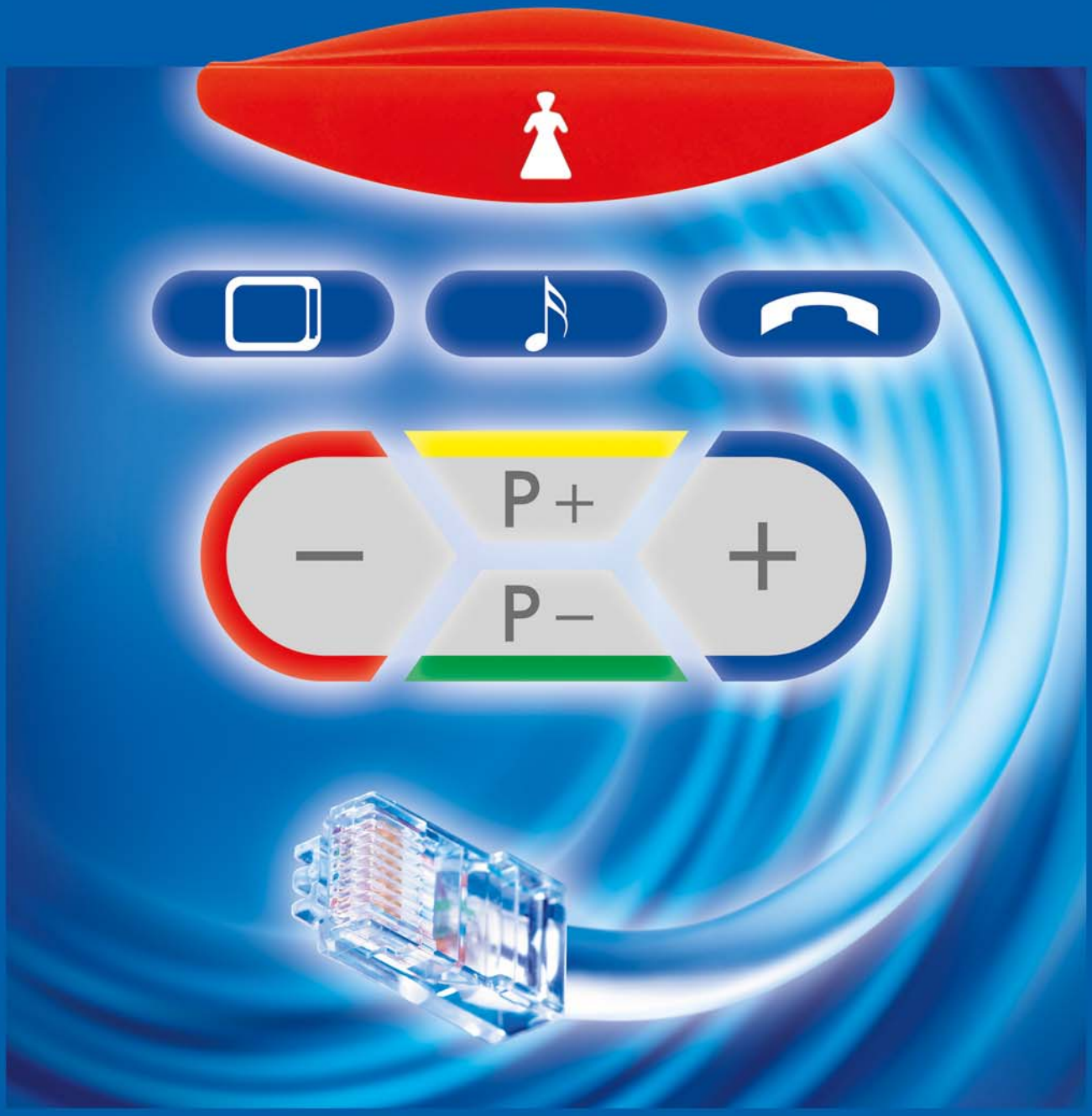


VISOCALL IP.

Product Catalogue 2016/2017.

HEALTH CARE

SCHRACK SECONET

Table of contents

Data sheets 33

General hints

This product catalogue describes the standard functions and components of the VISOCALL IP communication system, thereby representing a mere fraction of our very extensive range of products. All information which is not contained in this catalogue is available upon request at any time from one of our offices.

All Schrack VISOCALL IP system components and modules are developed and manufactured in Austria and constitute the technological state-of-the-art, whilst observing the currently enforced standards. Schrack Seconet's high quality is documented in a quality management system, which has been certified in accordance with ISO 9001:2008 for all the company's divisions.

The planning of communication systems as well as the installation, commissioning and maintenance of products and the systems which they form required specialist expert knowledge, and therefore may only be undertaken by specially trained experts. The product-specific training of staff members must be carried out by Schrack Seconet or by people who have been specifically authorised to carry out this duty by Schrack Seconet. In addition to this, the currently applicable country-specific regulations and guidelines for the planning, construction of and use of the products must be observed and complied with without fail. Damage and consequential damage which have been caused due to interference or modifications made to our products or by improper handling of them are excluded from liability. The same is also true for inappropriate storage of items or other detrimental external factors.

We would explicitly like to point out that the VISOCALL IP communication system must be periodically serviced in accordance with the respective relevant standard VDE0834, in order to also ensure that the system's range of functions and protective scope is also maintained in the long term.

The plastic cases and operating membranes of the patient terminals are now shipped, without exception, in an anti-fungal version. Thee operating membranes of the communications terminals are also fitted with the same characteristic. Fungicidal surfaces reduce the risk of an outbreak of infections transmitted by contact with the surfaces of the unit. This preventive measure increases hygiene conditions and minimises the spread of infections. Furthermore, the patient terminals are produced in splash-proof IP54.

For the patient terminals, room terminals, ward terminals, call components etc., without exception only use disinfectants that do not contain ketones or esters either in part or in full. For the disinfection process disinfection by wiping should be used – and under no circumstances a disinfection by submersion process. If it can be assumed that defective products were contaminated, they must be cleaned and disinfected before being sent back for repair in accordance with this statement.

The use of normal light bulbs is no longer permissible anywhere in the entire system. All lighting must use LED technology, however there are also standards to be observed regarding the strength of lighting (in particular VDE0834/Part 1 – point 5.1.10).

The descriptions and technical information contained below corresponds to the current status stands at the time of printing. We reserve the right to make alterations, particularly where they are the result of technical improvements. The products illustrated in this document may differ in terms of their appearance as a result of the con-stant continued development from those products which are delivered.

CAUTION , NOTE

Particularly important notes in this document are denoted using the exclamation mark symbol shown beside this text. Failure to observe these points can lead to system faults or to damage to property!

System description

1 Characteristic system properties

1.1 Standards

VISOCALL IP fulfils the following standards and regulations in their entirety:

- DIN-VDE 0834 – Call systems in hospitals, care homes and similar establishments, valid from 1 April 2000
- DIN VDE 0834 / Part 1 – Device specifications, installation and operation, valid from 1 April 2000
- DIN VDE 0834 / Part 2 – Environmental conditions and electromagnetic compatibility, valid from 1 April 2000

As well as all standards and regulations referred to in these standards.

Furthermore the system's power supply conforms to the standards for:

Electrical safety:

- EN60601 Classification VDE 0750 / 03.1996
- EN60950 Classification VDE 0805 / 03.2003
- EN50178 Classification VDE 0160 / 04.1998

The cabling structure for the VISOCALL IP must conform fully to the standard

- EN50173-1: 2011 Class D dependent on CAT5

Test logs are compulsory for every commissioning process.

All VISOCALL IP system components conform to environmental class I, whilst all components which are installed in sanitary units, bathrooms etc. conform to environmental class II. In accordance with VDE0834 part 2 this means:

- Environmental class I: +5°C to +40°C *) with an relative air humidity of up to a maximum of 85%
- Environmental class II: +5°C to +40°C with a relative air humidity of up to a maximum of 95%

*) +55°C when installed in medical supply units

When planning and constructing nurse-call systems the currently applicable regional regulations must also be observed from the installation to the operation of call systems in hospitals, old people's homes and similar establishments. Many of the VISOCALL IP system's properties considerably exceed these requirements.

VISOCALL IP is certified by the Austrian Electrotechnical Association (OVE) pursuant to DIN VDE 0834-1:2000-04 and DIN VDE0834-2:2000-04.

2 The communications platform

VISOCALL IP allows the realisation of every practically occurring system configuration. Indication signals and indications on displays showing plain text on all communication terminals and ward terminals optimise the operating process just as automatic safety features do in critical cases. It unites several traditional systems in a single system and for future-looking reasons, as the name suggests, uses IP technology, and fully integrates TCP/IP, UDP and FTP protocols in their entirety.

In its basic structure, the overall system contains the following system functions:

- Nurse-call communications system with comprehensive signalling and speech connections between patients and nursing staff, as well as between fellow nursing staff members.
- IP telephony handsets conforming to standards H.323 and SIP built into the patient handsets.
- Smartcard system for processing and billing telephone, television and internet access charges in accordance with different charging models.
- Smartcard system for the staff to processing and manage patient data.
- Integrated electroacoustic functions, such as the digitalization and distribution of up to 32 radio programs and playing in of additional external LF signals.
- Audio system for announcements or voice promts.
- Intranet and Internet access for patients.
- Additionally there are further measures in place to permit video streaming.

System architecture

As a consequence of the current market orientation towards network-based technology, manufacturers of nursecall systems have also been requested to deploy such technologies. However, not only should the network cabling, but also the tried and tested bus structure should be possible to realise in such a system.

In conformance with standards, however, a separate network must be established for this system. The appropriation or use in the in-house data network is only allowed, if the conditions are observed in accordance with the "L3-NSP system integration" specification (in its most recent valid edition). It is not permissible to deploy or use the internal in-house data network. Microcomputer systems equipped with the necessary software, which function autarchically and which are distributed around the premises, are used to fulfil all described functions and features. Superordinated and/or centralised controller devices were not deployed for safety reasons. In the event of an end device failing, all other system components and functions must remain available in their entirety.

The network for the VISOCALL IP requires a guaranteed data transfer rate of 100 Mb/s. Data packets are prioritised to ensure the safe and rapid transfer of critical data e.g. call or alarm messages.

The cabling structure for all IP modules must be approved and tested in accordance with EN 50173-1: 2011 Class D for CAT5.

Centralised configuration

The possibility exists to configure every individual module connected to the network and to upload the firmware from a centralised location in the system. The entire system can be reconfigured at any time to cover system extensions or modifications. Software and firmware upgrades can also be carried out at any time. The configuration process is carried out in a centralised manner using proprietary system software.

Remote maintenance

Access for remote maintenance is also set up via the VISOCALL IP system, with whose help the manufacturer, acting in consultation with the system operator, can perform the following services:

- Modification of configuration of individual system modules;
- Modification of the configuration of the entire system;
- Carrying out firmware updates to even affect the individual system devices;
- In the event of a fault, various log files can be read out for evaluation purposes;
- Check of faults and failures in the system.

2.1 Integrated nursecall system

Autarchic computer systems

All system devices are fitted with autarchically functioning computer systems and software covering the entire range of services. All speech connections are also established autarchically. The required storage media use FlashProm technology. These media permit a software upgrade at any time during operation.

Independent structure

All IP system devices are connected to so-called system switches and thus form the smallest unit in the nursecall system. To allow the ports to be used in an optimal fashion, the functional links, which are independent of the physical assignment of the modules, are assigned via the system configuration.
All remaining system components are connected to the SWI9 system switch over the data bus wiring and are integrated into the entire system in this way.

Individual functional areas

Since the system structure is non-hardware based, it is possible to form individual functional areas at any time using the system configuration, without affecting or disrupting the continuous operation of the system. This ensures the utmost flexibility for the operator, whilst still ensuring substantial cost savings.

Infinitely variable system construction

Even just a pair of communications terminals connected to one another by means of a system switch form a complete nursecall communications system containing all features (call forwarding, speech connections, simultaneous system queries and announcements etc.). Every system can be constructed using a bottom-up approach by connecting various system devices next to one another – virtually separated communications islands for e.g. bathrooms, treatment wards and intensive care wards can also be created.

System-related care

The system considers each ward as an individual sector, in which the system-related patient care issues are directly dealt with by nursing staff in the ward itself. All calls made by patients reach nursing staff members immediately, and are followed up by them either using the system's speech circuits or by visiting location where the call originated from. Each ward contains a ward terminal, at which the current functional state of the system can be ascertained, and can be acted upon accordingly.
"Decentralised" wards must be able to be combined practically to permit operation of the system with reduced staffing levels. Nursing staff are not bound to a specific area. All functions (including call forwarding and speech connections etc.) extend to all interconnected wards and can be queried at every ward terminal, as well as at every communications terminal. The interconnection of groups can be activated or deactivated at any time. In particularly critical situations, the interconnection process is carried out in a completely automatic manner.

Additional standardised programs

The system devices can have additional programs fitted for manual and fully-automatic adaptations to situations at any time, as well as for working in conjunction with other systems. Moreover, all displays show individual room descriptors when system messages are shown.

Enhanced device intelligence

Communications terminals and patient terminals are prepared with digital processing for 32 audio programs. Additional functions can be installed and configuration parameters changed accordingly on a room to room basis. Even parameters which affect entire wards are programmed from a central location. The same applies to the individual room labels.

Faults or failures which might occur are automatically recognised by this technological platform, and indicated and automatically forwarded. The following hierarchy applies in this process:

- At control panels and ward terminals they are signalled separately and unambiguously as a fault or a failure, with the relevant event being recognisable without any risk of misunderstanding.
- On the displays of communications terminals, in the first instance, only the functional restriction in the affected area are signalled. These measures allow faults or failures to be minimised in terms of time that they occur for, thereby keeping restrictions to operation to as low an extent as possible.
- The service monitor easily shows the faults and supporting the search for these faults. The technician is able to change the system and to diagnose and analyse the fault storage. Receiptet faults are stored on the server with the correct time-stamp and all notices.

Furthermore, such events should also be forwarded from available system interfaces to a mobile end device or a pager to the responsible in-house technician.

Display indicators, membrane keypad, touch panel

Communications terminals and ward terminals are fitted with a full graphic display. The call area (ward), call location and call type are indicated on this display in plain text. Plain texts and various indicating signals as operator hints are used to optimize the functional process.

Additionally, there are 12 character textterminal displays e.g. in corridors or lounges, which display the same information. The display of calls are ranked according to the highest priority.
The system devices are fitted with membrane keypads for hygiene reasons or to permit simple cleaning. Also easy to clean is the touch panel of the Staff terminals. All patients terminals are delivered in accordance with IP54.

Patient terminal plug connection

The plug and socket connection between the patient terminal and the accompanying plug socket in the wall or in the media duct is carried out in such a way, that regardless of which direction the cable is pulled in, a slight pull on the cable is enough to automatically release the plug. In so doing, neither the plug, nor the plug socket nor any other components sustain any form of damage. The disconnection of the plug and socket connection is automatically recognised by the system as a disconnection call.

Surfaces of plastic components and membrane keypads

The membrane keypads of the communication-, room- and patient terminals as well as their plastic cases are fitted with a fungicidal surface. This preventive measure increases hygiene conditions and minimises the risk of an outbreak of infections transmitted by contact with the surfaces of the unit.

Maximum operational security and security against system failure

Hardware and software-based measures as part of the complete concept offer maximum security in both normal operating processes and in critical alarm situations. Further details regarding these safety precautions can be found in the functional description which follows later. Total system-related failures are therefore impossible in the VISOCALL IP system. By using room-autarchic computer systems in all important devices, in the event of failures (e.g. wire breaks on the data cabling etc.), all other sections of the system will continue to function fully in their entirety.

Automatic software download

If a system module requires changing whilst the system is operational, then it will be automatically recognized in the VISOCALL IP - System. The relevant firmware, software and configuration data are then automatically sent to the module and saved there: The ability of the rest of the system to function is not compromised in any way.

Self monitoring

Constant self-monitoring of all the components in the system, as well as constant self-monitoring of all data and call circuits, ensures that failures or faults are automatically detected. At the same time, fault indications are generated automatically and safety functions carried out.

Storage of data

In the event of a power failure, information remained saved for an unlimited time. This information is than restored automatically once the power returns.

Safety features

Automatic call forwarding and automated monitoring processes at regular intervals, preventing the blocking and disconnection of call and speech circuits.

2.2 Integration of a telecommunications system

Interface to the telecommunications system

The telecommunications system is physically connected to the VISOCALL IP using CAT5 cabling and a router (Core switch). The protocol stack is created both in accordance with the H.323 standard as well as the SIP (G.711 a-law, G.711 µ-law, G.729 a/b) standard.

2.3 Integration of a billing system

A cash-free and personnel-saving smartcard system, VISOTAX PLUS, is integrated into the VISOCALL IP communications platform for charging of fees for telephony, television and online charges.
Billing servers, payment stations and system workstations can be incorporated into the existing cabling structure at any time. Interfaces to the telecommunications system, to the TV system and the Internet applications server enable charges arising to be logged for each person using the system.

The patient terminals described in this document are therefore be fitted with contact-free smartcard readers, which capture all the relevant user data and forward it to the corresponding system modules.

2.4 Integration of radio programs

VISOCALL IP supplies digitalised LF signals over the system network for the transmission of radio signals to patient beds. A module which can be fitted in a cascade configuration is installed in a central location in the building, which contains both an FM tuner and also has other inputs for additional LF signals. All these signals are digitised by this module and transferred to the system network. The system configuration offers the possibility to filter these streaming signals accordingly and to transmit them only to the communications and patient terminals to which they are intended to go. Additionally for certain signals, it must be possible to have “compulsory reception” for defined modules.

2.5 Integration of announcements

For the import of once and recurrent external announcements or voice promts, etc. into a VISOCALL IP system. The performing of an announcement can be made from a PC using either the headset or a stand microphone or a wave file. The destination of the announcement is configurable.
Depending on the configuration, audio signals of external electro acoustics systems, can be switched to the VISOCALL IP system or nurse call announcements to external audio systems.

2.6 Integration of the intranet and internet

This integration process is carried out in two different ways:

Using laptops

An RJ45 socket has been integrated in the connection module for connecting the patient terminal, to which a laptop can be connected. Consequently, the user, according to the privileges granted by the smartcard used, will be able to consume various online services over the system network. The smartcard will simultaneously be used for billing of these services.

Using multimedia terminals

As an alternative to the aforementioned solution, the system also allows so-called multimedia terminals to be used. In this instance, such a terminal is to be permanently installed next to every patient bed, and to be connected to the system network. The patient terminal itself is held in a mechanical fitting on the multimedia terminal. The operation of the multimedia terminal in online mode is by means of a combined keyboard with trackball. The smartcard used allows the services to be provided to be selected as well as the possibility to bill the online service charges that are incurred.

Security guaranteed by VLAN

For security reasons an internal VLAN is formed for patient laptops and multimedia terminals. This ensures that Internet users do not have any opportunity to log into the hospital network or to examine data packets in this way.

Quality of service

Specific IP parameters in the TCP/IP protocols ensure that all data relevant for safety are distributed within the network and can be indicated on the intended end devices without delay. In addition, this also increases the security of the system and counteracts any possible interference from other data packets.

2.7 Combined functions with other systems

The following interfaces were incorporated in the VISOCALL IP:

Fire detector system

Automatic forwarding of fire alarms using serial data protocol. These messages are forwarded to specific parts of the system in the entire system depending on the location in which they were triggered. The assignment of where which type of alarm should be indicated is determined in the system configuration. Furthermore the VISOCALL IP also forwards these messages to the alarm server or to defined mobile end devices over the system interfaces.

Disorientation system

Automatic forwarding of alarms from the SecurWATCH disorientation system, if confused patients or residents leave the confines of the establishment with being noticed. In this serial protocol, all data (e.g. name of the person concerned as well as the area in which they are located) are contained, that are forward by VISOCALL IP to the defined modules. These alarms are also forwarded to the alarm server or to defined mobile end devices over the system interfaces.

Alarm server

Forwarding of the relevant type of call and the location of the call as plain text using the serial data protocol. The information to be forwarded is executed by the relevant interface and must be activated individually. Furthermore, it is ensured that calls which have not been acknowledged within a preconfigured period of time must to be passed on to the alarm server as repeated calls.

Mobile end devices

Transmission of the type of call and the call location as plain text as well as connection of speech communications between the nurse call system and the mobile end device in both directions. The quantity of possible speech channels is defined by the virtual extensions in the telecommunications system. E.g. if 40 extensions are made available, then it is possible for up to 40 devices to speak at once. In the event that a speech connection has already been established, reminders are set for all staff categories separately from the mobile end device. For security reasons, a repeat message must be sent to the relevant mobile device after a pre-configured time, for reminders which have been sent from the mobile unit and which have not been acknowledged.

TV Devices

Operation of system TV devices with modern Full HD, LED/LED HD technology from patient terminals. TV sound is also to be incorporated into the patient terminal.

Electro-acoustics system

Depending on the configuration and per ward, external audio signals can switched to the VISOCALL IP system or nurse call announcements to external audio systems. This functional connection is realized via a galvanically isolated audio interface.

Building automation

Control of e.g. illumination (reading and room light) and blinds or shading devices via patient terminals. VISOCALL IP - control commands are transferred via a IP interface to a fieldbus system, which controls the individual actuators.

Other foreign systems

Furthermore, there are also system interfaces, which connect the widest range of systems bidirectionally with VISOCALL IP. These functional connections are made using potential-free inputs and outputs. For messages that are sent to the VISOCALL IP system, clear message texts are assigned. It is also possible to forward messages to the alarm server or to the mobile system.

3 Basic installation

Infinitely variable system construction

Every system switch has 9 IP ports, one of which is used as the uplink (100Mb), with the other 8 ports (100Mb each) being available for IP system components. Two connected communications terminals (KMT) already form an autonomous and functional system with all the relevant functions required for a call system. Every type of system can be formed as a result of the cabling structure.

3.1 Wiring

VISOCALL IP is a security system, which was designed in the first instance for the integration of nursecall functions. Visocall IP uses structured LAN cabling, which is already used in the IT world. This IP-based structure is also used for other functions, but the security functions for VISOCALL IP set out in the standard VDE0834 must continue to have absolute priority. It is therefore necessary to prioritise cabling and connectors for the system. As a result of this the following requirements arise:

- CAT5 cable of the type F-UTP 4 x 2 x 0.5 AWG24
- The relevant connectors as prescribed by Schrack Seconet AG
- Checking of the LAN structure in accordance with EN 50173-1: 2011 Class D

As a renowned company with a great deal of experience in the communications and security branches, SCHRACK-SECONET AG explicitly advises, that guidance must be given with regard to the cable types and the accompanying RJ45 connectors for the VISOCALL IP system. The issue of security and safety is of primary importance, with patient wellbeing being our concern. All other and additional functions are to be viewed as optional extras.

As a result of the cabling structure and the recommendation of cable marking, it is ensured that it can not be possible for cables to be mixed up. RJ45 connection sockets on the IP bus and I/O bus components make fitting easier, reduce the expenditure on the installation and increase maintenance-friendliness.

3.2 Optimal concept for devices

Components which have been thoroughly thought out down to the finest details are a hallmark of the VISOCALL IP device concept:

System switch

For fitting in cavity ceilings and 19 inch switching cases.

Connection module IP

Ip component for fitting into double countersunk switchboxes or installation units for hospital rooms (media ducts).

Connection module single IP

Ip component for fitting into single countersunk switchboxes or installation units for hospital rooms (media ducts).

Connection module B

To be built into double countersunk switchboxes or installation units for hospital rooms (service ducts) in different versions with different connection options:

- 2 x RJ45 sockets for connection to the I/O bus,
- 2 x RJ12 sockets for connection to the data circuits (connection module I/O or room electronic),
- 4 x RJ12 sockets for connection to various basic components.

Connection module single B

To be built into single countersunk switchboxes or installation units for hospital rooms (service ducts) and in two different versions:

- Insulation displacement for connecting to the data circuits (push button),
- 1 x RJ12 socket for connection to the data circuits (radio receiver).

Diagnostic module

To be built into double countersunk switchboxes or installation units for hospital rooms (service ducts) with 2x RJ45 sockets for connection to the I/O bus.

Diagnostic module single IP

Ip component for fitting into single countersunk switchboxes or installation units for hospital rooms (media ducts).

Push button

Simple manual call components with call button and two lighting buttons that function independently of one another.

Patient terminal

Various versions available - the optimal solution for every use.

Button modules

For toilets, bathrooms and day rooms etc.

Lamp modules

For signalling on a room, area and ward-related basis, using LED technology.

Communications terminals

Autarchic communications and data centres, with integrated speech communication and membrane keypad.

Room terminals

Simple room component without speech communication, with membrane keypad and chooseable with or without a display. To be built into double countersuck switchbox (call button, present button and doctor call button). 2x RJ45 sockets for the connection to the I/O bus, 5x RJ12 sockets for the connection to various basic components.

Electronics for rooms

Simple electronic circuitry without speech connection, fitted into a special installation case. 2x RJ45 sockets for the connection to the I/O bus, 5x RJ12 sockets for the connection to various basic components.

Sound interface

Sound streaming via LAN. 64kb/s per program.

Text displays

For quick, comprehensive and clear signalling.

Ward terminal

With a ¼ VGA colour display and interactive buttons.

Staff terminal

TFT display with LED backlight and touch panel with icons.

Control panel

Colour graphical monitor system for an optional overview and easy operation.

Service monitor

For fault indication on a PC. Password-protected access for up to 16 users.

Power supplies

For supplying power to the ward or a particular sector (24V=).

Accessories

Single or double switchboxes, LED lamps

3.3 Realisation of all types of system

The freely programmable platform allow

- Decentralised systems or/and
- Centralised systems or/and
- Combination systems

to be formed.

It is possible to change from one type of system to another at any time. The platform allows the creation of: Communication islands for bathrooms and therapy wards with an independent sequence of functions within each type of system.

3.4 Combination with other systems

VISOCALL IP can work in combination with a wide range of other systems:

- In combination with Schrack Seconet's automatic billing system
- In combination with lighting controls
- In combination with building automation
- In combination with electro-acoucstics system
- In combination with the wireless paging system
- In combination with mobile end devices
- In combination with the IT system
- In combination with the fire alarm system
- In combination with the in-house IT system
- In combination with the disorientation system

VISOCALL IP is the symbiosis of the complex requirements placed on future looking communications systems in the healthcare sector, of the highest level of security and optimal operating comfort and maintenance-friendliness. All these features are bundled together with state-of-the-art technology and a timeless design.

4 The types of system

VISOCALL IP makes it possible to implement any type of system conforming to VDE 0834/part 1 whilst additionally offering practice-specific customisability.

- Global measures can also be implemented for decentralised systems (using possible extensions).
- There are no limitations to the number of possibilities for extending VISOCALL IP's functions and configurations. All important system devices contain single chip processors with comprehensive software, which permits the required functions to be carried out.
- Any system configuration is possible, based upon a standard installation of the system, by simply connecting communications terminal, ward terminals and control panels to the switches. If all types of connector are present, then it is possible to use or remove any type of device at any time. Devices automatically recognise the current status of the system.

4.1 Decentralised systems

Decentralised nurse-call communication systems consider each ward as an individual sector, in which the system-related interests of patient care by nursing staff in the ward are detected directly.

- All calls by patients reach nursing staff immediately, and are followed up by the nursing staff either via using the system's speech circuits or by them going to the place where the call originated.
- Each ward is equipped with a ward terminal, from which the current functional status of the system can be ascertained, and can be acted upon accordingly. The communications terminals offer support in all important rooms.
- Decentralised stations can be combined practically for operation with reduced staffing levels. Nursing staff are then not bound to a specific area. These functions (e.g. call forwarding, speech connections) are also incorporated into all interconnected wards and can be queried at every communications terminal and every ward terminal. The interconnection of groups can be activated and deactivated again at any time. In critical cases, an interconnection process occurs automatically.

4.2 Centralised systems

Centralised nursecall communications systems possess a control panel covering all wards in the building.

- All calls are indicated on this control panel and are in particular queried by trained staff members. The tasks to be carried out in the various wards are then forwarded to the nursing staff members working in that area via the system's speech circuits. Communication with nursing staff and patients is carried out via the communications terminals or patient terminals. Other sectors can also be integrated in to the functions section of the control panel.
- Any ward can be detached from the control panel at any time and then function in a decentralised manner. Speech transmission in every detached ward remains possible, even when the area does not contain any ward terminals. Equally, each decentralised ward can also be reconnected to the control panel. If the control panel is unmanned, then all wards function as decentralised wards. The type of system can be changed at the push of a button, or, in critical instances, automatically.

4.3 Combination systems

Combination systems make it possible to selectively use both types of care systems listed above.

- All types of system can be used with the corresponding query locations. Activated configurations can function separately from one another or in harmony with one another. It is possible to change from one type of system to another at the press of a button or (in critical instances) automatically.
- Combination systems offer the advantages of both decentralised and centralised forms. The (decentralised) wards that are no longer being operating centrally can also be combined with one another. It is therefore possible, for example, to have all wards displayed the control panel by day, whilst each ward is decentralised during the night. Otherwise, all wards can function as decentralised ones, whilst a control panel is activated for the centralised night watch duty, on which checks or combining of functions can be carried out.

4.4 Communication islands

By using various terminals, independent communications islands can be formed without the need for any particular arrangements. They are created, for example, for care wards. If organisationally required, then these communications islands can also be interconnected with other wards.

4.5 Group care

In certain cases it is necessary to define care groups within individual wards (communication islands). Different nursing staff members are responsible for different patient groups. Calls made in a care group remain within the group and are then also treated within the group. In the event that there is no prompt reaction, the calls are automatically forwarded. Up to 255 care groups can be defined per VISOCALL IP system. The division of care groups in to wards or across several wards is then dependent on the requirements of the customer.

5 The system functions

VISOCALL IP does not require superordinated controls – neither for functions, nor for speech circuits.

- All system functions are stored, ready-for-use, in the microcomputers of the autarchic communications terminals and query locations.
- The management center recognises all system components in the system as required (system switches, communications terminals, patient terminals, all types of call button combinations, lamp modules etc.) and thereby allows low-effort configuration and customer-specific programming.
- The system devices communicate over TCP/IP with one another and make the relevant assigned functional decisions autarchically.
- Every important function (doctor call, diagnostic call, emergency call etc.) can be monitored via the system interface and can be transferred to other systems or communications processes.

The following functions are as standard. Additional property-specific customisations can be carried out using the system's software structure.

The light signals, call signals and intervals between signals etc. correspond to the standard VDE0834/1-2000. When explaining about the functions and system components the terms used in the standards are also used.

5.1 Call types and priorities

All types of calls listed further below are ranked according to priority within the entire system. If different calls are triggered at the same time, then all system devices will automatically display the highest ranking call in first place. Only once this call has been dealt with, will the next call within the priority list be treated. If two calls with equal priority are triggered, then the system works in strict chronological order, with the first of the calls of equal priority being treated first.

The following call types, corresponding to the basic priorities mentioned are available:

1. Heart alarm
2. Doctor call
3. Disorientation threat
4. Fire alarm
5. Disorientation alarm
6. Diagnostic associated disconnection call
7. Diagnostic call
8. Bathroom or WC emergency call
9. Bed emergency call
10. Room emergency call
11. Bathroom or WC call
12. Bed associated disconnection call
13. Enhanced patient call from his bed
14. Patient call from his bed
15. Room call
16. Service call
17. Disorientation manipulation
18. Disorientation low battery
19. Fault
20. Failure

In special cases can be configured "Additional calls".

General requirements

All events generated in or by the system are transferred to the mobile end devices and alarm server interface. Moreover, they are also recorded in chronological order in a log file, and can be displayed or printed out as necessary. All keys within the system that trigger calls are fitted with a so-called finder light in accordance with VDE0834, so that the call buttons are also easy to locate in darkened rooms.

5.2 The heart alarm

This is a remote call made by the nurse to the doctor or to a reanimation team in an emergency. This call occurs when nurse presence is set at the communications terminal and is indicated optically and acoustically on other terminals where doctor or nurse presence is marked. If required, this heart alarm can also be queried. If required this heart alarm can also be queried. The call is signalled using a blue flashing light and an acoustic signal with a fast call rhythm (alarm call pursuant to VDE0384). The organisation of the call or the alarm is adapted to the requirements of the hospital.

The heart alarm is only able to be cancelled by pressing the doctor presence key at the terminal from which the call was triggered. Once this call has been queried, there is also the opportunity to activate a reminder.

5.3 The doctor call

This is a remote call made by the nurse to the doctor in an emergency. The call is made where nurse presence has been marked on the communications terminal and is indicated optically and acoustically on other terminals where doctor presence is marked (with information on the display about the precise call location). If required it is also possible for this call to be queried. The call is signalled using a blue flashing light and an acoustic signal with a normal call rhythm (emergency call pursuant to VDE0384). The doctor call is either cancelled by pressing the doctor presence key at the terminal from which the call was triggered or by remotely cancelling the call once a call query has taken place. Once this call has been queried, there is also the opportunity to activate a reminder.

5.4 The fire alarm

This event is automatically generated by the BMZ Integral IP fire detector system. It is passed on to the VISOCALL IP communications system via a unidirectional system interface, and is indicated on differing end devices dependent on the configuration.

The following parameters can be configured for this:

- The display text for the event to be displayed,
- In which ward(s) it should be indicated,
- Whether the indication should occur only where there is staff presence marked or generally at every terminal (programmable),
- Forwarding of the event to other system interfaces (e.g. mobile end devices or alarm server)
- The duration for which it is to be indicated in the configured end devices,

It is indicated optically on the terminal on the display (including information about the area in which the fire was detected) as well as acoustically with a quick call rhythm (alarm call pursuant to VDE0834). This event can not be acknowledged within the VISOCALL IP system. It can only be cancelled via the fire detector system.

5.5 Diagnostic call

This call is automatically triggered by a monitoring device at the patient's bed, and is indicated at the other terminals where nurse presence has been marked both optically (with information on the display about the precise call location including the bed number) as well as acoustically. The call can not be queried and is followed up by the nurse directly. The call is signalled using a red flashing light and an acoustic signal with a fast call rhythm (alarm call pursuant to VDE0384). The call is cancelled directly from the external monitoring device, with cancellation from within the communications system not being permitted.

5.6 Disorientation call

This type of call is generated automatically by the external SecurWATCH disorientation alarm system, and informs staff members that a person who is not allowed to has left a defined local area.

This event is passed on to the communications system by means of a unidirectional system interface, and should be indicated at differing end devices dependent on the configuration.

The following parameters can be configured for this call:

- In which ward(s) it should be indicated,
- Whether the indication should occur only where there is staff presence marked or generally at every terminal (programmable),
- Forwarding of the event to other system interfaces (e.g. mobile end devices or alarm server)

The indication occurs at terminals where nurse presence has been set optically on the display (with information about the person concerned and the area that they have left) and acoustically in fast call rhythm (alarm call conformant to VDE0834). The call can not be queried and is followed up by the nurse directly.

The call is manually cancelled by pressing the relevant cancel button on a ward terminal intended for this purpose.

5.7 Bathroom or WC emergency call

This is a call made by a nurse from a sanitary room (WC, shower etc.) with marked nurse presence. The call can not be queried and must be followed up by the nurse directly. The call is signalled using a red and white flashing light and an acoustic signal with a fast call rhythm (emergency call pursuant to VDE0384). Furthermore, all system displays recognise this call as such in an unambiguous manner and make details known about the room in question.

The call is cancelled either using a separate cancellation button or by using the accompanying presence button at the communications terminal.

5.8 Bed emergency call

This is an emergency call made by a nurse from a patient bed. The call is made where nurse presence has been marked on the communications terminal and is indicated optically and acoustically on other terminals where nurse presence is marked (with information on the display about the precise call location including bed number). The call is signalled using a red flashing light and an acoustic signal with a fast call rhythm (emergency call pursuant to VDE0384). If required this call can also be queried from the KMT. The bed emergency call is either cancelled by pressing the nurse presence key at the terminal from which the call was triggered or by remotely cancelling the call once a call query has taken place. Once this call has been queried, there is also the opportunity to activate a reminder.

5.9 Room emergency call

This is an emergency call made by a nurse from a room within the ward. The call is made where nurse presence has been marked on the communications terminal and is indicated optically and acoustically on other terminals where nurse presence is marked (with information on the display about the precise call location). The call is signalled using a red flashing light and an acoustic signal with a fast call rhythm (emergency call pursuant to VDE0384). If required this call can also be queried from the KMT. The room emergency call is either cancelled by pressing the nurse presence key at the terminal from which the call was triggered or by remotely cancelling the call once a call query has taken place. Once this call has been queried, there is also the opportunity to activate a reminder.

5.10 Bathroom or WC call

This call is made by the patient from a sanitary unit (toilet, shower, etc.). The call can not be queried and must be followed up by the nurse directly. The call is signalled using a red and white continuous light and an acoustic signal with a slow call rhythm (call pursuant to VDE0384). Furthermore, all system displays recognise this call as such in an unambiguous manner and make details known about the room in question.
The call is cancelled either using a separate cancellation button or by using the accompanying presence button at the communications terminal.

5.11 Disconnection call

This call is automatically made, as soon as the connection plug of a patient terminal is pulled out of its connection module. This call is indicated at other terminals with nurse presence set both optically on the display (with information about the precise call location including bed number) and acoustically. The call is signalled using a permanent red light and an acoustic signal with a normal call rhythm (call pursuant to VDE0384). The call can not be queried and must be followed up by the nurse directly. The room call is cancelled by setting nurse presence on the terminal.

If a patient terminal is consciously disconnected by staff e.g. to clean it, a disconnection call can be circumvented by simultaneously pressing a specific combination of keys.

5.12 Enhanced patient call

This is a call made by a patient from their bed, who is e.g. severely ill or has just undergone an operation. This call is indicated at other terminals with nurse presence set both optically on the display (with information about the precise call location including bed number) and acoustically. The call is signalled using a permanent red light and an acoustic signal with a normal call rhythm (call pursuant to VDE0384). If required this call can also be queried from the KMT. The room call is either cancelled by pressing the nurse presence key at the terminal from which the call was triggered or by remotely cancelling the call once a call query has taken place. Once this call has been queried, there is also the opportunity to activate a reminder.

The ward sister is responsible for making the decision to upgrade individual patients, with the programming being carried out via the ward terminal or the control panel. This type of call has a higher priority than standard patient calls.

5.13 Patient call

This call is made by the patient from their patient bed. This call is indicated at other terminals with nurse presence set both optically on the display (with information about the precise call location including bed number) and acoustically. The call is signalled using a permanent red light and an acoustic signal with a normal call rhythm (call pursuant to VDE0384). If required this call can also be queried from the KMT. The room call is either cancelled by pressing the nurse presence key at the terminal from which the call was triggered or by remotely cancelling the call once a call query has taken place. Once this call has been queried, there is also the opportunity to activate a reminder.

5.14 Room call

This is a call made by a patient from a room within the ward. This call is indicated at other terminals with nurse presence set both optically on the display (with information about the precise call location) and acoustically. The call is signalled using a permanent red light and an acoustic signal with a normal call rhythm (call pursuant to VDE0384). If required this call can also be queried from the KMT. The room call is either cancelled by pressing the nurse presence key at the terminal from which the call was triggered or by remotely cancelling the call once a call query has taken place. Once this call has been queried, there is also the opportunity to activate a reminder.

5.15 Message from a foreign system

These messages are generated by foreign systems and inform the relevant staff members in this way via the indication elements existing for the described system. These events are transmitted using potential-free contacts to the communications system and are indicated on various system end devices dependent on the system's configuration.

The following parameters can be configured:

- Text is highlighted to show which event is concerned,
- The event is locally assigned,
- Which staff members should receive the message (nurses, service staff, doctors or technicians)
- If nurses, service staff or doctors are to be informed about the message, then it is to be indicated either when presence has been marked or always,
- Forwarding of the event to other system interfaces (e.g. mobile end devices or alarm server)

- The priority of the call
- Call transmission either by continuous contact or a wiping contact
- Optical and acoustic indication of the message in the system conformant to VDE0834

Indication on the terminals is optically on the display with details about the location and the event as well as acoustically accordingly to the configured acoustic signal conformant to VDE0834. The calls are not queryable and are followed up by staff members directly.

The call is cancelled, depending on the foreign system‘s configuration, either by the foreign system itself (by opening the continuous contact) or manually by pressing the relevant cancel button on a ward terminal intended for that purpose.

5.16 Service call

This is a call made by a patient from their patient bed using a special service call button on the patient terminal. This call is indicated at other terminals with service staff presence set both optically on the display (with information about the precise call location including bed number) and acoustically. The call is signalled using a permanent red light and an acoustic signal with a normal call rhythm (call pursuant to VDE0384). This call can also be queried if required. The service call is either cancelled by pressing the service staff presence key at the terminal from which the call was triggered or by remotely cancelling the call once a call query has taken place. Once this call has been queried, there is also the opportunity to activate a reminder.

5.17 Additional calls

These are calls made by a patient from their patient bed via special configured service call key of the patient terminal. This additional call types may be used in addition to the service call in the service call key menu. These special calls are visually displayed (including exact call position and bed number) on the other terminals with set service staff attendance and signaled acoustically. The call signaling is performed by a steady red light and an audible signal in the normal call rhythm (VDE0834). If necessary, it is also possible to query this call. The canceling of the call will either be done by setting the service staff presence on the terminal of the call initiation or by remotely cancel by a call inquering. After inquiry of this call it is also possible to set a reminder.

5.18 Fault message

The fault message is automatically detected by the communications system in the event of wire breaks or similar events and is indicated immediately on all ward terminals and control panels that can be reached, both optically and acoustically, as well as being forwarded to other systems such as mobile end devices, central management systems or alarm servers via various interfaces. The optical messages on the display contain pertinent information, from which it is possible to ascertain the approximate location of the fault. This message is cancelled once the fault itself has been dealt with, however it is possible to suppress the acoustic indication for a configured period of time after pressing a key on the ward terminal.

5.19 Failure message

The failure message is automatically detected by the communications system in the event of the complete failure of a system switch or of an IP module and is indicated immediately on all ward terminals and control panels that can be reached, both optically and acoustically, as well as being forwarded to other systems such as mobile end devices, central management systems or alarm servers via various interfaces. The optical messages on the display contain pertinent information, from which it is possible to ascertain the approximate location of the failure. This message is cancelled once the failure itself has been dealt with, however it is possible to suppress the acoustic indication for a configured period of time after pressing a key on the ward terminal.

6 Standard functions

6.1 Treating the call at the staff terminal

Call queries are handled on a room-by-room basis down to the patient terminals. The nurse can receive one call after the other in accordance with the priority of the calls as well as in a free order. Each call is instantly recognisable as being queryable or not queryable. In order to optimise the operating procedure, the relevant information is shown as plain text on the display using different colours and symbols.

It can also be configured that the call can be cancelled simply by pressing the function field on the touchscreen.

Queryable Calls on modules intended for this person

After the call has been queried, a speech connection is established to the caller, which is displayed by means of an attention reminder to both parties in the conversation. Additionally, the type of call and location of the call are also displayed. Once the conversation has been ended, each call can be remotely cancelled or be replaced by a reminder.

Non Queryable calls

They are also immediately displayed according to type of call and location of call after having been received. The call is cancelled at the location where the call was triggered, which can additionally be ascertained by means of a reminder.

Appearance on the display

Up to 6 currently pending calls can be displayed simultaneously on the staff terminal. It is possible to view all the calls using the touchscreen scroll function. On the right hand side next to the call symbol the type of call and call location is displayed as plain text.

6.2 Treating the call at the ward terminal

Call queries are handled on a room-by-room basis down to the patient terminals. The nurse can receive one call after the other in accordance with the priority of the calls as well as in a free order. Each call is instantly recognisable as being queryable or not queryable. In order to optimise the operating procedure, the relevant information is shown as plain text on the display using different colours and symbols.

It can also be configured that the call can be cancelled simply by pressing a button.

Queryable Calls on modules intended for this person

After the call has been queried, a speech connection is established to the caller, which is displayed by means of an attention reminder to both parties in the conversation. Additionally, the type of call and location of the call are also displayed. Once the conversation has been ended, each call can be remotely cancelled or be replaced by a reminder.

Non Queryable calls

They are also immediately displayed according to type of call and location of call after having been received. The call is cancelled at the location where the call was triggered, which can additionally be ascertained by means of a reminder.

Appearance on the display

Up to 4 currently pending calls can be displayed simultaneously on the ward terminal. It is possible to view all the calls using the scroll function. On the right hand side next to the call symbol the type of call and call location is displayed as plain text.

6.3 Treating calls from the communications terminals

Communications terminals with presence marked are automatically activated in decentralised systems for call diversion and secondary queries. As a result the nurse can be reached in every important room in the ward, and is therefore informed of existing calls. Linking to the network happens according to the priority hierarchy, and each call is immediately recognised as being queryable or non-queryable.

If several calls occur simultaneously, then the call which according to the configuration has the highest ranking is displayed automatically. It is simultaneously possible to recognise that other calls exist that are waiting to being dealt with. Staff members have the opportunity via a "scroll function" to see all other calls and to attend to the calls based on their own decision.

Queryable calls

When a queryable call is accepted, a speech connection to the person making the call is made. Once the conversation has been ended, each call can be remotely cancelled or be replaced by a reminder.

Non Queryable calls

They are recognisable as such straightaway and can only be acknowledged from the location where the call was triggered.

Appearance on the display

The displays on the communications terminals are fully graphical, with a resolution of 128 x 64 pixels and must indicate the relevant call type, call area, call location and at least 16 characters of additional information in plain text form. Additional calls made during the conversation are signalled by a changing display.
The displays on the patient terminals are also fitted with a 128 x 64 pixel full graphic display, with in this case the main priority being that hints for operation must be given.

6.4 Call answering at room terminals

Room terminals with presence marked are automatically activated in decentralised systems for call forwarding. As a result the nurse can be reached in every important room in the ward, and informed of outstanding calls. Calls are connected based on the priority scheme.

Non Queryable calls:

They can be recognised as such straightaway and can only be acknowledged from the location where the call was triggered.

Appearance on the display:

The displays on the communications terminals are fully graphical with a resolution of 128 x 64 pixels and indicate the relevant call type, call area, call location and at least 16 characters of additional information in plain text form. Additional calls made during the conversation are signalled by a changing display.

6.5 Reminder

A reminder allows the indication (marking, identification) of rooms, which are to be visited by a member of the nursing staff as a follow-up to a call. A reminder is generally activated by nursing staff themselves, in the event that there is no reply from the person making the call when querying a call, or if there is no speech connection for a call, or if there is an engaged tone, or if other calls are to be queried before going to the location of the call or if calls are delegated to other nursing staff members. Up to three reminders can be activated at communications terminals or at the ward terminal or at the control panel – for:

- Nurses Green flashing
- Service staff Yellow flashing
- Doctors Blue flashing

Calls parked by the reminder and were not reset by the respective presence button (in the room of the caller), are automatically regenerated after a predefined time. This newly generated call is also sent to the alarm server or a DECT system terminal. This prevents that a set reminder remains unnoticed.
The cancellation of a reminder in a "marked" room occurs by setting the relevant presence in the room of the caller.

6.6 Room call

The nurse at the ward terminal or the control panel can also establish communications to every individual communications terminal in that area even when there is no call outstanding. At terminals where presence has not been marked a mute is automatically put in place, which can be lifted by replying from this terminal. The room telephone call is signalled optically and acoustically at the selected terminal.

6.7 The patient telephone call

The nurse at the ward terminal or the control panel can also establish communications to every individual patient terminal within that area even when there is no call outstanding, with a mute function automatically being activated, which can be deactivated by a return call from the patient terminal. The patient telephone call is signalled optically and acoustically at the patient terminal.

6.8 Announcements

Staff members at the ward terminal, the control panel and the communications terminal can make announcements at all configured terminals. These announcements are simultaneously possible both by separate staff category (nurse, service staff or doctor) as well as in all rooms within a zone.

- Presence-related announcements only reach the communications terminals of the ward being called, at which members of the relevant staff members have marked their presence. This applies both to doctor and nurse presence.
- Collective announcements reach all communications terminals and patient terminals within the ward, regardless of whether presence has been marked or not.
- General announcements (via audio manager) reach all communications terminals and patient terminals in the entire system.

6.9 Manual or timed ward interconnection

This allows the manual or timed formation of care areas, which consist of two or more wards. The indication, call forwarding and possibility to query every call is then extended in accordance with the priorities set to all ward terminals and communications terminals in this area. Additionally ward lamp modules or corridor displays indicate calls or reminders from all interconnected wards. The displays on the ward terminals and communications terminals are able to display the name of the ward when calls are being forwarded.

6.10 Automatic call forwarding

If calls have not been able to be dealt with within a pre-configured time due to the fact that staff members are all busy, it is possible to forward a call to one or more other pre-configured care groups. This continues to take place until all calls have been dealt with. All other functions are identical to those for manual interconnection.

6.11 Group care

Group care makes it possible to assign rooms within a ward or even across several wards into logical groups. This can either be done as a one-off event or during normal system operation. Up to 255 different care groups are possible within a VC-IP system. Calls from a care group remain exclusively within this group as long as they are answered promptly. If this is not the case in an individual instance, then the call is automatically forwarded.

6.12 Ward-by-ward centralisation

It is possible for centralisation to block call forwarding and the ability to query the call at communications terminals across the whole ward. All calls from the ward are only displayed at the ward terminal and can then only be queried from here. Centralisation is said to have occurred, if, for example, all calls are queried by a nurse at the ward terminal, which will be delegated to other nursing staff in the ward for dealing with.

6.13 Global centralisation

It is possible for centralisation to block call forwarding and the ability to query the call both at communications terminals as well as at the ward terminal. All calls from the ward are only displayed at the centralised control panel and can then only be queried from here. Centralisation is said to have occurred, if, for example, all calls are queried by a staff member at the control panel, which will be delegated to other nursing staff in the ward for dealing with.

6.14 Variable assignment of rooms and wards

During the commissioning process of the communications system, it is configured which end devices are functionally assigned to which room or to which ward. Logical units, such as rooms, sanitary rooms, wards, storeys etc. are formed regardless of their physical structure by various software parameters. On the one hand, it is possible to carry out the necessary for group nursing in a very easy way.

6.15 Test and service functions

In accordance with the standards listed at the beginning of the document, all system devices are automatically monitored to check that they are functioning properly. Errors detected by the system are indicated on the ward terminal or control panel as either "failures" or "faults" depending on their cause. Devices and parts of the system that are not affected continue to function without their functioning being impeded. Test functions which can be carried out at any time, for displays, LED's and audible alarms, enable the problem-free testing of these system components.

6.16 Regulated call forwarding

The querying of a call ends it being displayed on other system devices, although new calls are immediately displayed again. A conversation can neither be influenced nor terminated from another location. It is also not possible to listen in on conversations.

6.17 Automatic call termination

To avoid speech circuits getting blocked, patient calls are terminated after a specific time period. A conversation automatically cancels the call, even when someone forgets to cancel the call at the end of the conversation.

6.18 Backing up of data

The memory modules of the system computer saves its current state of information in the event of a power failure for an unlimited period of time, and restores it once the power returns.

If there is a power cut during a conversation, then the call of the affected room is shown again when the power returns.

6.19 Switching of lighting circuits

Every patient handset contains two lighting buttons with integrated guide lighting. They are used for indirectly controlling of two lighting circuits (e.g. a "reading light" and "room lighting").

6.20 Receiving radio programmes

All communications terminals and the patient terminals PAT and PAT-E are able to receive digitised radio programs. For this purpose, a system is housed in a central location, which receives the radio programs from the network of aerials and digitises them and distributes them to the end devices over the communications network. Other external LF signals can also be incorporated in digitised form using this centralised receiver module. These signals are either treated by the system configuration as additional programs.

6.21 Call acoustics - day/night function

Through this function, the acoustics of the communication-, ward or staff terminals can be automatically lowered for a pre-configured time (e.g. at night).

7 Additional functions of the system

Infrared receiver

The IP patient terminals have the possibility to receive wireless signals, which make the patient terminal “remote controllable” e.g. as devices for controlling surrounding conditions (or similar systems) for the severely disabled.

Text terminal display

The text terminal displays in e.g. corridors, lounges or staircases, can carry out other tasks in idle mode, such as displaying the date and time.

Permanent presence

For the ward terminals and communication terminals, it is possible to configure a permanent „call acoustics without attendance“. This calls are displayed and signaled even without set an attendance.

Reminder call

This function allows to set a timer on the communication terminal KMT in order to signal the end of a medical therapy (e.g. a physio therapy). After the set time a call is initiated, the call type and the call name can be configured. Up to five minutes the countdown can be set every minute and from the fifth minute, it can be set for every five minutes. During the therapy, the communication terminal displays the remaining time. The timer can also be stopped via the communication terminal menu.

Parental controls for TV operation

This function is possible for example in children‘s wards to lock the TV function for a certain time (e.g. at night).

Integration of switching contacts

For bidirectional interfaces to foreign systems. All generated events in VISOCALL IP can be passed on this way to other systems, in the same way that status messages from other systems can be received by the communication system.

For these events it is possible to configure a special message text with the call priority as well as configuring the ward and staff category that should be informed about this event. Furthermore, these interfaces are used for controlling a reading light and room lighting as well as for controlling electronically adjustable blinds and similar systems.

8 System devices

Using the aforementioned system devices it is possible, in practice, to create any type of system imaginable. Functions are automatically adapted using the device's in-built software. The system devices correspond to the relevant VDE and DIN standards. For connection to cabling, they have an RJ45 jack either in its standard form, or with a special self-disconnecting mechanical property.

- Switchboxes and double switchboxes for use in installation in cavity walls and concealed installation are as standard (as described in section 12 "Installation Accessories") and can also be obtained elsewhere. The same is also true for the various wiring materials.
- Some system devices are delivered as individual pieces for economic reasons and installation purposes. These parts for shipping are listed alongside the relevant devices, including their article numbers.
- Precise advice and recommendations for the selection, planning and configuration of system devices in the various types of rooms within a hospital, can be found in the technical documentation "**Planning and Installation**" (K-HB-004EN) which feature many diagrams and examples.

8.1 Communication and security at the hospital bed

Patient terminal as a handheld unit

Moveable and easy to manoeuvre like a telephone receiver, it is the ideal communications device for the hospital bed. The follow functions are available as standard:

- Call nursing staff,
- Voice connection with staff members,
- Operate reading light and room lighting and
- Listen to the radio.

The following options are possible:

- Making telephone calls
- Controlling the room's television and receiving TV sound
- Operating the patient's television and receiving TV sound
- Telephone usage with fee model
- Television usage with fee for 24 hours
- Control blinds

Staff members use the same device if they require assistance. Every device contains a single chip processor with its own software for bed-autarchic intelligence. Every device is fitted with a self-disconnecting plug.

Push button as a handheld unit

Moveable and easy to manoeuvre like a telephone receiver, it is the ideal communications component for the hospital bed. The following functions are available:

- Call nursing staff,
- Operate reading light and/or room lighting

Staff members use the same device if they require assistance. Every device is fitted with a self-disconnecting plug.

8.2 Communication and security in every room

Communications terminal

The room autarchic communications centre for every important room. From here nursing staff members and doctors can:

- Indicate their presence,
- Clear calls,
- Acknowledge and query calls,
- Set reminders
- Set therapy timer,
- Call for assistance and even
- Make ward announcements.

Each communications terminal contains its own computer system with multifunctional software and many new advantages – e.g.:

- Centralised firmware upload
- Multiple line full graphic display with scroll function
- Radio reception via streams
- Membrane keys, wear-free LED's etc.

Room terminal

The centralised communications centre for every important room. From here nursing staff members and doctors can:

- Indicate their presence,
- Investigate calls,
- Call for assistance

Every room terminal contains a processor with multifunctional software and many advantages - e.g.:

- Centralised firmware upload
- Multiline full graphic display
- Membrane keys, wear-free LED's etc.

8.3 Communication and security in the ward's nurses room

Staff terminal

The ward terminal is mainly used in the event of a decentralised system being in effect. With its TFT display with wide viewing angle and LED backlight, an interactive operation via touch sensor field icons, it offers the user a simple way for indicators and controls, such as:

- Presence lists arranged by room,
- Signalling of calls on the call priority, the query is selectable,
- Setting of reminders,
- Bed, room and group announcements etc.
- Ward interconnections
- Enforcement of centralisation of areas
- Upgrading of patient calls
- Activation of group care
- Recognition of faults and failures

Password-protected programmer level and selection by room of group care and selection by bed of enhanced bed calls.

Ward terminal

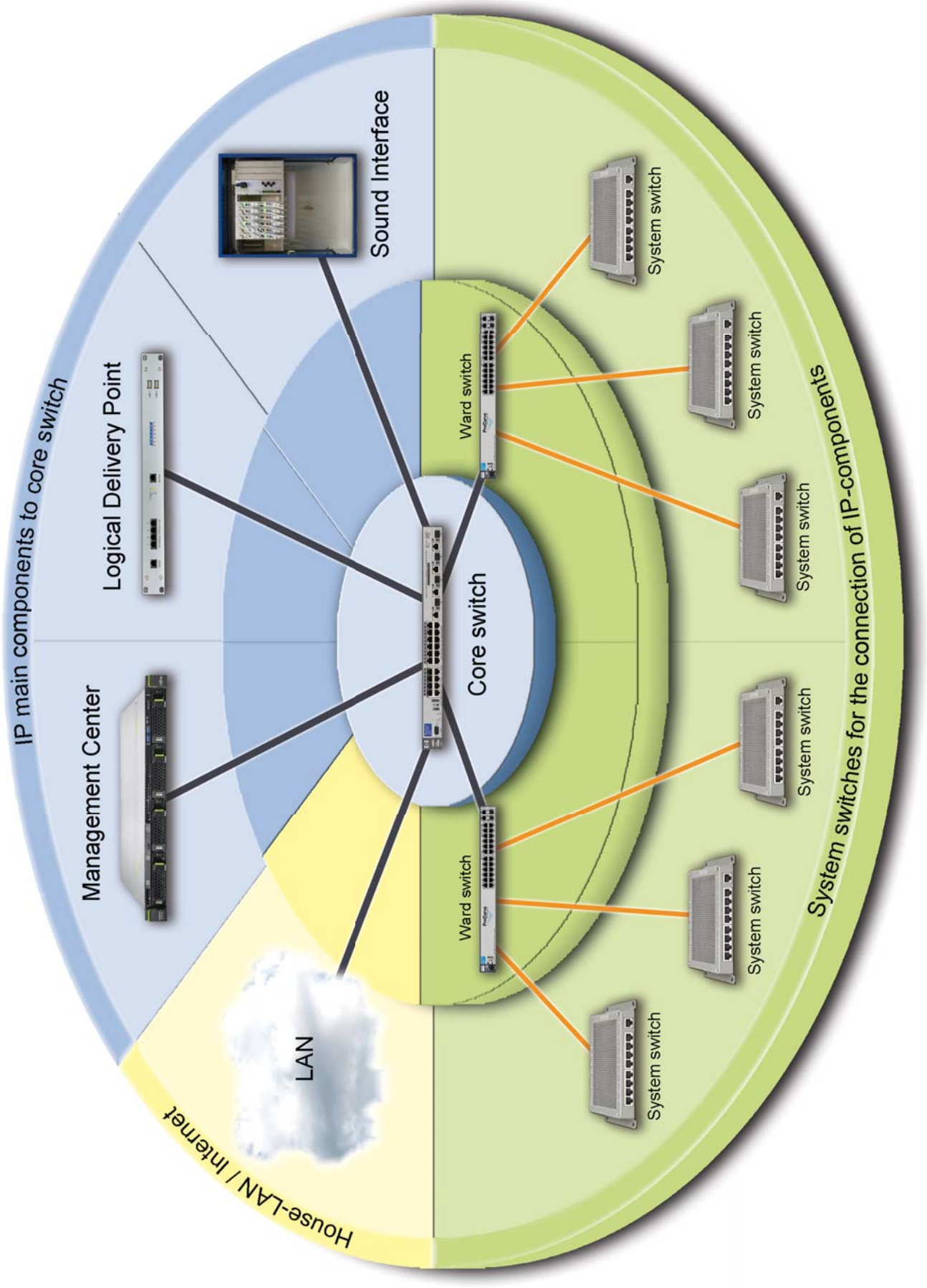
The ward terminal is mainly used in the event of a decentralised system being in effect. Its large colour screen display and the surrounding functions keys arranged around it clearly display information for the user, such as:

- Presence lists arranged by room,
- Signalling of calls on the call priority, the query is selectable,
- Setting of reminders,
- Bed, room and group announcements etc.
- Ward interconnections
- Enforcement of centralisation of areas
- Upgrading of patient calls
- Activation of group care
- Recognition of faults and failures

Password-protected programmer level and selection by room of group care and selection by bed of enhanced bed calls.

Data sheets

1 General modules



Generally housed in a server room, the general modules are housed centrally in a single location, which are usually built into a 19 inch cabinet for each system.

FC010090

Management Center MC-IP

The system service is used during the commissioning of the system for reading in the system topology, for uploading the firmware and the system configuration, for operating interfaces to foreign systems, for logging of all system events and as a central location for system configuration and remote maintenance. This management center is not used for controlling of the nursecall system. An USB-Dongle gives via Licences access to the software modules (chapter 2). In the event that the management center is not available for the system during normal operation, then its functions are carried out in their entirety by VISOCALL IP.

The minimum requirements for the management center are as follows:

- Intel Xeon E3 2,3 GHz or similar
- 2 GB RAM
- 1 x 160 GB HDD
- 1 x DVD harddrive
- 2 x Gbit LAN Ethernet RJ45
- 1 x serial connection RS-232 and 2 x USB V2.0
- 1 x PCI or 1 x PICe socket
- Support for SUSE Linux enterprise server from V.11-SP1
- Optional - second power supply for redundancy

Dimensions: 42.5 x 431 x 572 mm (H x W x D)
Weight: 13.55 kg

NOTE: Due to the depth of the management center and the cable that must be connected, it is essential that when using a 19 inch cabinet that the depth of the cabinet is a minimum of 1000 mm.

Description:	Type:	Article No.:
Management Center	MC-IP	FC010090
USB-Dongle	USB-DONGLE	FC010089

Optional:

Description:	Type:	Article No.:
Harddrive	HDD-SATA-MC	FC010080
DVD drive	DVD-MC	FC010081
Interface	RS232-MC	FC010085
Power supply, hot-plug capable (for redundancy)	NG-MC-IP	FC010083
Keyboard USB black	TT-USB	ZZS01491
Optical mouse PS/2 black	OM-PS2	ZZS01492

FC010031

Management Center MC-IP-D

The management center in Desktop variation.
The minimum requirements for the management center are as follows:

- Intel Xeon E3 2,3 GHz or similar
- 2 GB RAM
- 1 x 160 GB HDD, 1 x DVD harddrive
- 2 x Gbit LAN Ethernet RJ45
- 1 x serial connection RS-232 and 2 x USB2.0
- 1 x PCI or 1 x PCIe socket
- Support for SUSE Linux enterprise server from V.11-SP1

Dimensions: 340 x 98 x 399 mm (H x W x D)
Weight: 9.5 kg

Description:	Type:	Article No.:
Management Center Desktop	MC-IP-D	FC010031

ZZL10699

Time server LT-M200

Compact NTP Time server with integrated GPS radio clock for synchronization of the system time, for 19 inch rack mounting.

Dimensions: 43 x 335 x 250 mm (H x W x D)
Weight: approx. 8 kg (incl. antenna)

Description:	Type:	Article No.:
Time server LANTIME M200	LT-M200	ZZL10699

Nr.: FC008053

Nr.: FC010071

Control panel hardware LS-HW

The hardware package consists of a computer, the control panel is currently set up for use with the WIN XP/WIN XP PRO (ab Service Pack 3)/WIN 7 Professional (32/64bit) operating systems, minimum system requirements:

- Intel Pentium 2.8 GHz
- RAM: min. 1 GB
- HDD 80 GB, DVD-ROM,
- LAN Intel 10/100/1000 on board, RJ45 connection
- VGA graphics card (onboard or PCI)
- Mouse and keyboard

Dimensions: 399 x 170 x 442 mm (H x W x D)
Weight: 11.59 kg
Weight VoIP-handset: 0.58 kg

Description:	Type:	Article No.:
Control panel hardware	LS-HW	FC008053
PC Monitor	Monitor VGA	on request
VoIP - handset	VOIP-H	FC010071

Nr.: ZZH08052

Null modem cable DB9

Null modem cable to directly connect two computers using a serial interface (RS-232). Cable with double-sided D-sub socket.

Description:	Type:	Article No.:
Null modem cable 1.8 m	DB9-2M	ZZH08052
Null modem cable 3 m	DB9-3M	ZZH08053

Nr.: FG022046

UPS emergency power supply USV-SECO LOG

To ensure the integrity of a control panel in the event of a short term power failure (for at least 5 min.), with:

- graphical LCD display, measuring energy consumption providing kWh values
- automatically battery test and deep discharge protection

Technical details:

Power supply:	230 V~/50 Hz
Output:	230 V~(+6/-10%)/max. 850 VA / 6 IEC C13 (10 A)
Noise emission:	< 40 dbA
Ambient temperature:	0 up to 35°C

Time to bridge in minutes with needed power (VA/Watt):
80 min. (85/60), 46 min. (170/120), 26 min. (255/180), 21 min. (340/240), 15 min. (425/300), 12 min. (510/360), 8 min. (595/420), 6 min. (680/480), 5 min. (765/540), 4 min. (850/600).

Interfaces: USB or RS232, as well as relay contacts (with expansion board)

Dimensions:	230 x 150 x 345 mm (H x W x D)
Weight:	10.4 kg

Description:	Type:	Article No.:
UPS emergency power supply	USV-SECO LOG	22-4494001-01-02

Nr.: 20-4100150-02-01

Remote access for system monitoring

Serves as access to VISOCALL IP system via a secure VPN (Virtual Private Network) in the following variants:

Remote access via UMTS router:

In an enclosed within itself operator network system (no additional or missing Internet), additional access directly onto the VISOCALL IP system. (The SIM card must be provided by the operator).
Dimensions: 50 x 117 x 84 mm (H x W x D); Weight: 200 g

Description:	Type:	Article No.:
S2Service Router UMTS	S2S UMTS1	20-4100150-02-01
S2Service VPN certificate for router	S2S VPN-Z-R	20-4100153-01-01
S2Service VPN certificate for Windows PC	S2S VPN-Z-PC	20-4100152-01-01

Nr.: 20-4100151-01-01

Remote access via LAN router:

Use of the operator‘s network infrastructure in which the VPN connection is made by an additional LAN router.

Description:	Type:	Article No.:
S2Service Router LAN	S2S LAN	20-4100151-01-01
S2Service VPN certificate for router	S2S VPN-Z-R	20-4100153-01-01
S2Service VPN certificate for Windows PC	S2S VPN-Z-PC	20-4100152-01-01

Remote access using firewall:

Direct use of the operator VPN connection (external access via firewall) with the S2Service VPN certificate.

Description:	Type:	Article No.:
S2Service VPN certificate for router	S2S VPN-Z-R	20-4100153-01-01
S2Service VPN certificate for Windows PC	S2S VPN-Z-PC	20-4100152-01-01

Nr.: FC010010

Logical Delivery Point LDP

The LDP can be used for various tasks:

a. As long as no centralised services such as logging, the patient database and connection of foreign systems are required, the LDP replaces the Management Center including its licensing.

b. By using the Logical Delivery Point, an entire VISOCALL IP network is divided into separate layer 3 subnets. Thus, two locally separated systems are connected through layer 3 networks (routing) and managed by a central Management Center. The LDP serves as a gateway (in the layer 3 networks) between the individual physical layer 2 networks and the Management Center.

c. For the expansion of the VISOCALL IP system boundaries (e.g. larger IP addressing range).

The LDP consists of:

- 19 inch case 1 height unit
- 1 Gbit Uplink (connection to the backbone switch)
- 4 x 100Mbit (connection for the VISOCALL IP segments)
- RS-232
- 1 x 100Mbit (service interface)
- 2 x USB (licensing)
- 230 V / 47-63 Hz - 50 W
- Ambient temperature: 0 to +45°C ,
  measured with natural convection conditions underneath the device
- Relative air humidity: 10 to 90% non-condensing
- Protection class: VDE 0834 environmental class I, IP20,
- EMV: EN50081-1 Emissions for residential use
  EN50082-2 Emissions for industrial environments
- Product safety: EN60950
- Suppression of radio interference: EN55022B
- Pre-installed system software

Dimensions: 42.5 x 448,5 x 228 mm (H x W x D)
Weight: 3.8 kg

Description:	Type:	Article No.:
Logical Delivery Point	LDP	FC010010

Backbone switches

This switch is used to make the connection between the SWI9 system switch and the management center and conforms to the requirements of VISOCALL IP. The following different types are currently available:

Nr.: FC010092

Core switch

Uplink connections:	4 x 10 Gb uplink ports, RJ45 or SFP (dual share ports)
Optional:	via GBIC usage FOC with 4 x 10 GB SFP (small form-factor plugable)
Downlink connections:	20 x 1 Gb downlink ports, RJ45
Dimensions:	44 x 443 x 336 mm (H x W x D)
Weight:	5.25 kg

Nr.: FC010091

Ward / Core - switch

Uplink connections:	2 x 1 Gb uplink ports, RJ45
Optional:	via GBIC usage FOC with 2 x 1 GB SFP
Downlink connections:	24 x 100Mb downlink ports, RJ45
When used as a core switch, no streaming is possible!	
Dimensions:	44 x 443 x 254 mm (H x W x D)
Weight:	2.59 kg

Nr.: FC010093

Ward switch

Uplink connections:	2 x 1 Gb uplink ports, RJ45
Optional:	via GBIC usage FOC with 2 x 1 GB SFP
Downlink connections:	24 x 100Mb downlink ports, RJ45
Dimensions:	44 x 443 x 254 mm (H x W x D)
Weight:	2.77 kg

Description:	Type:	Article No.:
Core switch	SRV-SWITCH	FC010092
Ward / Core - switch	ST-SWITCH	FC010091
Ward switch	HP2530-24-IP	FC010093

GBIC usage GBIC-HP-SM or MM

Nr.: DF010092--LWL

For connecting fibre-optical cable to the backbone switches HP2530, HP2620 or HP2920, with the following specifications:

- 1 x LC 1000Base-LX Port Plug-in Module
- Full duplex Gigabit, Singlemode max. 10,000 m
- Full duplex Gigabit, Multimode max. 550 m
- low metal content, single mode fibre optic cable, conforming to ITU-T G.652 and ISO/IEC 793-2 Type B1

Dimensions:	12 x 14 x 57 mm (H x W x D)
Weight:	20 g

Description:	Type:	Article No.:
HP X121 1G SFP LC LX GBIC	GBIC-HP-SM	DF010092--LWL

Nr.: DF010091--LWL

GBIC usage GBIC-HP-MM

For connecting optical fibre to the backbone switches HP2530, HP2620 or HP2920, with the following specifications:

- 1 x LC 1000Base-SX Port Plug-in Module
- Full duplex Gigabit, Multimode with range of up to 550 m
- Cable types 62.5/125 µm or 50/125 µm (core/shield), Gradient index, low metal content, Multimode optical fibre, in accordance with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a

Diameter	Range	Bandwith
62,5 µm	2-220 m	160 MHz
62,5 µm	2-275 m	200 MHz
50 µm	2-500 m	400 MHz
50 µm	2-550 m	500 MHz

Dimensions: 12.3 x 13.7 x 56.9 mm (H x W x D)
Weight: 20 g

Description:	Type:	Article No.:
HP X121 1G SFP LC SX GBIC	GBIC-HP-MM	DF010091--LWL

photo icon

19 inch network cabinet Schrank-IP

Used for housing devices and VISOCALL IP system components, consisting of:

- Half cylinder lock including key
- 19 inch cable inlet panel, 1 height unit
- Toolless shelf floor 19 inch
- 19 inch pull out shelf floor, keyboard shelf incl. keyboard, mouse shelf
- 7-way power bar with overvoltage protection, 1 height unit
- Ceiling-based ventilation group incl. thermostat, 1 fan

Dimensions: 1979 x 800 x 1000 mm (H x W x D)

Description:	Type:	Article No.:
19 inch network cabinet	Schrank-IP	on request

photo icon

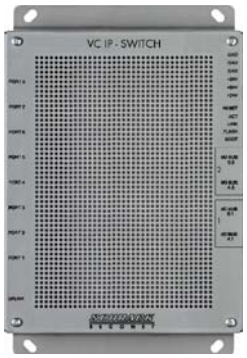
19 inch system rack Rack-IP

Used for housing devices and VISOCALL IP system components, consisting of:

- 19 inch one piece system rack, 42 height units,
- 19 inch cable inlet panel, 1 height unit
- Toolless shelf floor 19 inch
- 19 inch pull out shelf floor, keyboard shelf incl. keyboard, mouse shelf
- 7-way power bar with overvoltage protection, 1 height unit

Dimensions: 2031 x 600 x 1000 mm (H x W x D)

Description:	Type:	Article No.:
19 inch system rack	Rack-IP	on request



Nr.: FC010005

System switch SWI9R-2IO

The system switch forms a decentralised communications node for exchanging data between the connected system devices and the rest of the communications system. It is set up for redundant operation and is supplied with 24 VDC power by the ward power supply unit. It contains both a row of IP ports for connecting IP capable end devices, as well as two connections for another data buses for all other system modules. The system switch is fitted in a shielded metal case for surface mounting in the distribution case or in a false ceiling, and consists of:

- 1 x RJ45 socket, 100Mb IP Port (IEEE802.3 100BaseTX), galvanically isolated conformant with EN 60950 and VDE 0834,
- 7 x RJ45 sockets, each with a 100Mb IP system port (IEEE802.3 100BaseTX) for connection of all IP capable system modules,
- 1 x RJ45 socket, 100Mb IP Port (IEEE802.3 100BaseTX) for connecting communications terminals, ward terminals, staff terminals as well as control panel PC's or for the redundant operation,
- Control LED's for indicating the current operating state,
- 2 x 2 x RJ45 sockets for connecting the I/O data buses,
- All IP system modules are supplied with power by means of proprietary Power over Ethernet (PoE) technology,
- Output for connection of an external amplifier (e.g. for loudspeakers in corridors - only in conjunction with a multi sound 4 interface MS4-I),
- 6 screw-type terminals for connecting the 24 VDC supply voltage.

Dimensions: 34 x 150 x 230 mm (H x W x D)
Weight: 0.74 kg

Description:	Type:	Article No.:
System switch redundant 2IO	SWI9R-2IO	FC010005

SCHRACK SECONET Lichtruf

Nr.: FC38100-

Accessories:

Description:	Type:	Article No.:
Sign nurse call bl/wh	S LTR	FC38100-

Nr.: DF010008

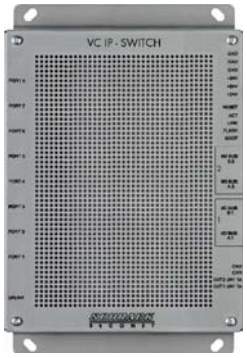
Case for system switch G-SWI9

Metal case for fitting SWI9 switches in cavity ceilings, consisting of:

- Slits for cable outlets (top and bottom)
- 4 fitting holes
- Earth connection for case earthing
- inspection window for the device's LED's
- Cover with four screw caps

Dimensions: 64 x 255 x 255 mm (H x W x D)
Weight: 0.763 kg

Description:	Type:	Article No.:
Case for SWI9	G-SWI9	DF010008



Nr.: FC010006

System switch SWI9-24

The system switch forms a decentralised communications node for exchanging data between the connected system devices and the rest of the communications system. It is set up for redundant operation and is supplied with 24 VDC power by the ward power supply unit. It contains both a row of IP ports for connecting IP capable end devices, as well as two connections for another data buses for all other system modules. Additional two outputs 24 VDC for external devices. The system switch is fitted in a shielded metal case for surface mounting in the distribution case or in a false ceiling, and consists of:

- 1 x RJ45 socket, 100Mb IP Port (IEEE802.3 100BaseTX) uplink, galvanically isolated conformant with EN 60950 and VDE 0834,
- 7 x RJ45 sockets, each with a 100Mb IP system port (IEEE802.3 100BaseTX) for connection of all IP capable system modules,
- 1 x RJ45 socket, 100Mb IP Port (IEEE802.3 100BaseTX) for connecting communications terminals, ward terminals, staff terminals as well as control panel PC's or for the redundant operation,
- Control LED's for indicating the current operating state,
- 2 x 2 x RJ45 sockets for connecting the I/O data buses,
- All IP system modules are supplied with power by means of proprietary Power over Ethernet (PoE) technology,
- Output for connection of an external amplifier (e.g. for loudspeakers in corridors - only in conjunction with a multi sound 4 interface MS4-I),
- 6 screw-type terminals for connecting the 24 VDC supply voltage,
- 4 screw-type terminals for supervised 24 VDC outputs for external devices (light module LM-B, connection modules SMU-B / SMF-B and diagnostic module DMU-IO).

Dimensions: 34 x 150 x 230 mm (H x W x D)
Weight: 0.74 kg

Description:	Type:	Article No.:
System switch SWI9-24	SWI9-24	FC010006

Accessories:

Description:	Type:	Article No.:
Sign nurse call bl/wh	S LTR	FC38100-

SCHRACK SECONET Lichtruf

Nr.: FC38100-

Nr.: DF010008

Case for system switch G-SWI9

Metal case for fitting SWI9 switches in cavity ceilings, consisting of:

- Slits for cable outlets (top and bottom)
- 4 fitting holes
- Earth connection for case earthing
- inspection window for the device's LED's
- Cover with four screw caps

Dimensions: 64 x 255 x 255 mm (H x W x D)
Weight: 0.763 kg

Description:	Type:	Article No.:
Case for SWI9	G-SWI9	DF010008

Nr.: FC010009

19 inch Installation rack for switches SWI9-Rack

For installation into a 19 inch network cabinet and for attaching up to 8 system switches, consisting of a metal frame (height = 6 HU) and 7 FH-MR

Dimensions: 266 x 482 x 181 mm (H x W x D)
Weight: 15 kg

Caution: SWI9 units are not supplied as shipped

Description:	Type:	Article No.:
19inch installation rack for system swiches	SWI9-Rack	FC010009
Guide rail for installation rack, 1 PE - 100 pcs.	FH-MR	DF010009

Nr.: FC010520

Sound interface SDI

The sound interface is intended for receiving and digitising up to 16 radio programs. These radio programs are fed into the communications network via a switch as so-called audio streams. The FM tuners which are integrated into the individual modules are equipped for being tuned for the frequency range between 87.5 and 108.0 MHz with automatic fine tuning. Moreover, the sound interface offers the opportunity to convert externally generated audio or other LF signals into audio streams and to also distribute these over the network. The SDI consists of:

- Metal case
- Module rack for fitting in a 19 inch cabinet (14 RU)
- 230 V power supply circuit with connection cable and plug
- 8 connection slots for fitting the sound interface controllers

Supply voltage: 230 V/50 Hz
Input surge current: 25 A
Power consumption: < 280 W
Fuses: 4 A slow acting
Operating temperature: 0 to +40°C in presence of natural convection
Relative air humidity: 5 to 95% without condensation
Air pressure: > 80 kPa, up to 2000 m above sea level
Dimensions: 600 x 445 x 225 mm (H x W x D)
Weight: 15 kg

Nr.: ED010737-A

Sound interface controller SIC

The sound interface controller is used for supplying the sound interface and for receiving and digitising 2 radio programs, consisting of:

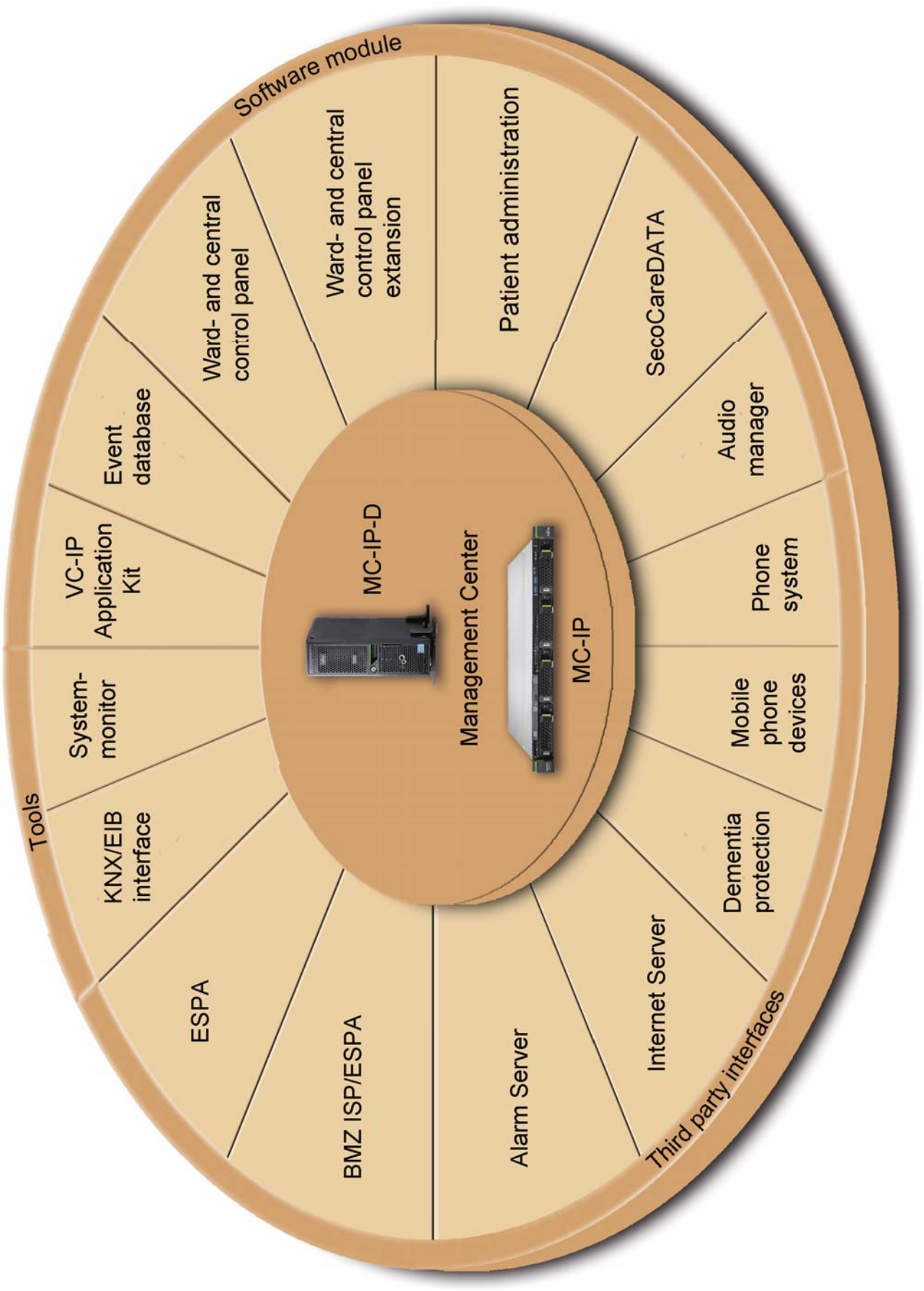
- 2 FM tuners with a frequency reception range from 87.5 to 108.0 MHz
- Automatic fine tuning
- 2 control headphones outputs
- Control LED's for indicating the current operating state
- 2 external LF inputs for receiving external audio signals
- Controller circuit board with accessories for fitting into the SDI

CAUTION: For each sound interface controller (SIC), a separate LAN connection is required!

Dimensions: 215 x 27 x 135 mm (H x W x D)
Weight: 186 g

Description:	Type:	Article No.:
Sound interface	SDI	FC010520
Sound interface controller	SIC	ED010737-A

2 Software


Software module
Ward- and central control panel
Ward- and central control panel extansion
Patient administration
SecoCareDATA
Audio manager
Phone system
Mobile phone devices
Dementia protection
Internet Server
Alarm Server
BMZ ISP/ESPA
ESPA
KNX/EIB interface
System-monitor
VC-IP Application Kit
Event database
Tools
Third party interfaces
MC-IP-D
Management Center
MC-IP

Software - VCIP Application Kit

Version 5.0.0 of the VISOCALL IP software contains all programs required for commissioning, programming, service and maintenance of VISOCALL IP and VISOCALL IP basic components.

Description:	Type:	Article No.:
Software VCIP Application Kit	SWP-IP/AK	FC010040-H

Software - License Control panel

Software license for the Windows-based application with a graphical user interface for centralised or decentralised system configurations. The control panel can communicate with all the ward terminals connected in the system and can monitor all activities for the ward which it controls or for the system as a whole and react accordingly.

Control panel software:

A graphical representation of the ward which the control panel is in or all interconnected wards offers a rapid overview of the nurse call components integrated in the system. Regardless of call location and call priority, the control panel can react to a call by means of a single mouse click, connect a call and, if necessary, set the relevant reminder. Equally it is possible to select a single room or bed, as per general announcements and those destined for specific people; the latter being applicable for nurses as well as for doctors. The system distinguishes between announcements intended for the ward in which the control panel is located and those intended for the entire system. Up to 255 care groups per system can also be assigned up the freely selectable group care options in the standard software. (Max. of 75 wards possible!)

Description:	Type:	Article No.:
Software - License Ward control panel	SWP-IP/LS	FC010050
Software - License Central control panel	SWP-IP/ZLS	FC010053

Software - License Control panel extension

Software license for control panel extension - adding an additional control panel in an already functioning VISOCALL IP system. Using this extension, a fully functional control panel is available for use in the ward in which it is located as well as in multiple wards. (Max. of 75 wards possible!)

Description:	Type:	Article No.:
Software - License Ward control panel extensions	SWP-IP/LSE	FC010052
Software - License Central control panel extensions	SWP-IP/ZLS-E	FC010054

Software - License ESPA

Software license for the forwarding of events. All VISOCALL IP events can be forwarded to external systems using the ESPA 4.4.4 or ESPA-X data interface (RS-232 physical interface). The necessary filters are set in the communications system in order that only relevant data is forwarded to the external system.

Description:	Type:	Article No.:
Software - License ESPA interface	SWP-IP/ESPA	FC010045

Software - License for event database

Software pack installed on the system server for automatically logging all events in the entire communications system, such as, e.g., calls, presence markings, call acknowledgements, reminders.

Data is displayed or analysed using firefox that has server-side access to the XML data. This access is password-protected. Various filters make it easily to find and display the required information.

Description:	Type:	Article No.:
Software- License for event database	SWP-IP/EDB	FC010056

Software - License for patient management

Patient management is used for logging, displaying and printing out patient data via a browser in the network. The implementation of a patient photo for each record is possible. When querying calls, all important patient data is displayed on screen but only in combination with the control panel. Access to the data on the database for all browsers within the LAN is password-protected.
An HL7 interface is also included in this software pack. The most important patient data, such as name, address, social security no., date of birth, telephone number are imported from the hospital information system and automatically entered into the system's SQL database. Patient information is required for entries into the event database. Optionally available accompanying disorientation interface is also used.

Description:	Type:	Article No.:
Software- License for patient management	SWP-IP/PV	FC010055

Software - BMZ ISP/ESPA License

The BMZ Integral license is used for forwarding all detected fire alarms from the BMZ without any reaction to the VISOCALL IP communications systems. All data is transferred, which allows the staff members to see the precise location of the blaze on all configured system displays. As a further option, a non-ambiguous acoustic indication can be given at the relevant terminals.

The system configuration is used to assign which alarm is forwarded to which ward, and which category of staff has to be informed about the event.

Description:	Type:	Article No.:
Software - BMZ Integral License	SWP-IP/BMZ	FC010059

Software - Mobile telephone end devices license

This bidirectional voice and data interface to the telephone system as a SIP tie line (SIP TRUNK) is used for:

- the detailed transmission of system events to mobile end devices (DECT) with information about the type and location of the call
- immediately establishing a speech connection to the location the call is being made from by simply picking up the phone in the case of queryable calls
- Setting reminders for different staff categories by pressing a button during a conversation
- Making external collective and staff announcements from the mobile end device to pre-configured wards (ward selection).

For each ward, it is possible to simultaneously address as many end devices as have been reserved for this function.

Description:	Type:	Article No.:
Software - Mobile telephone end devices license	SWP-IP/MP	FC010042

Software - Telephone system license

This interface used Voice over IP technology in accordance with the standard H.323 or SIP (G.711 a-law, G.711 µ-law, G.729 a/b) and is used for telecommunications between the patient terminals listed below in chapter 5. and the public telephone network as well as to other in-house extensions. As an optional extra, it is possible to ensure using the VISOTAX IP billing system integrated into the system that charges for telephone calls made are charged to the appropriate user.

Description:	Type:	Article No.:
Software - Telephone system license	SWP-IP/TK	FC010060

Software- Alarm server license ESPA 4.4.4/ESPA-X

This unidirectional interface transmits all events occurring in the integrated nursecall system to an external alarm server. This occurs in the form of a data protocol. The server processes the information and organises for it to be forwarded as relevant. Both the type of call and the call location are contained in this data log.

Description:	Type:	Article No.:
Software - Alarm server license	SWP-IP/AS	FC010057

Software- License for dementia protection system ESPA 4.4.4

VISOCALL IP receives all disorientation alarms from the external dementia protection system using this unidirectional interface in the form or a data protocol. In this case the data is forwarded to the locations in the hospital based on the configuration that were pre-agreed with the user. In particular, in this instance, it must be ensured that these alarms can also be forwarded over the internal interfaces to the mobile end devices and to the alarm server.

Description:	Type:	Article No.:
Software- License for Dementia Protection System	SWP-IP/DESO	FC010058

Software - Internet server license

This interface is used for data transfer between the multimedia terminals or patient laptops, the system's own application server and the Internet Proxy Server or an Internet gateway to the ISP that are both located on site. For security reasons bandwidth restrictions are imposed for this service by use of the QoS configuration of all switches.

Description:	Type:	Article No.:
Software - Internet server license	SWP-IP/WEB	FC010062

Software - License System monitor

The System Monitor is used for indication and location of faults on a PC. It used password-protected access and can manage up to 16 users and 16 VISOCALL IP systems. This software module can be found in the technician's control panel. The technician is also able to make modifications to the system, as well as being able to examine or read out the fault log. Acknowledged faults are time stamped by the logged on user and notes are stored on the server.

Description:	Type:	Article No.:
Software - License System monitor	SWP-IP/MON	FC010063

Software - License IP interface to OPC server

This LAN interface is used for forwarding fault and failure messages to a security control panel (building control system). The protocol which is used for this purpose must conform to the OPC (OLE for Process Control) standard.

Description:	Type:	Article No.:
Software - License IP interface to OPC server	SWP-IP/OPC	FC010068

Software - License IP interface to KNX/EIB

This LAN interface is used for controlling the illuminations and blinds or shading devices (building automation). The VISOCALL IP commands will be transferred to the system bus KNX/EIB via a router or a layer 3 switch.

Description:	Type:	Article No.:
Software - License IP interface to KNX/EIB	SWP-IP/KNX	FC010069

FC010074
photo icon

Software - License Audio manager

The VISOCALL IP Audio Manager is used for external announcements and voice announcements, etc. once and recurrent. Complex integrations of conventional ELA systems are no longer necessary.

Description:	Type:	Article No.:
Software - License Audio manager	SWP-IP/AM	FC010065
Microphone USB	MIC-USB	FC010074

Nr.: FC017330

Nr.: FC010073
Front side

Nr.: FC010073
Back side

Software - License SecoCareDATA

SecoCareDATA takes the burden off nursing staff, reduces costs and eliminates a possible source of error when transcribing handwritten information on to a PC. Logging of care data directly at the hospital bed. A Mifare-smartcard, on which all required information is stored, and which is inserted directly into the patient handset of the nursecall system, makes the documentation of care data more efficient. Simultaneous marking of nurse presence in the nursecall system, call cancellation etc.

Gewicht (Mifare Reader USB): 70 g

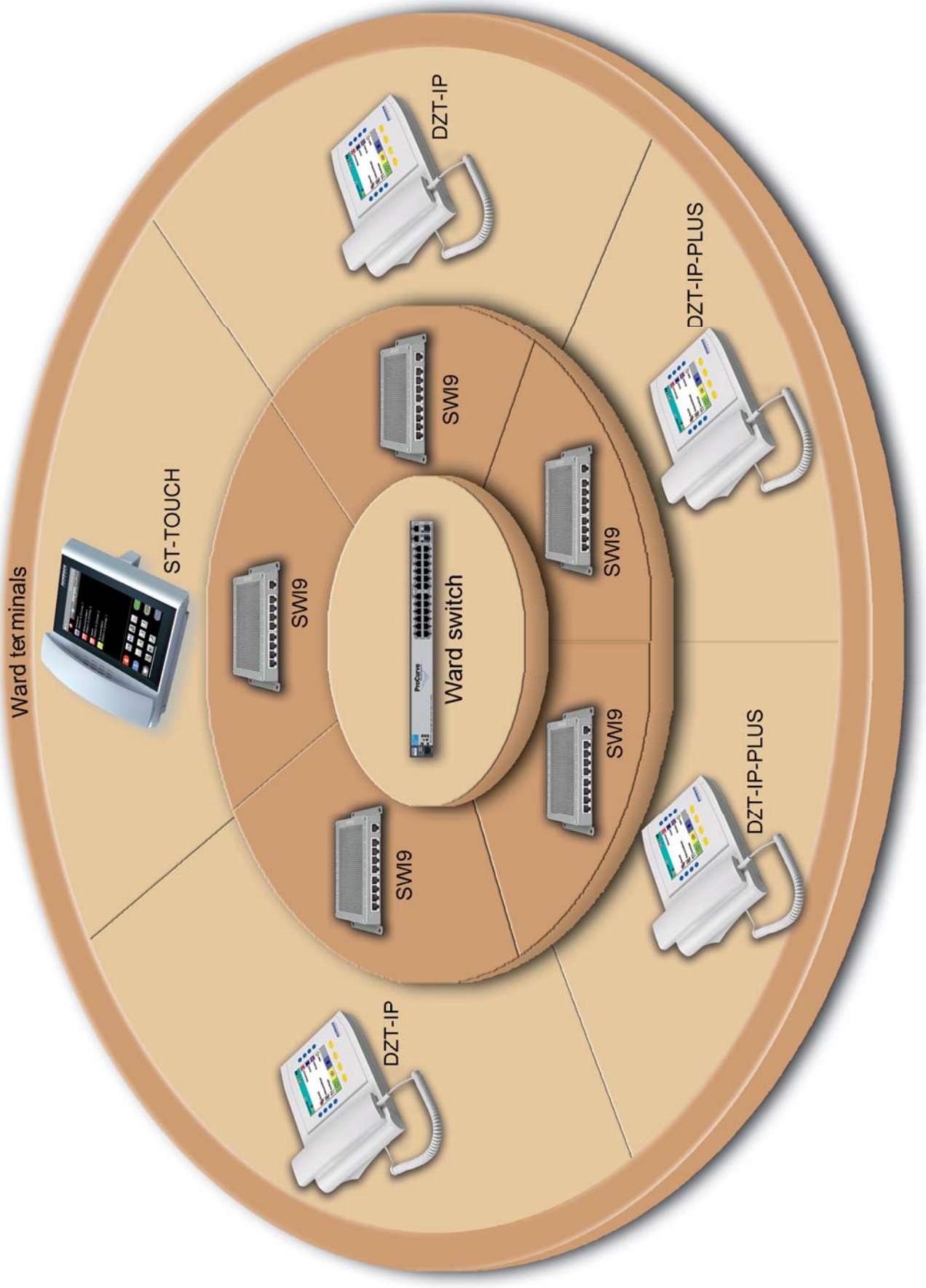
Description:	Type:	Article No.:
SW-License SecoCareDATA	SWP-IP/CD	FC010066
Mifare Reader USB	SCL011	FC017330
Mifare-Card	MFC4C-CD	FC010073

Software - License SecoCareDATA extension

Software license for SecoCareDATA extension - adding in an already functioning VISOCALL IP system. Using this extension, a fully functional Secocare-DATA application is available for use in the ward in which it is located as well as in multiple wards.

Description:	Type:	Article No.:
SW-License SecoCareDATA Extension	SWP-IP/CD-E	FC010067
Mifare Reader USB	SCL011	FC017330
Mifare-Card	MFC4C-CD	FC010073

3 Ward terminals



3.1 Ward terminals

For use as a communications and information centre within a ward and for use in the relevant staff room.

Range of functions:

- Displaying the date and time,
- The sum of number of currently outstanding calls, reminders and also possible faults are permanently displayed,
- Indication of all set presences, depending on the staff cat. in the relevant colour according to VDE 0834 and with a non-ambiguous symbol,
- Indication of all set reminders, depending on the staff cat. in the relevant colour according to VDE 0834 and with a non-ambiguous symbol,
- Indication of all calls in accordance with VDE 0834 (in the relevant colour and with non-ambiguous symbols dependent of the type of call),
- Indication of events, which have been forwarded from foreign systems in to the system,
- All call indications follow the priority for indication set up in the system, starting the highest priority, and the following content is displayed in this instance:
  - the exact type of call e.g. bed call incl. bed number, WC call, doctor call etc.,
  - the exact call location with information about the individual room and ward description and the care group that may have been assigned,
  - emergency calls
- The exact location of the reminder that has been triggered (as described above),
- If there are no calls outstanding, all reminders that have been set are displayed, and the following information is displayed for reminders
- Indication of faults or failures, in this case the room that is affected by the fault is also recognisable
- Call query according to priority,
- Direct dialling of communications terminals and patient terminals,
- Triggering of reminders for all three staff categories,
- Staff announcements, separately for all three staff categories,
- Collective announcements,
- Activation of ward interconnections,
- Programming and activation of group-based nursing care,
- Programming and activation of centralised operation,
- Assigning call upgrades on a bed-by-bed basis.

3.2 Staff terminal

Nr.: FC010000

Nr.: FC010003

Nr.: FC010300

Nr.: FC88012-

Nr.: FC88013-

This terminal comprises of:

- Bright 6.5 inch TFT display with wide viewing angle, resolution of 800 x 480 pixel and LED backlight for displaying all details described,
- Interactive operation via touch sensor field and icons,
- 2 unit foot postions for different angles of inclination or wall mounting,
- Querying receiver for speaking discretely,
- Microphone and loudspeaker for hands-free speech (incl. volume control),
- Automatic changeover between hands-free and discrete speaking,
- Electronic circuit board with controller and FlashProm,
- 100BaseTX interface to the system switch,
- 2.8 m connection cable with an RJ45 connection plug, which is protected from disconnection, for connecting to a connection module SM, SM-S or SM-MMC (see eg. FC010300).

Dimensions: 188 x 212 x 38 mm (L x W x D)
Material: plastic case in colour RAL9016
Weight: 1.22 kg (Wall mount: 50 g)

Description:	Type:	Article No.:
Staff terminal	ST-TOUCH	FC010000
Connection module	SM	FC010300

Accessories:

Description:	Type:	Article No.:
Countersunk double switchbox	U2	FC88012-
Cavity wall double switchbox	H2	FC88013-
Wall mount Staff terminal	ST-TOUCH-WH	FC010003

3.3 Ward terminal DZT-IP

Nr.: FC010100

Nr.: FC010300

Nr.: FC88012-

Nr.: FC88013-

This terminal comprises of:

- Colored, graphics capability 5.6 inch LC display with a resolution of 320 x 240 pixel for displaying all details described,
- A smash proof glass panel placed in front of the display (to protect the sensitive display from unnecessary contact during cleaning and other processes)
- 12 interactive function keys for operating the system,
- Querying receiver for speaking discretely,
- Microphone and loudspeaker for hands-free speech (incl. volume control),
- Automatic changeover between hands-free and discrete speaking,
- Electronic circuit board with controller and FlashProm,
- 100BaseTX interface to the system switch,
- 2.8 m connection cable with an RJ45 connection plug, which is protected from disconnection, for connecting to a connection module SM, SM-S or SM-MMC (see eg. FC010300).

Dimensions: 188 x 310 x 100 mm (L x W x D)
Material: plastic case in colour RAL9016
Weight: 1.64 kg

Description:	Type:	Article No.:
Ward terminal	DZT-IP	FC010100
Connection module	SM	FC010300

3.4 Ward terminal DZT-IP-Plus

Nr.: FC008010

Like DZT-IP, is acting like an interface terminal, consisting of:

- Added plugger for connection to AE-DZT (compatible to VISOCALL PLUS)
- Systeminterfaces to connect to a VISOCALL PLUS ward into a existing IP system.

Dimensions: 188 x 310 x 100 mm (L x W x D)
Material: plastic case in colour RAL9016
Weight: 1.64 kg

Nr.: FC010300

Description:	Type:	Article No.:
Ward terminal IP-PLUS	DZT-IP-PLUS	FC008010
Connection module	SM	FC010300
Connection cable DZT-IP / 2.8 m	AK-DZT-IP	EI931544

Necessary components for surface mounting or countersunk mounting for connection module SM:

Nr.: FC88012-

Nr.: FC88013-

Description:	Type:	Article No.:
Countersunk double switchbox	U2	FC88012-
Cavity wall double switchbox	H2	FC88013-

Nr.: FC008003

Nr.: FC81441-

Necessary components for surface mounting and connection to VISOCALL PLUS:

Description:	Type:	Article No.:
Cover for distribution board DZT	A-VDZT	FC008003
Distribution board DZT	V-DZT	FC81441-
Surface mounting frame	APA-ST	FC008990
Connection cable DZT-Ward bus / 3 m	DZT/K	EI931408

Nr.: FC008101

Nr.: FC008990

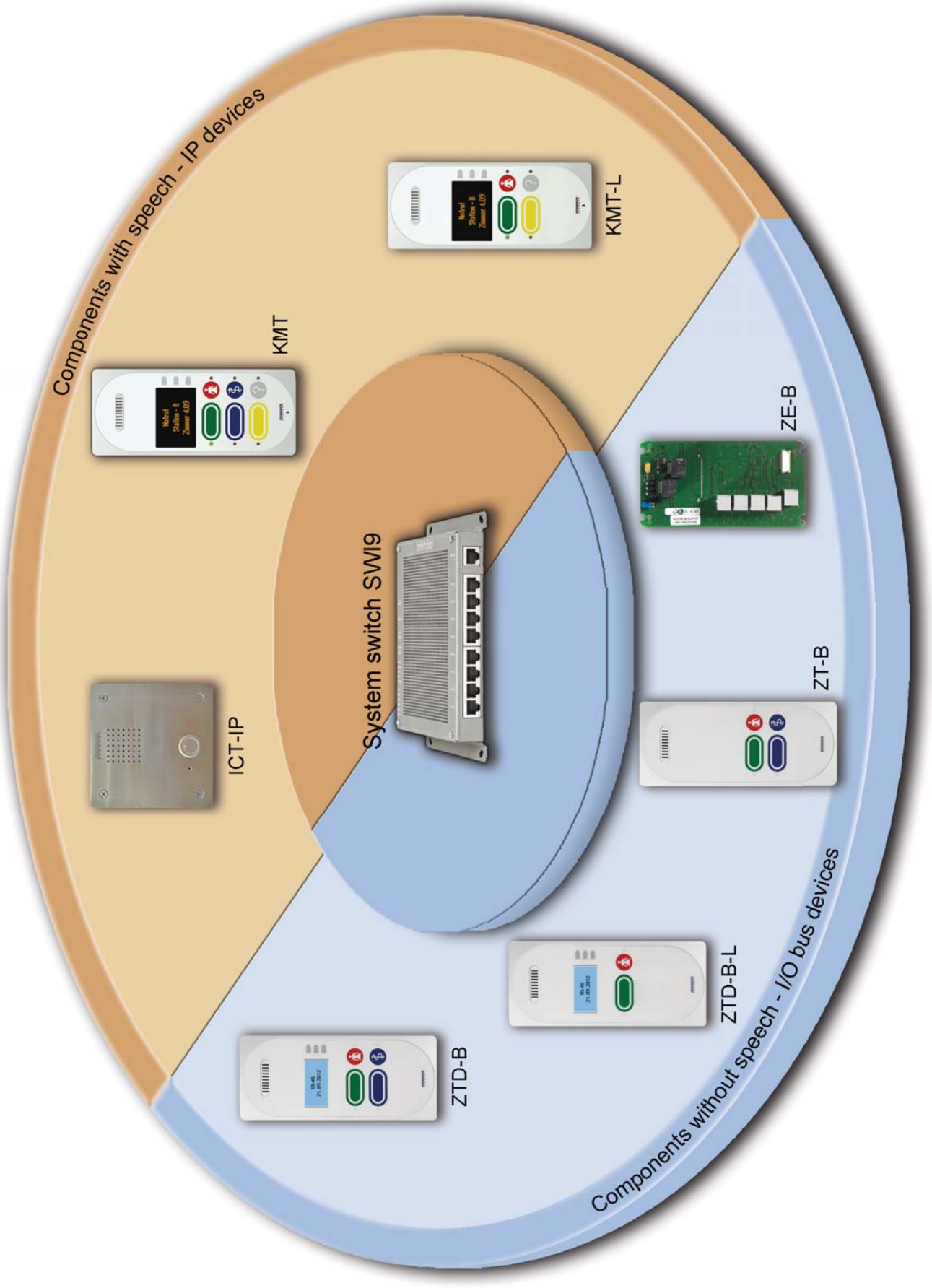
Necessary components for countersunk mounting and connection to VISOCALL PLUS:

Nr.: FC88009-

Nr.: FC88008-

Description:	Type:	Article No.:
Cover for distribution board DZT	A-VDZT	FC008003
Distribution board DZT	V-DZT	FC81441-
Plastic mouting frame	DR-ST	FC008101
Connection cable DZT-Ward bus / 3 m	DZT/K	EI931408
Cavity wall installation box	H-ZEK2	FC88008-
Countersunk installation box	ZEK2	FC88009-

4 Components for rooms



4.1 IP components

Nr.: FC010110

Nr.: FC010191

Nr.: FC010190

Communications terminal KMT

For installation in all important rooms in the ward in which the possibility to communicate is required or desired, with integrated functional components and operating membrane keypad with coloured fields and symbols; consisting of:

- Plastic mounting frame
- A fully-graphical display with a resolution of 128 x 64 pixels
- 1 microphone and 1 loudspeaker
- Controller circuit board with integrated display and a 100BaseTX switch, as well as
- 2 x RJ45 sockets each for 1 x 100Mb IP Port (IEEE802.3 100BaseTX),
- Integrated audio reception from the streamed LF data packets from the Sound Interface,
- Antimicrobial membrane keypad for operation, comprising of:
  - Call button (red) with integrated finder and reassurance light,
  - Doctor call button (blue) with integrated finder and reassurance light,
  - Query button (grey) with control LED,
  - Presence button (green) with control LED,
  - Presence button (yellow) with control LED,
  - Presence button (blue) with control LED,
- 3 interactive function keys:
  - For display scrolling in the event that there are several calls outstanding at once,
  - For turning on and off, for selecting the program and the volume of the integrated radio receiver for up to 16 programs,
  - To select the time interval, start and stop the timer for a reminder call

For screw-free attachment of the terminal to a double installation case

Dimensions:	203 x 86 x 36 mm (H x W x D)
Material:	Plastic case in colour RAL9016
Weight:	0.4 kg

NOTE: A double installation case is also required.

Necessary components for countersunk mounting:

Description:	Type:	Article No.:
Communications terminal	KMT	FC010110
Plastic mouting frame for KMT	DR-KMT	FC010191

Necessary components for surface mounting:

Description:	Type:	Article No.:
Communications terminal	KMT	FC010110
Surface mounting frame for KMT	AP-KMT	FC010190

Nr.: FC010115

Nr.: FC010191

Nr.: FC010190

Communications terminal light KMT-L

For installation in all important rooms in the ward in which the possibility to communicate is required or desired, with integrated functional components and operating membrane keypad with coloured fields and symbols; consisting of:

- Plastic mounting frame,
- A fully-graphical display with a resolution of 128 x 64 pixels,
- 1 microphone and 1 loudspeaker,
- Controller circuit board with integrated display and a 100BaseTX switch, as well as
- 2 x RJ45 sockets each for 1 x 100Mb IP Port (IEEE802.3 100BaseTX),
- Integrated audio reception from the streamed LF data packets from the Sound Interface,
- Antimicrobial membrane keypad for operation, comprising of:
  - Call button (red) with integrated finder and reassurance light,
  - Query button (grey) with control LED,
  - Presence button (green) with control LED,
  - Presence button (yellow) with control LED,
- 3 interactive function keys:
  - For display scrolling in the event that there are several calls outstanding at once, and
  - For turning on and off, for selecting the program and the volume of the integrated radio receiver for up to 16 programs
  - To select the time interval, start and stop the timer for a reminder call

For screw-free attachment of the terminal to a double installation case

Dimensions:	203 x 86 x 36 mm (H x W x D)
Material:	Plastic case in colour RAL9016
Weight:	0.4 kg

NOTE: A double installation case is also required.

Necessary components for countersunk mounting:

Description:	Type:	Article No.:
Communications terminal light	KMT-L	FC010115
Plastic mouting frame for KMT	DR-KMT	FC010191

Necessary components for surface mounting:

Description:	Type:	Article No.:
Communications terminal light	KMT-L	FC010115
Surface mounting frame for KMT	AP-KMT	FC010190

Nr.: FC010150

Intercom terminal ICT-IP

For installation in entrance areas, for use as a door phone, also suitable for outdoor installation, consisting of:

- Electronic module coated with protective paint,
- 1 microphone,
- 1 loudspeaker
- Control circuit board with integrated DSP
- 1 x RJ45 socket for a 100Mb IP Port (IEEE802.3 100BaseTX),
- Stainless steel panel, consisting of:
  - Call button (stainless button) with integr. finder and reassurance light,
- Four screws for mouting to an installation case

Dimensions:	120 x 120 x 25 mm (H x W x D)
Material:	Stainless steel panel
Weight:	0.17 kg

Nr.: FC88019-

NOTE: The required installation case should be ensured.

Necessary components for countersunk mounting:

Description:	Type:	Article No.:
Intercom terminal	ICT-IP	FC010150
Countersunk switchbox for ICT	U-ICT-IP	FC88019-

Nr.: FC88018-

Necessary components for cavity wall mounting:

Description:	Type:	Article No.:
Intercom terminal	ICT-IP	FC010150
Cavity wall switchbox for ICT	H-ICT-IP	FC88018-

4.2 I/O bus components

Nr.: FC011120

Room terminal with display ZTD-B

For installation in all important rooms in the ward in which staff members receive all calls made in the ward, with integrated functional components and operating membrane keypad with coloured fields and symbols, consisting of:

- A fully-graphical display with a resolution of 128 x 64 pixels,
- Electronic buzzer for acoustic call forwarding,
- Controller circuit board with FlashProm,
- 2x RJ45 sockets for connection to the data bus,
- 5x RJ12 sockets (6 pole) for connecting external devices,
- Membrane keypad for operation, comprising of:
  - Call button (red) with integrated finder and reassurance light
  - Doctor call button (blue) with integrated finder and reassurance light,
  - Presence button (green) with control LED,
  - Presence button (blue) with control LED,
  - 3 function keys for setting the display brightness, contrast and call tone volume

Nr.: FC010191

For screw-free attachment of the terminal to a double installation case.

Dimensions:	203 x 86 x 17 mm (H x W x D)
Material:	plastic casing in colour RAL9016
Weight:	0.42 kg

NOTE: The required double installation case should be ensured.

Nr.: FC010190

Necessary components for countersunk mounting:

Description:	Type:	Article No.:
Room terminal with display	ZTD-B	FC011120
Plastic mouting frame for KMT	DR-KMT	FC010191

Necessary components for surface mounting:

Description:	Type:	Article No.:
Room terminal with display	ZTD-B	FC011120
Surface mounting frame for KMT	AP-KMT	FC010190

Nr.: FC011125

Room terminal light with display ZTD-B-L

For installation in all important rooms in the ward in which staff members receive all calls made in the ward, with integrated functional components and operating membrane keypad with coloured fields and symbols, consisting of:

- A fully-graphical display with a resolution of 128 x 64 pixels,
- Electronic buzzer for acoustic call forwarding,
- Controller circuit board with FlashProm,
- 2x RJ45 sockets for connection to the data bus,
- 5x RJ12 sockets (6 pole) for connecting external devices,
- Membrane keypad for operation, comprising of:
  - Call button (red) with integrated finder and reassurance light,
  - Presence button (green) with control LED,
  - 3 function keys for setting the display brightness, contrast and call tone volume

Nr.: FC010191

For screw-free attachment of the terminal to a double installation case.

Dimensions:	203 x 86 x 17 mm (H x W x D)
Material:	plastic casing in colour RAL9016
Weight:	0.42 kg

NOTE: The required double installation case should be ensured.

Nr.: FC010190

Necessary components for countersunk mounting:

Description:	Type:	Article No.:
Room terminal light with display	ZTD-B-L	FC011125
Plastic mouting frame for KMT	DR-KMT	FC010191

Necessary components for surface mounting:

Description:	Type:	Article No.:
Room terminal light with display	ZTD-B-L	FC011125
Surface mounting frame for KMT	AP-KMT	FC010190

Nr.: FC011130

Room terminal without display ZT-B

For installation in all important rooms in the ward in which staff members receive all calls made in the ward, with integrated functional components and operating membrane keypad with coloured fields and symbols, consisting of:

- Electronic buzzer for acoustic call forwarding,
- Controller circuit board with FlashProm,
- 2 x RJ45 sockets for connection to the data bus,
- 5 x RJ12 sockets (6 pole) for connecting external devices,
- Membrane keypad for operation, comprising of:
  - Call button (red) with integrated finder and reassurance light,
  - Doctor call button (blue) with integrated finder and reassurance light,
  - Presence button (green) with control LED,
  - Presence button (blue) with control LED

Nr.: FC010191

For screw-free attachment of the terminal to a double installation case.

Dimensions:	203 x 86 x 17 mm (H x W x D)
Material:	plastic casing in colour RAL9016
Weight:	0.42 kg

NOTE: The required double installation case should be ensured.

Nr.: FC010190

Necessary components for countersunk mounting:

Description:	Type:	Article No.:
Room terminal without display	ZT-B	FC011130
Plastic mouting frame for KMT	DR-KMT	FC010191

Necessary components for surface mounting:

Description:	Type:	Article No.:
Room terminal with displayout	ZT-B	FC011130
Surface mounting frame for KMT	AP-KMT	FC010190

Nr.: FC011110

Electronics for rooms ZE-B

Controller electronics for installation in electronic distribution cases, cavity ceiling etc. with integrated controller circuit board for extension functions in individual rooms, consisting of:

- Controller circuit board with FlashProm,
- 2x RJ45 sockets for connection to the data bus,
- 5x RJ12 sockets (6 pole) for connecting external devices,

Nr.: FC88115--

Dimensions: 151 x 79 x 15.5 mm (H x W x D)
Weight: 70 g
Weight-case: 0.37 kg

Description:	Type:	Article No.:
Electronics for rooms	ZE-B	FC011110

Accessories:

Description:	Type:	Article No.:
Case for electronics for rooms	GH-ZE-B	FC88115--
Distance piece for electronics for rooms	ZUB-ZE-B	FC88116--

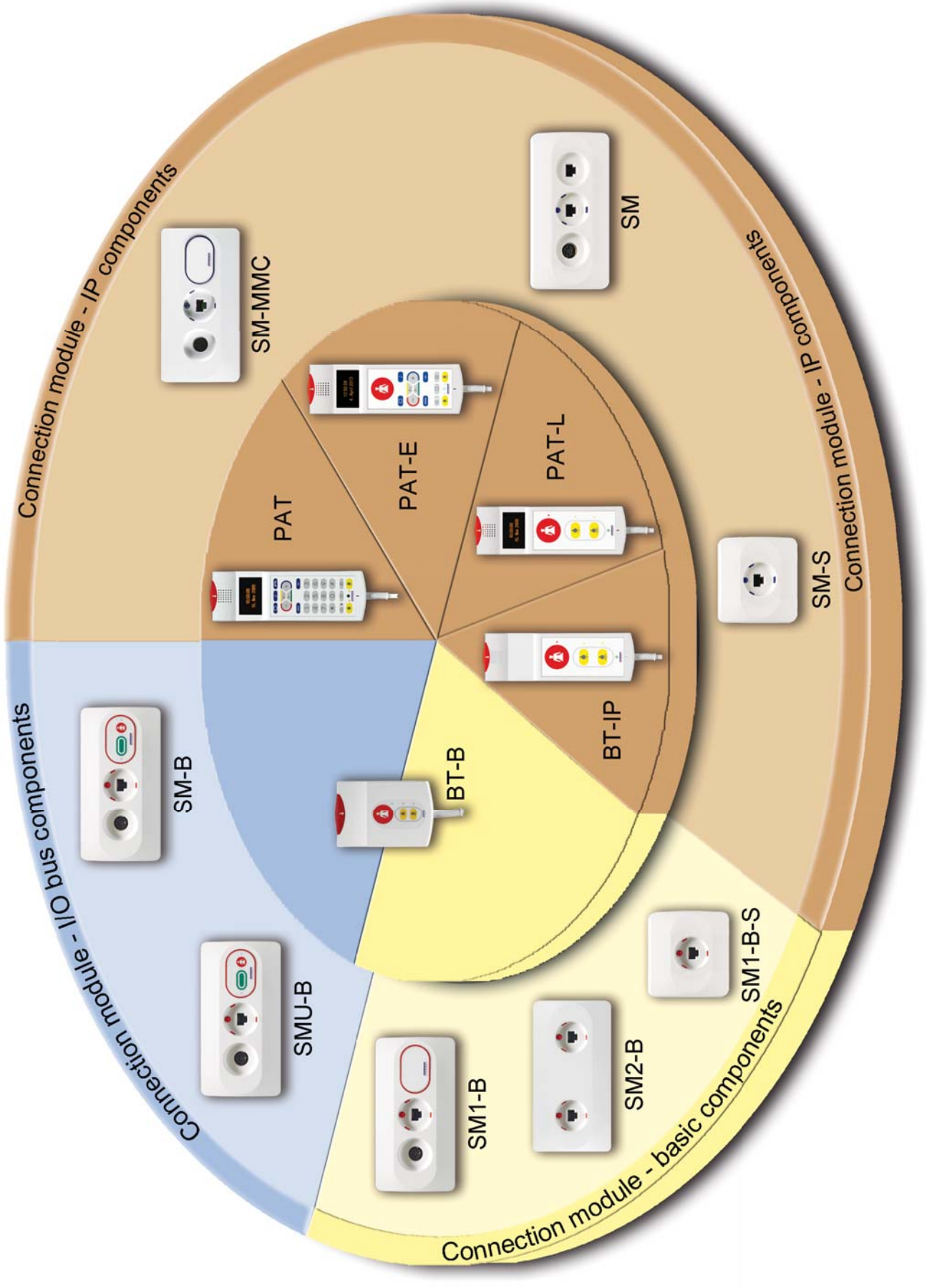
SCHRACK SECONET Lichtruf

Nr.: FC38100-

Accessories:

Description:	Type:	Article No.:
Sign nursecall bl/ws	S LTR	FC38100-

5 Connection modules and patient terminals



5.1 IP components

Nr.: FC010200

Nr.: FC010240

EI931506-C

Patient terminal PAT

For operation by patients from their beds to carry out the functions listed below, with the following characteristics:

- Nurse call with possibility for communications,
- Service call with possibility for communications,
- Additional calls via service call key (optional) with possibility for communications,
- For tuning on and off, selecting the program and the volume level of the integrated radio receiver,
- For tuning on and off, selecting the program and the volume level of system TV devices and system streaming terminals,
- Integrated IP telephone end device (H.323 or SIP protocol stack)
- Integrated contact-free smart card reader and mechanism for inserting a smart card,
- Controlling two independent lighting circuits,
- Controlling electronically driven shutters or other environmental applications,
- Prepared for receiving IR control signals from environmental control devices,
- Automatic volume switching when using the PAT in the cradle,
- Plastic case and membrane keypad in fungicidal material,
- Menu-driven operation,
- Splash resistant case, consisting of:
  - Call button with nurse symbol with integrated finder and reassurance light on the top end of the unit,
  - Loudspeaker, microphone, headphones socket,
  - A fully-graphical display with a resolution of 128 x 64 pixels,
  - 2.80 m connection cable with a RJ45 plug which is protected against disconnection
  - Board with integrated display and a 100Base TX switch, (IEEE802.3 100BaseTX),
  - Membrane keypad with integrated LED's, consisting of:
    - » 3 function keys for TV, radio and telephone,
    - » 4 different coloured cursor keys for user operation,
    - » Menu key, OK key, Teletext key, 12 key numeric keypad,
    - » Service call key, Special function key, 2 lighting keys

Dimensions: 205 x 64 x 23 mm (H x W x D)
Material: Plastic case in colour RAL9016
Weight: 0.3 kg

Description:	Type:	Article No.:
Patient terminal	PAT	FC010200

Accessories:

Description:	Type:	Article No.:
Cradle	K-PAT	FC010240
Connection cable PAT blue, 2.8 m	AK-PAT-BL-280	EI931506-C

Nr.: FC010210

Nr.: FC010240

EI931506-C

Patient terminal PAT-E

For operation by patients from their beds to carry out the functions listed below, with the following characteristics:

- Nurse call with possibility for communications,
- Service call with possibility for communications,
- Additional calls via service call key (optional) with possibility for communications,
- For tuning on and off, selecting the program and the volume level of the integrated radio receiver,
- For tuning on and off, selecting the program and the volume level of system TV devices and system streaming terminals,
- Receiving telephone calls (active call not possible),
- Integrated contact-free smart card reader and mechanism for inserting a smart card,
- Controlling two independent lighting circuits,
- Controlling electronically driven shutters or other environmental applications,
- Prepared for receiving IR control signals from environmental control devices,
- Automatic volume switching when using the PAT in the cradle,
- Plastic case and membrane keypad in fungicidal material,
- Menu-driven operation,
- Splash resistant case, consisting of:
  - Call button with nurse symbol with integrated finder and reassurance light on the top end of the unit,
  - Loudspeaker, microphone, headphones socket,
  - A fully-graphical display with a resolution of 128 x 64 pixels,
  - 2.80 m connection cable with a RJ45 plug which is protected against disconnection,
  - Board with integrated display and a 100Base TX switch, (IEEE802.3 100BaseTX),
  - Membrane keypad with integrated LED's, consisting of:
    - » Call button with nurse symbol,
    - » 2 function keys for TV and radio,
    - » 4 different coloured cursor keys for user operation,
    - » Menu key, OK key, Teletext key,
    - » Service call key, special function key, 2 lighting keys

Dimensions:	205 x 64 x 23 mm (H x W x D)
Material:	Plastic case in colour RAL9016
Weight:	0.3 kg

Description:	Type:	Article No.:
Patient terminal Easy	PAT-E	FC010210

Accessories:

Description:	Type:	Article No.:
Cradle	K-PAT	FC010240
Connection cable PAT blue, 2.8 m	AK-PAT-BL-280	EI931506-C

Nr.: FC010220

Nr.: FC010240

EI931506-C

Patent terminal PAT-L

For operation by patients from their beds to carry out the functions listed below, with the following characteristics:

- Nurse call with possibility for communications,
- Integrated contact-free smart card reader,
- Mechanism for inserting a smart card,
- Controlling two independent lighting circuits,
- Prepared for receiving IR control signals from environmental control devices,
- Plastic case and membrane keypad in fungicidal material,
- Splash resistant case, consisting of:
  - Call button with nurse symbol with integrated finder and reassurance light on the top end of the unit,
  - Loudspeaker, microphone, headphones socket,
  - A fully-graphical display with a resolution of 128 x 64 pixels,
  - 2.80 m connection cable with a RJ45 plug which is protected against disconnection,
  - Controller circuit board with integrated display and a 100Base TX switch, (IEEE802.3 100BaseTX),
  - Membrane keypad with integrated LED's, consisting of:
- Call button with nurse symbol with integrated finder and reassurance light,
- 2 lighting buttons with integrated finder lights

Dimensions: 205 x 64 x 23 mm (H x W x D)
Material: Plastic case in colour RAL9016
Weight: 0.3 kg

Description:	Type:	Article No.:
Patient terminal light	PAT-L	FC010220

Accessories:

Description:	Type:	Article No.:
Cradle	K-PAT	FC010240
Connection cable PAT blue, 2.8 m	AK-PAT-BL-280	EI931506-C

Nr.: FC010230

Push button BT-IP

For operation by patients from their beds to carry out the functions listed below, with the following characteristics:

- Nurse call,
- Controlling two independent lighting circuits,
- Prepared for receiving IR control signals from environmental control devices,
- Plastic case and membrane keypad in fungicidal material,
- Splash resistant case, consisting of:
  - Call button with nurse symbol with integrated finder and reassurance light on the top end of the unit,
  - 2.80 m connection cable with a RJ45 plug which is protected against disconnection,
  - Board with integrated display and a 100Base TX switch, (IEEE802.3 100BaseTX),
  - Membrane keypad with integrated LED's, consisting of:
    - » Call button with nurse symbol,
    - » 2 lighting keys

Nr.: FC010240

EI931506-C

Dimensions: 205 x 64 x 23 mm (H x W x D)
Material: Plastic case in colour RAL9016
Weight: 0.3 kg

Description:	Type:	Article No.:
Push button IP	BT-IP	FC010230

Accessories:

Description:	Type:	Article No.:
Cradle	K-PAT	FC010240
Connection cable PAT blue, 2.8 m	AK-PAT-BL-280	EI931506-C

Nr.: FC010300

Connection module SM

For fitting in a double switchbox or in a media duct for connecting the ward terminals DZT, for staff terminals (ST-TOUCH), for patient terminals (PAT), for patient terminals easy (PAT-E) for patient terminals light (PAT-L) or push buttons IP (BT-IP); optional diagnostic devices, radio receiver or contact mats as well as laptops, comprising of:

- Supporting frame with electronic circuit board,
- Circuit board with one RJ45 socket for the uplink to the system switch,
- 1 x RJ45 socket marked in colour and with measures to ensure that the PAT / PAT-E / PAT-L, BT-IP or DZT / ST-TOUCH is correctly connected, incl. the auto disconnect mechanism,
- 1 x RJ45 socket for connecting a laptop belonging to the patient,
- 1 x 5 pole DIN socket for connecting a diagnostic device with disconnection call if required, diagnostic adapter AD-DIA with disconnection call if required or radio receiver, noise monitor etc. The connection module automatically triggers the relevant call in the event of an alarm,
- Fastening bracket made of plastic to attachment the plug module without using screws

Nr.: FC88012-

Nr.: FC88013-

Dimensions: 158 x 81 x 13 mm (H x W x D), in colour RAL 9016
Weight: 100 g

Description:	Type:	Article No.:
Connection module	SM	FC010300

Accessories:

Description:	Type:	Article No.:
Countersunk double switchbox	U2	FC88012-
Cavity wall double switchbox	H2	FC88013-

Connection module single SM-S

Nr.: FC010302

For fitting in a single switchbox or in a media duct for connecting the ward terminals DZT, for staff terminals (ST-TOUCH), for patient terminals (PAT), for patient terminals easy (PAT-E) for patient terminals light (PAT-L) or push buttons IP (BT-IP), comprising of:

- Supporting frame with electronic circuit board,
- Circuit board with insulation displacement for the uplink to the system switch,
- 1 x RJ45 socket marked in colour and with measures to ensure that the PAT / PAT-E / PAT-L, BT-IP or DZT / ST-TOUCH is correctly connected, incl. the auto disconnect mechanism,
- Fastening bracket made of plastic to attachment the plug module without using screws

Nr.: FC88010-

Nr.: FC88011-

Dimensions: 80 x 82 x 13 mm (H x W x D), in colour RAL 9016
Weight: 70 g

Description:	Type:	Article No.:
Connection module single	SM-S	FC010302

Accessories:

Description:	Type:	Article No.:
Countersunk switchbox	U1	FC88010-
Cavity wall switchbox	H1	FC88011-

Nr.: FC010301

Connection module SM-MMC

For fitting a double switchbox or in a media duct, both for connection of patient terminals (PAT), patient terminals easy (PAT-E), patient terminals light (PAT-L) or push buttons IP (BT-IP); optional diagnostic devices, radio call receivers or contact mats; comprising of:

- Mounting rail with board, 2x RJ45 sockets for the uplink to the system switch and for connecting an external multimedia terminal,
- 1 x RJ45 socket for connecting the patient terminals or the BT-IP in the correct position, incl. the auto disconnect mechanism,
- 1 x 5 pole DIN socket for connecting a diagnostic device with disconnection call if required, diagnostic adapter AD-DIA with disconnection call if required or radio receiver, noise monitor etc. The connection module automatically detects the external device connected using this sockets and automatically triggers the relevant call in the event of an alarm occurring,
- Fastening bracket made of plastic to attachment the plug module without using screws

Nr.: FC88012-

Nr.: FC88013-

Dimensions: 158 x 81 x 13 mm (H x W x D), in colour RAL 9016
Weight: 100 g

Description:	Type:	Article No.:
Connection module (Multimedia)	SM-MMC	FC010301

Accessories:

Description:	Type:	Article No.:
Countersunk double switchbox	U2	FC88012-
Cavity wall double switchbox	H2	FC88013-

5.2 I/O bus and basic components

Nr.: FC011200

Push button BT-B

For operation by patients from their patient bed, consisting of:

- Call button with nurse symbol with integrated finder and reassurance light on the top end of the unit,
- Membrane keyboard with integrated LED's, consisting of:
  – 1 call button (red),
  – 2 lighting keys
- 2.8 m connection cable with a RJ45 plug which is protected against disconnection,

Dimensions: 96 x 64 x 23 mm (H x W x D)
plastic case in colour RAL9016
Weight: 210 g

Description:	Type:	Article No.:
Push button	BT-B	FC011200

Nr.: FC010240

Accessories:

Description:	Type:	Article No.:
Cradle	K-PAT	FC010240
Connection cable BT-B red, length 2.8 m	AK-BT-B	EI931573-A
Connection cable BT-B red, length 5 m	AK5-BT-B	EI931573-A500

EI931573--

Connection module SM-B

For fitting in a double switchbox or in a media duct for connecting a push button BT-B and a diagnostic device, comprising of:

- Mounting rail with board, 2 x RJ45 sockets for connecting the data bus
- 1 x RJ45 socket marked in colour and with measures to ensure that the push button is correctly connected, including the auto disconnect mechanism,
- 1 x 5 pole DIN socket for connecting a diagnostic device with disconnection call if required. The connection module automatically triggers the relevant call in the event of an alarm occurring.
- 4 x RJ12 sockets (6 pole) for connecting additional devices
- 1 membrane keypad with:
  – 1 call button (red) including a finder light / reassurance light,
  – 1 presence key (green) including control LED,
- Fastening bracket made of plastic to attachment the plug module without using screws

Nr.: FC011300

Dimensions: 158 x 81 x 13 mm (H x W x D), in colour RAL 9016
Weight: 100 g

Description:	Type:	Article No.:
Connection module	SM-B	FC011300

Nr.: FC88012-

Accessories:

Description:	Type:	Article No.:
Countersunk double switchbox	U2	FC88012-
Cavity wall double switchbox	H2	FC88013-

Nr.: FC88013-

Nr.: FC011301

Connection module SMU-B

For fitting in a double switchbox or in a media duct for connecting a push button BT-B; optional diagnostic devices, radio call receivers or contact mats; comprising of:

- Mounting rail with board, 2 x RJ45 sockets for connecting the data bus
- 1 x RJ45 socket marked in colour and with measures to ensure that the push button is correctly connected, including the auto disconnect mechanism,
- 1 x 5 pole DIN socket for connecting a diagnostic device with disconnection call if required, diagnostic adapter AD-DIA with disconnection call if required or radio receiver, noise monitor etc. Automatic input monitoring with autonomous call triggering,
- 1 membrane keypad with:
- 1 call button (red) including a finder light / reassurance light,
- 1 presence key (green) including control LED,
- Fastening bracket made of plastic to attachment the plug module without using screws,
- Screw clamps for power supply

Nr.: FC88012-

Nr.: FC88013-

Dimensions: 158 x 81 x 13 mm (H x W x D), in colour RAL 9016
Weight: 120 g

Description:	Type:	Article No.:
Connection module light	SMU-B	FC011301

Accessories:

Description:	Type:	Article No.:
Countersunk double switchbox	U2	FC88012-
Cavity wall double switchbox	H2	FC88013-

Nr.: FC011310

Connection module SM1-B

For fitting in a double switchbox or in a media duct for connecting a push button BT-B and a diagnostic device, comprising of:

- Mounting rail with board, 2 x RJ12 sockets (6 pole) for connecting the data circuits,
- 1 x RJ45 socket for connecting the push button in the correct position, incl. the mechanical parts required for the auto disconnect mechanism,
- 1 x 5 pole DIN socket for connecting a diagnostic device with disconnection call if required. The connection module automatically detects the external device connected using this sockets and automatically triggers the relevant call in the event of an alarm occurring.
- Fastening bracket made of plastic to attachment the plug module without using screws

Nr.: FC88012-

Nr.: FC88013-

Dimensions: 158 x 81 x 13 mm (H x W x D), in colour RAL 9016
Weight: 90 g

Description:	Type:	Article No.:
Connection module (1 bed)	SM1-B	FC011310

Accessories:

Description:	Type:	Article No.:
Countersunk double switchbox	U2	FC88012-
Cavity wall double switchbox	H2	FC88013-

Nr.: FC011312

Connection module single SM1-B-S

For fitting in a single switchbox or in a media duct for connecting a push button BT-B, comprising of:

- Mounting rail with board, insulation displacement for connecting the data circuits,
- 1 x RJ45 socket for connecting the push button in the correct position, incl. the mechanical parts required for the auto disconnect mechanism,
- Fastening bracket made of plastic to attachment the plug module without using screws

Nr.: FC88010-

Nr.: FC88011-

Dimensions: 80 x 82 x 13 mm (H x W x D), in colour RAL 9016
Weight: 70 g

Description:	Type:	Article No.:
Connection module single basic	SM1-B-S	FC011312

Accessories:

Description:	Type:	Article No.:
Countersunk switchbox	U1	FC88010-
Cavity wall switchbox	H1	FC88011-

Nr.: FC011320

Connection module SM2-B

For fitting in a double switchbox or in a media duct for connecting two push buttons BT-B, comprising of:

- Mounting rail with board, 2 x RJ12 sockets (6 pole) for connecting the data circuits,
- 2 x RJ45 socket for connecting the push button in the correct position, incl. the mechanical parts required for the auto disconnect mechanism,
- Fastening bracket made of plastic to attachment the plug module without using screws

Nr.: FC88012-

Nr.: FC88013-

Dimensions: 158 x 81 x 13 mm (H x W x D), in colour RAL 9016
Weight: 100 g

Description:	Type:	Article No.:
Connection module (2 beds)	SM2-B	FC011320

Accessories:

Description:	Type:	Article No.:
Countersunk double switchbox	U2	FC88012-
Cavity wall double switchbox	H2	FC88013-

5.3 Expansion modules

Nr.: FC010310

Diagnostic module DM-IO

For extending the diagnostic connection in a patient bed. Up to 4 additional foreign devices can be connected to the diagnostic extension. It comprises of:

- Mounting rail with board, 2 x RJ45 sockets for connecting the data bus,
- 4 x 5pin DIN sockets for connecting the diagnostic devices,
- Fastening bracket made of plastic to attachment the diagnostic module without using screws,
- Galvanically isolated diagnostic sockets

Nr.: FC88012-

Nr.: FC88013-

Dimensions: 158 x 81 x 13 mm (H x W x D), in colour RAL 9016
Weight: 150 g

Description:	Type:	Article No.:
Diagnostic module	DM-IO	FC010310

Accessories:

Description:	Type:	Article No.:
Countersunk double switchbox	U2	FC88012-
Cavity wall double switchbox	H2	FC88013-

Nr.: FC010309

Diagnostic module single DM1-IP

For extending the diagnostic connection in a patient bed. A additional foreign device can be connected to the diagnostic extension. For the connection of optional diagnostic devices, radio call receivers or contact mats; comprising of:

- Supporting frame with electronic circuit board,
- Circuit board with one RJ45 socket for the uplink to the system switch,
- 1 x 5 pole DIN socket for connecting a diagnostic device with disconnection call if required, diagnostic adapter AD-DIA with disconnection call if required or radio receiver, noise monitor etc. Automatic input monitoring with autonomous call triggering,
- Fastening bracket made of plastic to attachment the diagnostic module without using screws,
- Galvanically isolated diagnostic sockets,

Nr.: FC88010-

Nr.: FC88011-

Dimensions: 80 x 82 x 13 mm (H x W x D), in colour RAL 9016
Weight: 70 g

Description:	Type:	Article No.:
Diagnostic module single	DM1-IP	FC010309

Accessories:

Description:	Type:	Article No.:
Countersunk switchbox	U1	FC88010-
Cavity wall switchbox	H1	FC88011-

5.4 Accessories

Nr.: FC010290

Diagnostic adapter AD-DIA

For connection to the connection modules SM / SM-MMC / SMU-B or the diagnostic module DM1-IP for connecting call triggering foreign devices such as breathing sensors, contact mats etc. including galvanic isolation conforming to DIN60601-1.

Due to the different conditions that apply, the module is configurable for both make as well as break contacts triggering the call, consisting of:

- Cable with a 5 pole DIN connector plug for connecting to the connection modules SM / SM-MMC / SMU-B or to the diagnostic module DM1-IP,
- DIL switch for configuration,
- 2 wire cable with open ends for connecting to foreign devices

Plastic case in colour RAL 9016

Dimensions: 41 x 99 x 25 mm (H x W x D), in colour RAL 9016
Weight: 115 g

Description:	Type:	Article No.:
Diagnostic adapter	AD-DIA	FC010290

Nr.: FC010350

Diagnostic connection cable DSTK

For connecting a diagnostic device to the diagnostic socket of the connection module, consisting of:

- 2.5 m connection cable / weight: 130 g

Description:	Type:	Article No.:
Diagnostic connection cable 2.5 m	DSTK-W-VCIP	FC010350

Nr.: FC010348

Diagnostic Y connection cable Y-DSTK

For connecting a diagnostic device to the diagnostic socket of the connection module from VISOCALL IP or to the diagnostic socket of the connection device from VISOCALL PLUS, consisting of:

- 4 pole connector plug for connection device from VISOCALL PLUS
- 5 pole DIN connector plug for connection modul from VISOCALL IP
- 2.5 m connection cable / weight: 160 g

Description:	Type:	Article No.:
Diagnostic Y connection cable 2.5 m	Y-DSTK-VCIP/VCP	FC010348

Nr.: FC010295

Blind cover connection module BLA-SM

Used to cover the diagnostic socket of the connection modules SM, SM-MMC, SM-B, SMU-B, SM1-B or the LAN socket (RJ45) of connection module SM.

Dimensions: 25 x 1 mm (Diameter x D), in colour RAL 9016
Weight: 20 g

Description:	Type:	Article No.:
Blind cover connection module	BLS-SM	FC010295

Nr.: FC010240

Cradle K-PAT

This cradle is used to hold the patient terminal including the volume control, and is made of plastic in colour RAL9016.

Dimensions: 66,5 x 70,5 x 32mm (H x W x D), Weight: 16g

Description:	Type:	Article No.:
Cradle	K-PAT	FC010240

Nr.: ZZL10737

Gosseneck SH-GTS

Used to attach the patient devices (via the cradle K-PAT, also controlling volumne) and is installed on the cartridge carrier, in colour silver/white.

Dimensions: 840 x 20mm (L x Diameter), Weight: 1.9kg

Description:	Type:	Article No.:
Gosseneck for cartridge carrier	SH-GTS	ZZL10737

Nr.: FC12803

Retaining tap HL27/38-VC

Used to fix the connection cable of the patient devices at the bed frame or bed gallows, in colour silver.

Dimensions: 20 x 29/40mm (W x Diameter), Weight: 12g

Description:	Type:	Article No.:
Retaining tap for connection cable, d=27mm	HL27-VC	FC12803--A
Retaining tap for connection cable, d=38mm	HL38-VC	FC12803--B

Nr.: FC12804

Holding clip HC-VC

Used to surround the connection cable of the patient devices and may be attached on a pillow or bed sheet, in colour silver/white.

Dimensions: 13,5 x 75mm (W x L), Weight: 4g

Description:	Type:	Article No.:
Holding clip for connection cable	HC-VC	FC12804

Nr.: FC006209

Holding clamp HKL-VC

Used to double-fix the connection cable of the patient devices and may be attached at the bed gallows, in colour red.

Dimensions: 20 x 26 x 10mm (H x W x D), Weight: 4g

Description:	Type:	Article No.:
Holding clamp for connection cable	HKL-VC	FC006209-A

Nr.: FC005205

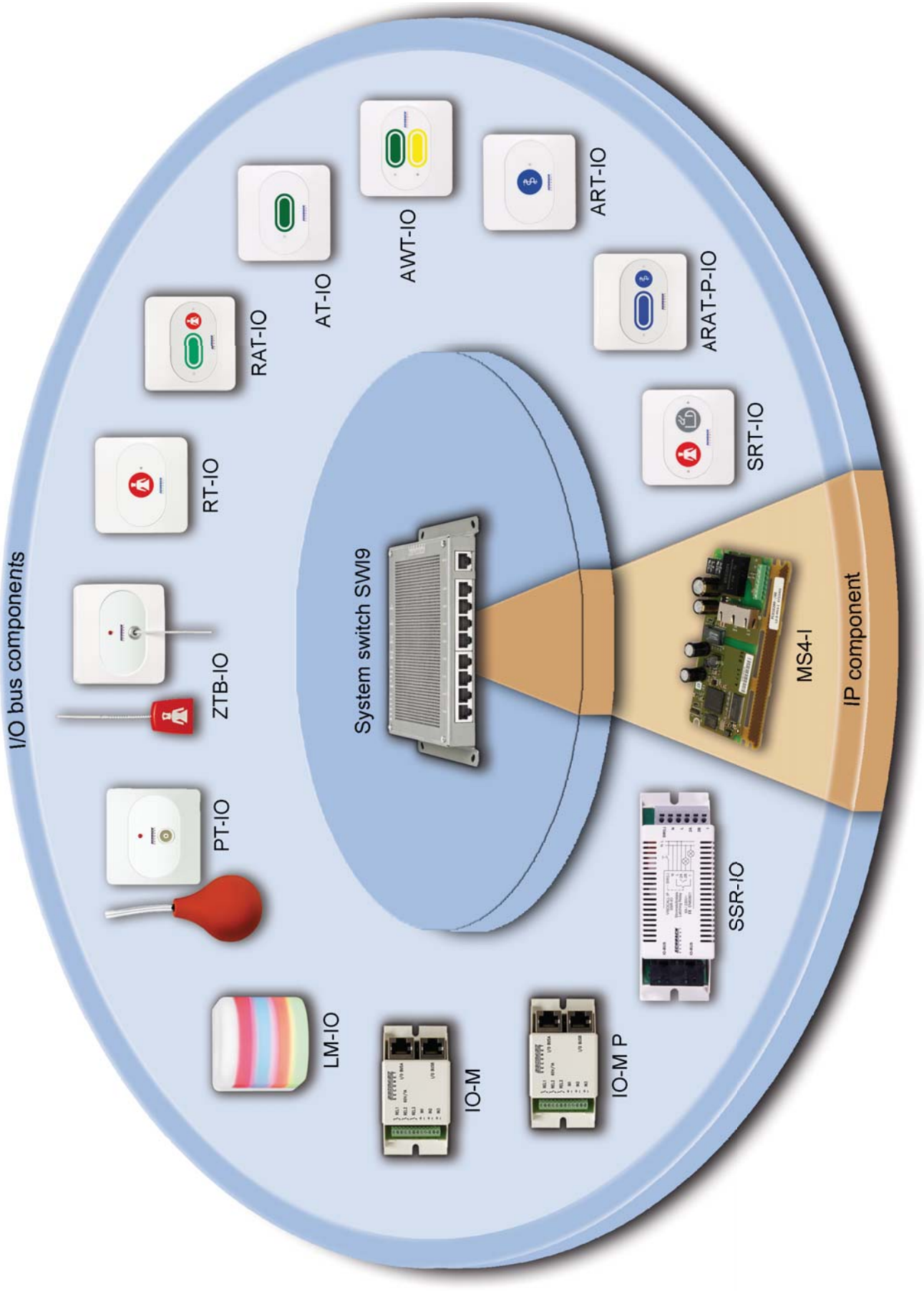
Headphones KH

- For listening to radio programs in comfort and
- For connection to the patient terminal
- Incl. 2.0m connection cable and a 3 pole 3.5mm jack connection plug

Weight: 37g

Description:	Type:	Article No.:
Headphone	KH	FC005205

6 Call combinations, lamps and interfaces



6.1 IO components

Nr.: FC010400

Nr.: FC88011-

Nr.: FC88010-

Call button RT-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with:

- 1 call button (red) including a finder light / reassurance light,
- 2 x RJ45 sockets for connecting to the data bus,
- Including an installation frame for screw-free attachment to an installation case

Dimensions: 80 x 83 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 50 g

Description:	Type:	Article No.:
Call button	RT-IO	FC010400

Nr.: FC010401

Nr.: FC88011-

Nr.: FC88010-

Call button RTB-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with:

- 1 call button (red) including a finder light / reassurance light,
- 2 x RJ45 sockets for connecting to the data bus,
- Including an installation frame for screw-free attachment to an installation case
- Circuit board is physically protected against moisture

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 50 g

Description:	Type:	Article No.:
Call button (moisture protected)	RTB-IO	FC010401

Nr.: FC010411

Nr.: FC88011-

Nr.: FC88010-

Pull button ZTB-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes with:

- Integrated finder / reassurance light,
- Microswitch with 2 metre pull cord (max. force at break: 60-130 N or 6-13 kg) and grip with a printed nurse symbol and a carabiner as a connecting piece (for hygiene reasons it must be easy to change the pull cord),
- 2 x RJ45 sockets for connecting to the data bus
- Incl. an installation frame for screw-free attachment to an installation case
- Circuit board is physically protected against moisture

Dimensions: 83 x 80 x 55 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 60 g

Description:	Type:	Article No.:
Pull button (moisture protected)	ZTB-IO	FC010411

Nr.: DF100168

Pull cord (replacement) ZT-S-E

Replacement pull cord for pull button consisting of:

- 2 m / 4 m pull cord, max. force at break: 60-130 N or 6-13 kg
- Carabiner as a connecting piece
  (for hygiene reasons it must be easy to change the pull cord easily)
- Grip with a printed nurse symbol

Weight: 16 g / 20 g

Description:	Type:	Article No.:
Pull cord (replacement) 2 m, 10 pcs	ZT-S2-E	DF100168
Pull cord (replacement) 4 m, 10 pcs	ZT-S4-E	DF100169

Nr.: FC010420

Pneumatic call button PT-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as:

- Membrane keypad with integrated finder / reassurance light,
- Microswitch with 2 metre pneumatic hose and pressure ball,
- 2 x RJ45 sockets for connecting to the data bus
- Incl. an installation frame for screw-free attachment to an installation case

Nr.: FC88011-

Nr.: FC88010-

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 50 g / 150 g (with pneumatic hose and pressure ball)

Description:	Type:	Article No.:
Pneumatic call button	PT-IO	FC010420

Nr.: FC010430

Cancel button AT-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with:

- Membrane keypad with 1 cancel button (green) incl. control LED,
- 2 x RJ45 sockets for connecting to the data bus
- Incl. an installation frame for screw-free attachment to an installation case

Nr.: FC88011-

Nr.: FC88010-

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 50 g

Description:	Type:	Article No.:
Cancel button	AT-IO	FC010430

Nr.: FC010440

Nr.: FC88011-

Nr.: FC88010-

Call and cancel button RAT-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with:

- 1 call button (red) including a finder light / reassurance light,
- 1 presence button (green) incl. control LED,
- 2 x RJ45 sockets for connecting to the data bus
- Incl. an installation frame for screw-free attachment to an installation case

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 50 g

Description:	Type:	Article No.:
Call and cancel button	RAT-IO	FC010440

Nr.: FC010442

Nr.: FC88011-

Nr.: FC88010-

Call and cancel button RATB-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with:

- 1 call button (red) including a finder light / reassurance light,
- 1 presence button (green) incl. control LED,
- 2 x RJ45 sockets for connecting to the data bus
- Incl. an installation frame for screw-free attachment to an installation case
- Circuit board is physically protected against moisture

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 50 g

Description:	Type:	Article No.:
Call and cancel button (moisture protected)	RATB-IO	FC010442

Nr.: FC010441

Nr.: FC88011-

Nr.: FC88010-

Call and cancel button piezo RAT-P-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with:

- 1 call button (red) including a finder light / reassurance light,
- 1 presence button (green) incl. control LED,
- 2 x RJ45 sockets for connecting to the data bus
- Integrated piezo buzzer
- Incl. an installation frame for screw-free attachment to an installation case

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 50 g

Description:	Type:	Article No.:
Call and cancel button piezo	RAT-P-IO	FC010441

Nr.: FC010460

Presence button AWT-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with:

- 1 presence key (green) incl. control LED,
- 1 presence key (yellow) incl. control LED,
- 2 x RJ45 sockets for connecting to the data bus
- Incl. an installation frame for screw-free attachment to an installation case

Nr.: FC88011-

Nr.: FC88010-

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 50 g

Description:	Type:	Article No.:
Presence button	AWT-IO	FC010460

Nr.: FC010480

Call and service call button SRT-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with

- 1 call button (red) incl. a finder light/reassurance light,
- 1 call button (grey) including a control LED,
- 2 x RJ45 sockets for connecting to the data bus
- Incl. an installation frame for screw-free attachment to an installation case

Nr.: FC88011-

Nr.: FC88010-

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 50 g

Description:	Type:	Article No.:
Call and service call button	SRT-IO	FC010480

Nr.: FC010470

Doctor call button ART-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with

- 1 doctor call key (blue) including a finder light / reassurance light,
- 2 x RJ45 sockets for connecting to the data bus
- Incl. an installation frame for screw-free attachment to an installation case

Nr.: FC88011-

Nr.: FC88010-

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 50 g

Description:	Type:	Article No.:
Doctor call button	ART-IO	FC010470

Nr.: FC010491

Doctor call and cancel button piezo ARAT-P-IO

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with

- 1 doctor call button (blue) including a finder light / reassurance light,
- 1 cancel button (blue) incl. control LED,
- 2 x RJ45 sockets for connecting to the data bus
- Integrated piezo buzzer
- Incl. an installation frame for screw-free attachment to an installation case

Nr.: FC88011-

Nr.: FC88010-

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 50 g

Description:	Type:	Article No.:
Doctor call and cancel button piezo	ARAT-P-IO	FC010491

Nr.: FC010900

Light module LM-IO

Can be configured as a room call lamp, a direction lamp and as a ward lamp. For optical indication of calls, presences and reminders in the relevant colours conforming to VDE0834 and suitable for fitting on to an installation case, consisting of 5 light chambers:

- 5 light chambers with light reflectors for homogenous illumination,
- 1 light chamber equipped with 3 ultra light red LED's,
- 1 light chamber equipped with 3 ultra light white LED's,
- 1 light chamber equipped with 3 ultra light green LED's,
- 1 light chamber equipped with 3 ultra light yellow LED's,
- 1 light chamber equipped with 3 ultra light blue LED's,
- Each light chamber conforms to the lighting strength from VDE0834,
- The life expectancy of the LED's is approx. 100,000 operating hours,
- Plastic base with controller circuit board,
- 2 x RJ45 sockets for connection to the data bus

Dimensions: 83 x 80 x 42 mm (H x W x D), with an opal coloured transparent lamp cap
Weight: 94 g

Description:	Type:	Article No.:
Light module	LM-IO	FC010900

Nr.: FC010500

I/O module IO-M

This module is a bidirectional and potential-free interface to foreign systems. All events generated in VISOCALL IP can be passed on in this way to other systems, in the same way that status messages from other systems can be received by the communications system. It is possible for a special message text and the call priority for these events as well as configuring the ward and staff category that should be informed about this event. Furthermore, this module is used for controlling a reading light and room lighting over latching relays as well as for controlling electronically adjustable blinds and similar systems, consisting of:

- Controller circuit board with short circuit isolator for the data bus,
- 2 x RJ45 sockets for connection to the data bus,
- 3 potential-free outputs conformant to EN60950, max. 60 V / 1 A,
- 3 potential-free inputs conformant to EN60950,
- 12 screw-type terminals for connecting the inputs/outputs

Suitable for fitting in the media duct or in double installation cases.

Dimensions: 26 x 85 x 42 mm (H x W x D) including plastic case in colour RAL 9016
Weight: 41 g

Description:	Type:	Article No.:
I/O module	IO-M	FC010500

Nr.: FC010501

I/O module non-floating IO-M-P

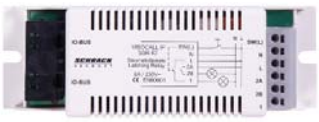
Like the IO-M, but consisting of:

- 3 non-floating inputs (only for potential-free contacts)

Suitable for fitting in the media duct or in a double installation cases.

Dimensions: 26 x 85 x 42 mm (H x W x D) including plastic case in colour RAL 9016
Weight: 41 g

Description:	Type:	Article No.:
I/O module non-floating	IO-M-P	FC010501



Nr.: FC010504

Latching relay SSR-IO

This latching relay is using for directly controlling room up to 2 independent light sources (e.g. room light and reading lamp). It is operated by PAT, PAT easy, PAT light, BT-IP und BT-B, consisting of:

- Controller circuit board with short circuit isolator for the outputs,
- Switching voltage max. 260 V~
- Max. current load: 8 A~
- Max. input surge current: 165 A/20 ms bzw. 800 A/200 µs
- 2 x RJ45 sockets for connection to the I/O data bus,
- 6 plug-in clamps for connecting the input/outputs
- Product saftey: EN 50950/EN60101-1

The SSR-IO is housed in a plastic housing with the 230 V~ connections on one side, and RJ45 sockets for the VC-IP I/O bus on the other side.

Dimensions: 30 x 130 x 42 mm (H x W x D) including plastic case
Weight: 154 g

Suitable for fitting in the media duct:

Description:	Type:	Article No.:
Latching relay SSR-IO	SSR-IO	FC010504

6.2 IP interfaces

Nr.: FC010280

Multi sound 4 interface MS4-I

The multi sound 4 interface serves as a communication link between the system switch SWI9 and external audio systems.
Depending on the configuration and per ward, external audio signals can switched to the VISOCALL IP system or nurse call announcements to external audio systems. The interface consists of:

- 2x RJ45 sockets for connection to the SWI9 or for external devices (e.g. notebook),
- 5 srew clamps for LSP, MIC and 24 V power supply,
- Galvanic isolated audio interface

For fitting in electronic distribution cases, cavity ceiling, media duct etc..

Dimensions: 151 x 80 (60) x 24 mm (H x W x D)
Weight: 465 g

Description:	Type:	Article No.:
Multi sound 4 interface	MS4-I	FC010280

Nr.: ZZL10728

Nr.: ZZL10727

KNX/EIB Interface

KNX/EIB IP interface for controlling of e.g. illuminations and blinds or shading devices. The VISOCALL IP commands will be transferred to the system bus KNX/EIB via router or layer 3 switch.
For the integration of KNX/EIB in the VISOCALL IP system it will not require any more IO modules or latching relays.

- Rail mounting device - 3 RU,
- Supply from PoE or separate voltage supply (4 RU),
- Galvanic isolation between KNX and IP network,
- Power consuption max. 1 W

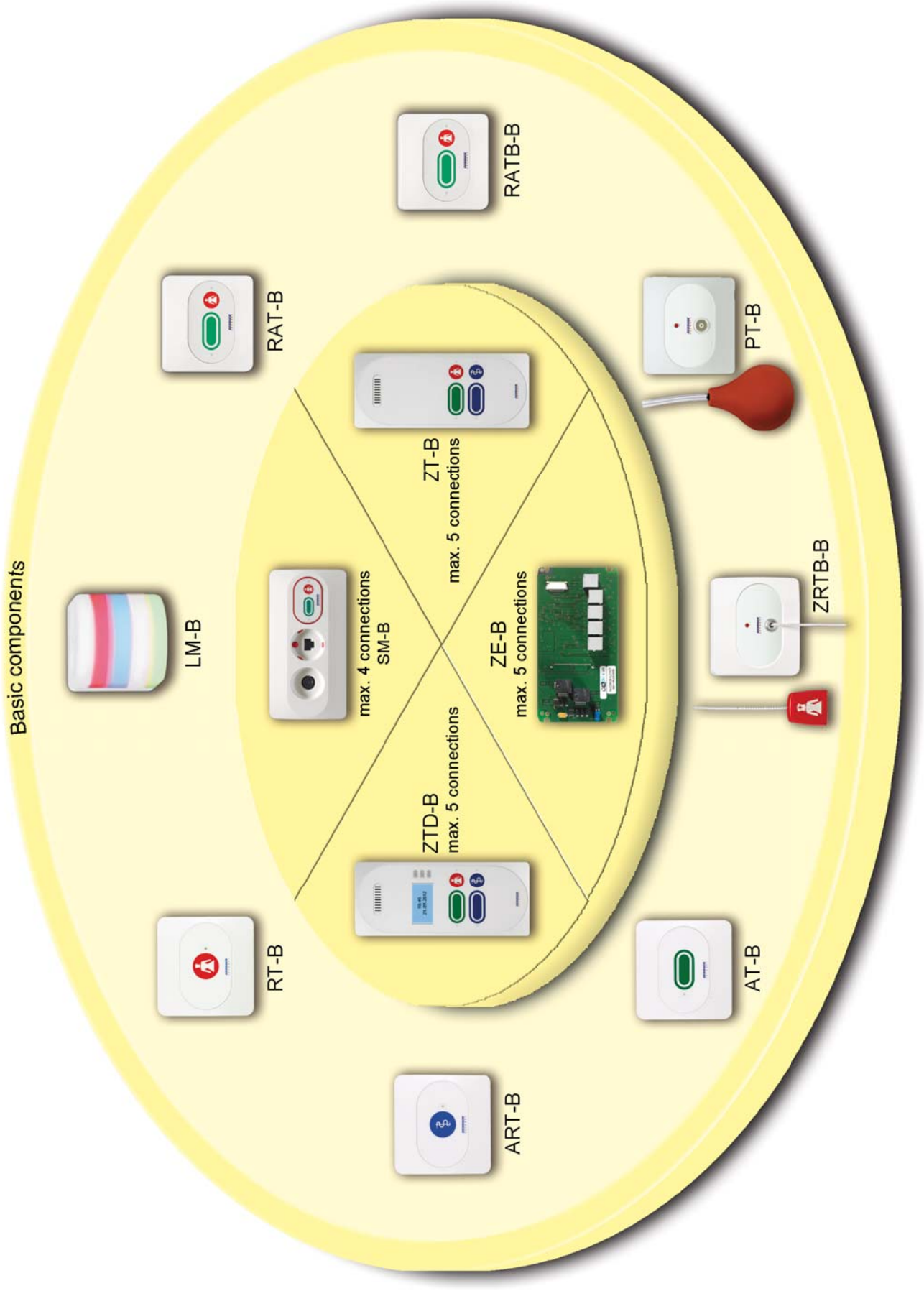
Weight - interface: 200 g
Weight - power supply: 260 g

Description:	Type:	Article No.:
KNX IP interface IPS 200 REG	IPS 200 REG	ZZL10728

Optional:

Description:	Type:	Article No.:
KNX Power supply 730 mA	NT-IPS-200	ZZL10727

6.3 Basic components



Nr.: FC011400

Nr.: FC88011-

Nr.: FC88010-

Call button RT-B

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with

- 1 call button (red) including a finder light / reassurance light,
- 1 x RJ12 (6 pin) socket for connecting to the data connection
- Including an installation frame for screw-free attachment to an installation case

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 45 g

Description:	Type:	Article No.:
Call button basic	RT-B	FC011400

Nr.: FC011401

Nr.: FC88011-

Nr.: FC88010-

Call button RTB-B

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with

- 1 call button (red) including a finder light / reassurance light,
- 1 x RJ12 (6 pin) socket for connecting to the data connection
- Including an installation frame for screw-free attachment to an installation case
- Circuit board is physically protected against moisture

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 45 g

Description:	Type:	Article No.:
Call button basic (moisture protected)	RTB-B	FC011401

Nr.: FC011411

Nr.: FC88011-

Nr.: FC88010-

Pull button ZRTB-B

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes with:

- Integrated finder / reassurance light,
- Microswitch with 2 metre pull cord (max. force at break: 60-130 N or 6-13 kg) and grip with a printed nurse symbol and a carabiner as a connecting piece (for hygiene reasons it must be easy to change),
- 1 x RJ12 (6 pin) socket for connecting to the data connection
- Incl. an installation frame for screw-free attachment to an installation case
- Circuit board is physically protected against moisture

Dimensions: 83 x 80 x 55 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 55 g

Description:	Type:	Article No.:
Pull button basic (moisture protected)	ZRTB-B	FC011411

Nr.: DF100168

Pull cord (replacement) ZT-S-E

Replacement pull cord for pull button consisting of:

- 2 m / 4 m pull cord, max. force at break: 60-130 N or 6-13 kg
- Carabiner as a connecting piece
  (for hygiene reasons it must be easy to change the pull cord easily)
- Grip with a printed nurse symbol

Weight: 16 g / 20 g

Description:	Type:	Article No.:
Pull cord (replacement) 2 m, 10 pcs	ZT-S2-E	DF100168
Pull cord (replacement) 4 m, 10 pcs	ZT-S4-E	DF100169

Nr.: FC011420

Pneumatic button PT-B

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as:

- Membrane keypad with integrated finder / reassurance light,
- Microswitch with 2 metre pneumatic hose and pressure ball,
- 1 x RJ12 (6 pin) socket for connecting to the data connection
- Incl. an installation frame for screw-free attachment to an installation case

Nr.: FC88011-

Nr.: FC88010-

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 45 g / 145 g (with pneumatic hose and pressure ball)

Description:	Type:	Article No.:
Pneumatic button basic	PT-B	FC011420

Nr.: FC011430

Cancel button AT-B

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with:

- 1 cancel button (green) incl. control LED,
- 1 x RJ12 (6 pin) socket for connecting to the data connection
- Incl. an installation frame for screw-free attachment to an installation case

Nr.: FC88011-

Nr.: FC88010-

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 45 g

Description:	Type:	Article No.:
Cancel button basic	AT-B	FC011430

Call and cancel button RAT-B

Nr.: FC011440

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with:

- 1 call button (red) including a finder light / reassurance light,
- 1 presence button (green) incl. control LED,
- 1 x RJ12 (6 pin) sockets for connecting to the data connection
- Incl. an installation frame for screw-free attachment to an installation case

Nr.: FC88011-

Nr.: FC88010-

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 45 g

Description:	Type:	Article No.:
Call and cancel button basic	RAT-B	FC011440

Call and cancel button RATB-B

Nr.: FC011442

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with:

- 1 call button (red) including a finder light / reassurance light,
- 1 presence button (green) incl. control LED,
- 1 x RJ12 (6 pin) sockets for connecting to the data connection
- Incl. an installation frame for screw-free attachment to an installation case
- Circuit board is physically protected against moisture

Nr.: FC88011-

Nr.: FC88010-

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 45 g

Description:	Type:	Article No.:
Call and cancel button basic (moisture protected)	RATB-B	FC011442

Doctor call button ART-B

Nr.: FC011470

For fitting in a switchbox, consisting of a mounting rail with circuit board, with electronics for functioning and monitoring purposes as well as a membrane keypad with

- 1 doctor call key (blue) including a finder light / reassurance light,
- 1 x RJ12 (6 pin) socket for connecting to the data connection
- Incl. an installation frame for screw-free attachment to an installation case

Nr.: FC88011-

Nr.: FC88010-

Dimensions: 83 x 80 x 36 mm (H x W x D) including cover plate in colour RAL 9016
Weight: 45 g

Description:	Type:	Article No.:
Doctor call button basic	ART-B	FC011470

Nr.: FC011900

Light module LM-B

Can be configured as a room call lamp. For optical indication of calls, presences and reminders in the relevant colours conforming to VDE0834 and suitable for fitting on to an installation case, consisting of:

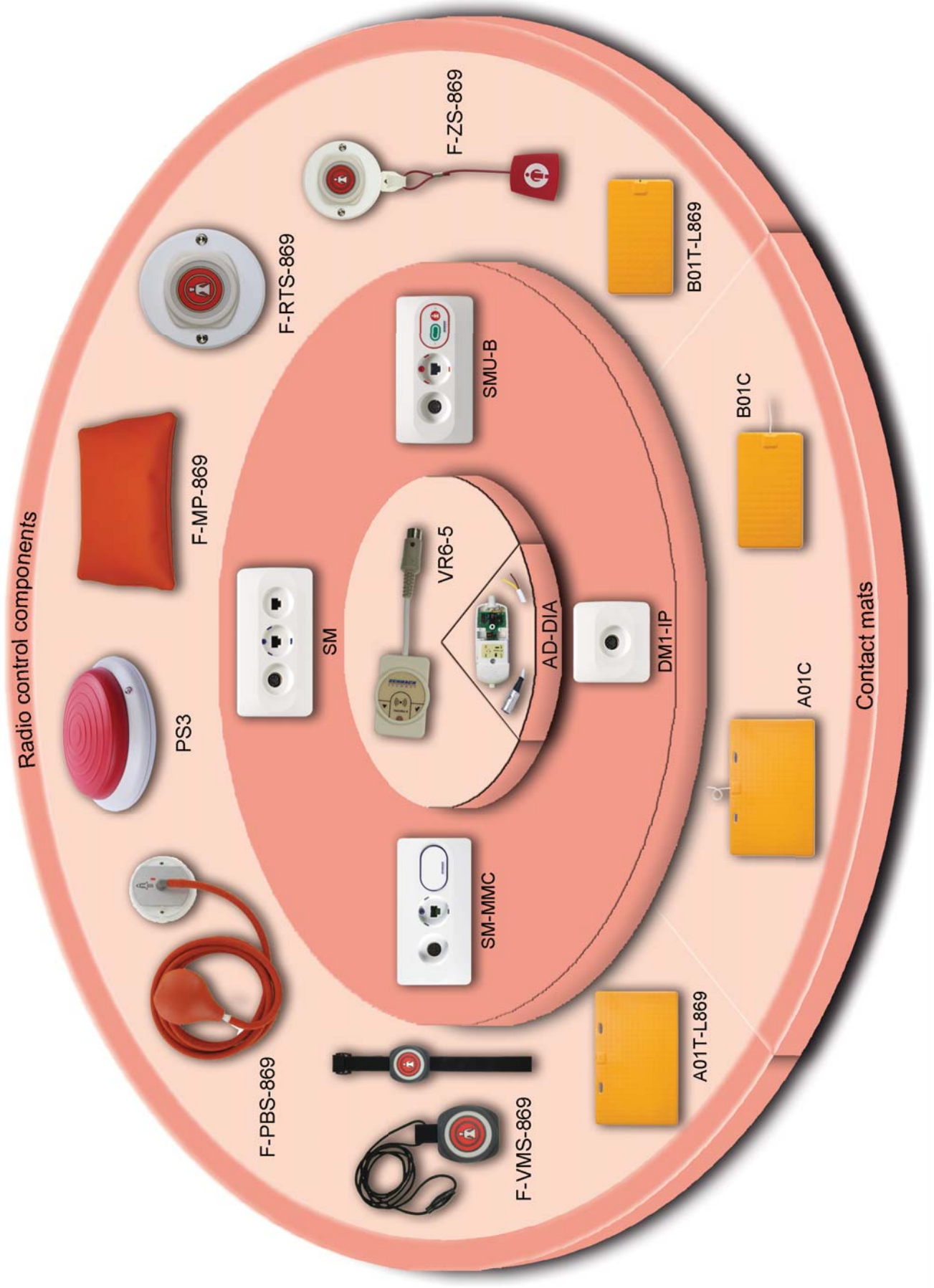
- 4 light chambers with light reflectors for homogenous illumination,
- 1 light chamber equipped with 3 ultra light red LED's,
- 1 light chamber equipped with 3 ultra light white LED's,
- 1 light chamber equipped with 3 ultra light green LED's,
- 1 light chamber equipped with 3 ultra light blue LED's,
- Each light chamber conforms to the lighting strength from VDE0834,
- The life expectancy of the LED's is approx. 100,000 operating hours,
- Plastic base with controller circuit board,
- 1 x RJ12 (6 pin) socket for connection to the data connection
- 4 screw-type terminals for connecting the power supply circuit

Dimensions: 83 x 80 x 42 mm (H x W x D), with an opal coloured transparent lamp cap

Weight: 100 g

Description:	Type:	Article No.:
Light module basic	LM-B	FC011900

7 Radio call components and contact mats



Nr.: FC017973

Radio receiver VR6-5

Connectible UHF switching receiver for connection to the diagnostic socket of a connnection module SM / SM-MMC / SMU-B or a diagnostic module DM1-IP, consisting of:

- 5 pole DIN connector for connection to SM, SM-MMC, SMU-B or DM1-IP,
- Integrated aerial (869.2125 MHz),
- Transmitter memory for 64 transmitters, channel switching indicator,
- Operating control indicator and reassurance light,
- Programming keys for assigning transmitters

Dimensions: 46 x 66 x 18 mm (H x W x D), plastic case, colour RAL 9016
Cable length: approx. 50 mm
Weight: 50 g

Description:	Type:	Article No.:
Wireless receiver VR6-5	VR6-5	FC017973
Wireless receiver VR6-5 wall mount	VR6-WALL	FC017978

Nr.: FC017978

Nr.: FC017995-A

Wireless combi transmitter F-VMS-869

UHF mini transmitter in a plastic case, coded in the factory, consisting of:

- Elastic wrist band with velcro fastening or necklace,
- Rubber-coated call button and red control LED,
- Battery monitoring electronic circuitry and “batterie low” message
- Protection class IP68
- Batterie life typically three years
- Range of up to 30 metres depending on the structural construction of the building (869.2125 MHz)

Dimensions: 43 x 46 x 15 mm (H x W x D), plastic case.
Weight: 25 g

Description:	Type:	Article No.:
Wireless combi transmitter	F-VMS-869	FC017995-A

Nr.: FC017984

Wireless pull button transmitter F-ZS-869

UHF mini transmitter in a plastic case, coded in the factory, consisting of:

- Pull cord with re-insertable weakened connection (strangulation protection), length approx. 2 m
- Call button with red control LED,
- Battery monitoring electronic circuitry and “batterie low” message
- Protection class IP68
- Batterie life typically three years
- Range of up to 30 metres depending on the structural construction of the building (869.2125 MHz)

Dimensions: 74 x 14 mm (diameter x D), plastic case
Weight: 80 g

Description:	Type:	Article No.:
Wireless pull button transmitter	F-ZS-869	FC017984

Nr.: FC017986

Wireless call button transmitter F-RTS-869

UHF mini transmitter in a plastic case, coded in the factory, consisting of:

- Call button and red control LED,
- Rubber-coated button surface,
- Battery monitoring electronic circuitry and “batterie low” message
- Batterie life typically three years
- Protection class IP68
- Range of up to 30 metres depending on the structural construction of the building (869.2125 MHz)

Dimensions: 74 x 14 mm (diameter x D), plastic case
Weight: 35 g

Description:	Type:	Article No.:
Wireless call button transmitter	F-RTS-869	FC017986

Nr.: FC017988

Wireless pneumatic ball-button transm. F-PBS-869

UHF mini transmitter in a plastic case, coded in the factory, consisting of:

- Rubber ball with pneumatic hose,
- LED for acknowledgement and battery status indication,
- Battery monitoring electronic circuitry and “batterie low” message
- Batterie life typically three years
- Protection class IP66
- Range of up to 30 metres depending on the structural construction of the building (869.2125 MHz)
- Wall mounting

Dimensions: 80 x 15 mm (W x D), plastic case
Pneumatic hose: 1.8 m
Weight: 210 g

Description:	Type:	Article No.:
Wireless pneumatic ball-button transmitter	F-PBS-869	FC017988

Nr.: FC017966

Wireless pneumatic button transmitter PS3

UHF mini transmitter in a plastic case, coded in the factory, consisting of:

- Large pneumatic call button with red control LED,
- Battery monitoring electronic circuitry and “batterie low” message
- Batterie life typically three years
- Protection class IP44
- Range of up to 30 metres depending on the structural construction of the building, 869.2125 MHz

Dimensions: 100 x 45 mm (diameter x H), plastic case
Weight: 145 g

Description:	Type:	Article No.:
Wireless pneumatic button transmitter	PS3	FC017966

Nr.: FC017983

Wireless pneumatic pad transmitter F-MP-869

UHF mini transmitter in a plastic case, coded in the factory, consisting of:

- Highly sensitive pneumatic pressure sensors for both pad sides,
- Radio call; acoustic feedback (can be switched off),
- Battery monitoring electronic circuitry and “batterie low” message,
- Actuating area approx. 180 x 100 mm, both sides,
- Pad cover with hook-and-loop strip and attachment pieces
- Batterie life typically three years
- Protection class IP30
- Range of up to 30 metres depending on the structural construction of the building, 869.2125 MHz

Dimensions: 225 x 150 x 45 mm (W x H x D), pad cover washable
Weight: 170 g

Description:	Type:	Article No.:
MediPad pneumatic transmitter	F-MP-869	FC017983

Nr.: FC007948

Nr.: FC017973

Contact mat with radio transmitter A01T-L869

Pressure sensor mat as a bedside mat for connecting to the diagnostic socket of a connection module SM / SMU-B / SM-MMC or a diagnostic module DM1-IP via a radio receiver with 869 MHz, consisting of:

- Material - Polyurethane (PU),
- Surface - Nub structure with sloped edges,
- Integrated radio transmitter

Technical Data:

Radio transmitter: 869.2125 MHz
Weight of person: min. 10 kg

Dimensions: 1100 x 700 x 9 mm, hight with housing 15 mm
Weight: 8.2 kg
Colour: Care yellow

Description:	Type:	Article No.:
CareMat with transmitter module 1100 x 700 x 9 mm	A01T-L869	FC007948

Required accessory:

Description:	Type:	Article No.:
Wireless receiver VR6-5	VR6-5	FC017973

Nr.: FC007949

Nr.: FC017973

Contact mat with radio transmitter B01T-L869

Pressure sensor mat as a bedside mat or door mat for connecting to the diagnostic socket of a connection module SM / SMU-B / SM-MMC or a diagnostic module DM1-IP via a radio receiver with 869 MHz, consisting of:

- Material - Polyurethane (PU),
- Surface - Nub structure with sloped edges,
- Integrated radio transmitter

Technical Data:

Radio transmitter: 869.2125 MHz
Weight of person: min. 10 kg

Dimensions: 700 x 400 x 9 mm, hight with housing 15 mm
Weight: 3.2 kg
Colour: Care yellow

Description:	Type:	Article No.:
CareMat with transmitter module 700 x 400 x 9 mm	B01T-L869	FC007949

Required accessory:

Description:	Type:	Article No.:
Wireless receiver VR6-5	VR6-5	FC017973

Nr.: FC007942

Contact mat A01C

Pressure sensor mat as a bedside mat for connecting to the diagnostic socket of a connection module SM / SMU-B / SM-MMC or a diagnostic module DM1-IP via a diagnostic adapter AD-DIA, consisting of:

- Material - Polyurethane (PU),
- Surface - Nub structure with sloped edges,
- Cabel 4 pin, lenght 3m, diameter 5.1 mm

Technical Data:

Signal output:	Normally open contact
Admissible capacity:	max. 50 mA at 48 V AC/DC
Weight of person:	min. 10 kg

Dimensions:	1100 x 700 x 9 mm, hight with housing 15 mm
Weight:	8.2 kg
Colour:	Mat: care yellow, cable: white

Description:	Type:	Article No.:
CareMat 1100 x 700 x 9 mm	A01C	FC007942

Nr.: FC010290

Required accessory:

Description:	Type:	Article No.:
Diagnostic adapter AD-DIA	AD-DIA	FC010290

Contact mat B01C

Nr.: FC007943

Pressure sensor mat as a bedside mat or door mat for connecting to the diagnostic socket of a connection module SM / SMU-B / SM-MMC or a diagnostic module DM1-IP via a diagnostic adapter AD-DIA, consisting of:

- Material - Polyurethane (PU),
- Surface - Nub structure with sloped edges,
- Cabel 4 pin, lenght 3 m, diameter 5.1 mm

Technical Data:

Signal output:	Normally open contact
Admissible capacity:	max. 50 mA at 48 V AC/DC
Weight of person:	min. 10 kg

Dimensions:	700 x 400 x 9 mm, hight with housing 15 mm
Weight:	3.2 kg
Colour:	Mat: care yellow, cable: white

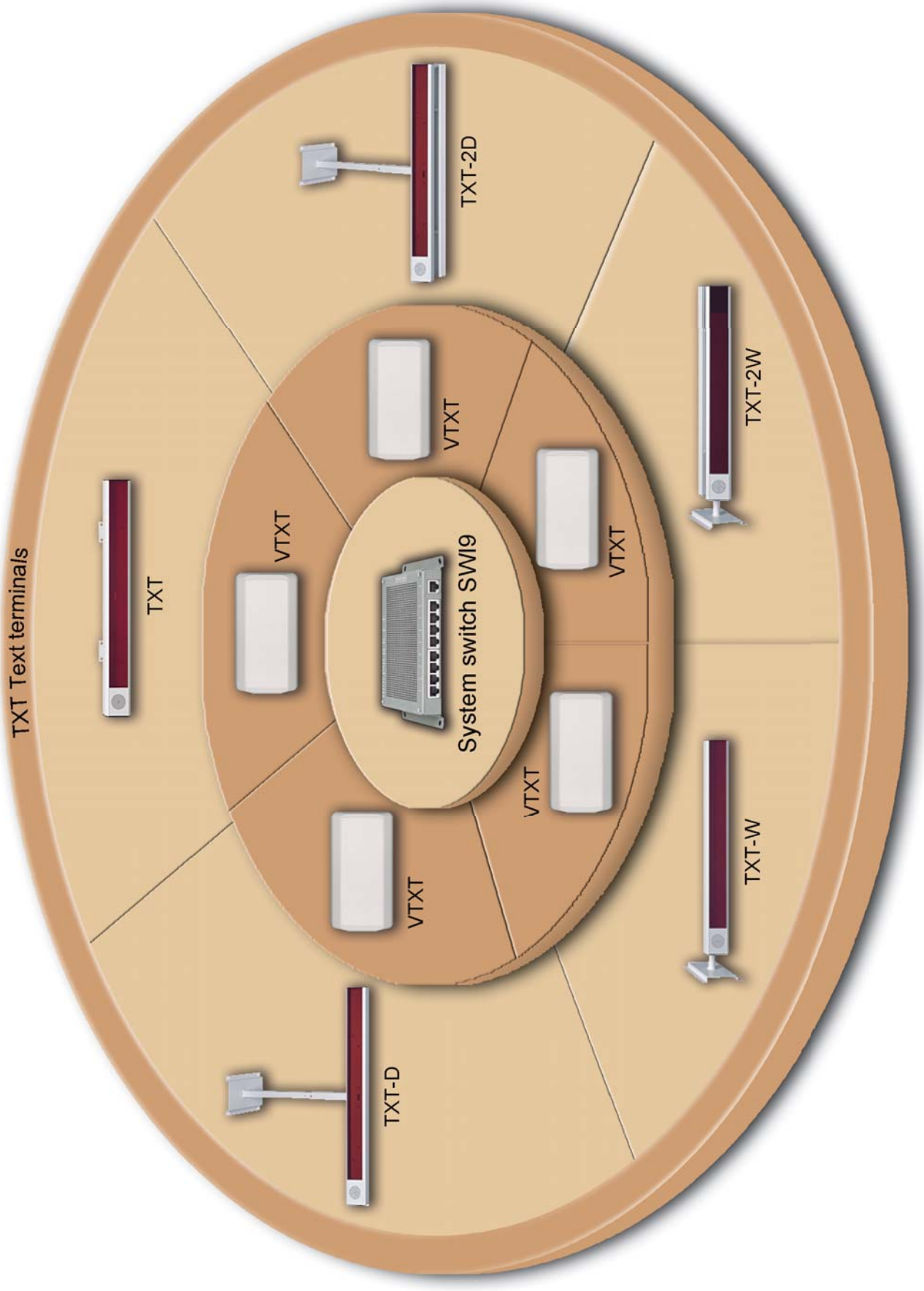
Description:	Type:	Article No.:
CareMat 700 x 400 x 9 mm	B01C	FC007943

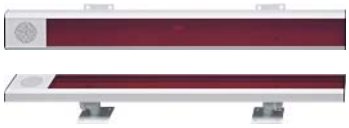
Nr.: FC010290

Required accessory:

Description:	Type:	Article No.:
Diagnostic adapter AD-DIA	AD-DIA	FC010290

8 Text terminal





Nr.: FC008810

Text terminal TXT

12 character LED display with terminal amplified loudspeaker for wall mounting for recapitulating display of emergency calls, calls and reminders by group. Displays the call that is most important according to the priority scheme, with a changing display, if there are several calls.
By using the integrated RS-485 and RS-232 interface, texts from the PC from other sources can be displayed on the text terminal. The PC uses software to load the text from the foreign system in to the text terminal. The current date and time are displayed in standby mode, and the unit is made up of a series of modules, consisting of an independent microcomputer system for independent data processing, evaluation and controlling of 12 LED matrix displays, character height 80 mm, mounted in an aluminium casing. An integrated loudspeaker is used on the one hand for acoustic call forwarding and on the other hand for ward announcements within the communications system. It is possible to release/block these features.
Additional functions:
These text terminals are also suitable for use for calling patients in waiting areas for general patient and visitor information, and are equipped with interfaces to PC's, from where individual texts can be entered. When these texts are changed, an acoustic information tone is emitted.

Nr.: FC008811

This terminal comprises of:

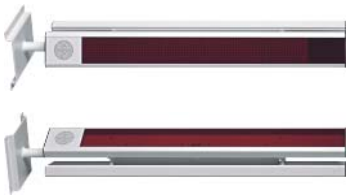
- An aluminium profile with end caps on both ends,
- Electronic circuit board with microcontroller and flash PROM,
- 12 matrix LED modules (10 x 8 for improved readability) with a character height of 8 cm each,
- DIL switch for addressing,
- One interface each of type RS-232 and RS-485 for a fixed connection of one or more PC's,
  - 1 loudspeaker
  - 1 connection circuit board with connection field and fuse

Nr.: FC008812

Weight: approx. 4 kg

Text terminal TXT-W

Functions identical to those on TXT, with wall mounting bracket, adjustable.



Nr.: FC008813

Text terminal TXT-D

Functions identical to TXT, with ceiling mounting bracket, adjustable heights between 820 and approx. 1,000 mm from the ceiling using the flange.

Text terminal TXT-2W (double display)

Functions identical to TXT-W, but with double display. Weight: approx. 7.5 kg

Text terminal TXT-2D (double display)

Functions identical to TXT-D, but with double display. Weight approx. 7.5 kg

Nr.: FC008814

Dimensions: 978 x 110 x 40 mm (L x W x D),
aluminium housing in colour RAL 9010

Description:	Type:	Article No.:
Text terminal	TXT	FC008810
Text terminal	TXT-W	FC008811
Text terminal	TXT-D	FC008812
Text terminal	TXT-2W	FC008813
Text terminal	TXT-2D	FC008814

Nr.: FC010815

Nr.: FC88012-

Nr.: FC88013-

Nr.: FC008992

Connection splitter to the text terminal VTXT-IP

The connection splitter VTXT-IP serves as a communi-cation link between the system switch SWI9 and the text terminals.

Additional ports for announcements on the text terminal and display of individual texts with a PC control (via terminal software TXT-SW).

For fitting in a double switchbox comprising of a mounting rail with connection circuit board consisting of:

- RJ45 socket for connecting to the system switch SWI9,
- 3 screw-type terminals in each section for supply voltage (+24 V and GND),
- Connection terminals for external audio input (announcements),
- Connection terminals for RS232 and RS485 (PC-based control),
- 2 connection blocks for connecting of one text terminal,
- Power supply protection for the text terminals (4 A fuse).

Dimensions: 160 x 82 x 36 mm (L x W x D) incl. cover plate, plastic case in colour RAL 9016
Weight: 110 g

Description:	Type:	Article No.:
Connection splitter to the text terminal	VTXT-IP	FC010815

Accessories:

Description:	Type:	Article No.:
Countersunk double switchbox	U2	FC88012-
Cavity wall double switchbox	H2	FC88013-

Optional:

Description:	Type:	Article No.:
Double surface mounting case	APA-2	FC008992

Text terminal software TXT-SW

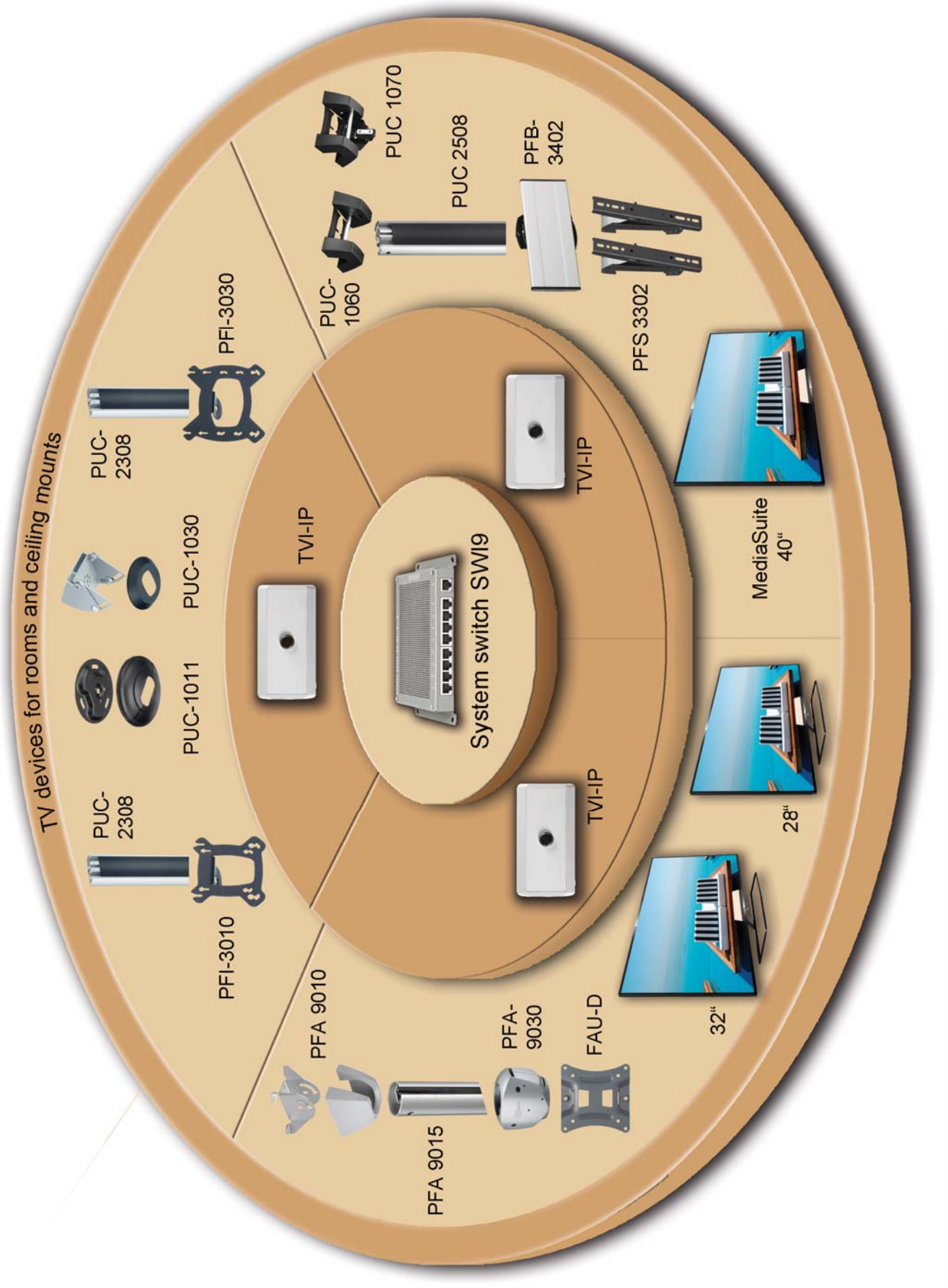
For entering individual texts from a PC to be supplied locally with a free RS-232 interface and equipped for Windows 2000 operating system or later, The user interface is simple to operate and offers the following features:

- Multitasking in accordance with the operating system used,
- Selection of displays (32 displays must be able to be supplied with different texts),
- Entering of texts,
- If the length of the text exceeds the 12 characters visible on the text terminal, then the text is to be displayed in scrolling text.

After confirming the text that has been entered, the text is sent to the text terminal.

Description:	Type:	Article No.:
Text terminal software	TXT-SW	on request

9 TV devices, mounts and accessories



9.1 TV devices

Nr.: FC007051-F

Nr.: FC007052-F

Nr.: FC007054-F

MediaSuite TV devices

Flat panel TV sets for watching television in the room; that can be mounted on the opposite wall to the patient using the wall console or central at the ceiling using the ceiling mounts. The loudspeaker is deactivated, and the TV sets can be controlled using the VISOCALL IP nursecall system. A prerequisite for this is that the TV device is connected to the TV interface. This connection is used for transmission of control signals and the audio signal. The Media Suite series offers in addition to the analog / DVB-T / DVB-C receiver also streaming TV (no longer necessary additional Settop Box).

CAUTION: If using streaming TV no telext is possible!

NOTE: For the network integration of the system TV devices, a private network (VLAN) with automatic IP adress assignment via a DHCP server is required!

Electrical data:

28"	32"	40"
Mains connect 220-240 V, 50/60 Hz	Mains connect 220-240 V, 50/60 Hz	Mains connect 220-240 V, 50/60 Hz
19 W / <0.3 W	25 W / <0.3 W	37 W / <0.3 W
0°C up to 40°C	0°C up to 40°C	0°C up to 40°C

Digital TV, Tuner, Reception, Transmission, Video, Audio, Picture, IP-TV:

28"	32"	40"
DVB-T2, DVB-C/T MPEG2/4	DVB-T2, DVB-C/T MPEG2/4	DVB-T2, DVB-C/T MPEG2/4
PAL, NTSC, SECAM	PAL, NTSC, SECAM	PAL, NTSC, SECAM
MP3, WAV, BMP, JPG, PNG	PAL, NTSC, SECAM	PAL, NTSC, SECAM
Multicast, Unicast	Multicast, Unicast	Multicast, Unicast

Physical data:

28"	32"	40"
28 inch / 70 cm HD TV, LED	32 inch / 81 cm Full HD, LED	40 inch / 100 cm Full HD, LED
16:9	16:9	16:9
1366 x 768 p	1920 x 1080 p	1920 x 1080 p
310 cd/m²	350 cd/m²	350 cd/m²
635 x 393 x 62 mm (WxHxD)	727 x 425 x 64 mm (WxHxD)	904 x 512 x 64 mm (WxHxD)
VESA 100 x 100 mm	VESA 100 x 100 mm	VESA 200 x 200 mm
4.5 kg	5.0 kg	7.7 kg

Connections:

28"	32"	40"
IEC75, 75 Ohm coaxial	IEC75, 75 Ohm coaxial	IEC75, 75 Ohm coaxial
2 x HMDI, 1 x Scart, 1 x USB 2.0, VGA, audio, Ethernet LAN RJ45	2 x HMDI, 1 x Scart, 1 x USB 2.0, VGA, audio, Ethernet LAN RJ45	2 x HMDI, 1 x Scart, 1 x USB 2.0, VGA, audio, Ethernet LAN RJ45

Power cable and plug integrated into the set.
TV devices in colour black.

Description:	Type:	Article No.:
Philips MediaSuite TV 28"	28HFL5010T	FC007051-F
Philips MediaSuite TV 32"	32HFL5010T	FC007052-F
Philips MediaSuite TV 40"	40HFL5010T	FC007054-F

9.2 Ceiling mount

For mounting the TV devices, ceiling mounts are required by the VESA standard.

Nr.: FC007150

Ceiling plate PUC 1011

For the poles PUC 2308, 2315 and 2330.

- For flat ceilings
- Max. weight 60kg
- Dimensions: 160 x 30 mm (diameter x H)

Weight: 0.55 kg

Description:	Type:	Article No.:
Ceiling plate PUC 1011	PUC-1011	FC007150

Nr.: FC007151

Ceiling plate PUC 1030

For the poles PUC 2308, 2315 and 2330.

- For flat and inclined ceilings
- Inclined ceilings up to 90°
- Max. weight 30 kg
- Dimensions: 106 x 105 x 140 mm (W x H x D)
- Dimensions cover: 100 x 15 mm (diameter x H)

Weight: 1.84 kg

Description:	Type:	Article No.:
Ceiling plate PUC 1030	PUC-1030	FC007151

Nr.: FC007160

Pole PUC 2308, 2315 and 2330

For the ceiling plates PUC 1011 and 1030 as well as for the flat display interfaces PFI 3010 and 3030.

- Aluminum tube profile
- Double CIS - cable inlay system
- Colour: aluminum
- Max. weight 30 kg
- Cross section: 69 x 28 mm (W x H)

Weight: 1.8 kg / 3.3 kg / 6.6 kg

Description:	Type:	Article No.:
Pole PUC 2308, length 80 cm	PUC-2308	FC007160
Pole PUC 2315, length 150 cm	PUC-2315	FC007161
Pole PUC 2330, length 300 cm	PUC-2330	FC007162

Nr.: FC007170

Flat display interface PFI 3010

For mounting on the poles PUC 2308, 2315 or 2330, for the Philips MediaSuite TV 28 inch and 32 inch.

Specifications:

Max. weight:	30 kg
Interface width:	137 mm
Interface height:	130 mm
Tilt function:	0°/10°/20°
Colour:	Black
VESA:	100 x 100 mm
Weight:	0.6 kg

Description:	Type:	Article No.:
Flat display interface PFI 3010	PFI-3010	FC007170

Nr.: FC007171

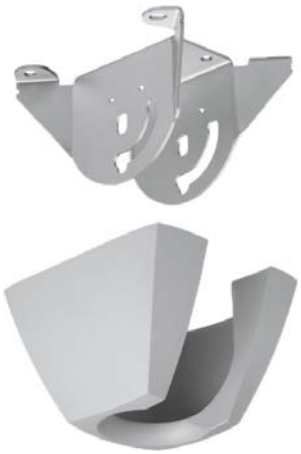
Flat display interface PFI 3030

For mounting on the poles PUC 2308, 2315 or 2330, for the Philips MediaSuite TV 40 inch.

Specifications:

Max. weight:	30 kg
Interface width:	256 mm
Interface height:	242 mm
Tilt function:	0°/10°/20°
Colour:	Black
VESA:	200 x 200 mm
Weight:	1.1 kg

Description:	Type:	Article No.:
Flat display interface PFI 3030	PFI-3030	FC007171



Nr.: FC007155

Ceiling plate PFA 9010

For the extension tubes PFA 9015, 9003 and 9004.

- For flat and inclined ceilings
- Max. weight 60 kg
- Dimensions: 167 x 194 x 115 mm (W x L x H), with cover

Weight: 1.3 kg

Description:	Type:	Article No.:
Ceiling plate PFA 9010	PFA-9010	FC007155

Nr.: FC007166

Extension tube PFA 9015, 9003 and 9004

For the ceiling plate PFA 9010.

- Profile/tube in aluminum
- Colour: aluminum
- Max. weight 60 kg
- Dimensions: 60 x 800/1500/3000 mm (diameter x H)

Weight: 1.87 kg / 3.5 kg / 7.0 kg

Description:	Type:	Article No.:
Extension tube PFA 9015, length 80 cm	PFA-9015	FC007166
Extension tube PFA 9003, length 150 cm	PFA-9003	FC007167
Extension tube PFA 9004, length 300 cm	PFA-9004	FC007168

Nr.: FC007190

Turn and tilt unit PFA 9030

For the extension tubes PFA 9015, 9003 and 9004.

- 360° turn and 15° tilt function
- Suitable for 2 x FAU-D interface for 2 displays back-to-back
- Max. weight 20 kg
- Dimensions: 80 x 115 x 88 mm (W x L x H)

Weight: 1.2 kg

Description:	Type:	Article No.:
Turn and tilt unit PFA 9030	PFA-9030	FC007190

Nr.: FC007195

Universal flat display interface FAU-D

For mounting on the turn and tilt unit PFA 9030 (two display interfaces possible), for the Philips MediaSuite TV 28 inch and 32 inch.

Max. weight:	12 kg
Dimensions:	115 x 115 mm (W x H)
Colour:	Black
VESA:	75 x 75 mm / 100 x 100 mm

Weight: 0.3 kg

Description:	Type:	Article No.:
Universal flat display interface FAU-D	FAU-D	FC007195

Nr.: FC007153

Ceiling plate PUC 1060 / 1070

For the poles PUC 2508, 2515 and 2530.

- Ceiling plate PUC 1060 for flat ceilings
- Ceiling plate PUC 1070 for flat and inclined ceilings
- Max. weight 80 kg
- Dimensions: 143 x 170 x 70/91 mm (W x L x H)

Weight: 1.0 kg / 1.1 kg

Description:	Type:	Article No.:
Ceiling plate PUC 1060	PUC-1060	FC007153
Ceiling plate PUC 1070	PUC-1070	FC007152

Nr.: FC007152

Pole PUC 2508, 2515 and 2530

For the ceiling plates PUC 1060 / 1070 and also for the interface bar PFB 3402 (multiple interfaces possible).

- Profile in aluminum, main colour silver
- Multiple CIS® cable inlay system
- Max. screen weight 80 kg
- Cross-section: 93 x 52 mm (L x W)

Weight: 1.8 kg / 3.4 kg / 6.8 kg

Description:	Type:	Article No.:
Pole PUC 2508, length 80 cm	PUC-2508	FC007163
Pole PUC 2515, length 150 cm	PUC-2515	FC007164
Pole PUC 2530, length 300 cm	PUC-2530	FC007165

Nr.: FC007163

Nr.: FC007181

Interface bar PFB 3402

For the poles PUC 2508, PUC 2515 and PUC 2530 (multiple interfaces possible), and also for the interface display stripes PFS 3302.

- Max. weight 80 kg
- VESA mounting area: min. 75 mm / max. 225 mm
- Dimensions: 137 x 30 x 290 mm (H x W x L)

Gewicht: 1.2 kg

Description:	Type:	Article No.:
Interface bar PFB 3402	PFB-3402	FC007181

Nr.: FC007185

Interface display stripes PFS 3302

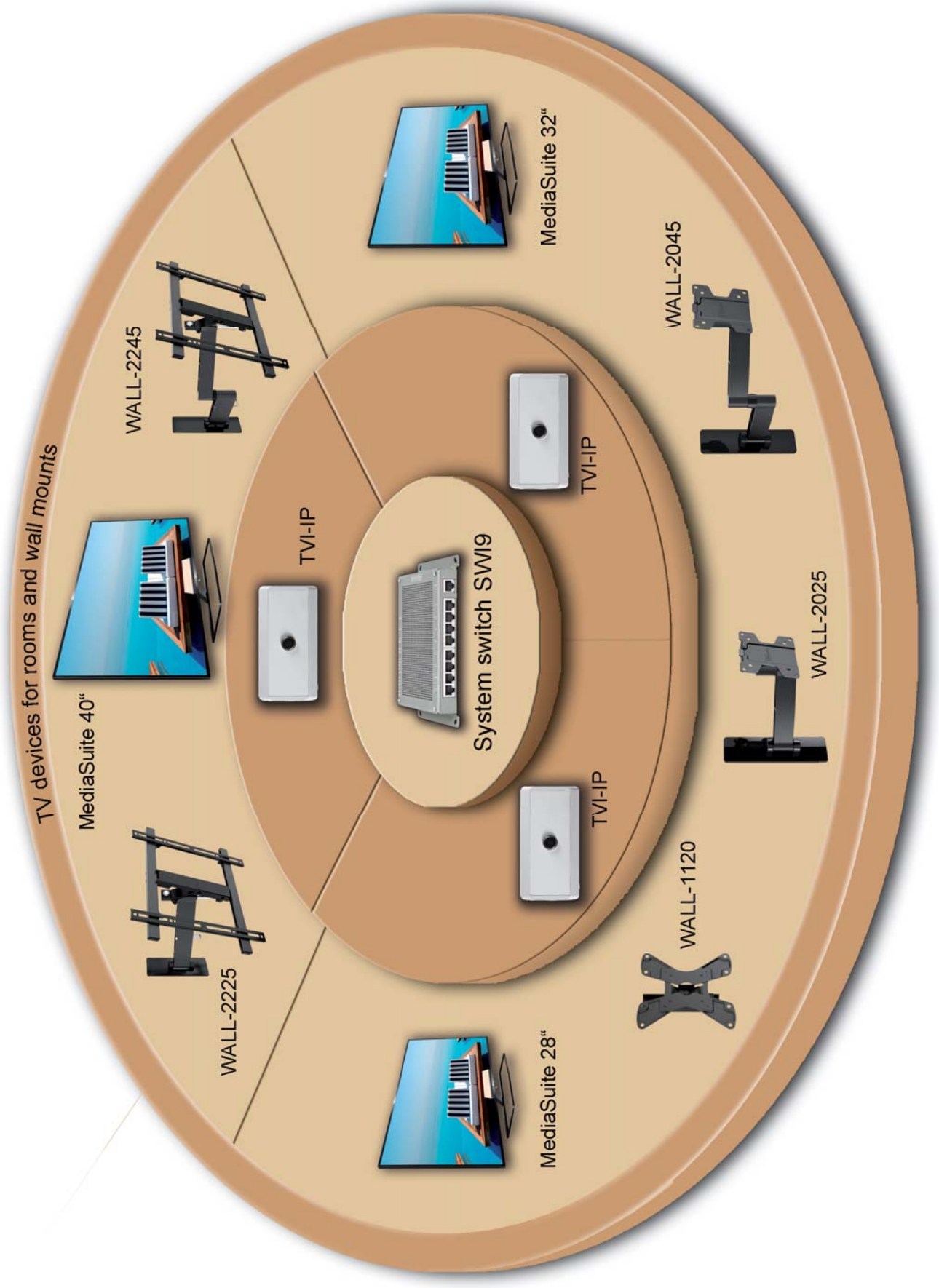
For mounting on the interface bar PFB 3402, for the Philips MediaSuite TV 40 inch.

- Gradual adjustable tilt function 0 - 10 - 15 - 20°
- Max. weight 80 kg
- VESA mounting area: min. 75 mm / max. 270 mm
- Dimensions: 295 x 41 x 52 mm (H x W x D)

Weight: 1.5 kg

Description:	Type:	Article No.:
Interface display stripes PFS 3302	PFS-3302	FC007185

9.3 Wall mount



For mounting the TV devices, wall mounts are required by the VESA standard.

Nr.: FC007113

Swivel TV wall mount WALL 1120

For the Philips MediaSuite TV 28 inch and 32 inch

Specifications:

Max. weight:	15 kg
Interface width:	222 mm
Interface height:	229 mm
Turn/tilt:	60°/10°
Min./max. wall distance:	70/71 mm
Number of pivot points:	1
Colour:	Black
VESA:	Min. 75 x 75 / max. 200 x 200 mm
Weight:	1.2 kg

Description:	Type:	Article No.:
Swivel TV wall mount WALL 1120	WALL-1120	FC007113

Nr.: FC007114-A

Swivel TV wall mount WALL 2025

For the Philips MediaSuite TV 28 inch and 32 inch

Specifications:

Max. weight:	15 kg
Interface width:	117 mm
Interface height:	122 mm
Turn/tilt:	120°/20°
Min./max. wall distance:	60/239 mm
Number of pivot points:	2
Colour:	Black
VESA:	Min. 75 x 75 / max. 100 x 100 mm
Weight:	1.1 kg

Description:	Type:	Article No.:
Swivel TV wall mount WALL 2025	WALL-2025	FC007114-A

Nr.: FC007124-A

Swivel TV wall mount WALL 2045

For the Philips MediaSuite TV 28 inch and 32 inch

Specifications:

Max. weight:	15 kg
Interface width:	117 mm
Interface height:	122 mm
Turn/tilt:	180°/20°
Min./max. wall distance:	70/410 mm
Number of pivot points:	3
Colour:	Black
VESA:	Min. 75 x 75 / max. 100 x 100 mm
Weight:	1.5 kg

Description:	Type:	Article No.:
Swivel TV wall mount WALL 2045	WALL-2045	FC007124-A

Nr.: FC007115

Swivel TV wall mount WALL 2225

For the Philips MediaSuite TV 40 inch

Specifications:

Max. weight:	20 kg
Interface width:	401 mm
Interface height:	422 mm
Turn/tilt:	120°/10°
Min./max. wall distance:	55/320 mm
Number of pivot points:	2
Colour:	Black
VESA:	Min. 100 x 100 / max. 200 x 200 mm
Weight:	3.45 kg

Description:	Type:	Article No.:
Swivel TV wall mount WALL 2225	WALL-2225B	FC007115-A

Nr.: FC007125

Swivel TV wall mount WALL 2245

For the Philips MediaSuite TV 40 inch

Specifications:

Max. weight:	20 kg
Interface width:	401 mm
Interface height:	422 mm
Turn/tilt:	180°/20°
Min./max. wall distance:	55/540 mm
Number of pivot points:	3
Colour:	Black
VESA:	Min. 100 x 100 / max. 200 x 200 mm
Weight:	4.7 kg

Description:	Type:	Article No.:
Swivel TV wall mount WALL 2245	WALL-2245	FC007124

9.4 Accessories

Nr.: FC010650

TV interface TVI-IP

The TV interface is the interface between the Philips TV devices offered by Schrack Seconet AG and the VISOCALL IP nursecall platform. The interface consists of:

- A mounting rail with circuit board
- 1 x 8 pole DIN connector socket
- Including an installation frame for screw-free attachment

Dimensions: 158 x 81 x 13 mm (L x W x D), plastic case in colour RAL9016
Weight: 117 g

Description:	Type:	Article No.:
TV interface	TVI-IP	FC010650

Nr.: FC81774-

Cable for TV Interface K-TVT-PHILIPS

This cable is using for the electronic connection between the TV interface and the TV set, consisting of:

- 1.5 m connection cable
- On the TV end: 3.5 mm stereo jack plug and RJ45 connector
- On the TVI end: 8 pole DIN connector

Weight: 95 g

Description:	Type:	Article No.:
Cable for TV interface	K-TVI-PHILIPS	FC81774-

Nr.: FC81712-

Aerial cable TV-KOAX

This is the connection cable between the TV set and the aerial connection socket:

- 1 m connection cable

Weight: 41 g

Description:	Type:	Article No.:
Aerial cable	TV-KOAX	FC81712

Nr.: FC007059

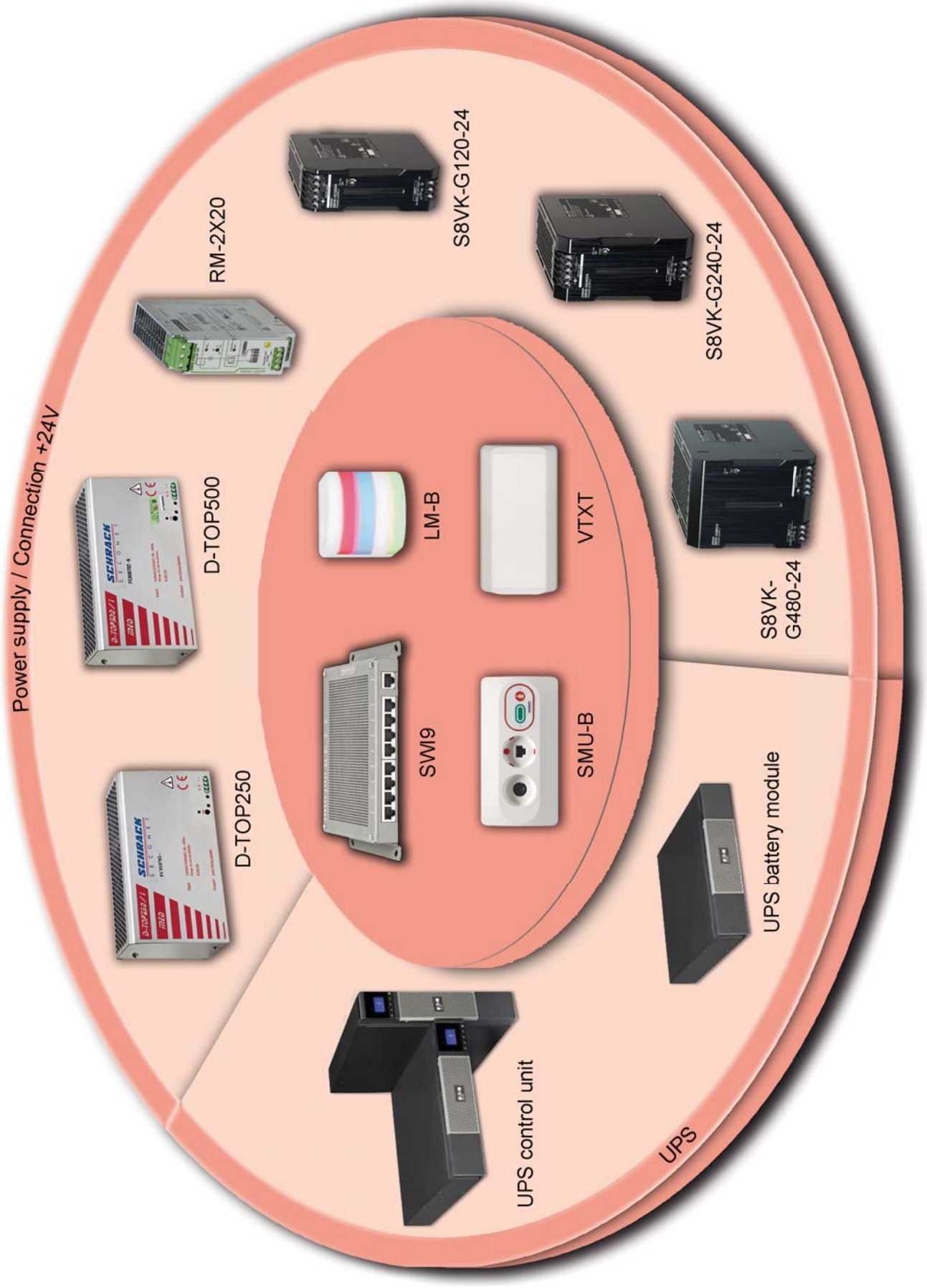
Remote control PHFB

For programming the PMS-TV28, PMS-TV32 and PMS-TV40 Media Suite series.

Weight: 186 g

Description:	Type:	Article No.:
Remote control	PHFB	FC007059

10 Power supplies



Nr.: FC008702

Ward power supply D-TOP500/1-MED

For supplying the VISOCALL IP system with power on a ward-by-ward basis and for fitting in the control cabinet to be snapped onto the TS35 rail in accordance with EN50022. Suitable for parallel operation without required additional measures, with overvoltage protection and overtemperature protection and double supply network fuses, network connection indicator and function indicator. Assembled in accordance with VDE0804, protection class II. The following directives and standards must be observed:

- Structure conformant to EN60601
- Discharge current and isolation voltage conformant to EN60601-1 medical regulations (4 kV),
- EMC in accordance with 2004/108/EG,
- Low voltage regulations EN60950,
- Interference emission compliant with EN50081-1,
- Interference compliant with EN50082-1,
- Passive PFC switching compliant with EN61000-3-2

Technical details:

Mains connection:	230 V/50 Hz
Primary power consumption:	2.5 A with full load
Output:	24 V=
Output current / from cold start:	Maximum 28 A
Average continuous current:	20 A short circuit resistant, cable cross section of at least 2.5 mm²
Peak current:	30 A
Residual ripple:	50 mV with full load
Isolation voltage:	3 kV between input and output
Operating temperature:	Max. -25°C to +60°C, natural cooling
Load variation:	0-60°C < 1% (typically 0.4%)
Air humidity:	100%, coated circuit boards
Parallel operation:	Activated

Dimensions:	241 x 130 x 88 mm (W x H x D)
Weight:	2.5 kg

Leakage current and circuit insulation voltage in accordance with EN60601-1 (DIN 750, part 1). Transformer in accordance with VDE 0551. Device fused, and with control lamp. In accordance with VDE0384 the power supply must be connected to its own electric current The primary electrical circuit earthing must be done using a 16 A circuit-breaker with B type tripping characteristics.

Description:	Type:	Article No.:
Ward power supply D-TOP500/1-MED, 24 V/20 A	D-TOP500/1-MED	FC008702

SCHRACK SECONET Lichtruf

Nr.: FC38100-

Accessories:

Description:	Type:	Article No.:
Sign nurse call bl/ws	S LTR	FC38100-

Power supply cable for D-TOP500/1-MED

Power supply cable for connection to 230 V~

Length: approx. 2.5 m

Description:	Type:	Article No.:
Power supply cable for D-TOP500/1-MED	ZUB NG KAB	DF020231

Nr.: FC010702

Ward power supply D-TOP250/1-MED

For supplying the VISOCALL IP system with power on a ward-by-ward basis and for fitting in the control cabinet to be snapped onto the TS35 rail in accordance with EN50022. Suitable for parallel operation without required additional measures, with overvoltage protection and overtemperature protection and double supply network fuses, network connection indicator and function indicator. Assembled in accordance with VDE0804, protection class II. The following directives and standards must be observed:

- Structure conformant to EN60601
- Discharge current and isolation voltage conformant to EN60601-1 medical regulations (4 kV),
- EMC in accordance with 2004/108/EG,
- Low voltage regulations EN60950,
- Interference emission compliant with EN50081-1,
- Interference compliant with EN50082-1,
- Passive PFC switching compliant with EN61000-3-2

Technical details:

Mains connection:	230 V/50 Hz
Primary power consumption:	1.5 A with full load
Output:	24 V=
Output current / from cold start:	Maximum 14 A
Average continuous current:	10 A short circuit resistant cable cross section of at least 1.5 mm²
Peak current:	15 A
Residual ripple:	50 mV with full load
Isolation voltage:	3 kV between input and output
Operating temperature:	Max. -25°C to +60°C, natural cooling
Load variation:	0-60°C < 1% (typically 0.4%)
Air humidity:	100%, coated circuit boards
Parallel operation:	Activated

Dimensions:	241 x 130 x 88 mm (W x H x D)
Weight:	2.5 kg

Leakage current and circuit insulation voltage in accordance with EN60601-1 (DIN 750, part 1). Transformer in accordance with VDE 0551. Device fused, and with control lamp. In accordance with VDE0384 the power supply must be connected to its own electric current The primary electrical circuit earthing must be done using a 16 A circuit-breaker with B type tripping characteristics.

Description:	Type:	Article No.:
Ward power supply D-TOP250/1-MED, 24V/10A	D-TOP250/1-MED	FC010702

SCHRACK SECONET Lichtruf

Nr.: FC38100-

Accessories:

Description:	Type:	Article No.:
Sign nurse call bl/ws	S LTR	FC38100-

Power supply cable for D-TOP250/1-MED

Power supply cable for connection to 230 V~

Length: approx. 2.5 m

Description:	Type:	Article No.:
Power supply cable for D-TOP250/1-MED	ZUB NG KAB	DF020231

Nr.: FC008715

Redundancy module RM-2X20

The redundancy module is used to provide the VISOCALL IP systems with a redundant power supply (with the same type of power supplies D-TOP 250 or D-TOP 500).

- For high requirements of operational safety
- Floating signal contact „Redundancy OK“, reports the loss of power supply or if the load current is to high.
- Floating signal contact „ACB OK“, reports if the load current is not symmetrically distributed on both parallel connected power supply units.

Technical data:

Nominal input voltage:	24 VDC (18 up to 28 VDC)
Efficiency:	> 98%
Nominal current:	2 x 20 A (-25° up to 60°C)
	1 x 40 A (-25° up to 60°C)
Maximum current:	2 x 26 A (-25° up to 40°C)
	1 x 52 A (-25° up to 40°C)
Insulation voltage:	500 V (input, output, housing)
MTBF:	> 720000h (40°C)
Mounting position:	Horizontal DIN rail NS 35
Connection method:	Screw connection, 0.2 - 6 mm² solid
	0.2 - 4 mm² stranded
Redundancy OK contact:	
Output:	Screw connection
Voltage:	Max. 30 VAC/DC
Current:	≤ 100 mA (short-circuit resistant)
Status display:	Redundancy OK LED / green
ACB OK contact (Auto Current Balance):	
Output:	Contact closed: $\Delta U_{IN} \leq 300$ mV
Voltage:	Max. 30 VAC/DC
Current:	≤ 100 mA (short-circuit resistant)
Status display:	ACB OK LED / bar graph green
Protection class:	IP20
Dimensions:	38 x 130 x 125 mm (W x H x D)
Weight:	0.6 kg

Description:	Type:	Article No.:
Redundancy module, 24 VDC, 2 x 20 A	RM-2X20	FC008715

Nr.: FC008727

Nr.: FC008728

Nr.: FC008729

Power supplies S8VK-G series

For supplying the VISOCALL IP system with power on a ward-by-ward basis and for fitting in the control cabinet to be snapped onto the TS35 rail in accordance with EN50022.

- Structure conformant to EN60950-1,
- Discharge current and isolation voltage conformant to EN60950-1,
- EMC in accordance with EN61204-3 and EN55011,
- Low voltage regulations EN60950

Electrical data:

Data:	S8VK-G12024	S8VK-G24024	S8VK-G48024
Nominal power	120 W	240 W	480 W
Efficiency:	89%	92%	93%
Mains connection:	230 V, 47-63 Hz	230 V, 47-63 Hz	230 V, 47-63 Hz
Input current:	0,7 A	1,3 A	2,3 A
Output voltage:	24 V= (-10% / +15%)	24 V= (-10% / +15%)	24 V= (-10% / +15%)
Output current:	5 A	10 A	20 A
Min. cable cross-section:	1,5 mm²	1,5 mm²	2,5 mm²
Inrush current (at 25°C):	< 32 A	< 32 A	< 32 A
Ripple:	< 150 mVss	< 180 mVss	< 230 mVss
Overload protection: (of rated load current)	125%	130%	130%
Overvoltage protection:	Yes	Yes	Yes
Ambient temperature:	-40 to 70°C	-40 to 70°C	-40 to 70°C

Mechanical data:

Data:	S8VK-G12024	S8VK-G24024	S8VK-G48024
Dimensions (W x H x D):	40 x 125 x 122 mm	60 x 125 x 150 mm	95 x 125 x 150 mm
Weight:	0.62 kg	0.9 kg	1.5 kg
Protection class:	IP20	IP20	IP20

Description:	Type:	Article No.:
Power supply S8VK-G12024	S8VK-G120-24	FC008727
Power supply S8VK-G24024	S8VK-G240-24	FC008728
Power supply S8VK-G48024	S8VK-G480-24	FC008729

FC010721

FC010722

UPS option

UPS (Uninterruptible Power Supply) unit for all components in a VISOCALL IP luminous call system to be supplied with power on the primary side (230 VAC) for a minimum of one hour in the event of a mains power failure, i.e. VC-IP Ward + Management Center + Backbone switches, etc., comprises 3 main components:

- UPS control unit (2 RU), The display unit can be rotated through 90°
- UPS battery module (2 RU)
- Relay card for fault processing (is fitted in the UPS control unit)

The UPS control unit and the UPS battery module can be fitted in a 19“ rack (2 rack units – RU - in each case) and also used as floor-mounted devices. The corresponding accessories (mounting rails or feet) are supplied as standard.

FC010723

The UPS unit supply a ward with 18A secondary-side power input (1 ward power supply with 28 VDC output voltage and 18 A output current) for a minimum of 1 hour after a mains power failure via back-up batteries (48 VDC converted to 230 VAC).
The UPS control unit and 1 battery module are required for this purpose. If the system needs to be buffered for 2 hours, the UPS control unit is combined with 2 battery modules etc. (up to a maximum of 4 UPS battery modules are possible).

Messages: Potential-free contacts on the built-in relay card can be connected to the inputs of an IO-M-P module for fault reports (mains fault, battery fault). If a fault occurs, then it is forwarded to all ward terminals in the system and indicated at these components.

FC010726

Technical Data:

Mains connection:	230 V / 50 Hz
Rating:	1500 VA / 1350 W
Output voltage:	230 V (+6/-10%)
Primary-side power input:	Max. 3.5 A (230 VA)

Backup times (for max. 3.5 A current load):

5PX:	12 min
5PX + 1 EBM:	60 min
5PX + 2 EBM:	120 min
5PX + 3 EBM:	180 min
5PX + 4 EBM:	240 min

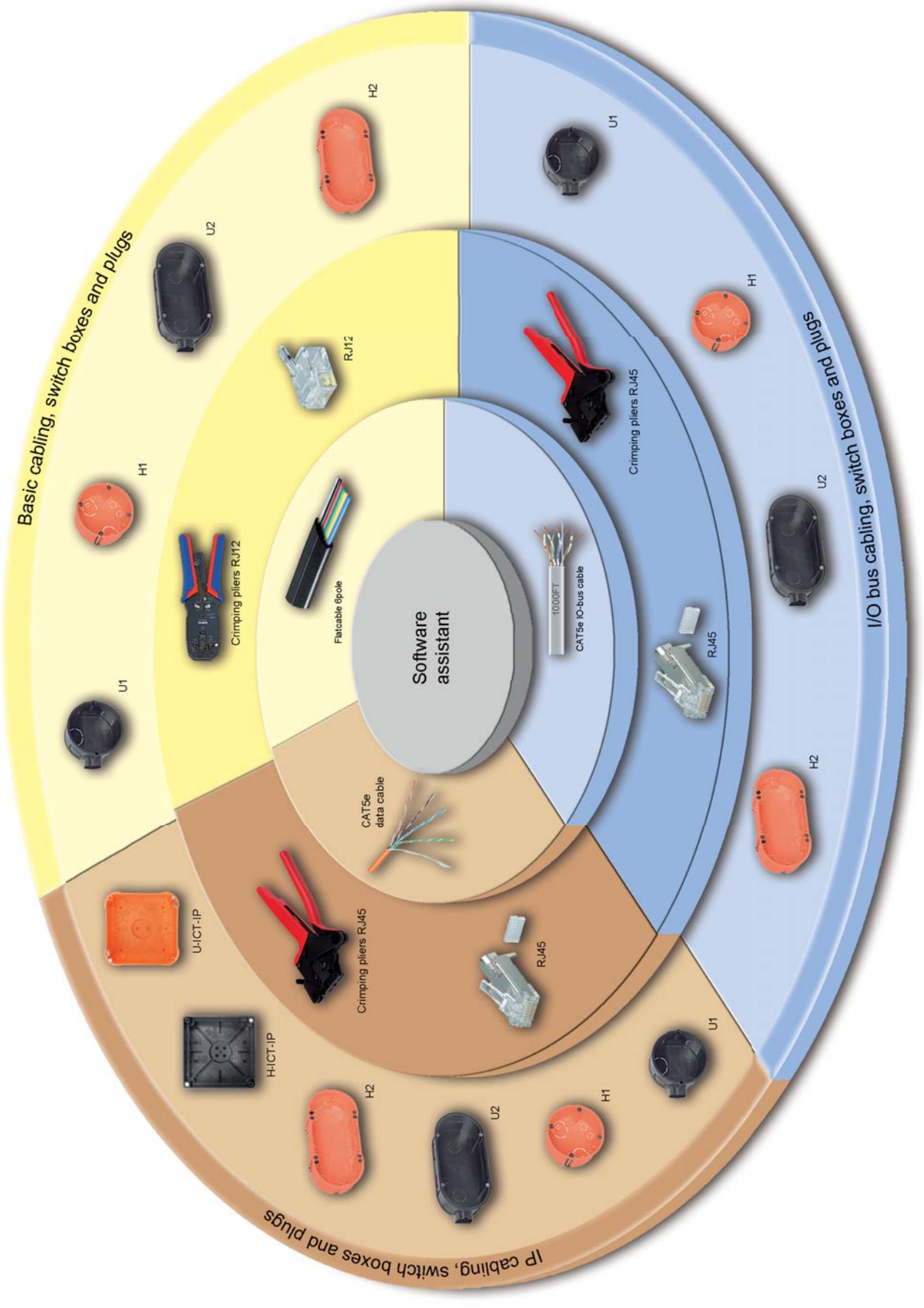
FC010728

Operating temperature:	0°C up to +40°C
Noise Level :	< 45 dBA
Safety:	IEC/EN 62040-1
EMC:	IEC/EN 62040-2
Performance:	IEC/EN 62040-3
UPS demensions:	441 x 522 x 86.2 mm (W x H x D) - rack 2U
UPS weight:	27.6 kg
EBM demensions:	441 x 522 x 86.2 mm (W x H x D) - rack 2U
EBM weight:	32.8 kg

FC010727

Description:	Type:	Article No.:
UPS control unit EATON 5PX 1500i RT2HE	5PX1500IRT	FC010721
UPS battery module EATON 5PX EBM 48 V RT2HE	5PXEBM48RT	FC010722
UPS EATON Relay Management Card	RELAY-MS	FC010723
UPS EATON cable IEC320/C14 10A (Cable to connect to the ward power supply), 2 m	K-USV-C14	FC010724
UPS EATON cable Schuko-IEC320/C13 10A (UPS mains connecting cable), lockable, 2 m	K-SCHUKO-C13	FC010725
UPS cable for fault diagnosis	K-SUBD-STÖR	FC010726
UPS wall bracket	WH-USV	FC010727
Relay for UPS fault diagnosis	USV-REL	FC010728
I/O module non-floating	IO-M-P	FC010501

11 Installation accessories



Nr.: FC88010-

Countersunk switchbox U1

For countersunk installation; made of plastic, flame retardant in accordance with DIN/VDE 0606 Part 1 /11.84; main body conforms to DIN 49030; suitable for parts in accordance with DIN 49200. Plastic part does not contain halogens.

Dimmensions: 60 mm diameter, H=40 mm,
distance between device screws 60 mm
Weight: 10 g

Description:	Type:	Article No.:
Countersunk switchbox	U1	FC88010-

Nr.: FC88012-

Countersunk double switchbox U2

For countersunk installation; made of plastic, flame retardant in accordance with DIN/VDE 0606 Part 1 /11.84; main body conforms to DIN 49030; suitable for 2 units or 1 double unit in accordance with DIN 49200. Plastic part does not contain halogens.

Dimmensions: W=60 mm, D=40 mm, H=142 mm,
distance between device screws 60 mm,
2 x at a distance of 71 mm
Weight: 30 g

Description:	Type:	Article No.:
Countersunk double switchbox	U2	FC88012-

Nr.: FC88011-

Cavity wall switchbox H1

For cavity wall installation with mounting screws and device screws; made of plastic, flame retardant in accordance with DIN/VDE 0606 Part 1 /11.84; main body conforms to DIN 49073; suitable for parts in accordance with DIN 49200. The switchbox is available on request and upon special demand in a halogen-free version.

Dimmensions: 60 mm diameter, H=45 mm,
distance between device screws 60 mm
Weight: 20 g

Description:	Type:	Article No.:
Cavity wall switchbox	H1	FC88011-

Nr.: FC88013-

Cavity wall double switchbox H2

For cavity wall installation with mounting screws and device screws; made of plastic, flame retardant in accordance with DIN/VDE 0606 Part 1 /11.84; main body conforms to DIN 49073; suitable for parts in accordance with DIN 49200. The switchbox is available on request and upon special demand in a halogen-free version.

Dimensions: W=68 mm, D=45 mm, H=142 mm,
Distance between device screws 60 mm,
2 x at a distance of 71 mm
Weight: 40 g

Description:	Type:	Article No.:
Cavity wall double switchbox	H2	FC88013-

Nr.: FC88019-

Countersunk switchbox U-ICT-IP

For countersunk installation of the Intercom terminal, made of plastic, fire resistant up to 650°C pursuant to DIN/VDE 0606. The switchbox is also available in a halogen-free version if required and upon special request.

Dimensions: 107 x 107 x 57 mm (W x H x D)
Weight: 30 g

Description:	Type:	Article No.:
Countersunk switchbox for ICT	U-ICT-IP	FC88019-

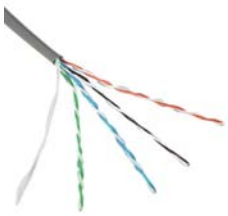
Nr.: FC88018-

Cavity wall switchbox H-ICT-IP

For cavity wall installation of the Intercom terminal, with fixing screws and device screws; made of plastic, fire resistant up to 850°C pursuant to DIN/VDE 0606. The switchbox is also available in a halogen-free version if required and upon special request.

Dimensions: 107 x 107 x 45 mm (W x H x D)
Weight: 30 g

Description:	Type:	Article No.:
Cavity wall switchbox for ICT	H-ICT-IP	FC88018-



Nr.: MM001124

VISOCALL IP CAT5 data cable CAT5

For the cabling structure of the VISOCALL IP network, types as follows:

- F-UTP 4 x 2 x 0.5 AWG24, solid conductor with foil shield and drain wire (max. data transfer rate 1 Gb)
- Halogen-free

Description:	Type:	Article No.:
VISOCALL IP CAT5 data cable	CAT5	MM001124

Nr.: MM001125

I/O bus CAT5 data cable CAT5-IO

For loop cabling of the I/O bus of the VISOCALL IP, types as listed below:

- EYN857A-PB-1000, solid conductor without shield
- UTP 4 x 2 x 0.5 AWG24, solid conductor
- Including plastic cable stranding, with cable grip
- The cable is contains in a “Black Box”, length 305 m
- 350 MHz, CAT5

Colour: grey

Description:	Type:	Article No.:
IO-Bus CAT5 data cable	CAT5-IO	MM001125
IO-Bus CAT5 data cable halogen-free	CAT5-IO-HF	MM001135

Nr.: MM010008

RJ45 connector plug RJ45-IP

Shielded connector plug, to be crimped on to the VISOCALL IP CAT5 data cable and the I/O bus CAT5 data cable, consisting of:

- Connector piece with metallic mains lead cleat
- Insert pieces for the individual cores

Description:	Type:	Article No.:
RJ45 Connector Plug	RJ45-IP	MM010008

Nr.: MM010001

Crimping pliers for RJ45 CRIMP-IP

Pliers, for crimping the RJ45 connector plug onto the VISOCALL IP CAT5 data cable and the I/O bus CAT5 data cable.

Weight: 1.13 kg

Description:	Type:	Article No.:
Crimping pliers for RJ45	CRIMP-IP	MM010001

Nr.: MM001126

Data cable VISOCALL IP basic AWG28/7

Telephone flatcable for cabling the basic-components:

- 6 x AWG28/7 (flexible)

Description:	Type:	Article No.:
Data cable VISOCALL IP basic	AWG28/7	MM001126
Data cable VISOCALL IP basic (halogen-free)	AWG28/7-H	MM001128

Nr.: MM011008

RJ12 connector plug RJ12-IP-B

Unshielded connector plug, to be crimped on to the VISOCALL IP basic data telephone flatcable, consisting of:

- 6 pole plastic plug
- Single wire diameter up to AWG24

Description:	Type:	Article No.:
RJ12 Connector Plug	RJ12-IP-B	MM011008

Nr.: MM011001

Crimping pliers for RJ12 CRIMP-IP-B

Crimping pliers, for crimping the RJ12 connector plug to the data cable VISOCALL IP basic flatcable.

Weight: 1.13 kg

Description:	Type:	Article No.:
Crimping pliers for RJ12	CRIMP-IP-B	MM011001

Nr.: FC010191

Plastic mouting frame DR-KMT

This plastic mouting fame is for mounting the terminals KMT, ZTD-B or ZT-B to a cavity wall double switchbox, consisting of:

- A plastic case for screw-free fitting of the communications terminal

Dimensions: 203 x 86 x 9 mm (H x W x D)
Material: Plastic case in colour RAL9016
Weight: 20 g

Description:	Type:	Article No.:
Plastic mouting frame for KMT	DR-KMT	FC010191

Nr.: FC010190

Surface mounting frame AP-KMT

This surface mounting frame is used for surface mounting the terminals KMT, ZTD-B or ZT-B, consisting of:

- A plastic case for screw-free fitting of the communications terminal

Dimensions: 203 x 86 x 9 mm (H x W x D)
Material: Plastic case in colour RAL9016
Weight: 20 g

Description:	Type:	Article No.:
Surface mounting frame for KMT	AP-KMT	FC010190

Nr.: FC008991

Single surface mounting case APA-1

For surface mounting, made of plastic with two prepared cable inlets (10 mm and 16 mm) and two screws for attaching the carrying ring.

Dimensions: 86 x 83 x 40 mm (H x W x D)
Material: ABS in colour RAL9016
Weight: 60 g

Description:	Type:	Article No.:
Single surface mounting case	APA-1	FC008991

Nr.: FC008992

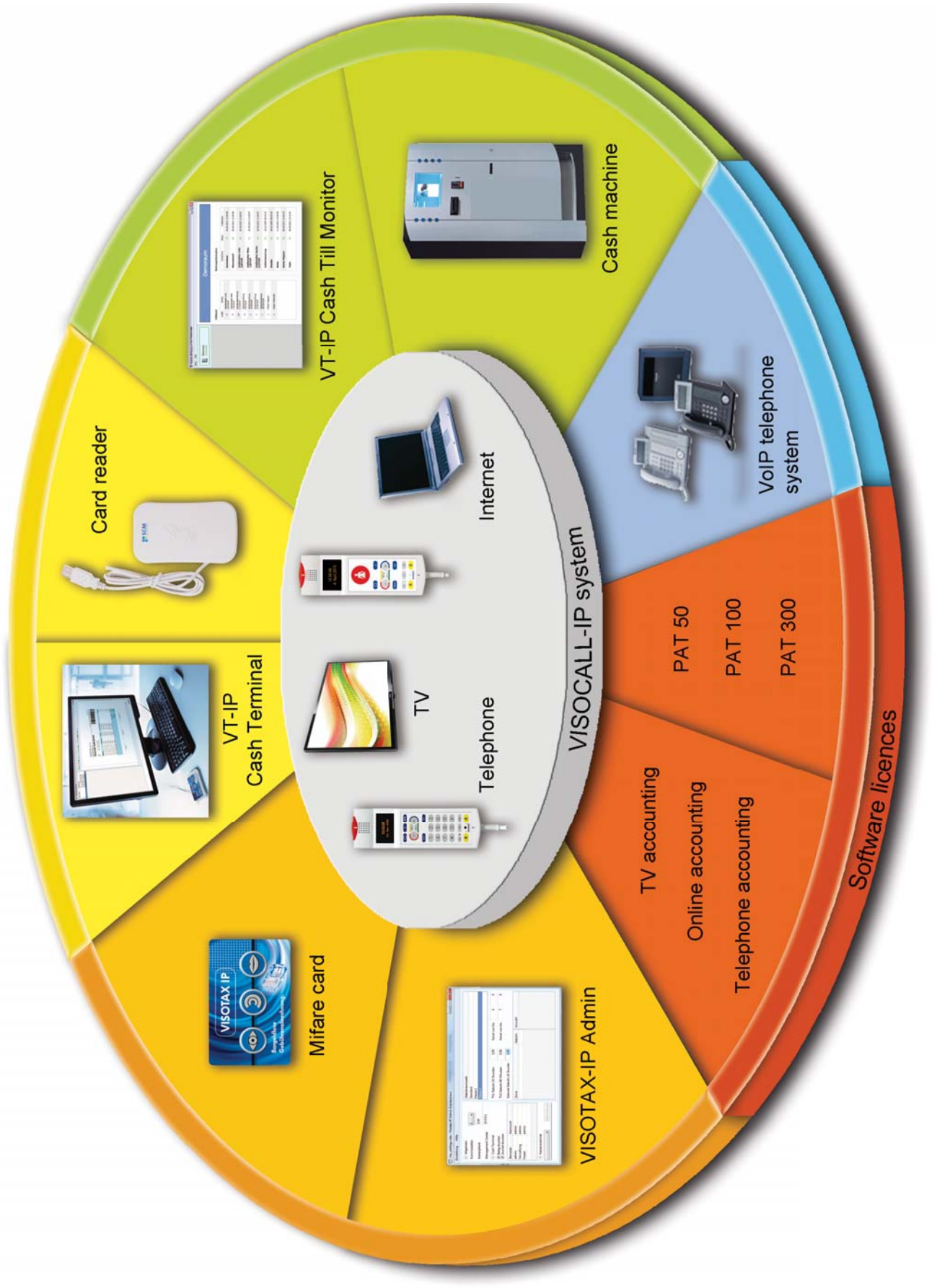
Double surface mounting case APA-2

For surface mounting, made of plastic with six prepared cable inlets (10 mm and 16 mm) and four screws for attaching the carrying ring.

Dimensions: 160 x 83 x 40 mm (H x W x D)
Material: ABS in colour RAL9016
Weight: 70 g

Description:	Type:	Article No.:
Double surface mounting case	APA-2	FC008992

12 VISOTAX IP



VISOTAX IP

VISOTAX IP is used for the collection and processing of telephone conversations, television and internet usage and is available in three different processing variants.

The following modules are required:

- PAT or PAT easy (only TV and online billing) + SM
- Management Center
- VoIP-enabled telephone system (provided by customer)

A chip card linked to patients is the key to the respective services provided. The chip card reader is integrated in the patient terminals.

VISOTAX IP can be used at three development levels:

Variant1 - Access authorisation:

At the basic level, a pre-configured chip card allows access to the services (telephone, TV, internet). The operator reserves the right to decide how the chip cards are distributed and the services are processed.

Variant 2 - Pre-collection basis system:

The basis of the pre-collection system is the chip card manually issued by the operator to the users (patients). Before the services can be used, a system account needs to be set up for the patient and funds need to be paid into the account.
The payment of funds and booking into this account takes place manually. Services which are used will be recorded automatically and the incurred costs will be automatically debited to the account balance.
If the funds are all used, the balance can be increased at any time by making a deposit, otherwise the services will be automatically blocked by VISOTAX IP.

Variant 3 - Pre-collection standard system:

In this version, the chip cards are automatically issued by a pay machine in exchange for a preconfigured deposit amount and the user (patient) can top up their balance at any time by transferring funds using this pay machine.
A receipt will be printed out for the user for each payment. Services which are used will be recorded automatically and the incurred costs will be automatically debited to the account balance. If the balance is fully depleted, the services will be automatically blocked by the system.
At the end of the stay in hospital, the user can cancel their account on the pay machine. In this case, the current balance, including the originally paid deposit amount, will be paid back to the user by the pay machine and the chip card will be retained by the machine.

Overview of service features:

Charging modes:

- TV fee for 24 hours
- TV fee 60 min
- Online fee for 24 hours
- Telephone usage with fee model

At patient's bed:

- Telephone calls via the patient terminal (subject to fee)
- Television via system TV devices or system multimedia terminal (subject to fee)
- Internet via LAN connector on plug-in module type SM (notebook or system multimedia terminal (subject to fee)

At administrations PC (VISOTAX IP Admin):

- Card deposit configuration
- Creating user profiles
- Create patient classes
- Create fee models
- POS Administration

At workplace PC (VISOTAX IP Cash Terminal):

- Account setup / deletion
- Booking payments into a patient account
- Settlement and discharge of a patient
- Printout of individual service confirmation
- Re-programming patient classes

On system workspace (VISOTAX IP Cash Till Monitor - only for variant 3):

- Operating statuses and filling levels of cash points
- Selective display of maintenance requirements for cash points

On cash machines:

- Issue of a chip card in return for deposit (configurable deposit level)
- Payment of cash into the system account
- Account balance request for chip card account incl. display of individual service confirmation
- Account dissolution with payment of remaining balance and chip card deposit
- Including automatic chip card collection
- Password-protected service level for the administration of fund balances in pay machines
- Optional language selection for operating interface (max. 4 languages)

FC007410

CAUTION: A VISOTAX IP Cash Till Monitor is required!

FC017340

Chip card

Contains the following data:

- System code
- Chip card number
- Account balance
- Patient class
- Fee model

FC017330

Software Licenses:

Description:	Type:	Article No.:
SW licence VISOTAX IP Admin	SWP-VTIP/ADMIN	FC017300
SW licence VT IP Cash terminal	SWP-VTIP/CT	FC017301
SW licence VT IP Cash till monitor	SWP-VTIP/CTM	FC017302
SW licence telephone accounting	SWP-VTIP/TEL	FC017310
SW licence TV accounting	SWP-VTIP/TV	FC017311
SW licence online accounting	SWP-VTIP/ONLINE	FC017312
SW licence PAT 50	SWP-VTIP/PAT50	FC017320--50
SW licence PAT 100	SWP-VTIP/PAT100	FC017320--100
SW licence PAT 300	SWP-VTIP/PAT300	FC017320--300

Nr.: FC008053
photo icon

Components:

Description:	Type:	Article No.:
Mifare reader USB	SCL011	FC017330
Mifare card	MFC4C	FC017340
Cash machine	VTP-KA	FC007410
VISOTAX PC	LS-HW	FC008053

Subject to technical changes.

SCHRACK SECONET AG
Eibesbrunnergasse 18
A-1120 Vienna
Tel.: +43 1 81157-0
office@schrack-seconet.com
www.schrack-seconet.com

SCHRACK SECONET AG

Eibesbrunnergasse 18
A-1120 Vienna
Tel. +43 1 81157
office@schrack-seconet.com
www.schrack-seconet.com

EN

Czech Rep. • CZ-149 00 Prague 4 - Újezd., Štítová 283 • Tel. +420 2 74784422
Hungary • HU-1119 Budapest, Fehérvári út 89-95 • Tel. +36 1 4644300
India • IN-122002 Gurgaon, DLF Golf Course Road, Sector-54 • Tel. +91 124 4141501
Poland • PL-02-672 Warsaw, ul. Domaniewska 44a, bud. Platinium V • Tel. +48 22 3300620
Romania • RO-023961 Bucharest, Str. Mântuleasa nr. 15A et. 1, Sector 2 • Tel. +40 372 756316
Russia • RU-129626 Moscow, Ul. Staroalexejevskaja 5 • Tel. +7 495 5105015
Slovakia • SK-83527 Bratislava–Rača, Mudrochova 2 • Tel. +421 2 44635595
Sweden • SE-145 84 Norsborg, Botvid Business Center • Tel. +46 8 6801860
Turkey • TR-34722 Kadıköy-İstanbul, Kasap İsmail Sk. 5/5 • Tel. +90 216 3455199

HEALTH CARE

SCHRACK SECONET