COMPACT^{eco}

Firmware-Version 1.11
Document Version 1.0
English

User Manual

Control unit for
an electric
height-adjustable
desk

LOGIC
office

Contents

1   Preface

Dear Customer,

Thank you for choosing a **COMPACT^{eco}** control unit for electric height-adjustable desks from **LOGICDATA Electronic & Software Entwicklungs GmbH**. You are now in possession of a state-of-the-art product that complies with all the relevant safety requirements.

1.1   Intended Use

COMPACT^{eco} control units may only be used for the intended purpose, i.e. to control electric height-adjustable desks. Only motors that meet LOGICDATA specifications (e.g. duty cycle, current consumption) may be used to drive the lifting devices. The control units must be installed, put into operation and their function checked by qualified personnel. Using them to control other motors or installing them in products other than electric height-adjustable desks is only permissible with the prior written consent of LOGICDATA. Their basic function is upward and downward adjustment of the desktop, which can be controlled with all the hand controls available.

1.2   COMPACT^{eco} control unit functionality

The COMPACT^{eco} control units incorporate the following features (the availability of some of the features depends on the hand control used):

- High efficient switch mode power supply (SMPS)
- Low standby power consumption, low field emission
- Control units with US and EU input voltage available
- Table height display with configurable offset
- Up to 6 memory positions (depending on handset)
- Up to 2 motor groups
- ISP (Intelligent System Protection)
- Enhanced Drive Comfort
- Safety area
- Low speed area
- Plug detection and automatic detection of the number of connected drives (depending on used motors)
- Automatic recognition of SLIMdrive actuator type and selection of the appropriate parameters (for LOGICDATA SLIMdrive actuators only)
- Configurable reset conditions
- Configurable stop conditions (overtemperature, overcurrent, timeout, limit switches)
- LogicConnector DATA for sensors and cascading
- Additional functions are available, depending on the hand control model used (e.g. saving desktop positions, adjusting the desktop to saved positions, etc.)
- A wide selection of LOGICDATA hand controls is available for the control units

1.3 Target group and previous knowledge

This user manual addresses the following people:

- Technicians who assemble and put electric height-adjustable desks into operation (by installing motors and control units, configuring control units, etc.)
- Furniture assembly, service and maintenance personnel who put electric height-adjustable desks into operation in showrooms or at the customer's

The following is required for installing, operating and configuring electric height-adjustable desks with COMPACT^{eco} control units:

- Basic mechanical and electrical skills (with suitable qualifications)
- Reading the user manual

1.4 Symbols used in safety instructions

This user manual contains safety instructions with symbols drawing your attention to possible dangers and residual risks. They indicate the following:

Danger: this warning symbol advises you of imminent danger to people's lives and health.

Failure to observe this warning may result in health problems, serious injuries and damage to property.

Caution: this warning advises you of **possible dangers from electric current**.

Failure to observe this warning may cause injuries and damage to property.

Note: this symbol advises you of important information that must be noted for operating the COMPACT^{eco} control unit safely.

Danger: this warning advises you of a possible risk of body parts being trapped or pinched in exceptional cases.

Failure to observe this warning may result in health problems, serious injuries and damage to property.

For indoor use only!

Note: You must read the user manual.

1.5   Package contents

The COMPACTeco control unit is supplied together with the following components as standard:

Figure 1: Package contents

①   COMPACTeco control unit

> **Note:** power cords can be ordered separately.

1.6   Unpacking

The COMPACTeco control unit comes packed in a cardboard box. Some components are also sealed in plastic film. To unpack, proceed as follows:

1. Remove the cardboard and plastic film from the control unit components.
2. Check the package contents.
3. Dispose of the packaging materials.
4. Keep the user manual at hand for the operators.

> **Note:** ensure eco-friendly disposal of the packaging materials (separate the plastic parts and cardboard for collection).

1.7   Safety instructions

This user manual contains safety instructions that draw your attention to any possible risks, thus enabling safe operation of the COMPACTeco control unit. Please observe these warnings and instructions at all times.

In this section you will find general safety instructions that do not refer to any particular steps or procedures. You will find the work-specific safety instructions in the relevant section of the manual. Additional warnings are given on the COMPACTeco control unit itself.

1.7.1   General safety instructions

> **Note:** Read the user manual carefully before installing or operating the COMPACTeco control unit.

> **Caution:** Do not open the COMPACTeco control unit under any circumstances. There is a danger of electric shock.

Caution: The COMPACT^{eco} control unit is not designed for continuous operation. Changing the desktop position without interruption must not exceed the duty cycle indicated on the type label.

Caution: The COMPACT^{eco} control unit may only be operated with mains voltage as specified on the type label.

COMPACT^{eco} control units are also available for the mains voltages used in other countries. Detailed information is provided in the corresponding datasheet!

Caution: only use the power cord supplied with the control unit. Check that it is not damaged. Do not ever operate the COMPACT^{eco} control unit if the power cord is damaged.

Danger: It is not allowed to connect self-constructed products to LOGICDATA motor controls. To prevent damage of the unit, use only components suitable for LOGICDATA motor controls.

Caution: Before connecting and disconnecting hand controls, you must unplug the power cord.

Danger: In the event of a malfunction (e.g. if the control unit keeps adjusting the desk because a movement key has jammed), please unplug the unit immediately.

Danger: Do not expose the COMPACT^{eco} control unit to moisture, drips or splashes.

Danger: When changing the desktop position, there is a risk of pinching. You must therefore ensure that no people or objects are located in the hazardous area or can reach into it.

Danger: Do not modify or make any changes to any LOGICDATA product.

Danger: Do not operate the COMPACT^{eco} control unit in a potentially explosive atmosphere.

Danger: In the event of a fault (motor or component), whenever the desktop attempts to adjust the height it may move slightly before the safety cut-out is triggered. Please note that there is a higher risk of pinching in this case.

Danger: Intelligent system protection (ISP) is not enabled during all resets (see chapter 4.2.4). Please note that there is a higher risk of pinching in this case.

Danger: This control unit can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge only if they have been given supervision or instruction concerning use of the control unit in a safe way and understand the hazards involved.

o

Danger: Children shall not play with the appliance.

Caution: If the control unit's power cord is damaged, it must be replaced by the manufacturer or customer service or similarly qualified person in order to prevent any risks.

Caution: Only clean the COMPACT^eco control unit with a dry, soft cloth. Before cleaning. You must always unplug the power cord.

Danger: Cleaning and user maintenance shall not be made by children.

1.7.2 Important notes for OEMs

What we mean by OEMs are companies that purchase COMPACT^eco control units from LOGICDATA and install them in their own products (e.g. electric height-adjustable desks). For reasons of EU conformity and product safety, we advise you to provide users of your products with a manual in the relevant EU language. When you ship your finished products, enclose a user manual containing all the safety instructions that consumers need to handle your product safely. The user manual for your finished product must contain the following note: you must read the user manual before you operate the product (electric height-adjustable desk). Advise your customers that the user manual must be kept at hand in close proximity to the product (electric height-adjustable desk). Conduct a risk analysis of your product (electric height-adjustable desk) so that you can respond to any potential residual risks (e.g. by changing design features or adding notes to the user manual and/or placing warnings on your product). Ensure that no unauthorized individuals (e.g. small children, people under the influence of drugs, etc.) can tamper with your product or the control unit.

1.7.3 Important note for service

Only use original accessories. Parts may only be replaced by qualified service technicians, otherwise the warranty/guarantee shall be null and void. In the event of a fault, please contact customer service immediately. Only original spare parts may be used for repairing the control units. Parts may only be replaced by qualified service technicians, otherwise the warranty/guarantee shall be null and void.

2   COMPACT^{eco} installation instructions

Mount the COMPACT^{eco} control unit on the underside of the desktop. You will need the following tools for mounting:

- Phillipps screwdriver
- Pencil
- Drill (for drilling holes)

> ⚠️ **Caution:** The power cord must be unplugged while the COMPACT^{eco} control unit is being mounted.

> ⚠️ **Caution:** When installing the COMPACT^{eco} and putting it into operation, be sure that the COMPACT^{eco} is acclimatized to the temperature and humidity values for operation, shown in the datasheet!

To mount the COMPACT^{eco} control unit, proceed as follows:

> ⓘ **Note:** We recommend using the drill template to help with mounting. You will find the template in section 7.4. If you do not wish to use it, please follow the mounting instructions carefully.

1. Position the control unit where you want it under the desktop.
2. Mark the drill holes with a pencil.

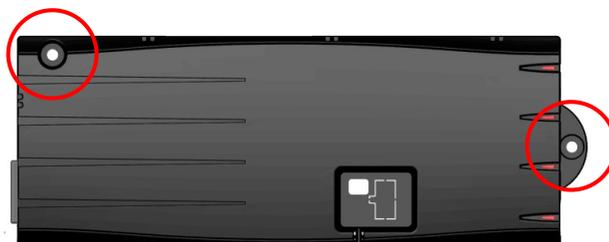*Figure 2: Installation step 2*

3. Pre-drill these two holes.
4. Attach the control unit with 2 screws by using these two holes.
5. Tighten the two screws properly.

> ⓘ **Note:** LOGICDATA recommends lens head screws DIN7981C 4,8xL with a lens head diameter of 9,5mm. The length L of the screw should fit to the used desktop. The tightening torque depends on the wood, but 2Nm shall not be exceeded.

3 Commissioning

Commissioning involves the procedures required to ensure that the height of an electric height-adjustable desk can be adjusted with the COMPACT^{eco} control unit. Requirements for commissioning:

- The COMPACT^{eco} control unit must be mounted (as described in section 2)
- The table legs for adjusting the desktop must be mounted

⚠️ **Danger:** Only qualified technicians may commission the control unit. Qualified technicians have the necessary electrical engineering training and are familiar with this user manual.

⚠️ **Caution:** When installing the COMPACT^{eco} and putting it into operation, be sure that the COMPACT^{eco} is acclimatized to the temperature and humidity values for operation, shown in the datasheet!

3.1 COMPACT^{eco} sockets

The COMPACT^{eco} control unit (COMPACT-e-3 can drive three motors) has the following sockets:
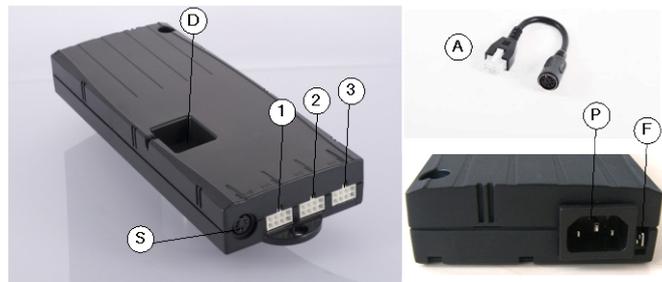
Figure 3: Sockets

①   Motor socket 1 (M1)
②   Motor socket 2 (M2)
③   Motor socket 3 (M3)
S   Hand control socket (HS)
P   Mains socket
F   Functional earth, cable lug for earthing the desk frame (6,3x0,8mm lug)
D   LogicConnector DATA for sensors, squeeze lines and cascading
A   Adapter cable LOG-CBL-ADAP-DIN-MOLEX for motors with DIN-connectors (optional)

ℹ️ **Note:** If your motors are equipped with connectors of the type DIN 41524 (8-pin with 262° angled pin alignment) and if your control unit has MOLEX motor sockets, you need for each motor the adapter cable LOG-CBL-ADAP-DIN-MOLEX (shown with the letter A in Figure 3)

⚠️ **Caution:** Use 3-pole mains cables only!

ℹ️ **Note:** The clamp next to the mains socket is used as a connector for a functional earth. This clamp is used for example to deflect electrostatic charge from the electric height-adjustable desk. The connector cannot carry out the function of a protective conductor!

This clamp is also marked with the symbol ⏚ on top of the housing.

3.2 Commissioning procedure

Caution: The power cord must be unplugged while the COMPACT^{eco} control unit is being commissioned.

To commission a COMPACT^{eco} control unit, proceed as follows.

3.2.1 Connect drives

Plug the motor cables into the relevant 8-pin motor sockets (M1, M2, and M3).

Note: When connecting the motor cables, you must strictly adhere to the sequence **M1, M2, M3**.

Danger: During commissioning a system with single-end-limit switches (connection of upper and lower signal limit switches in series) or when changing a motor on such a system, the motors must not be extended to their highest position. (upper limit switch active)

3.2.2 Connect hand control

Plug the hand control into the 7-pin socket (HS).

Note: You can choose from a wide range of LOGICDATA hand controls for the COMPACT^{eco} control unit. Information about available hand controls can be found in the latest product catalogue and on the website www.logicdata.at .

3.2.3 Connect optional components

If your control unit has an **earthing cable lug**, attach a cable to a metal part of the desk.

If your control unit has an activated LogicConnector DATA, you can connect accessories like sensors.

Note: To determine whether the LogicConnector DATA is activated, please compare the product name on the nameplate with the order code which is shown in the appropriate datasheet.

Danger: When components like sensors shall be disconnected from the LogicConnector DATA, be sure to unlock the 8pin connector on the cable properly! There is a fixing hook on this connector which must be pressed.

3.2.4 Connect mains supply

Caution: Before you plug in the power cord, check the following again:

- The mains supply voltage must be as specified on the type plate
- All the components must be plugged into the right sockets
- The earthing cable must be connected if necessary

When the power cord is plugged in, the COMPACT^{eco} control unit is operational.

Note: According to the parameters of the COMPACT^{eco} a reset might be necessary after plugging in the power cord for the first time.

3.2.5 System configuration (example)

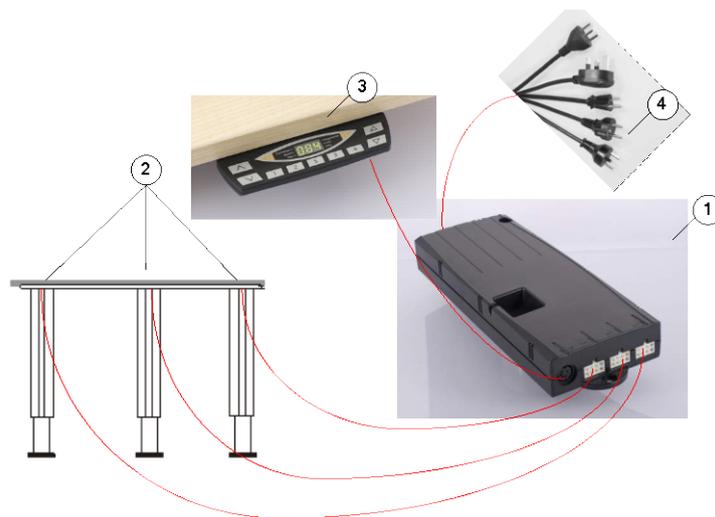The figure below shows the socket assignment for a configuration example. This configuration consists of:

Figure 4: Configuration example

①   1 COMPACT-e-3 control unit
②   3 motors (hidden in the table legs)
③   1 HSF-MDF-4M4-LD hand control
④   1 mains cable 3-pole

4 Operating the COMPACT^eco control unit

To ensure safe operation of the COMPACT^eco control unit, please observe the following safety instructions:

> **Caution:** Unplug the power cord during a thunderstorm or if you do not intend to use the desk for a longer period. The control unit might otherwise be damaged by power surges.

4.1 Basic functions

> **Note:** The COMPACT^eco control unit offers an extensive range of functions. The availability of some functions depends however on the hand control used.
>
> This section describes the basic functions available with every hand control designed for use with COMPACT^eco control units.

> **Note:** The 2 basic functions upward and downward movement are available for both motor groups separately. Please read the manual of the used hand control to see which buttons are linked to which motor group!

4.1.1 Upward desktop movement

This function enables you to adjust the desktop upwards. To change its position, proceed as follows:

Press the **desktop up** key.

Keep pressing the key until the required desktop height is reached.

> **Note:** The desktop will continue moving upwards until you release the key or the maximum height is reached.

4.1.2 Downward desktop movement

This function enables you to adjust the desktop downwards. To change its position, proceed as follows:

Press the **desktop down** key.

Keep pressing the key until the required desktop height is reached.

> **Note:** The desktop will continue moving downwards until you release the key or the minimum height is reached.

4.2 Advanced functions

> **Note:** You can only use the following functions of the COMPACT^eco control unit if you have a hand control with memory position keys and a memory key.

4.2.1 Saving a desktop position

This function allows you to save a defined desktop height. One desktop height can be saved per memory position key. To save a position, proceed as follows:

> **Note:** If you are switching on the COMPACT^{eco} control unit for the first time, all the saved positions are set to the lowest desktop height (minimum desktop position).

1. Adjust the desktop to the position you want to save.

    The display will show the desktop height (e.g. 73cm).

2. Press the **memory key**.

    The display will read **S –**.

3. Press the required **memory position key** (e.g. 2).
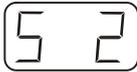
    The display will read **S 2**.

4. The set desktop position will now be saved tot he selected memory position key.

    You will hear an audible double click and after about 2 seconds the saved desktop position will be displayed.

> **Note:** Using saved desktop positions is only available for hand controls with memory keys. The design of the memory position keys varies, depending on the hand control model used.

> **Note:** Using saved desktop positions is only available for hand controls with memory keys. The design of the memory position keys varies, depending on the hand control model used.

> **Note:** It is software parameter dependent which motor group can save/recall memory positions. If both motor groups are capable of saving memory positions, the current position of both groups will be stored (even if they are different). When recalling a stored position in this case, both groups start their movement at the same time, even if their movement direction is different.

4.2.2 Adjusting the desktop to a saved position

You can use this function to adjust the desktop to a saved height. To change to a saved position, proceed as follows:

Note: Availability of the double click function depends on the software configuration of the control unit.

Option A (without double click function)

1. | 2 | Press the required **memory position key** (e.g. 2) and hold it down.

The desktop will move until it reaches the saved position. If you release the key before the saved position is reached, the desktop will stop and the saved desktop position will not be reached.

2. The desktop has reached the saved position. Now release the memory position key.

The display will read the current (saved) desktop position.

Option B (with double click function)

1. | 2 | Double click the required **memory position key** (e.g. 2).

2. After the double click, the desktop will automatically adjust to the saved position.

The display will show the current (saved) desktop position.

Danger: When you change the desktop position automatically, there is a risk of pinching. You must therefore ensure that no people or objects are located in the hazardous area or reach into it.

Note: If you press another key while the desktop is changing automatically to a saved position, it will stop immediately. You then have to reactivate automatic desktop adjustment to a preset position.

4.2.3 Changing the desktop height displayed

This function enables you to change the height shown on the display, but not the actual position of the desktop. Proceed as follows:

1. | S | Press the **memory key**.

The display will read **S –**.

2. | ▽ | Press the **desktop down key** (down arrow) for approx. 5 seconds.

The display will start flashing.

3. | ▽ △ | Adjust the height displayed by pressing the **desktop down key** (down arrow) or **desktop up key** (up arrow).

4. | S | Press the **memory key**.

The height display is now set to the new desktop position entered.

Note: This procedure does not alter the actual position of the desktop. It only changes the height displayed.

Note: This function is only available for hand controls with integrated display.

Note: This function is available for both motor groups separately. Please read the manual of the used hand control to see which buttons are linked to which motor group!

4.2.4 Manual Reset

When the actual desktop position no longer corresponds to the height displayed or you wish to use a configured control unit on another identical electric height-adjustable desk, you have to reset the lowest desktop position to the minimum height.

1. | ▽ | Press the **desktop down key**.

Keep pressing it until the desktop has reached the lowest position (programmed desktop position).

2. | ▽ | Press the **desktop down key** again and keep pressing it.

After about 5 seconds, the desktop will slowly move further down until it reaches the absolutely lowest desktop position possible.

3. Release the **desktop down key**. The electric height-adjustable desk can now be used again normally.

Danger: Intelligent system protection (ISP) is not enabled during all resets.

Note: This function is available for both motor groups separately. Please read the manual of the used hand control to see which buttons are linked to which motor group!

4.3 Software dependent functions

Note: Prior to shipping, the COMPACT^{eco} control unit is parameterized with the software. The following functions are only available if the control unit has been configured accordingly.

4.3.1 Slow speed ranges

This function (low speed area) automatically slows down the desktop during adjustment before it reaches the following positions:

- Highest and lowest desktop positions
- All saved positions (for example: memory-positions, container-stop-position)

4.3.2 Safety area

This function triggers a safety stop at a defined desktop position (configured with the software). The safety stop functions as follows:

1. ▽   Press the **desktop down key** (and hold it down). The desktop will move to the start of the safety area.

2.   The desktop movement will stop just before the safety area.

3. ▽   Press the **desktop down key** again. The desktop will then move to the lowest position.

Note: you cannot save desktop positions in safety areas.

Note: this function is available for both motor groups separately. Please read the manual of the used hand control to see which buttons are linked to which motor group!

4.3.3 Container- and Shelf-Stop positions

These 2 features can be used to limit the movement area of the desktop (e.g. if a container is placed underneath the desktop). A container stop position can be defined in the lower half of the movement area, a shelf stop position in the upper half. If a container stop position is set, this position will be the lower limit position. If a shelf stop position is set, this position will be the new upper limit position. To **store** a container stop / shelf stop position, go on as shown below:

1. ▽ or △ Move the desktop to the position where the container stop/ shelf stop position shall be stored. Do so by pressing the **desktop down** or **desktop up key** until you reach the desired position.

Note:

A container stop position can only be stored in the lower half of the movement area and a shelf stop in the upper half.

2. S Press S for 10 seconds. The COMPACT^{eco} will click **twice** when the container stop position is stored.

or

▽ & △

at the same time If the hand control is only equipped with Up and Down buttons, the function can be carried out with these two buttons by pressing them for 10 seconds simultaneously.

ⓘ **Note:** These steps have to be done for a container stop and a shelf stop position separately!

To **deactivate** the container stop/ shelf stop position go on as shown below:

1. ▽ or △ Move the desktop to any position in the lower half to deactivate the container stop. / Move the desktop to any position in the upper half to deactivate the shelf stop.

Do so by pressing the **desktop down** or **desktop up key** until you reach the desired position.

2. S Press S for 10 seconds. The COMPACT^{eco} will click **once** when the container stop position is deactivated.

or

▽ & △

at the same time If the hand control is only equipped with Up and Down buttons, the function can be carried out with these two buttons by pressing them for 10 seconds simultaneously.

ⓘ **Note:** These steps have to be done for a container stop and a shelf stop position separately!

ⓘ **Note:** this function is only available for motor group 1.

4.3.4 Plug detection

The COMPACTᵉᶜᵒ control unit can detect whether a motor is plugged into the relevant motor socket. In addition, the control unit detects whether a motor has been replaced (the availability of this function depends on the type of the control and the used motors). If a motor is missing or if it is replaced, the COMPACTᵉᶜᵒ will click three times. Additionally, the corresponding error code will be displayed if the hand control is equipped with a display (For the error code list, see chapter 0). To rectify the error, proceed as follows:

1. **Possible situations:**

    - A motor is disconnected from the COMPACTᵉᶜᵒ when the control unit is connected to mains.

     The error code **E36, E37 or E38** is shown on the display, depending on the disconnected motor.

2. Disconnect the mains supply of the COMPACTᵉᶜᵒ and wait at least 5 seconds.

3. Re-connect the missing motor.

4. Connect the mains supply of the COMPACTᵉᶜᵒ again.

5. Make a **manual reset** (see chapter 4.2.4).

> **Note:** The availability of the plug detection feature is depending on the motor group settings in the software parameters of the COMPACTᵉᶜᵒ and on the used motors. Please contact LOGICDATA for further information!

4.3.5 Auto Detect Number of Drives

The COMPACTᵉᶜᵒ is able to auto-detect the number of drives, this enables you to decide during the commissioning process of the electric height-adjustable desk if for instance a 2-leg desk or a 3-leg desk shall be controlled without changing the parameters. To operate the COMPACTᵉᶜᵒ after changing the motor group configuration again, proceed as follows:

1. **Possible situations:**

    - Commissioning/first usage of COMPACTᵉᶜᵒ
    - After a reset to factory settings (S0 menu)

     The error code **E70** is shown on the display.

2. Disconnect the mains supply of the COMPACTᵉᶜᵒ and wait at least 5 seconds.

3. Connect the desired number of motors to the COMPACTᵉᶜᵒ.

4. Connect the mains supply of the COMPACTᵉᶜᵒ again.

5. Make a **manual reset** (see chapter 4.2.4).

> **Note:** The availability of the auto-detection feature is depending on the motor group settings in the software parameters of the COMPACTᵉᶜᵒ and on the used motors. Please contact LOGICDATA for further information!

4.3.6 Recognition of SLIMdrive actuator type

The COMPACT^eco is able to recognize the type of the connected SLIMdrive actuators, this enables you to decide during the commissioning process of the electric height-adjustable desk if the desk is equipped with SLIMdrive-660, SLIMdrive-660S or SLIMdrive-500 actuators. To initially set up the COMPACT^eco with the desired SLIMdrive actuators, proceed as follows:

1. **Possible situations:**

    - Commissioning/first usage of COMPACT^eco

    - After a reset to factory settings (S0 menu)

    - Inhomogeneous mixture of SLIMdrive actuators connected to the control unit (e.g. one SLIMdrive-660S and one SLIMdrive-500) during initial setup

    E70   The error code **E70** is shown on the display.

2. Disconnect the mains supply of the COMPACT^eco and wait at least 5 seconds.

3. Connect the desired number of SLIMdrives of similar type to the COMPACT^eco.

4. Connect the mains supply of the COMPACT^eco again.

5. Make a **manual reset** (see chapter 4.2.4).

In case that the control unit shall be used for another actuator type as before (e.g. a change from SLIMdrive-660 to SLIMdrive-660S, perform a reset to factory settings (see chapter 4.3.10) and repeat the procedure above.

> ℹ **Note:** The function for automatic actuator type recognition is only available for LOGICDATA SLIMdrive actuators.

> ℹ **Note:** This function is only available for motor group 1.

> ℹ **Note:** The availability of the function for automatic actuator type recognition is depending on the settings in the software parameters of the COMPACT^eco. Please contact LOGICDATA for further information!

> ℹ **Note:** In case that the number of actuators or the actuator type shall be changed, a reset to factory settings is necessary (see chapter 4.3.10).

4.3.7 Duty cycle monitoring

Duty cycle monitoring means that when the control unit has been operating for a defined period, it is switched off for a set time (e.g. after 2 minutes of continuous operation, the control unit is automatically disabled for the next 18 minutes).

4.3.8 Change the displayed desktop position (cm or inch)

With this function, it is possible to change the displayed desktop position from centimeters to inches or the other way around. The desktop position itself is not affected by this function.

1.
   | 1 | | 2 | | △ |

   Press the keys **memory position 1, 2** and the **desktop up key** at the same time. Keep the key combination pressed for about 10 seconds. Then release the keys.

   | 5   7 |

   The display will show **S and a number**, e.g. **S 7**.

2.
   | △ |

   Press the **desktop up key** until the display reads S 5.

   | 5   5 |

   The display will show **S 5**.

3.
   | S |

   Press the **memory key**.

   If the display was set to centimeters, it will be changed to inches now.

   If the display was set to inches, it will be changed to centimeters now.

Note: The menu timeout is 5 seconds, this means that the menu will close automatically without storing new settings if the user does not press a key for 5 seconds.

Note: After starting the menu, the display will read **S and any number**, for instance **S 7**. The number depends on the parameters of the control unit.

4.3.9 Change number of drives

It is possible to adjust the number of drives which can be controlled by a COMPACT^{eco}. A COMPACT-e-3 can control one, two or three, a COMPACT-e-2 one or two motors according to the chosen settings.

Note: Factory provided settings are 3 drives for COMPACT-e-3 and 2 drives for COMPACT-e-2

Danger: Only qualified technicians may use this function! An incorrect number of drives can cause damages of the table!

Note: A hand control with display and memory keys is necessary.

To change the settings, proceed as follows:

1. Press the keys **memory position 1, 2** and the **desktop up key** at the same time. Keep the key combination pressed for about 10 seconds. Then release the keys.

   The display will show **S and a number**, e.g. **S 5**.

2. Press the **desktop up key** until the display reads S 8.

   The display will show **S 8**.

3. Press the **memory key**.

   The display will show the current number of drives (1, 2 or 3)

4. Press the **desktop down key** to decrease the number of drives. The minimum number is 1 drive.

   Press the **desktop up key** to increase the number of drives. The maximum number is according to the control unit:

   2 drives for COMPACT-e-2 or

   3 drives for COMPACT-e-3

   The display will show the chosen number of drives.

5. Press the **memory key** to confirm the settings.

6. If **000** flashes on the display, a reset is necessary. This procedure is explained in section 4.2.4.

Note: The menu timeout is 5 seconds, this means that the menu will close automatically without storing new settings if the user does not press a key for 5 seconds.

Note: After starting the menu, the display will read **S and any number**, for instance **S 5**. The number depends on the parameters of the control unit.

Note: This function is not available for controls with activated cascading function.

4.3.10 Reset control unit to factory settings

With this function, you can reset the control unit to its factory settings.

In case a hand control with display is used, proceed as follows:

1. | 1 | 2 | △ | Press the keys **memory position 1, 2** and the **desktop up key** at the same time. Keep the key combination pressed for about 10 seconds. Then release the keys.

    ⌈5 5⌋   The display will show **S and a number**, e.g. **S 5**.

2. △   Press the **desktop up key** until the display reads S 0.

    ⌈5 0⌋   The display will show **S 0**.

3. S   Press the **memory key**.

    The control unit will be reset to its factory settings. The control unit is now in the same state as it is when the commissioning is done.

Note: The menu timeout is 5 seconds, this means that the menu will close automatically without storing new settings if the user does not press a key for 5 seconds.

Note: After starting the menu, the display will read **S and any number**, for instance **S 5**. The number depends on the parameters of the control unit.

In case a two-button hand control is used, proceed as follows:

1. Disconnect the mains supply of the COMPACT^{eco} and wait at least 5 seconds.

2. ▽ & △ While disconnected from mains, press **desktop up and desktop down key** at the same time. Keep the keys pressed.

3. ▽ & △ Keep the **desktop up and desktop down key** pressed. Connect the mains supply of the COMPACT^{eco} again.

4. Keep the **desktop up and desktop down key** pressed until the control box starts to click twice per second. Release both keys while the control box clicks twice per second.

   The control unit will be reset to its factory settings. The control unit is now in the same state as it is when the commissioning is done.

⚠ **Danger:** If one or more motors are changed in a system, the control unit must be reset to factory settings and a manual reset has to be performed!

5 Collision protection

5.1 Intelligent System Protection (ISP)

ISP is an electronic state-of-the-art protection system developed by LOGICDATA. It reduces damage to the system in case of a collision.

Note: The ISP-sensitivity and the ISP-cutoff value depend on the whole system (mechanical and electrical components). To evaluate the ISP-capability of a height adjustable table, please contact LOGICDATA!

Note: Please note the following for maximizing ISP functionality:

To ensure the best possible protection, a **mechanical brake** must be fitted that is applied when the electric height-adjustable desk moves down.

Note: Without a mechanical brake, cut-out sensitivity may be reduced under load. However, if there is no load on the desktop, ISP will function properly even without a brake.

Note: As soon as ISP has stopped the electric height-adjustable desk from moving, you can then only adjust the desktop in the opposite direction (the safety feature initially prevents you from adjusting the desk in the same direction as triggered it).

Note: The ISP-cutoff can be adjusted by control unit parameters.

5.2 ACS-CB-SENS

The ACS-CB-SENS is an external sensor unit for collision protection. It can be used as upgrade of the ISP-functionality for single control units and in cascaded systems.

Note: Further information on the ACS-CB-SENS is shown in a separate user manual! It can be found in the download area of the homepage www.logicdata.at

Danger: In spite of collision protection sensors being in place, there may still be a risk of pinching in exceptional cases, as it is not only the control unit, but also the interaction between the mechanical and electronic systems that is responsible for cutting out the motor. In addition, the mechanical components, motor and ambient conditions all affect cut-out sensitivity.

As the control unit manufacturer, LOGICDATA cannot therefore eliminate this residual risk completely or accept any liability.

Figure 5: ACS-CB-SENS

5.3 Squeeze lines

A squeeze line can be mounted on the electric height-adjustable desk. When the desk moves and the squeeze line is touched by an obstacle (e.g. a user or an object), the control unit stops the movement immediately and performs a Drive-Back into the opposite direction.

Note: The movement direction that shall be monitored by the squeeze line can be chosen by parameters.

Danger: To ensure proper functionality of the squeeze line, it must be installed by qualified technicians only!

Danger: The squeeze line is equipped with a wire break monitoring. Therefore, do not disconnect a squeeze line when operating a COMPACT^{eco} control unit!

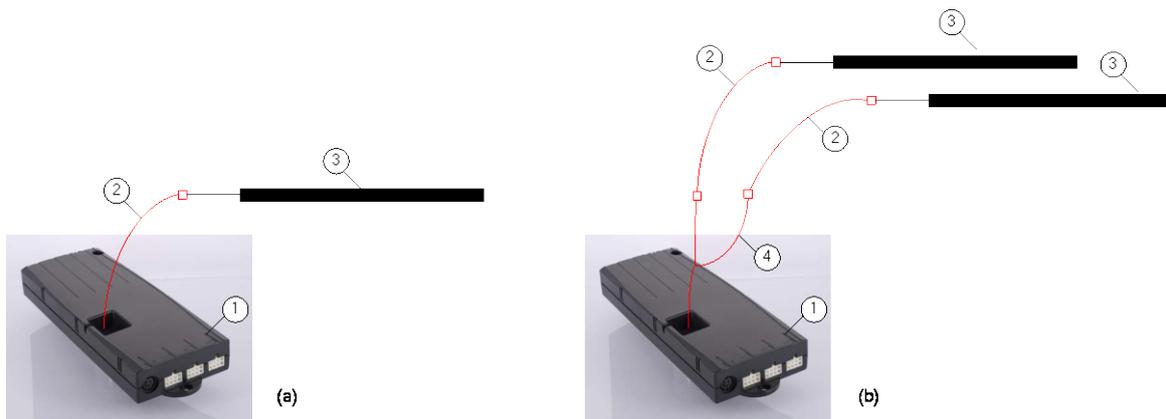Squeeze lines are connected to the COMPACT^{eco} as shown below:

Figure 6: connection of (a) one squeeze line and (b) two squeeze lines

①   Control unit COMPACT-e-3
②   Adapter cable LOG-CBL-MOLEX-RJ45
③   Squeeze line
④   Split cable LOG-CBL-LC-DATA-Y-CROSSOVER

> **Note:** If the squeeze line configuration (e.g. number of squeeze lines, monitored drive direction) shall be changed, the control unit needs new parameters.

5.4 Activate squeeze lines or sensors

> **Note:** the external sensor ACS-CB-SENS and squeezes lines must be activated by parameters.

> **Note:** A control unit with activated LogicConnector DATA is necessary to operate an ACS-CB-SENS or squeezes lines.

> **Caution:** The power cord must be unplugged while all other electrical connections (to motors, sensors, hand control, etc.) to the COMPACT^{eco} are being set up!

1.   Disconnect the mains supply from the COMPACT^{eco} control unit.

2.   Connect the external sensor or the squeeze line to the LogicConnector DATA.

3.   Re-connect the mains supply to the COMPACT^{eco} control unit.

4.   Wait at least 5 seconds after connection the mains supply. **During this time, do not press any key on the hand control!** The external sensor or squeeze line is recognized by the control unit and the safety system will be activated. You will hear an audible double click when the control unit and the safety system is operable.
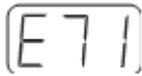
> **Note:** If the control unit is parameterized for "Reset at first use" for commissioning, the reset has to be performed before the safety system is activated by the control unit.

5.5 Deactivate squeeze lines or sensors

External sensors or squeeze lines can be deactivated by the user. For example, this can be used if the squeeze line or the external sensor is defective.

To deactivate the ACS-CB-SENS or a squeeze line, proceed as follows:

1.	Be sure that the external sensor or the squeeze line is disconnected from the LogicConnector DATA.
	The error code **E71** is shown on the display.
2.	Press and hold the **desktop up key** for at least 5 seconds.
4.	You will hear an audible double click to confirm that the external sensor or the squeeze line is disconnected and deactivated.

Danger: Deactivating the ACS-CB-SENS causes a higher risk of pinching. Other anti-pinch mechanisms like **ISP** stay active.

As the control unit manufacturer, LOGICDATA does not have an effect on this residual risk and cannot therefore accept any liability.

Please follow the safety instructions in the manual and treat our product with due care.

5.6 Drive back

Note: drive back is only active if collision protection (**ISP**, external sensors) is activated by parameters.

After a safety function is triggered by ISP, the desktop automatically moves a defined distance in the opposite direction. This immediately prevents any possible risk of pinching.

6 Cascading

Cascading enables you to operate up to 12 motors synchronously by connecting multiple control units.

Note: It has to be set in advance by parameter if a control unit will be used for cascading and how many control units are parts of the cascaded system. Deviation to the behavior of a single motor control is possible.

Note: For more information on cascading see the user manual for cascading of control units. User manuals It can be found in the download area of the homepage www.logicdata.at

7 Appendix

In this section, you will find detailed information on the following topics:

- Possible faults and remedies
- Error messages on the hand control display
- Click codes
- Drill template

7.1 Possible faults and remedies

Drives not working

Possible cause	Remedy
Power cord is not connected	Plug the power cord into the control unit
Drives are not connected	Plug the motor cables into the control unit
Poor plug contact	Plug the motor cables, power cord and hand control in properly
Control unit is defective	Contact customer service
Hand control is defective	Replace the hand control

Drives only operating in one direction

Possible cause	Remedy
Mains power breakdown or mains power is plugged off **during movement**	Manual Reset *)
Control unit is defective	Contact customer service
Hand control is defective	Replace the hand control
Drive is defective	Contact customer service

*) if movement is only possible downwards

Control unit or hand control is not working

Possible cause	Remedy
Power cord is not connected	Plug the power cord into the control unit
Hand control is not connected	Plug in the hand control
Control unit is defective	Contact customer service
Power cord is defective	Contact customer service
Hand control is defective	Replace the hand control
Poor plug contact	Plug the motor cables, power cord and hand control in properly

7.2 Error messages on the hand control display

$H \ O \ T$

The display reads **HOT**.

Cause	Remedy
The COMPACTeco control unit is fitted with overheating protection. Overheating has caused it to stop the control unit.	Wait until the control unit has cooled down and **HOT** is no longer displayed. The COMPACTeco control unit is then operational again.

$E \ 0 \ 0$

The display reads **E** + an error code.

Cause	Remedy
There is an internal fault in the COMPACTeco control unit.	Proceed as indicated in the following list.

Code	Description	Remedy
00	Internal Error Channel 1	Unplug the power cord and contact the customer service.
01	Internal Error Channel 2	
02	Internal Error Channel 3	
12	Defect Channel 1	Unplug the control unit.
		Fix the external short circuit.
13	Defect Channel 2	Or
		Plug in the correct motor to the motor socket that shows the error.
14	Defect Channel 3	Start the control unit again.
24	Overcurrent Motor M1	Remove jammed objects from the driving area.
25	Overcurrent Motor M2	Desk might be overloaded → Remove load from desk.
26	Overcurrent Motor M3	
48	Overcurrent Motor Group 1	
49	Overcurrent Motor Group 2	Contact customer service
60	Collision protection	
62	Overcurrent Control Unit	
36	Plug detection in Motor socket M1	Plug in the correct motor to the motor socket that shows the error.
37	Plug detection in Motor socket M2	Reset all motors.
38	Plug detection in Motor socket M3	
61	Actuator changed	
55	Synchronization lost motor group 1	Remove load from desktop.
56	Synchronization lost motor group 2	Reset all motors.
		If error occurs after reset again, contact customer service.
67	High voltage	Unplug the power cord and contact the customer service
70	Motor configuration changed	See chapter 4.3.5 or 4.3.6
71	Anti-Pinch configuration changed	See chapter 0 to activate or deactivate sensors
81	Internal error	Make a manual reset

| | | Unplug the power cord and plug it in again after a few seconds.

If this error occurs frequently, unplug the power cord and contact the customer service. |
| --- | --- | --- |

Number	Description	Remedy
93	Connection error in the cascaded network (The error appears on the display for 15 seconds and then the control unit goes into reset mode with the display flashing **000**)	Check all the cable connections and try to reset the motors. If you cannot reset the motors, disconnect all the control units from the power supply. Wait for at least 5 seconds and then reconnect all the control units to the power supply. Try again to reset the motors. If you still cannot reset the motors, please contact customer service.

Note: For more information on cascading see the user manual for cascading of control units. User manuals It can be found in the download area of the homepage www.logicdata.at

Note: The **PowerFail detection** identifies mains power breakdowns and saves all relevant data before the voltage falls below a critical threshold.

In some exceptional cases, this storage is not possible and the error **E81** is shown on the hand control display (if available) and the COMPACT^{eco} clicks three times.

To rectify this error, a **manual reset** is necessary (see chapter 4.2.4)

Note: If the mains power breaks down or is disconnected from the control unit during movement of the drives, a manual reset might be necessary.

7.3   Click codes

When the control unit is switched on the COMPACT^{eco} uses its relays to inform the user acoustically about the system state and the reason why the control unit was switched off before. The table below shows which number of clicks corresponds to certain information.

Number of clicks	State information
2x	**Normal operation:** No problems detected
1x	**Emergency operation:** The system is in safe-state, movement is not possible. Check error codes on the display of the hand control.
3x – 6x	**Last shutdown incomplete / forced reset:** Check error codes on the display of the hand control. If the control unit could not finish the last saving process, it will click 4 -5 times and switch to reset mode but without displaying the error code 81. Perform a reset.

7.4   Drill template

Cut out the drill template and mark the drill holes on the desktop.

> **Note:** Place this drill template with the depicted side up on the position where the COMPACT^{eco} shall be mounted!
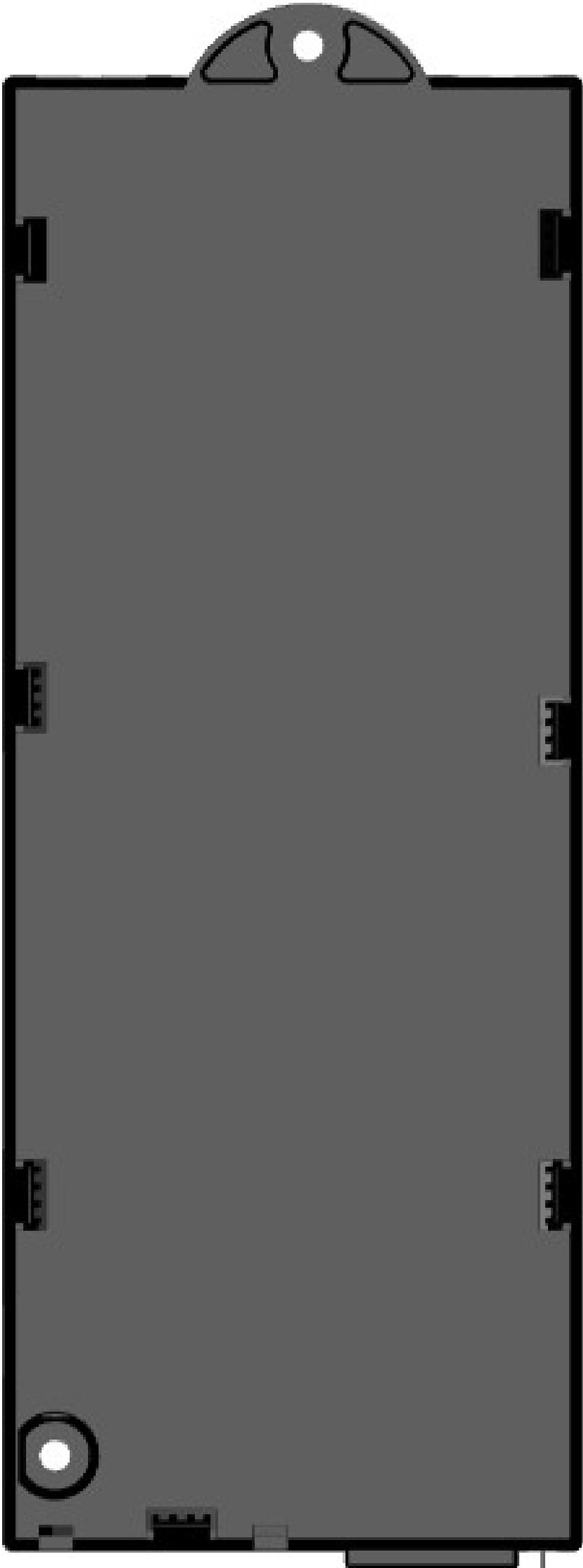
8 Further information

8.1 End of life disposal

COMPACT^{eco} is electrical and electronic equipment. This symbol on products, packings and/or accompanying documents means, that electrical/electronic products should not be disposed of in normal household waste. These products must be disposed of according to the WEEE directive 2012/19/EU.

Before disposal of materials and components, consider which parts of them are suitable for recycling. Supply as many parts as possible for recycling in your local area. The items should be handed in for recycling in accordance with local environmental regulations and rules for waste disposal Make sure that the waste disposal verifiably minimizes any potential negative impact on human health and the environment.

8.2 Technical data

Find the technical data of your control unit in the datasheet.

8.3 Optional products

Information about available optional products can be found in the latest product catalogue and on the website **www.logicdata.net**

MOTION

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