

Installation Instructions

for the MEDITOUCH Control System

Foreword

Revisions

Version	Date	Changes
(-)	01/10	First edition
(a)	07/12	Second edition
(b)	12/12	RoHS

Disclaimer and exclusion of liability

DewertOkin is not responsible for damage resulting from:

- failure to observe these instructions,
- changes made to this product which have not been approved by DewertOkin, or
- the use of replacement parts which have not been approved or manufactured by DewertOkin.

Contact address

DewertOkin GmbH
Weststraße 1
32278 Kirchlegern
Germany
Tel: +49 (0)5223/979-0
Fax: +49 (0)5223/75182
<http://www.dewertokin.de>
Info@dewertokin.de

Creation of a complete operating instruction manual for the entire end product

These instructions are only intended to be used by the end-product manufacturer. They should not be given to the operator of the end product. The factual information contained within may be used as a basis when creating the end-product manual.

The warning and danger notices are best suited for use in the end-product's manual. However it is not sufficient to simply follow these notices. You should also carry out an internal risk assessment for your end product. This can then be used as the basis for the safety notices in your manual.

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1. General

1.1 About these installation instructions

These installation instructions must be followed closely in order to install this drive successfully and safely in the end product. These instructions are not an operating manual for the end product.

These instructions will help you to minimize danger, repair costs and down times. They will also help you to increase the reliability and lifespan of the end product.

	<div data-bbox="391 600 1434 660"> CAUTION</div> <p data-bbox="391 672 1434 739">The notices in these instructions must be followed! Following the guidelines during installation and connection procedures will help to minimize:</p> <ul data-bbox="391 750 1434 831" style="list-style-type: none">• the risk of accident and injury, and• damage to the drive system of the end product.
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These installation instructions have been written with due care and attention. However, unless otherwise required by law, we do not guarantee that the data, images and drawings are accurate or complete nor do we accept liability for their contents.








- We reserve the right to make unannounced technical changes in the course of our continual product improvement process!

1.2 Conventions used

Notices which do not relate to safety are indicated in these instructions with a triangle:

- Triangular notice symbol

Explanations of warning notices



	<div data-bbox="395 607 1442 674" style="background-color: red; color: black; padding: 5px;">  DANGER </div> <p>DANGER indicates a hazardous situation which, if not avoided, will result in serious injury or death.</p>
	<div data-bbox="395 808 1442 875" style="background-color: orange; color: black; padding: 5px;">  WARNING </div> <p>WARNING indicates a hazardous situation which, if not avoided, could result in serious injury or death.</p>
	<div data-bbox="395 1010 1442 1077" style="background-color: yellow; color: black; padding: 5px;">  CAUTION </div> <p>CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.</p>
	<div data-bbox="395 1211 1442 1256" style="background-color: blue; color: white; padding: 5px;"> WARNING </div> <p>NOTICE is used to address practices which are not related to personal injury but may result in damage to the product or surroundings.</p>

2. Safety Notices

2.1 Proper and intended usage

The MEDITOUCH control system is intended to be installed in an end product. It can be used as follows:



- for operating DewertOkin drive systems and for controlling (unlocking and releasing) the adjustment functions (can be used, for example, in beds for handicapped or hospital patients).



	 CAUTION
	The control system should only be used for the applications described above. Any other application is not permitted and can lead to accidents or damage to the unit. Such non-approved applications will lead immediately to the expiration of all guarantee and warranty claims on the part of the end-product manufacturer against DewertOkin.



The MEDITOUCH control system can be used with the DewertOkin control units from the following product lines: CARE / CARE L / HOSP or FURNIBUS.

Improper usage

Be sure to follow the notices below concerning improper usage. You should include them in your product manual in order to inform the users of your end product.

	 WARNING
	The MEDITOUCH should not be used: <ul style="list-style-type: none"> • in any environment where combustible or explosive gases or vapors (e.g., anaesthesiology) may be present, • in a moist environment, • outdoors, • in any application that will be cleaned with an automated washing system.

	 CAUTION
	The MEDITOUCH control system may not be operated: <ul style="list-style-type: none"> • by small children, • by frail or infirmed persons without supervision, or • in the proximity of small children.

	 CAUTION
	You should only use spare parts which have been manufactured or approved by DewertOkin. Only these parts will guarantee a sufficient level of safety.

2.2 Selection and qualification of personnel

This control system should only be installed into the end product by someone who has completed training in electronic motor assembly or has equivalent qualifications.

You should only install this control system when you are qualified to do so. Otherwise, a properly qualified person should be found for this task.

2.3 Notice on safety during operations

Basic safety rules must be followed in order to ensure that the end product can be continually operated in a safe manner. These rules must be observed while using the end product and while installing the control system.

These rules and safety measures can be categorized as follows:

- Safety fundamentals during the installation of the control system and during cable and wire routing (refer to the "Safety notices to observe during installation" section in the "Installation" Chapter).
- Basic safety rules during operation (refer to the "Notices for Operation" Chapter).
- The creation of a manual for the end product which contains these and other safety rules.

Creating a user's manual

The manufacturer of the end product must create a manual for the users of that product. The safety notices in the end-product manual must be written based on the end product's risk assessment.

2.4 Product labeling

2.4.1 Ratings plate (type label)

The MEDITOUCH control system consists of a number of components.

A ratings plate on each component specifies the exact name and serial number of the component. It also states the technical specifications for that particular component. The following illustrations show the location of the ratings plate specifications on the components which make up the control system.

- The ratings plate shown is an example; the specifications for your component may differ from this illustration.

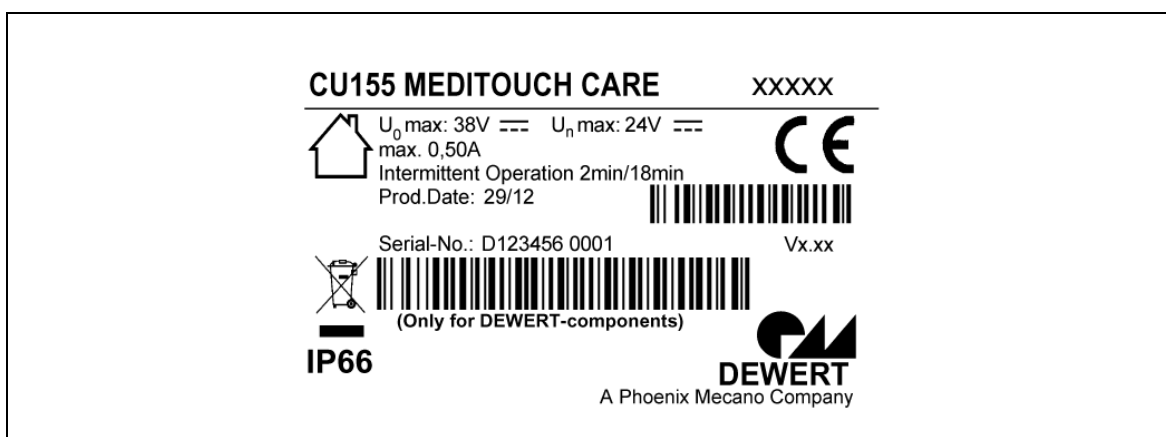




Figure 1 Ratings plate for the CU155 MEDITOUCH (example)

CU155 MEDITOUCH	Model name
XXXXXX	Article number
U_0 max: 38V	No-load voltage
U_n max: 24V	Rated voltage
Max. 0.50A	Current consumption
Intermittent Operation 2min/18min	Intermittent operations: 2 minutes / 18 minutes
Prod. Date	Calendar week / year
Serial-No.	Serial number for the component
Vx.xx	Software version of the CU155 MEDITOUCH
	Use in dry rooms only!
	Follow all special disposal instructions!
IP66	Protection category

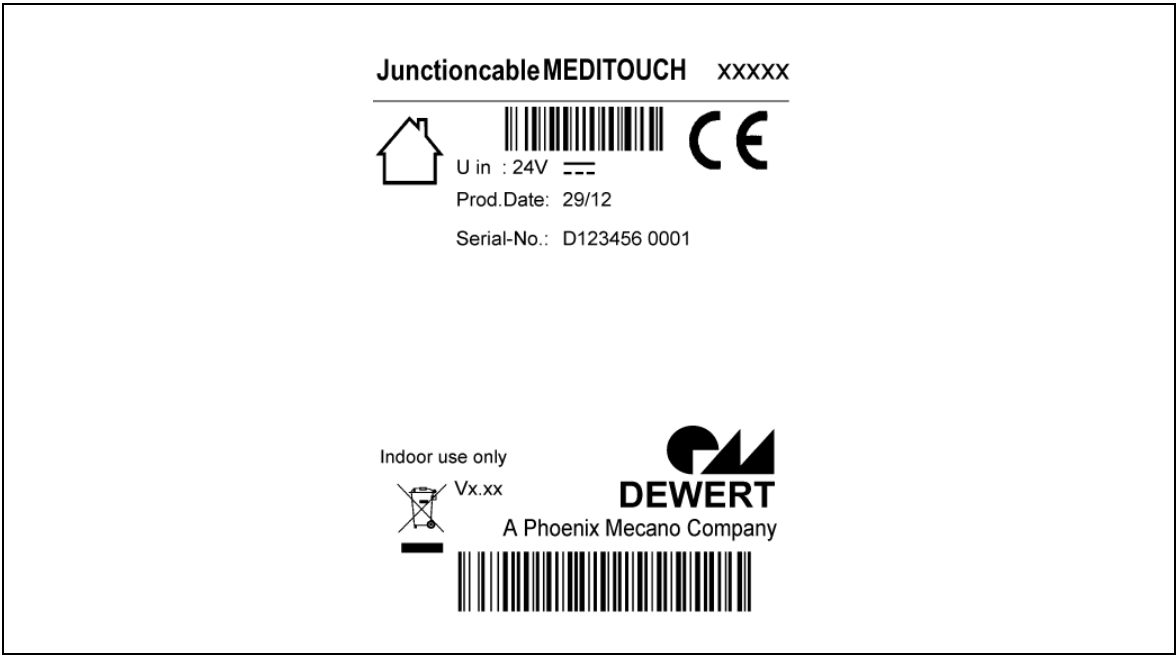




Figure 2 Ratings plate for the MEDITOUCH junction cable (example)

MEDITOUCH junction cable	Model name
xxxxx	Article number
U in: 24V	Input voltage
Prod.Date	Calendar week / year
Serial-No.	Serial number for the component
Vx.xx	Software version of the MEDITOUCH junction cable
	Use in dry rooms only!
	Follow all special disposal instructions!

3. Description of System

The MEDITOUCH control system is used to adjust and control the movable parts of the end product (e.g., hospital and patient beds).

The MEDITOUCH control system consists of a number of distinct components. In order to use the MEDITOUCH control system, the following components are required: a control unit, a junction cable, and membrane keypads (nurse – patient or patient – patient).

Additional optional components can also be connected to the MEDITOUCH control system, such as lighting, a handset, or a foot switch.

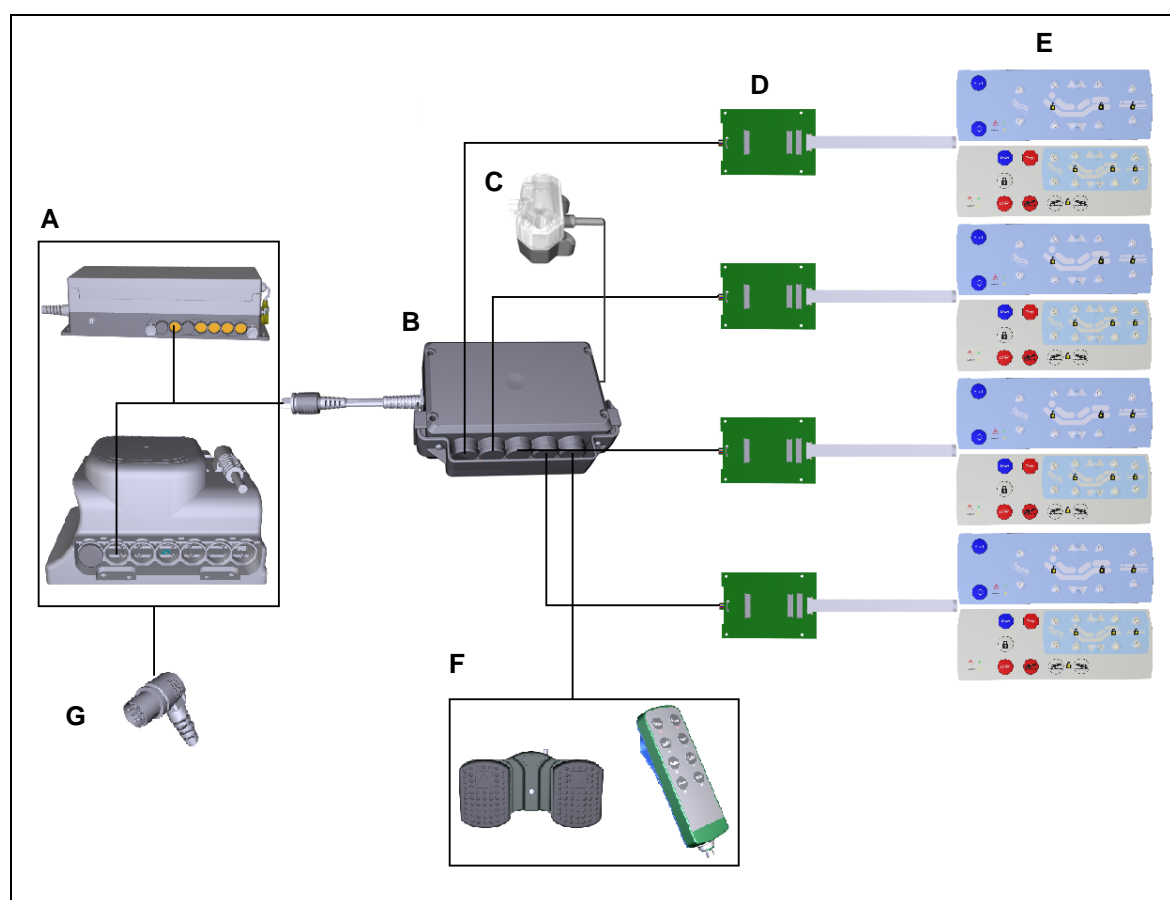


Figure 3 The MEDITOUCH control system – a sample configuration

- | | |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| A Optional: DewertOkin control unit (e.g., SG 300 series, MCL) | B CU155 MEDITOUCH |
| C Optional: Lighting, or a floating (voltage-free) contact (can be used contacting the nurse) | D MEDITOUCH junction cable |
| E Membrane keypads (max. two keypads per MEDITOUCH junction cable) | F Optional additional operating device (foot switch or handset) |
| G Optional short-circuit plug:
This may not be used with FURNIBUS-system control units! | |

- We reserve the right to make unannounced technical changes in the course of our continual product improvement process!

3.1 System components

The main components of the MEDITOUCH control system are the CU155 MEDITOUCH, the MEDITOUCH junction cable and the membrane keypad.

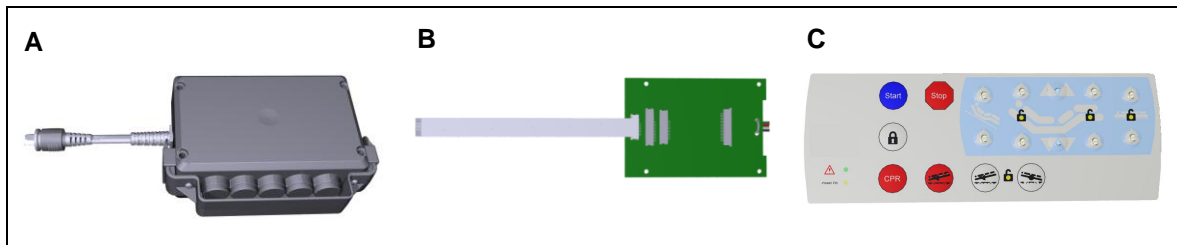


Figure 4 The components of the MEDITOUCH control system

A CU155 MEDITOUCH

B MEDITOUCH junction cable

C Membrane keypad (may vary)

3.1.1 CU155 MEDITOUCH

The CU155 MEDITOUCH is used to connect the membrane keypad(s) with the DewertOkin control unit. Up to four MEDITOUCH junction cables can be connected. The CU155 MEDITOUCH is then plugged into the control unit.

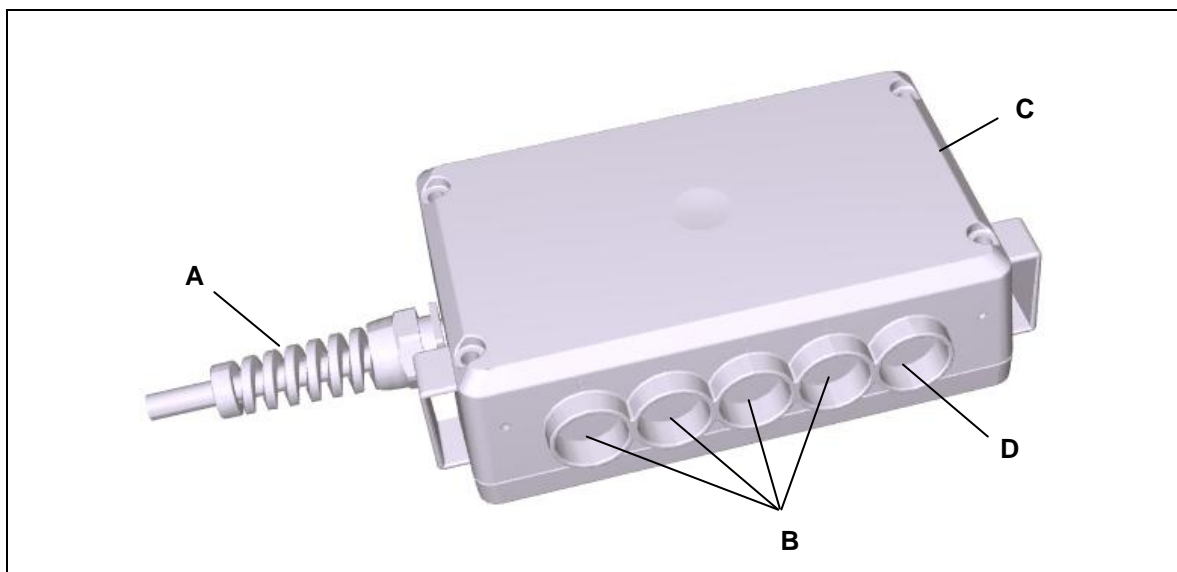


Figure 5 CU155 MEDITOUCH

A Connection to control unit

B Ports for the membrane keypads
(via the MEDITOUCH junction cable)

C Optional: Lighting, or a floating (voltage-free) contact (can be used contacting the nurse)

D Optional: Another operating device
(foot switch or handset)

3.1.2 MEDITOUCH junction cable

The MEDITOUCH junction cable connects the membrane keypad to the CU155 MEDITOUCH. Different versions of the MEDITOUCH junction cable are used depending on the exact function of the membrane keypad (nurse or patient version).

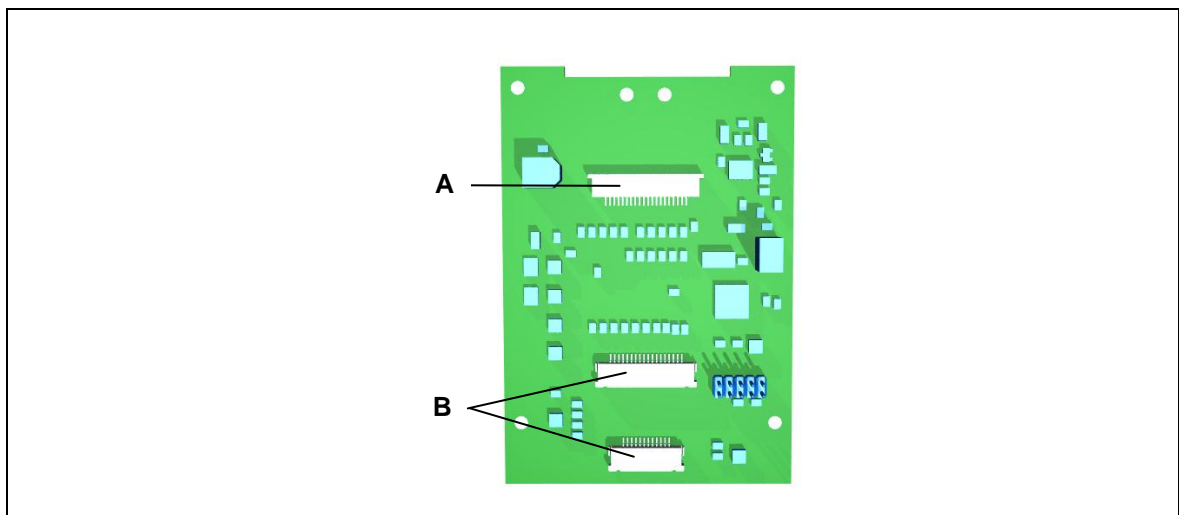


Figure 6 The MEDITOUCH junction cable for the nurse – patient membrane keypads

A Ribbon-cable plug for the patient membrane keypad **B** Ribbon-cable plug for the nurse membrane keypad

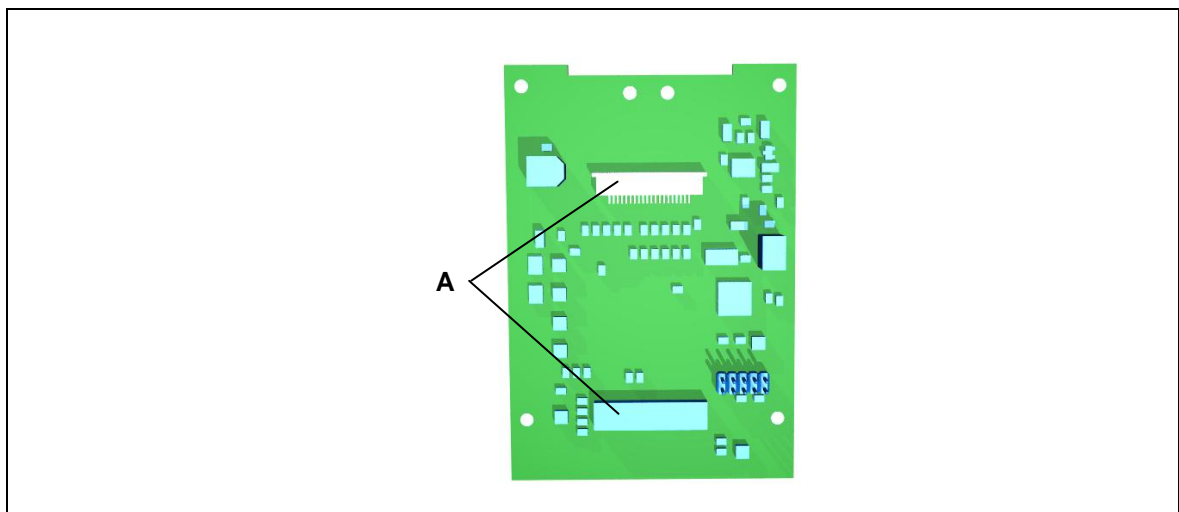


Figure 7 The MEDITOUCH junction cable for the patient – patient membrane keypads

A Ribbon-cable plug for the patient membrane keypad

3.1.3 Membrane keypad

The keypad on the MEDITOUCH control system is used for entering the commands which control the application (end product).

The adjustment options can vary depending on the patient and nursing staff. The MEDITOUCH control system (the nurse keypad) allows medical staff to lock or enable the individual adjustment options on the application. The commands are then active for all connected control mechanisms. Only the nurse keypad can be used to control all of the extended function such as "Trendelenburg", swivel and the neutral position. The actual range of functions depends on the application and is customized according to the requirements of the customer. The patient keypad has a more limited range of simple adjustment options.

- The keypad displayed below is a sample illustration; the functions and design of the keypad can be configured according to customer needs. The size, shape, design and functions of your keypads may vary significantly.

3.1.4 Keypad examples

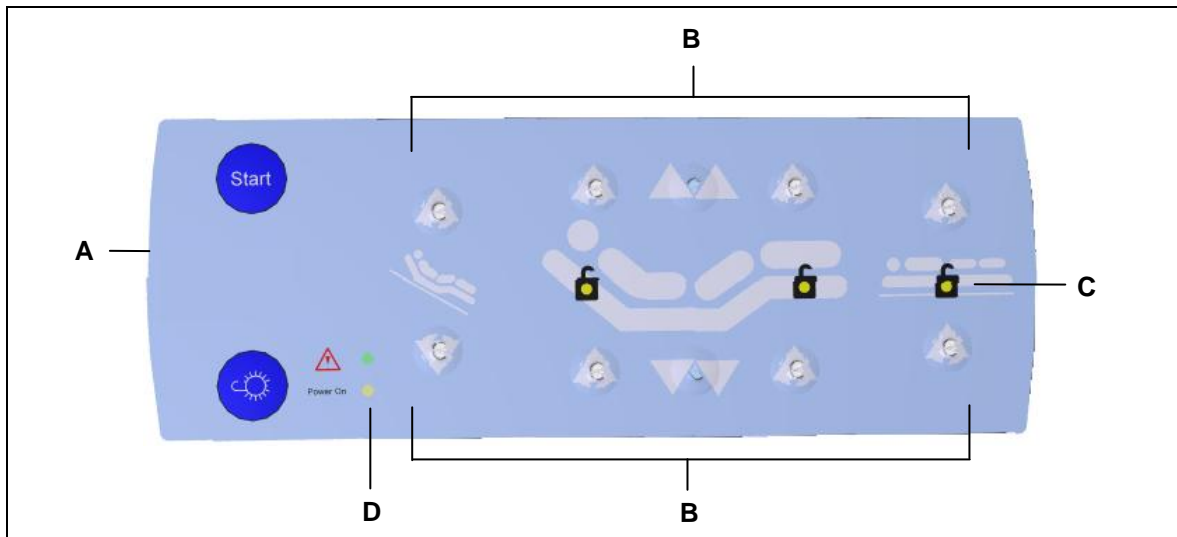


Figure 8 Example of patient keypad with limited functionality

- A** Ribbon-cable port for the MEDITOUCH junction cable (rear side)
- B** Control keys
- C** Display of locked and unlocked functions (LEDs)
- D** LEDs (e.g., Power ON and CARE)

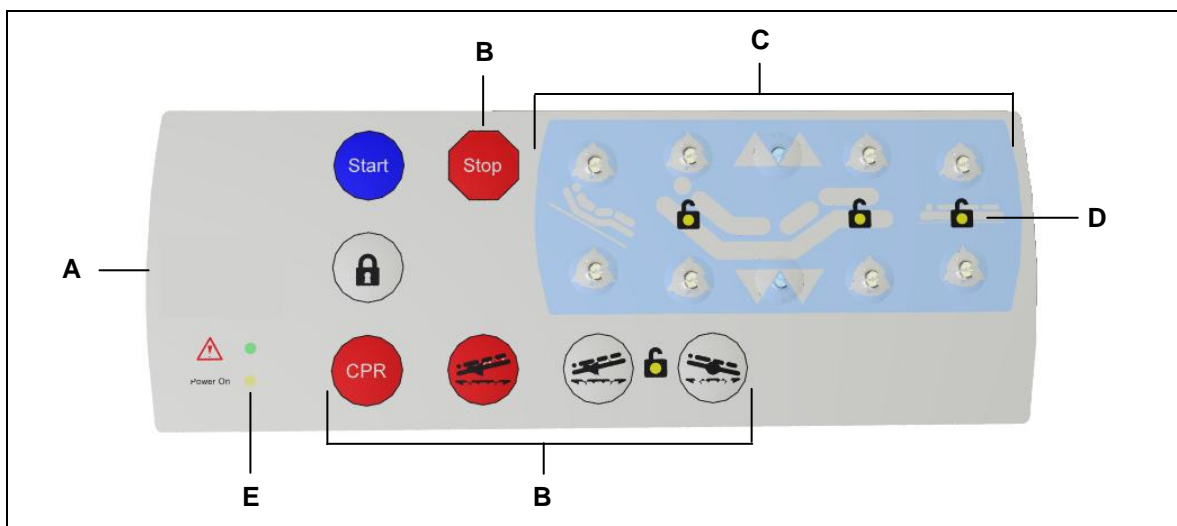


Figure 9 Example of nurse keypad with extended functionality

- A** Ribbon-cable port for the MEDITOUCH junction cable (rear side)
- B** Control keys exclusive to the nurse keypad
- C** Smaller version of patient keypad
- D** Display of locked and unlocked functions (LEDs)
- E** LEDs (e.g., Power ON and CARE)

4. Technical Specifications

4.1 CU155 MEDITOUCH and MEDITOUCH junction cable

Input voltage	24 V DC
Permitted total current consumption when outputs are under load	max. 400 mA DC
Permitted load for lighting output (optional) ¹⁾	max. 50 mA DC (for 24 V LED variant: floating (voltage-free) contact, 24 V DC / max. 300 mA)
Permitted load on output for MEDITOUCH junction cable	max. 50 mA DC per output Take into consideration the total current consumption!
Mode of operation ²⁾ at maximum load on outputs	Intermittent duty 2 min./18 min.
Protection classification	III
Protection category for CU155 MEDITOUCH	IP54 (IP66 available on request)
Protection category for MEDITOUCH ³⁾ junction cable	IP00 (before installation)
Colors of CU155 MEDITOUCH	Grey, black
Dimensions and weight	
Length x width x height of CU155 MEDITOUCH	approx. 157 x 107 x 44 mm
Weight of CU155 MEDITOUCH	approx. 300 g
Length x width x height of MEDITOUCH junction cable	approx. 100 x 69 x 15 mm (without connecting cable)
Weight of MEDITOUCH junction cable	approx. 30 g (without connection cable)
Ambient conditions for operation, storage and transport	
Ambient room temperature for storage and transport	from -20 °C to +50 °C from -4 °F to +122 °F
Ambient room temperature for operation	from +10 °C to +40 °C from +50 °F to +104 °F
Relative humidity	from 30% to 75%
Air pressure	from 800 hPa to 1060 hPa
Altitude	< 2000 m

¹⁾ Ask your customer representative for more information.

²⁾ Mode of operation: intermittent duty 2 min./18 min. This means that after the system is operated with its rated load for up to two minutes it must then be paused for 18 minutes. The system can malfunction if this pause is not observed!

³⁾ IPX4 or IP66 must be guaranteed by the manufacturer of the end product using proper installation methods.

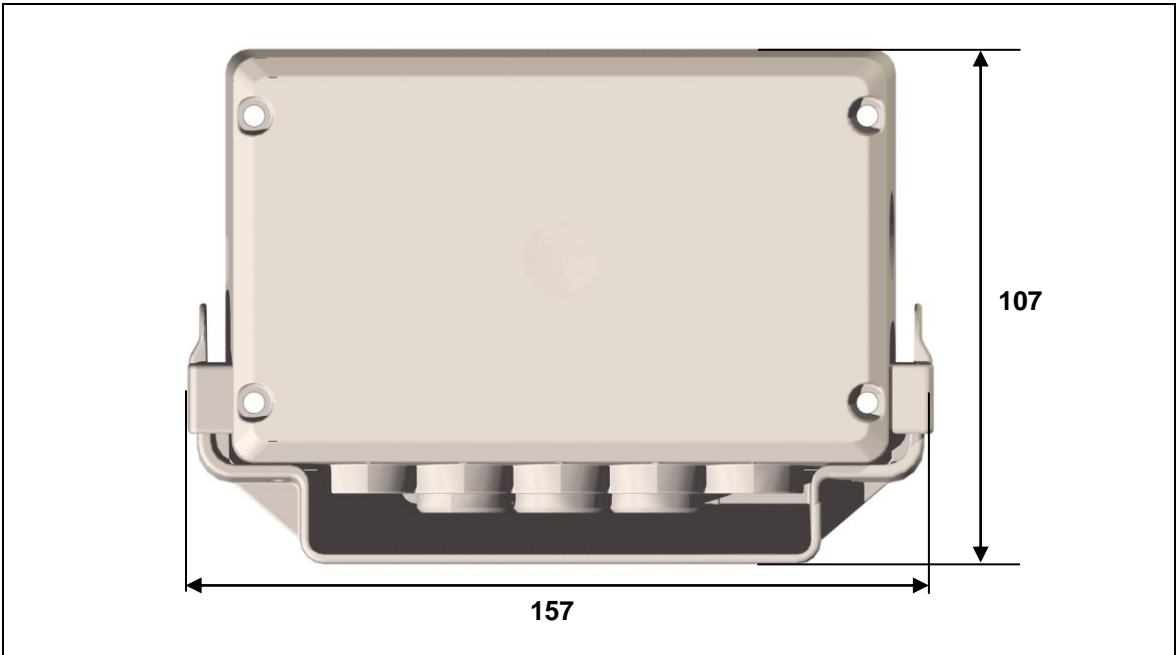


Figure 10 Dimensions of the CU155 MEDITOUCH (in mm), viewed from above

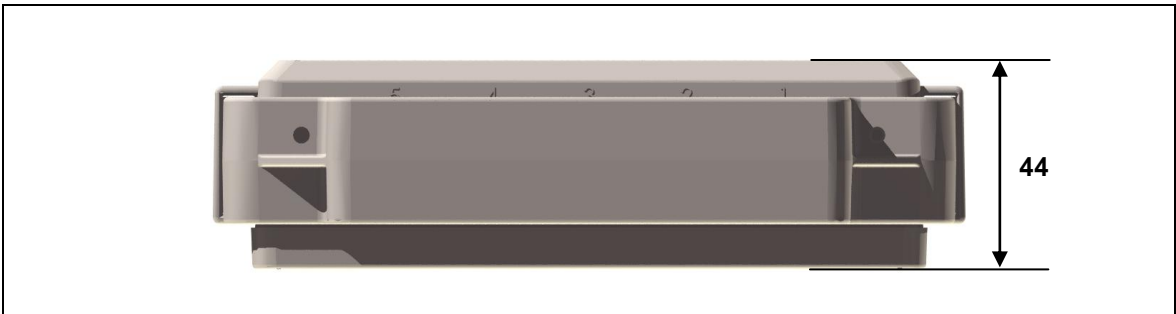


Figure 11 Dimensions of the CU155 MEDITOUCH (in mm), side view

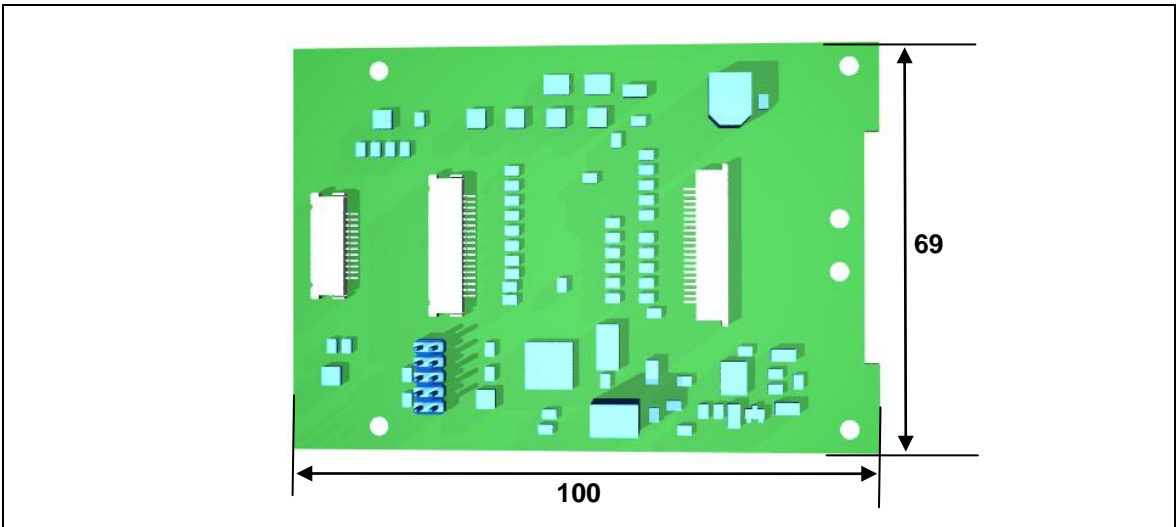


Figure 12 Dimensions of the MEDITOUCH junction cable (in mm)

4.2 The MEDITOUCH membrane keypad

The general specifications of the keypad are dependent on the customer-specific installation.



Membrane characteristics	
Material	Polyester
Type	Autoflex F150 (fine) lightly-structured, 150 Microns
Chemical resistance	In compliance with DIN 42115
Dielectric strength	125 KV/mm
Physical pencil hardness	2 H
Temperature range	- 40° C to + 80° C
Mechanical resistance to marking	> 1 million operations
Tape specifications	
Tape	Duploband 362 (for example)
Adhesive	Pure acrylate
Carrier	PET foil laminate
Covering	PE paper
Thickness	Approx. 0.3 mm
Temperature range	- 20 °C to + 70 °C
Surface	Matt
Number of permitted bending motions	Max. 10
Permitted bending radius	> 10 mm
Membrane keypad	
Material	UL94V-0
Protection category	IP65 before installation (only membrane)
Operational force	3 N – 5 N
Snap-in panels	Gold-plated underside
Bounce time	< 10 ms

Contact travel	Approx. 0.5 mm – 0.7 mm
Lifespan	> 1 million operations
Max. voltage	42 VDC
Marking	Embossed keys
LED	No marking
Conductor connection	Zero-force closure - 1.00-mm pitch (conductive surface is facing the visual side of the membrane)
Operating temperature	0 °C to + 50 °C

5. Installation

5.1 Safety notices to observe during installation

Basic safety rules must be followed in order to ensure that the end product can be continually operated in a safe manner. These rules must be observed while using the end product and while installing the membrane keypads.

	 CAUTION
	<p>Electrical components should be connected and disconnected only when no voltage is present.</p> <p>The manufacturer of the end product is responsible for implementing a proper strain relief mechanism for the cable.</p>

5.2 Installation procedure

Before installing the drive, make sure that you are observing all of the safety notices found in the "Safety notices to observe during installation" section.

5.2.1 Installation and dismantling for the CU155 MEDITOUCH

There are four mounting holes in the CU155 MEDITOUCH which can be used to attach it to the end product with the appropriate screws (for example, M4 x 50 screws). The CU155 MEDITOUCH should be mounted so that it lies flat against its supporting material. In the end product, no mechanical forces (such as torsion) should be put on the CU155 MEDITOUCH or enclosure. Such forces could lead to damage (such as cracks) in the housing.

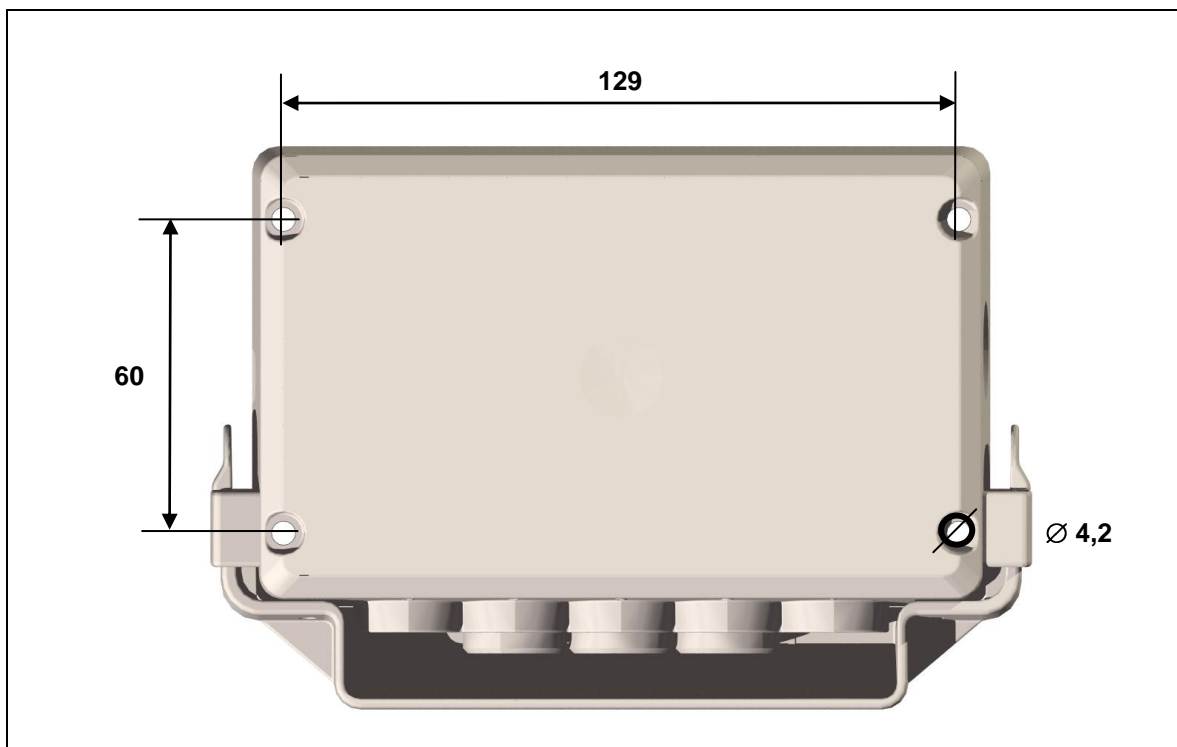


Figure 13 CU155 MEDITOUCH mounting holes (dimensions in mm)

5.2.2 Installation and disconnection of the MEDITOUCH junction cable

The details of the installation of the MEDITOUCH junction cable depend on the specific application. The four mounting holes can be used to attach to an application or an enclosure (for example, by using M3 screws: the screw head must be no wider than 6.5 mm, and the proper plastic washers must be used).

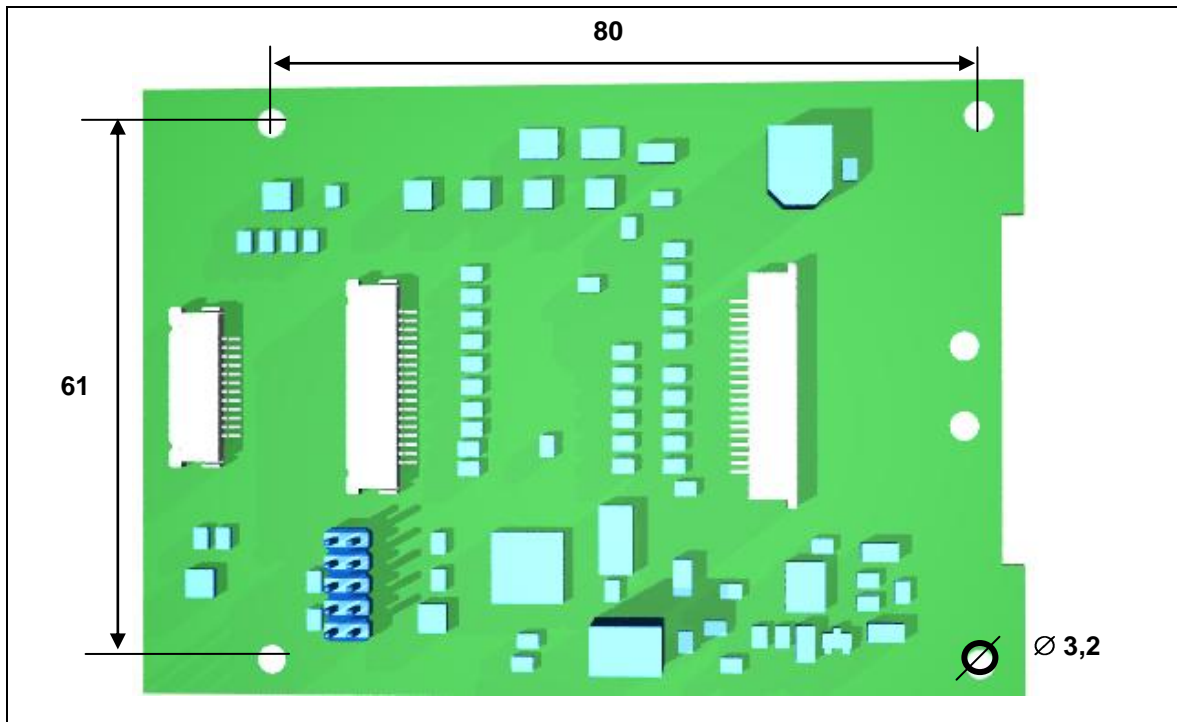



Figure 14 Mounting holes for the MEDITOUCH junction cable (dimensions in mm)

The manufacturer of the end product must ensure that the installation in the end product complies with EN60601-1. The manufacture must prove and document the following:

- IP protection category: min IP54 or IP protection category: min. IP66 (in accordance with IEC/EN60601-2-38).
- Creepage and clearance distances: min. 1 mm / min. 2 mm (in accordance with IEC/EN60601-1).
- Insulation: minimum 500 V/1 minute (in accordance with IEC/EN60601-1).
- Soldered connections (cable to PCB) to the MEDITOUCH junction cable should be protected against accidental mechanical loosening (for example, using hot glue to cover the solder points).
- Cable: min. 0.4 A/40 V; min. 0.128 mm² (AWG26); insulation: minimum 500 V/1 minute
- Additional requirements (circuit diagram, wiring, etc): Refer to the sections 5.2.2 and 5.2.3 for more information on the circuit diagram and wiring.
- Refer to IEC/EN60601-1 and IEC/EN60601-2-38 for scope of use and additional requirements.

	WARNING
	<p>The junction cables are delivered separately; be sure to take protective measures against electrostatic discharges (ESD).</p> <p>Refer to the information on ESD protection in section 5.2.5.</p>

The MEDITOUCH junction cable(s) are not delivered with the system because they vary according to the application. They must be installed as follows:

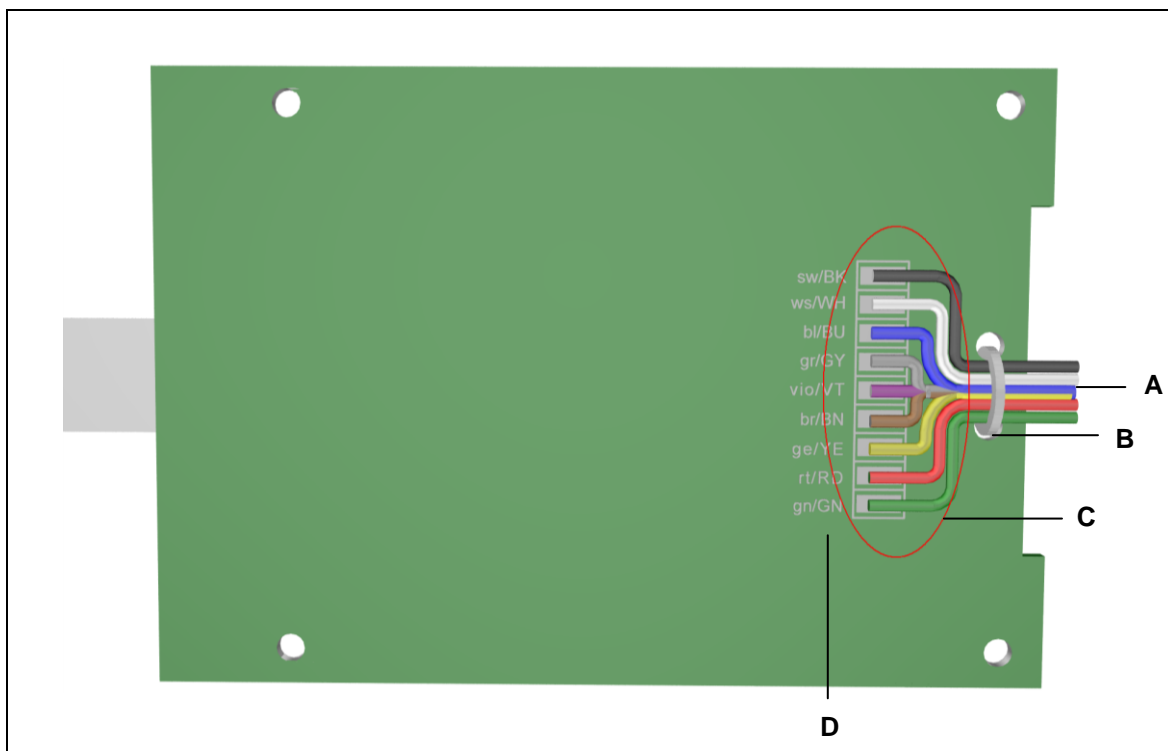


Figure 15 Wiring diagram for the connecting cable to the MEDITOUCH junction cable (under-side)

- | | |
|---------------------------------------------|-------------------------|
| A Connecting cable | B Cable tie |
| C Adhesive area (within red ellipse) | D Wiring diagram |

- 1 Solder the connecting cable (A) to the circuit board according to the wiring assignments (D).
- 2 Secure the connecting cable (A) to the holes in the circuit board using a cable tie (B).
- 3 The wires must be covered in hot glue in order to prevent them from accidentally loosening at the solder points. The glue should cover the wires so that at least 3 mm of insulation is covered (so that glue covers the area C).

Wiring assignments

Pin	Wire color		Wire cross-section
1	schwarz / black	sw / BK	0.14 mm ² or AWG 26
2	weiß / white	ws / WH	0.14 mm ² or AWG 26
3	blau / blue	bl / BU	0.14 mm ² or AWG 26
4	grau / grey	gr / GY	0.14 mm ² or AWG 26
5	violett / violet	vio / VT	0.14 mm ² or AWG 26
6	braun / brown	br / BN	0.14 mm ² or AWG 26
7	gelb / yellow	ge / YE	0.14 mm ² or AWG 26
8	rot / red	rt / RD	0.14 mm ² or AWG 26
9	grün / green	gn / GN	0.14 mm ² or AWG 26

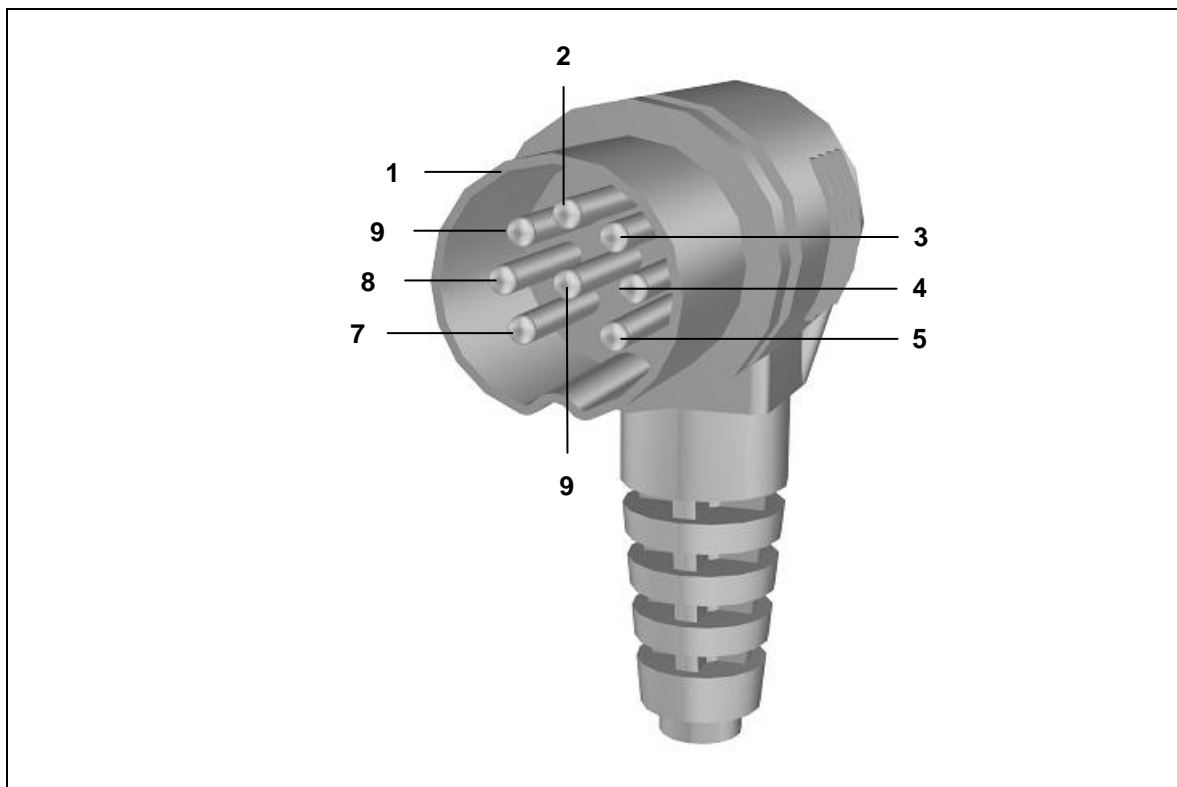


Figure 16 Solder side of connector

5.2.3 Connecting the membrane keypad to the MEDITOUCH junction cable

The keypad can be either a nurse-type keypad or a patient-type keypad, depending on its functions. A different version of the MEDITOUCH junction cable is used for each of these two variants.

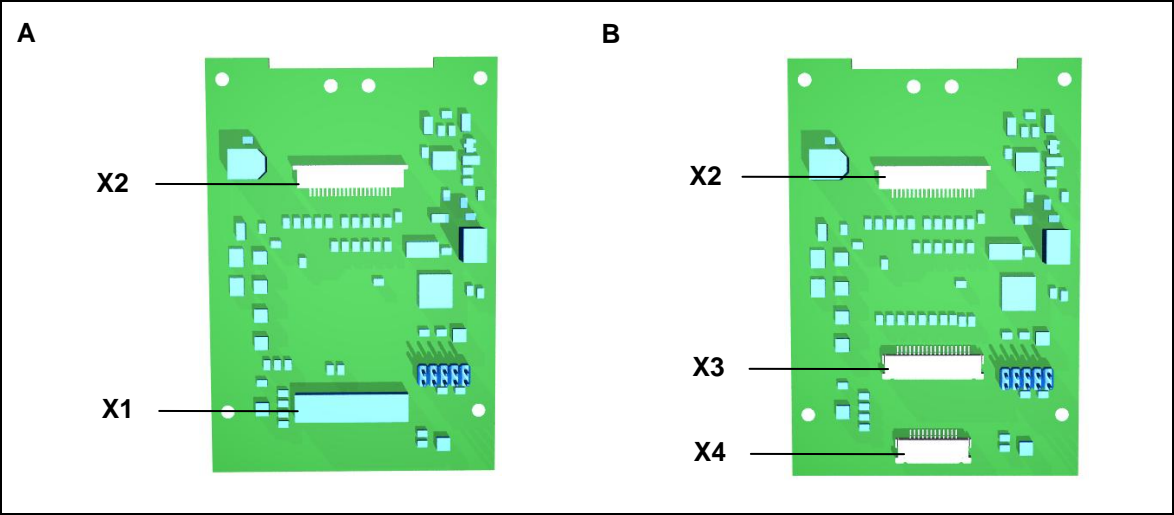


Figure 17 MEDITOUCH junction cable

- A The MEDITOUCH junction cable for patient to patient
- B The MEDITOUCH junction cable for nurse to patient

X1	Molex connector (20-pole) 52207-2019 for the patient keypad
X2	Molex connector (20-pole) 52271-2019 for the patient keypad
X3	Molex connector (18-pole) 52207-1819 for the nurse keypad
X4	Molex connector (12-pole) 52207-1219 for the nurse keypad
Molex connectors X1, X3 and X4	Top contact type
Molex connector X2	Bottom contact type

Connecting the ribbon cable to the MEDITOUCH junction cable

- 1 Open the cable clip in the direction of the arrow (refer to Figure 18).

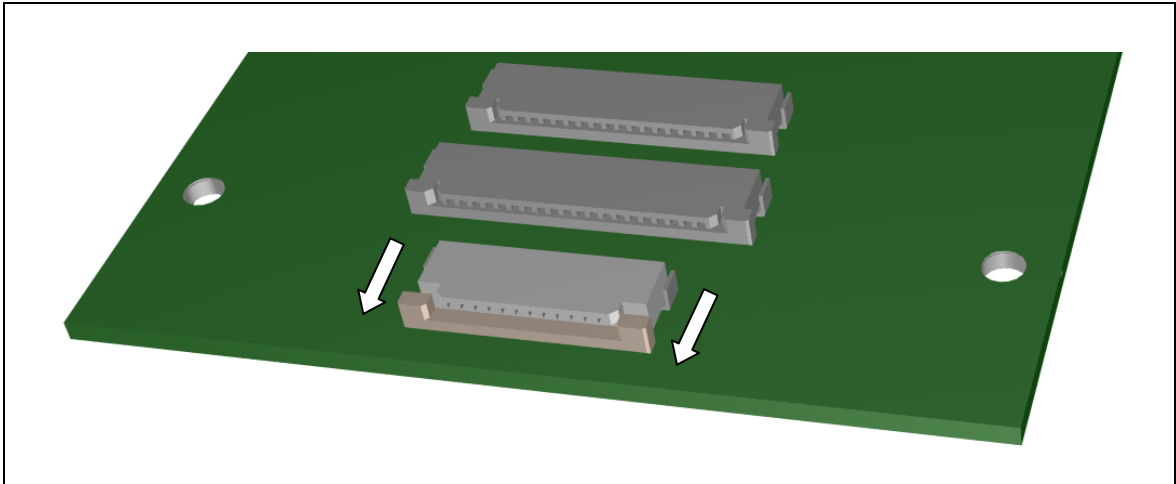


Figure 18 Opening the cable clip

- 2 Then push the ribbon cable all the way into the Molex connector.

Top contact type	Connectors X1, X3 and X4
Bottom contact type	Connector X2

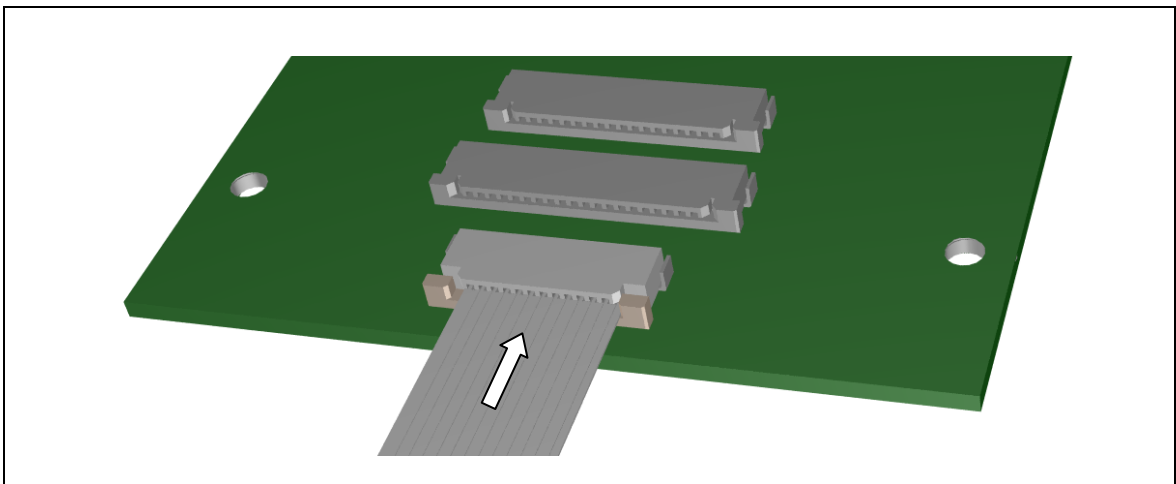


Figure 19 Connecting the ribbon cable

- 3 You can now re-close the cable clip.

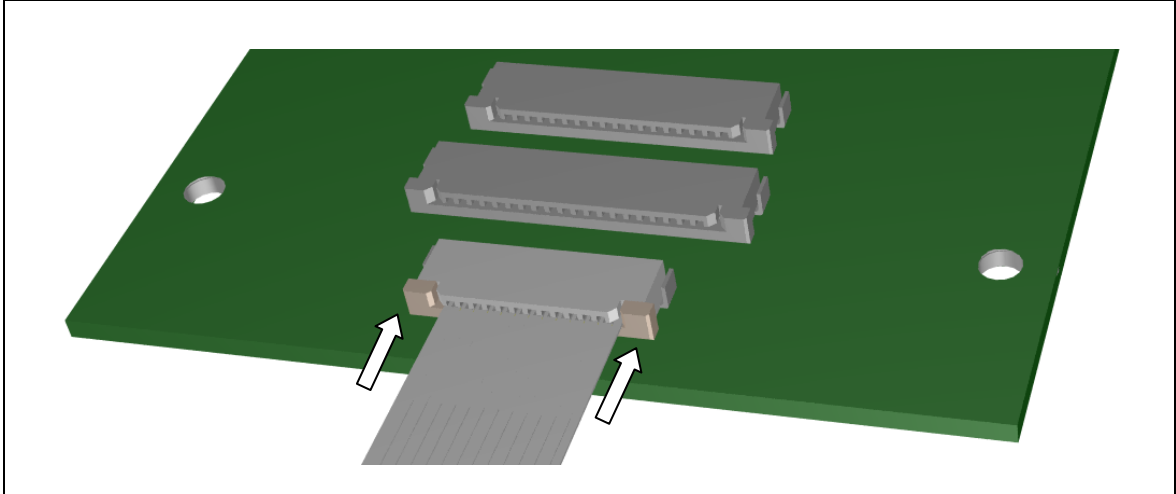


Figure 20 Closing the cable clip

- 4 Then gently pull back on the ribbon cable to test the connection. The cable should not pull out of the connector.
- 5 Repeat this procedure for all additional ribbon cables in your application.

	WARNING
	Make sure that the ribbon cable is installed in the proper direction and that the contact side is in the proper position (top contact type or bottom contact type)! Refer to Figure 19 for more information.

5.2.4 Installing the membrane keypad and ribbon cable

The DewertOkin membrane keypad can be adhered to the application. Custom-produced keypads can also be used as long as they conform to the required interface (as described on pages 29-32). The manufacturer of the end product must ensure that the installation in the end product complies with EN60601-1. The manufacture must prove and document the following:

- IP protection category: min. IP54 or min. IP66 (IEC/EN60601-2-38).
- Creepage and clearance distances: min. 1 mm / min. 2 mm (IEC/EN60601-1).
- Insulation: min. 500 V/1 minute (IEC/EN60601-1).
- Be sure to observe the permitted bending radius and the number of permitted bends.
- Specifications for the membrane keypad (refer to the section 4.2).
- Ribbon cable (for keypad): min. 0.1 A / 40 VDC; min. 500 V / 1 minute
- Membrane key: Min. 10 mA / 40 VDC insulation: min. 500 V / 1 minute
- Additional requirements: specifications for the membrane keypad (refer to section 4.2).
- ▶ Additional requirements (circuit diagram, wiring, etc):
nurse keypad: refer to page 29.
patient keypad, refer to page 32.
- Refer to IEC/EN60601-1 and IEC/EN60601-2-38 for scope of use and additional requirements.

**WARNING**

Be sure to take protective measures against electrostatic discharges (ESD)!

- ▶ Refer to the "ESD protective measures" section found on page 34.

Layout of the connector to the nurse keypad

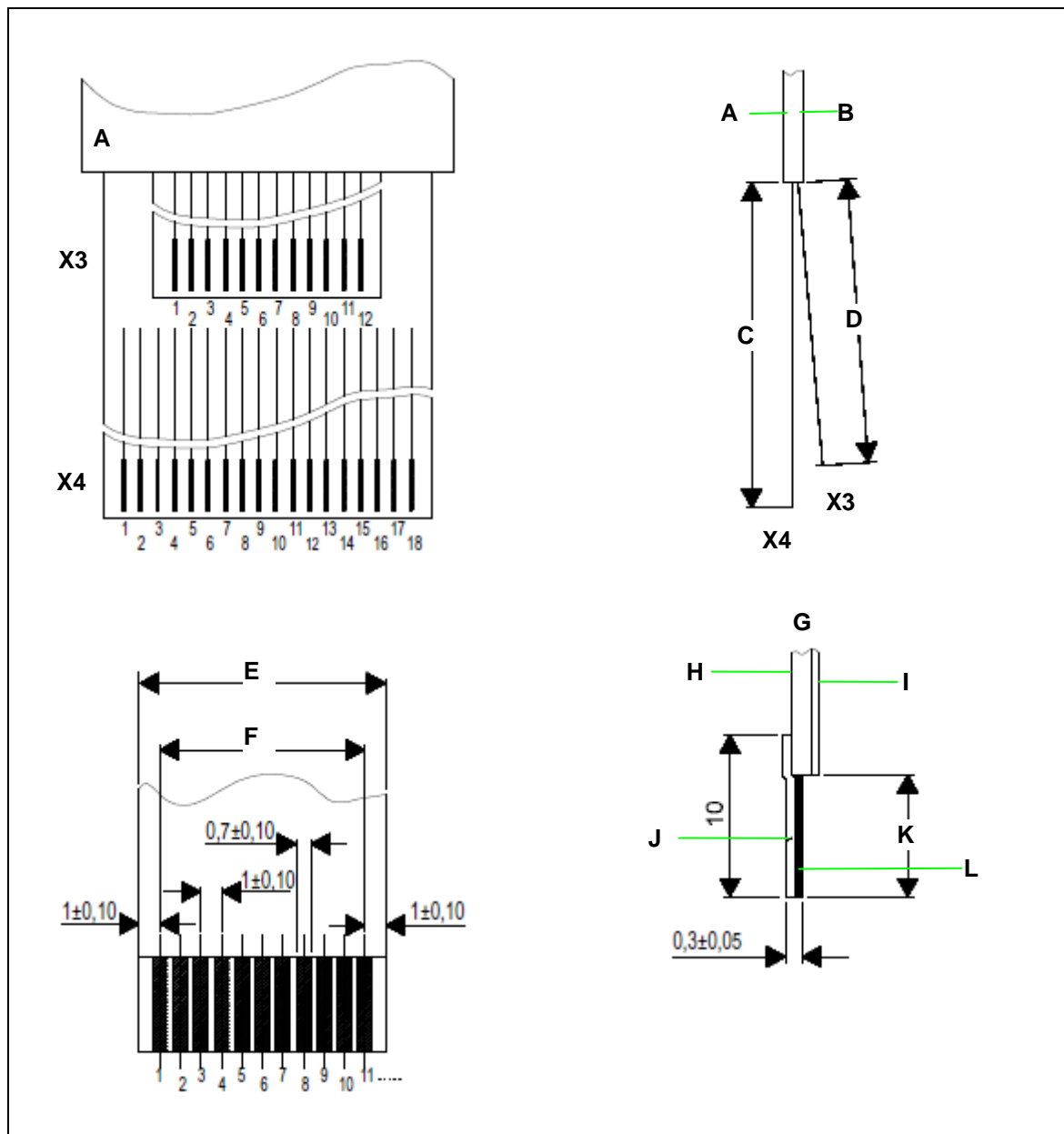


Figure 21 Wire connections and dimensions (in mm)

A Membrane front**C** Recommended: 140 mm**E** = $1.0 \times (\text{number of contacts} + 1) \pm 0.10$ **G** For connection to control board:
Molex Series 55207-xx19
Molex Series 55271-xx19**I** Protective layer**K** Min. 5.5 mm**B** Side section of membrane**D** Recommended: 120 mm**F** = $1.0 \times (\text{number of contacts} - 1) \pm 0.10$ **H** Primary layer**J** Reinforced layer / carrier material**L** Wire

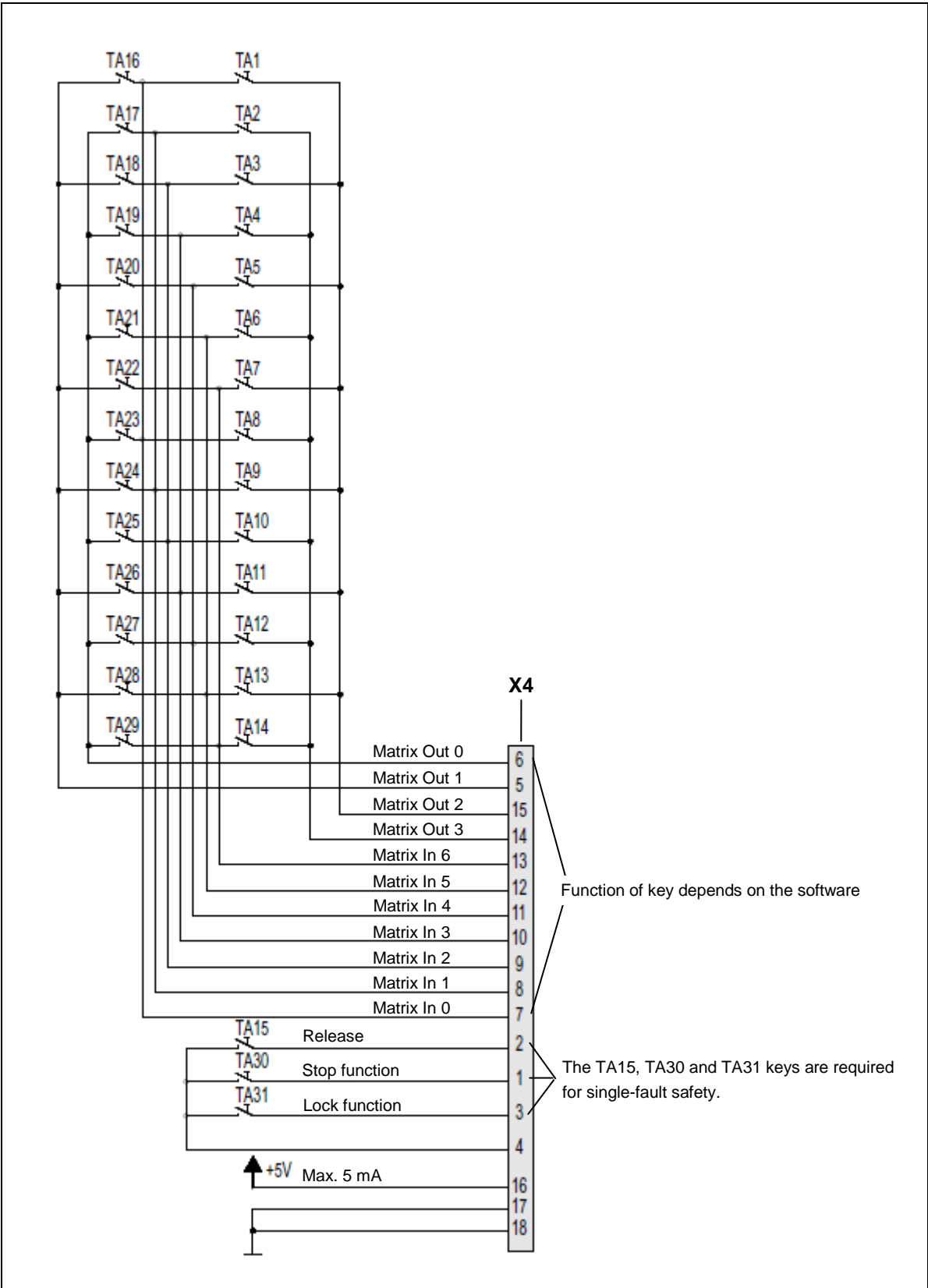


Figure 22 18-pole membrane connector (X4)

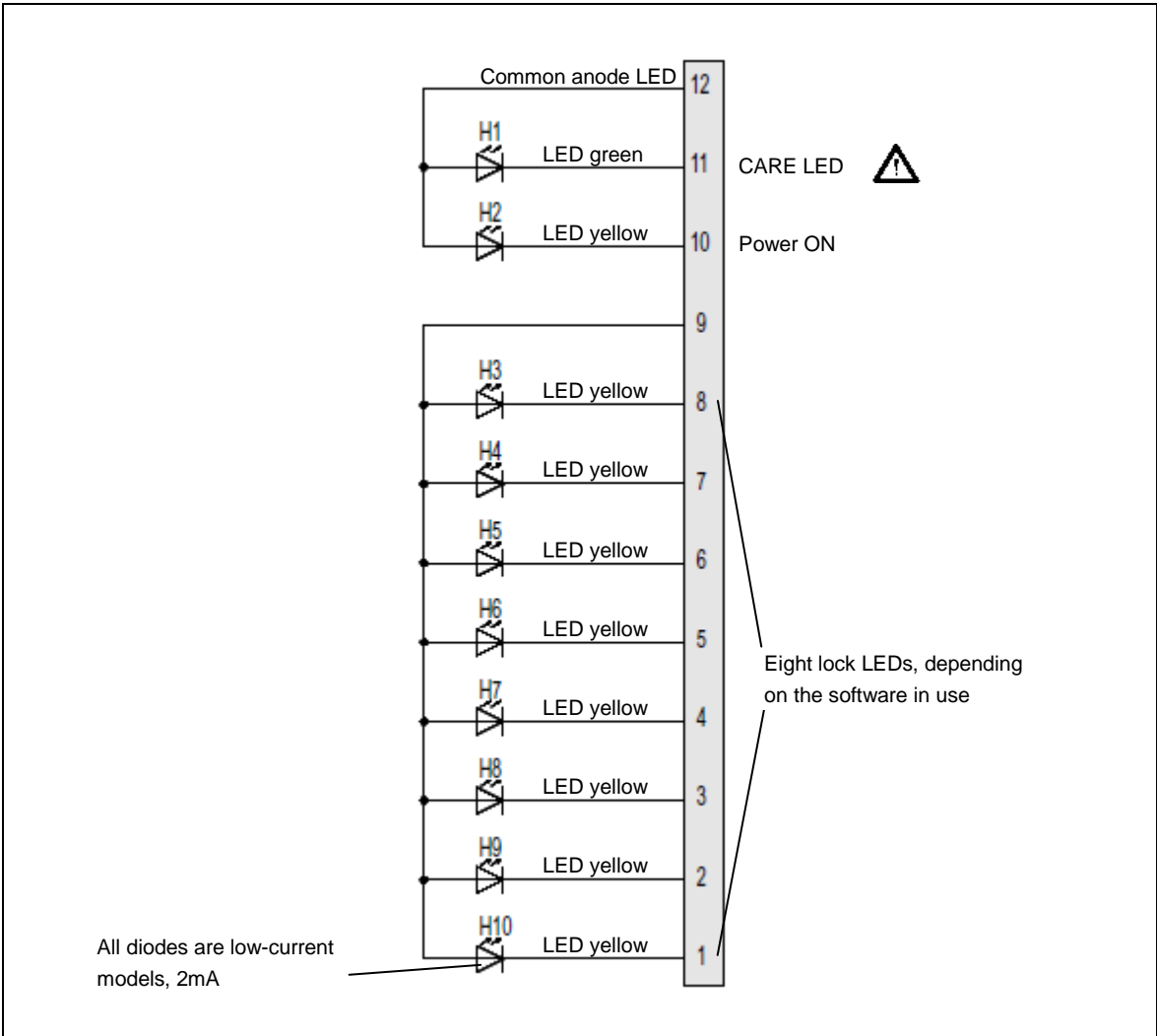


Figure 23 12-pole membrane connector (X3)

Layout of the connector to the nurse keypad

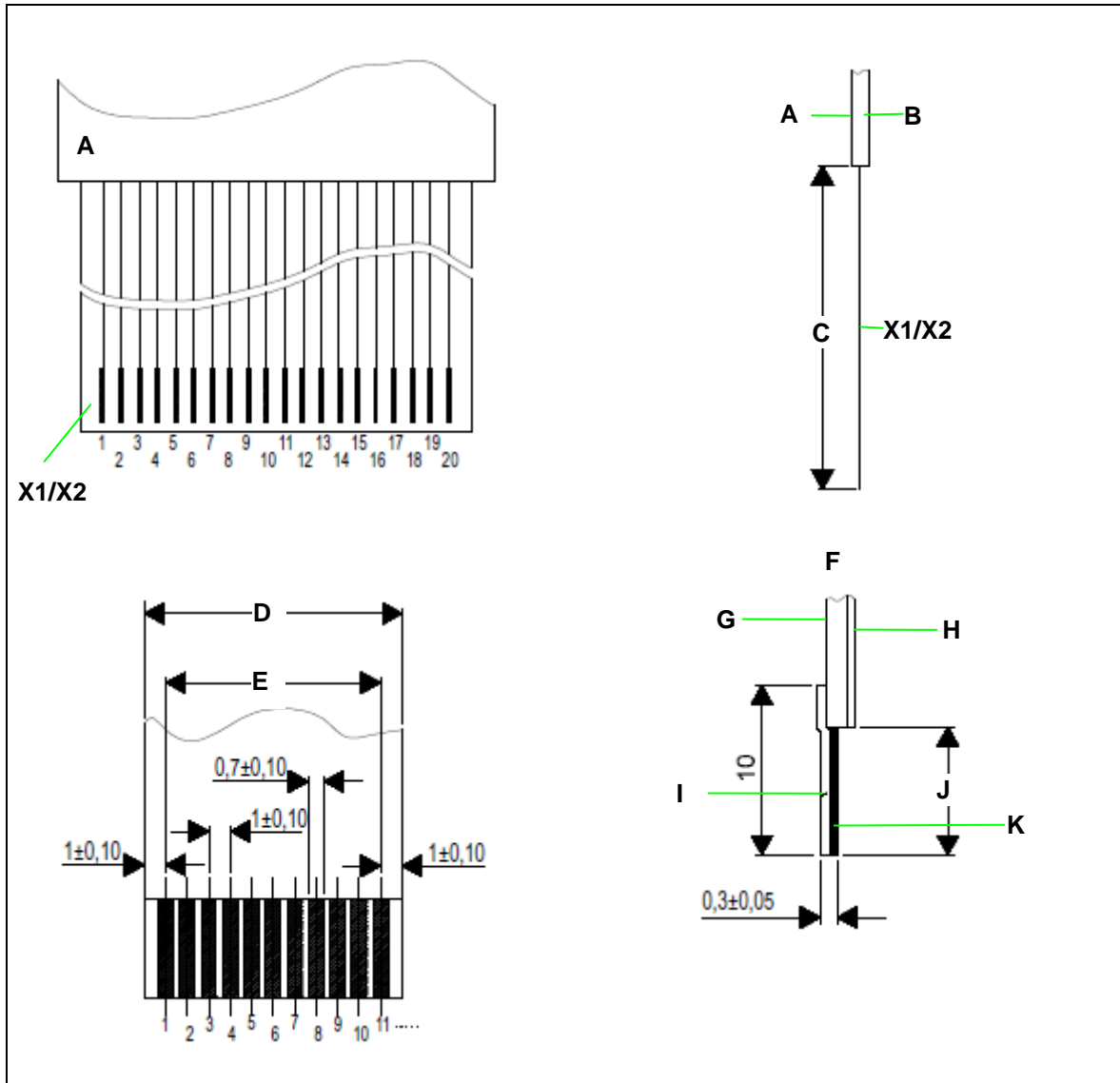


Figure 24 Wire connections and dimensions (in mm)

A Membrane front**C** Recommended: 110 mm**E** = $1.0 \times (\text{number of contacts} - 1) \pm 0.10$ **G** Primary layer**I** Reinforced layer / carrier material**K** Wire**B** Side section of membrane**D** = $1.0 \times (\text{number of contacts} + 1) \pm 0.10$ **F** For connection to control board:

Molex Series 55207-xx19

Molex Series 55271-xx19

H Protective layer**J** Min. 5.5 mm

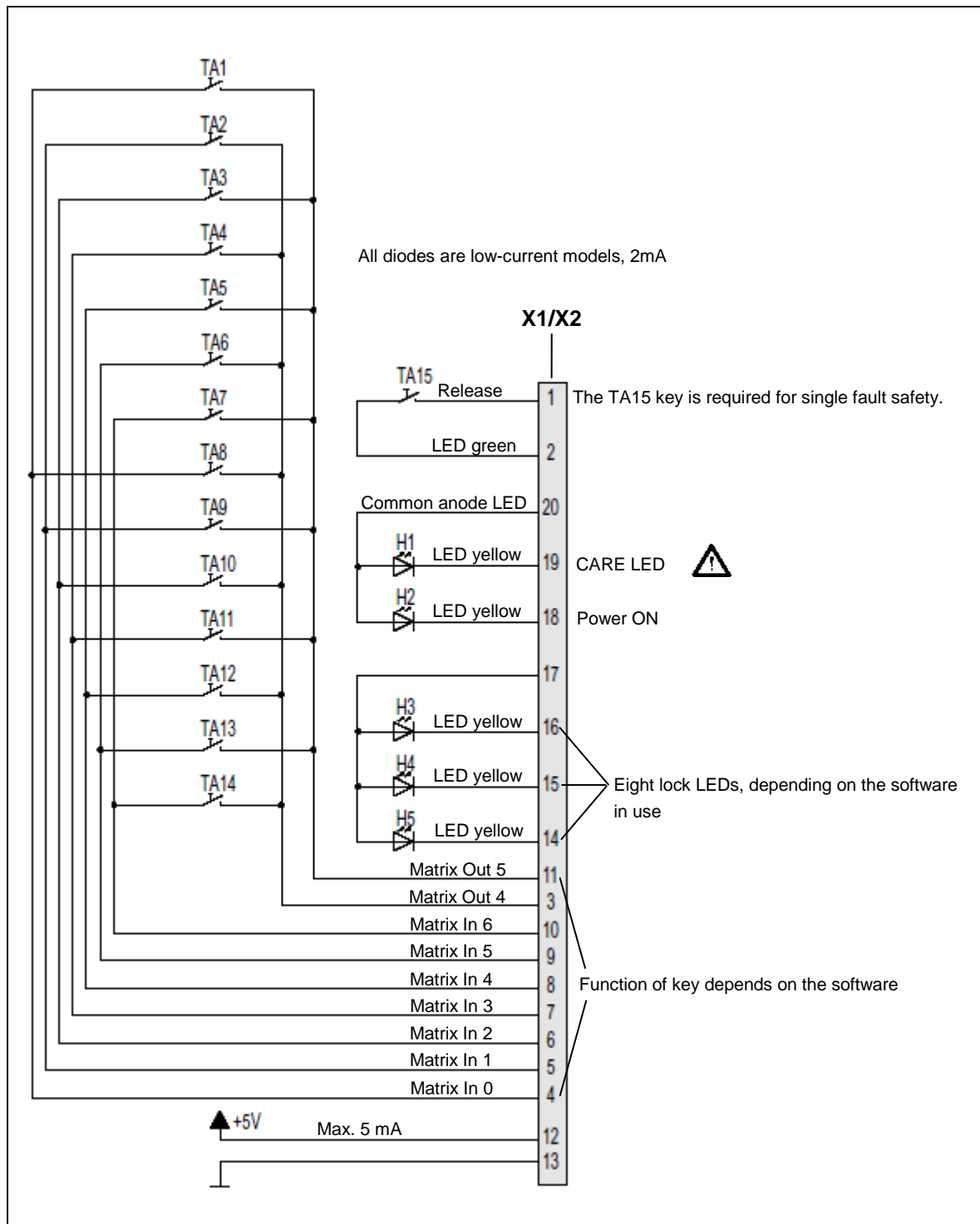


Figure 25 20-pole membrane connector (X1/X2)

5.2.5 ESD protective measures

ESD protective measures must be followed during the installation, in compliance with IEC/EN61340-5-1 and IEC/EN61340-5-2. These include:

- ESD protective zones,
- ESD-protected objects (working surfaces, storage shelves, floors, chairs and seating, clothing, gloves, grounding bracelets, footwear, tools, machines, material distribution, testing devices, etc.), and
- trolleys and hand carts.

For additional information, refer to IEC/EN61340-5-1 and IEC/EN61340-5-2.

5.2.6 Connecting the MEDITOUCH junction cable to the CU155 MEDITOUCH

	CAUTION
First connect the MEDITOUCH junction cable to the CU155 MEDITOUCH (always start from socket 2).	

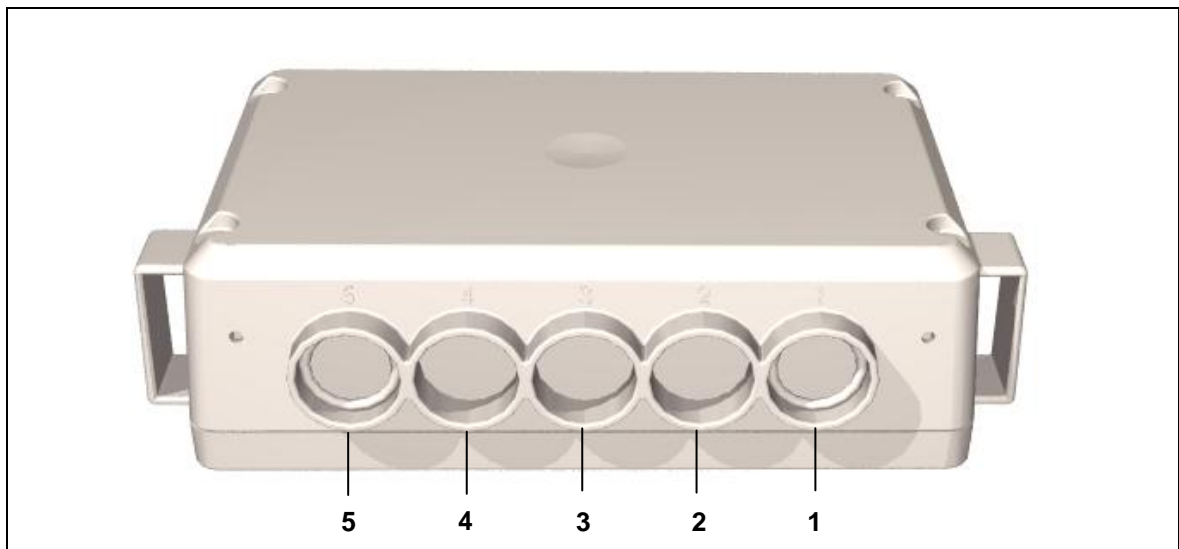


Figure 26 Connecting the MEDITOUCH junction cable to the CU155 MEDITOUCH, sockets 2–5

	WARNING
Make sure that the unoccupied slots on the CU155 MEDITOUCH and the control units are sealed with dummy plugs. The protection category cannot be maintained when they are left unsealed.	

5.2.7 Electrical connection

Your operating instructions for the end product must notify the user that the cables (the power cable in particular) should not be run over and should not be subject to mechanical loads.

When routing the cables, be sure that:

- the cables cannot get jammed,
- no mechanical load (such as pulling, pushing or bending) will be put on the cables, and
- the cables cannot be damaged in any way.

Make sure that all cables (especially the power cable) are fitted to the application with sufficient strain-relief and kink-prevention mechanisms. Be sure that the design of the end product prevents the connecting cables from coming into contact with the floor during transport.



WARNING

Always connect the MEDITOUCH control system in the following sequence:

- 1 First connect the membrane keypad to the MEDITOUCH junction cable.
- 2 Then connect the MEDITOUCH junction cable to the CU155 MEDITOUCH.
- 3 Install the pull-out protection (refer to "Mounting the shield cover over the sockets (pull-out guard)").
- 4 Connect the CU155 MEDITOUCH to the control unit.
- 5 Plug the power connector from the DewertOkin control unit into the power outlet only after all components are connected to the CU155 MEDITOUCH.

5.2.8 Mounting the shield cover over the sockets (pull-out guard)

The shield cover is attached to the CU155 MEDITOUCH by snapping it into the guide slots. In order to maintain the IP protection level, it must be fastened to the CU155 MEDITOUCH using suitable screws (ST 2.9 x 6.5; ISO 7049).

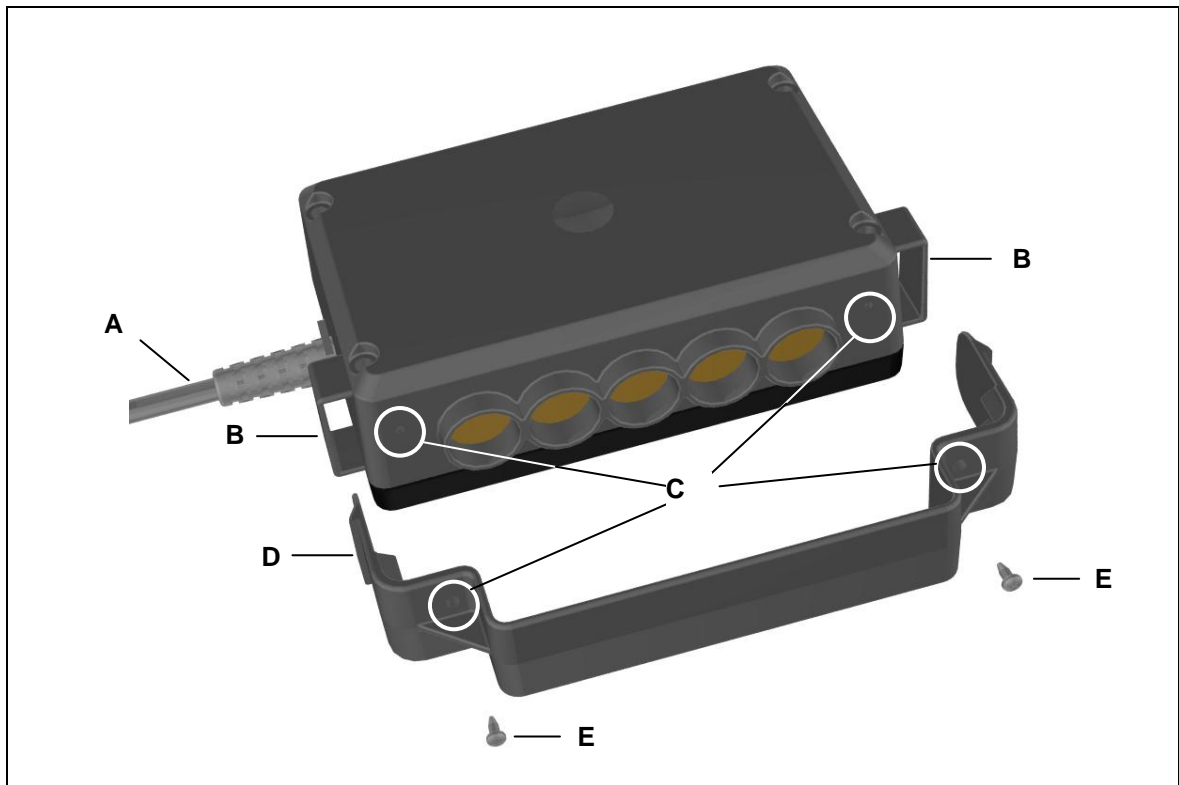


Figure 27 Connecting the MEDITOUCH junction cable to the CU155 MEDITOUCH, sockets 1-5

A Connector to control unit

B Guide slots



C Holes for screws

D Shield cover (pull-out protection)

E Screws



6. Notices for Operation

The factual information contained within may be used when you are creating the end-product manual. The installation instructions do not contain all information required for the safe operation of the end product. They only describe the installation of the control system as a partially assembled piece of machinery.



	 CAUTION
	When creating the operating instructions, remember that the installation instructions are intended for qualified specialists and are not for typical users of the end product.

6.1 General notices

Single fault safety



	 CAUTION
	Only the locked functions have single fault protection!

Emergency shutoff of a connected drive or control unit

	 CAUTION
	In case of an emergency, you can shut down the drive by disconnecting the power plug or battery plug from the control unit and the CU155 MEDITOUCH plug from the control unit. The power plug must always be accessible during operations so that emergency shutoff is possible.



Avoiding cable damage

Be sure that your operating instructions inform the user about the possible cable risks.

	 CAUTION
	The cables (particularly the connecting cable) should not be run over. In order to prevent injuries or drive damage, no mechanical strain should be placed on the cables.

6.2 Starting the MEDITOUCH system for the first time

- 1 Before starting the system for the first time, connect the membrane keypads to the MEDITOUCH junction cables.
- 2 Then connect the MEDITOUCH junction cables to the CU155 MEDITOUCH.
- 3 Then connect the CU155 MEDITOUCH with the DewertOkin control unit.

	 CAUTION
	<p>A short-circuit plug may not be used with the FURNIBUS version of the control unit (SG 300 / MCL)!</p>

6.2.1 Adding, replacing and disconnecting the membrane keypads

The system must be reset each time that you add, remove or replace a keypad.

- 1 After you make a change to the system, pull out the CU155 MEDITOUCH connector from the controller. Leave unplugged for about ten seconds and then plug back in.



The MEDITOUCH control system will automatically carry out a self-test after the power supply is reconnected. The LED will flash on and off. The LEDs will go out after a few seconds or after you press a key.

Using the membrane keypad

Operating instructions for your customer-specific keypad can be obtained from the supplier or manufacturer of the keypad.



7. Troubleshooting

This chapter describes troubleshooting methods for fixing problems. If you experience an error that is not listed in this table, please contact your supplier.

	 CAUTION
	Only qualified specialists who have received electrician training should carry out troubleshooting and repairs.

Problem	Possible cause	Remedy
The MEDITOUCH control system or drive system is not functioning.	The MEDITOUCH control system or the control unit is broken.	Please contact your supplier or sales agent.
	There is no mains supply voltage.	Check the lead-in connections and re-seat the contacts if required.
	The system does not recognize the membrane keypad.	Reset the control system (refer to the "Starting the MEDITOUCH system for the first time" section).
No movements can be carried out on the end product.	The MEDITOUCH control system may be locked.	Check and unlock the adjustment motion functions on the keypad.
	A lead-in connection has been interrupted (mains power, auxiliary drive or handset).	Check the lead-in connections and re-seat the contacts if required.
The "CARE" LED is permanently lit on the membrane keypad (or is blinking when no key is pressed).	The MEDITOUCH control system or the control unit is broken.	Please contact your supplier or sales agent.
The control unit is not reacting normally and functioning improperly when keys are pressed.	The MEDITOUCH membrane keypad may be locked.	Check and unlock the adjustment motion functions on the keypad.
	The MEDITOUCH control system or the control unit is broken.	Please contact your supplier or sales agent.
The LEDs flash continuously (longer than ten seconds) after the power supply is connected.	The system starts and the flashing stops after about ten seconds.	System is okay.
	The MEDITOUCH control system or the control unit is broken.	Please contact your supplier or sales agent.
The keypad is not functioning	There is a problem with the contact between the keypad and the MEDITOUCH junction cable.	Check and re-seat the contact.
The "CARE" LED does not go out after a key has been pressed.	The MEDITOUCH control system or the control unit is broken.	Please contact your supplier or sales agent.
The Lock LED is flashing.	There is an error in the control system.	Unlock the corresponding key or adjustment function.

8. Maintenance


	 CAUTION
	You should only use spare parts which have been manufactured or approved by DewertOkin. Only these parts will guarantee a sufficient level of safety.

8.1 Maintenance


Type of check	Explanation	Time interval
Check the function and safety of the electrical system.	A qualified electrician should carry out this inspection. (Refer to the "Electrical connection" section in the "Installation" Chapter.)	Periodic inspections can be carried out at intervals based on the risk assessment which you conduct for your end product.
Periodic visual inspection for housing damage.	Check the housing for breaks or cracks. The IP protection will be impaired by any breakage or cracks.	At least every six months.
Periodic visual inspection of the plug-in connections and electrical access points for damage.	Check that all electrical cables and connections are firmly seated and correctly positioned.	At least every six months.
Periodic visual inspection for cable damage.	Check the connecting cables for pinching or shearing. Also check the strain relief and kink protections mechanisms, in particular after any mechanical load.	At least every six months.

8.2 Cleaning and care

The MEDITOUCH control system was designed so that it would be easy to clean. Its smooth surfaces can be conveniently cleaned.

	WARNING
Never clean the control system in an automated washing system or with a high-pressure cleaner. Do not allow fluids to penetrate the lighting. Damage to the system could result.	

- 1 Always disconnect the mains power plug before you start to clean the drive!
- 2 Before starting to clean, disconnect the CU155 MEDITOUCH plug from the control unit. This ensures that the application will not accidentally be set in motion.
- 3 Clean the MEDITOUCH control system using a moist cloth
- 4 Be sure that you do not damage the connecting cables of the control system during the cleaning.

	WARNING
Do not use a cleanser that contains benzene, alcohol or similar solvents.	

9. Disposal

The MEDITOUCH control system consists of electronic components, cables and metal and plastic parts. You should observe all corresponding national and regional environmental regulations when disposing of the MEDITOUCH control system.

The disposal of the end product is regulated in Germany by Elektro-G, internationally by the EU Directive 2002/95/EC (RoHS, from 1 Jul. 2006) and Directive 2011/65/EU (RoHS, from 3 Jan. 2013), or by any applicable national laws and regulations. (The end product is not regulated by the EU Directive 2002/96/EC (WEEE) and its amendment EU Directive 2003/108/EC.)



This MEDITOUCH control system should not be disposed of with normal household waste!

Additional information

MEDITOUCH control system

In accordance with EN60601-2-38:1996 +A1:2000 (electrically operated hospital beds), the following standards apply when using the CARE L / CARE / HOSP / FURNIBUS units:

EN60601-2-38, section 5.2	The classification of application parts.
EN60601-2-38, section 5.3	System protection category: Min. IPX4; CU155 MEDITOUCH Warning: The manufacture of the end product must ensure the IP protection level of the following components: the MEDITOUCH junction cable and the patient and nurse membrane keypads.
EN60601-2-38, section 22.2.102	Nurse membrane keypad: locking mechanism for restricting drive motion(s)
EN60601-2-38, section 22.4.101	Drive motions controlled by key presses (Drive motions without key press – alternatives available on request.) The manufacturer of the end product must ensure that the corresponding standards are upheld.
EN60601-2-38, section 36	Electromagnetic compatibility
EN60601-2-38, section 52.4.101	Nurse membrane keypad: locking mechanism for restricting drive motion(s)
EN60601-2-38, section 52.5.9	Nurse membrane keypad: locking mechanism for restricting drive motion(s)
EN60601-2-38, section 52.5.101	Nurse membrane keypad: locking mechanism for restricting drive motion(s)
EN60601-2-38, section 56.8	Lighting (not required) is available optionally
EN60601-1-4	PEMS

EU Declaration of Conformity

In compliance with Appendix IV of the EU EMC Directive 2004/108/EG

In compliance with Appendix III of the EU Low Voltage Directive 2006/95/EG

In compliance with Appendix VI of the EU RoHS Directive 2011/65/EU

The manufacturer:

DewertOkin GmbH

Weststraße 1

32278 Kirchlingern

Germany

declares that the following product

MEDITOUCH control system with DewertOkin drive system

meets the requirements of the following EU directives:

Electromagnetic Compatibility Directive 2004/108/EG

Low Voltage Directive 2006/95/EG

RoHS Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Applied standards:

- EN 60335-1:2012
- EN 55014-1/A1:2009
- EN 55014-2/A2:2008
- EN 61000-3-2/A2:2009
- EN 61000-3-3:2008
- EN 62233:2008

This declaration of conformity is no longer valid if constructional changes are made which significantly change the control unit (i.e., which influence the technical specifications found in the instructions or the intended use)!

Kirchlingern, Germany on 15 December, 2012



Sascha Koltzenburg

Head of R & D

DewertOkin GmbH
Weststraße 1
32278 Kirchlegern, Germany
Tel: +49 (0)5223/979-0
Fax: +49 (0)5223/75182
<http://www.dewertokin.de>
Info@dewertokin.de

ID No.: 61365