



CU155

Installation Instructions

**(Translation of the original
installation instructions)**

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CU155

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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. With regard to the specialist information contained herein, these instructions can serve as a basis for drawing up the instructions for the end products.

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.

To supply the voltage, use only a DewertOkin DC power supply!

The DewertOkin DC power supply includes an earth-free electric circuit which is isolated from the supply voltage via double or reinforced insulation.

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 CU155 drive control unit is **designed** for installing in end products...

- to control motorised adjustment devices in movable furniture components (e.g. beds, chairs...)

The CU155 drive control unit 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 beds intended for cleaning in wash tunnels
- in applications in which inadvertent movements are not prevented by appropriate technical measures.

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 CU155 drive control unit 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 control unit with DewertOkin DC power supply meets the safety objectives of the EC Directives concerning **Low voltage** and **Electromagnetic Compatibility (EMC)**.

The CU155 drive control unit 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**.

Caution! For your own safety!

Shutdown in an emergency is achieved by **pulling out the mains plug from the DC power supply!** 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 main's connection lead and connection cables to mechanical loads. Regular visual checks of the mains connection lead should be carried out at short-term intervals and in particular each time it has been subjected to a mechanical load.

If the mains connection lead of the DC power supply gets damaged, it must be replaced in order to prevent hazards. **Work to and replacement of the mains connection lead may only be carried out by specialist personnel holding the qualifications described on page 3 or by persons who have taken part and successful 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 **CU155** drive control unit is intended for the German market and complies with the Law applicable in Germany in implementation of relevant EC Directives.

a) Product versions

To operate the drive controls, **further components, such as from 1 to 4 slave drives, (5 slave drives optional) handset** ... are required.

Reverter-Plug

The optionally available reverter-plug (see page 7) allows flexible adjustment of the motor's running direction to match the application. The controls and handset can therefore be standardized.

Connectable components

	Slave Drive	Handset	Voltage Supply
CU155	MEGAMAT ¹⁾ MULTITRAXX ¹⁾ MULTIMAT B23 ¹⁾ ⋮	COMFORT ⋮	DC power supply

¹⁾ with or without reverter-plug

b) Technical data

Supply voltage.....	24 V DC
Permissible total current input.....	max. 8.0 A (ID 2min./18min.)
Fuse.....	T 6.3A - T 8.0 A (depending on version)
Operating mode ¹⁾	intermittent duty ID 2 min./18 min.
Protection classification.....	III
Variations.....	various control functions for up to 5 drives
Protection category.....	IP20 (optional IPX4)
Colours.....	black

Dimensions and weights

Length x width x height of the control system....:	157 x 128.5 x 44 mm
Weight.....	approx. 0.3 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
Height.....	< 2000 m

¹⁾ Operating mode = **intermittent duty ID 2 min./18 min.**, i.e. run for 2 min. max. under rated load, then a rest period of 18 min. must be observed, otherwise operational **failure could occur!**

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4. Fitting

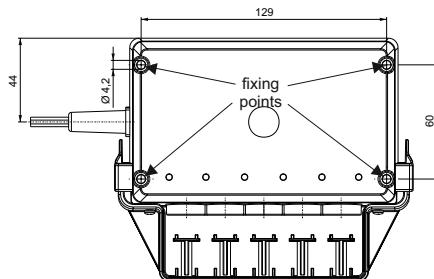
Caution!

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

Included in the supply package is the **drive control unit** and depending on the order a **DC power supply**, a **handset** and up one to five **slave drives**. The components are prewired and ready to plug in.

a) Installation

The **CU155** drive control unit can be screwed to the application at the 4 fixing points using suitable screws (e.g. M4x50 screws). The surface onto which the controls are mounted **must** be level and **flat**. It is important in the application that no mechanical forces (e.g. torsional forces etc.) are brought to bear on the drive controls or casing parts. Such forces can bring about damage (e.g. cracks) to the casing parts.



b) Electrical connection

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

When routing the cables make sure that they

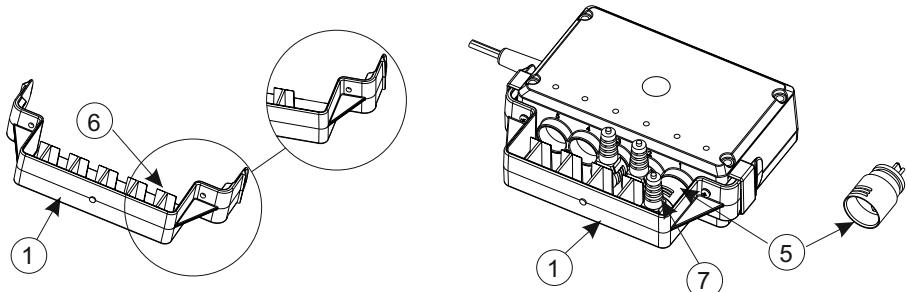
- cannot get entangled or trapped,
- are not subjected to mechanical loads (i.e. do not pull, apply pressure or bend),
- cannot get damaged in any other way.

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

First connect the **slave drives and controls**, as shown (see page 11). Make sure that any sockets not being used are sealed off with **blind plugs**, - otherwise the protection category is not guaranteed. Do not insert the mains plug of the DewertOkin DC power supply until all the components have been connected to the **CU155** control unit. Afterwards fit the plug pull-out safeguard (see page 7).

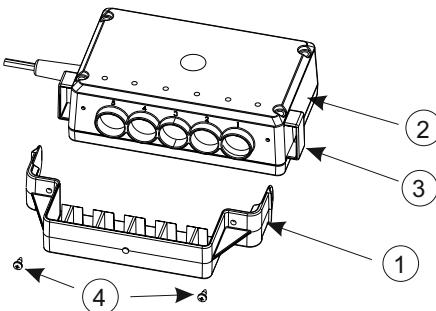
c) Fitting the reverter-plug

In order to fit the **reverter-plug** (5), a **fin** (6) must be broken off the **plug pull-out safeguard** (1) at the relevant socket. This is easy to do by hand. The **motor cable plug** (7) is then inserted into the **reverter-plug** (5) which in turn is inserted into the corresponding socket of the control system. The plug then sits at the front of the **plug pull-out protection** (1).



d) Fitting the plug pull-out protection

Fit the **plug pull-out protection** (1) to the **drive control unit** (2) by allowing it to engage into the **guides** (3). Additionally, it can be firmly connected to the drive control system using suitable **screws** (4) (ST 2.9 x 6.5; ISO7049).



Caution! For your own safety!

There is a **risk of sustaining** injury by getting trapped if the mechanical connections between the fitting and the drive system are loosened.

e) Dismantling

Operate the application to travel to the starting position and disconnect the drive system from the mains voltage, then the drive control unit from the DewertOkin DC power supply. Pull-off the **plug pull-out protection** (1), take this off first and then the cables from the respective sockets. Loosen the retaining screws - the drive control system can now be removed from the application.

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5. Operation

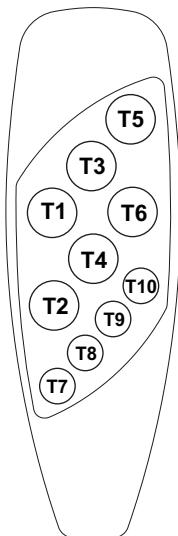
For drawing up the Operating Instructions for the end product, you can use the specialist information described herein. Please bear in mind that these instructions are intended for you as a specialist and not for the possibly non-professional operator of the end product.

Attention!

- The electric adjustment drive is not intended to be used by small children or the unsupervised infirm.
- The electric adjustment drive is not a toy for children to play with.

a) Handset (example)

The handset (COMFORT type) can be equipped with up to 10 adjustment keys. The control elements are assigned as follows:



Example: COMFORT with 10 adjustment keys

Key	Function
T1	Motor 1 up
T2	Motor 1 down
T3	Motor 1 + 2 (Reset up)
T4	Motor 1 + 2 (Reset down)
T5	Motor 2 up
T6	Motor 2 down
T7	Motor 3 up
T8	Motor 3 down
T9	Motor 4 up
T10	Motor 4 down

6. Maintenance and Repairs

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

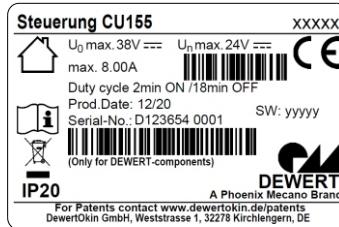
In addition to the above, the following checks should be carried out at shorter intervals:

- **Regular visual checks for damage of all kinds**
Check the housing for cracks and fractures and the mains connection lead for signs of pinching and shearing-off. Also check the strain relief with kink protection, in particular after each case of mechanical loading.
- **Regular checks of the protective conductor resistance and leakage currents (by a specialist)**

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7. Type Label (Example)

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



Steuerung CU155

Xxxxx

U_0 max. 38V

U_n max. 24V

Max. 8.00A

Duty cycle 2min ON / 18 min OFF

Prod.Date

Serial-No.

Ip20



Article type designation

Article number

No load voltage

Rated voltage

Current consumption

Intermittent operations: 2 minutes / 18 minutes

Week / Year

Serial number

Protection category

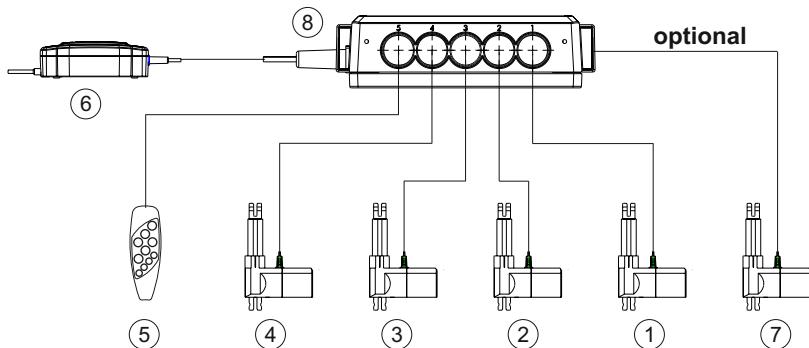
Use in dry rooms only!

Follow all special disposal instructions!

Mark of CE conformity

8. Design of the CU155 Drive Control Unit

Example: CU155 with all additional equipment



**Only connect the components as shown!
This can otherwise result in damage to the drive controls!**

Pos.	Part Designation	Description
1 - 4	DewertOkin slave drive	e.g. MEGAMAT, MULTITRAXX ...
5	DewertOkin handset	e.g. COMFORT
6	DewertOkin DC power supply	Voltage supply
7	DewertOkin slave drive (Optional)	e.g. MEGAMAT, MULTITRAXX ...
8	DewertOkin CU155	Drive control unit

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9. 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
Handset or drive system without function	<ul style="list-style-type: none">- Handset or drive system defective- No supply voltage	<ul style="list-style-type: none">- Contact your supplier/dealer- Connect to mains
Drives suddenly no longer respond, no movement takes place	<ul style="list-style-type: none">- Thermoswitch on transformer or in the DEWERT controls has possibly been triggered- Temperature fuse in transformer has possibly been triggered- Instrument fuse has possibly been triggered- Lead (mains and/or handset/slave drives) interrupted- No supply voltage	<ul style="list-style-type: none">- Leave the drive system in the rest position for approx. 20-30 minutes- Contact your supplier/dealer- Check the lead, if necessary restoring contact
When handsets is activated control unit does not react adequately and shows malfunction	<ul style="list-style-type: none">- Handset or drive system defective	<ul style="list-style-type: none">- Contact your supplier/dealer

10. Cleaning

The **CU155** drive control unit 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 **CU155** drive control unit should be cleaned with a household cleaning agent suitable for **ABS** 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!

Never clean the CU155 drive control unit in a wash tunnel or with a high-pressure cleaner nor spray liquids onto it. You otherwise risk damaging the equipment!

When **cleaning**, take care not to **damage the connection lead!**

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

11. Disposal

The **CU155** drive control unit consists of electronic components, cables and metal and plastic parts. You should observe all corresponding national and regional environmental regulations when disposing of the **CU155** drive control unit.

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 **CU155** drive control unit should not be disposed of with the normal household waste!

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EU Declaration of Conformity

In compliance with Appendix IV of the EMC-Directive 2014/30/EU

In compliance with Appendix IV of the LVD-Directive 2014/35/EU

In compliance with Appendix VI of the EU RoHS Directive 2011/65/EU (incl. Commission delegated Directive (EU) 2015/863)

The manufacturer:

**DewertOkin GmbH
Weststraße 1
32278 Kirchlengern
Deutschland - Germany**

declares that the following product

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meets the requirements of the following EU directives:

Electromagnetic Compatibility Directive 2014/30/EU

Low Voltage Directive 2014/35/EU

COMMISSION DELEGATED DIRECTIVE (EU) 2015/863 of 31 March 2015 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances.

Applied standards:

**EN 60335-1:2012/A11:2014
EN 55014-1:2006/A1:2009/A2:2011
EN 55014-2:1997/A1:2001/A2:2008
EN 61000-3-2:2014
EN 61000-3-3:2013
EN 62233:2008**

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



Kirchlengern, Germany 18 March 2020

**Dr.-Ing. Josef G. Groß
Managing Director**

CU155



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