Installation Instructions

DEWERT OKIN
A DewertOkin Technology Group Company

Locking Device

Installation Instructions

(Translation of the original Installation instructions)

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Locking Device

Contents

General Information

These instructions are intended for the manufacturer of the end product and are not designed for passing on to the operator of the end product. However, with regard to the specialist information contained herein, they can well serve as a basis for drawing up the end product manual.

It is essential to note the information contained in these instructions! In doing so, you can prevent mistakes being made in installing or connecting the system which could result in

- **injury and accidents as well as**
- **damage** to the drive system or the end product.

DewertOkin **accepts no liability** for damage caused as a result of…

- non-observance of these instructions,
- alterations to the product not approved by DewertOkin or...
- the use of spare parts not manufactured or approved by DewertOkin - these may not ensure adequate safety!

Due to the policy of ongoing product improvement, DewertOkin reserves the right to carry out technical changes at any time without prior notification!

1. Designated Use

The **Locking Device** operating element is **intended for use** in DewertOkin drive systems for locking/releasing drive movements, e.g. in beds…

- for the disabled,
- for the hospital sector.

The **Locking Device** is **not intended for use**…

- in an environment where **inflammable** or **explosive** gases or vapours (e.g. anaesthetics) are likely to occur,
- in a damp environment, i.e. outdoors,
- In applications intended for cleaning in wash tunnels,
- in applications in which inadvertent movements are not prevented by appropriate technical measures,
- in the immediate vicinity of young children.

2. Prerequisites

The installation steps described in these instructions must be performed by a **fully trained electrical engineer**.

- This being the case, you should never carry out this work **yourself** unless you are a **qualified electrical engineer** or
- you **should entrust** this work to suitably **qualified persons** only.

Conformity according to EC Directives

The **Locking Device** is supplied ex factory as a **machine not ready for use** in accordance with the EC Machinery Directive. In other words, you may not put the drive control system into operation until you have met the **safety objectives** of the Machinery Directive and issued a corresponding **Declaration of Conformity**!

The drive system meets the safety objectives of the EC Directives concerning **"Low Voltage"** and **"Electromagnetic Compatibility (EMC)"**.

The **Locking Device** is **not a medical product** - for installing for use in such a product, manufacture in **conformity** with the EC Directive for Medical Products or other regulations is the responsibility of the **manufacturer of the end product**.

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The **Locking Device** is **not a medical product** - for installing into same, manufacture in **conformity** with the EC Directive for "Medical Products" or other regulations is the responsibility of the **manufacturer of the end product**. For this purpose, in the case of the CARE L/CARE/HOSP drive systems, DewertOkin has additionally applied, fully or partially, a number of standards from the medical products sector, in order to **facilitate** use in medical products, e.g.

EN 60601-1	Safety of Electromedical Equipment
EN 60601-1-2	Electromagnetic Compatibility of Electromedical Equipment
EN 60601-2-38	Safety of Hospital Beds (CARE/CARE L version only)
EN 1970	Adjustable Beds for the Disabled (CARE/CARE L version only)

Caution!

For your own safety!

When designing the **bed construction**, take into account any areas in which an inadvertent movement could prove hazardous.

Shutdown in an emergency is achieved by **pulling out the mains plug from the drive system!** The mains plug must therefore be accessible at all times when the system is in operation to ensure it can be quickly pulled out of the wall socket in an emergency.

Avoid subjecting the mains cable and connecting cable to mechanical loads. Regular visual checks of the cables should be carried out at short-term intervals and in particular each time it has been subjected to a mechanical load.

If the mains cable of the drive system gets damaged, it must be replaced in order to prevent hazards. **Work to and replacement of the mains cable may only be carried out by specialist personnel holding the qualifications described on page 3 or by persons who have taken part and successfully completed the corresponding training programmes offered by DewertOkin.**

In the Operating Instructions to be drawn up by yourselves, it is essential that you draw the operator´s attention to the points mentioned here.

3. Getting to Know the System

The **Locking Device** is intended for the German market and complies with the Law applicable in Germany in implementation of relevant EC Directives.

To put the operating element **Locking Device** into operation, **further components, e.g. control unit, drive with integral control PC board**...are required.

a) Connectable components

Operating Element	Main Drive	Control Unit
Locking Device	DUOMAT 7[1)] DUOMED	MCL[1)] SG 300[1)] SGAG 300[1)] MBXL[2)]

1) Versions CARE/CARE L and HOSP

2) Versions CARE/CARE L

Locking Device

b) Technical data

Input voltage..... :	24 - 29 V DC SELV max. 40 V DC SELV
Approved current capacity, contact load rotary switch..... :	max. 150 mA
Approved current capacity, contact load adjustment key.....:	max. 50 mA
Protection classification..... :	III
Lockable drives.....:	1 - 3
Equipment versions..... :	Trendelenburg, Antitrendelenburg
Protection category..... :	IP20 (optional IPX4 / IPX6)
Colours.....:	Grey

Dimensions and weights

Length x width x height..... :	approx. 83 x 68 x 36.5 mm
Weight.....:	approx. 0.2 kg

Ambient conditions for operation, storage and transport

Transport / storage temperature..... :	from -20 °C to +50 °C from -4 °F to +122 °F
Operating temperature.....:	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

4. Fitting

The supply package includes a **Locking Device** - and depending **on the order**, a **control unit**, a **double drive**, a **handset** and **slave drives**. The components are prewired ready to plug in.

a) Installation (examples)

Caution!

Only ever connect or disconnect electrical components when they are **voltage-free**.

Example: Using **four screws (1)**, fix **adapter plate (3)** to **frame (2)** as shown in **figure a)**. Make sure that there is sufficient space for the installation. Slide **Locking Device (4)** onto **adapter plate (3)** until **locking mechanism (5)** engages, **figure b).** Take care that the **connection lead (6)** does not get jammed or trapped.

Figure a: Screw **adapter plate (3)** to **frame (2)**.

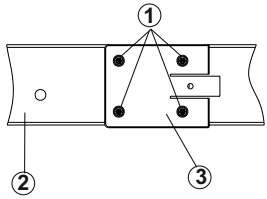
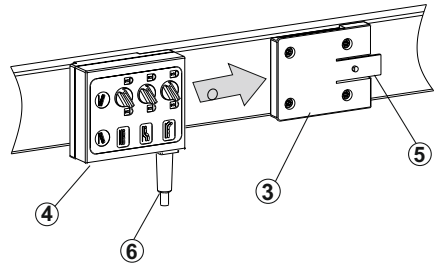


Figure b: Slide **Locking Device (4)** onto **adapter plate (3)**.



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b) Electrical connection

In the **Operating Instructions** to be issued by you, point out to the operator that if cables are **driven over**, they could sustain damage. **Mechanical loads should also be avoided**.

When routing the cables make sure that they

- cannot get entangled or trapped,
- are not subjected to mechanical loads (i e. do not pull, apply pressure or bend),
- cannot get damaged in any other way.

Make sure that the cables, in particular the **mains cable**, are fastened to the application with adequate **strain relief** and **kink protection** and that suitable constructional measures prevent the **mains cable from trailing on the floor** when the application is being **moved**.

d) Dismantling

Disconnect the plug-in connectors from the respective connecting sockets.

Example: **Support the Locking Device (4)**, press **locking mechanism (5)** onto **adapter plate (3)** at the same sliding **Locking Device (4)** back. The **Locking Device** is now disengaged and can be removed **(see figure a/b, page 7)**.

Make sure that the cables cannot sustain damage when the application is moved.

5. Operation

For drawing up the Operating Instructions for the End Product, you can use the specialist information described herein. Please bear in mind that these instructions are intended for you as a specialist and not for the potentially non-professional operator of the end product.

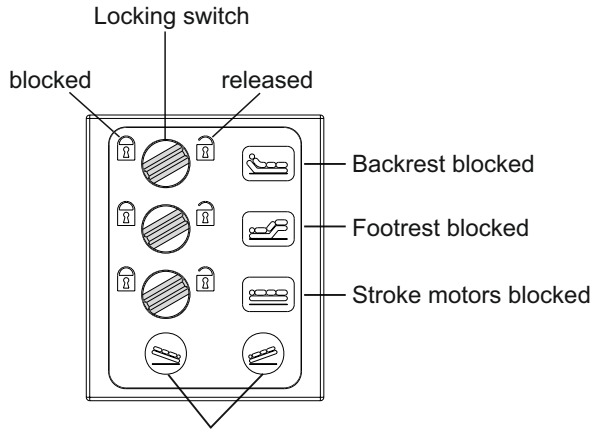
Attention!

- **The Locking Device is not intended to be used by small children or the unsupervised infirm.**
- **The Locking Device is not a toy for children to play with.**

a) Prerequisites

The functions of **adjustment keys are only available** provided **these are not blocked** on the Locking Device. In certain circumstances it may be advisable to block functions in order to prevent specific movements from being carried out.

b) Locking Device function (example)
Locking Device with 3 locking switches and 2 adjustment keys



Adjustment keys for the Trendelenburg/Antitrendelenburg function

To guarantee first error security, you can block the drive movements via the Locking Device:

- Turn the **locking switch** to the **"blocked"** position.
- **Check** that the function is blocked by pressing the corresponding adjustment key on the handset. The drive should be **immobilized**.
- If movement is carried out, the drive system must be replaced immediately.

The Locking Device features the same pictographs as on the handset, i.e. the depicted function is blocked by the locking switch. Blocking is symbolized by a closed shackle lock. Furthermore, the Locking device features up to 3 adjustment keys which by way of example (depending on the version) can initiate Trendelenburg/Antirendelenburg or other functions.

Blocking the other functions is possible by blocking the backrest, footrest and/or the stroke motors (height adjustment).

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c) Maintenance and Repairs

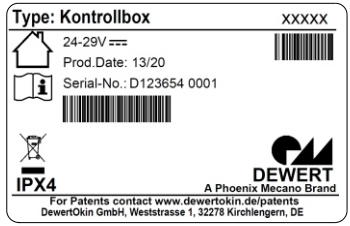
At regular intervals carry out the inspections. The recommended inspection period is: **6 months**

In addition to the above, the following checks should be carried out at shorter intervals:

- **Regular visual checks** for damage of all kinds
  Check the housing for cracks and fractures and the mains connection lead, handset leads and drive leads for signs of pinching and shearing-off. Also check the strain relief with kink protection, in particular after each case of mechanical loading.

6. Type label (Example)

Each component carries a type label giving the exact designation, item number and technical specifications (for explanation see following figure as an example).



Type: Kontrollbox	Article type designation
Xxxxx	Article number
24-29V	Input voltage
Prod.Date	Week / Year
Serial-No.	Serial number
IPX4	Protection category
	Use in dry rooms only!
	Follow all special disposal instructions!

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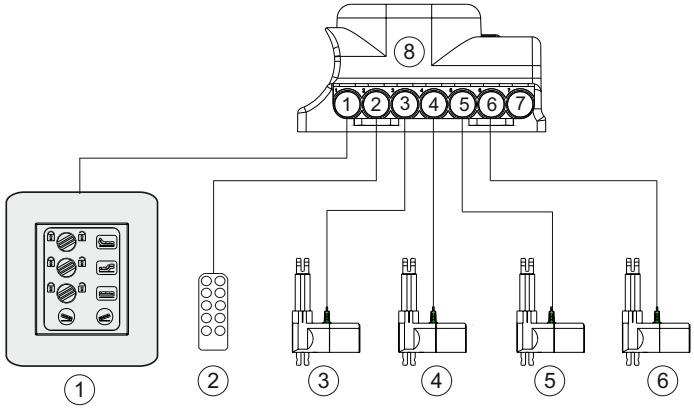
8. Connecting Diagram with Locking Device (Example)

(MCL control unit with additional equipment)



Only connect the components as shown!
This can otherwise result in damage to the drive control unit!

Pos.	Part designation	Description
1	DewertOkin Locking Devise	Locking function
2	DewertOkin Handset	Version depends on application range (e.g.: IPROXX®[1)])
3 - 6	DewertOkin Slave Drive	e. g. MEGAMAT, MEGAMAT 2 ...
8	DewertOkin Control Unit	Drive control unit (e.g.: MCL,...)

[1)] without integral Locking Device

7. Troubleshooting

The following table has been developed to help you detect and eliminate common faults and errors. If you come across a fault/error that is not listed here, please contact your supplier. All of these faults/errors may only be inspected and rectified by specialists holding the qualifications as described on page 3.

Problem	Possible Cause	Remedy
Locking Device or drive system without function	- Locking Device or drive system defective - No supply voltage	- Contact your supplier/ dealer
No movements/ adjustments can be carried out.	- Locking Device is blocked - Feeder cable (mains and/or Slave Drives/Locking Device) interrupted	- Check switch position on the Locking Device and, if necessary, release. - Check the feeder cable, if necessary restoring contact
Acoustic signal (CARE/HOSP)	- Locking Device is blocked	- Check switch position on the Locking Device and, if necessary, release.

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9. Cleaning

The **Locking Device** has been designed to facilitate cleaning for the user, and this has been made even easier thanks to the large number of flat surfaces.
The **Locking Device** should be cleaned with a proprietary cleaning agent suitable for **polyamide 6** using a damp cloth. Always note the instructions provided by the manufacturer of the respective cleaning agent used.

Before cleaning, always pull out the mains plug from the drive system!

Never clean the Locking Device in a wash tunnel or with a **high-pressure cleaner nor spray liquids** onto it. You risk damaging the equipment!

When **cleaning** take care not to **damage** the drive system´s **connection lead**!

Do not use **any solvents** such as **benzene**, **alcohol** or similar substances.

10. Disposal

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

The disposal of the product is regulated in Germany by Elektro-G, internationally by the EU Directive 2012/19/EC (WEEE), or by any applicable national laws and regulations.

The **Locking Device m**should not be disposed of with normal household waste!

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DEWERT OKIN
A DewertOkin Technology Group Company

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

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