VDE 0834 standard. In addition, country-specific building regulations must be observed where applicable. Further information can be found in the standard itself and in the ZVEI brochure “Call systems according to DIN VDE 0834.”

Mounting heights for control units

- 0.7 m – 1.5 m → Call and cancellation buttons
- 1.5 m – 1.7 m → Terminals with display
- 1.6 m – 1.8 m → Medical supply units
- 1.5 m – 2.5 m → Signal lights and large-area displays

Special instructions for pull cord switches in wet rooms

- Install at least 20 cm above the highest position of the shower head.
- Pull cord end: 10 cm to 20 cm above the floor.

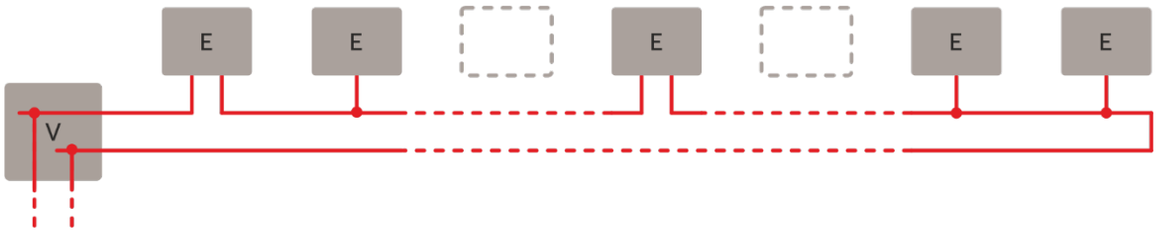
The installation locations should not be exposed to direct sunlight.

Note on operating voltage

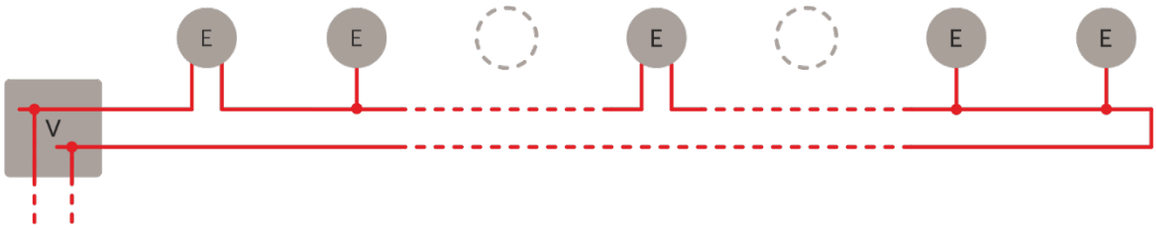
At the end of a power supply line, at least 15 V DC must be present for 30% of calls triggered.

System configuration

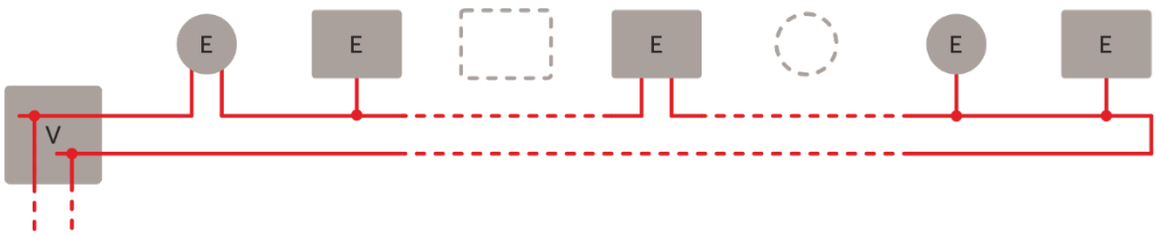
Room electronics integrated into room signal light



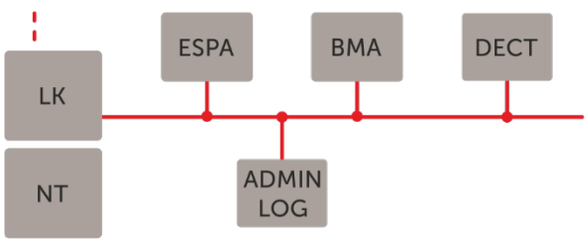
Flush-mounted room electronics in cancellation button or remote room distribution



Room electronics in mixed operation



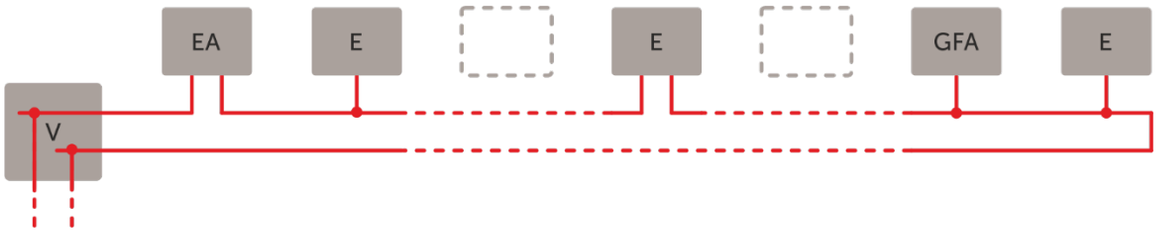
Central components



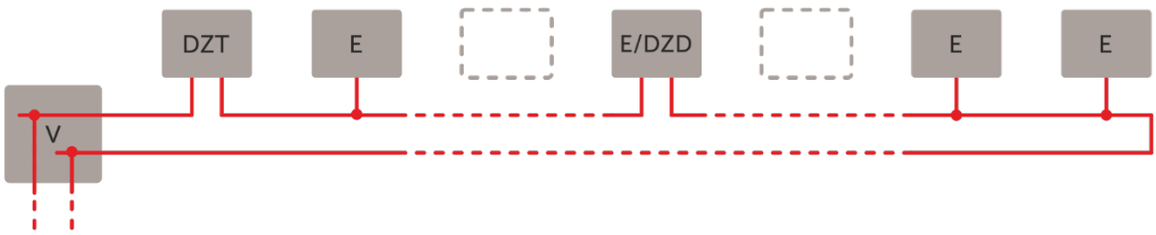
- System bus: Recommended JY(St)Y 4x2x0.8
- Maximum of 15 room electronics per segment
- Connection to the next segment via system bus repeater
- Segments are terminated via integrated resistors
- One power supply unit is required per call system zone (max. 50 rooms); central or decentral arrangement possible
- Up to 20 room electronics per fuse output
- Connection of the call system server via isolation coupler with 2 x MOPP
- Interfaces to DECT, BMA, ESPA, etc. directly via the system bus

V – distribution, E – room electronics, LK – line coupler, NT – power supply units

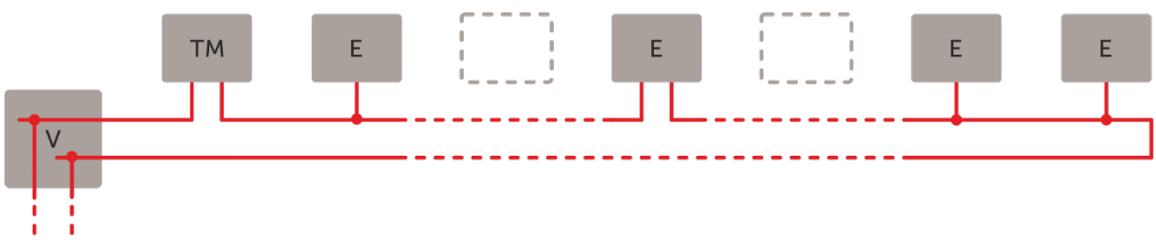
Connection of floor displays and large-area displays



Connection of duty room terminal and duty room display



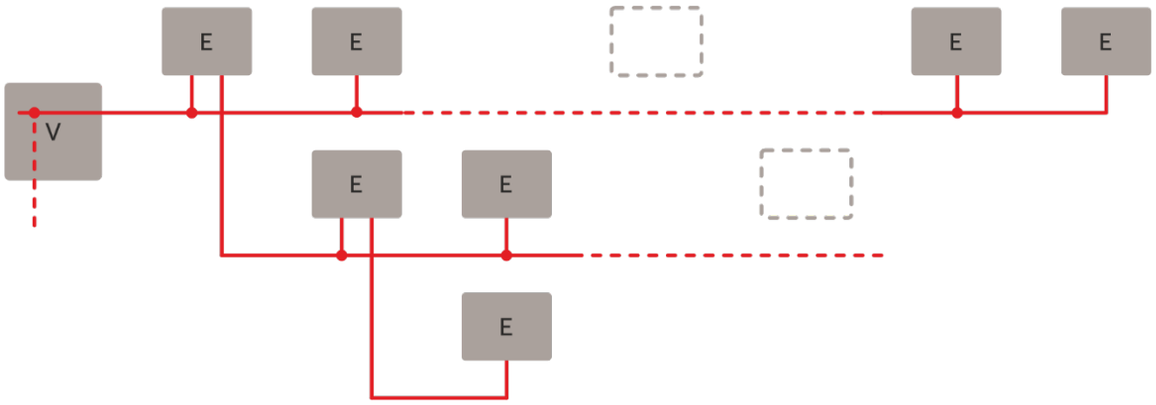
Connection of technical modules (fault messages, external messages, etc.)



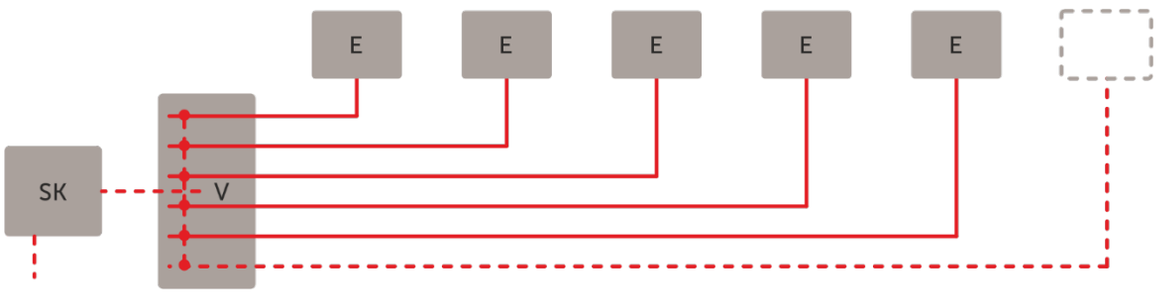
- Displays and indicators can be integrated anywhere in the system bus
- The duty room terminal has integrated room electronics and is connected directly to the system bus
- The duty room display can be operated either with flush-mounted room electronics (as shown) or with room electronics with integrated room signal light
- Technology modules can be integrated at any point in the system bus

V – distribution, EA – floor display, GFA – large-area display, DZT – duty room terminal
E/DZD – room electronics with duty room display, TM – technology module

Tree structure and branches



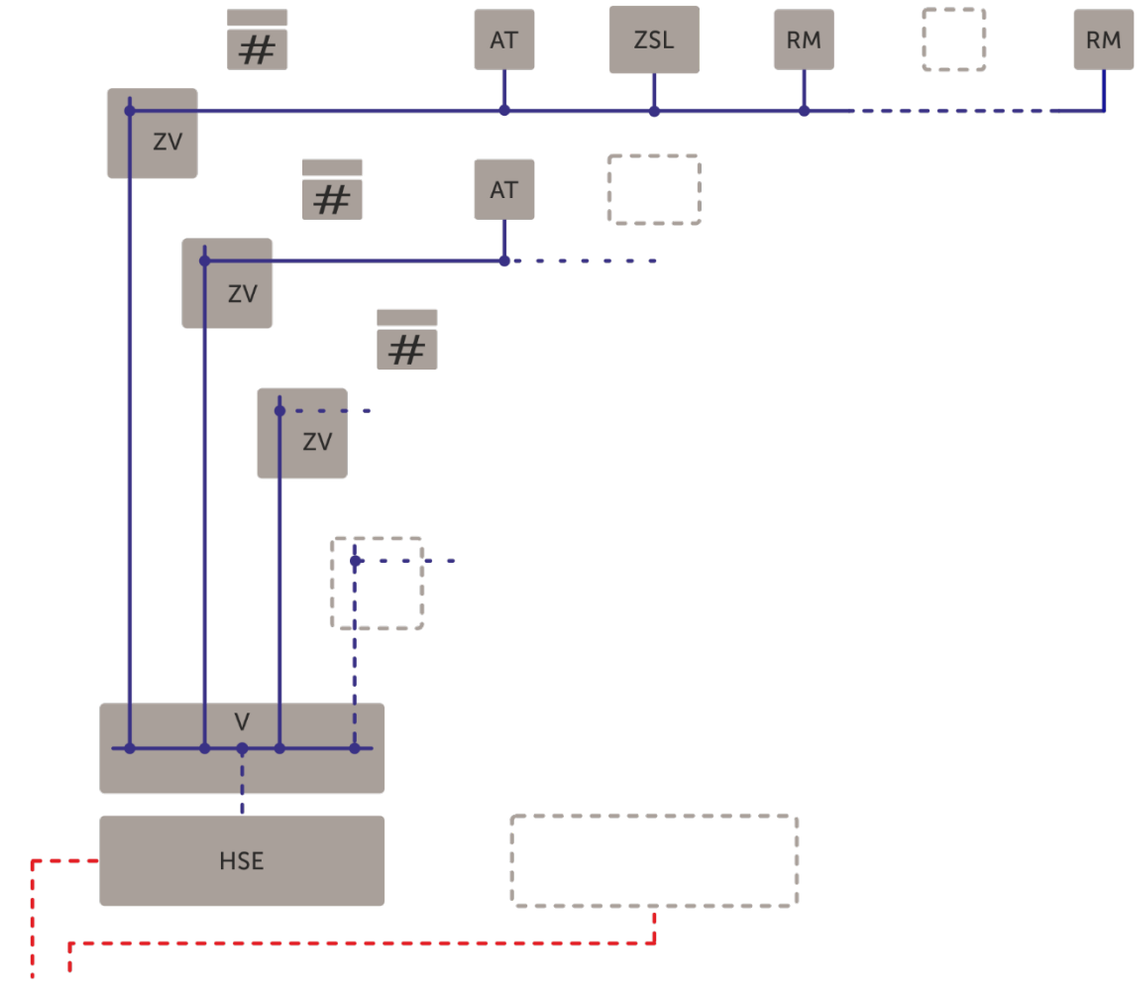
Star structure

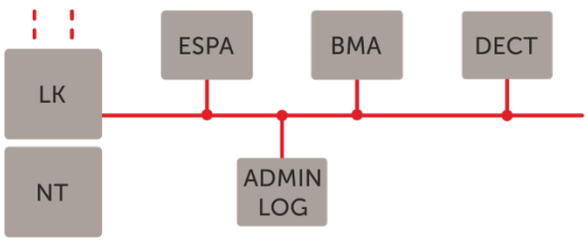


- The system bus can be set up in a bus, tree, or star structure
- Segments are terminated via integrated resistors
- The topology can be flexibly combined

V – distribution, SK – star coupler, E – room electronics

2-wire topology via telephone network



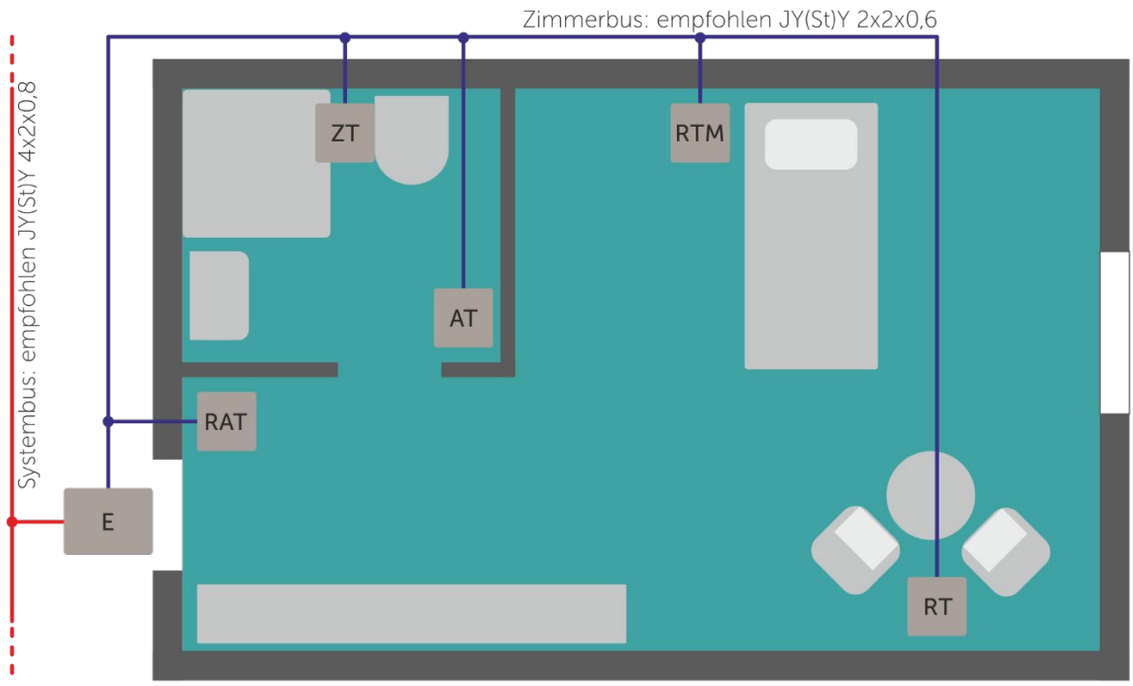


- Structure of the room bus in a star configuration
- 1 DA from JY(St)Y nx2x0.6
- Central room electronics in top-hat rail housing
- Modules can be arranged in any order in the room
- Can be combined with standard topology

V – distribution, ZV – room distribution, AT – cancellation button, ZSL – room signal light, RM – call module,
- analog telephone end devices, HSE - top-hat rail room electronics, LK – line coupler, NT - power supply unit

Cable routing in rooms

Bus structure

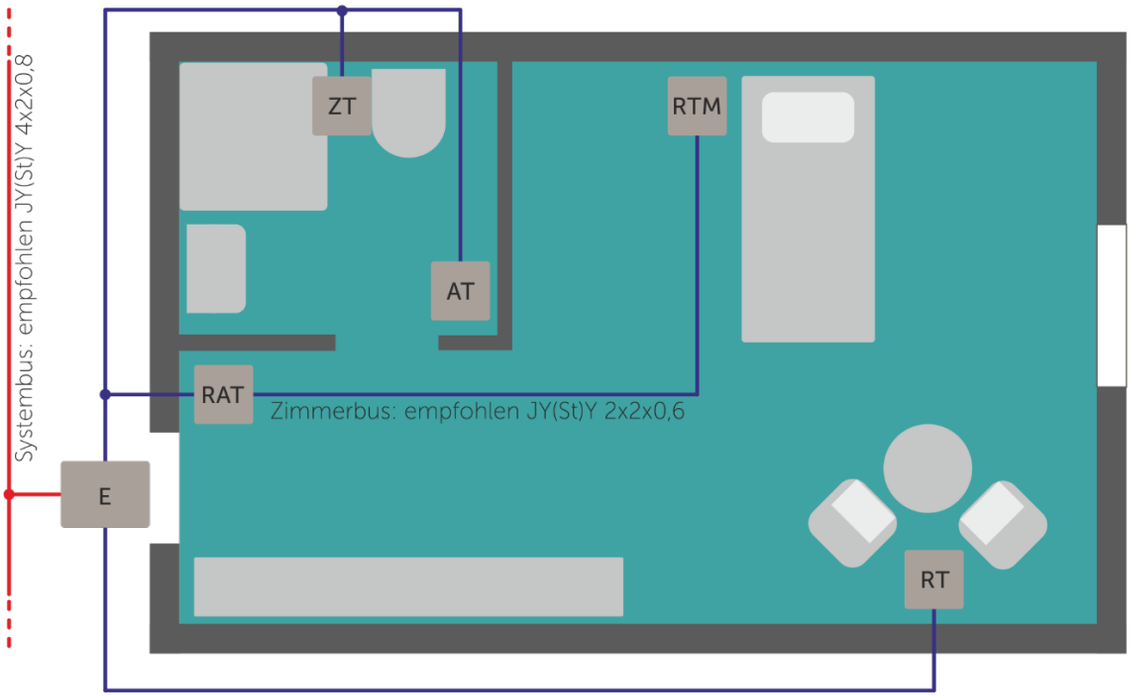


Tips for wiring in rooms

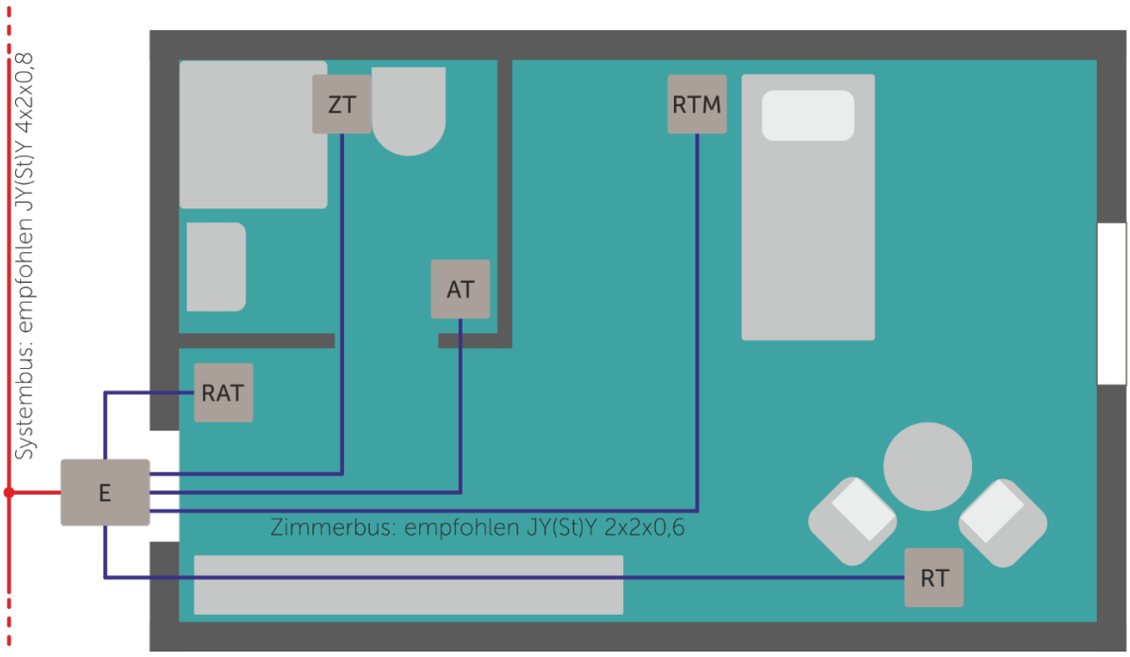
- Room bus: recommended JY(St)Y 2x2x0.6
- Wire pairs used: 1 DA
- Topology: bus, tree, or star structure possible
- Distribution: recommended WAGO Micro Connection Box Terminal 243
- Room electronics:
  - integrated into room signal light
  - Alternatively: flush-mounted version for installation in room distribution panels, attendance button or display module
- Capacity:
  - Up to 32 modules at 16 call stations per room electronics
  - Up to 4 configurable areas per room electronics (e.g., bathroom, hallway, bedroom, WC)

E – room electronics with room signal light, RAT – call/attendance button, AT – cancellation button, ZT – pull cord switch RTM – call button with magnetic plug contact RT – call button

Tree structure



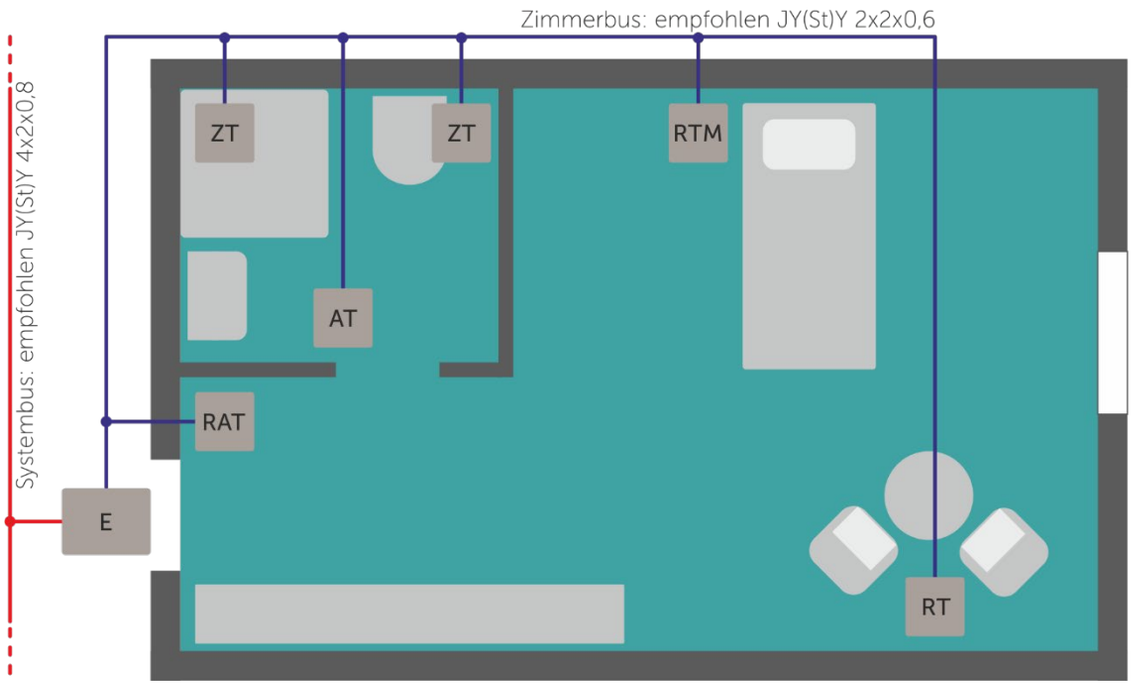
Star structure



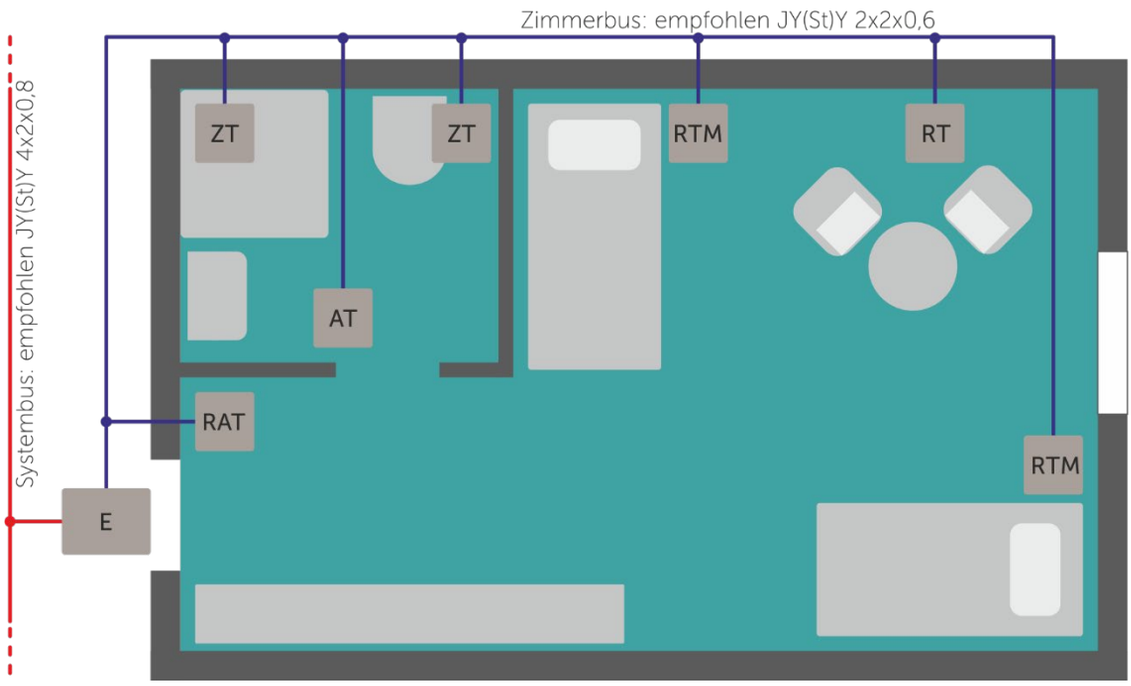
E – room electronics with room signal light, RAT – call/attendance button, AT – cancellation button, ZT – pull cord switch
RTM – call button with magnetic plug contact, RT – call button

Room amenities

1-bed room with bathroom

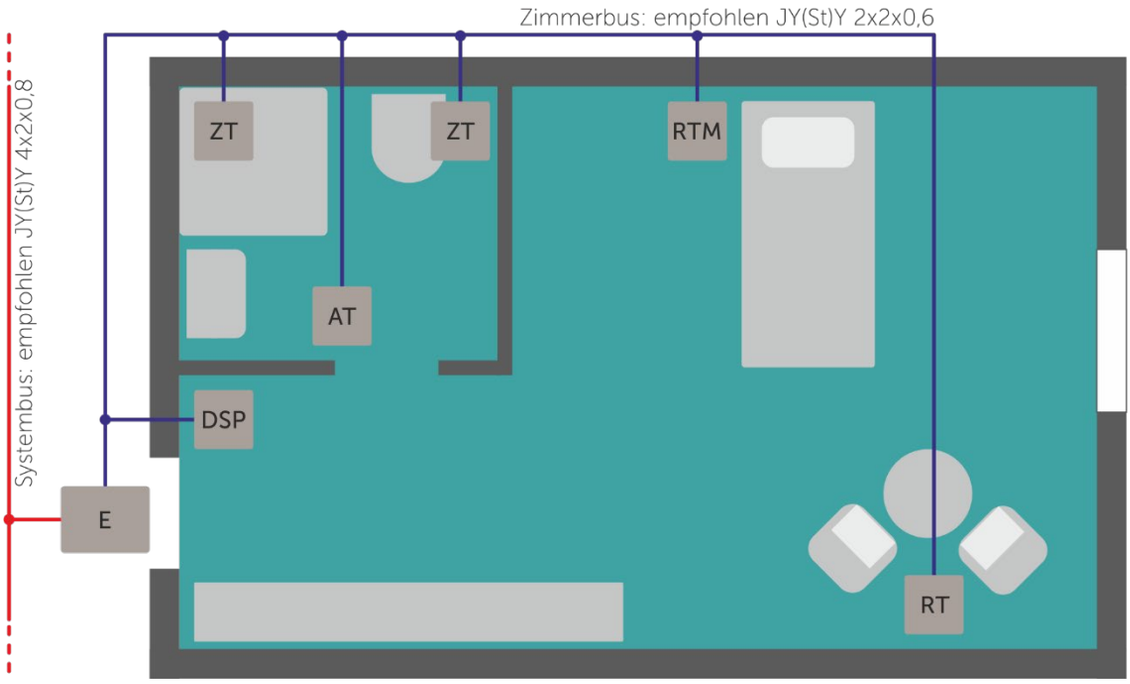


2-bed room with bathroom

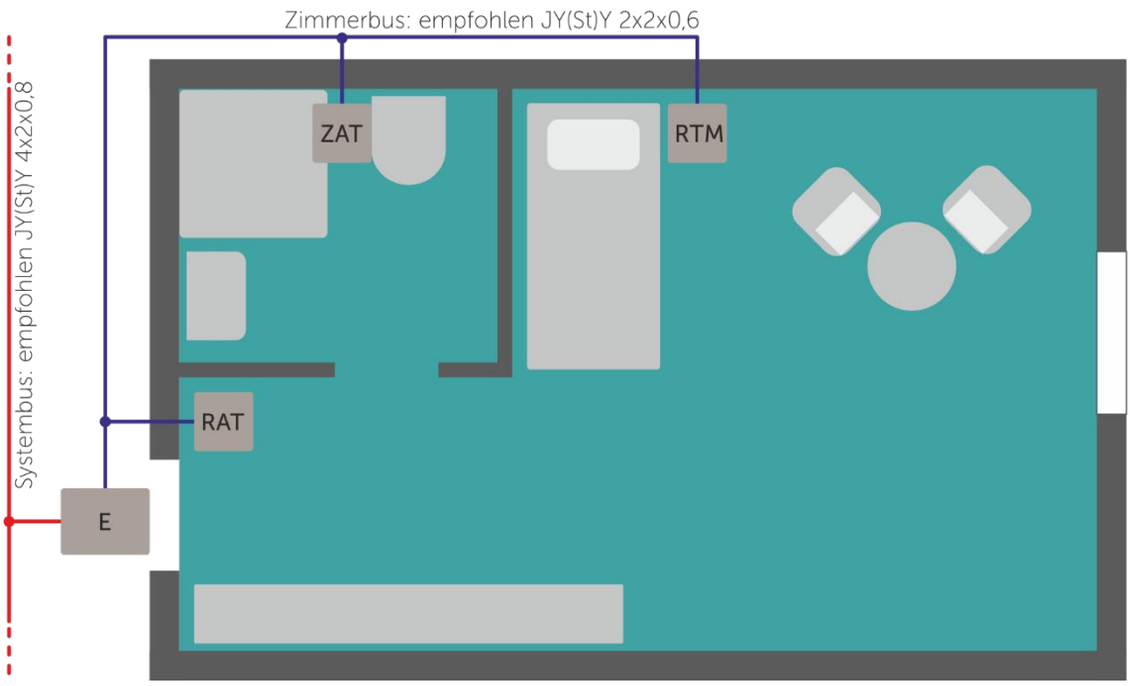


E – room electronics with room signal light, RAT – call/attendance button, AT – Off button, ZT – pull cord switch
RTM – call button with magnetic plug contact, RT – call button

1-bed room with wet room - variant: room display

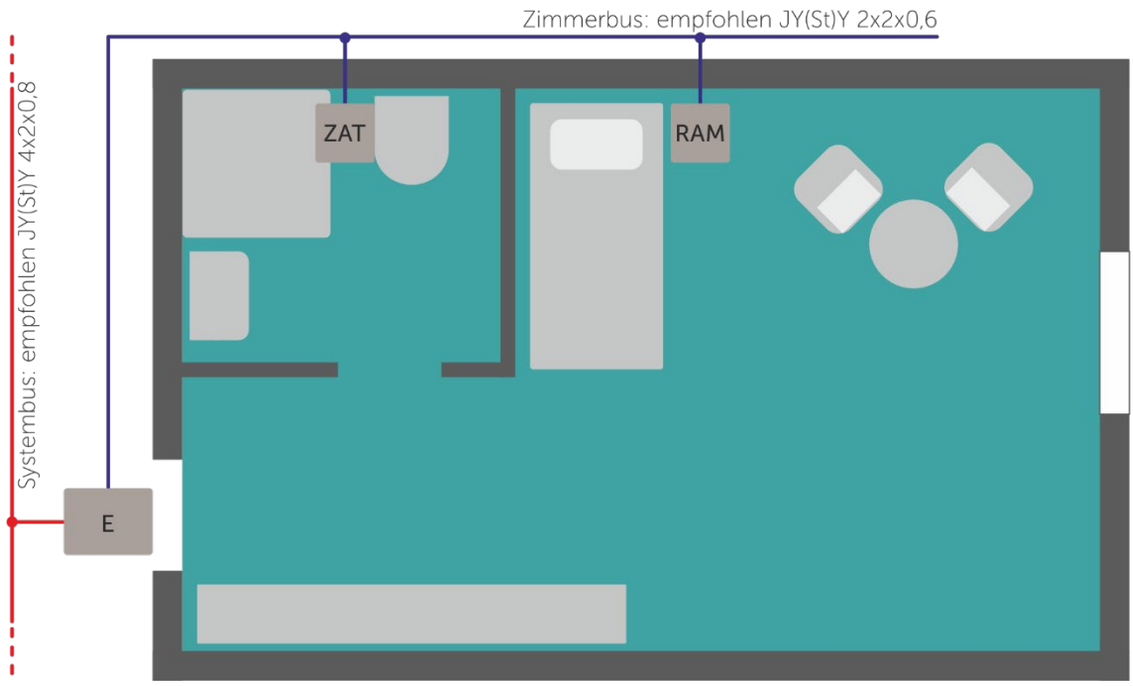


1-bed room with wet room - variant: pull switch and cancellation function

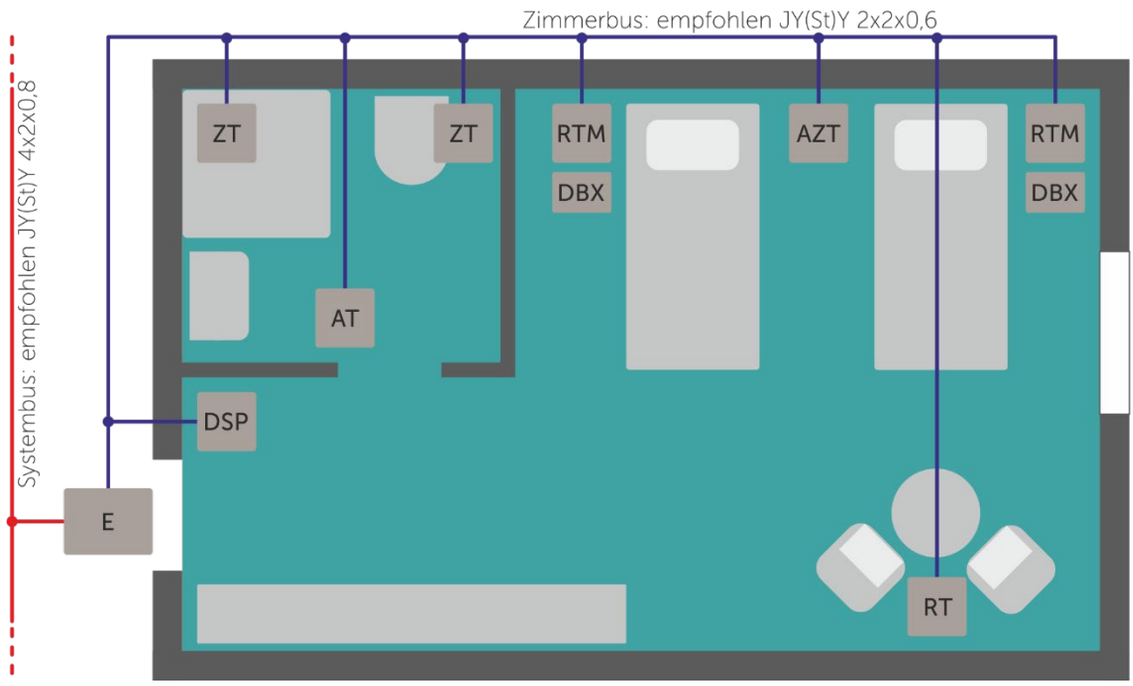


E – room electronics with room signal light, DSP – room display, RAT – call/attendance button, AT – cancellation button
ZT – pull cord switch, ZAT – pull cord switch/cancellation button, RTM – call button with magnetic plug contact, RT – call button

1-bed room with wet room – variant: call cancellation at bedside



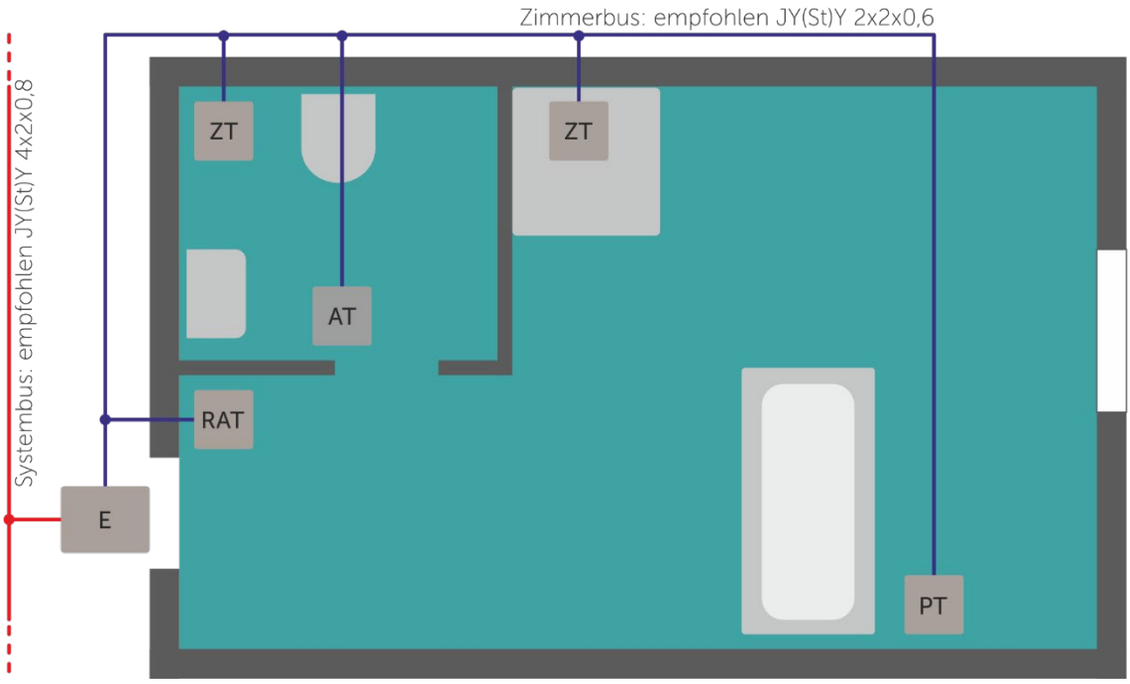
2-bed patient room with wet room



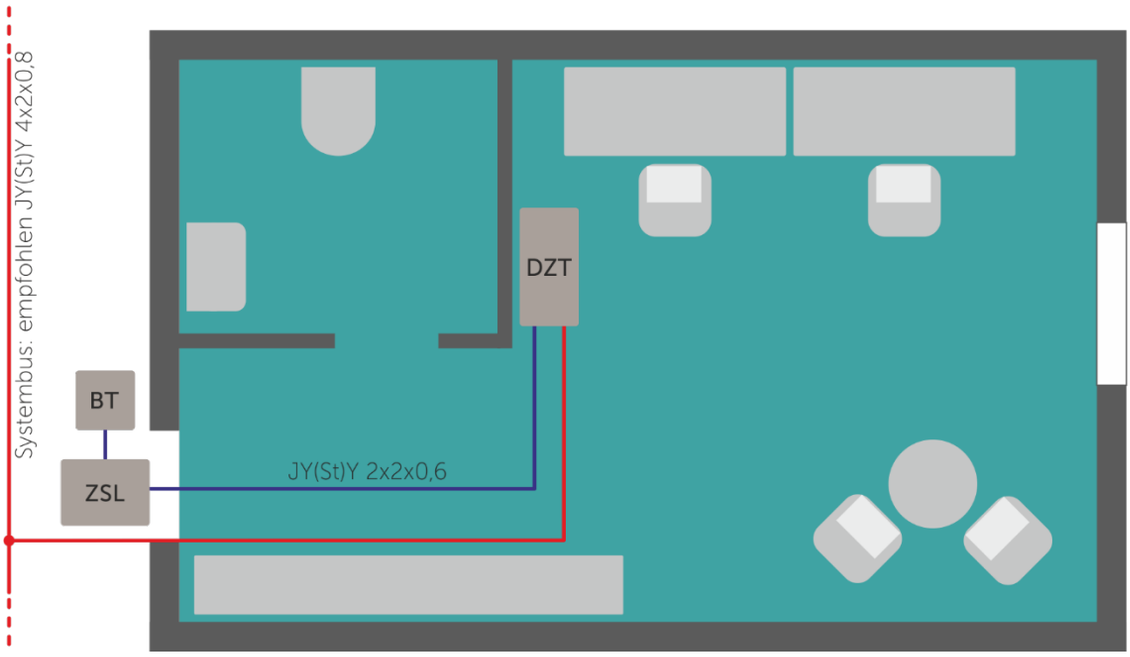
E – room electronics with room signal light, ZAT pull cord switch/cancellation button, RAM call/cancellation button with magnetic plug contact

DSP – display module, AT – cancellation button, ZT – pull cord switch, RTM – call button with magnetic plug contact, DBX – diagnostic box

Nursing bath



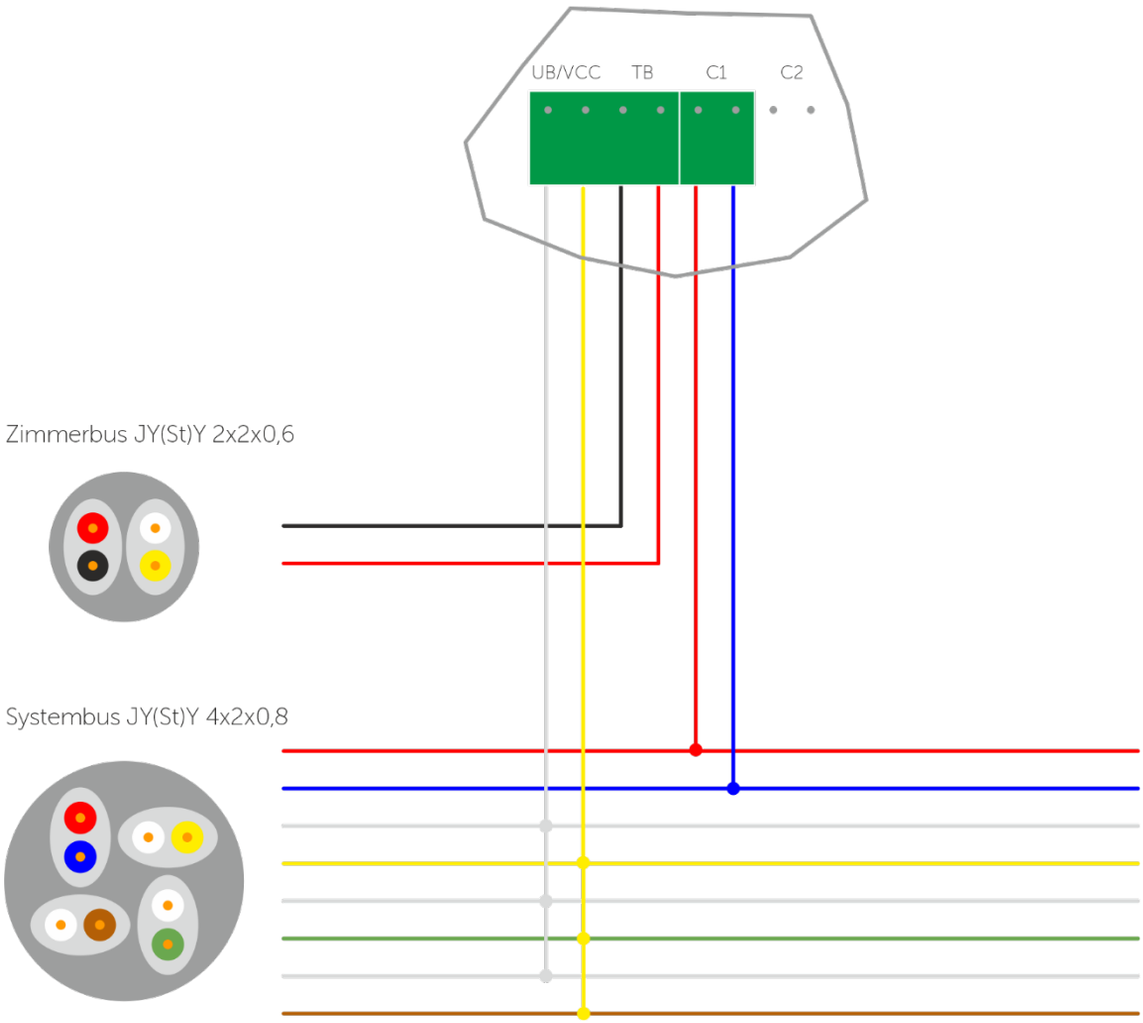
Duty room



E – room electronics with room signal light, RAT – call/attendance button, AT – cancellation button, ZT – pull cord switch, PT – pneumatic button, ZSL – room signal light, DZT – duty room terminal, BT – visitor button

Connection for room electronics

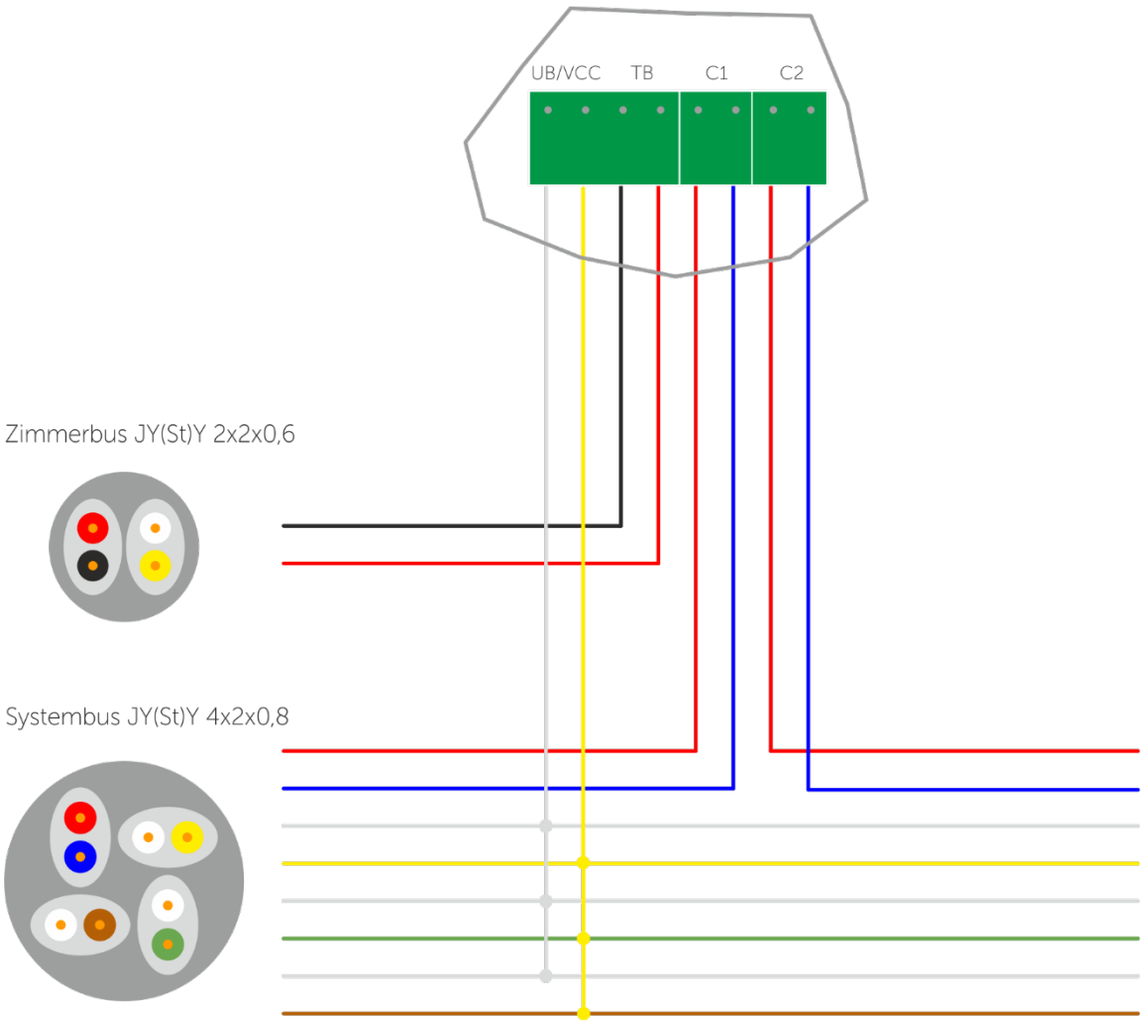
Standard



Tips for wiring in rooms

- System bus (C1/C2): recommended JY(St)Y 4x2x0.8, 1 DA
- Power supply (UB/VCC): 3 DA parallel
- Room bus (TB): recommended JY(St)Y 2x2x0.6, 1 DA
- Power distribution: recommended WAGO micro connection box terminal 243

as a system bus repeater

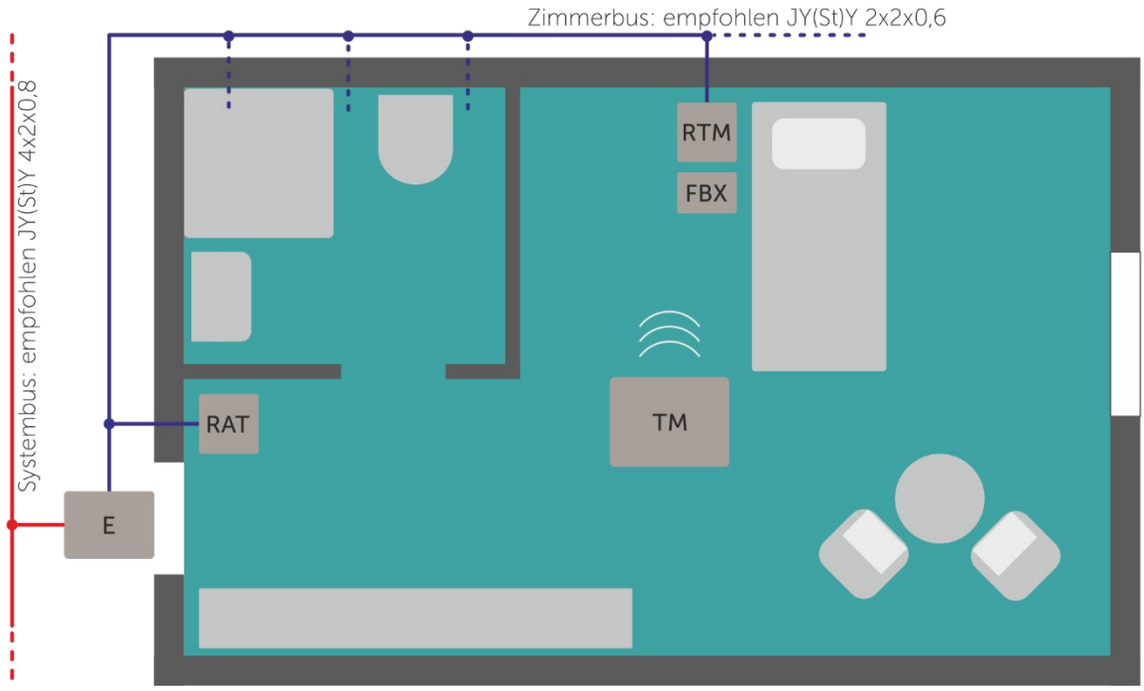


- 15 room electronics per segment
- Next segment via system bus repeater (C2)
- Branches via C2

Place terminating resistors at the beginning and end of a segment!

Radio communication

Room radio call via radio box



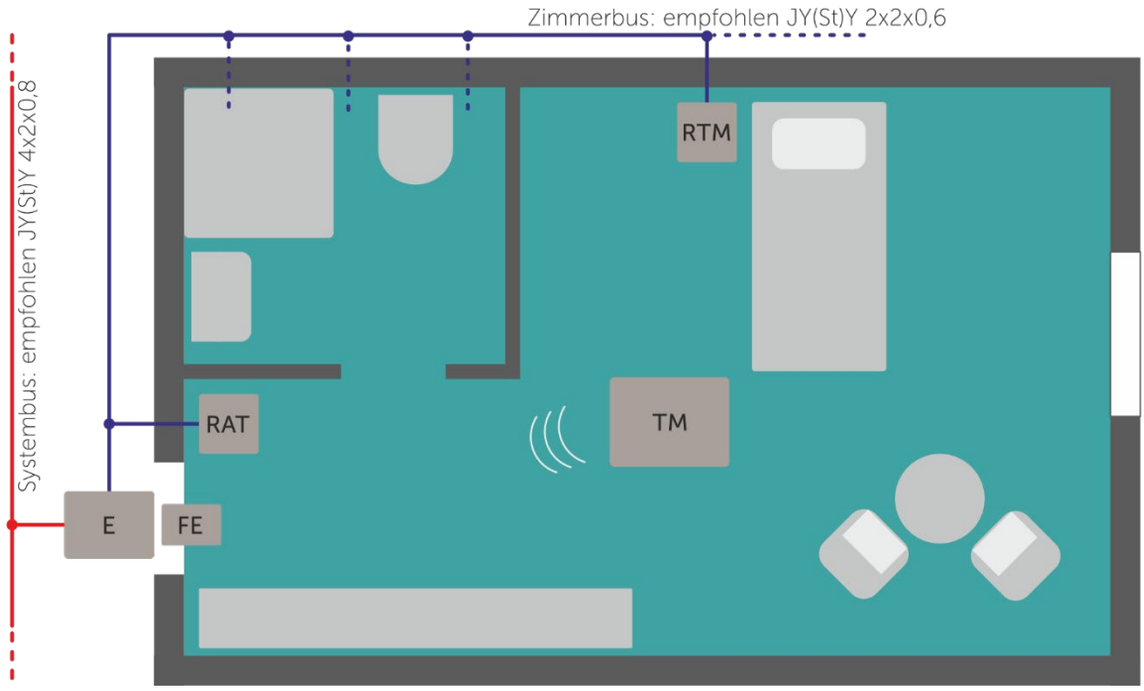
Function

- Connection to any call module with multifunctional magnetic plug contact
- Flexible use wherever it is needed
- Quickly switch between rooms
- Registration and reception of a radio unit (e.g., pressure mat, body-worn transmitter, or similar)
- Transmission of plain text names and room numbers
- Call acknowledgment via attendance/cancellation button in the room
- Additional connection of a manual trigger possible
- Automatic fault detection when the radio box is removed

E - room electronics with room signal light, RAT - call/attendance button

RTM – call button with magnetic plug contact, FBX – radio box, TM – pressure mat

Room radio call via radio receiver board



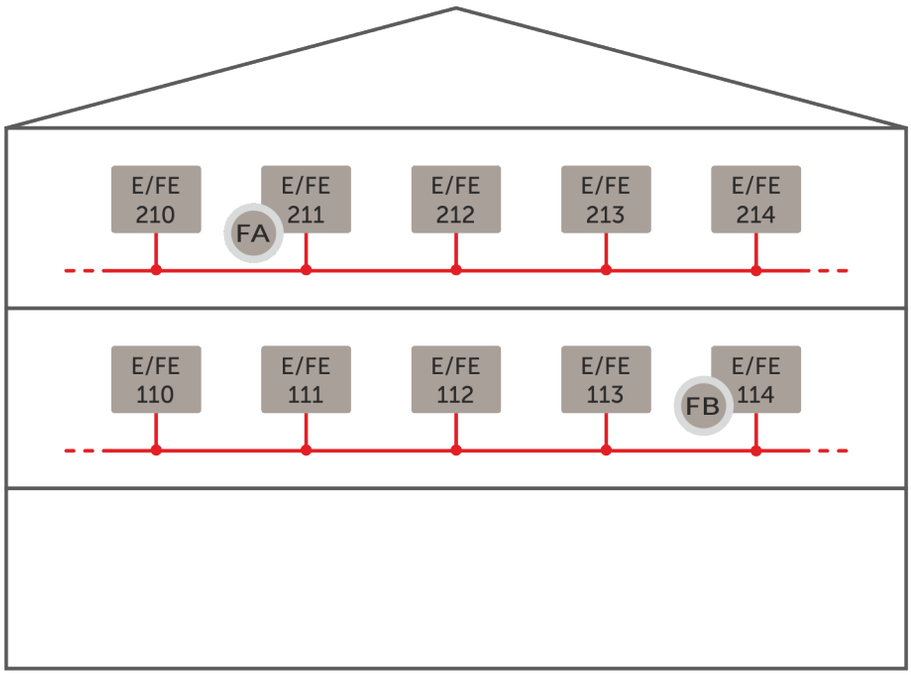
Function

- Fixed installation of the radio receiver in, for example, room electronics or room signal lights
- Reception and registration of up to 14 radio units, e.g., pressure mat, body-worn transmitter, etc.
- Transmission of plain text names and room numbers for precise identification of the call
- Call acknowledgment via attendance/cancellation button in the room

E - room electronics with room signal light, FE - radio receiver board, RAT - call/attendance button

RTM – call button with magnetic plug contact, TM – pressure mat

Internal positioning system (IPS) - room radio call

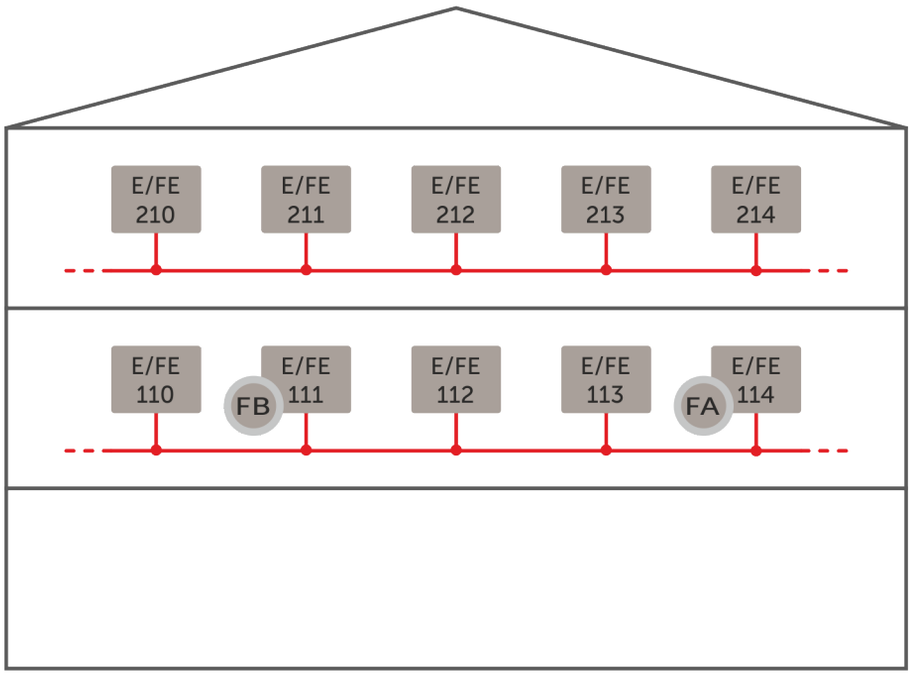


Function

- Fixed installation of the radio receiver board in each room for individual detection
- Registration of body-worn transmitters:
  - Body-worn transmitter A is assigned to room 211
  - Body-worn transmitter B is assigned to room 114
- Call triggering:
  - Body-worn transmitter A triggers a room radio call in room 211
  - Body-worn transmitter B triggers a room radio call in room 114
- Acknowledging the call:
  - Call A is acknowledged via the attendance/cancellation button in room 211
  - Call B is acknowledged via the attendance/cancellation button in room 114

E/FE – room electronics with radio receiver board, FA – body-worn transmitter A, FB – body-worn transmitter B

Internal positioning system (IPS) - mobile/selective radio call



Function

- Triggering a call via radio transmitter:
  - After activating the radio transmitter, the resident's position is transmitted to the staff
  - At the same time, the person in need of help is identified
- No automatic localization:
  - Location without active call triggering is not possible
- Call triggering
  - Body-worn transmitter A triggers a selective/mobile radio call in range 114
  - Body-worn transmitter B triggers a selective/mobile radio call in range 111
- Call acknowledgment:
  - Call A is acknowledged via body-worn transmitter A and the mobile radio acknowledgment transmitter
  - Call B is acknowledged via body-worn transmitter B and the mobile radio acknowledgment transmitter

E/FE – room electronics with radio receiver board, FA – body-worn transmitter A, FB – body-worn transmitter B

Appendix A - Compatible switch ranges

Berker

- S.1

Busch-Jaeger

- Balance SI

Elso

- Fashion (with spacer frame)
- Joy

Gira

- Modules not compatible with magnetic plug contact, separate frame required
- Standard 55 (only in multiple combination)
- E2 (only in multiple combination)

Young

- AS581, AS581 WW, AS581 BF, AS581 BF WW
- ABAS 581, ABAS 581 WW
- CD 581 W, CD 581 WW, CD 581 WU W, CD 581 WU WW (mit Zwischenrahmen)

Merten

- System M / 1-M

Appendix B - Compatible accessories

The ZELO FL24 call systems make it especially easy to integrate accessories via radio. In addition to our own product range, we work with a large number of specialists to make day-to-day care easier with intelligent assistance systems. Smart sensors, intelligent care beds, and innovative radio solutions can be flexibly integrated. Thanks to our open interfaces, integration is quick and easy.

IQcare, an IQfy brand

IQfy offers a unique system for effective support in day-to-day care. IQcare prevents falls, reduces unnecessary check-ups, and ensures that residents feel safer.

nevisCura by nevisQ

The nevisCura bed sensor detects when a patient gets out of bed before their feet even touch the floor. It is also easy to use and can be paused or deactivated as necessary. The nevisCura bed sensor is sensitive to dementia and available in a color that matches the nursing bed.

Stiegelmeyer

The Out-of-Bed system from Stiegelmeyer detects early on when a resident sits up or leaves the bed. This significantly reduces the risk of falls, especially during the night. The integrated automatic lighting system also improves orientation and makes it easier to move around safely in the dark.

Wissner-Bosserhoff

SafeSense® 3 is a digital care assistant that noticeably reduces the workload of care staff. Thanks to its bed exit, real-time movement, and moisture monitoring, falls, maceration, and pressure ulcers can be effectively prevented. The open interface structure allows data to be transmitted directly to the care documentation software.

Legal notice

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