Instructions for Use and Technical Description

SafeSense® 3

Monitoring System

Stand-alone Version, Version for Image 3, Version for Eleganza 2 and Version for Essenza 300

C E

LINET

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SafeSense® 3
Monitoring System

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Related links: www.linet.com

D9U001SFS-0101
Version: 05
Publication Date: 2024-03

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1 Symbols and Definitions

1.1 Warning Notices

1.1.1 Types of Warning Notices

Warning notices are differentiated by the type of danger using the following key words:

► **CAUTION** warns about the risk of material damage.
► **WARNING** warns about the risk of physical injury.
► **DANGER** warns about the risk of fatal injury.

1.1.2 Structure of Warning Notices

SIGNAL WORDS!
Type and source of danger!
► Measures to avoid the danger.

1.2 Instructions

Structure of instructions:
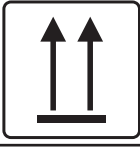
► Perform this step.
Results, if necessary.

1.3 Lists

Structure of bulleted lists:
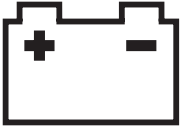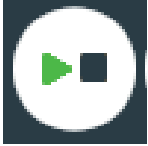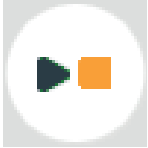
■ List level 1
  □ List level 2
    ● List level 3

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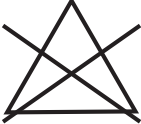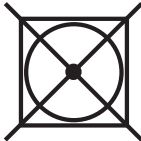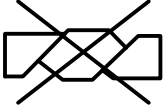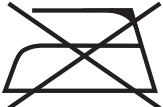
1.4 Symbols on the Package
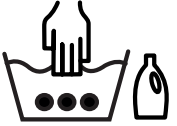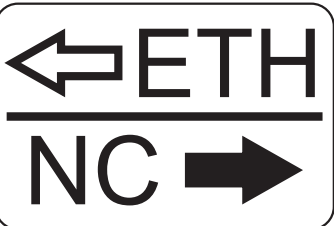
	FRAGILE, HANDLE WITH CARE
	THIS WAY UP
	DO NOT POLLUTE THE ENVIRONMENT
	PAPER RECYCLING SYMBOL

1.5 Symbols and Labels on the Product

	READ INSTRUCTIONS FOR USE
	ACTIVATION BUTTON (TO ACTIVATE SafeSense® 3)
	PLAY OR STOP BUTTON (TO ACTIVATE OR DEACTIVATE SELECTED MONITORING)
	SELECT AND TIME BUTTON (SELECT TYPE OF MONITORING OR SET PERIOD OF SELECTED MONITORING)
	WEEE SYMBOL (RECYCLE AS ELECTRONIC WASTE, DO NOT PUT INTO THE HOUSEHOLD WASTE)
	MANUFACTURER
	MANUFACTURING DATE
	ON
	OFF
	WARNING
	ONLY SUITABLE FOR INDOOR USE

	APPLIED PARTS TYPE **B**
REF	REFERENCE NUMBER (PRODUCT TYPE DEPENDING ON CONFIGURATION)
SN	SERIAL NUMBER
	BATTERY (HUB)
	PLAY ICON (ON)
	STOP ICON (OFF)
	DECUBITUS/MOVEMENT NOTIFICATION
	MOTION MONITORING
	BED EXIT MONITORING
	WETNESS MONITORING

	CHECKED BY AUTHORIZED SERVICE DEPARTMENT
	DO NOT WASH (AIR PAD)
	DO NOT BLEACH (AIR PAD)
	DO NOT TUMBLE DRY (AIR PAD)
	DO NOT WRING (AIR PAD)
	DO NOT IRON (AIR PAD)
	PROFESSIONAL CHEMICAL CLEANING - MODERATE PROCEDURE (AIR PAD)
	DO NOT USE PHENOL (AIR PAD)
	DRY NATURALLY (AIR PAD)
	RINSE WITH WATER (AIR PAD)

NaClO ≤1,000ppm	DISINFECT USING SOLUTION CONTAINING LESS THAN 1000 ppm OF CHLORINE (REFER TO INSTRUCTIONS FOR USE) (AIR PAD)
	HANDWASH WITH DETERGENT (INITIAL TEMPERATURE OF HOT WATER SHOULD NOT EXCEED 50°C) (AIR PAD)
BS 7175 RESISTANT 5	COVER MATERIALS ARE FIRE RESISTANT TO BS7175, SOURCE 0, 1 AND 5 (AIR PAD)
CE	CE MARKING
MD	MEDICAL DEVICE (COMPATIBLE WITH MEDICAL DEVICE REGULATION)
⇐ETH NC ➡	LABEL INDICATING POSITIONS OF CONNECTORS FOR LAN CONNECTION (ETH) AND NURSE CALL CONNECTION (NC)

1.6 Product Labels

Serial label of the SafeSense 3 Monitoring System is placed on the Hub bottom side. The serial label contains information about manufacturer's address, manufacturing date, product reference number and product serial number. Hub serial label is also placed on the Hub bottom side. The Hub serial label contains information about manufacturer's address, manufacturing date, component reference number, component serial number, symbols and electrical specification.

HUB - SafeSense®
REF XXXXXXXXX
bar code
Power In: 24-40 V ⎓, max. 0,5 A
Version: HW: XX.XX FW: XX.XX
SN XXXXXXXXXXXXXXXX
bar code
ETH MAC: XX:XX:XX:XX:XX:XX
WiFi MAC: XX:XX:XX:XX:XX:XX
UUID: XXXXXXXXXXXXXXXX
ELDAT: XXXXXXXX

20XX-XX-XX   IPXX

1: Li-ion 7,3 V/2,6 Ah
2: CR1220
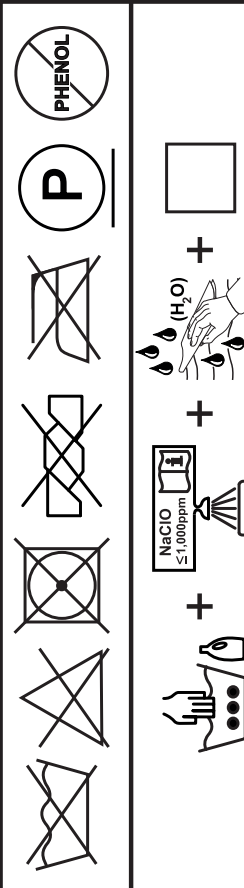
Fig. SafeSense® 3 Hub Serial Label (example)

LINET

REF
S7001718
SafeSense®

YYYY-MM-DD

L I N E T spol. s r.o.
Želevčice 5, 274 01 Slaný
Czech Republic
Made in Czech Republic

www.linet.com

Fig. SafeSense® 3 Air Pad
Type Label

COVER TEXTILE(S) PASS
THE REQUIREMENTS
OF CTB 117-2013 SECTION 1
(CLASS 1 NORMAL FLAMMABILITY)
and 16 CFR Part 1632.6-2013 Edition

BS 7175

MD

RESISTANT

CE

LINET

LINET spol. s r. o.,
Želevčice 5, 274 01 Slaný
The Czech Republic

1	2	3	4	5	6
7	8	9	10	11	12
21	22	23	24	25	26

Fig. SafeSense® 3 Air Pad
Wash Label

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1.7 Visual signalisation

1.7.1 LEDS ON THE HUB CONTROL PANEL

SIGNALISATION		MEANING
ACTIVATION LED	GREEN	SafeSense® 3 ON - battery charged to more than 75%
	LIGHT BLUE	SafeSense® 3 ON - battery charged to 25 - 75%
	RED	SafeSense® 3 ON - battery fault
	LED OFF	SafeSense® 3 OFF
PLAY/STOP LED	GREEN	monitoring ON
	BLUE	monitoring OFF
ERROR LED	RED	internal error
	LED OFF	no error detected

1.8 Definitions

Adult	Patient having a physical size equal to or more than 146 cm, a mass equal to or more than 40 kg and a body mass index (BMI) equal to or more than 17 (according to IEC 60601-2-52).
Alert	Information signal (other than alarm signal)
MQTT Broker	MQTT Broker is a software part of the SafeSense® 3 system. MQTT (Message Queuing Telemetry Transport) represents a light-weight communication protocol for the internet of things according to the standard ISO/IEC 20922. The MQTT Broker consists of software components running on the server allowing to share messages among connected devices (clients with SafeSense Application and Hubs). The MQTT Broker is configured to use encrypted communication in a network to eliminate vulnerable and insecure client connections.

1.9 Abbreviations

AC (~)	Alternating Current
ACP	Attendant Control Panel
CE	European Conformity
CPR	Cardiopulmonary Resuscitation
dBA	Sound Intensity Unit
DC (⎓)	Direct Current
ELDAT	Eldat Radio Module Identifier
EMC	Electromagnetic Compatibility
ETH	Ethernet
ETH MAC	Ethernet MAC Address
HF	High Frequency
HW	Hardware
ICU	Intensive Care Unit
IP	Ingress Protection
IV	Intravenous
LAN	Local Area Network
LED	Light Emitting Diodes
MAC	Media Access Control Address
ME	Medical Electrical (Equipment)
NC	Nurse Call
ON	Activation
OFF	Deactivation
ppm	parts per million, millionth (1000 ppm = 0,1%)
REF	Reference Number (product type depending on configuration)
SN	Serial Number
SW	Software
SWL	Safe Working Load
USB	Universal Serial Bus
UUID	Universally Unique Identifier (of the whole system)
WEEE	Waste Electrical and Electronic Equipment
WiFi	Wireless Networking Protocol
WiFi MAC	WiFi MAC Address
WLAN	Wireless Local Area Network

2 Safety Instructions

⚠️ **WARNING!**
You cannot rely unconditionally on alert notifications! This medical device is not intended to be used as an alarm system! SafeSense® 3 was not developed or tested as a diagnostic tool and must not be considered as such or as another instrument of that type.

⚠️ **WARNING!**
This medical device is portable medical electrical equipment!

⚠️ **WARNING!**
Inappropriate handling of the power supply cord, e. g. by kinking, shearing or other mechanical damages is hazardous!

⚠️ **WARNING!**
When routing cables from SafeSense® 3 in a medical bed avoid squeezing those between parts of the medical bed!

⚠️ **WARNING!**
No modification of this equipment is allowed.

⚠️ **WARNING!**
An additional multiple socket-outlet or extension cord shall not be connected to the medical electrical system.

⚠️ **WARNING!**
Only authorised and trained person using the tool is allowed to change Hub battery!

⚠️ **WARNING!**
To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth.

⚠️ **WARNING!**
This medical device is not intended for oxygen enriched environment!

⚠️ **WARNING!**
Incompatible mattresses can put system functions out of order.

⚠️ **WARNING!**
This medical device is not intended for use with flammable substances!

⚠️ **WARNING!**
Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established!

Additional instructions for correct use:

►   Follow the instructions for use carefully.

►   Ensure any user has read and understood the instructions for use completely before operating the product.

►   Use the system exclusively if it is in perfect working order.

►   If necessary, check the system functions daily or at each shift change.

►   Use the system exclusively with the correct mains supply.

►   Ensure that the system is operated exclusively by qualified personnel who have been trained according to the instructions for use.

►   Ensure that the patient (health permitting) has been informed about the operation of the system and all applicable safety instructions.

►   Contact service department of the manufacturer immediately to let it replace any damaged parts by the original spare parts.

►   Ensure that maintenance and installation are performed exclusively by qualified personnel who have been trained by the manufacturer.

►   To avoid injury or crushing, take extra caution when operating any moving parts of the bed.

►   Never use the system in areas where there is a hazard of explosion.

►   Never handle the mains plug with wet hands.

►   Disconnect the product from the mains exclusively by pulling the mains plug.

►   When pulling the mains plug, always hold the plug, not the cable.

►   Position the mains cable so that there are no loops or kinks in the cable; protect the cable from mechanical wear and tear.

►   Improper handling of mains cable can cause an electric shock hazard and other serious injuries or damages.

►   To prevent failures, use exclusively the manufacturer's original accessories and mattresses in perfect working order.

►   Do not hang anything on any cable.

►   Select a suitable location for the placement of bed accessories and other objects to prevent involuntary activation of buttons or controls which may result in the adjustment of bed positioning.

►   Replace the Air Pad once every 2 years to ensure its full functionality!

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3 Intended Use (Stand-alone Version, Version for Image 3 and Version for Eleganza 2)

The SafeSense® 3 Monitoring System is intended to use for the automated, contactless and unobtrusive continuous mobility detection of patients in bed, bed exit and continuous wetness detection in the context of healthcare and nursing facilities.

3.1 User population

► Not specific. Indication is limited by limitation of hospital/nursing bed patients (weight ≥ 40 kg and ≤ 180kg , height >= 146 cm, BMI >= 17)
► Caregivers (nurses, doctors, technical personnel, transport personnel, cleaning personnel)

3.2 Contraindications

► Patients in whom proper positioning cannot be achieved or maintained.
► Patients who do not meet the weight limits tested or specified.
► An explosive atmosphere or in the presence of flammable anesthetics or gases.

3.3 Operator

► Health care professional (nurses, doctors)

4 Mattresses compatible with SafeSense® 3

⚠️ **WARNING!**
Following mattresses are manufactured in versions with different dimensions. Use only mattresses whose dimensions are compatible with corresponding medical bed! Active Mattresses are not compatible with SafeSense 3 Monitoring System!

Compatible Mattresses:

■ EffectaCare 10
■ EffectaCare 20
■ PrimaCare 10
■ PrimaCare 20
■ CliniCare 10
■ CliniCare 20
■ CliniCare 30
■ Universal mattress Wulff
■ ViskoMatt Comfort
■ MicroMatt 7
■ HeavyMatt 270
■ ViskoMatt 2
■ ViskoMatt 3
■ ViskoMatt 5
■ ViskoMatt 3 bariatric

5 Product Description

Based on the functional principle of ballistocardiography, patients are monitored by a bed-side hardware unit of the SafeSense® 3 Monitoring System. This system consists of an electronic-free pad (SafeSense® 3 Air Pad) located under the mattress, which is connected to a hardware unit (SafeSense® 3 Hub) through an air hose. From there, the data is sent to remote devices via (W) LAN. The data is visualized using an SafeSense Application. Targeted and efficient patient care is also supported by an integrated notification function.

5.1 System Desciption

5.1.1 Stand-alone Version
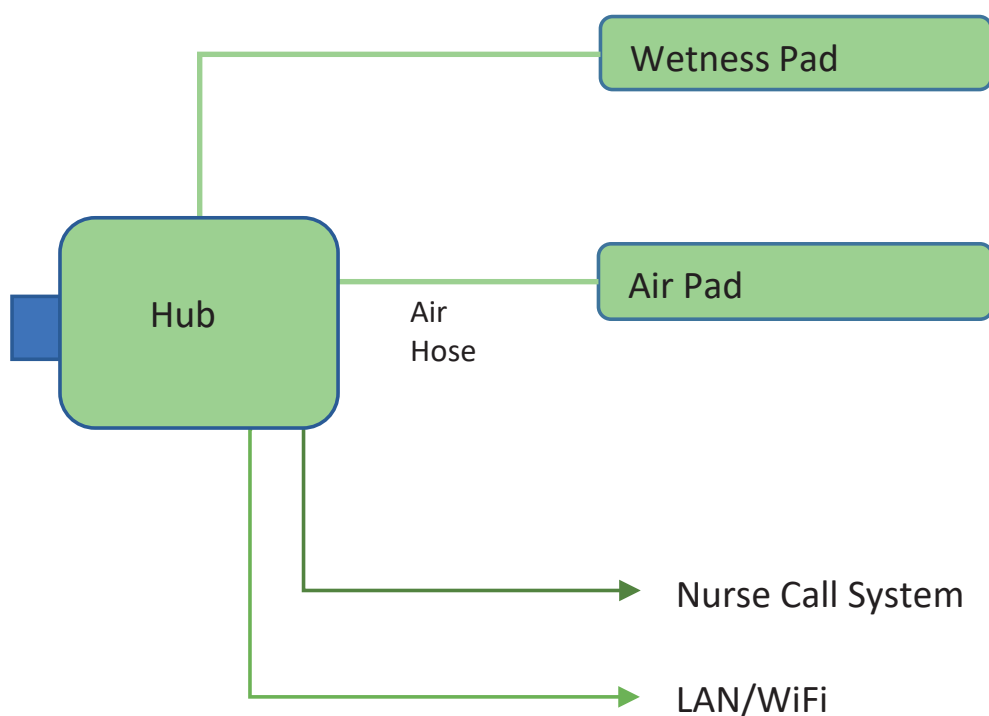
Fig. Diagram of the SafeSense® 3 Stand-alone system

5.1.2 Version for Image 3 (Image 3 bed with SafeSense® 3)

⚠️ **WARNING!**
SafeSense® 3 Monitoring System in Version for Image 3 is compatible only with Image 3 medical bed and depends on the specific configuration of the Image 3 bed because Image 3 bed must be SafeSense® 3 ready for use with SafeSense® 3!
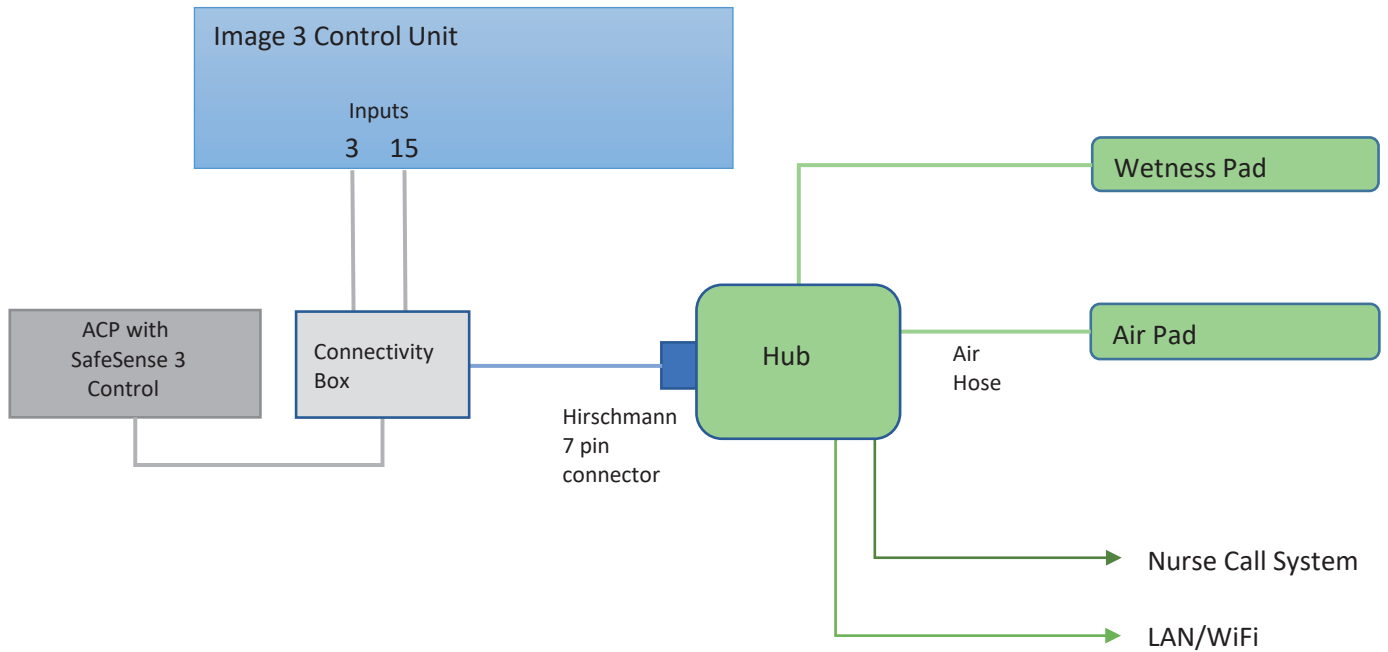
Fig. Diagram of the SafeSense 3 system with Image 3 bed

5.1.3 Version for Eleganza 2 (Eleganza 2 bed with SafeSense® 3)

⚠️ **WARNING!**
SafeSense® 3 Monitoring System in Version for Eleganza 2 is compatible only with Eleganza 2 medical bed and depends on the specific configuration of the Eleganza 2 bed because Eleganza 2 bed must be SafeSense® 3 ready for use with SafeSense® 3!
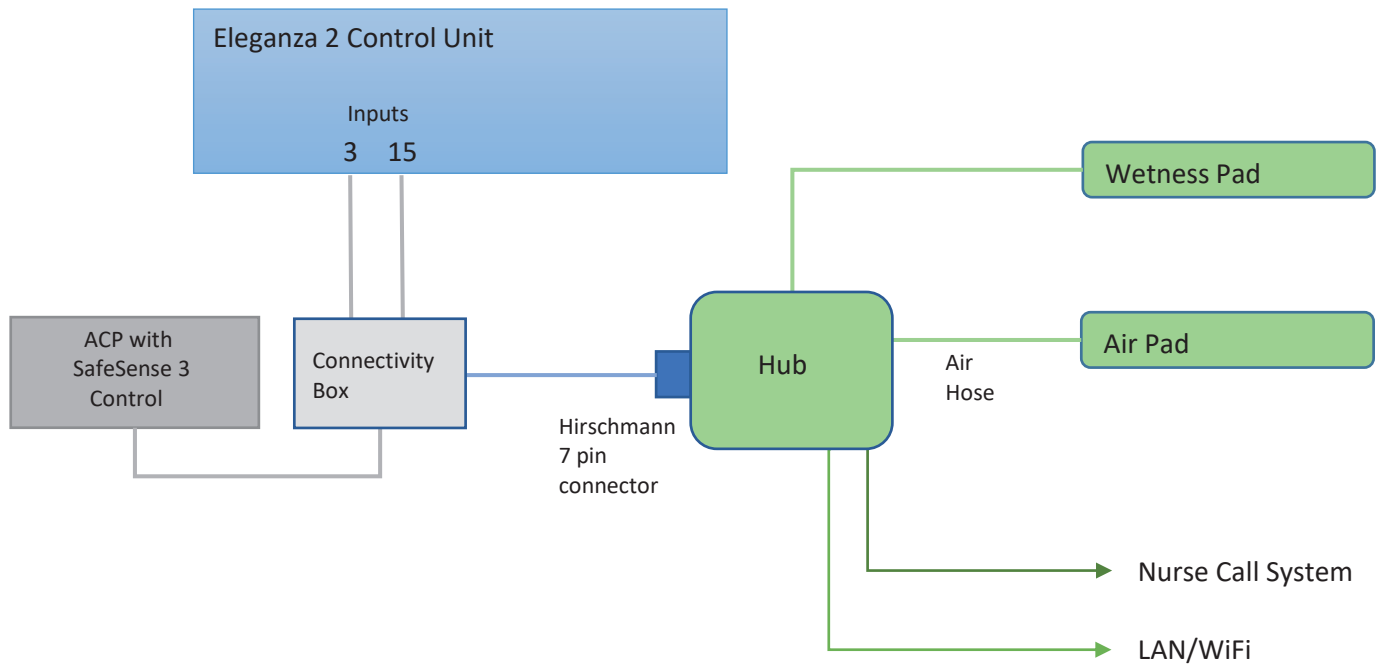
Fig. Diagram of the SafeSense 3 system with Eleganza 2 bed

5.1.4 Version for Essenza 300 (Essenza® 300 bed with SafeSense® 3)

⚠️ **WARNING!**
SafeSense® 3 Monitoring System in Version for Essenza 300 is compatible only with Essenza 300 medical bed and depends on the specific configuration of the Essenza 300 bed because Essenza 300 bed must be SafeSense® 3 ready for use with SafeSense® 3!
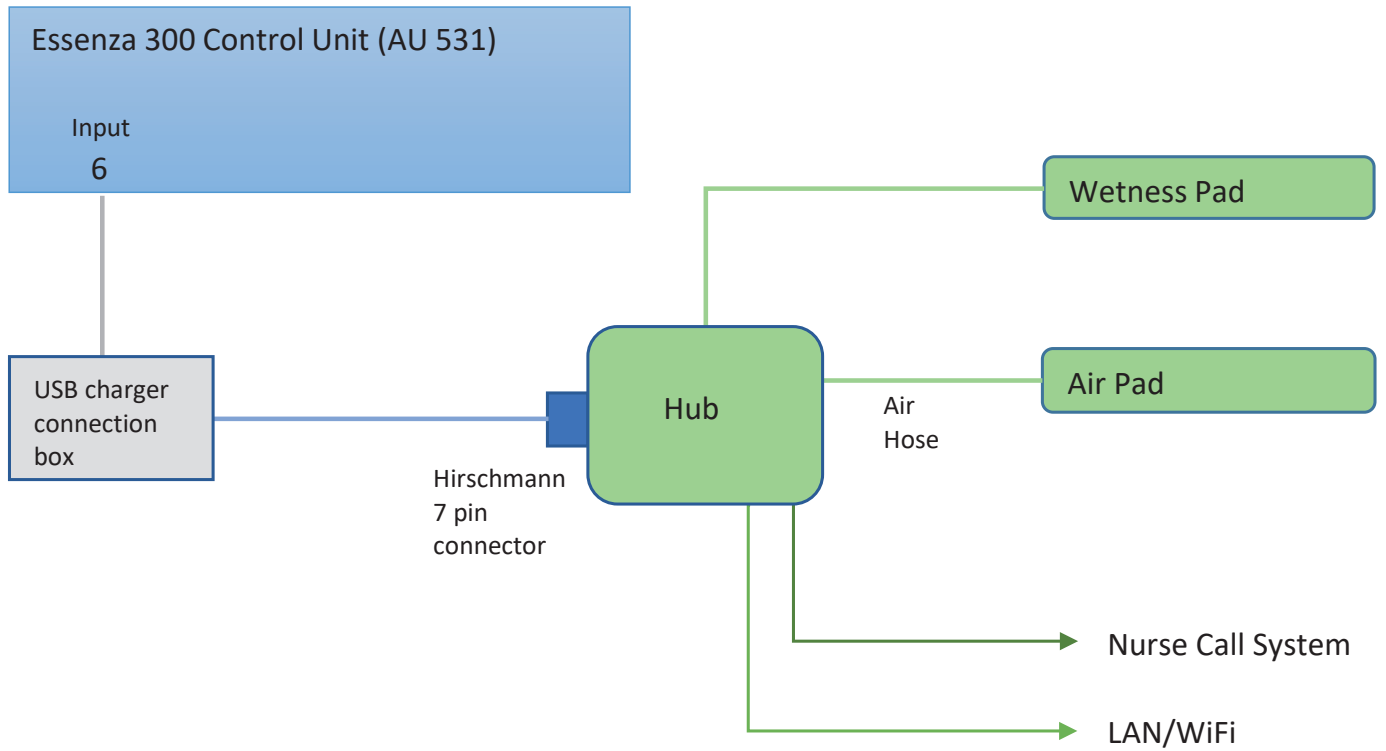
Fig. Diagram of the SafeSense 3 system with Essenza 300 bed

5.2 Hub

Hub interconnects parts of the SafeSense® 3 system and enables communication between the SafeSense® 3 system installed on a medical bed and CareMonitor user interface.
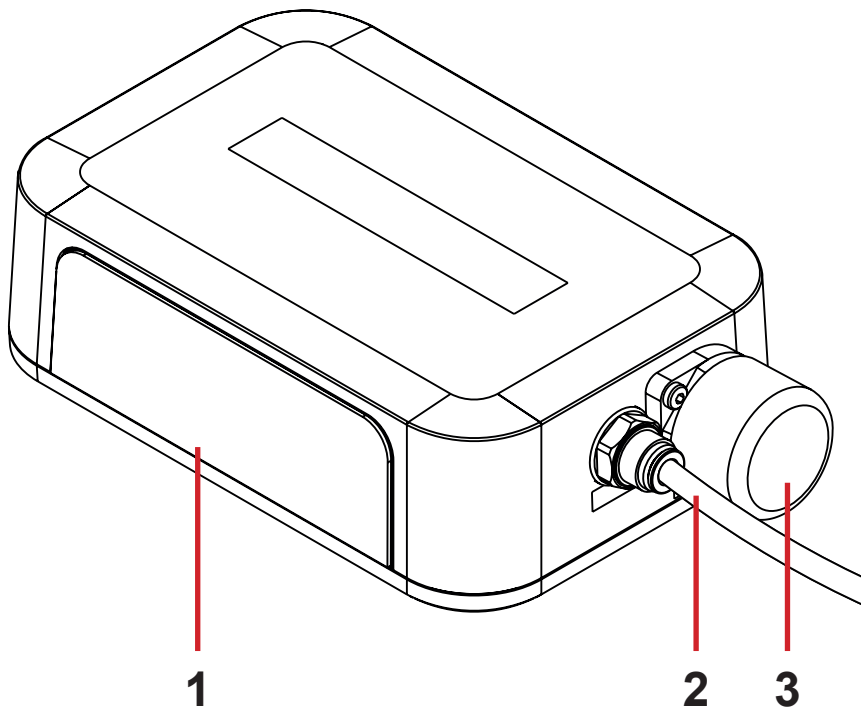
1. Hub Control Panel
2. Air Hose
3. Attendant Control Panel Connector with plug (only for Image 3 and Eleganza 2 medical bed)

5.3 Air Pad

Air Pad connected to the Hub via Air Hose enables Bed Exit Monitoring and Motion Monitoring.

5.3.1 Air Pad for Stand-alone Version

Air Pad for Stand-alone Version is equipped with 3 straps intended for fixing the Air Pad to Backrest of a compatible bed.
The straps are equipped with buckles that must be properly buckled in order to secure the correct position of the Air Pad on the bed Backrest.
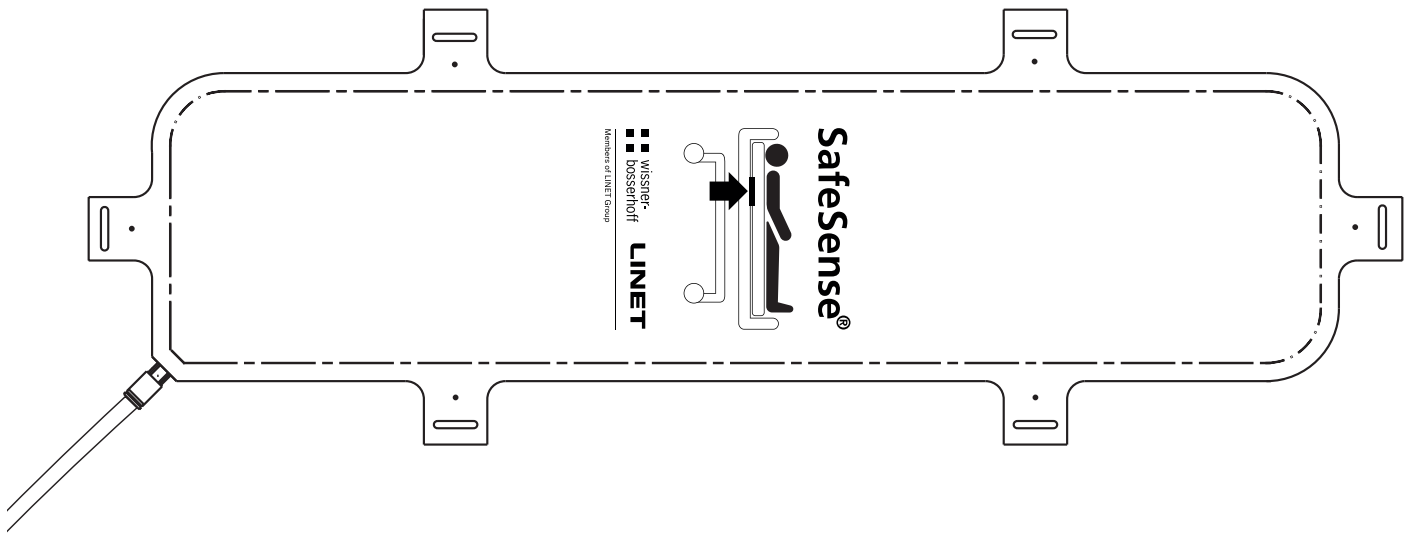
Fig. Air Pad with Air Hose for Stand-alone Version
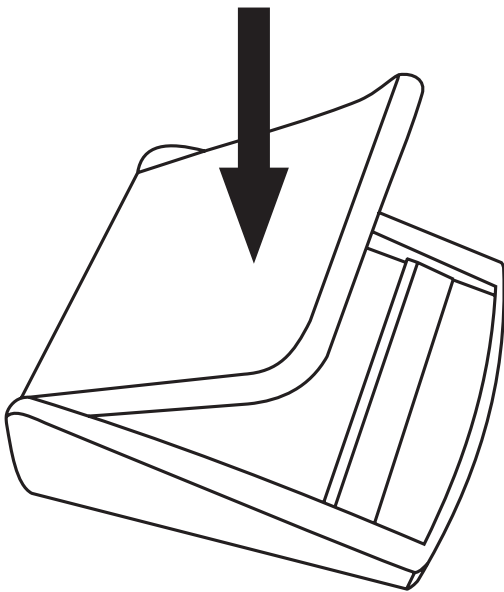
Fig. Buckle to fix the straps connecting the Air Pad for Stand-alone Version to Backrest of a compatible bed

5.3.2 Air Pad for Image 3 Version, Eleganza 2 Version and Essenza 300 Version
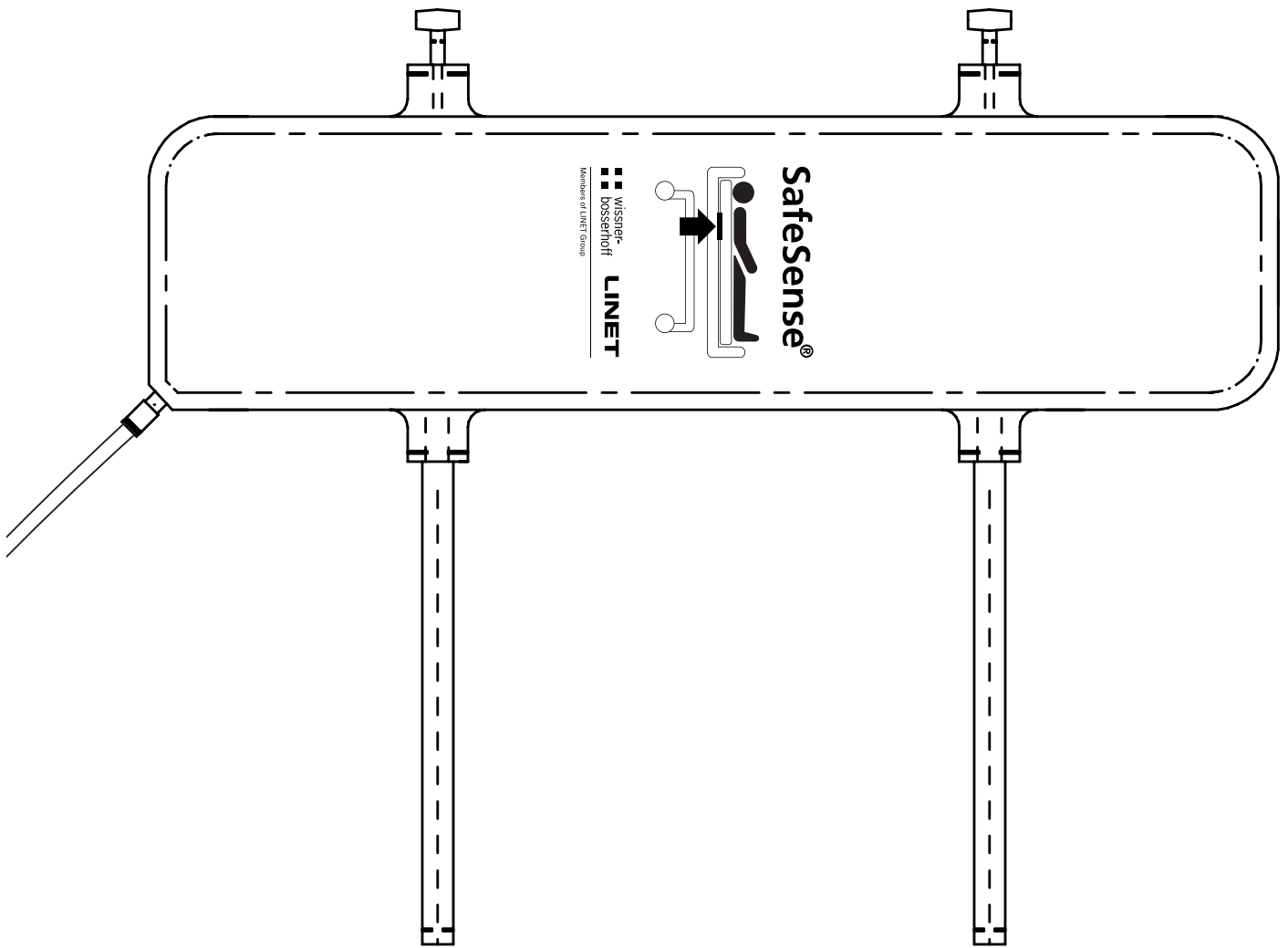
Fig. Air Pad with Air Hose for Image 3 Version, Eleganza 2 Version and Essenza 300 Version

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5.4 Wetness Pad (optional equipment)

WARNING!
Risk of incorrect use!
► Follow the instructions for use of the Wisbi Wetness Pad carefully!

CAUTION!
Risk of incorrect Wetness Monitoring due to incorrect cleaning of the Wetness Pad!
► For maximum sensitivity of Wetness Monitoring, wash the used Wetness Pad before use under another patient.
► Follow the instructions for cleaning the Wetness Pad to achieve the maximum lifetime of the Wetness Pad.

Wetness Pad connected to the Hub via Wetness Pad Cable enables Wetness Monitoring.
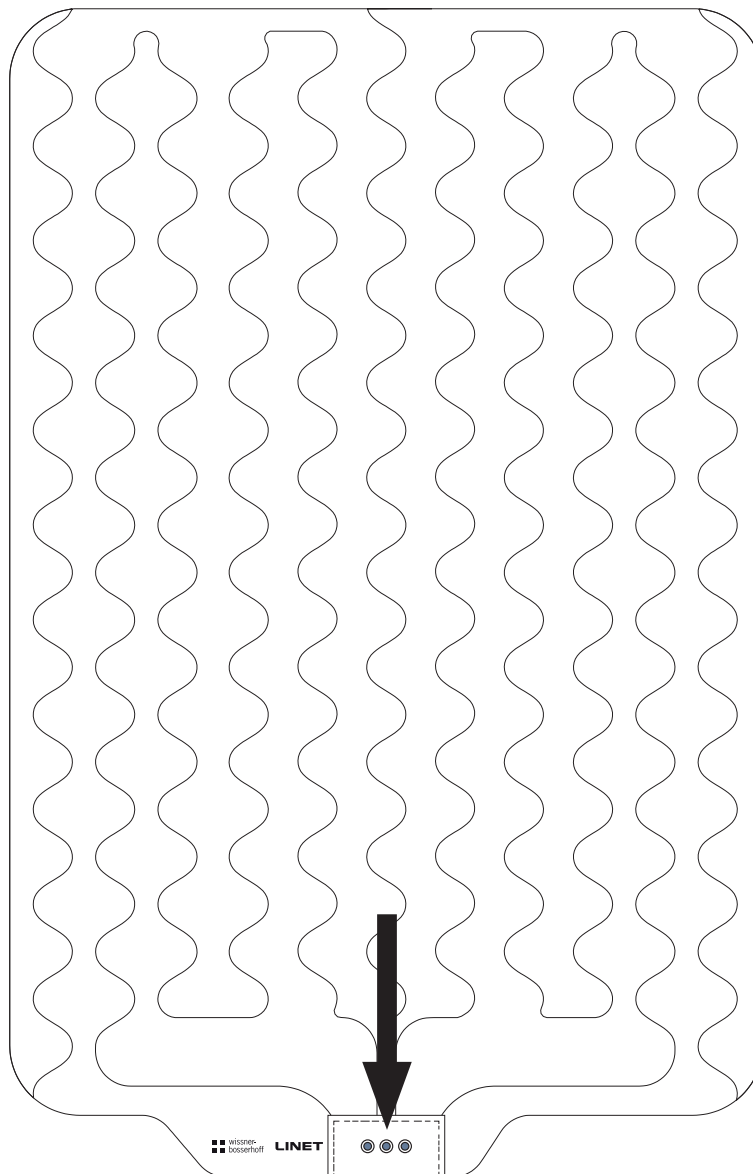
Fig. Wetness Pad with 3 connectors
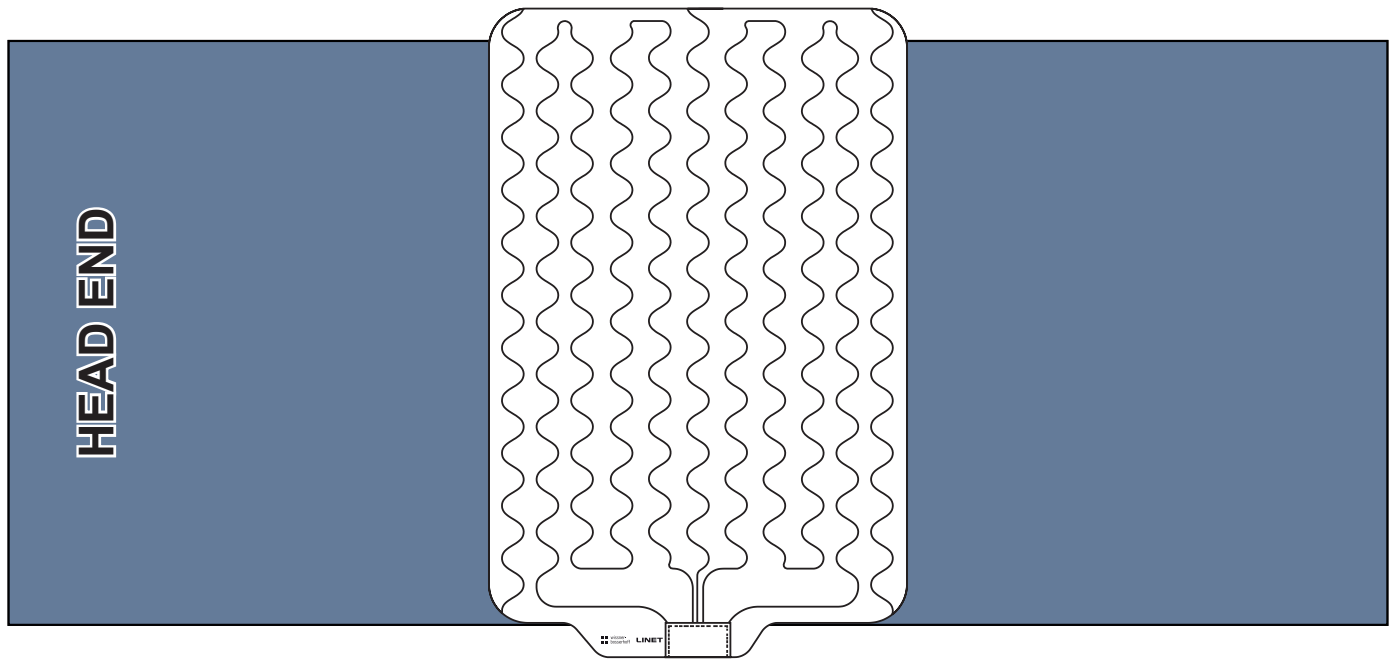
Fig. Position of the Wetness Pad on the compatible mattress

To place Wetness Pad on a mattress:

► Put Wetness Pad over the mattress seat section to have 2 overlapping ends of the Wetness Pad on the sides of the mattress. Three connectors on the Wetness Pad are facing the right side of the compatible mattress. Blue side is the bottom side of the Wetness Pad.

► Connect Wetness Pad Cable to the 3 connectors on the Wetness Pad.

![LINET]
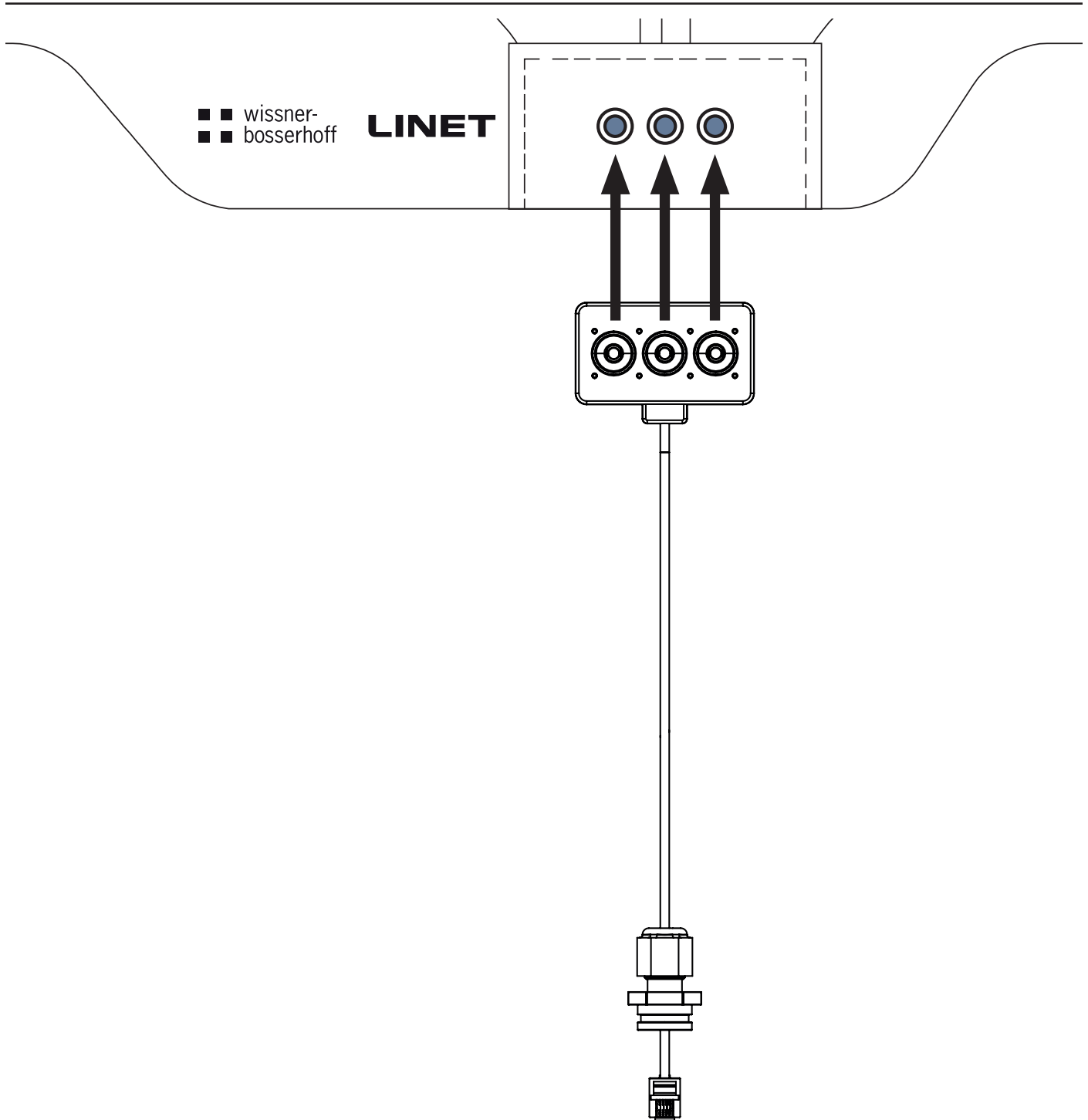
Fig. Connecting the Wetness Pad Cable to Wetness Pad

To connect Wetness Pad to the SafeSense® 3 system:

► Connect the RJ connector on the opposite side of the Wetness Pad cable to the Hub (connector in the position **3**).

► Connect 3 connectors of the Wetness Pad cable to the three connectors on the Wetness Pad according to the picture above.

5.5 Nurse Call system

⚠ **WARNING!**
LINET accepts no liability for untransmitted or incorrectly transmitted signals to the Nurse Call system!
► **Before installing the SafeSense3® Monitoring System, contact the manufacturer to check the compatibility of your Nurse Call system and any other information that may need to be taken into account!**

⚠ **WARNING!**
If your Nurse Call system does not have a socket and a socket is needed for a Nurse Call accessory, a compatible Y-adapter is required. You can obtain one from the manufacturer of your Nurse Call system. Also ask the manufacturer about any risks and other requirements that should be met!

⚠ **WARNING!**
LINET is not responsible for the incorrect use of the Y-adapters or any possible damage to the Nurse Call system and accepts no liability for such damages.

⚠ **CAUTION!**
Wireless Eldat receivers can be programmed to up to 30 senders. However, for safety reasons, at any time only one SafeSense® 3 Monitoring System maybe calibrated to one wireless receiver! If you wish to move the system to a different location (e.g. a different room), you will also have to move the corresponding wireless receiver.

All notifications provided by the SafeSense® 3 Monitoring System can also be forwarded to your Nurse Call system via a compatible cable (Y-cable or standard cable) or via the built in Eldat transmitter. If a compatible Y-cable is used, both connectors on the Y-cable may need to be occupied (e.g. when a Handheld Switch is used). The Handheld Switch is an accessory of your Nurse Call system. This accessory is intended for calling the hospital staff manually by patient.

In order to ensure that the SafeSense® 3 Monitoring System functions correctly with your local Nurse Call system, the following requirements must be met:

► **For cable based Nurse Call connection:**
An adapter cable must be laid out individually for the Nurse Call systems installed in the building and must be ordered separately from LINET. Prepare the SafeSense® 3 Monitoring System for connection to a Nurse Call system by attaching the Nurse Call cable to the Nurse Call connector (NCS) on the SafeSense® 3 Hub and the other end of the Nurse Call cable to an interconnecting element for Nurse Call cable at head end of the bed. Standard cable or Y-cable is necessary to connect the bed to your Nurse Call system. Two sockets are necessary to allow you to use the Handheld Switch with your Nurse Call system and also to connect the bed to your Nurse Call system.

► **Wireless Nurse Call connection using an Eldat EasyWave receiver:**
For the connection to a Nurse Call system an Eldat EasyWave receiver can be used that can be ordered from LINET. The receiver is equipped with its own adapter that should be connected to the mains. When using the SafeSense® 3 Monitoring System with an Eldat receiver for the first time, both systems have to be paired. For this purpose, the receiver has to be set to **programming mode**. **Refer to the instructions for use of the corresponding Eldat receiver for more information on this step!** Thereafter, a notification has to be triggered by the SafeSense® 3 Monitoring System. Set the Bed Exit Alarm delay setting to "Immediately" and activate the Bed Exit Alarm notification in the settings menu. In order to trigger a notification, put pressure on the Air Pad (e.g. by sitting on the Air Pad) and release the pressure after 5 sec. If a notification has been sent by the SafeSense® 3 Monitoring System, the Eldat receiver should have received the transmitted signal and the SafeSense® 3 Monitoring System is paired with the Nurse Call system. Programming mode of the Eldat receiver can now be turned off.
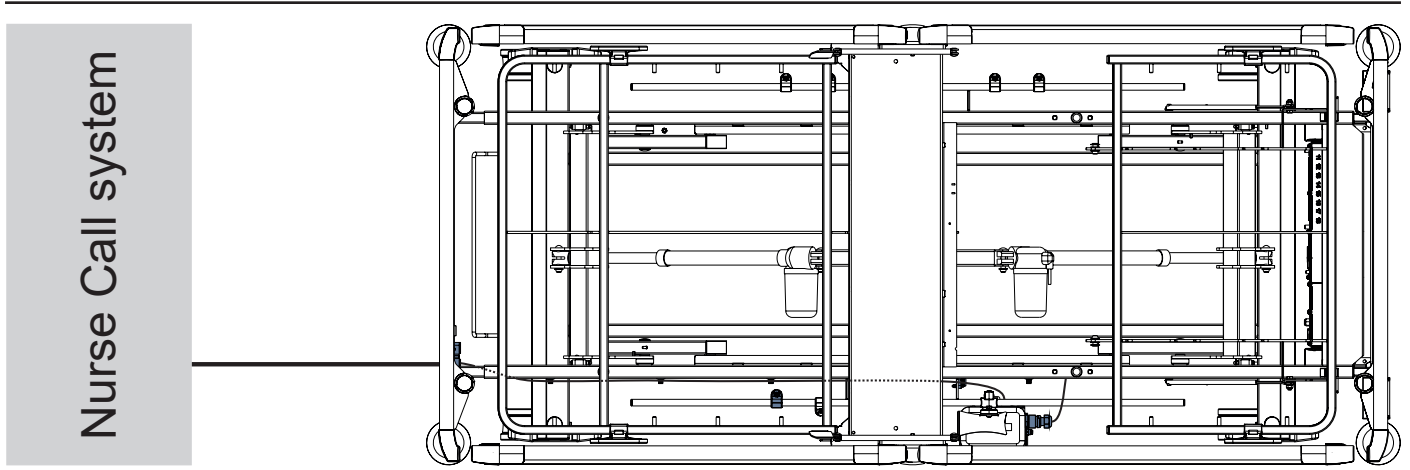
Nurse Call system

Fig. Image 3 bed connected to a Nurse Call system via cable

Nurse Call system
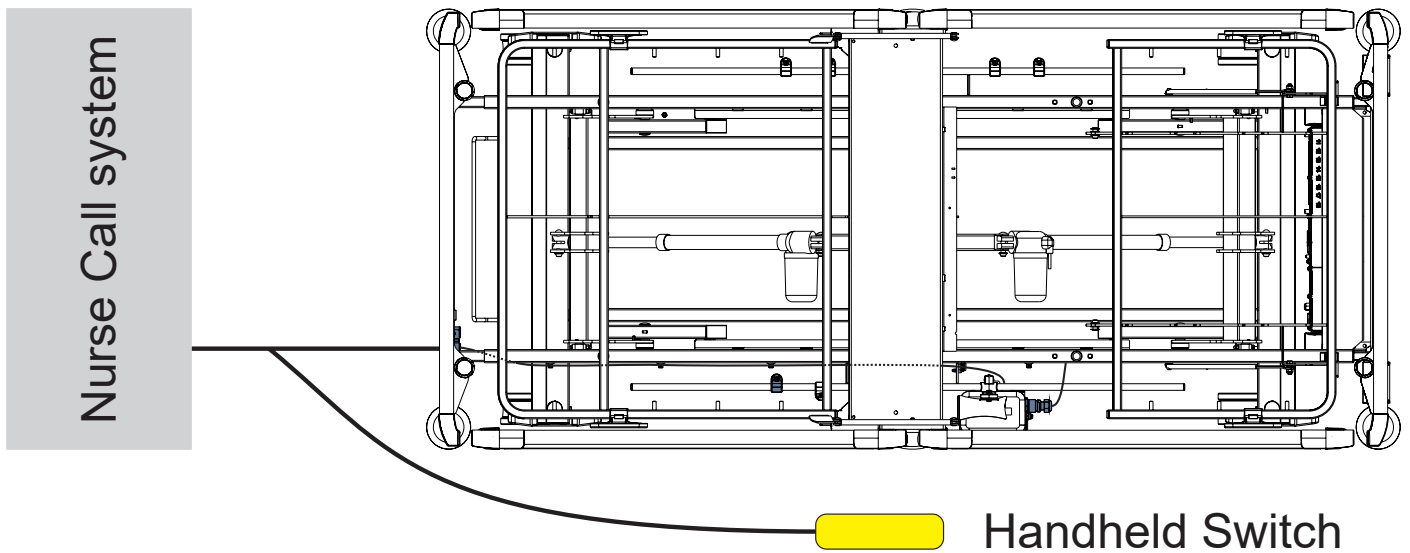
Handheld Switch

Fig. Image 3 bed connected to a Nurse Call system via Y-cable and Handheld switch connected to the Y-cable

6 Technical Specification

All technical data are rated data and are subject to construction and manufacturing tolerances.

6.1 Mechanical Specifications

Parameter	Value
Dimensions of Air Pad (length x width x height)	66 cm x 17 cm x 2 cm
Dimensions of Wetness Pad (length x width)	100 cm x 64 cm
Dimensions of Hub Box (length x width x height)	16,5 cm x 10,6 cm x 4,5 cm
Length of Air Hose (Stand-alone Version)	2,4 m
Length of Air Hose (Version for Image 3)	1,2 m
Length of Air Hose (Version for Eleganza 2)	1,4 m
Length of Air Hose (Version for Essenza 300)	0,7 m
Length of Power Supply cable (Stand-alone Version)	1,8 m
Length of LAN cable (Stand-alone Version)	140 cm
Length of LAN cable (Version for Image 3)	140 cm
Length of LAN cable (Version for Eleganza 2)	34 cm
Length of LAN cable (Version for Essenza 300)	89,5 cm
Length of Nurse Call cable (Stand-alone Version)	188,5 cm
Length of Nurse Call cable (Version for Image 3)	140 cm
Length of Nurse Call cable (Version for Eleganza 2)	34 cm
Length of Nurse Call cable (Version for Essenza 300)	89 cm
Length of Wetness Pad cable (Stand-alone Version)	2,2 m
Length of Wetness Pad cable (Version for Image 3 or Version for Eleganza 2 or Version for Essenza 300)	0,67 m
Minimum Patient Weight	40 kg (45 kg for Wetness Pad)
Maximum Patient Weight	180 kg
Weight of Hub Box	0,5 kg
Weight of Stand-alone Version Set	2,6 kg
Weight of Image 3 Version Set	2,4 kg
Weight of Eleganza 2 Version Set	2,2 kg
Weight of Essenza 300 Version Set	2,4 kg
Weight of Wetness Pad	0,25 kg

6.2 Technical Requirements on the Part of the Customer

Parameter	Value
Tablets	CPU 2 GHz, 3GB RAM, 64 GB eMMC
PCs	Dual Core CPU 3 GHz, 4 GB RAM, 128 GB SSD (free space: 300 MB), Intel UHD 630
Broker Station	Dual Core CPU 2,4 GHz, 4 GB RAM, 128 GB SSD (free space: 1 GB)
Operating System for Tablets (running CareMonitor)	Android 5.0
Operating System for PCs (running CareMonitor)	Windows 10
Operating System Broker PC	Windows 10 or Linux (Debian based)
Necessary SW on Broker PC	TeamViewer or alternative remote Desktop solution
LAN	IEEE 802.3
WLAN	IEEE 802.11 (802.11b/g, 2.4 GHz, WPA/WPA2-PSK)
Network Speed	10/100 Mbit
Open Network Ports	1883 8883 (Standard) (MQTT) 22666 (SSH-Hub) 5938 (TeamViewer)
Maximum Number of Hubs connected to a one SafeSense® 3 Monitoring System	50 pieces

6.3 Environment conditions

6.3.1 Use Conditions

Parameter	Value
Ambient Temperature	10°C — 40°C
Relative Humidity	30% — 75 %
Atmospheric Pressure	795 hPa — 1060 hPa

6.3.2 Storage and Transport Conditions

Parameter	Value
Ambient Temperature	-20°C — 50°C
Relative Humidity	20% — 90 %
Atmospheric Pressure	795 hPa — 1060 hPa

6.4 Electrical Specifications

Parameter	Value
Input Voltage, Frequency (Adaptor)	100 — 240 V AC, 50/60 Hz
Maximum Power Input (Adaptor)	max. 60 VA
Ingress Protection according to EN 60529 (Adaptor)	IPX4
Protection Class (Adaptor)	Class II
Input Voltage, Frequency (Hub)	100 — 240 V AC, 50/60 Hz
Maximum Power Input (Hub)	max. 10 W
Ingress Protection according to EN 60529 (Hub)	IPX4
Protection Class (Hub)	Class III
Batteries (Hub)	CL18650-29E/2S1P 7,3V / 2,67 Ah CR1220 3V / LFT 1A
Battery Operation	max. 3 h
Time to full charge	8 h

6.4.1 Available Connectors
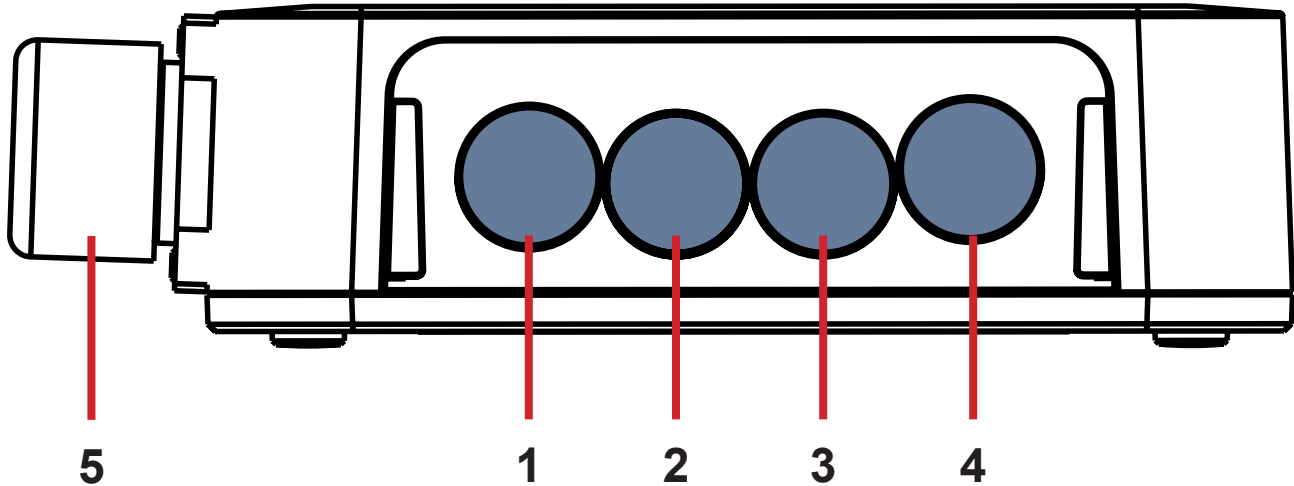
Fig. Hub Connectors (back side)

1. Power Supply connector for Stand-alone Version
2. Nurse Call connector
3. Wetness Pad connector
4. LAN connector
5. Power Supply/Data connector for Image 3 Version or Eleganza 2 Version

Parameter	Value
Type of Power Supply connector (1)	5,5 / 2,1 mm DC Jack
Type of Nurse Call connector (2)	RJ9
Type of Wetness Pad connector (3)	RJ12
Type of LAN connector (4)	RJ45
Type of Power Supply/Data connector (5)	932326100 CA 6 GS HIRSCHMANN
Correct Input to Power Supply connector (1)	24 — 40 V DC, max. 18 VA
Correct Input to Nurse Call connector (2)	Pinout: 1 - NC, 2 - NO, 3 - C (relay), 4- unused 24 V DC / 0,25 A (1 A Fuse)
Correct Input to LAN connector (4)	T-568B standard pinout, Auto MDI / MDIX
Correct Input to Power Supply/Data connector (5)	5 V
WiFi Module Internal Antenna	802.11ac standard 2,4 / 5 GHz
Eldat Module	Eldat RTM08E5008-01
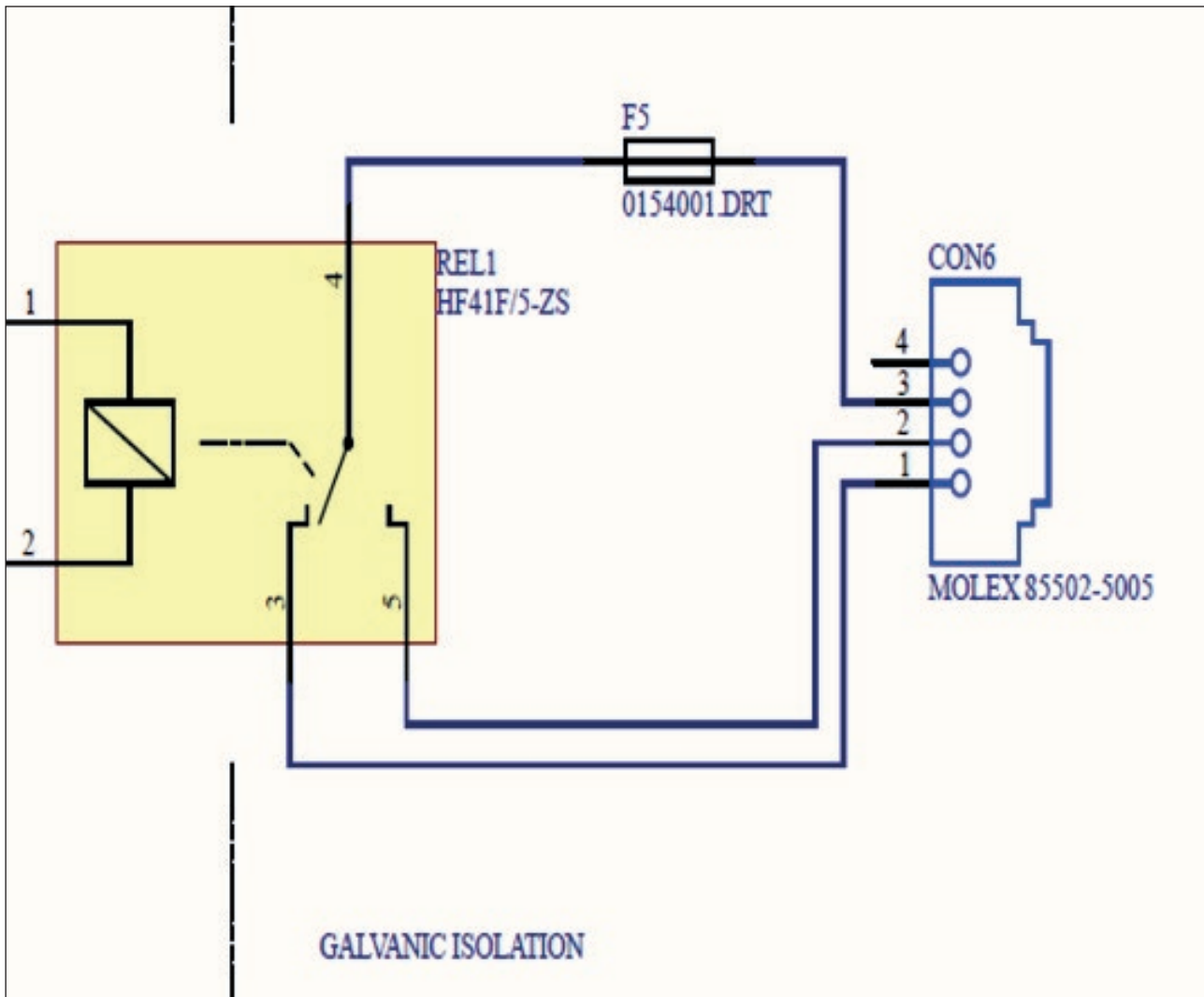
Fig. Block diagram for Nurse Call connection

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6.5 Electromagnetic Compatibility

Monitoring system is intended for hospitals except for near active HF surgical equipment and the RF shielded room of a medical system for magnetic resonance imaging, where the intensity of EM disturbances is high.

Monitoring system has defined no essential performance.

> ⚠ **WARNING!**
> **It is recommended to avoid the use of this device next to or in block with other device, because it could lead to improper operation. If such use is needed, this device and the other equipment should be under surveillance to verify proper operation.**

List of used cables:
- ► **AC/DC Adaptor Cable**, maximum length 1,8 m
- ► **Wetness Pad Cable**, maximum length 0,7 m
- ► **Nurse Call Cable**, maximum length 1,4 m
- ► **LAN Cable**, maximum length 1,4 m

> ⚠ **WARNING!**
> **Use of the accessories, converters and other cables, than specified and provided by manufacturer of this monitoring system could lead to increase of electromagnetic emission or lower the electromagnetic immunity of this monitoring system and lead to improper operation.**

> ⚠ **WARNING!**
> **Mobile RF communication device (including end use devices like antenna cables and external antenna) should not be used closer than 30 cm (12 inches) from any part of this monitoring system SafeSense® 3, including cables specified by manufacturer. Otherwise this could lead to deterioration of functionality of this monitoring system.**

> ⚠ **WARNING!**
> **Consider chapter 14 Maintenance in order to maintain the basic safety with regard to electromagnetic disturbances for the expected service life.**

6.5.1 Manufacturer instructions - electromagnetic emissions

Emission Test	Compliance
RF emissions CISPR 11	Group 1
RF emissions CISPR 11	Class A
Harmonic emissions IEC 61000-3-2	Class A
Voltage fluctuations / flicker emissions IEC 61000-3-3	Complies

6.5.2 Manufacturer instructions - electromagnetic susceptibility

Immunity Tests	Compliance level
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV for contact discharge ± 15 kV for contact discharge
Radiated RF IEC 61000-4-3 Proximity fields from RF wireless communications equipment IEC 61000-4-3	3 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz See Table 1
Fast electrical transients / burst IEC 61000-4-4	±2 kV for power line repetition frequency 100 kHz
Surge IEC 61000-4-5	± 1 kV Line-to-line ± 2 kV Line-to-ground
Conducted RF IEC 61000-4-6	3 V (0,15 MHz – 80 MHz) 6 V in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m
Voltage dips, short interruptions on power supply input lines IEC 61000-4-11	0 % UT; 0,5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0 % UT; 1 cycle and 70 % UT; 25/30 cycle Single phase: at 0° 0 % UT; 250/300 cycle

Table 1 - IMMUNITY to RF wireless communications equipment

Test frequency (MHz)	Band (MHz)	Service	Modulation	Immunity Test Level V/m
385	380 - 390	TETRA 400	Pulse modulation 18 Hz	27
450	430 - 470	GMRS 460, FRS 460	FM ± 5 kHz deviation 1 kHz sine	28
710 745 780	704 - 787	LTE band 13, 17	Pulse modulation 217 Hz	9
810 870 930	800 - 960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE band 5	Pulse modulation 18 Hz	28
1 720 1 845 1 970	1 700 - 1 990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE band 1, 3, 4, 25; UMTS	Pulse modulation 217 Hz	28
2 450	2 400 - 2 570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE band 7	Pulse modulation 217 Hz	28
5 240 5 500 5 785	5 100 - 5 800	WLAN 802.11 a/n	Pulse modulation 217 Hz	9

NOTE There are applied no deviations to requirements of IEC 60601-1-2 ed. 4

NOTE There are no known other measures for keeping the basic safety based on EMC phenomena.

NOTE Hub is equipped with communication module in compliance with standard IEEE 802.11 b/g/n (2400,0 MHz – 2483,5 MHz, modulation DSSS (IEEE 802.11 b), OFDM (IEEE 802.11 g/n) 20MHz bandwidth, EIRP = 0,34 W).

7 Use and Storage Conditions

⚠ **WARNING!**
A source of air flow near to the installed SafeSense® 3 system can affect the information functions of the system!
► Before and during the use of this system check the possible sources of air flow (e.g. air-conditioner) to ensure you will be informed about statuses whose detection can help you in care for a patient and not about environmental conditions.

⚠ **WARNING!**
Do not manipulate the bed if the SafeSense 3 Monitoring System is activated on it!

⚠ **WARNING!**
SafeSense 3 Monitoring System consists of the parts whose simultaneous working is necessary for the proper functioning of the whole system! Unless the CareMonitor Application is activated, outputs from the Hub could not be displayed correctly later in the CareMonitor Application!

SafeSense® 3 is designed for use in rooms for medical purposes. Electrical installations must therefore meet local norms laying down the necessary conditions for electrical installations.
► Disconnect the system from the mains in exceptional cases (i.e. lightnings, earthquake).

Respect values of the parameters connected with environment conditions in the chapter Technical Specification during use and storage of the product.
SafeSense® 3 is not suitable for indoor environments containing flammable gases (except oxygen cylinders).

8 Scope of Delivery and Product Variants

8.1 Delivery

► Upon receipt, check that the shipment is complete as specified on the delivery note.
► Notify the carrier and supplier of any deficiencies or damages immediately as well as in writing or make a note on the delivery note.

8.2 Scope of Delivery

■ SafeSense® 3 Monitoring System
■ Instructions for use

8.3 SafeSense® 3 Variants

8.3.1 Stand-alone Version

Basic Configuration:

- SafeSense® 3 Hub
- Hub Holder for Stand-alone Version
- Comb-like part securing connectors connected to the Hub
- SafeSense® 3 Air Pad for Stand-alone Version
- Air Hose
- AC/DC Adaptor

Optional Features:

- Wetness Pad with Wetness Pad Cable
- Nurse Call cable
- LAN cable

8.3.2 Version for Image 3

Basic Configuration:

- SafeSense® 3 Hub
- Comb-like part securing connectors connected to the Hub
- Hub Holder
- SafeSense® 3 Air Pad
- Air Hose
- Cables (Nurse Call cable, LAN cable)
- Holder of the interconnecting elements for Nurse Call cable and LAN cable

Optional Features:

- Wetness Pad with Wetness Pad Cable

8.3.3 Version for Eleganza 2

Basic Configuration:

- SafeSense® 3 Hub
- Comb-like part securing connectors connected to the Hub
- Hub Holder
- SafeSense® 3 Air Pad
- Air Hose
- Cables (Nurse Call cable, LAN cable)

Optional Features:

- Wetness Pad with Wetness Pad Cable

8.3.4 Version for Essenza 300

Basic Configuration:

- SafeSense® 3 Hub
- Comb-like part securing connectors connected to the Hub
- Hub Holder for Essenza 300
- SafeSense® 3 Air Pad
- Air Hose
- Cables (Nurse Call cable, LAN cable)
- Holder of the interconnecting elements for Nurse Call cable and LAN cable
- Four adhesive cable clips

Optional Features:

- Wetness Pad with Wetness Pad Cable

9 Putting into Service

Installation of the SafeSense® 3 Monitoring system consists of the hardware installation and the software installation. The hardware installation can be performed by a hospital technician. The software installation must be performed by the authorized LINET service technician.

9.1 Stand-alone SafeSense® 3

WARNING!
Risk of injury and risk of material damage due to incorrectly installed Stand-alone SafeSense® 3 system!
► Each installation method must comply with the general installation principles according to which Hub Box must be safely placed in the Hub Holder for Stand-alone Version, the Hub Holder for Stand-alone Version must be safely placed on the bed Head Board, Air Pad must be fixed on the Backrest of a medical bed via straps with buckles under the compatible mattress, Wetness Pad must be placed on the seat section of a compatible mattress and each cable must be safely installed not to be kinked or shorn during bed positioning!
► Do not run the Wetness Pad cable through any windows in the bed Head Board!
► Do not run the Air Hose through any windows in the bed Head Board!

WARNING!
Risk of injury and risk of material damage due to incorrectly installed Hub box!
► SafeSense® 3 Hub must be placed in the Hub Holder for Stand-alone Version and these two components must be fixed on the compatible part of bed Head Board!
► Avoid collisions between Hub Holder for Stand-alone Version and movable parts of the bed and collisions between Hub box and movable parts of the bed!
► Avoid collisions between Hub Holder for Stand-alone Version and accessories of the bed and between Hub box and accessories of the bed!
► Ensure the indispensable cables are correctly and safely connected to the Hub box!

WARNING!
Risk of injury and risk of material damage due to incorrect installation of cables and incorrect installation of the Air Hose!
► Ensure the cables leading to the SafeSense® 3 Hub are not kinked or sheared or otherwise machanically damaged during bed positioning or during manipulation with accessories of the bed!
► When routing cables from SafeSense® 3 system in a medical bed avoid squeezing those cables between parts of the medical bed!
► Cables of the SafeSense® 3 system and Air Hose must not be tensioned!
► Ensure the Air Hose is correctly connected to the Hub box and to the Air Pad!
► Avoid squeezing, kinking, shearing of the Air Hose or other mechanical damage to the Air Hose!
► Use only original power supply cord with original adaptor!

WARNING!
Risk of injury and risk of material damage due to incorrect installation of Air Pad and Wetness Pad!
► Use only mattress compatible with SafeSense® 3 system!
► Air Pad must be fixed on the Backrest of a medical bed. Prevent the Air Pad from moving on the Backrest under the mattress! Use the 3 straps with buckles to fix the Air Pad on the Backrest. Ensure the buckles are not a hindrance to the Air Pad, to the compatible mattress, to the patient and to the bed positioning. The buckles should be hidden under the bed mattress support platform.
► Ensure the Air Hose is correctly connected to the Air Pad fixed on the Backrest of a medical bed!
► Wetness Pad must be placed on the seat section of the compatible mattress and the ends of the Wetness Pad must be accessible from the mattress sides.
► Wetness Pad must not be covered with a plastic foil!
► Ensure the Wetness Pad cable is correctly connected to the SafeSense® 3 Hub and to the Wetness Pad.
► Wetness Pad cable must be correctly fixed between the Wetness Pad and Hub box on the mattress support platform frame! Use 5 fixing points intended to be stuck to the mattress support platform frame for this purpose. Ensure the Wetness Pad cable inserted into the 5 fixing points is not a hindrance to the bed positioning, to the siderail adjustment and to the use of compatible bed accessories!

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⚠️ **WARNING!**
Risk of injury in emergency case!
► Remove Hub in Hub Holder for Stand-alone Version from bed Head Board.
► Place removed Hub with Hub Holder for Stand-alone Version to a safe position.
► Disconnect the Air Hose from the Hub and place the Air Hose to a safe position.
► Disconnect the Wetness Pad cable from the Hub and place the Wetness Pad cable to a safe position.

Initial Instructions:

► Run LAN cable, Nurse Call cable, Wetness Pad cable and Power Supply cable through the bottom hole in the Hub Holder for Stand-alone Version.
► Connect LAN cable, Nurse Call cable, Wetness Pad cable and Power Supply cable to the Hub box.
► Tighten grommets of the connected cables on the back side of the Hub box by turning or by pushing in the case of the Power Supply cable.
► Secure the connected cables by inserting comb-like part to the Hub box.
► Ensure the SafeSense® 3 Hub is placed correctly to the Hub Holder for Stand-alone Version.
► Hang the Hub Holder for Stand-alone Version with Hub box on the suitable part of the bed Head Board.
► Tighten the turning knob of the Hub Holder for Stand-alone Version to fix the Hub Holder for Stand-alone Version on the bed Head Board. Check if SafeSense® 3 Hub is safely installed on the bed Head Board.
► Connect SafeSense® 3 Hub to the mains power using the compatible cable with adaptor.
► Connect SafeSense® 3 Hub to the hardware where CareMonitor Application is installed via LAN cable or remote WiFi connection.
► Place Air Pad under the compatible mattress to the correct position on the bed Backrest. Use three straps with buckles to fix the Air Pad correctly on the Backrest. Ensure the buckles are not a hindrance to the Air Pad, to the compatible mattress, to the patient and to the bed positioning. The buckles should be hidden under the bed mattress support platform.
► Connect Air Pad to the SafeSense® 3 Hub via Air Hose. Do not run the Air Hose through any windows in the bed Head Board!
► Place Wetness Pad on the mattress under the sheet to the correct position in the seat section of the patient. Three connectors on the Wetness Pad are facing the right side of the compatible mattress. Blue side is the bottom side of the Wetness Pad.
► Do not run the Wetness Pad cable through any windows in the bed Head Board! Wetness Pad cable must be correctly fixed between the Wetness Pad and Hub box on the mattress support platform frame! Use 5 fixing points intended to be stuck to the mattress support platform frame for this purpose. Ensure the Wetness Pad cable inserted into the 5 fixing points is not a hindrance to the bed positioning, to the siderail adjustment and to the use of compatible bed accessories!
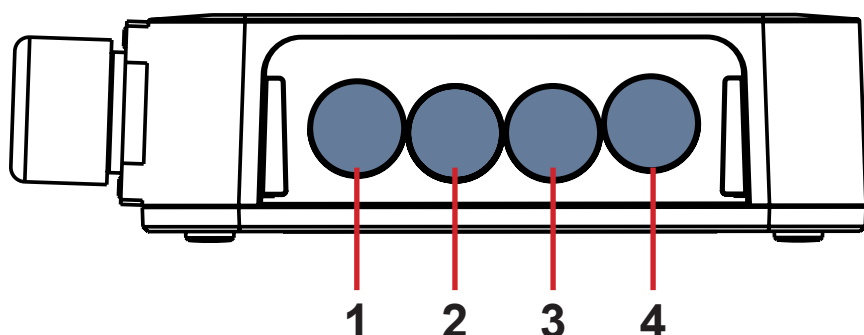► Connect Wetness Pad cable to the Wetness Pad on the mattress right side.
► Connect SafeSense® 3 Hub to the Nurse Call system via Nurse Call cable if the use of the Nurse Call system with SafeSense® 3 system is required.
► Open the CareMonitor Application.
► Activate the Hub and check if the corresponding bed is visible on the CareMonitor Screen.
► Perform the same steps to activate the other Hubs and to display the corresponding beds on the CareMonitor Screen.

1. Connector for Power Supply cable
2. Connector for Nurse Call cable
3. Connector for Wetness Pad cable
4. Connector for LAN cable

Fig. 4 Hub Connectors on back side of the Hub box
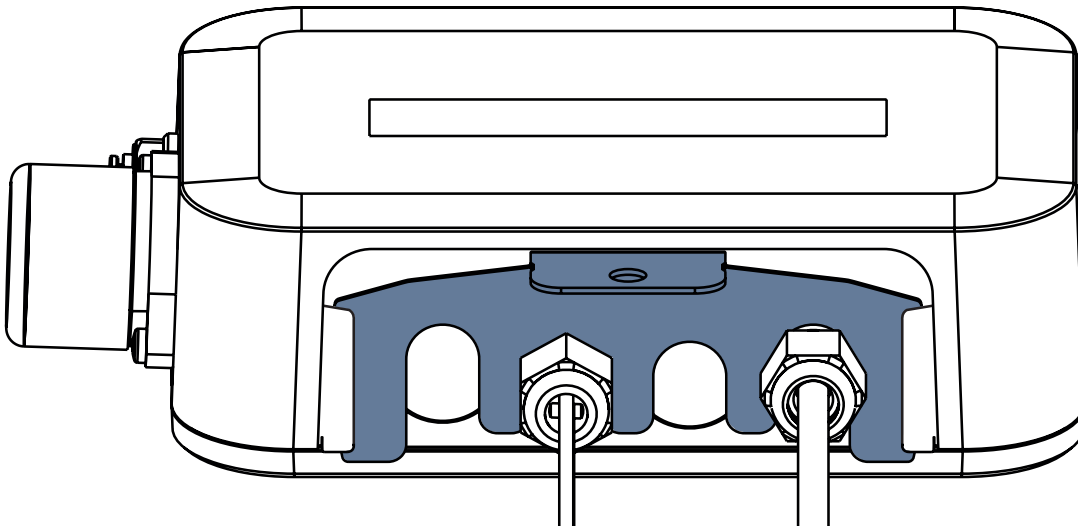
Fig. Hub box back side with tightened grommets and inserted comb-like part
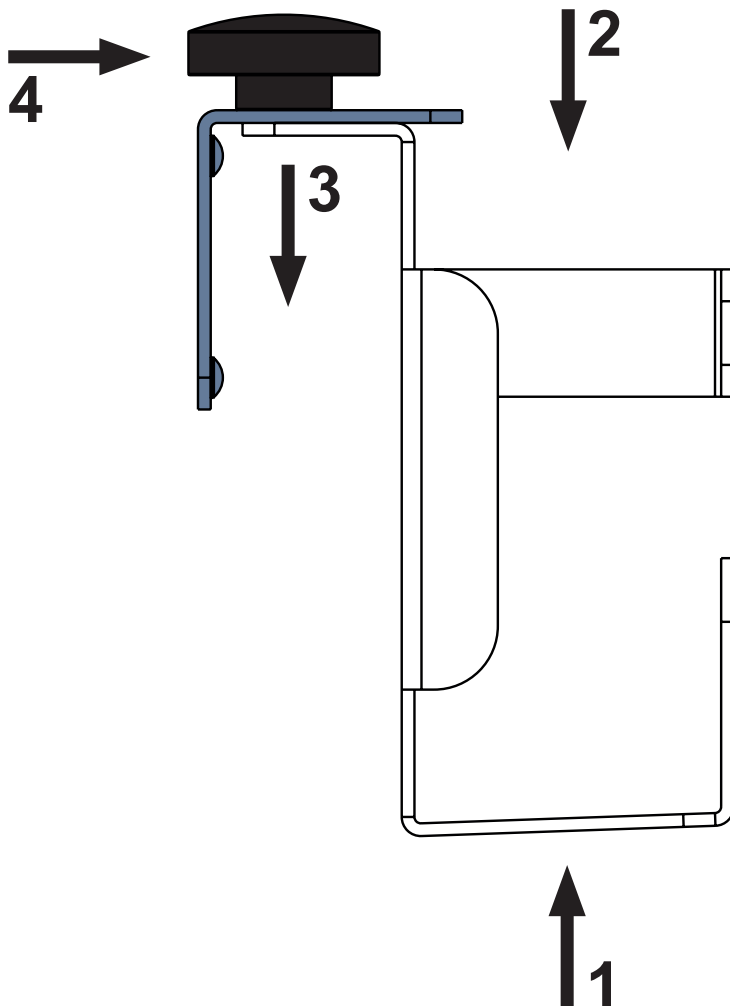
1. Connect LAN cable, Nurse Call cable, Wetness Pad cable and Power Supply cable through the bottom hole in the Hub Holder for Stand-alone Version to the Hub box.
2. Ensure the SafeSense® 3 Hub is placed correctly to the Hub Holder for Stand-alone Version.
3. Hang the Hub Holder for Stand-alone Version with Hub box on the suitable part of the bed Head Board.
4. Tighten the turning knob of the Hub Holder for Stand-alone Version to fix the Hub Holder for Stand-alone Version on the bed Head Board.

Fig. Manipulation with Hub Holder for Stand-alone Version with turning knob
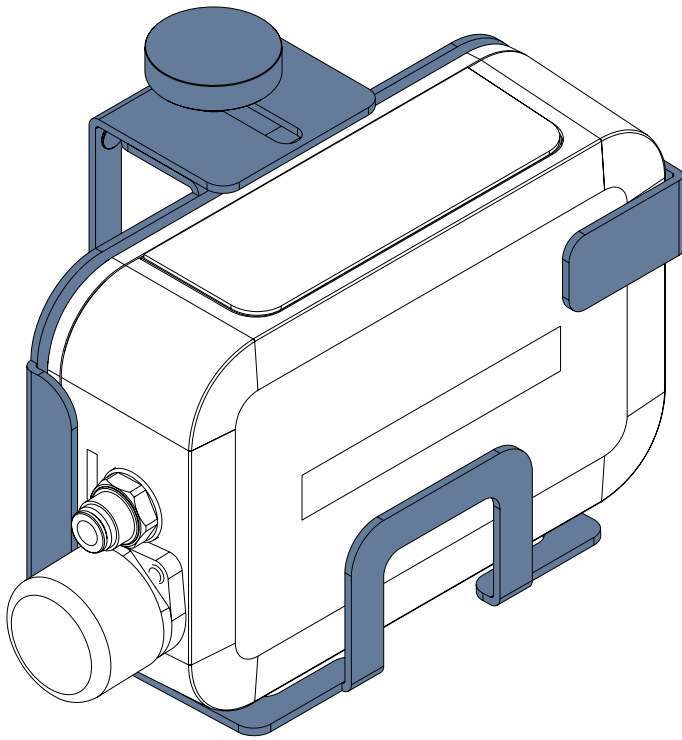
Fig. SafeSense® 3 Hub in Hub Holder for Stand-alone Version
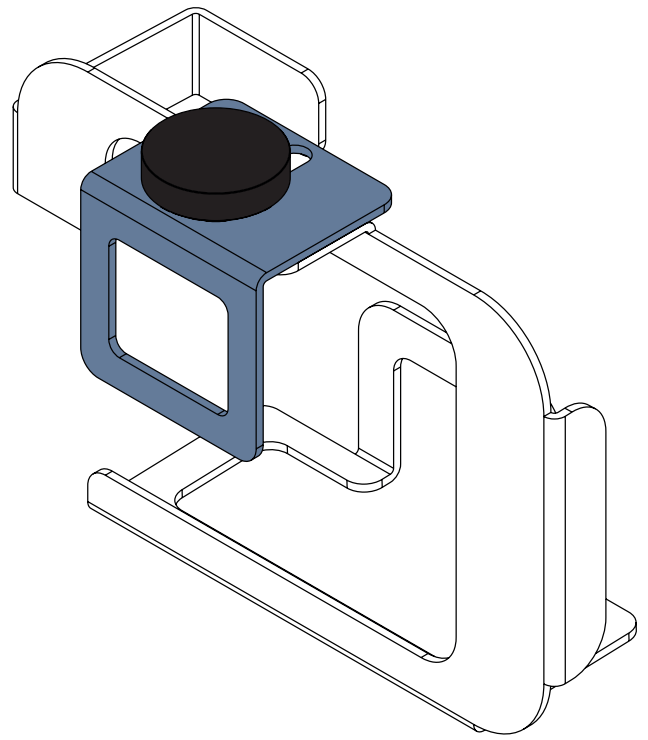
Fig. Back side of the Hub Holder for Stand-alone Version with turning knob
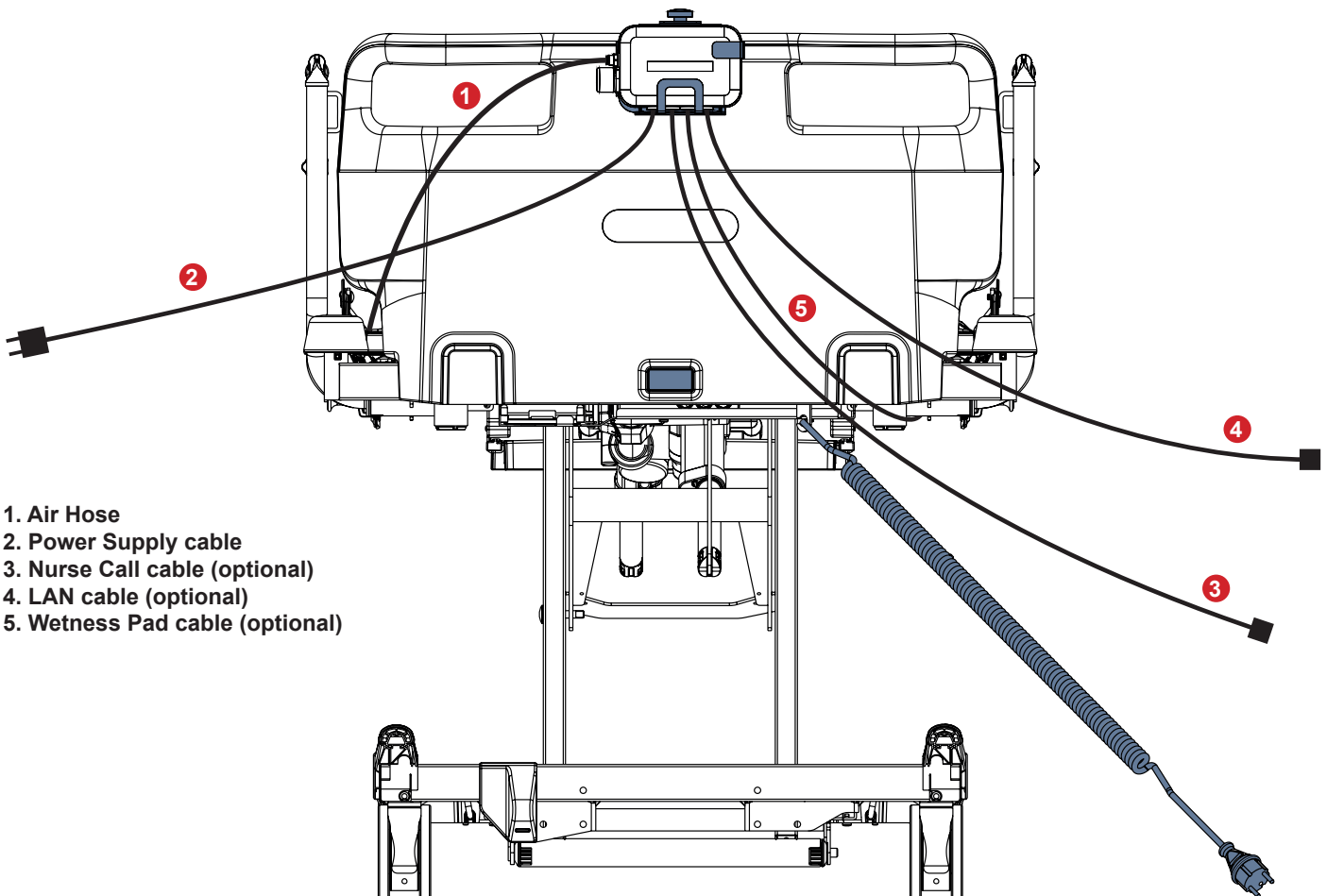
1. Air Hose
2. Power Supply cable
3. Nurse Call cable (optional)
4. LAN cable (optional)
5. Wetness Pad cable (optional)

Fig. SafeSense® 3 Hub in the Hub Holder for Stand-alone Version on the Head Board of the Essenza 300 bed
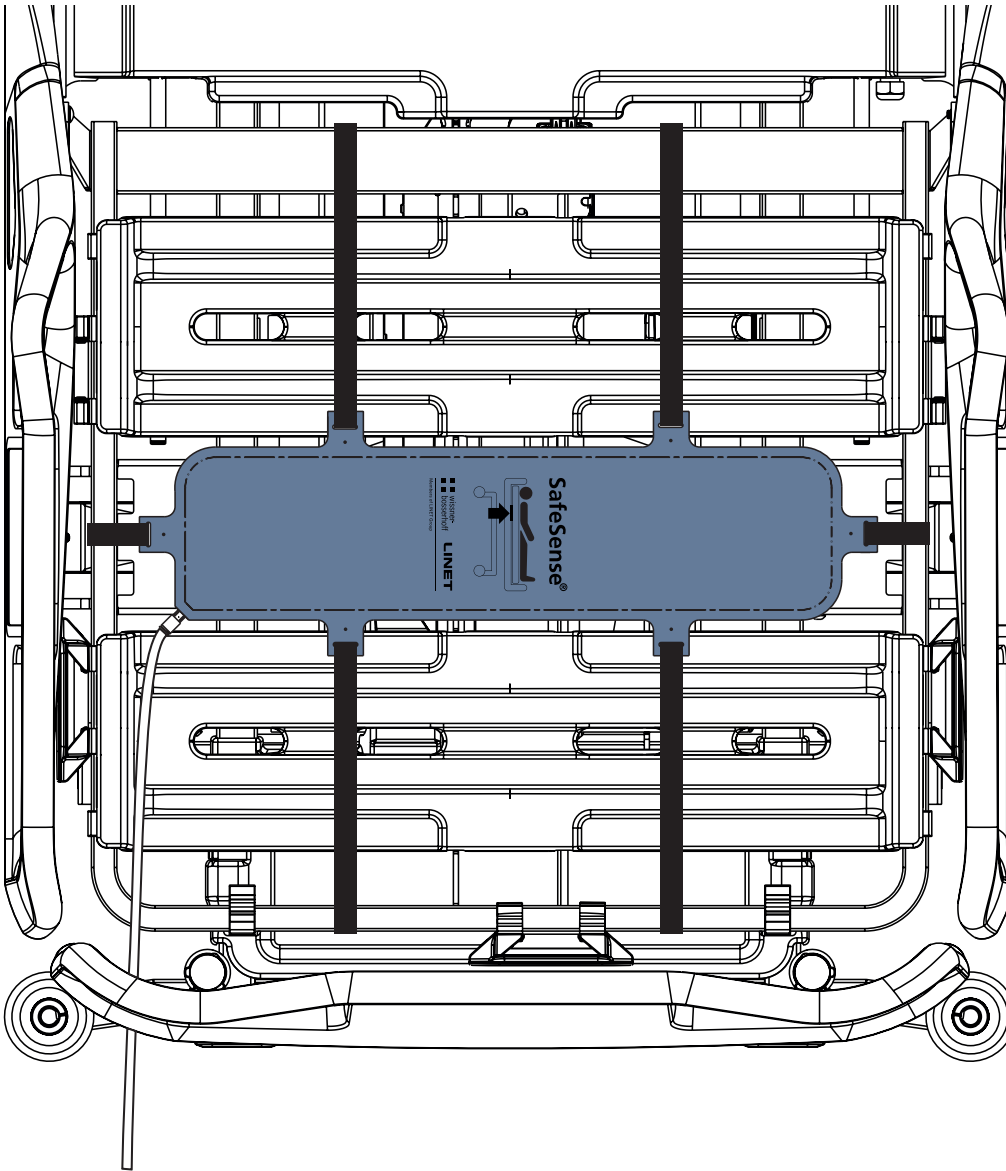
Fig. Air Pad fixed on the Backrest of the Essenza 300 medical bed
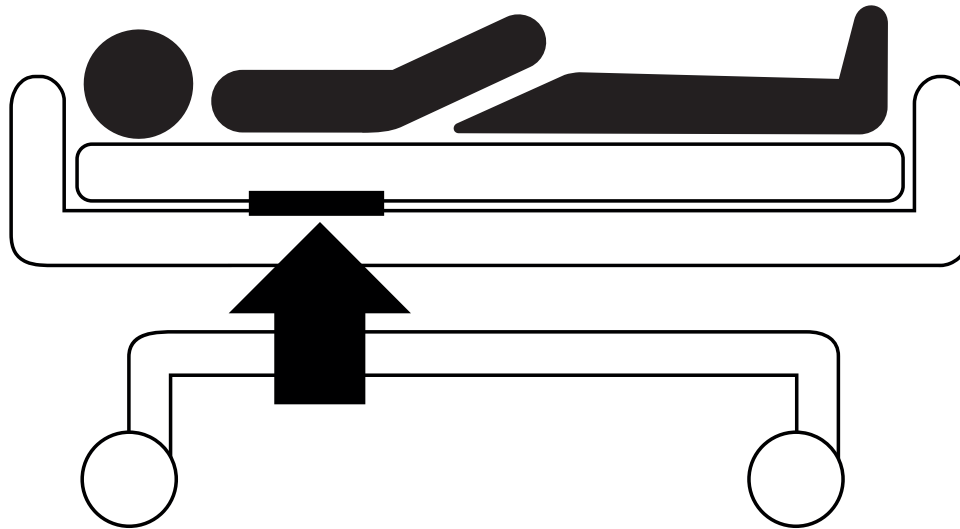
Fig. Position of the Air Pad under the mattress with patient

To transport a compatible bed with installed Stand-alone Version of the SafeSense 3 Monitoring System:
► Remove Hub in Hub Holder for Stand-alone Version from bed Head Board.
► Place removed Hub with Hub Holder for Stand-alone Version to a safe position.
► Disconnect the Air Hose from the Hub and place the Air Hose to a safe position.
► Disconnect the Wetness Pad cable from the Hub and place the Wetness Pad cable to a safe position.

To remove the SafeSense 3 Stand-alone Version in case of emergency:
► Remove Hub in Hub Holder for Stand-alone Version from bed Head Board.
► Place removed Hub with Hub Holder for Stand-alone Version to a safe position.
► Disconnect the Air Hose from the Hub and place the Air Hose to a safe position.
► Disconnect the Wetness Pad cable from the Hub and place the Wetness Pad cable to a safe position.

9.2 Image 3 with SafeSense® 3

⚠ **WARNING!**
Risk of injury and risk of material damage due to incorrectly installed Hub box!
► SafeSense® 3 Hub must be placed on the Hub holder and these two components must be fixed on the accessory rail on the right bed side towards the thigh rest!
► Avoid collisions between Hub holder and accessories of the bed and between Hub box and accessories of the bed!
► Ensure the indispensable cables are correctly and safely connected to the Hub box!

⚠ **WARNING!**
Risk of injury and risk of material damage due to incorrect installation of cables and incorrect installation of the Air Hose!
► Ensure the cables leading to the SafeSense® 3 Hub are not kinked or sheared or otherwise machanically damaged during bed positioning or during manipulation with accessories of the bed!
► When routing cables from SafeSense® 3 system in the Image 3 medical bed avoid squeezing those cables between parts of the medical bed!
► Cables of the SafeSense® 3 system and Air Hose must not be tensioned!
► Ensure the Air Hose is correctly connected to the Hub box and to the Air Pad!
► Avoid squeezing, kinking, shearing of the Air Hose or other mechanical damage to the Air Hose!

⚠ **WARNING!**
Risk of injury and risk of material damage due to incorrect installation of Air Pad and Wetness Pad!
► Use only mattress compatible with SafeSense® 3 system!
► Air Pad must be fixed on the Backrest of the Image 3 medical bed. Prevent the Air Pad from moving on the Backrest under the mattress!
► Ensure the Air Hose is correctly connected to the Air Pad fixed on the Backrest of the Image 3 medical bed!
► Wetness Pad must be placed on the seat section of the compatible mattress and the ends of the Wetness Pad must be accessible from the mattress sides.
► Wetness Pad must not be covered with a plastic foil!
► Ensure the cable connecting Wetness Pad with SafeSense® 3 Hub is correctly connected to the SafeSense® 3 Hub and to the Wetness Pad.

⚠ **WARNING!**
Material damage due to machine washing with SafeSense® 3 installed on the bed!
► Remove each part of the SafeSense® 3 Monitoring System from the Image 3 bed before each machine washing!
► Plug the connector of the Power Supply/Data cable to the safety position behind the accessory rail on the right side of the Image 3 bed!

9.2.1 Instructions for putting into service

►   Place the Hub Holder on the accessory rail on the right side of the Image 3 bed.

►   Tighten the safety bolt to fix Hub Holder on the accessory rail. Check if the Hub Holder is safely installed on the accessory rail.

►   Bolt the Holder of the interconnecting elements for Nurse Call cable and LAN cable to the crossbar at head end of the Image 3 bed.

►   Insert both interconnecting elements for Nurse Call cable and LAN cable to the Holder of the interconnecting elements in any order.

►   Connect LAN cable, Nurse Call cable and Wetness Pad cable to the back side of the Hub box.

►   Tighten grommets of the connected cables on the back side of the Hub box by turning.

►   Secure the connected cables by inserting comb-like part.

►   Place the Hub to the Hub Holder and ensure the Hub is fixed in the Hub Holder by the raised latch.

►   Disconnect the Power Supply/Data cable from the safety position behind the accessory rail.

►   Remove the plug covering the connector on the right side of the Hub.

►   Connect Power Supply/Data cable to the connector on the right side of the Hub.

►   Route LAN cable and Nurse Call cable above the accessory rail towards the head end of the bed. Place both cables to the plastic holders on the frame of the mattress support platform.

►   Connect LAN cable and Nurse Call cable to the interconnecting elements for Nurse Call cable and LAN cable at head end of the Image 3 bed according to the size of the connectors.

►   Raise the Backrest of the Image 3 bed to the highest position.

►   Fix the Air Pad on the Backrest so that the 2 middle plastic sections of the Backrest are surrounded by the straps of the Air Pad Cover.

►   Connect the Air Hose to the right side of the Hub.

►   Route the Air Hose along the two cables above the accessory rail towards the head end of the bed.

►   Run the Air Hose from below up through the hole in the hook on the accessory rail. The hook selected for this purpose must be put on the accessory rail in the other way around so it is not possible to use this hook for carrying any accessory. The position of the selected hook must be adjusted with respect to the Air Pad position on the Backrest in the highest position.

►   Run the Air Hose upwards through the plastic sections of the Backrest.

►   Connect the Air Hose to the Air Pad fixed on the Backrest.

►   Ensure the Backrest adjustment does not damage the Air Hose and the Air Hose is not squeezed in any position of the Backrest.

►   Place a compatible mattress on the mattress support platform of the Image 3 bed.

►   Place Wetness Pad on the mattress without any sheet to the correct position in the seat section of the patient. Three connectors on the Wetness Pad are facing the right side of the compatible mattress. Blue side is the bottom side of the Wetness Pad.

►   Connect Wetness Pad cable to the Wetness Pad.

►   Place a sheet on the mattress.

►   Connect the cable connected to the local Nurse Call system to the interconnecting element for Nurse Call cable at head end of the Image 3 bed, if the use of the Nurse Call system with SafeSense® 3 system is required.

►   Connect the local LAN cable to the interconnecting element for LAN cable at head end of the Image 3 bed, if wireless signal from Hub is not used for communication between Hub and a hardware with installed CareMonitor Application.

►   Place patient on the Image 3 bed.

►   Activate Hub according to the instructions for use.

►   Open the CareMonitor Application.

►   Activate the Hub and check if the corresponding bed is visible on the CareMonitor Screen.

►   Perform the same steps to activate the other Hubs and to display the corresponding beds on the CareMonitor Screen.

SafeSense® 3 system on the right side of the Image 3 bed

1. Power Supply/Data cable
2. Air Hose
3. LAN cable
4. Nurse Call cable
5. Wetness Pad cable
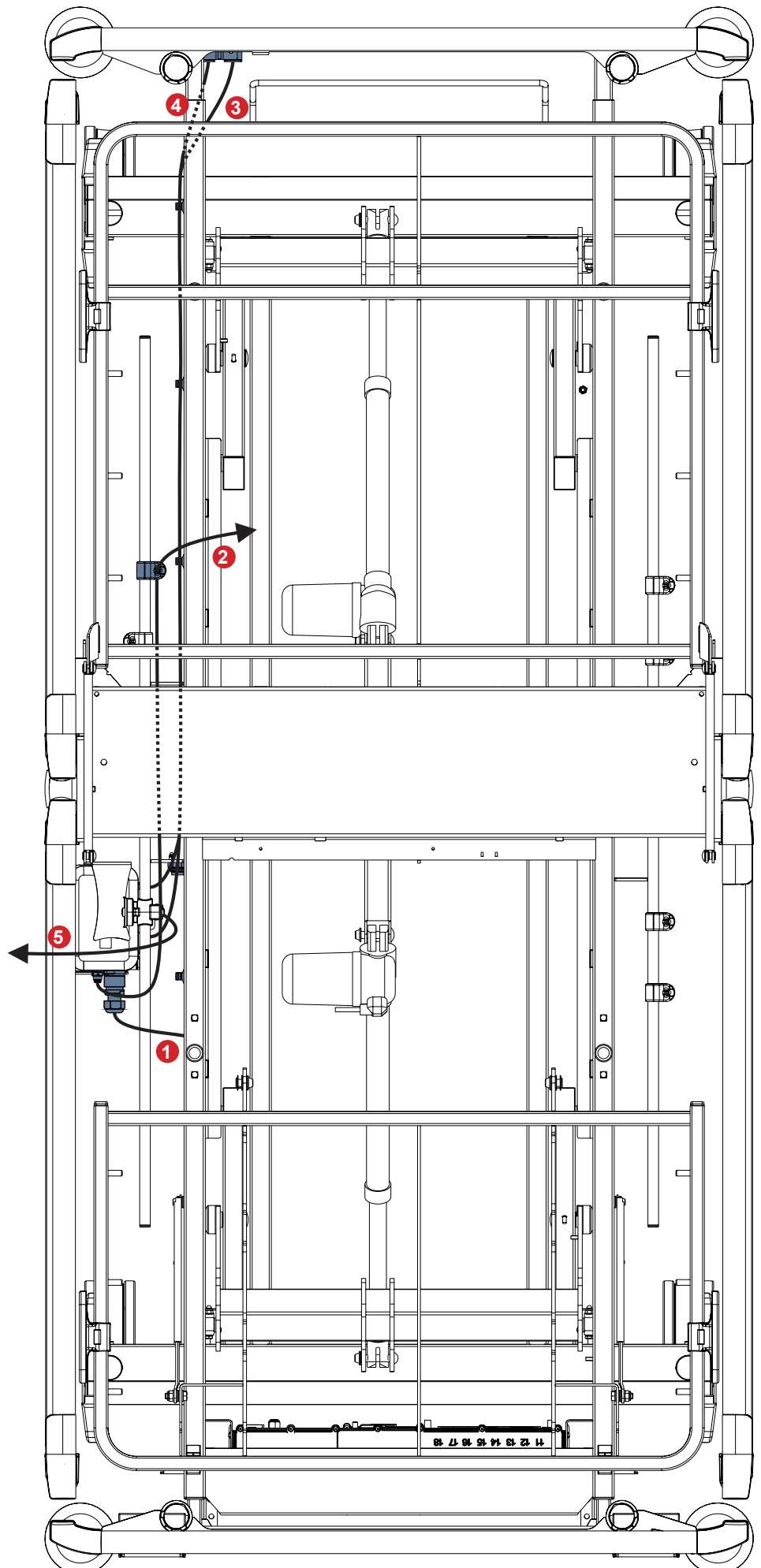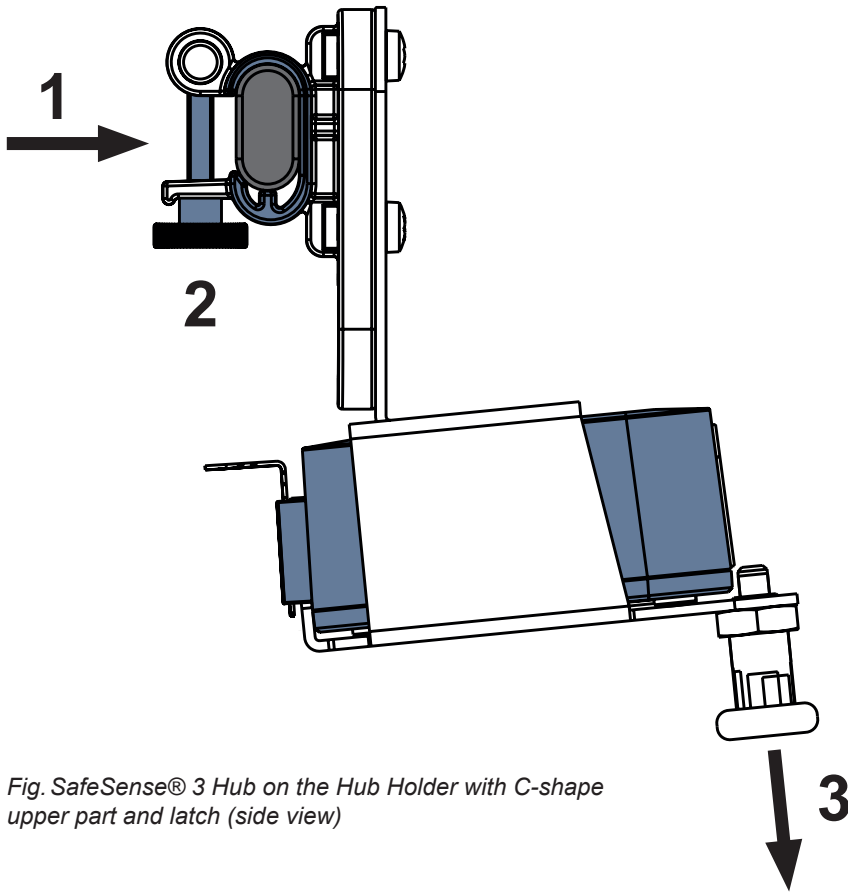
1 →

2

3

Fig. SafeSense® 3 Hub on the Hub Holder with C-shape upper part and latch (side view)

To fix Hub Holder on the accessory rail:
► Mount Hub Holder on the accessory rail. (**1**)
► Tighten the safety bolt (**2**) to fix Hub Holder on the accessory rail.

To fix Hub in the Hub Holder:
► Hold a latch of the Hub Holder pulled down (**3**).
► Place Hub to the Hub Holder.
► Ensure the Hub is fixed in the Hub Holder by the raised latch.

Fig. SafeSense® 3 Hub with Hub Holder on the accessory rail

Fig. Interconnecting elements for Nurse Call cable and LAN cable at head end of the Image 3 bed

Fig. Hub Connectors (back side)

1. **NOT AVAILABLE CONNECTOR**
2. **Nurse Call cable**
3. **Wetness Pad cable**
4. **LAN cable**
5. **Power Supply/Data cable**

Fig. Hub back side with tightened grommets and inserted comb-like part

Fig. Power Supply/Data cable in the safety position behind the accessory rail

Fig. Covered connector for Power Supply/Data cable
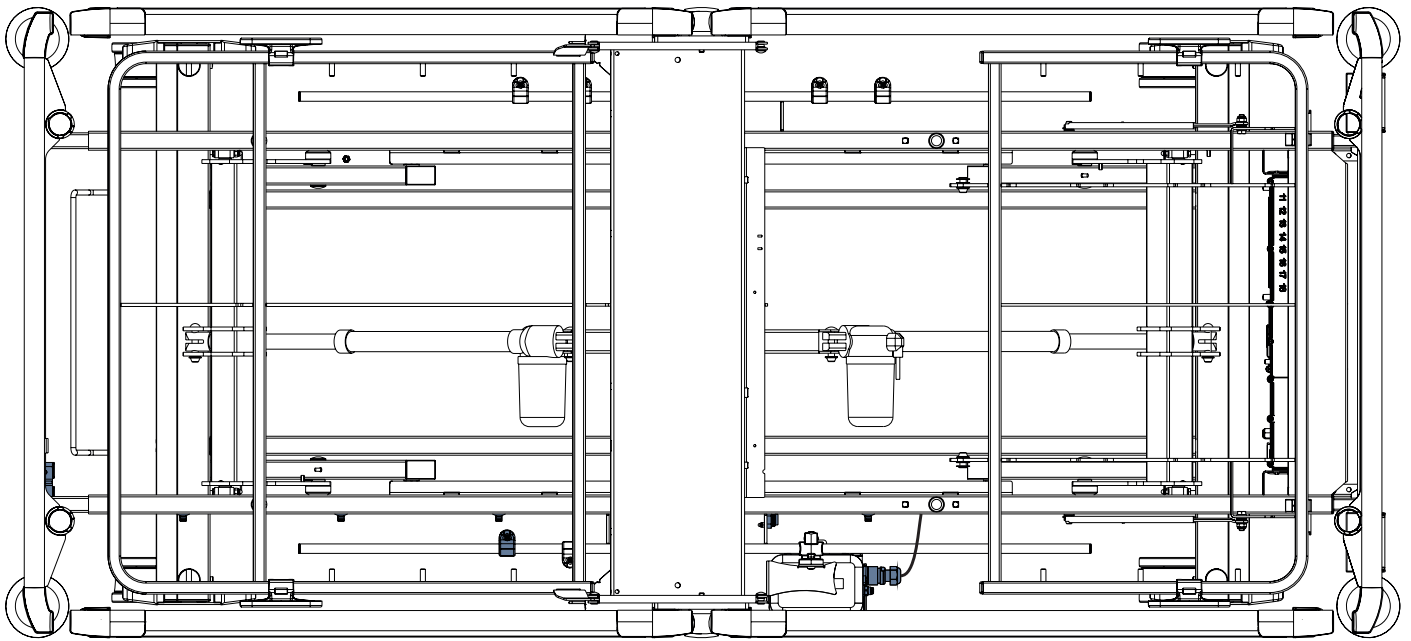
Fig. Power Supply/Data cable connected to the Hub
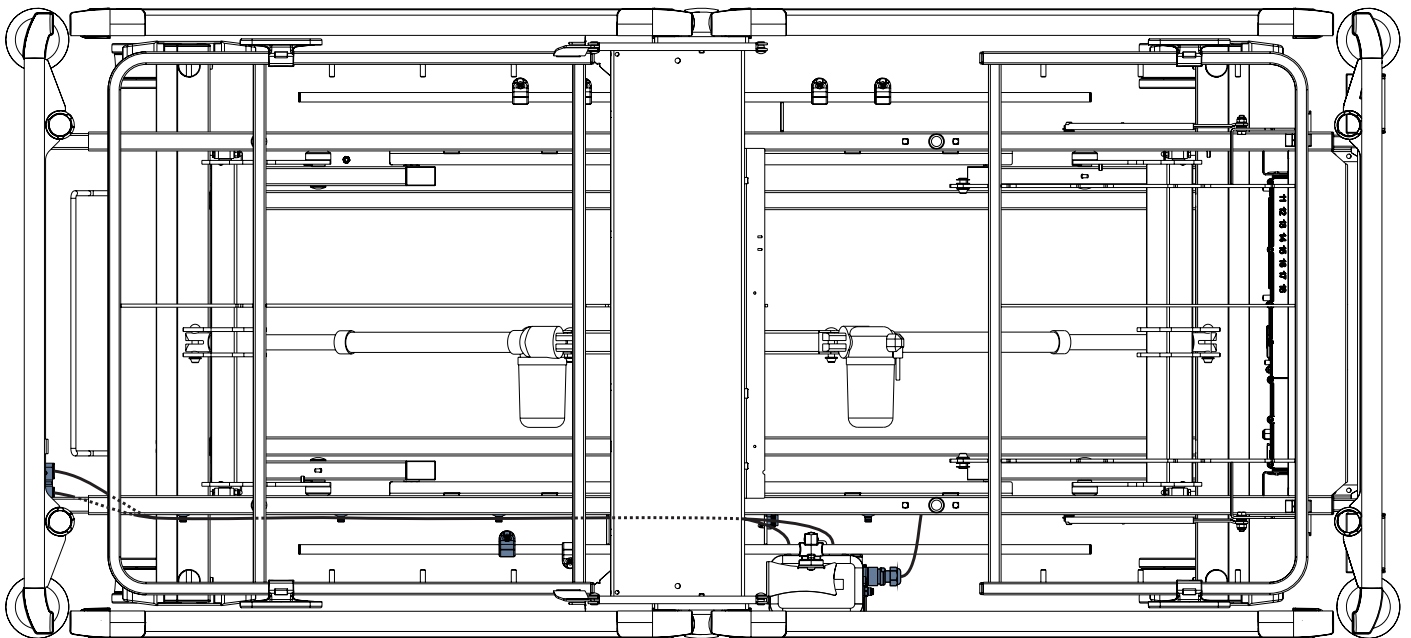
Fig. LAN cable and Nurse Call cable connected to the interconnecting elements for Nurse Call cable and LAN cable

Fig. Air Hose connected to the Hub
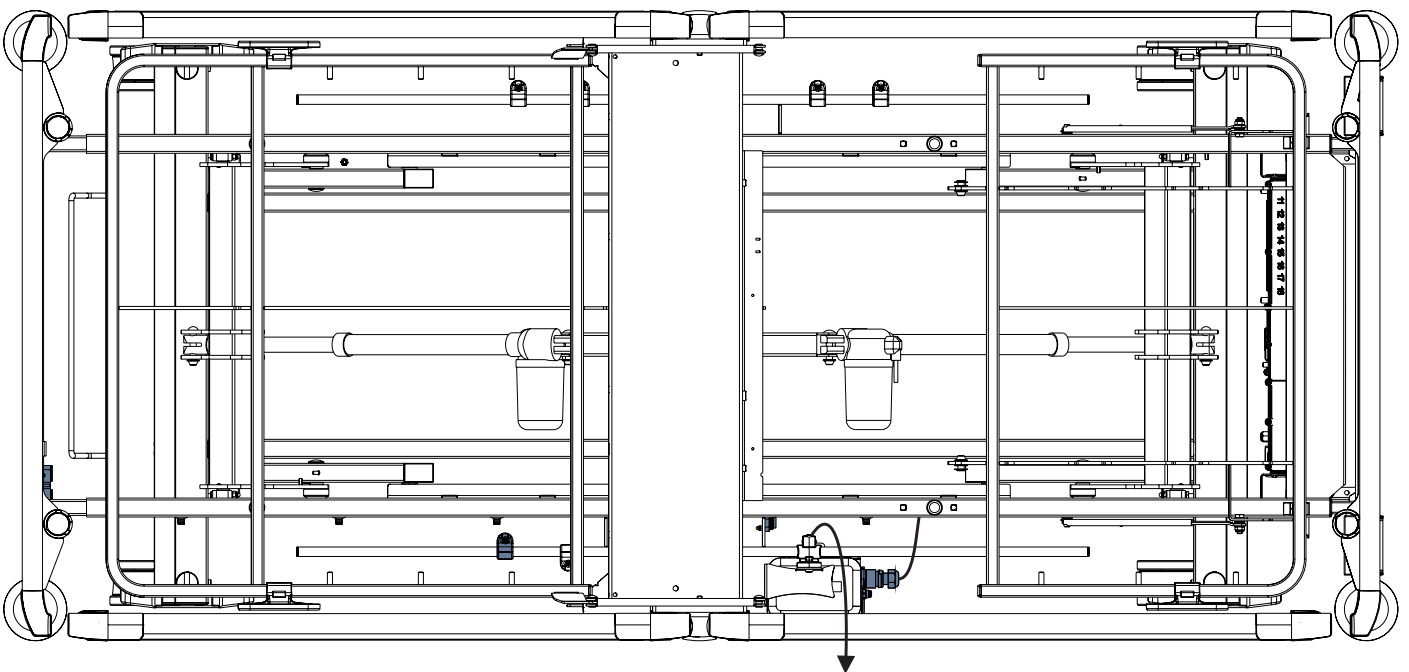
Fig. Wetness Pad cable connected to the Hub
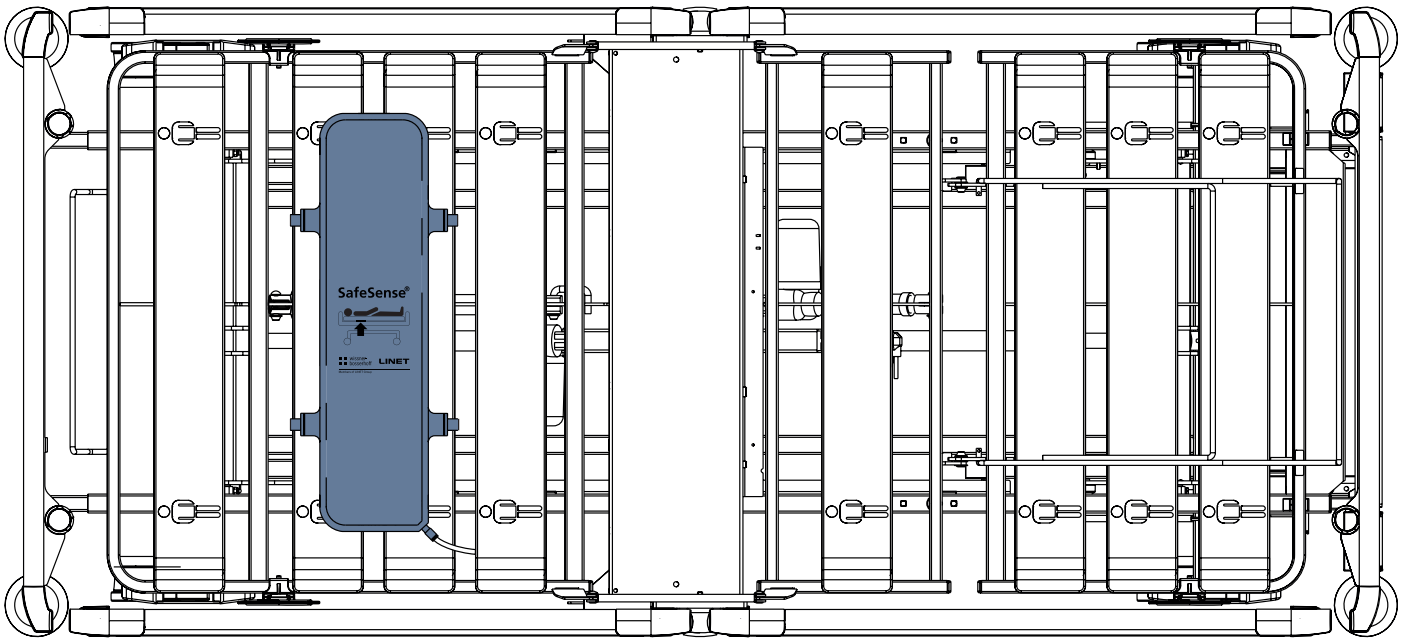
Fig. Air Pad fixed on the Backrest of Image 3 medical bed

Fig. Position of the Air Pad under the mattress with patient

![LINET logo]
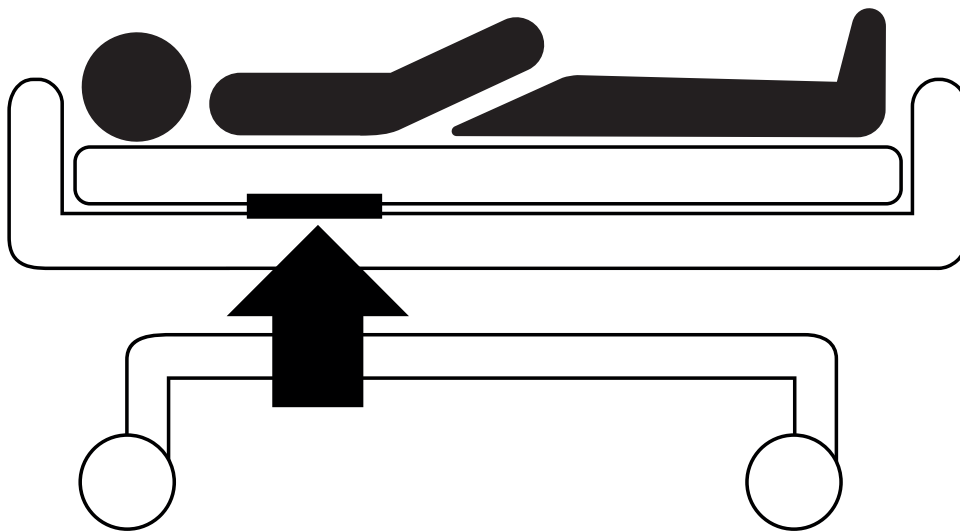
9.3 Eleganza 2 with SafeSense® 3

⚠ **WARNING!**
Risk of injury and risk of material damage due to incorrectly installed Hub box!
► SafeSense® 3 Hub must be placed on the Hub holder and these two components must be fixed on the accessory rail on the right bed side under the seat section!
► Avoid collisions between Hub holder and accessories of the bed and between Hub box and accessories of the bed!
► Ensure the indispensable cables are correctly and safely connected to the Hub box!

⚠ **WARNING!**
Risk of injury and risk of material damage due to incorrect installation of cables and incorrect installation of the Air Hose!
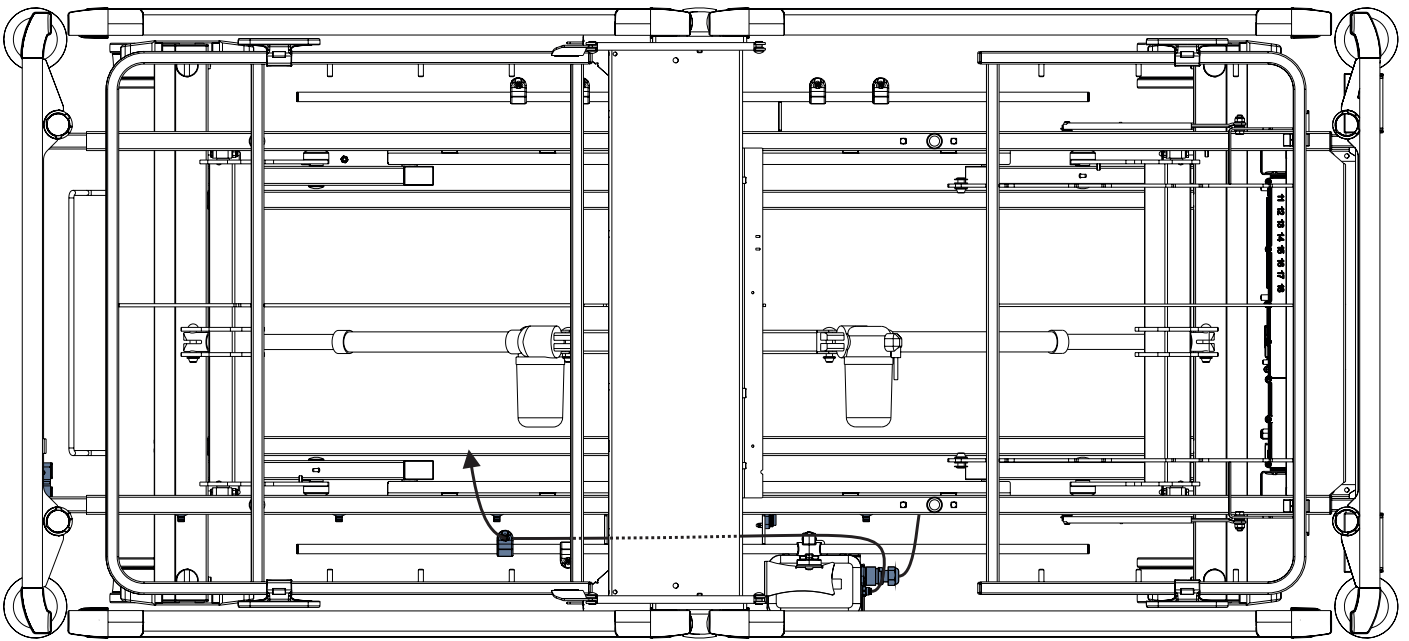► Ensure the cables leading to the SafeSense® 3 Hub are not kinked or sheared or otherwise machanically damaged during bed positioning or during manipulation with accessories of the bed!
► When routing cables from SafeSense® 3 system in the Eleganza 2 medical bed avoid squeezing those cables between parts of the medical bed!
► Cables of the SafeSense® 3 system and Air Hose must not be tensioned!
► Ensure the Air Hose is correctly connected to the Hub box and to the Air Pad!
► Avoid squeezing, kinking, shearing of the Air Hose or other mechanical damage to the Air Hose!

⚠ **WARNING!**
Risk of injury and risk of material damage due to incorrect installation of Air Pad and Wetness Pad!
► Use only mattress compatible with SafeSense® 3 system!
► Air Pad must be fixed on the Backrest of the Eleganza 2 medical bed. Prevent the Air Pad from moving on the Backrest under the mattress!
► Ensure the Air Hose is correctly connected to the Air Pad fixed on the Backrest of the Eleganza 2 medical bed!
► Wetness Pad must be placed on the seat section of the compatible mattress and the ends of the Wetness Pad must be accessible from the mattress sides.
► Wetness Pad must not be covered with a plastic foil!
► Ensure the cable connecting Wetness Pad with the SafeSense® 3 Hub is correctly connected to the SafeSense® 3 Hub and to the Wetness Pad.

⚠ **CAUTION!**
**Risk of material damage due to steam cleaning of the SafeSense 3 Monitoring System!**
► Always remove the components of the SafeSense® 3 Monitoring System (Hub Box, Air Pad, Wetness Pad and cables) from the Eleganza 2 medical bed on which the system has been installed!

9.3.1 Instructions for putting into service

► Place the Hub Holder on the accessory rail on the right side of the Eleganza 2 bed so that the holder with interconnecting elements for Nurse Call cable and LAN cable will be accessible next to the left side of the Hub Holder.

► Tighten the safety bolt to fix Hub Holder on the accessory rail. Check if the Hub Holder is safely installed on the accessory rail.

► Connect LAN cable, Nurse Call cable and Wetness Pad cable to the back side of the Hub box.

► Tighten grommets of the connected cables on the back side of the Hub box by turning.

► Secure the connected cables by inserting comb-like part.

► Place the Hub to the Hub Holder and ensure the Hub is fixed in the Hub Holder by the raised latch.

► Disconnect the Power Supply/Data cable from the safety position behind the accessory rail.

► Remove the plug covering the connector on the right side of the Hub.

► Connect Power Supply/Data cable to the connector on the right side of the Hub.

► Connect LAN cable and Nurse Call cable to the interconnecting elements for LAN cable and Nurse Call cable in the holder next to the left side of the Hub. LAN cable must be connected to the left white socket. Nurse Call cable must be connected to the right black socket.

► Raise the Backrest of the Eleganza 2 bed to the highest position.

► Fix the Air Pad on the Backrest so that the Air Pad will be placed over the space between the 2 plastic parts on the Backrest and the fixing straps will be led through the 4 holes in the 2 different plastic parts.

► Connect the Air Hose to the right side of the Hub.

► Route the Air Hose above the accessory rail towards the head end of the bed.

► Run the Air Hose through the hole in the left accessory rail holder next to the holder with interconnecting elements for Nurse Call cable and LAN cable.

► Run the Air Hose upwards and then back above the accessory rail in order to run the Air Hose between the Backrest and the Seat section.

► Run the Air Hose towards the head end of the bed in groove of the Backrest plastic part.

► Connect the Air Hose to the Air Pad fixed on the Backrest.

► Ensure the Backrest adjustment does not damage the Air Hose and the Air Hose is not squeezed in any position of the Backrest.

► Place a compatible mattress on the mattress support platform of the Eleganza 2 bed.

► Place Wetness Pad on the mattress without any sheet to the correct position in the seat section of the patient. Three connectors on the Wetness Pad are facing the right side of the compatible mattress. Blue side is the bottom side of the Wetness Pad.

► Connect Wetness Pad cable to the Wetness Pad.

► Place a sheet on the mattress.

► Connect the cable connected to the local Nurse Call system to the interconnecting element for Nurse Call cable at head end of the Eleganza 2 bed, if the use of the Nurse Call system with SafeSense® 3 system is required.

► Connect the local LAN cable to the interconnecting element for LAN cable at head end of the Eleganza 2 bed, if wireless signal from Hub is not used for communication between Hub and a hardware with installed CareMonitor Application.

► Place patient on the Eleganza 2 bed.

► Activate Hub according to the instructions for use.

► Open the CareMonitor Application.

► Activate the Hub and check if the corresponding bed is visible on the CareMonitor Screen.

► Perform the same steps to activate the other Hubs and to display the corresponding beds on the CareMonitor Screen.

![LINET]

SafeSense® 3 system on the right side of the Eleganza 2 bed

1. Power Supply/Data cable
2. Air Hose
3. LAN cable
4. Nurse Call cable
5. Wetness Pad cable
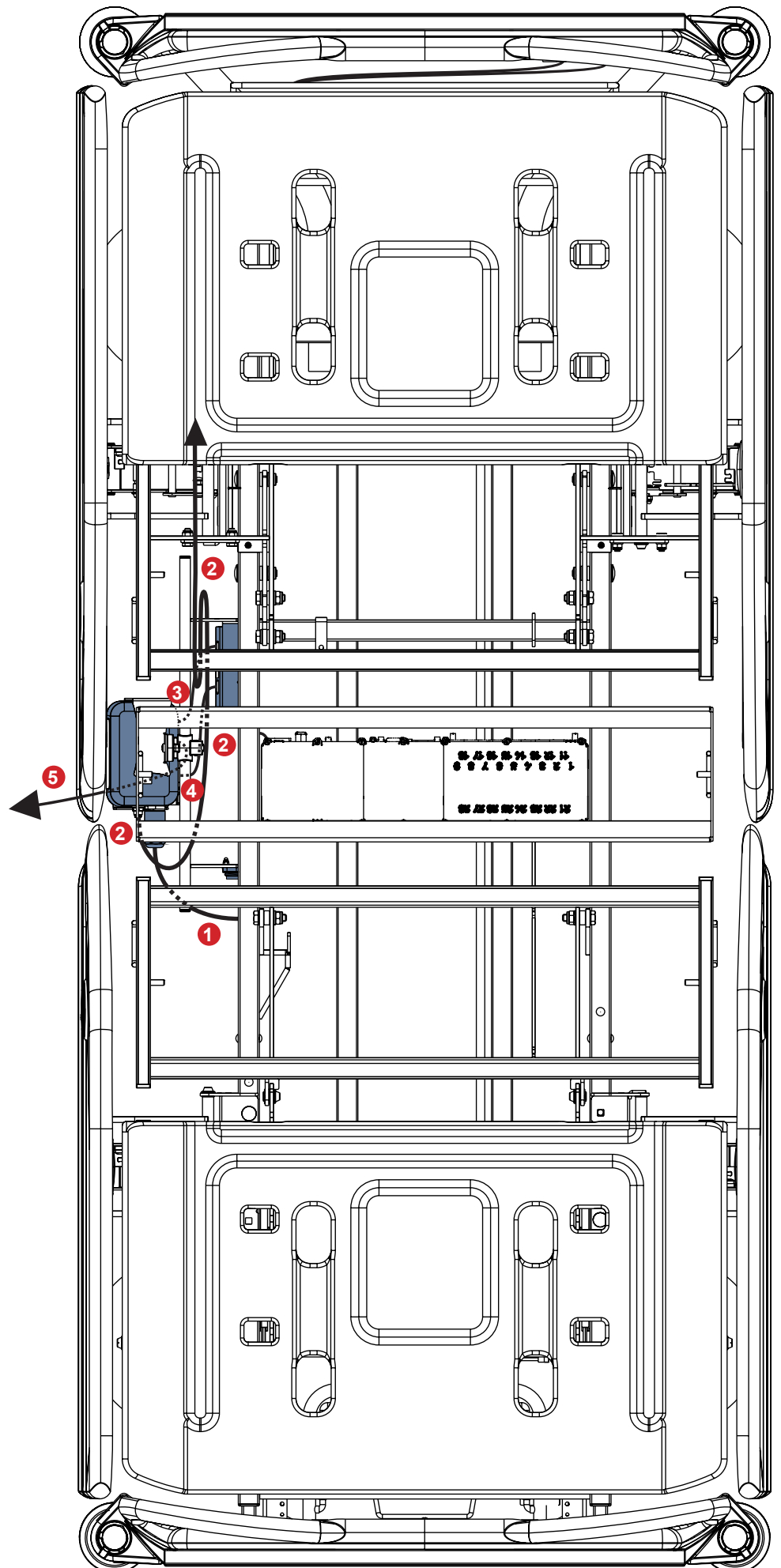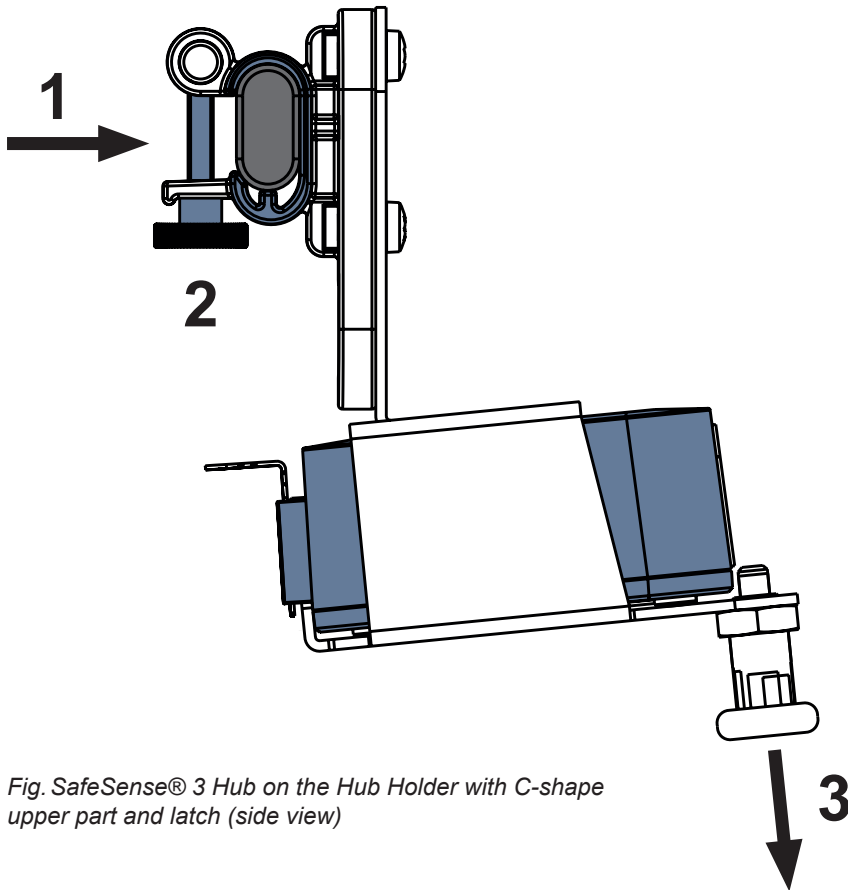
Fig. SafeSense® 3 Hub on the Hub Holder with C-shape upper part and latch (side view)

To fix Hub Holder on the accessory rail:
►   Mount Hub Holder on the accessory rail. (**1**)
►   Tighten the safety bolt (**2**) to fix Hub Holder on the accessory rail.

To fix Hub in the Hub Holder:
►   Hold a latch of the Hub Holder pulled down (**3**).
►   Place Hub to the Hub Holder.
►   Ensure the Hub is fixed in the Hub Holder by the raised latch.
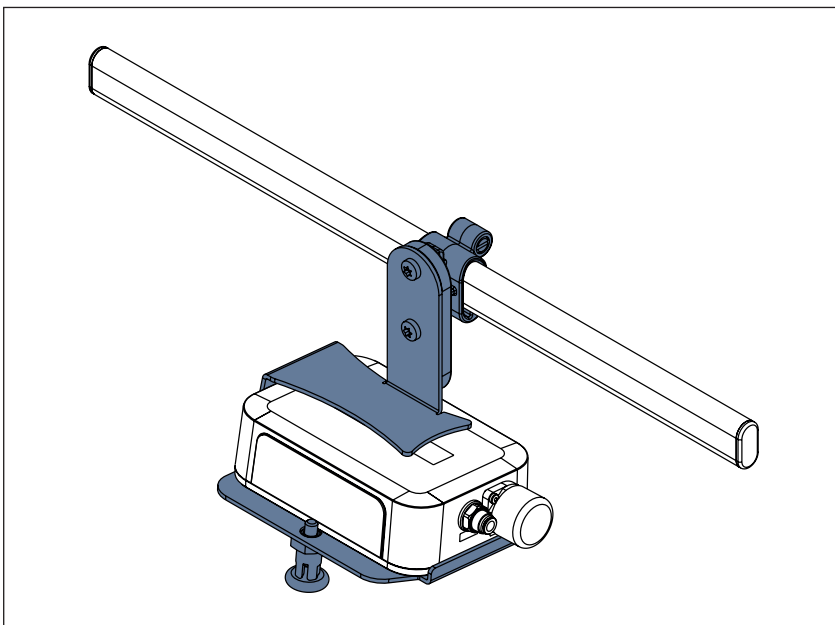
Fig. SafeSense® 3 Hub with Hub Holder on the accessory rail

Fig. Interconnecting elements for Nurse Call cable and LAN cable at head end of the Eleganza 2 bed

Fig. Hub Connectors (back side)

1. NOT AVAILABLE CONNECTOR
2. Nurse Call cable
3. Wetness Pad cable
4. LAN cable
5. Power Supply/Data cable

Fig. Hub back side with tightened grommets and inserted comb-like part

Fig. Power Supply/Data cable in the safety position behind the accessory rail

Fig. Covered connector for Power Supply/Data cable

Fig. Power Supply/Data cable connected to the Hub

Fig. LAN cable and Nurse Call cable connected to the interconnecting elements for Nurse Call cable and LAN cable

Fig. Air Hose connected to the Hub
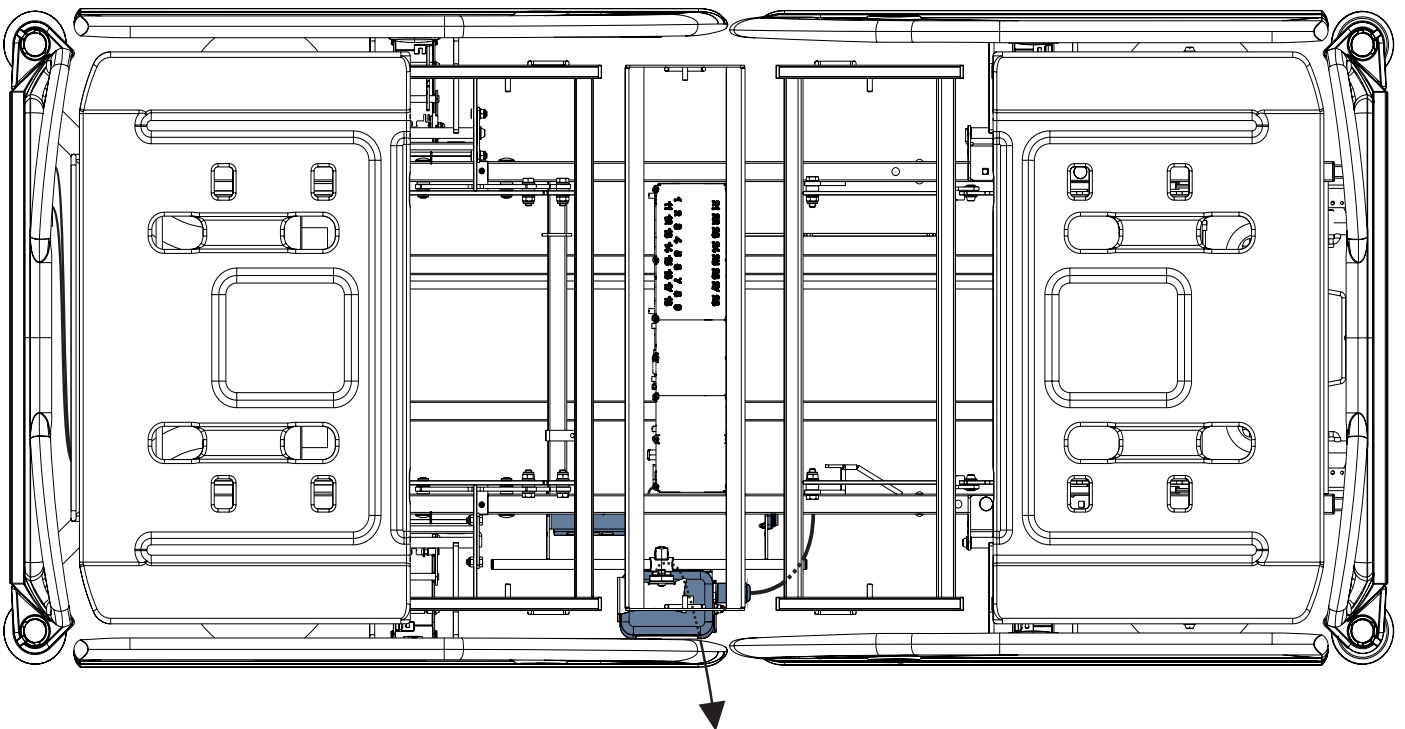
Fig. Wetness Pad cable connected to the Hub
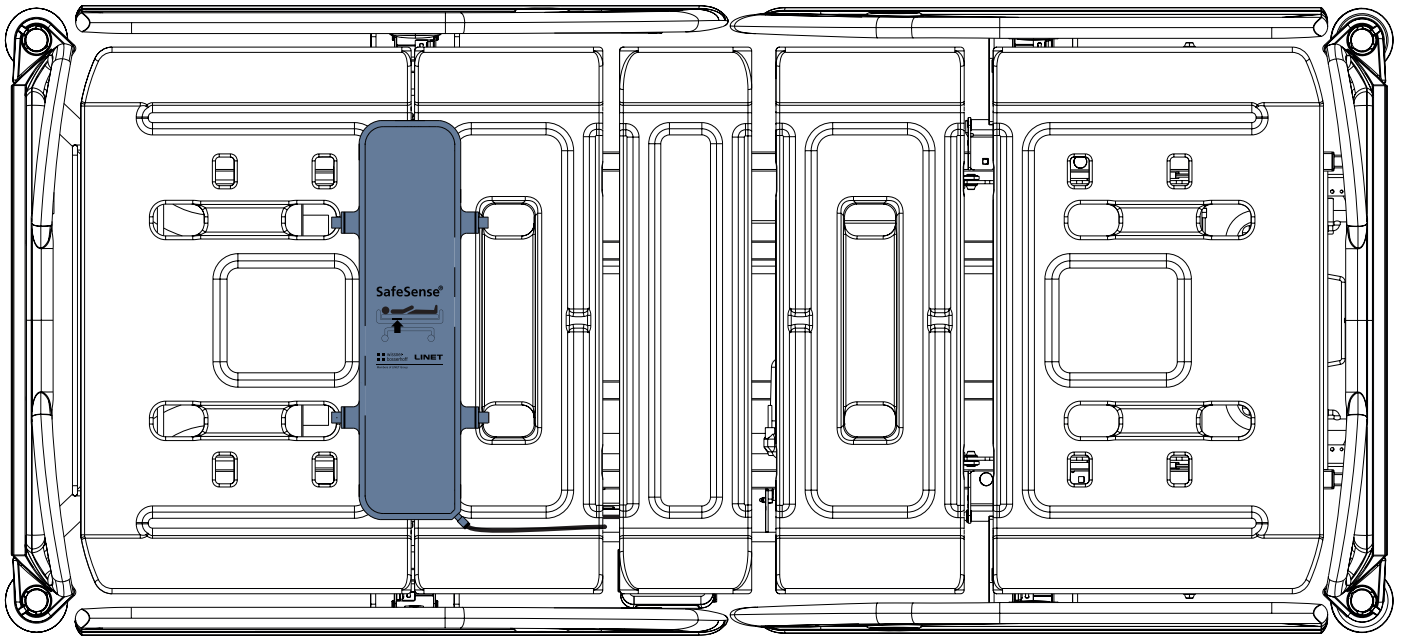
Fig. Air Pad fixed on the Backrest of Eleganza 2 medical bed
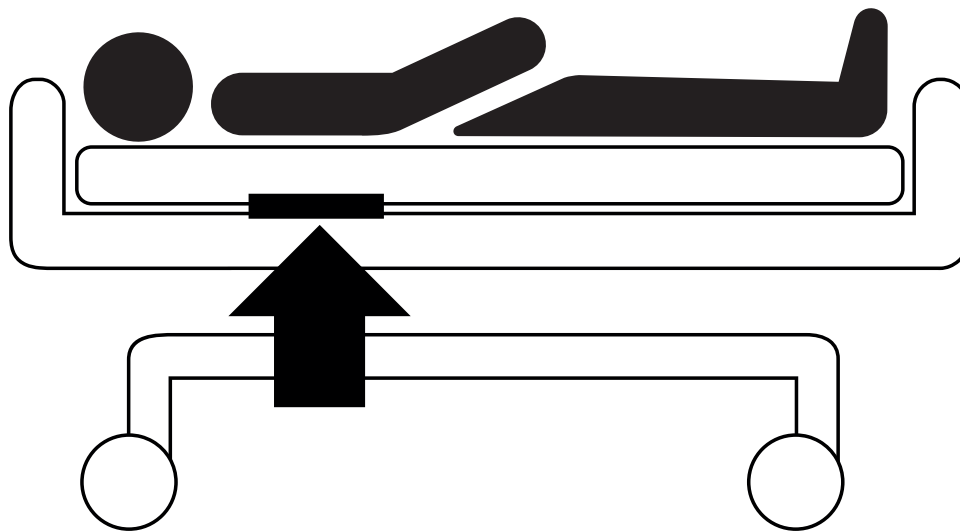
Fig. Position of the Air Pad under the mattress with patient

9.4 Essenza 300 with SafeSense® 3

⚠ **WARNING!**
Risk of injury and risk of material damage due to incorrectly installed Hub box!
► SafeSense® 3 Hub must be placed on the Hub Holder for Essenza 300 and these two components must be fixed on the accessory rail on the right bed side under the Backrest!
► Avoid collisions between Hub Holder for Essenza 300 and accessories of the bed and between Hub box and accessories of the bed!
► Ensure the indispensable cables are correctly and safely connected to the Hub box!

⚠ **WARNING!**
Risk of injury and risk of material damage due to incorrect installation of cables and incorrect installation of the Air Hose!
► Ensure the cables leading to the SafeSense® 3 Hub are not kinked or sheared or otherwise machanically damaged during bed positioning or during manipulation with accessories of the bed!
► When routing cables from SafeSense® 3 system in the Essenza 300 medical bed, avoid squeezing those cables between parts of the medical bed!
► Cables of the SafeSense® 3 system and Air Hose must not be tensioned!
► Ensure the Air Hose is correctly connected to the Hub box and to the Air Pad!
► Avoid squeezing, kinking, shearing of the Air Hose or other mechanical damage to the Air Hose!

⚠ **WARNING!**
Risk of injury and risk of material damage due to incorrect installation of Air Pad and Wetness Pad!
► Use only mattress compatible with SafeSense® 3 system!
► Air Pad must be fixed on the Backrest of the Essenza 300 medical bed. Prevent the Air Pad from moving on the Backrest under the mattress!
► Ensure the Air Hose is correctly connected to the Air Pad fixed on the Backrest of the Essenza 300 medical bed!
► Wetness Pad must be placed on the seat section of the compatible mattress and the ends of the Wetness Pad must be accessible from the mattress sides.
► Wetness Pad must not be covered with a plastic foil!
► Ensure the cable connecting Wetness Pad with SafeSense® 3 Hub is correctly connected to the SafeSense® 3 Hub and to the Wetness Pad.

⚠ **WARNING!**
Material damage due to machine washing with SafeSense® 3 installed on the bed!
► Remove each part of the SafeSense® 3 Monitoring System from the Image 3 bed before each machine washing!
► Plug the connector of the Power Supply/Data cable to the safety position behind the accessory rail on the right side of the Essenza 300 bed!

9.4.1 Instructions for putting into service

► Place the Hub Holder on the accessory rail on the right side of the Essenza 300 bed.

► Tighten the safety bolt to fix Hub Holder for Essenza 300 on the accessory rail. Check if the Hub Holder is safely installed on the accessory rail.

► Bolt the Holder of the interconnecting elements for Nurse Call cable and LAN cable to the crossbar at head end of the Essenza 300 bed.
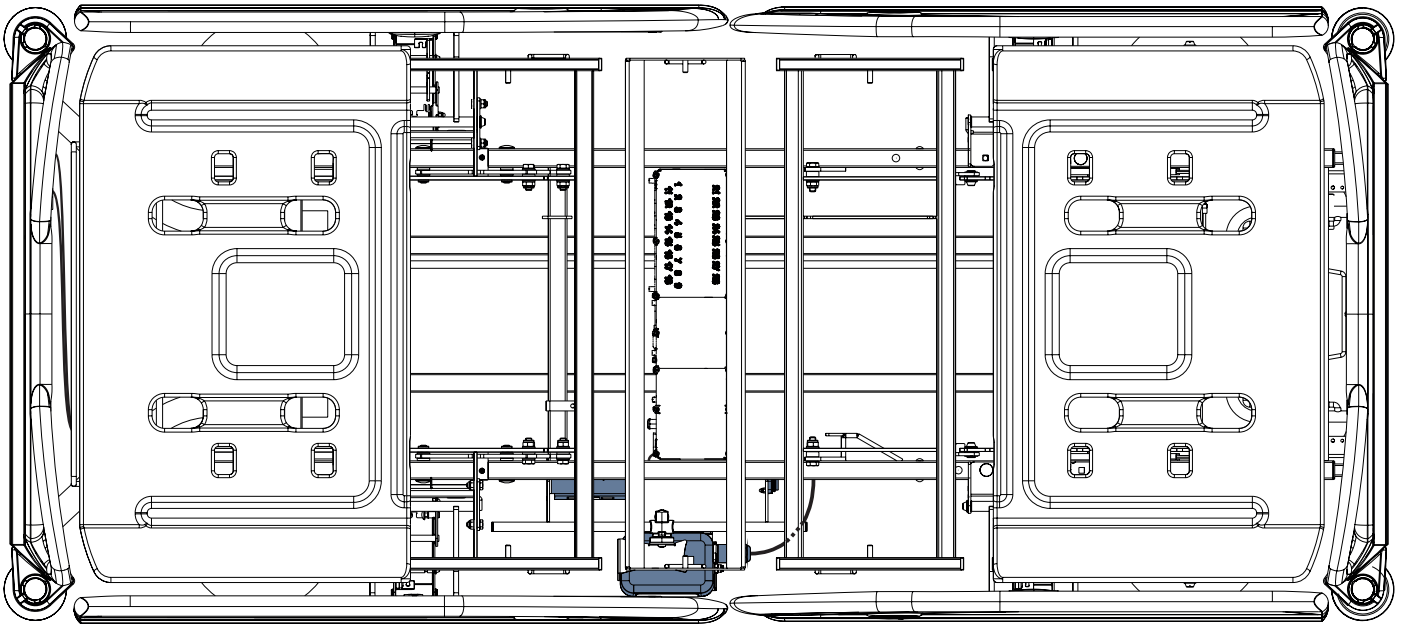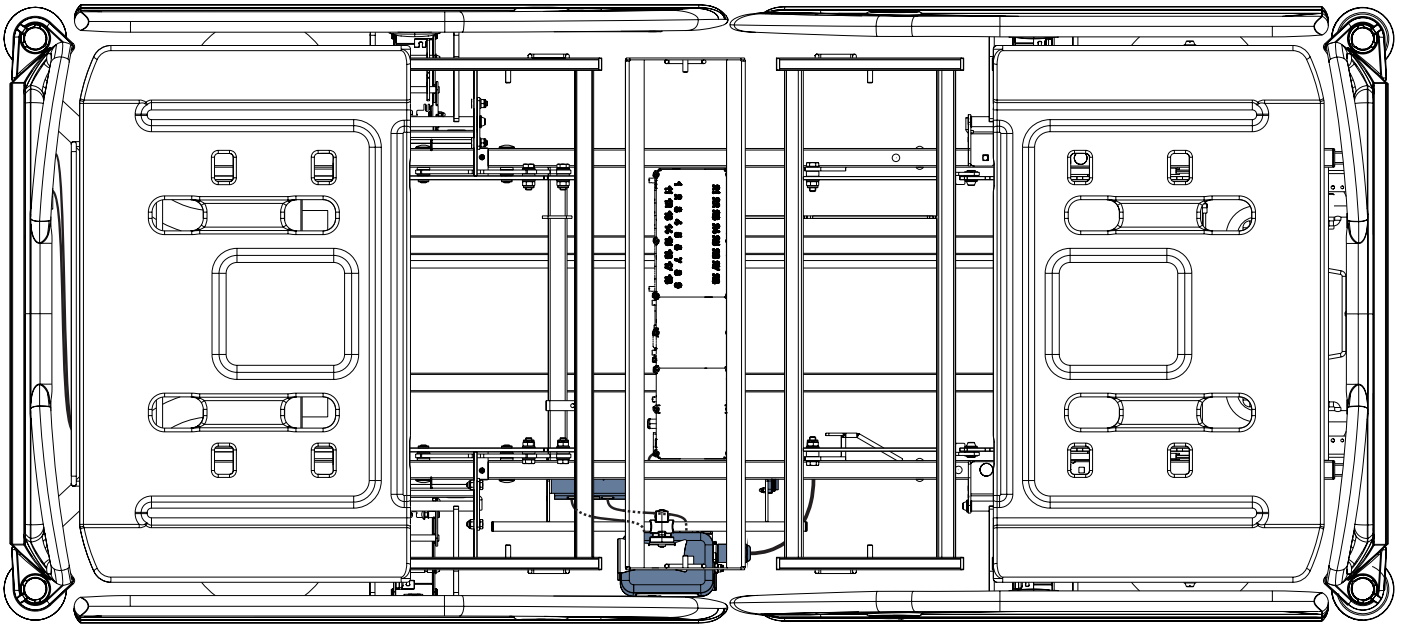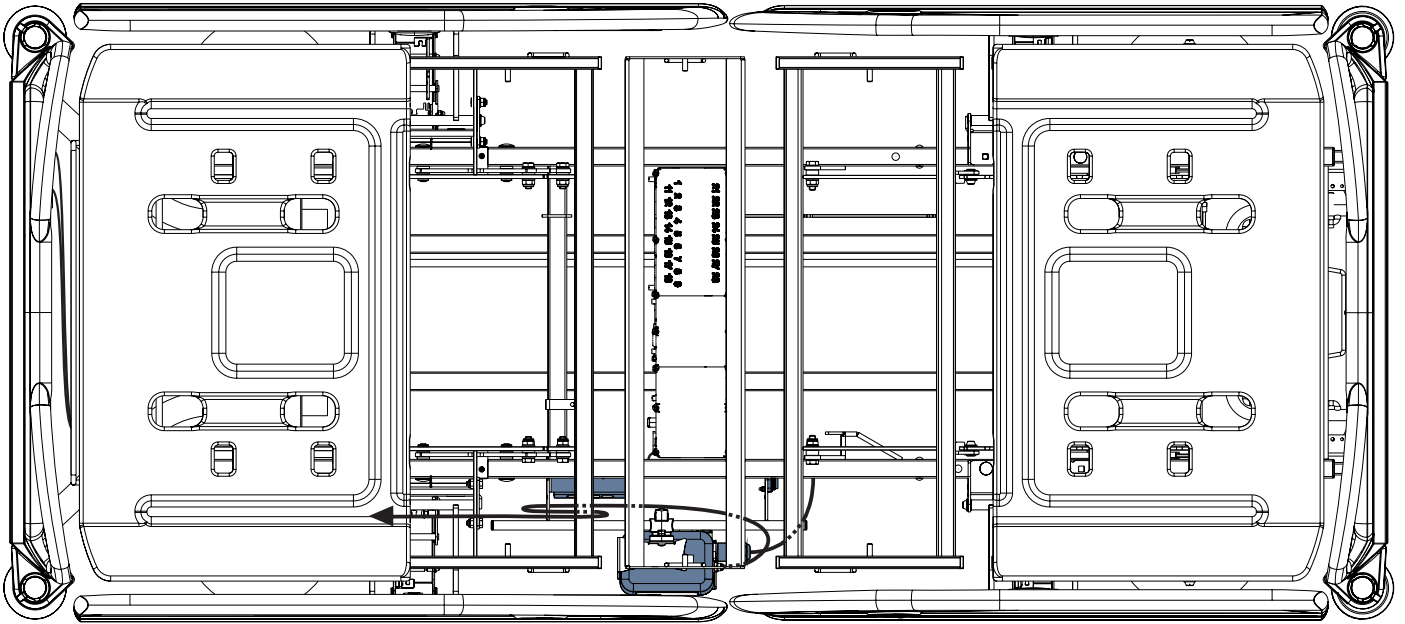
► Insert both interconnecting elements for Nurse Call cable and LAN cable to the Holder of the interconnecting elements according to the label on the Holder.

► Connect LAN cable, Nurse Call cable and Wetness Pad cable to the back side of the Hub box.

► Tighten grommets of the connected cables on the back side of the Hub box by turning.

► Secure the connected cables by inserting comb-like part.

► Place the Hub to the Hub Holder for Essenza 300 and ensure the Hub is fixed in the Hub Holder by the raised latch.

► Disconnect the Power Supply/Data cable from the safety position next to the accessory rail.

► Remove the plug covering the connector on the right side of the Hub.

► Connect Power Supply/Data cable to the connector on the right side of the Hub.

► Stick 4 cable clips to the mattress support platform frame according to the following pictures.

► Route LAN cable and Nurse Call cable towards the bed head end. Place both cables to the cable clips on the frame of the mattress support platform. Both cables are routed from the bottom in the case of Essenza 300 with Lateral Tilt. Both cables are routed above the mattress support platform frame in the area above the right castor at bed head end in the case of Essenza 300 without Lateral Tilt.

► Connect LAN cable and Nurse Call cable to the interconnecting elements for Nurse Call cable and LAN cable at head end of the Essenza 300 bed according to the size of the connectors or according to the label on the Holder of the interconnecting elements.

► Raise the Backrest of the Essenza 300 bed to the highest position.

► Fix the Air Pad on the Backrest so that the metal middle Backrest section is surrounded by the straps of the Air Pad.

► Connect the Air Hose to the right side of the Hub.

► Run the Air Hose upwards through the Backrest between the metal middle Backrest section and the lower plastic Backrest cover.

► Connect the Air Hose to the Air Pad fixed on the Backrest.

► Ensure the Backrest adjustment does not damage the Air Hose and the Air Hose is not squeezed in any position of the Backrest.

► Place a compatible mattress on the mattress support platform of the Essenza 300 bed.

► Place Wetness Pad on the mattress without any sheet to the correct position in the seat section of the patient. Three connectors on the Wetness Pad are facing the right side of the compatible mattress. Blue side is the bottom side of the Wetness Pad.

► Connect Wetness Pad cable to the Wetness Pad.

► Place a sheet on the mattress.

► Connect the cable connected to the local Nurse Call system to the interconnecting element for Nurse Call cable at head end of the Essenza 300 bed, if the use of the Nurse Call system with SafeSense® 3 system is required.

► Connect the local LAN cable to the interconnecting element for LAN cable at head end of the Essenza 300 bed, if wireless signal from Hub is not used for communication between Hub and a hardware with installed CareMonitor Application.

► Place patient on the Essenza 300 bed.

► Activate Hub according to the instructions for use.

► Open the CareMonitor Application.

► Activate the Hub and check if the corresponding bed is visible on the CareMonitor Screen.

► Perform the same steps to activate the other Hubs and to display the corresponding beds on the CareMonitor Screen.
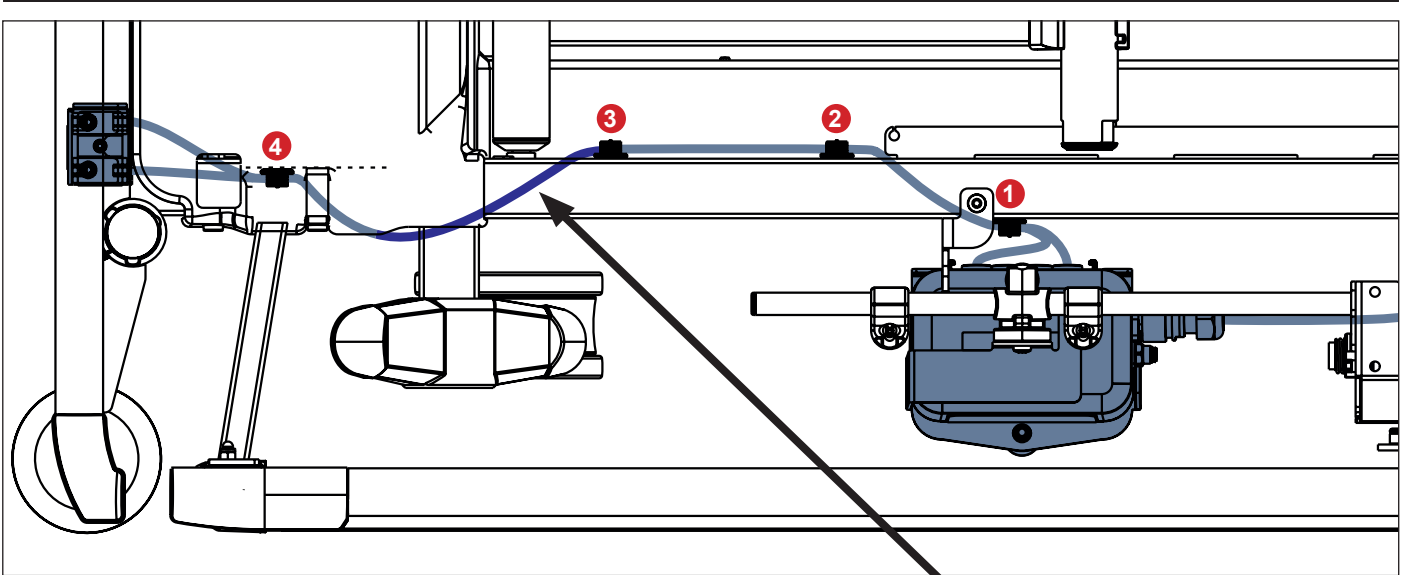
Fig. Four cable clips on the mattress support platform frame
of Essenza 300 without Lateral Tilt

**Both cables are routed above
the mattress support platform
frame here.**
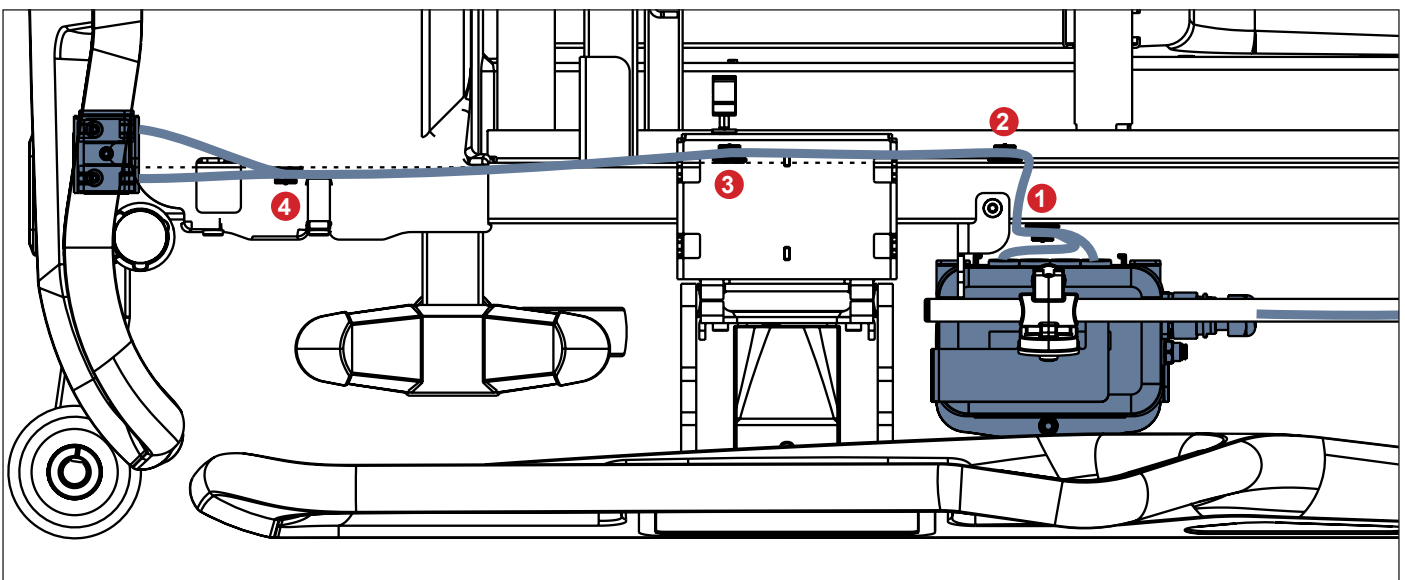
Fig. Four cable clips on the mattress support platform frame of Essenza 300 with Lateral Tilt

LINET

SafeSense® 3 system on the right side of the Essenza 300 bed without Lateral Tilt

1. **Power Supply/Data cable**
2. **LAN cable**
3. **Nurse Call cable**

Both cables are routed above the mattress support platform frame here.
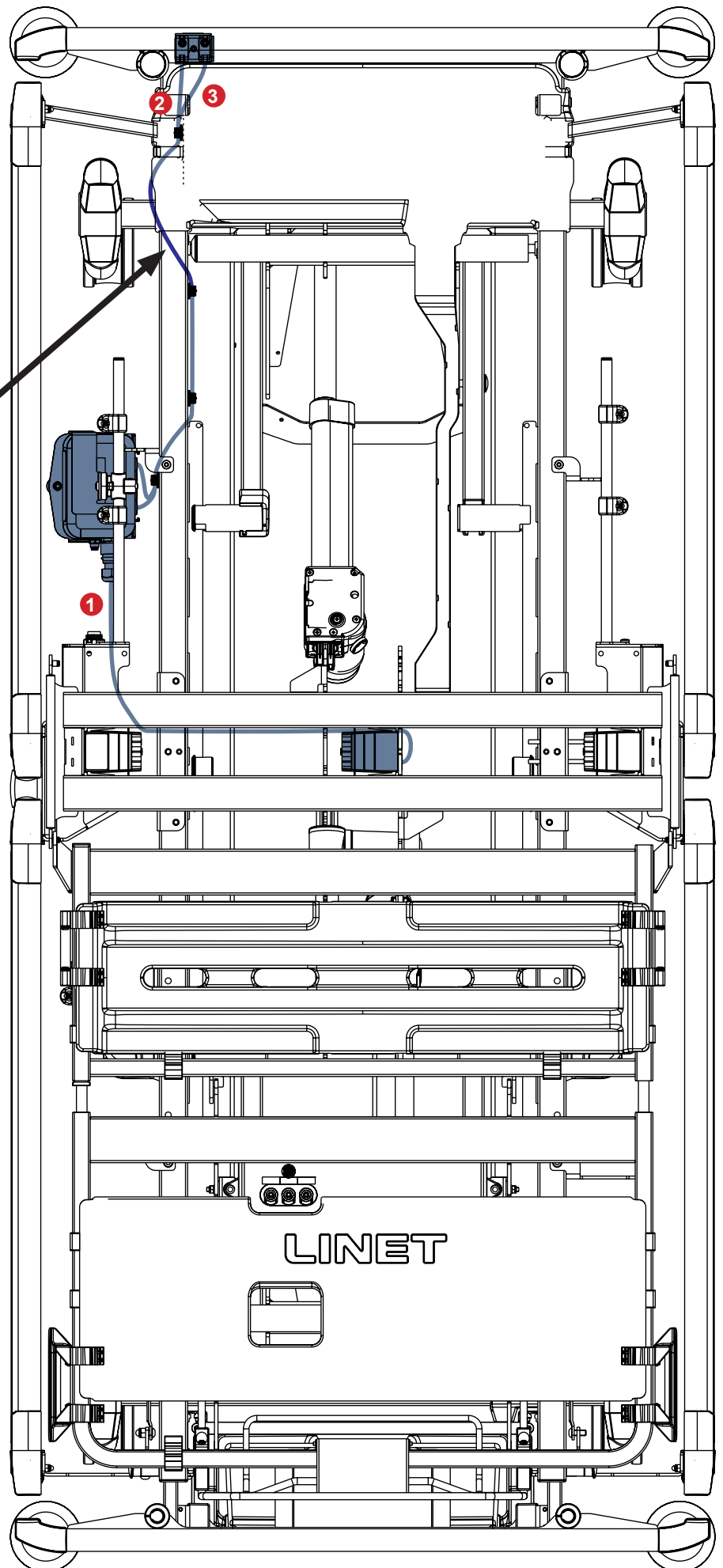
SafeSense® 3 system on the right side of the Essenza 300 bed with Lateral Tilt

1. Power Supply/Data cable
2. LAN cable
3. Nurse Call cable
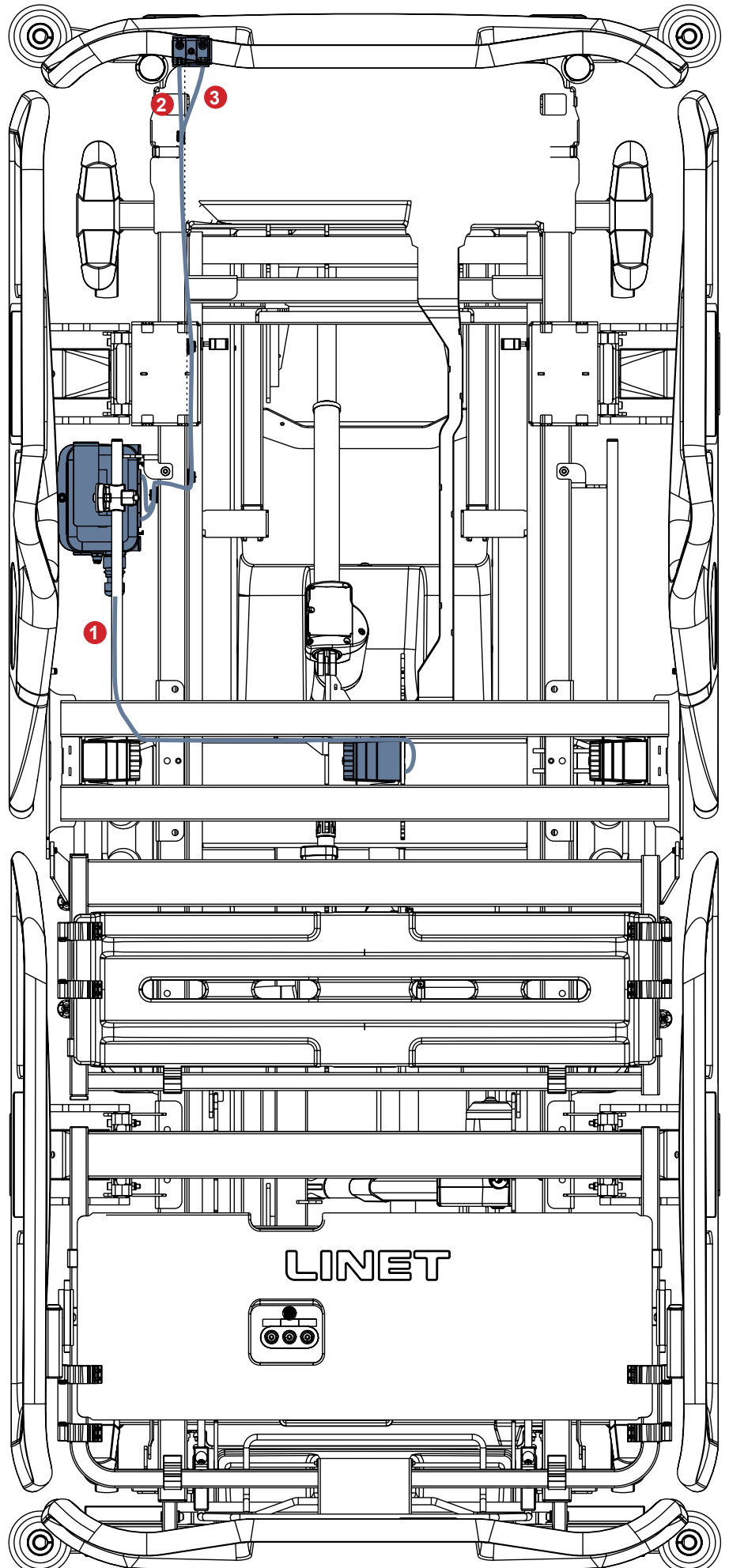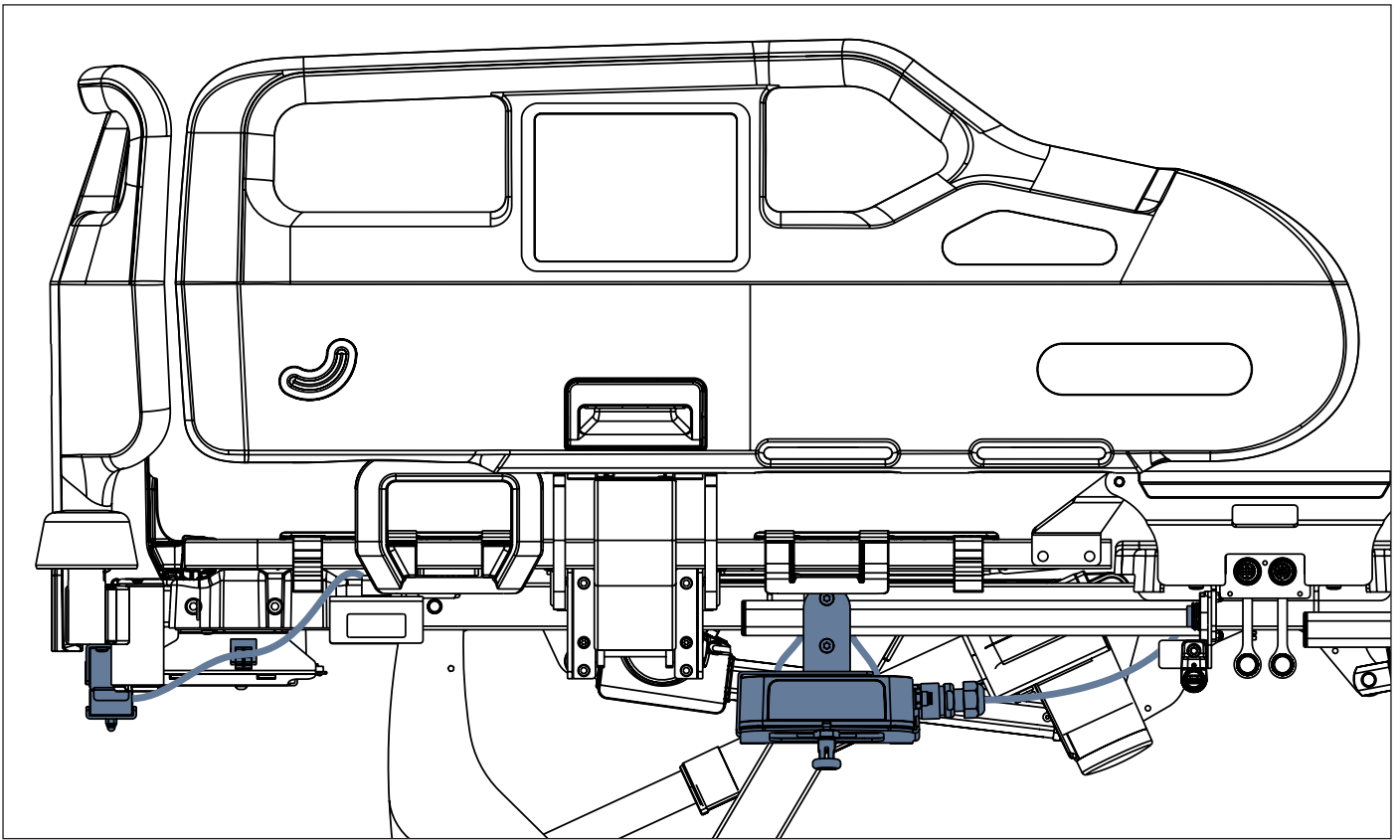
Fig. Hub box connected to the Essenza 300 bed without Lateral Tilt and to the interconnecting elements for Nurse Call cable and LAN cable at bed head end
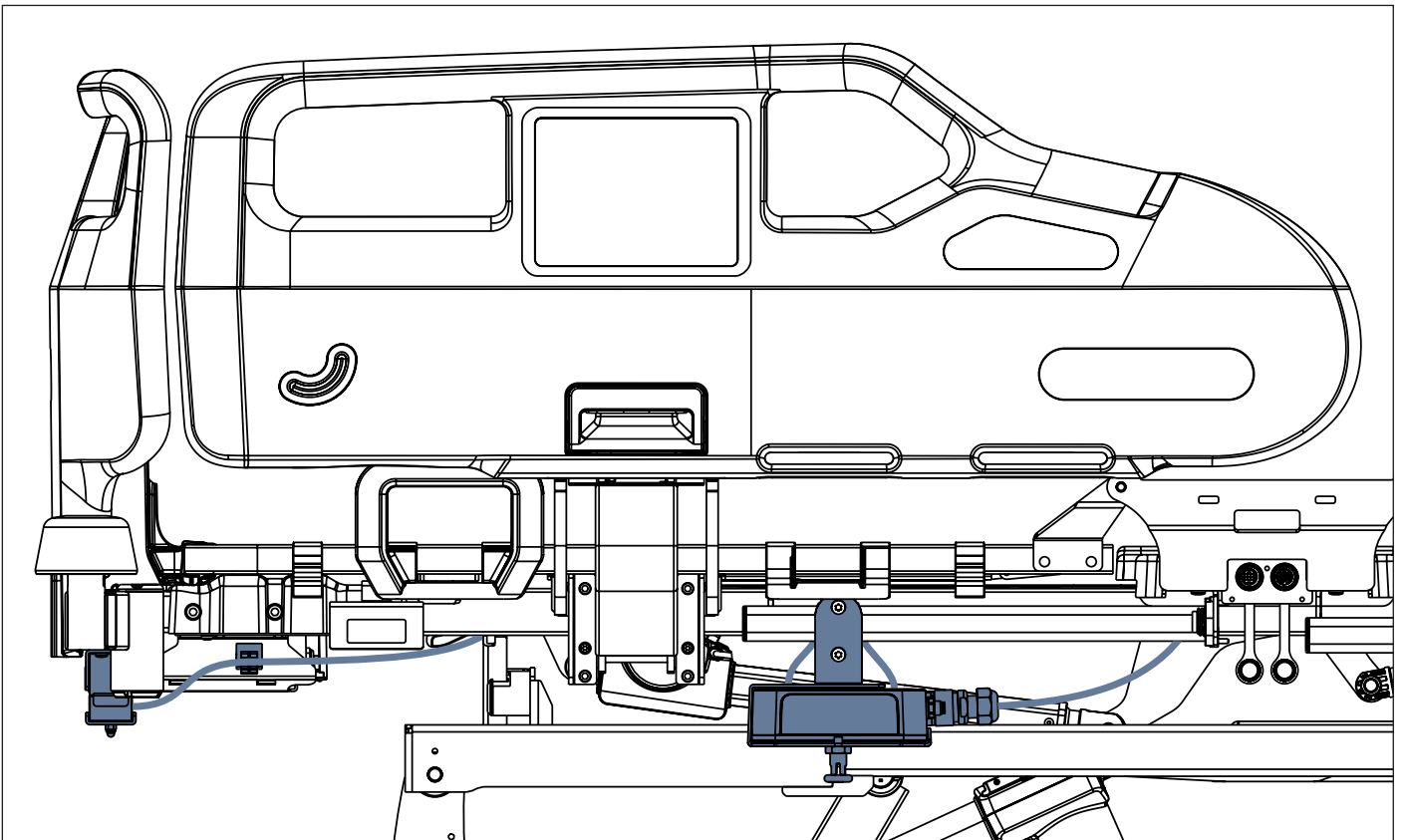
Fig. Hub box connected to the Essenza 300 with Lateral Tilt and to the interconnecting elements for Nurse Call cable and LAN cable at bed head end
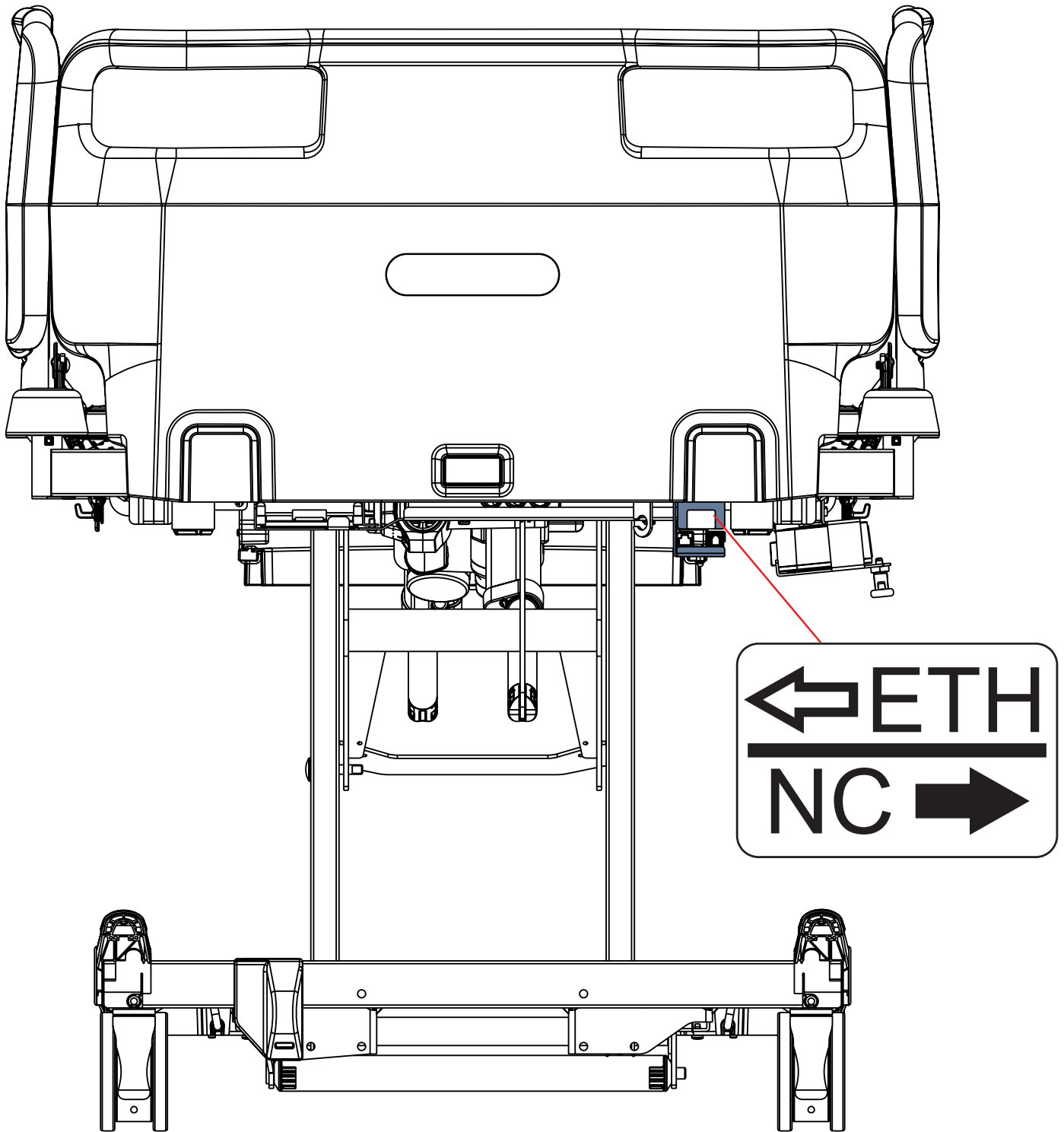
Fig. Interconnecting elements for Nurse Call cable and LAN cable at head end of the Essenza 300 bed
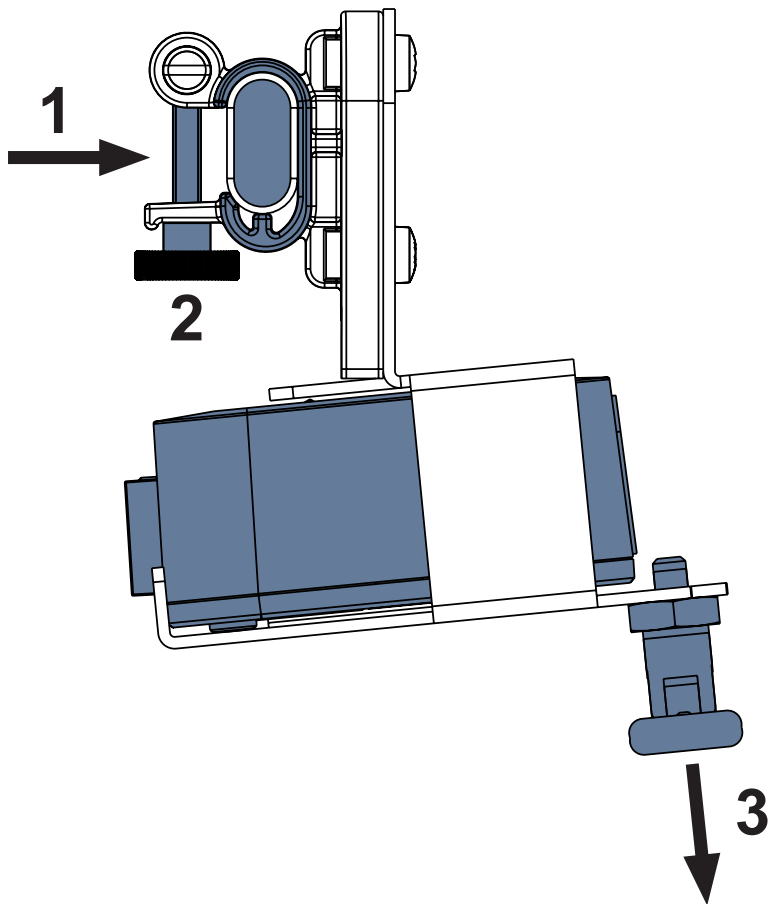
To fix Hub Holder for Essenza 300 on the accessory rail:

► Mount Hub Holder for Essenza 300 on the accessory rail. (**1**)

► Tighten the safety bolt (**2**) to fix the Hub Holder on the accessory rail.

To fix Hub in the Hub Holder for Essenza 300:

► Hold a latch of the Hub Holder for Essenza 300 pulled down (**3**).

► Place Hub to the Hub Holder for Essenza 300.

► Ensure the Hub is fixed in the Hub Holder for Essenza 300 by the raised latch.

Fig. SafeSense® 3 Hub in the Hub Holder for Essenza 300 with C-shape upper part and latch (side view)
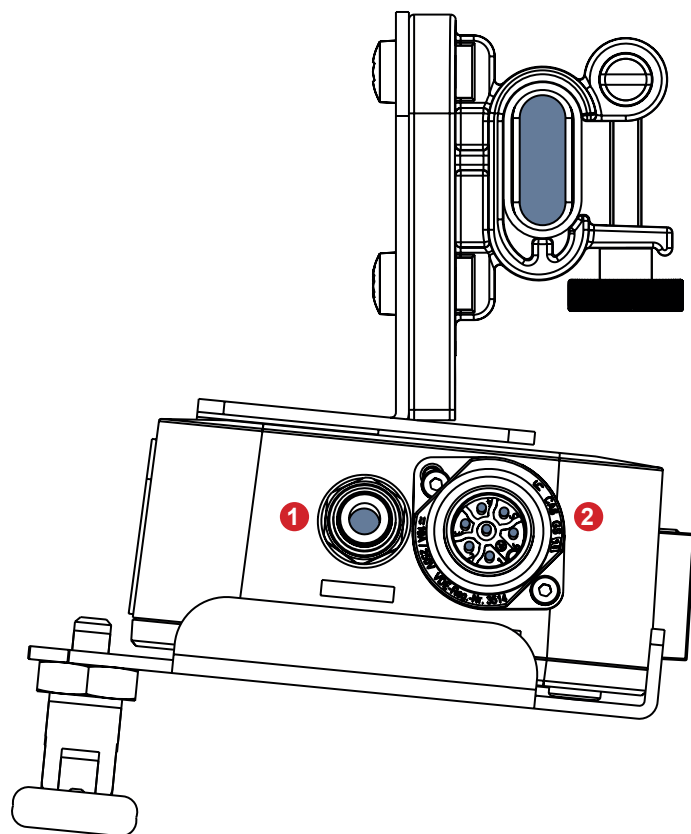
1. Connector for Air Hose
2. Connector for Power Supply/Data cable

Fig. Two connectors on the right side of the SafeSense® 3 Hub in the Hub Holder for Essenza 300
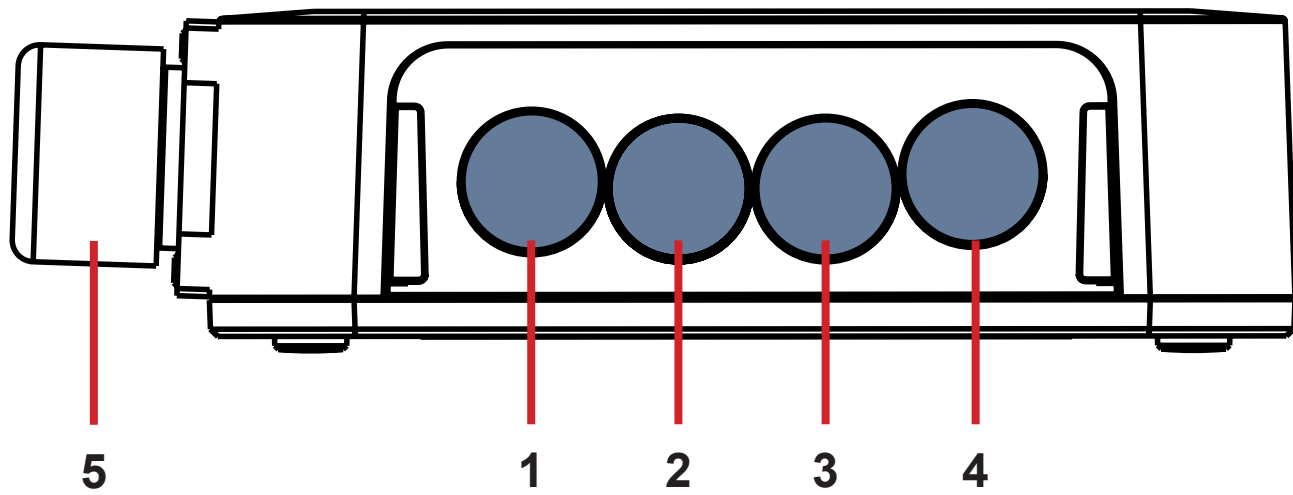
Fig. Hub Connectors (back side)

1. **NOT AVAILABLE CONNECTOR**
2. **Nurse Call cable**
3. **Wetness Pad cable**
4. **LAN cable**
5. **Power Supply/Data cable**
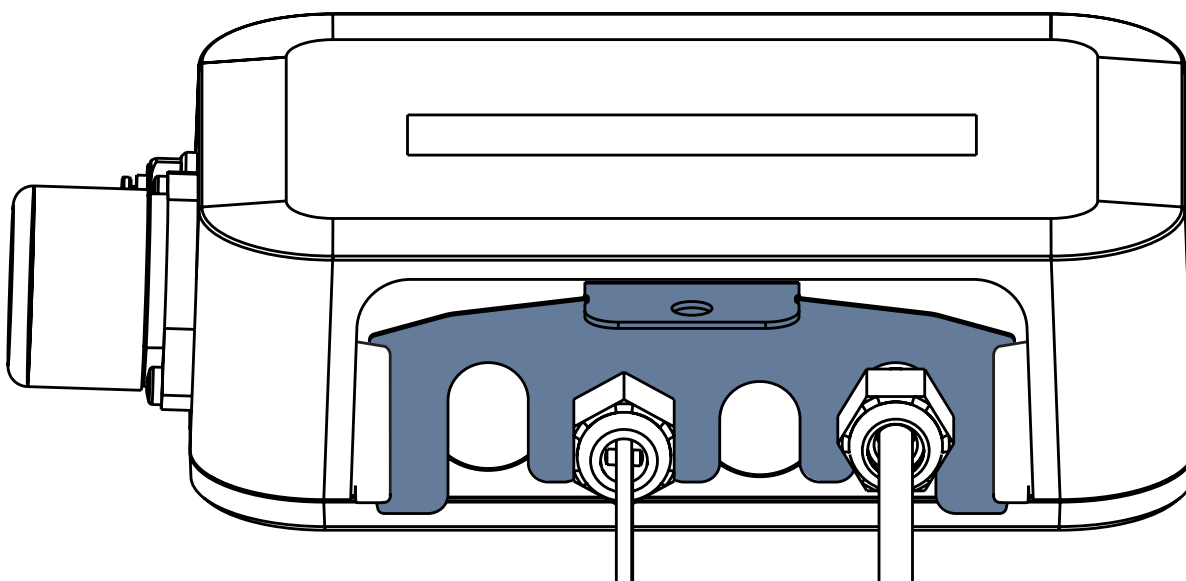
Fig. Hub back side with tightened grommets and inserted comb-like part
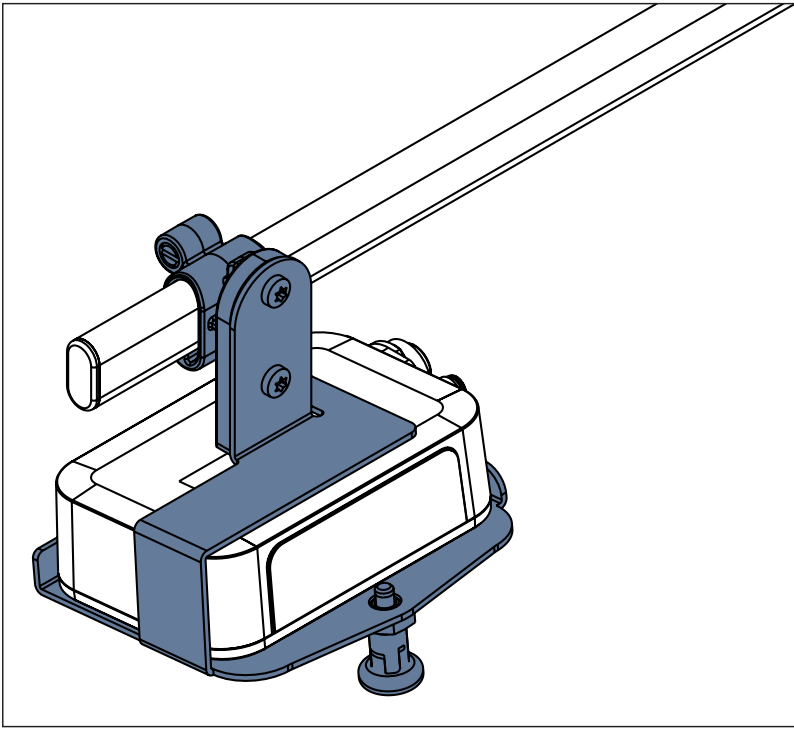
Fig. *SafeSense® 3 Hub with Hub Holder for Essenza 300 on the accessory rail*
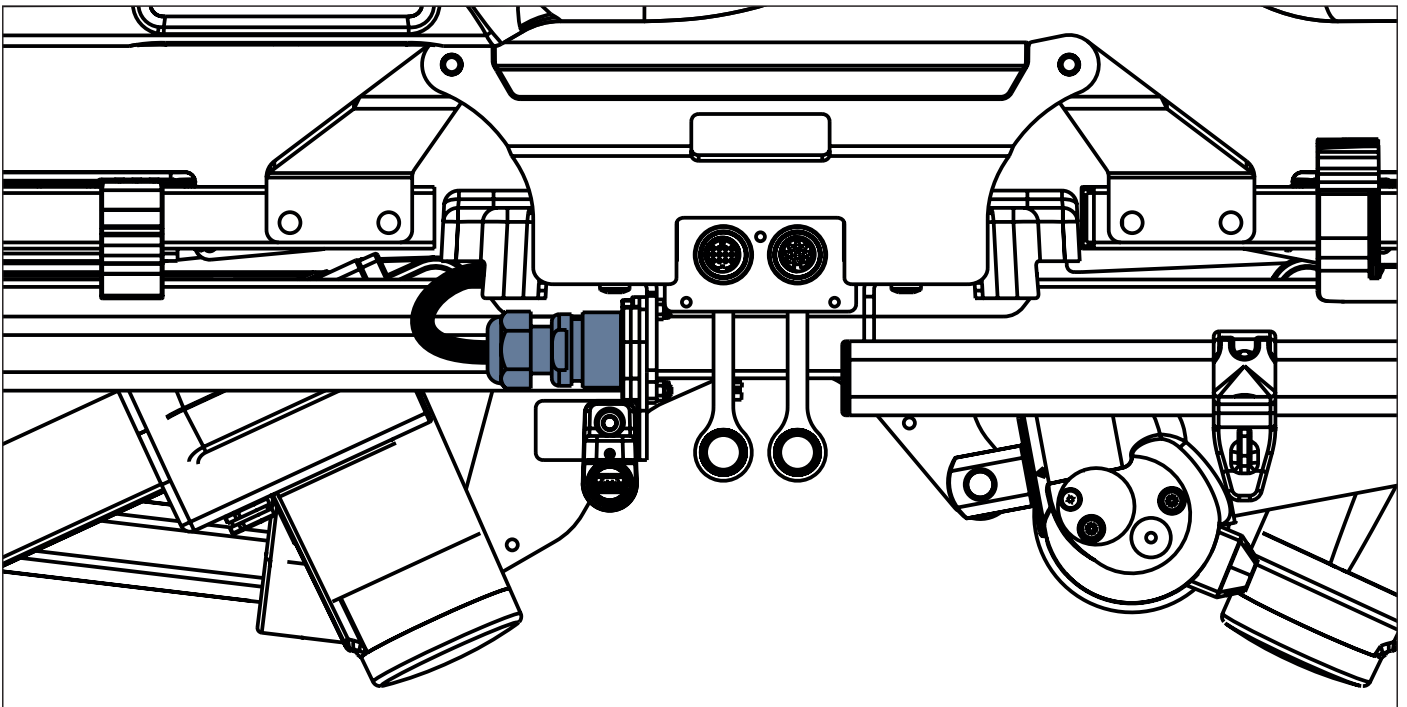
Fig. *Power Supply/Data cable in the safety position at the right end of accessory rail*
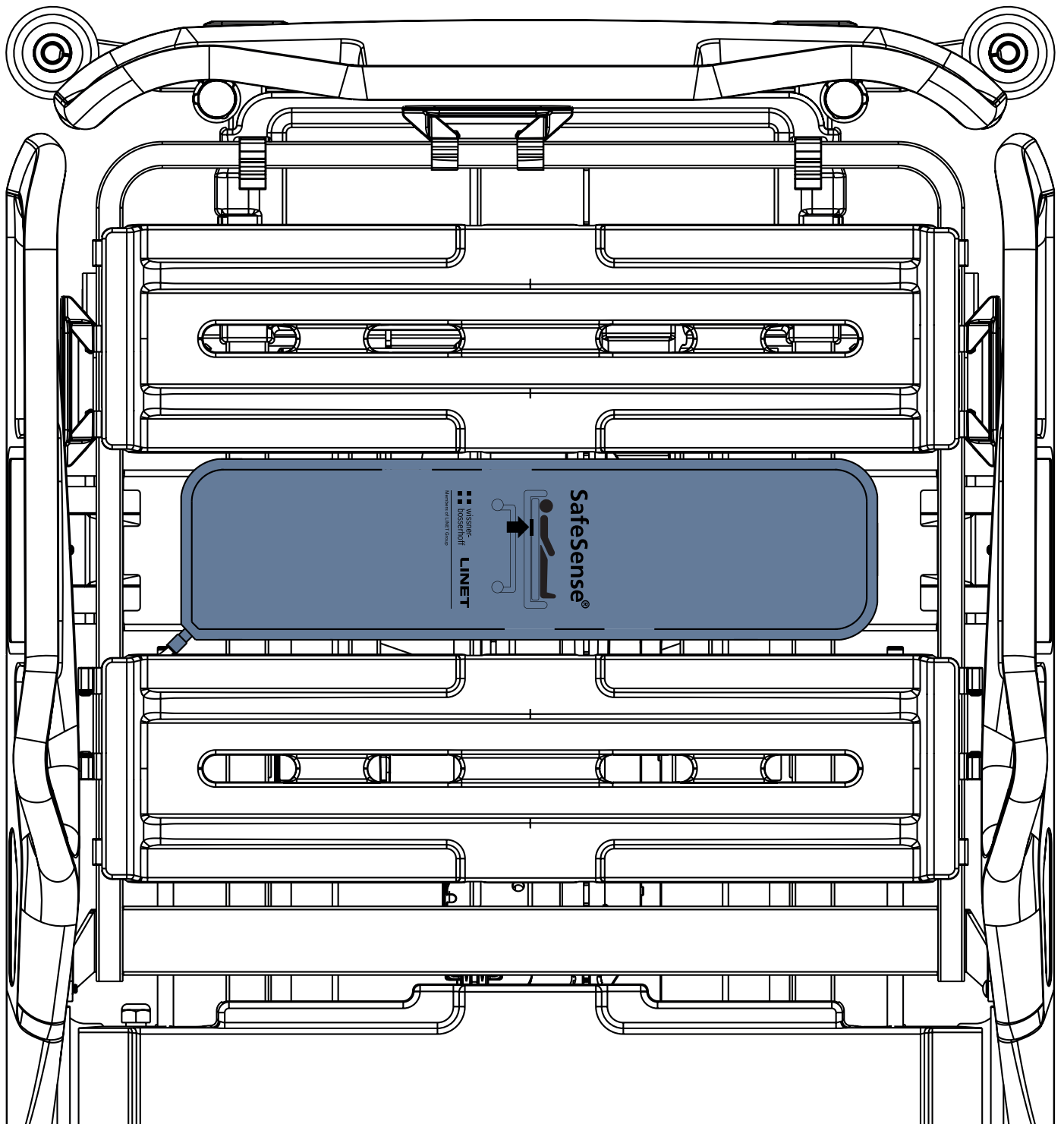
Fig. Air Pad fixed on the Backrest of Essenza 300 medical bed
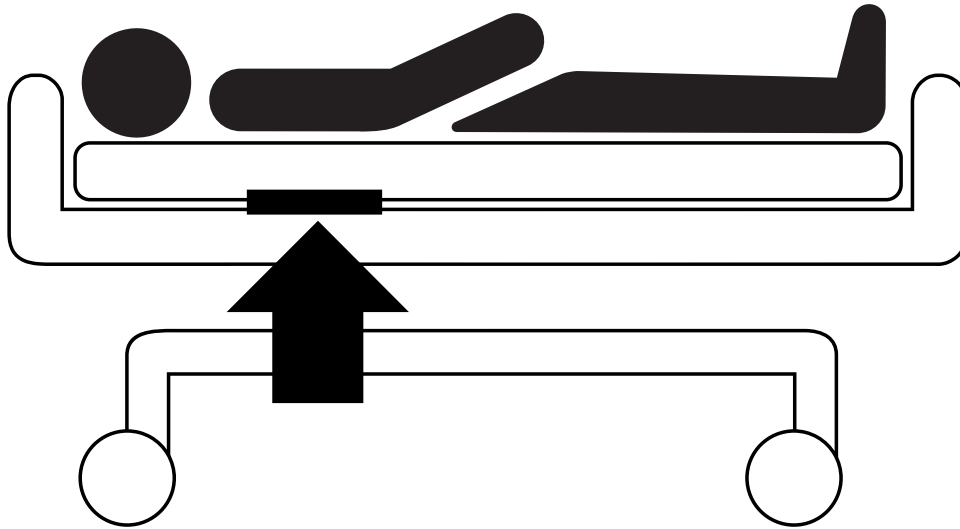
Fig. Position of the Air Pad under the mattress with patient

10 AC/DC Adaptor (only for Stand-alone Version)

⚠️ **WARNING!**
Where the integrity of the external protective conductor in the installation or its arrangement is in doubt
► use the other power source that is not in doubt.

⚠️ **WARNING!**
Do not rely on the batteries in Hub box! Power supply via AC/DC Adaptor is necessary for correct function of the SafeSense® 3 Stand-alone Version.

⚠️ **WARNING!**
Inappropriate handling of the power supply cord, e. g. by kinking, shearing or other mechanical damages is hazardous!

⚠️ **WARNING!**
When routing cable from AC/DC Adaptor in a medical bed avoid squeezing the cable between parts of the medical bed!

⚠️ **WARNING!**
An additional multiple socket-outlet or extension cord shall not be connected to the SafeSense® 3 system.

Attachment plug is means of connecting and disconnecting SafeSense® 3 system from the mains.
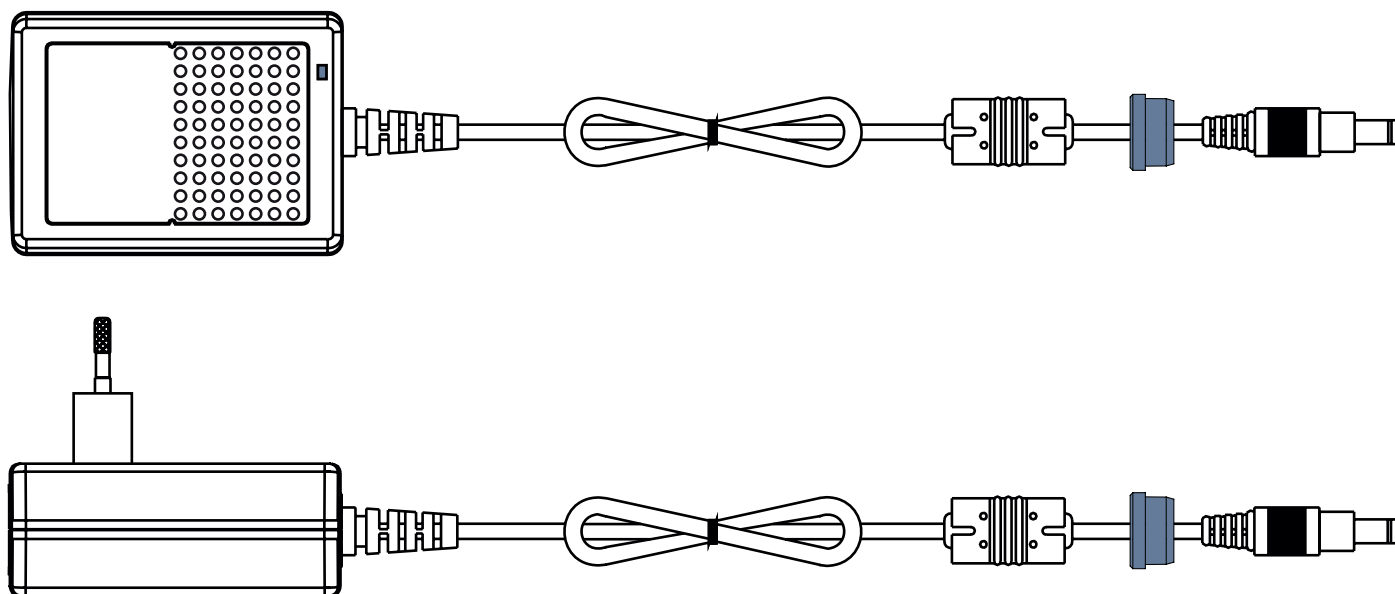
Fig. AC/DC Adaptor connecting Hub to the mains power (with grommet on the Power Supply cable)
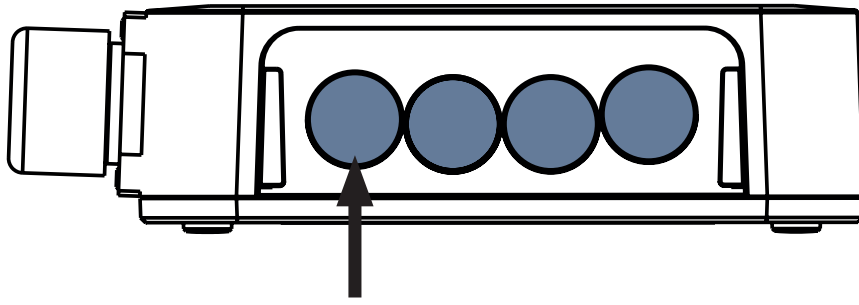
Fig. Connector for Power Supply cable (back side of the Hub Box)

11 Manipulation

⚠️ **WARNING!**
A source of air flow near to the installed SafeSense® 3 system can affect the information functions of the system!
► Before and during the use of this system check the possible sources of air flow (e.g. air-conditioner) to ensure you will be informed about statuses whose detection can help you in care for a patient and not about environmental conditions.

⚠️ **WARNING!**
Do not manipulate the bed if the SafeSense 3 Monitoring System is activated on it!

⚠️ **WARNING!**
SafeSense 3 Monitoring System consists of the parts whose simultaneous working is necessary for the proper functioning of the whole system! Unless the CareMonitor Application is activated, outputs from the Hub could not be displayed correctly later in the CareMonitor Application!

SafeSense® 3 provides 4 main functions: Bed Exit Monitoring, Motion Monitoring, Decubitus/Movement Notification and optionally Wetness Monitoring.

11.1 Bed Exit Monitoring

Bed Exit Monitoring is intended to notify nursing personnel that the monitored patient has left the bed.
Bed Exit alert is indicated by an acoustic signal when patient is out of the supporting bed.
Bed Exit alert is also indicated visually on the display of Attendant Control Panel with SafeSense® 3 Control and on the CareMonitor user interface.
Nursing personnel can set delayed reaction of the Bed Exit Monitoring system so the patient can return before Bed Exit alert is triggered. Periods for Bed Exit Monitoring are **early** (about **3** seconds) or **10** seconds or **20** seconds or **30** seconds or **40** seconds or **50** seconds or **1** minute or **5** minutes or **10** minutes or **15** minutes or **30** minutes.
Bed Exit acoustic alert is automatically muted when patient correctly returns to the bed during triggered Bed Exit alert.

To set Bed Exit Monitoring use:
► CareMonitor
► Attendant Control Panel with SafeSense 3 Control (only for Image 3 and Eleganza 2)

11.2 Motion Monitoring

Motion Monitoring is intended to notify nursing personnel of the patient´s motions on the bed.
Nursing personnel can set a period during which the absence of patient movement on the bed is tolerated.
Periods for Motion Monitoring are multiples of **5** minutes from **10** minutes to **100** minutes.
Countdown to the end of selected period starts again from the beginning after patient movement on the mattress.
CareMonitor shows chart of the patient movements if it is allowed in the **Display settings**.
Alert is triggered if no patient movement occurs before the set period has elapsed.

To set Motion Monitoring use:
► CareMonitor
► Attendant Control Panel with SafeSense 3 Control (only for Image 3 and Eleganza 2)

11.3 Decubitus/Movement Notification

Decubitus/Movement Notification provides timer which triggers an acoustic signal alerting the nursing personnel.
Nursing personnel can set a period after which notification to check position of the patient is triggered.
Periods for Decubitus/Movement Notification are **2** hours or **3** hours or **4** hours or **5** hours or **6** hours.
Visual and acoustic alert is triggered after the set period has elapsed depending on the current setting.

To set Decubitus/Movement Notification use:
► CareMonitor
► Attendant Control Panel with SafeSense 3 Control (only for Image 3 and Eleganza 2)

11.4 Wetness Monitoring

Wetness Monitoring is intended to notify nursing personnel of the bodily fluids on the bed sheet or directly on the mattress (e.g. urine).
Nursing personnel can set sensitivity of the Wetness Monitoring on the CareMonitor.
Limits of the wetness sensitivity are **25%** or **50%** or **75%** or **100%.**
Alerts are triggered after the set wetness sensitivity has been exceeded.
Attendant Control Panel with SafeSense® 3 Control indicates visual alerts depending on the current setting.

To set Wetness Monitoring use:
► CareMonitor

11.5 Control Elements

►   Hub Control Panel
►   CareMonitor
►   Attendant Control Panel with SafeSense 3 Control (only for Image 3 and Eleganza 2)

11.5.1 Hub Control Panel
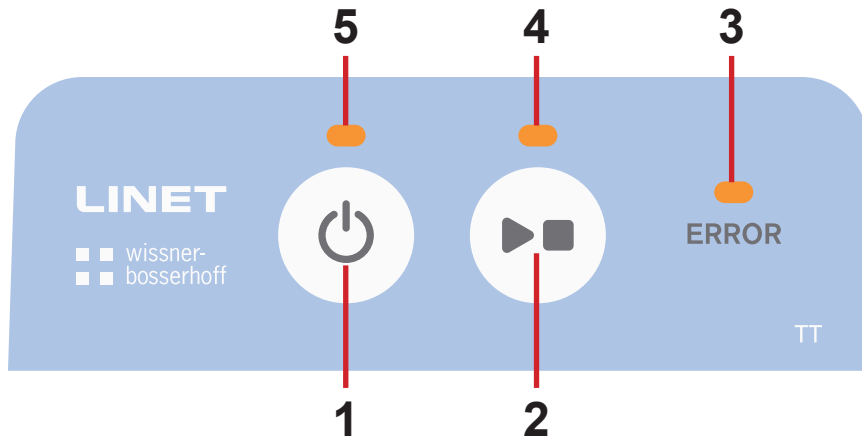
Fig. Hub Control Panel

1.   **Activation Button (to activate SafeSense® 3)**
2.   **PLAY or STOP Button (to activate or deactivate monitoring)**
3.   **ERROR LED (lit red - internal error)**
4.   **PLAY or STOP LED (monitoring ON - lit green, monitoring OFF - lit blue)**
5.   **Activation LED (SafeSense® 3 ON and battery charged to more than 75% - lit green, SafeSense® 3 ON and battery charged to 25% - 75% - lit light blue, SafeSense® 3 ON and battery fault - lit red, SafeSense® 3 OFF - not lit)**

To activate SafeSense® 3:

►   Press button ⏻ .

Activation LED (**5**) indicates activated SafeSense® 3 when it is lit green.
It is possible to start or stop monitoring selected by CareMonitor Application or by Attendant Control Panel with SafeSense® 3 Control.

To start monitoring selected by CareMonitor Application or by Attendant Control Panel with SafeSense® 3 Control:

►   Press button ▶■ when monitoring is OFF.

PLAY or STOP LED (**4**) is lit green when selected monitoring is ON.

To stop monitoring selected by CareMonitor Application or by Attendant Control Panel with SafeSense® 3 Control:

►   Press button ▶■ when monitoring is ON.

PLAY or STOP LED (**4**) is lit blue when selected monitoring is OFF.

To deactivate SafeSense® 3:

►   Press button ⏻ .

Activation LED (**5**) indicates deactivated SafeSense® 3 when it is not lit.

11.5.2 CareMonitor

⚠️ **CAUTION!**
Setting confirmed on a single CareMonitor influences setting on the other CareMonitors if more SafeSense® Applications run in the same SafeSense® 3 system!
► Check the CareMonitor settings regularly to ensure you will be informed about statuses whose detection can help you in care for a patient.

⚠️ **CAUTION!**
It is not possible to run the SafeSense® Application more than once on one device!
► Check if the SafeSense Application is activated only once when it is flashing in the error mode.

⚠️ **CAUTION!**
If SafeSense® Application is used by one user at the hardware where SafeSense® Application is installed and Attendant Control Panel with SafeSense® 3 Control is used by another user at the Image 3 bed or Eleganza 2 bed to set selected monitoring, the later setting prevails!

⚠️ **WARNING!**
The SafeSense® Application is using the system time of a device where the Application is running. The time might differ from the Hub system time. When the time difference is greater than 5 minutes user is notified in the SafeSense® Application and „system time not found." is displayed in the Chart of Motion History!

SafeSense® Application allows setting of all SafeSense® 3 functions (Bed Exit Monitoring, Motion Monitoring, Decubitus/Movement Notification and Wetness Monitoring), indicates alerts and shows history of motion monitoring. Acoustic signalisation of the alerts can be mediated only through the CareMonitor Application. No sound indicating alerts comes out of the Hub and of the Attendant Control Panel with SafeSense® 3 Control. SafeSense® Application provides global setting of the functions in relation to all the patients and also individual setting of the functions in relation to each patient. The CareMonitor user interface could be displayed in the Dark Mode for adaptation to an ambient light conditions. It is possible to use more SafeSense® Applications on different devices simultaneously. The CareMonitor Application is the only place to check if selected bed is successfully connected to the system SafeSense® 3.

SENSITIVITY

Sensitivity settings are intended for adapting monitoring conditions with regard to the patient's mobility. If a patient is rather restless, the monitoring sensitivity can be decreased (up to the low level) based on the nursing staff expert assessment in order to avoid detection of the redundant statuses which are not useful for nursing supervision. Lowering the monitoring sensitivity increases the reaction time concerning patient's detected bed entries and bed exits. If a patient is rather still, the monitoring sensitivity can be increased (up to the high level) based on the nursing staff expert assessment in order to enable the detection of all possible statuses that could be helpful for nursing supervision.

CAREMONITOR SCREEN

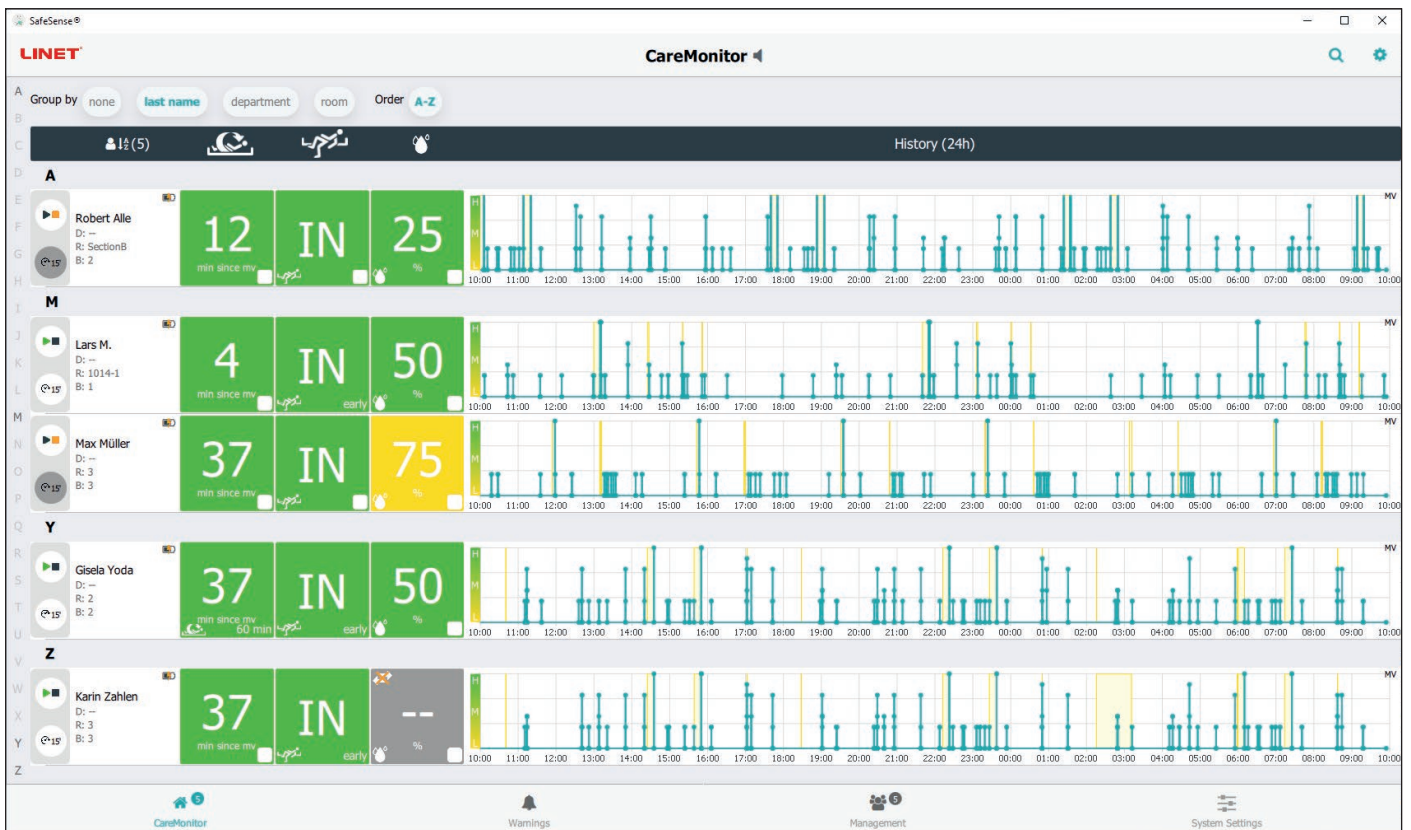*Fig. CareMonitor Screen*

CareMonitor Screen is the default main screen of the SafeSense Application.

GEAR Icon in the upper right corner of the CareMonitor Screen provides **Global warnings** settings and **Display** settings.

Bottom bar of the CareMonitor Screen provides access to the 4 screens:
■ **CareMonitor** Screen
■ **Warnings** Screen
■ **Management** Screen
■ **System Settings** Screen
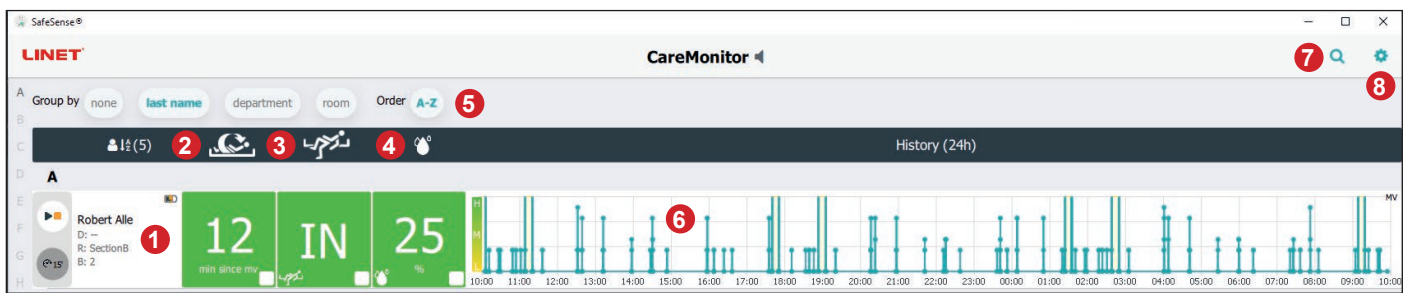
1. **Tile with Patient Name**
2. **Status of Motion Monitoring or Status of Decubitus/Movement Notification (displayed or hidden)**
3. **Status of Bed Exit Monitoring (displayed or hidden)**
4. **Status of Wetness Monitoring (displayed or hidden)**
5. **Grouping of the patients/Hubs according to last name or department or room or alphabetical order from A to Z or from Z to A (none - no grouping is selected)**
6. **Chart of Motion History (H - HIGH, M - MEDIUM, L - LOW, displayed or hidden)**
7. **HAND GLASS Icon (search a selected word)**
8. **GEAR Icon (settings - Global warnings or Display)**

NOTE: Upper horizontal bar with warning notifications under the CareMonitor heading can be displayed or hidden depending on the presence of a triggered warning notification.
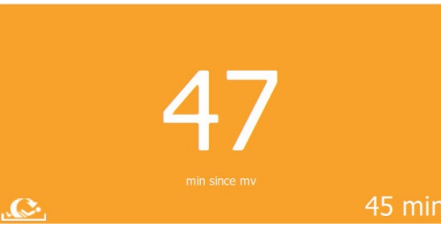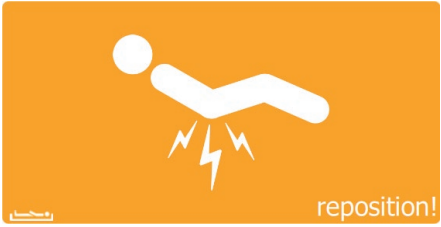
1. **CareMonitor screen (with number of monitored patients)**
2. **Warnings screen (with number of notifications)**
3. **Management screen**
4. **System Settings screen**

COLOURS OF THE TILES

Colour	Meaning
GREY	**GREY**: no monitoring: either no value could be received (intentionally disabled or because of wrong values) or that Air Pad or Wetness Pad is disconnected
GREEN	**GREEN**: monitoring activated, status without warning: values are in between threshold ranges (OR WARNINGS TURNED OFF when monitoring is activated!)
YELLOW	**YELLOW**: early warning: warning phase was reached, but no immediate action is required
ORANGE	**ORANGE**: a severe event was detected but no immediate action is required (e.g. Decubitus/Movement Notification clock ran out of time or no movement detected for a specific amount of time during Motion Monitoring)
RED	**RED**: a critical event was detected and a manual action is required (e.g. Bed Exit alert indicates possible fall so the nurse should visit patient immediatly)

LINET

ALERTS

Tile	Meaning
OUT 5 min	ALERT OF BED EXIT MONITORING
47 min since mv 45 min	ALERT OF MOTION MONITORING
reposition!	ALERT OF DECUBITUS/MOVEMENT NOTIFICATION
50 % 50%	ALERT OF WETNESS MONITORING
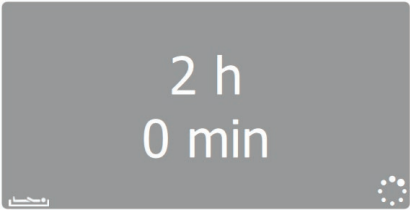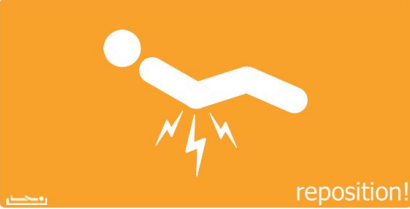
STATUSES OF BED EXIT MONITORING

Tile	Meaning
IN — 5 min (green)	BED EXIT MONITORING ACTIVATED PATIENT ON THE BED
OUT (green)	BED EXIT MONITORING ACTIVATED PATIENT OUT OF THE BED NO ALERT INDICATED BECAUSE ALERT NOTIFICATIONS ARE DELAYED INTENTIONALLY
OUT — 10 sec (yellow)	EARLY WARNING
OUT — 5 min (red)	BED EXIT ALERT IMMEDIATE ACTION REQUIRED

LINET

STATUSES OF MOTION MONITORING

Tile	Meaning
- - min since mv · 10 min	MOTION MONITORING NOT ACTIVATED
46 min since mv · 70 min	MONITORING ACTIVATED, NO WARNING
21 min seit mv · 25 min	EARLY WARNING
47 min since mv · 45 min	ALERT

STATUSES OF DECUBITUS/MOVEMENT NOTIFICATION

Tile	Meaning
2 h **0 min**	NOT ACTIVATED OR RESET
1 h **59 min** at 16:31	DECUBITUS/MOVEMENT NOTIFICATION ACTIVATED
reposition!	ALERT

STATUSES OF WETNESS MONITORING

Tile	Meaning
	WETNESS PAD DISCONNECTED WETNESS MONITORING NOT ACTIVATED
	WETNESS MONITORING ACTIVATED
	EARLY WARNING
	ALERT

GLOBAL WARNINGS SETTINGS
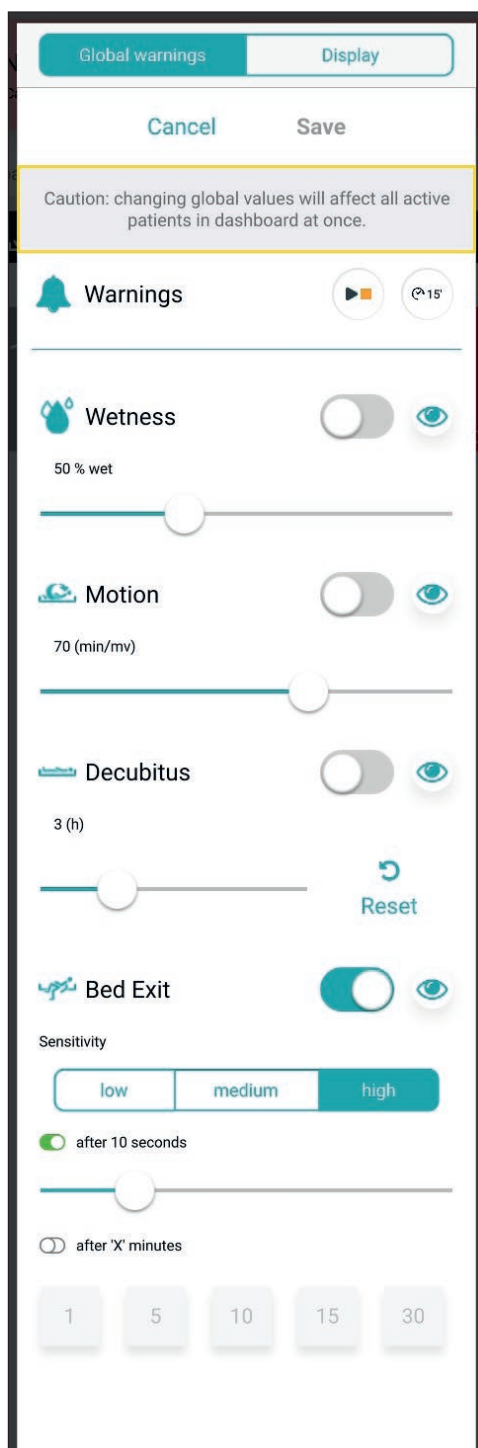
Fig. Global warnings settings

Abbreviation	Meaning
Wetness	Wetness Monitoring
Motion	Motion Monitoring
Decubitus	Decubitus/Movement Notification
Bed Exit	Bed Exit Monitoring

RANGES OF VALUES

Periods for Bed Exit Monitoring are **early** (about **3** seconds) or **10** seconds or **20** seconds or **30** seconds or **40** seconds or **50** seconds or **1** minute or **5** minutes or **10** minutes or **15** minutes or **30** minutes.

Periods for Motion Monitoring are multiples of **5** minutes from **10** minutes to **100** minutes.

Periods for Decubitus/Movement Notification are **2** hours or **3** hours or **4** hours or **5** hours or **6** hours.

Limits of the wetness sensitivity are **25%** or **50%** or **75%** or **100%.**

To set Sensitivity of Bed Exit Monitoring:

► Click on **low** button or **medium** button or **high** button.

To set Sensitivity of Motion Monitoring:

► Move with slide to required position according to the strength of the movement depending on the individual patient's risk of pressure injury.

Indicator	Meaning
	Warning will be triggered on each CareMonitor user interface connected to the SafeSense® 3 system when corresponding status occurs during activated monitoring (WARNINGS TURNED ON).
	Warning will **not** be triggered on any CareMonitor user interface connected to the SafeSense® 3 system when corresponding status occurs during activated monitoring (WARNINGS TURNED OFF).
	Warnings visible on a single CareMonitor user interface and audible from a single CareMonitor user interface and sent to Nurse Call system.
	Warnings not visible on a single CareMonitor user interface and not audible from a single CareMonitor user interface, but sent to the Nurse Call system.
Reset	Click on this button to zero the countdown of the Decubitus/Movement Notification. If a set period is changed, the countdown related to the previous setting is not reset. RESET button serves to reset the running countdown.

To enter Global warnings settings:

► Click on the GEAR Icon (⚙).

► Click on the **Global warnings** field.

► Click on the **Save** in the upper right corner of the window.

To enable Nurse Call alert only:

► Turn on the notification of warnings (⬤).

To change a setting of selected monitoring:

► Click on a corresponding sliding button, keep it and slide to the required position.

► Click on the **Save** in the upper right corner of the window.

NOTE: Setting of the Bed Exit Monitoring includes sliding button and tiles with values in minutes.

GLOBAL DISPLAY SETTINGS
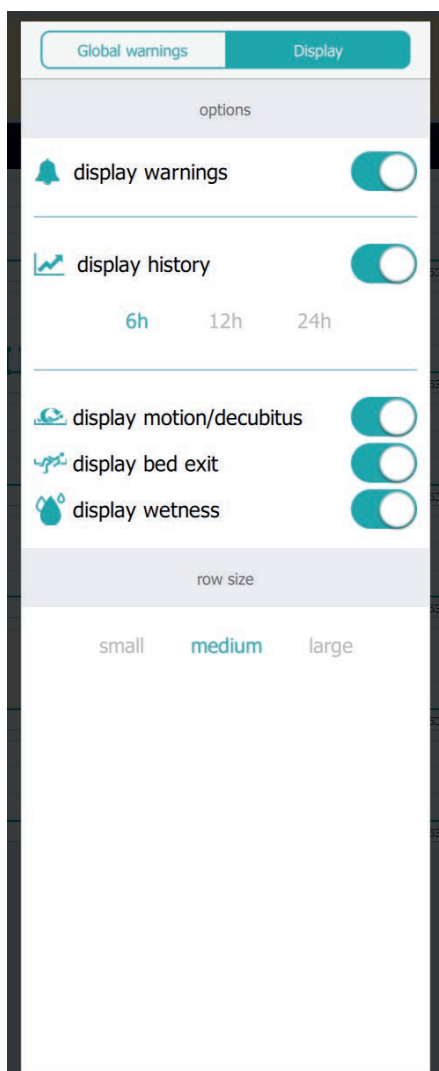
Fig. Display settings

Indicator	Meaning
	ON
	OFF

Function	Meaning
display warnings	**ON**: Upper horizontal bar with warning notifications is displayed on the CareMonitor screen. **OFF**: Upper horizontal bar with warning notification is hidden on the CareMonitor screen.
display history	**ON**: Chart of Motion History is displayed on the CareMonitor screen with selected range of hours (**6** hours or **12** hours or **24** hours). **OFF**: Chart of Motion History is hidden.
display motion/decubitus	**ON**: Tiles indicating Motion Monitoring statuses or Decubitus/Movement Notification statuses are displayed on the CareMonitor screen. **OFF**: Tiles indicating Motion Monitoring statuses or Decubitus/Movement Notification statuses are hidden on the CareMonitor screen.
display bed exit	**ON**: Tiles indicating Bed Exit Monitoring statuses are displayed on the CareMonitor screen. **OFF**: Tiles indicating Bed Exit Monitoring statuses are hidden on the CareMonitor screen.
display wetness	**ON**: Tiles indicating Wetness Monitoring statuses are displayed on the CareMonitor screen. **OFF**: Tiles indicating Wetness Monitoring statuses are hidden on the CareMonitor screen.
row size	To set proportions of the displayed tiles on the CareMonitor screen, click on a corresponding word (three sizes are available: **small**, **medium**, **large**).

To enter Display settings:

► Click on the GEAR Icon (⚙).

► Click on the **Display** field.

► Click anywhere outside the Global warnings window.

To set proportions of the displayed tiles on the CareMonitor screen:

► Click on the GEAR Icon (⚙).

► Click on the **Display** field.

► Click on **small** or **medium** or **large**.

Name of the selected size will be highlighted.

► Click anywhere outside the Global warnings window.

SINGLE PATIENT SCREEN
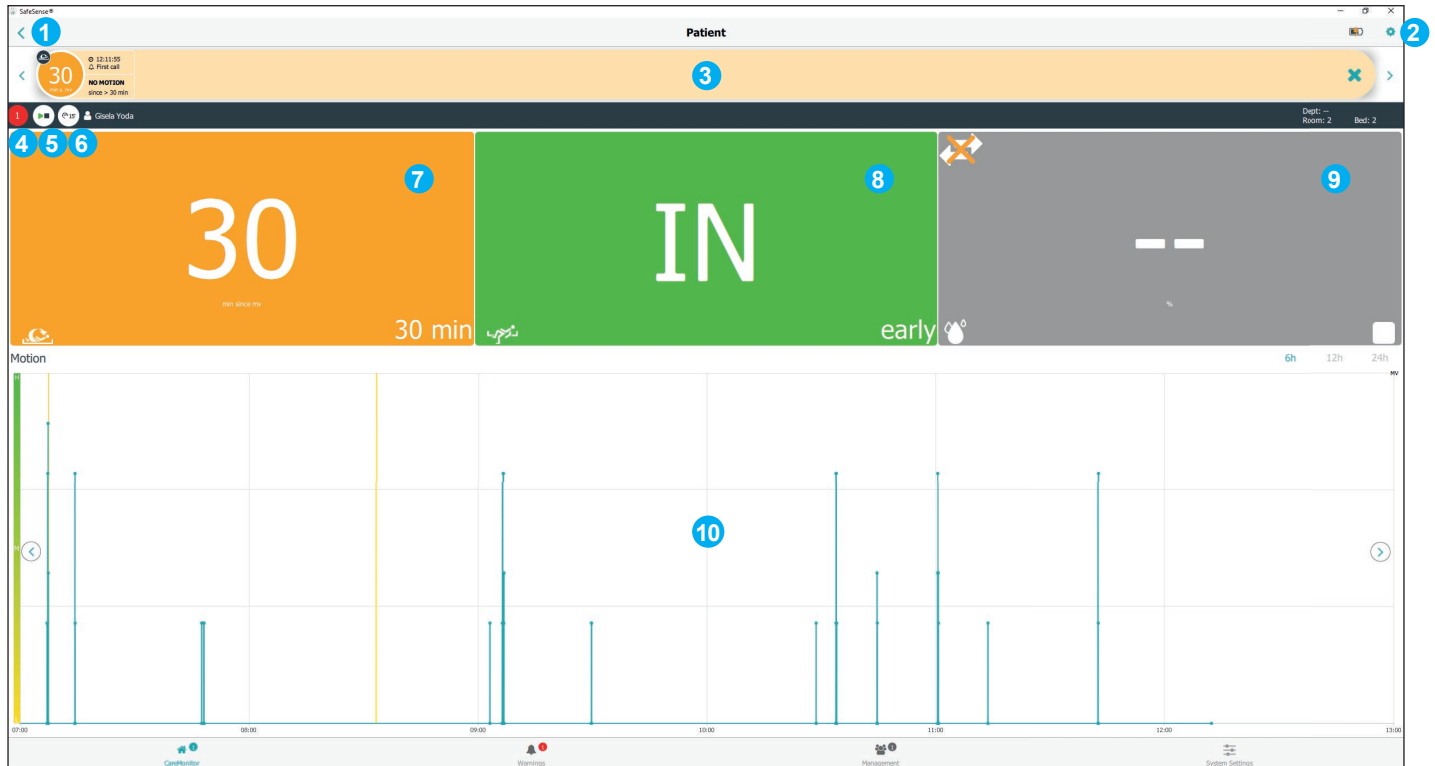
Fig. View on a single monitored patient (Patient screen)

Indicator	Meaning
▶■	Press the PLAY/STOP Icon to deactivate notification of warnings for the single patient.
▶■	Notification of warnings is OFF. Press the PLAY/STOP Icon to activate notification of warnings for the single patient. PAUSE function is disabled (grey circle).
⏱15'	No type of monitoring is PAUSED. Press the white PAUSE Icon to pause all types of monitoring.
12min	All types of monitoring are PAUSED for 15 minutes (or less). Press the orange PAUSE Icon to cancel the PAUSE period.

1. BACK to the CareMonitor screen
2. GEAR Icon (settings for single patient)
3. Upper horizontal bar with warning notifications (left and right arrows allow transition to the other warning notifications of the same patient)
4. Number of warnings related to this patient
5. PLAY/STOP Icon (green triangle + black square: warning notifications ON; black triangle + orange square: warning notifications OFF)
6. PAUSE Icon (white circle: monitoring not PAUSED; orange circle: monitoring PAUSED for 15 minutes)
7. Status of Motion Monitoring or Status of Decubitus/Movement Notification
8. Status of Bed Exit Monitoring
9. Status of Wetness Monitoring
10. Chart of Motion History (H - HIGH, M - MEDIUM, L - LOW)

To enter Patient screen:

► Click on the tile with patient name or on a tile of the monitoring statuses next to the tile with patient name on the CareMonitor screen.

To enter settings for single patient:

► Click on the GEAR Icon (⚙) on the Patient screen.

SETTINGS FOR A SINGLE PATIENT
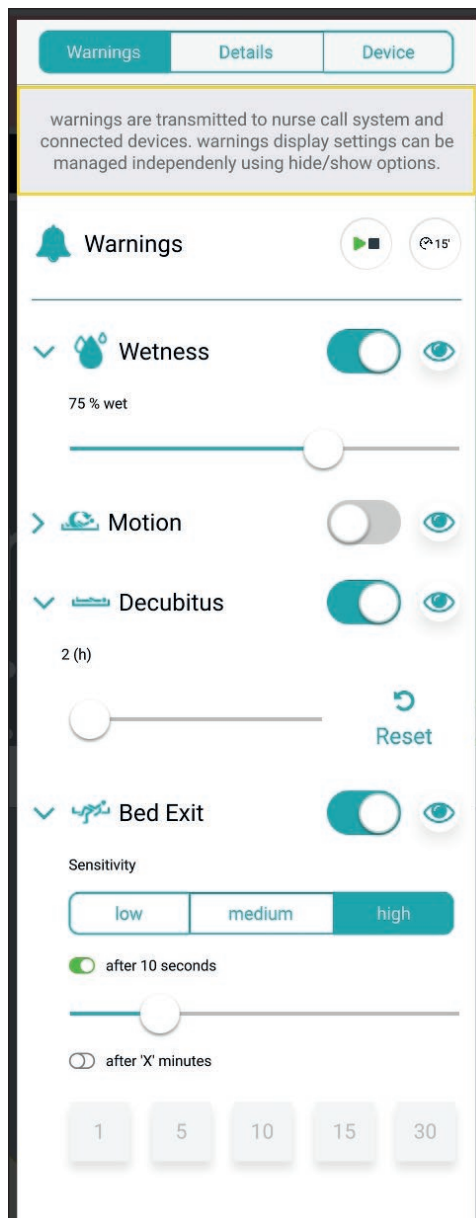
Fig. Warnings window (settings for single patient)

To change a setting of selected monitoring:

► Click on a corresponding sliding button, keep it and slide to the required position.

► Click anywhere outside the Warnings window.

NOTE: Setting of the Bed Exit Monitoring includes sliding button and tiles with values in minutes.

Abbreviation	Meaning
Wetness	Wetness Monitoring
Motion	Motion Monitoring
Decubitus	Decubitus/Movement Notification
Bed Exit	Bed Exit Monitoring

RANGES OF VALUES

Periods for Bed Exit Monitoring are **early** (about **3** seconds) or **10** seconds or **20** seconds or **30** seconds or **40** seconds or **50** seconds or **1** minute or **5** minutes or **10** minutes or **15** minutes or **30** minutes.

Periods for Motion Monitoring are multiples of **5** minutes from **10** minutes to **100** minutes.

Periods for Decubitus/Movement Notification are **2** hours or **3** hours or **4** hours or **5** hours or **6** hours.

Limits of the wetness sensitivity are **25%** or **50%** or **75%** or **100%.**

To set Sensitivity of the Bed Exit Monitoring and Motion Monitoring:

► Click on **low** button or **medium** button or **high** button.

Indicator	Meaning
	Warning will be triggered on each CareMonitor user interface connected to the SafeSense® 3 system when corresponding status occurs during activated monitoring (WARNINGS TURNED ON).
	Warning will **not** be triggered on any CareMonitor user interface connected to the SafeSense® 3 system when corresponding status occurs during activated monitoring (WARNINGS TURNED OFF).
	Warnings visible on a single CareMonitor user interface and audible from a single CareMonitor user interface and sent to Nurse Call system.
	Warnings not visible on a single CareMonitor user interface and not audible from a single CareMonitor user interface, but sent to the Nurse Call system.
Reset	Click on this button to zero the countdown of the Decubitus/Movement Notification.

Fig. Patient Details (Id, First name, Last name, Department, Room number, BedNr)

Fig. Device Specifications (DeviceId, Eth0 IP, Wlan0 IP, Wifi quality, System time, Som Serial Id, Firmware Version, Embedded Version, License, App Version)

To change Patient Details:

► Click on a selected line to write.

WARNINGS SCREEN
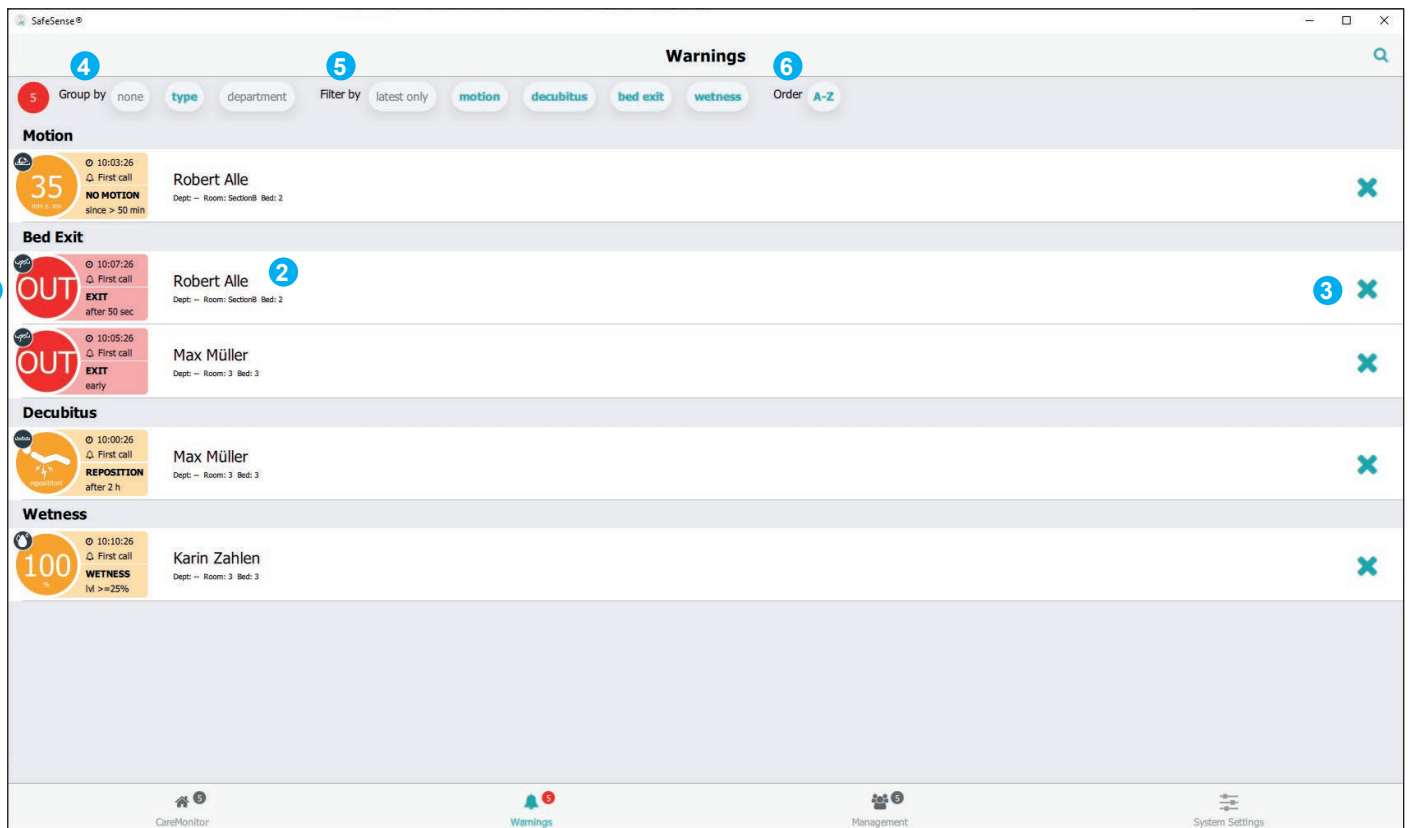
Fig. Warnings screen

1. Type of warning notification
2. Name of monitored patient
3. CROSS Icon (delete)
4. Grouping of the warnings according to type or department (none - no grouping is selected)
5. Filter of the warnings according to warning type (motion, decubitus, bed exit, wetness) or according to newness (latest only)
6. Grouping of the warnings according to alphabetical order from A to Z or from Z to A

To enter Warnings screen:

► Click on the Warnings Screen Icon (🔔) on the bottom bar of CareMonitor screen.

To delete a bar with recorded warning notification:

► Click on the CROSS Icon on the right side of a bar with recorded warning notification.

To filter warning notifications according to the warning types:

► Click on the button with corresponding writing under the Warnings heading to select the types of warnings which should be

displayed.

Buttons indicating the selected warning types are marked with green writings and the rest of warning types is not displayed.

MANAGEMENT SCREEN
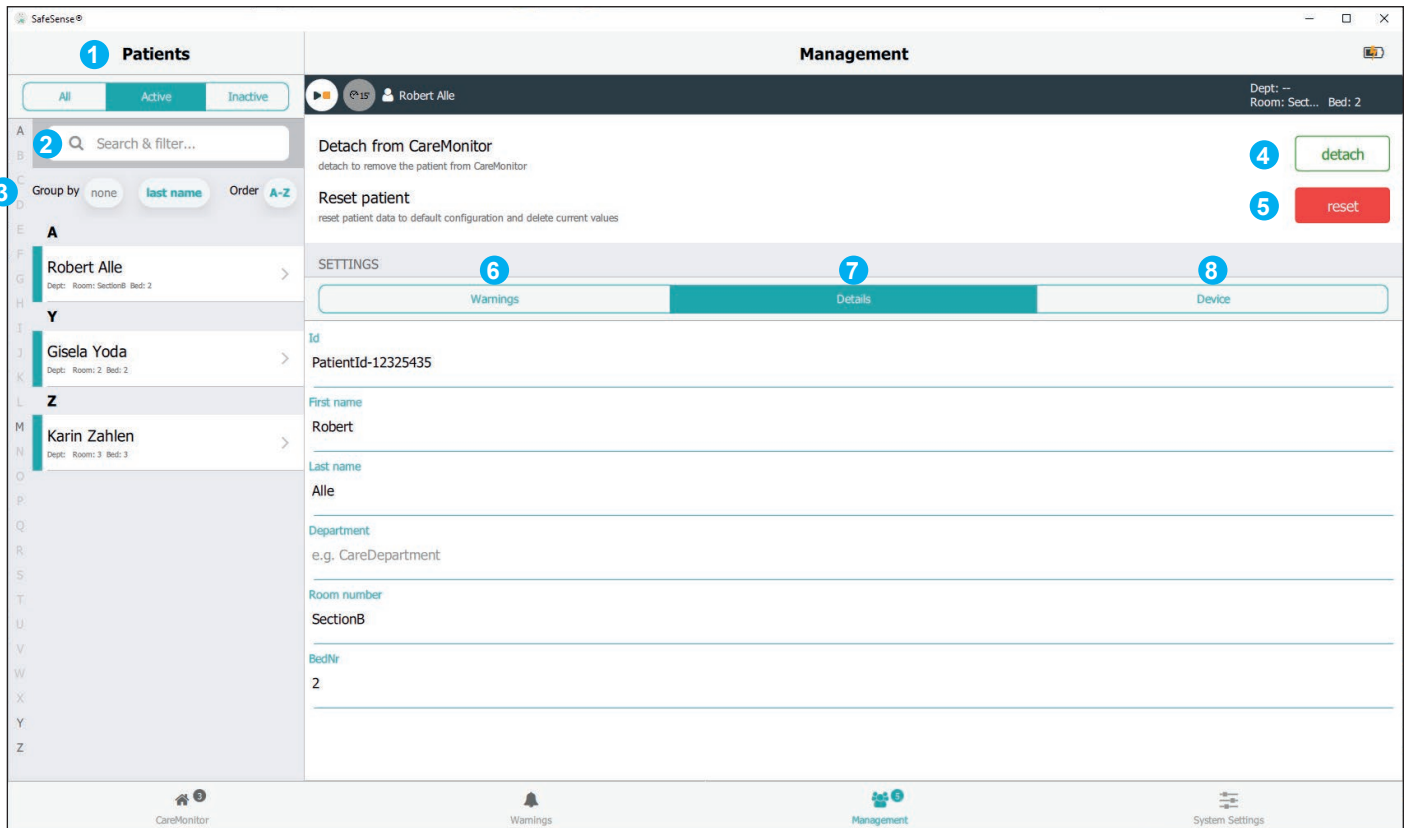
Fig. Management screen

1. Patients section (lists of patients according to the monitoring status: All or Active or Inactive)
2. Search & Filter field (search a selected word)
3. Grouping of the patients according to last name or alphabetical order from A to Z or from Z to A (none - no grouping is selected)
4. Detach button (click on the button to turn off monitoring of the selected patient - Detached patient is inactive and no monitoring can be set in his/her case in the SafeSense® 3 Monitoring System.)
5. Reset button (click on the button to reset patient data to default configuration and to delete current values of the patient in SafeSense® 3 Monitoring System)
6. Warnings Settings for Single Patient
7. Patient Details (Identification number, First name, Last name, Department, Room number, Bed number)
8. Device Specifications (Device identification number, Eth0 IP, Wlan0 IP, Wifi quality, System time, Som Serial Id, Firmware version, Embedded version, License, Application version)

To detach patient from the SafeSense® 3 Monitoring System:

► Select an active patient in the left column on the Management screen.

► Click on the Detach button in the upper right corner of the Management screen.
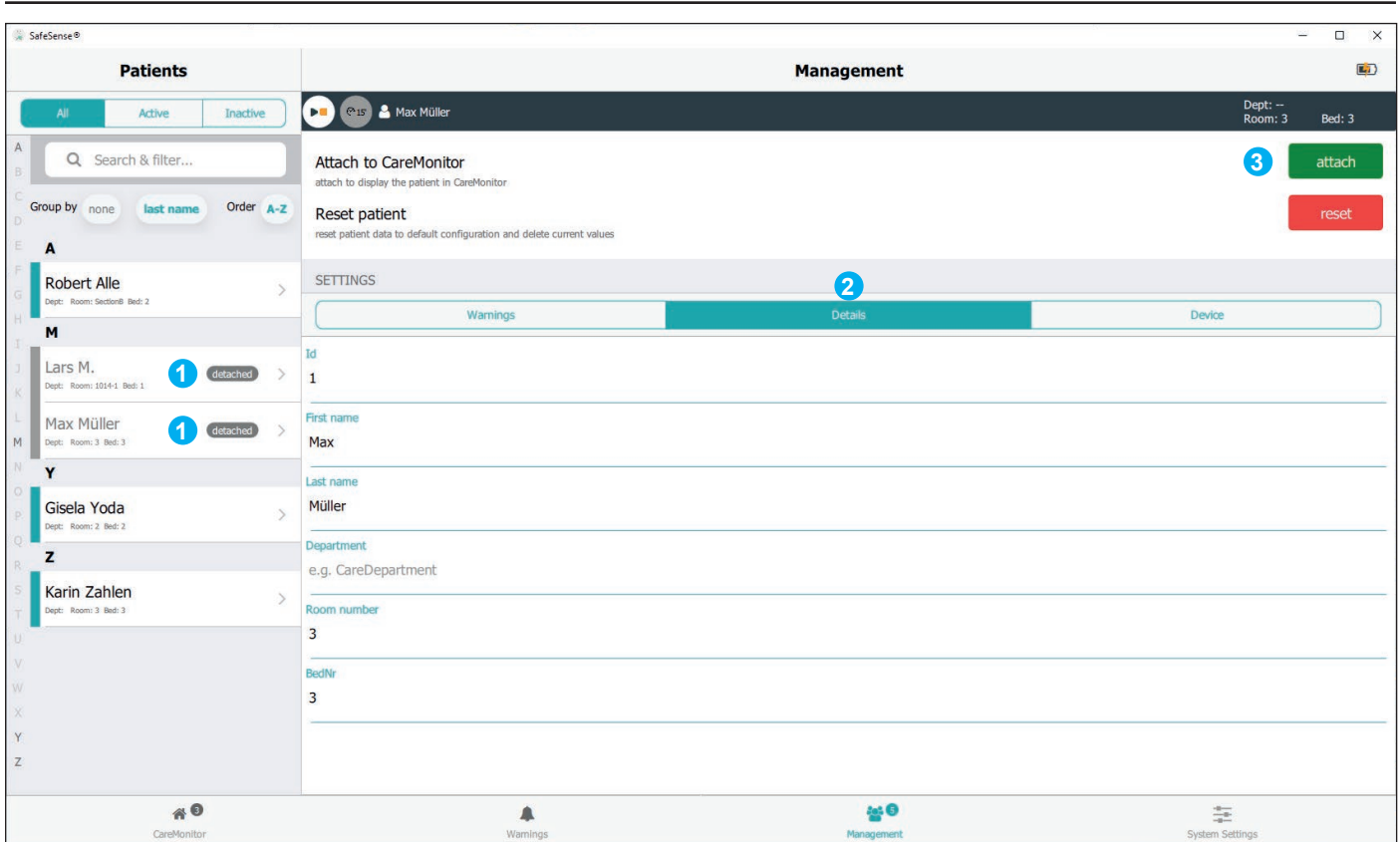
Fig. Detached patients

1. Detached patients (Inactive patients)
2. Patient Details (Identification number, First name, Last name, Department, Room number, Bed number)
3. Attach button (click on the button to turn on monitoring of the selected patient - Attached patient is active and monitoring can be set in his/her case in the SafeSense® 3 Monitoring System.)

To attach patient to the SafeSense® 3 Monitoring System:

► Select a detached patient in the left column on the Management screen.

► Click on the Attach button in the upper right corner of the Management screen.
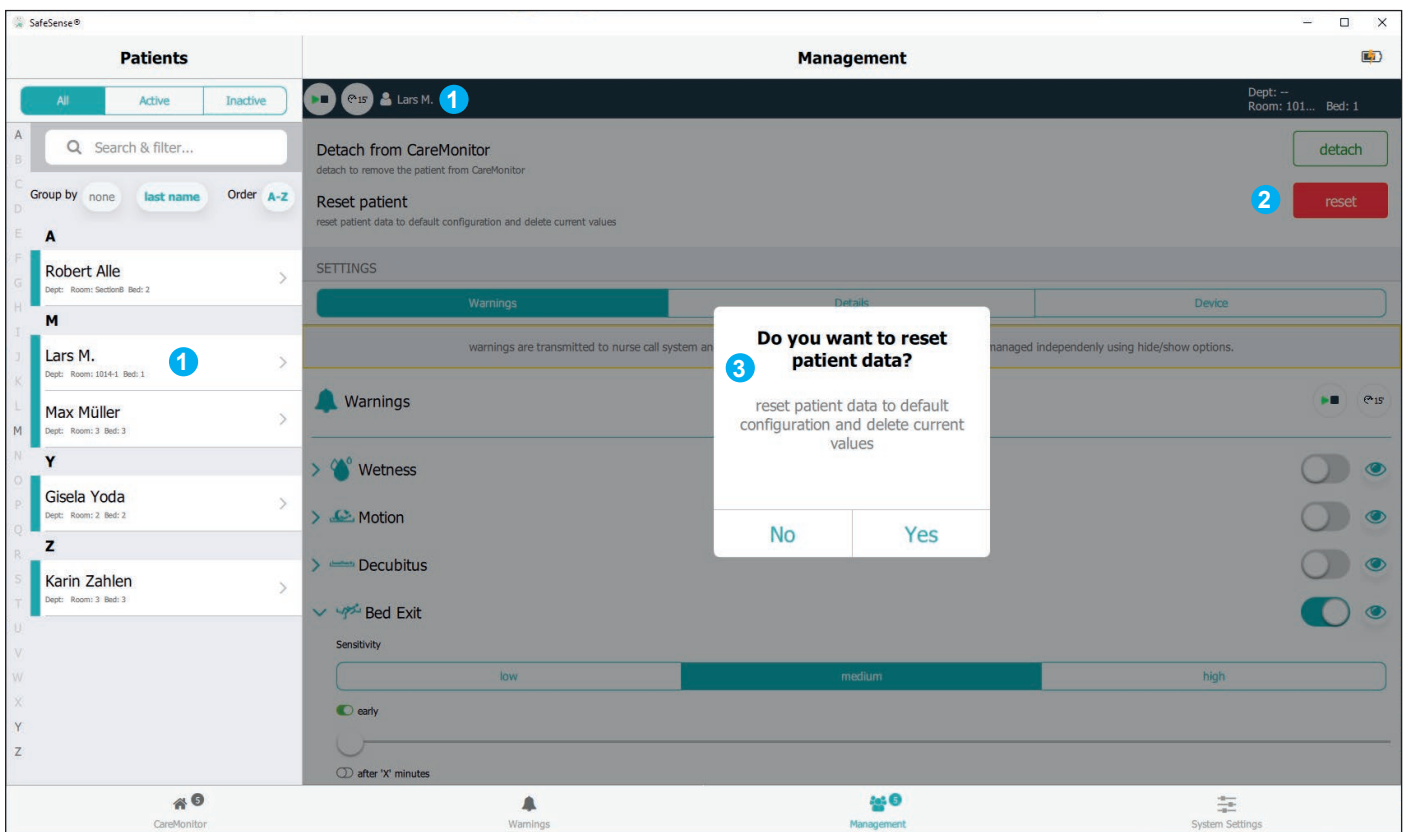
Fig. Reset confirmation window

1. Selected patient whose values will be reset
2. Reset button (click on the button to reset patient data to default configuration and to delete current values of the patient in SafeSense® 3 Monitoring System)
3. Reset confirmation window (press Yes to confirm the reset or No to cancel the reset)

To reset patient's settings and values:

► Select a patient in the left column on the Management screen.

► Click on the Reset button in the upper right corner of the Management screen.

► Confirm the reset by click on Yes on the Reset confirmation window.

SYSTEM SETTINGS
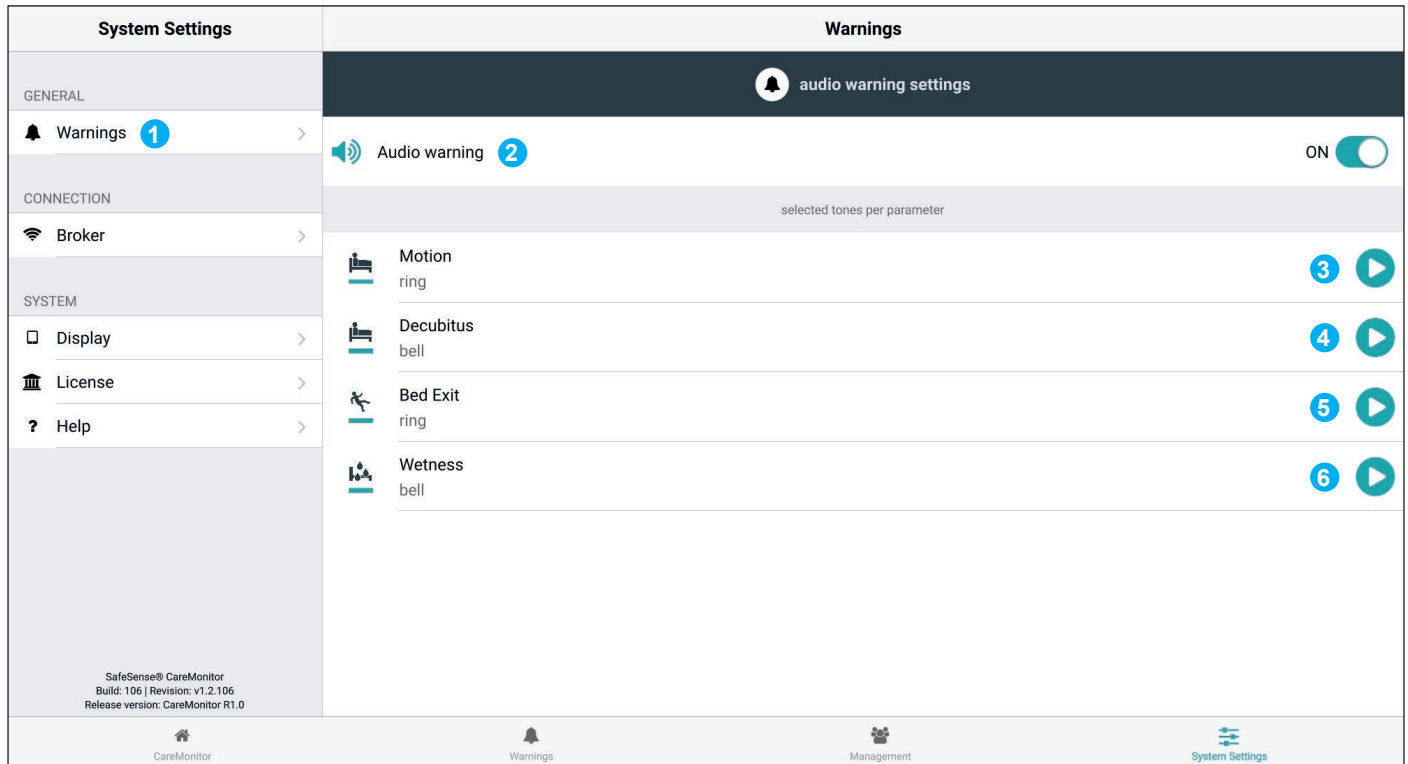
Fig. Warnings section of System Settings screen

1. **Warnings section of System Settings**
2. **Global setting of the warning sounds (ON/OFF)**
3. **Tone indicating alerts of Motion Monitoring**
4. **Tone indicating alerts of Decubitus/Movement Notification**
5. **Tone indicating alerts of Bed Exit Monitoring**
6. **Tone indicating alerts of Wetness Monitoring**

To sound a tone connected with a corresponding warning notification:

► Click on the corresponding PLAY Icon ( ).
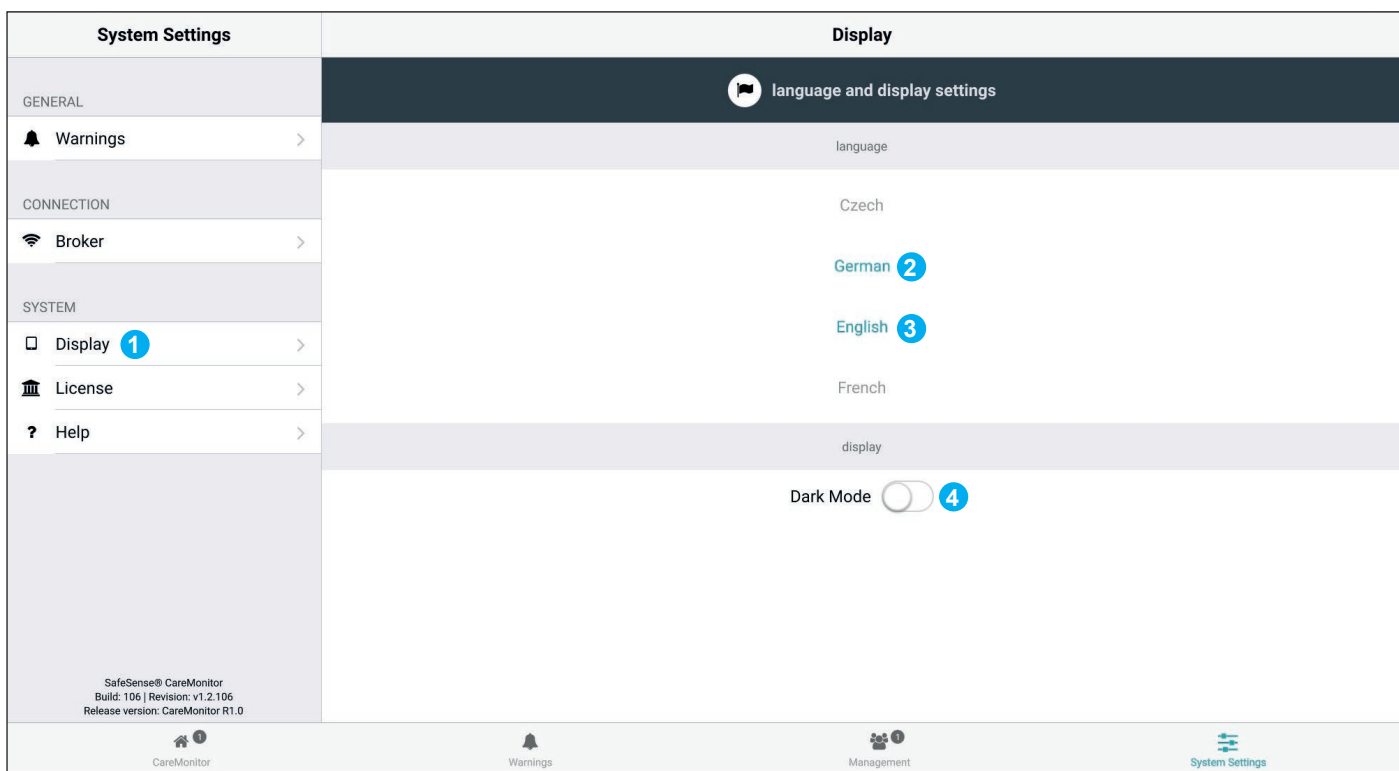
Fig. Display section of the System Settings screen

1. **Display section of System Settings**
2. **Available language: German**
3. **Available language: English**
4. **Dark Mode Sliding Button**

To set language of this user interface:

► Click on the name of an available language.

To set dark mode of this user interface:

► Slide the Dark Mode Sliding Button to the right.
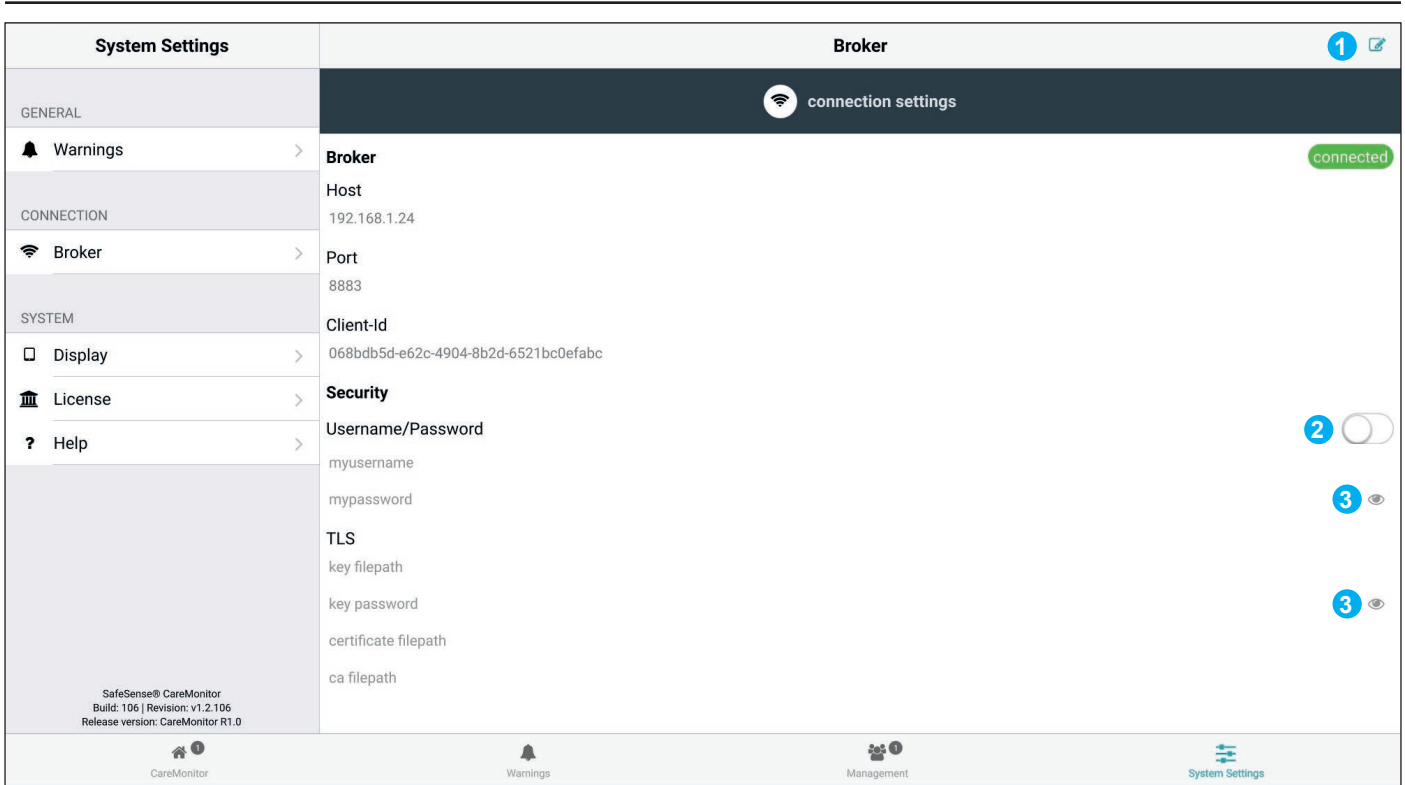
Fig. Broker section of the System Settings screen

1. **Edit Icon**
2. **Password Activation Button**
3. **Password Display Icon (click on the icon to show the password instead of the black dots)**

To set password:

► Click on Edit Icon (**1**) in upper right corner of the System Settings screen.

► Click on OK on the displayed Caution window.

► Set your user name and your password.

► Ensure that nothing else has been unintentionally changed.

► Click on Save Icon in place of the Edit Icon to confirm the changes.
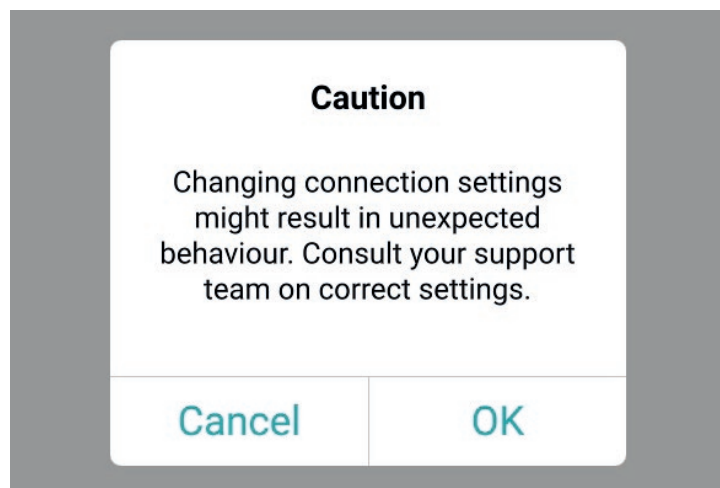
Fig. Caution window (Beware of changes in the connection settings!)

LINET

System Settings	License

🏛 **license and module settings**

active licenses
SafeSense 3 (1) | SafeSense 5 (0)

GENERAL

🔔 Warnings >

CONNECTION

📶 Broker >

SYSTEM

🖥 Display >

🏛 License >

❓ Help >

SafeSense 3
care parameters

🛏 🏃 💧

SafeSense® 3 actively supports nursing care, diagnostics and therapy tasks. This license includes care parameters such as **Bed Exit**, **Motion**, **Decubitus** and **Wetness**[*].

[*] only available with separate sensors.

SafeSense® CareMonitor
Build: 106 | Revision: v1.2.106
Release version: CareMonitor R1.0

🏠 CareMonitor   🔔 Warnings   👥 Management   ⚙ System Settings

Fig. License section of the System Settings screen

11.5.3 Attendant Control Panel with SafeSense® 3 Control (only for Image 3 and Eleganza 2)

The Attendant Control Panel with SafeSense® 3 Control is a control element for Image 3 medical bed or Eleganza 2 medical bed. The Attendant Control Panel with SafeSense® 3 Control indicates Bed Exit Monitoring, Motion Monitoring, Decubitus/Movement Notification and Wetness Monitoring. This Attendant Control Panel can be hung on the foot board or on the siderails if required or it can be stored in the Linen Shelf. It is possible to hold this Attendant Control Panel in the hand while operating.

► Ensure that exclusively trained nursing staff operates the Attendant Control Panel with SafeSense® 3 Control.
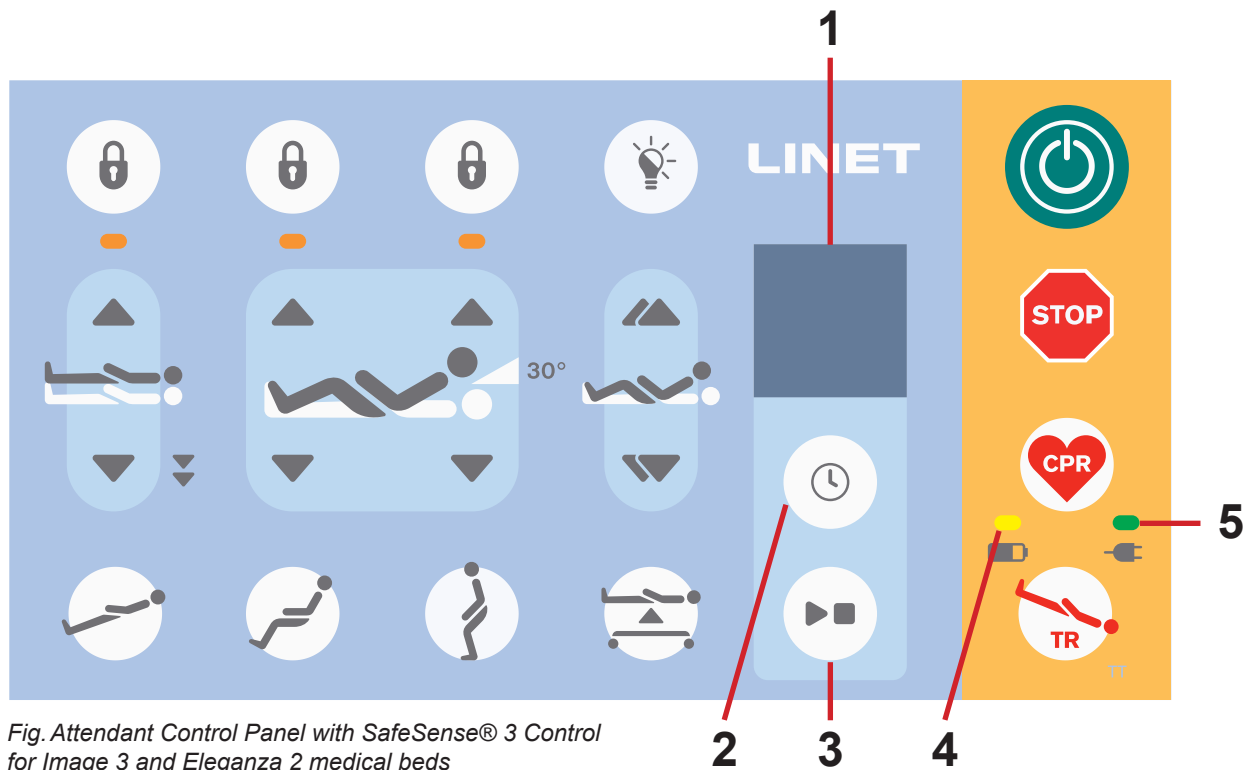
Fig. Attendant Control Panel with SafeSense® 3 Control for Image 3 and Eleganza 2 medical beds

1. **SafeSense® 3 Display**
2. **SELECT and TIME Button**
3. **PLAY and STOP Button**
4. **Accumulator Charge Status LED**
5. **Mains Power LED**

PLAY and STOP Button

⚠️ **CAUTION**
PLAY and STOP button on the Hub Control Panel does not mute any sounding alert! Use only Attendant Control Panel with SafeSense® 3 Control and SafeSense Application to mute any sounding alert!

Unintended press of the PLAY and STOP button causes return to the default monitoring status (Bed Exit Monitoring with set **early** period and Motion Monitoring with set **1hour** period).
Press of the PLAY and STOP button during triggered alert causes mute of sounding alert and deactivation of the set monitoring.

SafeSense® 3 Control

It is possible to set the other combinations of Bed Exit Monitoring, Motion Monitoring, Decubitus/Movement Notification and Wetness Monitoring at the same time. It is not possible to activate Motion Monitoring and Decubitus/Movement Notification at the same time. Display of the Attendant Control Panel with SafeSense® 3 Control indicates Wetness Monitoring but it is not control element of Wetness Monitoring. Setting order of the SafeSense® 3 functions is 1) **Bed Exit Monitoring**, 2) **Motion Monitoring** and 3) **Decubitus/Movement Notification**.

To set Bed Exit Monitoring:

► Press and hold button 🕐 once or repeatedly until there is flashing **Bed Exit Monitoring Indicator** on the left side of the display.

► Press button 🕐 during flashing of the **Bed Exit Monitoring Indicator** once or repeatedly to set required period during

which no Bed Exit Alert will be triggered unless patient is on the bed.
Periods for Bed Exit Monitoring are: **early** (Bed Exit Alert will be triggered in 3 - 5 seconds), **1 min, 5 min**, **10 min**, **15 min** or **30 min**.

To set Motion Monitoring:

► Press and hold button 🕐 once or repeatedly until there is flashing **Motion Monitoring Indicator** on the right side of the display.

► Press button 🕐 during flashing of the **Motion Monitoring Indicator** once or repeatedly to set required period during

which the absence of patient movement on the bed is tolerated.
Periods for Motion Monitoring are: **10 minutes, 30 minutes, 60 minutes or 90 minutes**.
Countdown to the selected time limit (e.g. 4 hours) starts again from the beginning after patient movement on the mattress.
CareMonitor shows chart of the patient movements if it is allowed in the settings.
Alert is triggered if no patient movement occurs before the set period has elapsed.

To set Decubitus/Movement Notification:

► Press and hold button 🕐 once or repeatedly until there is flashing **Decubitus/Movement Notification Indicator** on the right side of the display.

► Press button 🕐 during flashing of the **Decubitus/Movement Notification Indicator** once or repeatedly to set required

period after which nursing staff is notified to check position of the patient.
Periods for Decubitus/Movement Notification are: **2 hour, 3 hours, 4 hours, 5 hours or 6 hours**.
Alert is triggered after the set period has elapsed.

To deactivate selected monitoring:

► Press and hold button 🕐 repeatedly until the indicator of the selected monitoring is flashing.

► Press button 🕐 repeatedly until there is a cross over the indicator of the selected monitoring.

Selected monitoring is deactivated.

OR

► Select Motion Monitoring when Decubitus/Movement Notification is selected or select Decubitus/Movement Notification when Motion Monitoring is selected.
Selected monitoring is deactivated and another monitoring is selected.

OR

► Press button ▶■ to turn OFF the SafeSense® 3 system.

All monitorings are deactivated.

To mute triggered acoustic signal (Bed Exit Alert) or accept the triggered alert:

► Press button ▶■ when acoustic signal sounds or alert is displayed.

Acoustic signal is muted, triggered alerts are accepted and set monitoring is deactivated.

To return to the main screen:

► Press and hold button ▶■ when another screen is displayed.

SafeSense® 3 Display (main screen)

Fig. SafeSense® 3 Display - monitoring ON
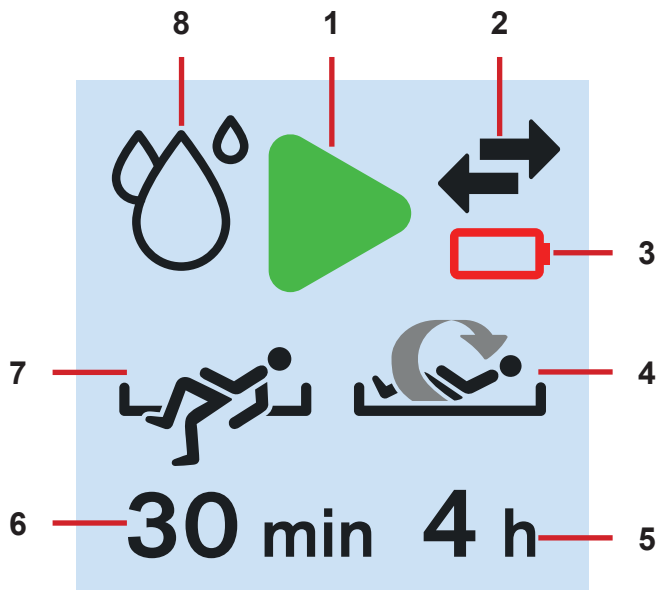
1.   **Activation Symbol (selected type (or types) of monitoring is (are) activated)**
2.   **Indicator of communication between Hub and Attendant Control Panel (black arrows - communication works, orange cross over black arrows - communication does not work)**
3.   **Indicator of discharged Hub battery**
4.   **Indicator of activated Motion Monitoring**
5.   **Period during which the absence of patient movement on the bed is tolerated. Countdown to the selected time (e.g. 4 hours) starts again from the beginning after patient movement on the mattress.**
6.   **Period during which the Bed Exit alerts are not triggered unless patient is on the bed (e.g. no alert during 30 minutes)**
7.   **Indicator of activated Bed Exit Monitoring (patient presence on the mattress is monitored)**
8.   **Indicator of Wetness Monitoring (Wetness Monitoring is activated)**

Fig. SafeSense® 3 Display - monitoring OFF
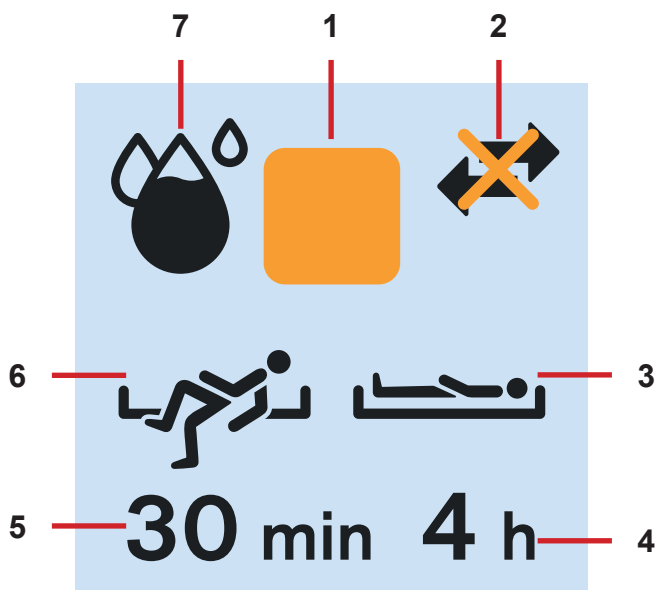
1.   **Deactivation Symbol**
2.   **Indicator of communication between Hub and Attendant Control Panel (black arrows - communication works, orange cross over black arrows - communication does not work)**
3.   **Indicator of activated Decubitus/Movement Notification**
4.   **Period after which nursing staff is notified to check position of the patient**
5.   **Period during which the Bed Exit alerts are not triggered unless patient is on the bed (e.g. no alert during 30 minutes)**
6.   **Indicator of activated Bed Exit Monitoring (patient presence on the mattress is monitored)**
7.   **Indicator of Wetness Monitoring (Wetness Monitoring is activated - The more black symbol of drop, the higher degree of the wetness is monitored.)**

Orange square symbol is displayed instead of the green activation symbol when no monitoring is activated.
Indicator of Wetness Monitoring is not displayed when Wetness Monitoring is not activated.
Indicator of Wetness Monitoring changes according to the degree of monitored wetness. The more black symbol of drop, the higher degree of the wetness is monitored.

Fig. Bed Exit Alert (monitored patient is not present on the mattress)

Fig. Motion Monitoring Alert (expired period during which the absence of patient movement on the mattress was tolerated)

Fig. Decubitus/Movement Notification Alert (nursing staff is notified to check position of the patient)

Mains Power LED Signalisation

MAINS POWER LED	MEANING
lit	connected to the mains
flashing: 0,6s lit / 0,6s not lit	keyboard error (flashing inverted to Lock LED)
	error (first fault)
flashing: 0,1s lit / 0,1s not lit	service mode
not lit	disconnected from the mains power
	transformer switching error

Accumulator Charge Status LED Signalisation

ACCUMULATOR INDICATOR	MEANING
lit	accumulator disconnected or faulty
flashing: 1,6s lit / 0,2s not lit	accumulator deeply discharged
flashing: 0,1s lit / 0,1s not lit	accumulator discharged
flashing: 0,2s lit / 1,6s not lit	accumulator is charging
not lit	accumulator charged

12 Cleaning and Disinfection

⚠️ **WARNING!**
Risk of injury due to accidental bed movement!
► Always disable the function buttons of a medical bed when cleaning SafeSense® 3 system components (Hub Box, Air Pad, Wetness Pad and cables) installed on the medical bed.

⚠️ **CAUTION!**
Risk of material damage due to cleaning of the SafeSense® 3 system in a washing machine!
► Before machine washing of a medical bed, always remove the components of the SafeSense® 3 system (Hub Box, Air Pad, Wetness Pad and cables) from the medical bed on which the system is installed!

⚠️ **CAUTION!**
Risk of material damage due to steam cleaning of the SafeSense 3 Monitoring System!
► Always remove the components of the SafeSense® 3 Monitoring System (Hub Box, Air Pad, Wetness Pad and cables) from the Eleganza 2 medical bed on which the system has been installed!

⚠️ **CAUTION!**
Risk of material damage due to incorrect washing of the Wetness Pad!
► It is recommended to wash the Wetness Pad at temperature of 60°C.
► Do not tumble dry for maximum lifetime of the Wetness Pad (50 washes). Washing of the Wetness Pad at temperature of 85°C with medium heat tumble dry causes shorter lifetime of the Wetness Pad (30 washes).
► Do not use fabric softener. Do not make the Wetness Pad waterproof.
► Hang Wetness Pad to dry after washing.

⚠️ **CAUTION!**
Material damage due to incorrect cleaning/disinfection!
► Do not use washing machines.
► Do not use pressure or steam cleaners.
► Follow the instructions and observe the dosages recommended by the manufacturer.
► Ensure that disinfectants are selected and applied exclusively by qualified hygiene experts.
► **Check if used cleaning agents and disinfectants are compatible with materials that the product consists of! For information see the following table.**

PRODUCT COMPONENTS THAT ARE INTENDED TO BE CLEANED Do not clean what is not mentioned in this column!	MATERIALS (SURFACES OF THE MENTIONED COMPONENTS) Competent user is responsible for check if used cleaning agents and disinfectants are compatible with mentioned materials!
Air Pad	Polyester (PES)
Air Hose	Polyvinylchlorid (PVC)
Wetness Pad	Cotton
Hub box	Acrylonitrile butadiene styrene (ABS)
Hub holder	Lacquered steel + Polyamide (PA)
Cables (LAN cable, Nurse Call cable, Wetness Pad cable)	Polyvinyl chloride (PVC)

13 Troubleshooting

Problem	Possible Cause	Proposed Solution
Patients/residents do not appear in the Care-Monitor.	The respective terminal is not connected to the correct WLAN. Error message Connection established.	1. Select the „WLAN" tab under the settings of the terminal and check the WLAN connection. 2. Select the correct WLAN network and connect to it by entering a password.
	CareMonitor Application is not properly connected to the broker. Connection problem (Yellow connection error bar).	1. Open the Broker field under the „System Settings" tab. 2. Note host computer, user & password. 3. Check if broker is reachable. 4. Contact the service technician to access the Hub Box and synchronise the data.
	Patients/residents have been set to „inactive" in the patient overview.	1. Click on „Inactive" under the tab „Patients". 2. Select patient/resident. 3. Move the patient's/resident's tab to the left. 4. Click on the „Eye" icon to reactivate the patient/resident.
	Hub Box is not properly connected to the Broker. Connection problem.	1. Contact the service technician to access the Hub Box and synchronise the data.
No values are displayed or a patient/resident in the bed is displayed who is not lying in it.	Things were placed on the bed or the mattress was lifted and then placed back on the lying surface.	1. Switch off the Hub Box once by pressing and holding the power button until the box switches off. 2. Wait approx. 10 seconds and switch the box on again (briefly press the power button again). 3. Make sure that the mattress lies properly on the lying surface. 4. Check the position of Air Pad or Wetness Pad.
	Air Pad or Wetness Pad is not placed or connected correctly.	1. Check the position of the Air Pad or Wetness Pad and the correct attachment. 2. Make sure that the Air Hose or Wetness Pad Cable is not disconnected. 3. Check that the Air Hose is correctly plugged into both the Hub Box and the Air Pad.
(W)LAN connection not available.	Network malfunction or connection problems WLAN.	Contact your in house technical support. If the system does not work again after the repair, please contact LINET customer support or make an appointment with LINET service technician.
The Hub Box does not switch ON.	Problems with the power supply.	1. Stand-alone version: Check the power supply and pull the plug out of the socket. 2. Reconnect the plug after a short pause (approx. 10 sec.). 3. Check whether all plugs are still inserted in the Hub Box.
In the CareMonitor view, only the Motion Monitoring is displayed or, the other way round, only the Bed Exit monitoring.	Display fields have been hidden.	1. Click on the GEAR Icon in the upper right corner of the CareMonitor screen. 2. Make sure that Display settings are set as required. 3. If this is not the case, change the Display settings.

13.1 Error Codes

Error Code	Meaning	Action to Eliminate Error
0	Unknown Error	
1	Socket Connection Refused Error	
2	Socket Remote Host Closed Error	
3	Socket Host Not Found Error	
4	Socket Access Error	
5	Socket Resource Error	
6	Socket Timeout Error	
7	Socket Datagram Too Large Error	
8	Socket Network Error	
9	Socket Address In Use Error	
10	Socket Address Not Available Error	
11	Socket Unsupported Socket Operation Error	
12	Socket Unfinished Socket Operation Error	
13	Socket Proxy Authentication Required Error	
14	Socket Ssl Handshake Failed Error	Check connection settings.
15	Socket Proxy Connection Refused Error	If an error status remains, contact service department
16	Socket Proxy Connection Closed Error	approved by manufacturer. Report the error code
17	Socket Proxy Connection Timeout Error	displayed on the CareMonitor screen if needed.
18	Socket Proxy Not Found Error	
19	Socket Proxy Protocol Error	
20	Socket Operation Error	
21	Socket Ssl Internal Error	
22	Socket Ssl Invalid User Data Error	
23	Socket Temporary Error	
24	Mqtt Unacceptable Protocol Version Error	
25	Mqtt Identifier Rejected Error	
26	Mqtt Server Unavailable Error	
27	Mqtt Bad User Name Or Password Error	
28	Mqtt Not Authorized Error	
29	Mqtt No Ping Response	

14 Maintenance

⚠ **WARNING!**
Risk of injury when working on the system!
► Ensure that the system is disconnected from the mains power prior to installation, putting into service, maintenance and deinstallation of the SafeSense® 3 system.
► Ensure that the bed castors are locked prior to installation, putting into service, maintenance and deinstallation of the SafeSense® 3 system.

⚠ **WARNING!**
Risk of injury due to defective system!
► Have a defective SafeSense® 3 system repaired immediately.
► If the defect cannot be repaired, do not use the SafeSense® 3 system.

⚠ **CAUTION!**
Material damage due to incorrect maintenance!
► Ensure that maintenance is performed exclusively by manufacturer´s customer service or by authorised service personnel certified by the manufacturer.
► If the defect cannot be repaired, do not use the SafeSense® 3 system.

14.1 Regular maintenance

► Perform regularly visual check of the product (with delivery note if necessary).
► Ask service department of the manufacturer for addition of the original spare parts if some product parts are missing.
► Ask service department of the manufacturer for replacement of any damaged product parts by the original spare parts.

14.2 Spare Parts

The serial label contains information for claims and ordering replacement parts.

Information about spare parts is available from:
■ Manufacturer´s customer service
■ Sales department

14.3 Safety Technical Checks

⚠ **WARNING!**
Risk of injury due to incorrect safety technical checks!
► Ensure that safety technical checks are performed exclusively by manufacturer´s customer service or by authorised service personnel certified by the manufacturer.
► Ensure that the safety technical checks are recorded in the service and maintenance log.

Safety technical check of the SafeSense® 3 system must be performed at least once every 12 months.

The procedure for performing the safety technical check is stipulated in EN 62353:2014.

NOTE On request, the manufacturer will provide service documentation (e.g. circuit diagrams, component part lists, descriptions, calibration instructions etc.) for service personnel for the repair of ME equipment designated by the manufacturer as repairable by service personnel.

15 Disposal

15.1 Environment Protection

The company LINET® is aware of the importance of environmental protection for future generations. Within this company the environmental management system is applied in accordance with the internationally agreed standard ISO 14001. The compliance with this standard is annually tested by the external audit executed by an authorised company. Based on the Directive No. 2002/96/EC (Directive **WEEE** - Waste, Electric and Electronic Equipments) the company LINET, s. r. o. is registered in the List of Electric and Electronic Equipment Producers (**Seznam výrobců elektrozařízení**) on the Ministry of the Environment of the Czech Republic (Ministerstvo životního prostředí).

Materials used in this product are not environmentally hazardous. LINET® products meet valid requirements of national and European legislation in the areas of **RoHS** and **REACH**, so they do not contain any prohibited substances in excess quantities. None of the wooden parts is made of tropical wood (such as mahogany, rosewood, ebony, teak etc.) or made of timber from the Amazon region or from similar rainforests. Product noise (sound pressure level) meets requirements of the regulations for the protection of public health against undesirable effects of noise and vibration in protected interior spaces of buildings (according to standard IEC 60601-2-52). Used packaging materials are in accordance with requirements of the Packaging Act (**Zákon o obalech**). For disposal of packaging materials after installation of products contact your sales representative or manufacturer´s customer service about the possibility of a free take-back of packaging through an authorized company (more details on **www.linet.cz**).

15.2 Disposal

The main objective of the obligations arising from the European Directive No. 2012/19/EU on Waste, Electric and Electronic Equipments (nationally regulated in Act No. 185/2001 Coll. as amended. On Waste and in Decree of the Ministry of the Environment No. 352/2005 Coll. as amended), is to increase the re-use, material recovery and recovery of electric and electronic equipment at the required level, thereby avoiding the production of waste and thereby avoiding the possible harmful effects of hazardous substances contained in electric and electronic equipment on human health and the environment. LINET® electric and electronic equipments that have a built-in battery or accumulator are designed so that the used batteries or accumulators can be safely removed by LINET® qualified service technicians. There is an information about its type on the built-in battery.

15.2.1 Within Europe

To dispose of the electric and electronic equipment:

► The electric and electronic equipment must not be disposed of as household waste.
► Dispose of this equipment at designated collection points or take-back points.

To dispose of the other equipment:

► The equipment must not be disposed of as household waste.
► Dispose of this equipment at designated collection points or take-back points.

LINET® participates in a collective system with take-back company REMA System (see **www.remasystem.cz/sberna-mista/**). By bringing electric and electronic equipment to a take-back point, you participate in recycling and you save primary raw material resources while protecting your environment from effects of unprofessional disposal.

15.2.2 Outside Europe

► Dispose of the product or its components in accordance with local laws and regulations!
► Hire an approved waste disposal company for disposal!

16 Warranty

LINET ® will only be held responsible for the safety and reliability of products that are regularly serviced, maintained and used in accordance with the safety guidelines, especially in the instructions for use.

Should a serious defect arise that cannot be repaired during maintenance:
► Do not continue to use the SafeSense® 3 system.

This product is covered by a 24-month warranty from the date of purchase. The warranty covers all material and manufacturing-related failures and errors. Failures and errors caused by incorrect use and external effects are not covered. Justified complaints will be fixed free of charge during the warranty period. Proof of purchase, with the date of purchase, is required for all warranty service. LINET standard terms and conditions apply.

17 Standards and Regulations

Apllied norms are stated on Declaration of Conformity.

The manufacturer adheres to a certified quality management system in compliance with the following standards:

- **ISO 9001**
- **ISO 14001**
- **ISO 13485**
- **MDSAP (Medical Device Single Audit Program)**