

User Manual

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SMARTneo-pro



Manual SMARTneo-pro

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Technical Documentation

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1 PREFACE

The product documentation consists of this manual and a data sheet.

This document is intended to enable assembly personnel to work safely with the product. Assembly personnel must therefore have the complete documentation available at all times. The document must remain complete and legible. Please observe all safety notices listed in this document in order to avoid hazards and damage to the product.

We strive to ensure the accuracy and completeness of the content in this document by revising it and updating it regularly. However, no guarantee can be given for its accuracy or completeness.

If you experience problems or have questions regarding the documentation, please contact our technical documentation department.

1.1 COPYRIGHT

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All rights reserved. All information in this documentation is copyrighted. No part of this documentation may be duplicated or reproduced without the written consent of LOGICDATA. LOGICDATA reserves the right to make changes to the specifications and other information in this documentation without prior announcement.

1.2 ROYALTY-FREE USE OF IMAGES AND TEXT

After purchase and complete payment for the product, the running texts and graphics in Chapter 9 “Operation” may be used by the customer to create end customer documentation for the height-adjustable table top in which the SMARTneo-pro is installed, for 10 years after delivery at no cost. This licence does not include logos, designs, or page layout elements belonging to LOGICDATA. The customer may make any necessary changes to texts and graphics in order to adjust them to the purpose of end customer documentation. The texts and graphics must not be – changed or unchanged – sold, published digitally, or sublicensed. A transfer of this licence to third parties without the permission of LOGICDATA is also precluded. The complete property rights and copyrights for the texts and graphics remain with LOGICDATA. Texts and graphics are offered in their current state without warranties or promises of any kind.

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1.4 SYMBOLS AND SIGNAL WORDS USED



 DANGER	Imminent threat to the lives of individuals “DANGER” warns against a dangerous situation. Failure to observe warnings may result in death or severe personal injury.
 WARNING	Risk of serious personal injury and material damage “WARNING” warns against a dangerous situation. Failure to observe warnings can result in severe personal injury.
 CAUTION	Risk of minor injury and material damage “CAUTION” warns against a dangerous situation. Failure to observe the warning can result in injuries or material damage.
NOTICE	Texts marked “NOTICE” facilitate the handling or understanding of the product.
	Damage from electrostatic discharge (ESD)



2 SAFETY

2.1 GENERAL SAFETY REGULATIONS AND OBLIGATIONS

In general, the following safety regulations and obligations apply when handling the product:

- Do not operate the product unless it is in a clean and perfect condition
- Do not remove, change, bridge, or bypass any protection, safety, or monitoring equipment
- Do not convert or modify the product without written approval from LOGICDATA
- In the event of malfunction or damage, the product must be replaced immediately
- Unauthorized repairs are prohibited
- Replace any defective products as a whole.
- Do not attempt to replace hardware unless the device is in a de-energized state
- Only qualified persons are allowed to work on the product
- Ensure that national worker protection conditions and national safety and accident prevention regulations are observed during operation of the system

2.2 RESIDUAL HAZARDS

Even with maximum diligence during the component design and construction process, and taking into consideration all safety-relevant issues, residual hazards are still present. These have been evaluated through a full risk assessment.



DANGER

Danger due to incorrect mains voltage

The control box may be operated only with the mains voltage and frequency ranges marked on the type plate of the mains adapter. These must not be exceeded, otherwise electrical hazards may occur.

DANGER

Disconnect the mains supply

Disconnect the mains supply before removing or connecting any components. Otherwise, electrical hazards may occur.

DANGER

Do not change or convert components

Components must never be changed or converted.

**⚠ DANGER****Danger of collision when changing the table top height**

There is a collision hazard whenever a table top height is changed. Always make sure that there are no items or persons in the table's range of movement, and that body parts are kept clear.

⚠ DANGER**Risk of explosion**

Do not operate any components in potentially explosive atmospheres.

⚠ DANGER**Danger due to damaged wires**

When an electrical wire is damaged, it must be replaced immediately by the manufacturer or customer service in order to prevent further damage. Recommissioning must not take place until the fault has been rectified.

⚠ DANGER**Danger due to liquids and heated surfaces**

Never immerse the connection cable or the hand control in liquid. Keep the connection cable away from heated surfaces.

⚠ DANGER**Danger due to defective mains supply cables**

Always use a standardized mains supply cable. Ensure that the mains supply cable is not damaged. Operating the control box with damaged mains supply cables is prohibited.

⚠ DANGER**Danger due to unauthorized products**

Connecting unauthorized products to the control box is prohibited. Use only LOGICDATA-approved accessories. Otherwise, the control box may be damaged or destroyed.

⚠ DANGER**Disconnect from the mains supply before inserting cables**

Before connecting the control box to the system, disconnect it from the mains supply.

⚠ DANGER**Danger due to malfunction**

If a malfunction occurs (e.g. the control box runs independently because a movement key is stuck), disconnect the system from the mains immediately.

**! DANGER****Danger due to humidity**

Ensure the control box is protected from moist atmospheres, dripping, and spray water.

! DANGER**Danger due to changes to the control box**

Conversions and changes to control box and hand control are prohibited.

! DANGER**Danger of collision**

When the system malfunctions (through motor or module error), the table top moves slightly with every attempt to start the system before the safety shutdown engages. This leads to an increased risk of collision.

! DANGER**Danger due to inactive collision protection**

During system reset processes (see chapter 9.4, Manual reset), collision protection (ISP) is inactive. This leads to an increased risk of collision.

! DANGER**Disconnect from mains supply before cleaning**

The control box may only be cleaned with a dry, soft cloth. Before cleaning, remove the mains supply cable from the mains plug.

! DANGER**Cleaning by children without supervision**

Do not allow children to clean the product without supervision.

! DANGER**Use compatible hand controls**

Only LOGICDATA-compatible hand control cables may be inserted into the hand control socket. Replica cables must not be connected to the control box.

! DANGER**Check for visual damage**

Check the control box for visual damage before commissioning. If you notice visual damage to the product's housing, do not attempt to operate the product. Contact customer services for further instructions in this case.

**! WARNING****Risk of electric shock**

Never attempt to open the control box. This leads to an increased risk of electric shocks.

! WARNING**Usage by children and persons with reduced capacity**

The device may be used by children above the age of 8 years, and by persons with reduced physical, sensorial, or mental capacities. Usage by the aforementioned groups may only occur if they are supervised, or if they were instructed in the safe use of the device and understand all potential hazards. Children may not play with the device.

NOTICE

Ensure proper ESD handling during unpacking. Damage that can be attributed to electrostatic discharge will void warranty claims.

! WARNING**Increased safety risk**

The firmware is delivered with a deactivated double-click function. If you activate this function, the gradings of the safety functions according to EN ISO 13849-1 PL b, Category B, are no longer valid. This is because the legal requirements from the standard are no longer met.

If you activate the function, perform a new risk new assessment to meet the higher safety requirements according to EN 60335-1. Please note that these cannot currently be met by the product.

LOGICDATA is not liable for injuries or damage resulting from the activation of the double-click function.



2.3 QUALIFIED PERSONS

The product may only be installed and commissioned by qualified persons. LOGICDATA defines a qualified person as:

- A person who is authorized for installation planning, installation, commissioning, or maintenance/servicing of the product
- A person who has read and understood the product documentation
- A person with the relevant technical education, training, and/or experience to perceive risks and avoid hazards
- A person with knowledge of the specialist standards applicable to the product
- A person with the expertise to test, assess, and manage electrical and mechatronic products and systems in accordance with the generally accepted standards and guidelines of electrical engineering and furniture manufacturing

All safety standards and guidelines relevant to the product's application must be taken into consideration. The manufacturer responsible for the final product, i.e. the height-adjustable table in which the SMARTneo-pro is installed, must carry out a safety review of the overall system and is responsible for its certification.

2.4 LIABILITY

The information in this documentation describes the characteristics of the product without assurances.

LOGICDATA products comply with all currently applicable health and safety regulations. However, risk can result from incorrect operation or misuse.

LOGICDATA is not liable for damage resulting from:

- Improper product use
- Disregard of the documentation
- Unauthorized product alterations
- Improper work on and with the product
- Operation of damaged products
- Worn parts
- Improperly performed repairs
- Unauthorized changes to the operating parameters
- Disasters, external influence, and force majeure

The manufacturer assumes responsibility for the LOGICDATA products installed in their applications. They must ensure their product complies with all relevant directives, standards, and laws. LOGICDATA shall not be held liable for any damage that is directly or indirectly caused by the delivery or use of this document.



3 PRODUCT

3.1 DESCRIPTION

SMARTneo-pro is a control box for electrically height-adjustable table tops. There are (at the time of publication) four versions of the control box available:

SMARTneo-pro-1-YYY-EU

- Designed for European mains supplies
- No double-click function (not allowed in Europe)
- One motor can be controlled by the control box
- Two control boxes can be connected with one cascading cable (LOG-CBL-SMARTneo-SYNC-1000) in order to actuate up to two motors
- One external sensor can be connected to the control box (LOG-PRT-DMS-LD or LOG-PRT-DMS-300)
- Can be powered with the LOGICcell battery pack

SMARTneo-pro-2-YYY-EU

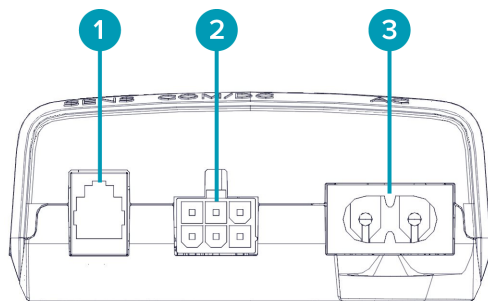
- Designed for European mains supplies
- No double-click function (not allowed in Europe)
- Two motors can be controlled by the control box
- Two control boxes can be connected with one cascading cable (LOG-CBL-SMARTneo-SYNC-1000) in order to actuate up to four motors
- One external sensor can be connected to the control box (LOG-PRT-DMS-LD or LOG-PRT-DMS-300)
- Can be powered with the LOGICcell battery pack

SMARTneo-pro-1-YYY-US

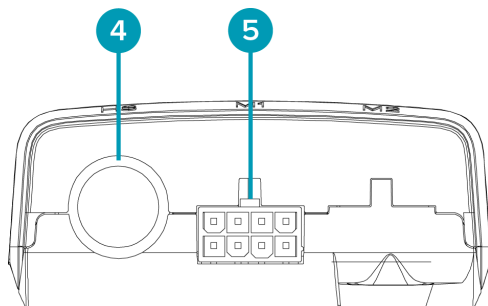
- Designed for North American mains supplies
- Double-click function can be activated in the parameters
- One motor can be controlled by the control box.
- Two control boxes can be connected with one cascading cable (LOG-CBL-SMARTneo-SYNC-1000) in order to actuate up to two motors
- One external sensor can be connected to the control box (LOG-PRT-DMS-LD or LOG-PRT-DMS-300)
- Can be powered with the LOGICcell battery pack

**SMARTneo-pro-2-YYY-US**

- Designed for North American mains supplies
- Double-click function can be activated in the parameters
- Two motors can be controlled by the control box
- Two control boxes can be connected with one cascading cable (LOG-CBL-SMARTneo-SYNC-1000) in order to actuate up to four motors
- One external sensor can be connected to the control box (LOG-PRT-DMS-LD or LOG-PRT-DMS-300).
- Can be powered with the LOGICcell battery pack

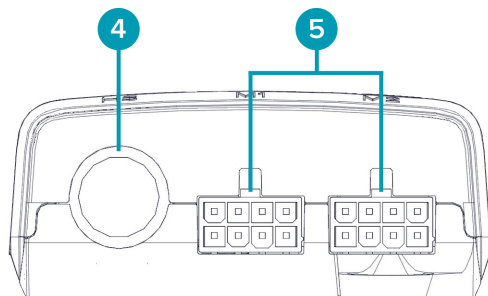


SMARTneo-pro - Side 1



SMARTneo-pro-1 - Side 2

- ① RJ10 for DMS-Sensor (SENS)
- ② 6-pin minifit for cascading cable (COM/DC)
- ③ 2-pin C8 for mains supply (AC)
- ④ DIN for hand control (HS)
- ⑤ 8-pin minifit for actuators (M1, M2)



SMARTneo-pro-2 - Side 2

Fig. 1: Control box connections



The vertical adjustment of tables is possible using the following mechatronic products:

Table top driven by one motor

- 1 SMARTneo-pro control box
- 1 actuator, e. g. SLIMdrive-500, SLIMdrive-660s
- 1 hand control, e. g. TOUCHfx, HSE, or other LOGICDATA hand controls (remote control through LOGIClink is also possible)
- 1 mains cable with a two-pin connection C7

Table top driven by two motors

- 1 SMARTneo-pro control box
- 2 actuators, e. g. SLIMdrive-500, SLIMdrive-660s
- 1 hand control, e. g. TOUCHfx, HSE, or other LOGICDATA hand controls (remote control through LOGIClink is also possible)
- 1 mains cable with a two-pin connection C7

Table top driven by four motors

- 2 SMARTneo-pro control boxes
- 1 cascading cable
- 4 actuators, e. g. SLIMdrive-500, SLIMdrive-660s
- 1 hand control e. g. TOUCHfx, HSE, or other LOGICDATA hand controls (remote control through LOGIClink is also possible)
- 2 mains cables with two-pin connections C7

Only LOGICDATA approved products are compatible with the control box and may be connected to it. Contact customer service for more information.

Due to technical restrictions, the following is valid for system configuration:

- Only system components released by LOGICDATA may be used.

3.2 INTENDED USE

The SMARTneo-pro is an electrical device for use in electrically height-adjustable tables. It may be used only in dry interior spaces and according to the product description. The installation site must be level, vibration-free, and free from contamination. It must also be ensured that there is no extraordinary exposure through dust, toxic or caustic gases and vapours, or through inadmissible heat exposure at the installation site.

The device can be used by children above the age of 8 years, by persons with reduced physical, sensorial, or mental capacities, and by persons with a lack of experience and knowledge of mechatronic systems. Usage by the aforementioned groups may only occur if they are supervised, or if they were instructed in the safe



use of the device and understand all potential hazards. Children may not play with the device.

After the mechatronic system has been installed into the table, the table manufacturer / customer is responsible for completing a risk assessment of the complete table system, and for producing any necessary user documentation.

4 SCOPE OF DELIVERY

The scope of delivery comprises of a control box. It does not include cables or accessory products. Control boxes are packaged in cardboard. Materials required for fitting/mounting is not included in the scope of delivery.



5 UNPACKING

Proceed as follows to unpack the product:

1. Put on an antistatic bracelet

NOTICE



Ensure proper ESD handling during unpacking. Damage that can be attributed to electrostatic discharge will void warranty claims.

2. Remove the packaging material
3. Check the contents of the package for completeness and damage
4. Dispose of the packaging material in an environmentally responsible way

6 ASSEMBLY

The SMARTneo-pro control box must be mounted onto the underside of the table top. For assembly, you will need the following tools and materials:

- 1 cross-head screwdriver
- 1 pencil
- 1 drill (for pre-drilling)
- mounting screws (not included in the scope of delivery)

WARNING

Unplug the mains cable

During installation, the control box's mains supply cable must be disconnected from the mains plug.

WARNING

Acclimatization of the product

Before mounting and commissioning the SMARTneo-pro, ensure that the product is acclimatized to the ambient conditions. Acceptable temperature and humidity values are specified in the product's data sheet.

NOTICE

System assembly instructions must be included in the customer manual that is supplied to end users.

To mount the SMARTneo-pro control box, proceed as follows:

NOTICE

LOGICDATA recommends using a drilling template during the mounting process. If you choose not to use a drilling template, please follow the instructions carefully.

1. Position the control box in the desired position on the underside of the table top.
2. Mark the 2 drill holes with a pencil.
3. Pre-drill the holes.
4. Attach the SMARTneo-pro to the pre-drilled locations using 2 screws.
5. Tighten the screws.

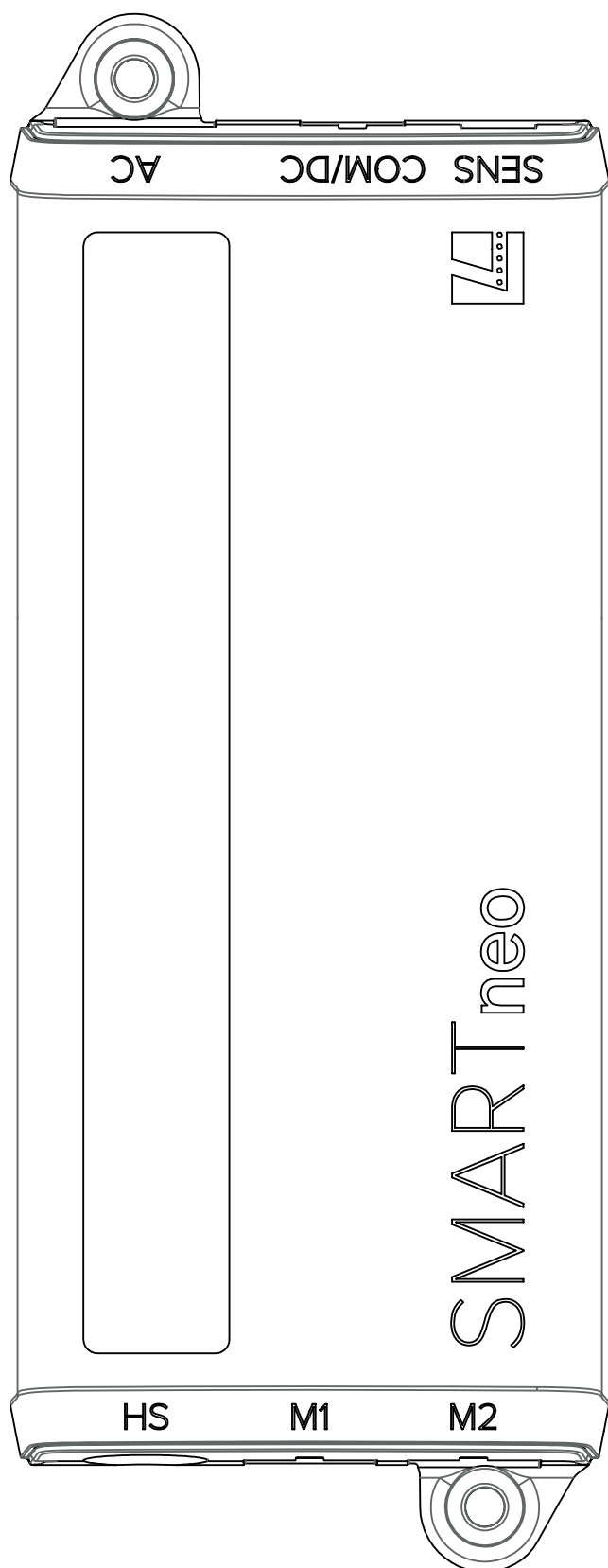


Fig. 2: Drilling template

7 COMMISSIONING

The table top system may only be assembled by qualified persons. The assembly area must be clean, dry and ESD protected.

DANGER

Commissioning only by qualified staff

Commissioning of the control box may be carried out only by qualified technical staff. Qualified technical staff members have the necessary electrotechnical training and have read and understood these operating instructions.

DANGER

Acclimatization of the product

Before assembly and commissioning of the SMARTneo-pro, ensure that the product is acclimatized to the ambient conditions. Acceptable temperature and humidity values are specified in the data sheet.

WARNING

Mains supply cable connection

Only plug in the mains supply cable after all other electrical connections (motors, hand controls, etc.) have been connected to the control box.

NOTICE



Ensure proper ESD handling during unpacking. Damage that can be attributed to electrostatic discharge will void warranty claims.

Proceed as follows to commission the SMARTneo-pro:

1. Connect the drives
2. Connect the hand control
3. Connect the DMS sensor
4. Connect any cascading control boxes
5. Connect the mains supply
6. Connect LOGICcell



7.1 CONNECTING THE DRIVES

Plug the drive's motor cables into the appropriate 8-pin motor sockets (M1, M2).



NOTICE

Consider the parameterization of the control box when plugging in the cables.

NOTICE

When plugging in the motor cables, ensure that M1 is always connected before M2.

7.2 CONNECTING THE HAND CONTROL

Insert the hand control cable into the DIN hand control socket (HS).

7.3 CONNECTING THE DMS SENSOR

The SMARTneo-pro control box has an RJ10 connection (SENS), to which a DMS sensor can be connected (e. g.: DMS sensor LOG-PRT-DMS-LD or LOG-PRT-DMS-300). This enables the activation of the ISP collision protection system.

Follow these steps to install the sensor unit LOG-PRT-DMS-LD or LOG-PRT-DMS-300 onto the bottom side of the table top.

You will need the following tools for the assembly process:

- Screwdriver (according to the screw types used)
- Pencil
- Drill (for pre-drilling)



⚠ WARNING

Unplug the mains cable

During installation, the control box's mains supply cable must be disconnected from the mains plug.

Proceed as follows to assemble the system:

1. The sensor unit of the DMS sensor must be connected to the metal crossbar as well as to the table top itself. There are two drill holes that allow you to attach the metal plate to the relevant areas. The hole for connecting the plate to the table top is marked with a yellow dot.

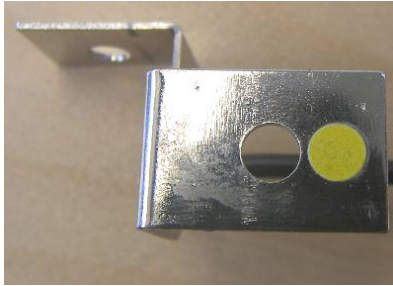


Fig. 3: Marking the area to be connected to the table top

⚠ DANGER

Danger due to incorrect installation

If the sensor unit is not installed properly, there is a risk of crushing because the collision protection will not be effective. Ensure the point marked by the yellow dot is connected to the table top.

2. Pre-drill the holes into the crossbar underneath the table top. Use a screw to connect the DMS sensor with the table top that is suited to the table top's material. To connect the sensor unit to the crossbar, a metric screw with a nut and a flat washer or a self-tapping screw can be used. All drill holes must be suitable for the selected screw.

NOTICE

The data sheet of each DMS sensor includes a dimensioned drawing of the sensor unit. Use this drawing to check the position of the assembly holes in the crossbar and the table top.

NOTICE

Screws are not included in the scope of delivery for the sensor unit.



Fig. 4: Drill holes for the assembly of the sensor unit

3. Attach the sensor unit using the drilled holes and the matching screws.



Fig. 5: Mounted sensor unit

⚠ DANGER

Tighten screws properly

If the screws are not properly tightened, there is a risk of crushing because the collision protection will not be effective.

⚠ DANGER

Use both screws

You must use both screws to attach the sensor, otherwise there is a risk of crushing because the collision protection will not be effective.

⚠ DANGER

Prevent screw release

Ensure that the screw cannot be released. Poorly tightened screws increase the risk of crushing because the collision protection will not be effective.

NOTICE

LOGICDATA recommends a tightening torque of 3 Nm for the connection to the crossbar and 2 - 2.5 Nm for the connection to the table top, depending on the type of wood used to make the table top.

7.4 CASCADING

Cascading enables the operation of up to four synchronized drives through the connection of up to two control boxes.

NOTICE

You must decide whether you wish to cascade control boxes before the installation begins. There are minor differences between the functions of single and cascading control boxes.

**NOTICE**

Always refer to the operating instructions when assembling cascading control boxes. Operating instructions are available from www.logicdata.net.

7.5 CONNECTING THE MAINS SUPPLY

! WARNING**Check before you connect the mains supply**

The SMARTneo-pro becomes operational as soon as the mains cable is connected.

- Ensure that the supplied voltage complies with the type plate of your control box
- Disconnect LOGICcell before connecting the control box to the mains
- Ensure all components are connected to the correct sockets

! WARNING**Danger of electric shock**

When connected to the mains, the LOGICcell connector is supplied with 30V DC.

- Only use compatible products.
- Do not attempt to make changes to the connector

NOTICE

You may need to reset the SMARTneo-pro or perform a calibration run after the first connection of the mains supply cable.

7.6 CONNECTING LOGICCELL

! WARNING**Check before you connect the mains supply**

The SMARTneo-pro becomes operational as soon as the mains cable is connected.

- Ensure that the supplied voltage complies with the type plate of your control box
- Disconnect LOGICcell before connecting the control box to the mains
- Ensure all components are connected to the correct sockets

NOTICE

You may need to reset the SMARTneo-pro or perform a calibration run after the first connection of the mains supply cable.

**NOTICE**

Installation instructions for the battery pack can be found in the product's manual at www.logicdata.net.

NOTICE

Ensure that the docking bay or the connecting cable is connected to the control box before you connect LOGICcell.

NOTICE

LOGICcell will give an audible and visible signal when it is connected correctly.

7.7 SYSTEM CONFIGURATION (MAINS SUPPLY)

The following figure shows a sample configuration:

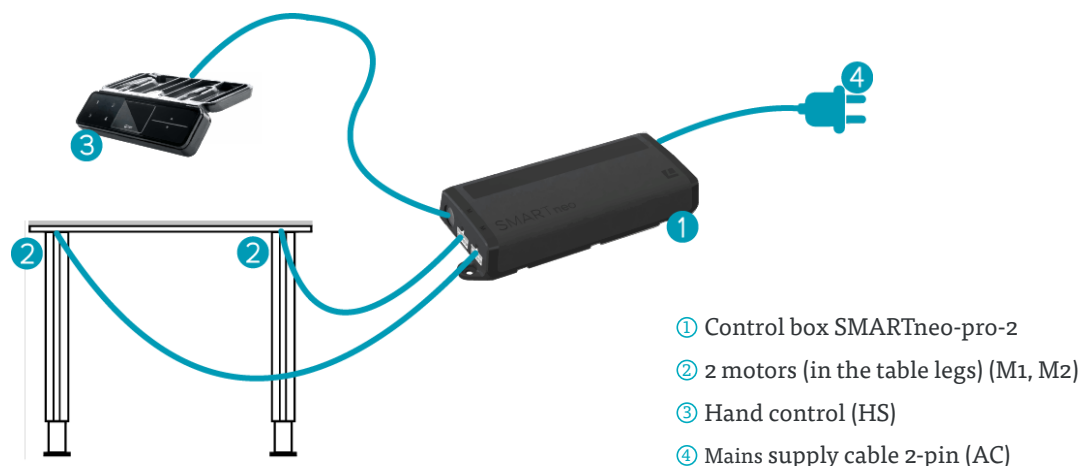


Fig. 6: Connections to the control box SMARTneo-pro

7.8 SYSTEM CONFIGURATION (LOGICCELL)

The following figure shows a sample configuration:

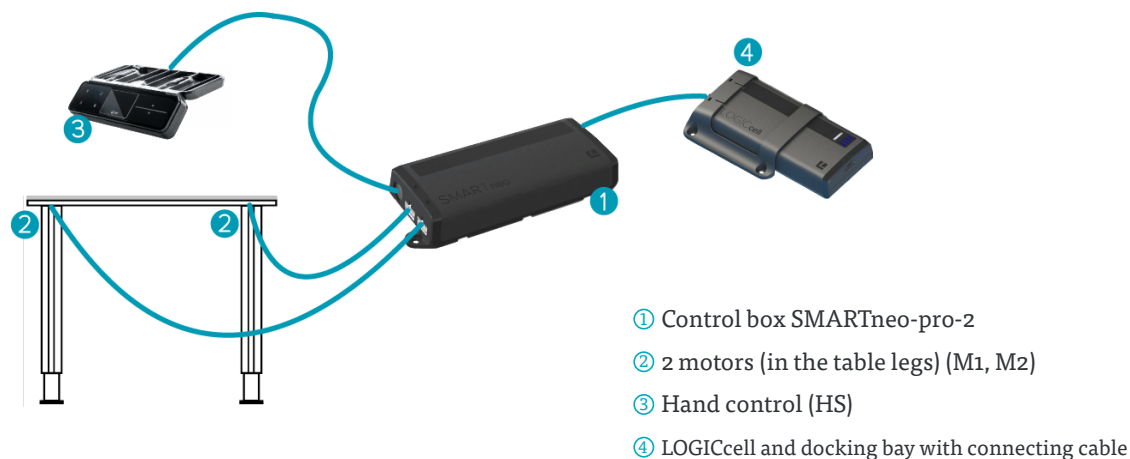


Fig. 7: Connections to the control box SMARTneo-pro



7.9 RESETTING DURING THE FIRST START-UP

During the first start-up, you will need to reset the system in order to commission the product.

This ensures that all columns are at the same height and that the table top remains level as it moves up and down. The control box stores the positions of the connected components and their settings as standard.

After resetting the system, configuration changes are detected and rated as errors. The system will not move until the saved state has been restored.



DANGER

Danger due to inactive collision protection

During system reset processes (see chapter 9.4, Manual reset), collision protection (ISP) is inactive. This leads to an increased risk of collision.

8 DISASSEMBLY

Proceed as follows to disassemble the system:

1. Disconnect the control box from the mains supply or LOGICcell.
2. Disconnect all plug connectors from the control box.
3. Dispose of all parts according to valid shut-down procedures. Ensure that disposal is environmentally responsible and that waste is sorted by material (see Chapter 14.2).

9 OPERATION

⚠ DANGER

Danger during thunderstorms

Leaving the product connected to the mains during a thunderstorm can lead to damage to the product through network-related overvoltage. Remove the mains supply cable if you will be absent for an extended period, or in the event of a thunderstorm.

The control box SMARTneo-pro provides a broad range of functions. However, the availability of some functions depends on the hand control used.

The basic functions that can be executed with the SMARTneo-pro for each compatible hand control are described in this section.



Fig. 8: User interface

The individual keys are represented as follows for further description:



Table top up key



Table top down key



	SAVE	Memory key
1		Memory position key 1
2		Memory position key 2
3		Memory position key 3
4		Memory position key 4

9.1 ADJUSTING THE TABLE TOP HEIGHT

This function allows you to easily move the table top up or down.



! DANGER

Danger of collision when changing the table top height

There is a collision hazard whenever a table top height is changed. Always make sure that there are no items or persons in the table's range of movement, and that body parts are kept clear.

NOTICE

The table top will move up or down until you release the key or the table's maximum or minimum height has been reached.

Proceed as follows to move the table top up or down:



Table top up key

Push the key until the desired table top height has been reached.



Table top down key

Push the key until the desired table top height has been reached.

9.2 SAVING MEMORY POSITIONS

This function saves a defined table top height. One table top height can be saved for each memory position key.



NOTICE

When the control box is switched on for the first time (and no parameters have been set), all saved positions will be equal to the minimum table top height.



NOTICE

The following functions of the SMARTneo-pro are only compatible with comfort hand controls. Controls must have a display, memory position keys, and a memory key.

Proceed as follows to save a table top height:



Move the table top to the desired height.



The display shows the table top height (e.g. 73 cm).



Press the **memory key**.



The display shows **S -**.



Select a **memory position key**, e.g. 2.



The display shows **S 2**.



The control box clicks twice when the saving process is completed.
After about two seconds, the table top height is displayed again.



9.3 ADJUSTING THE TABLE TOP TO A SAVED POSITION

You can use this function to adjust the table top to a saved height.

NOTICE

The double-click function is available only for the SMARTneo-pro-2-YYY-US w. This is only available in US markets.

Version A (without double-click function)



Press and hold the required **memory position key** (e.g. 2). The table top then moves until the saved table top height has been reached. If you release the key before the saved table top height is reached, the table will stop moving.

Once the table top has reached the saved height, release the memory position key.



The display will show the current (saved) table top height.



Version B (with double-click function)

2

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

After the double-click, the table top automatically moves to the saved table top height. You do not have to hold the key.

073

The display shows the current (saved) table top height.



⚠ DANGER

Danger of collision when changing the table top height

There is a collision hazard whenever a table top height is changed. Always make sure that there are no items or persons in the table's range of movement, and that body parts are kept clear.

⚠ DANGER

Increased safety risk

The firmware is delivered with a deactivated double-click function. If you activate this function, the gradings of the safety functions according to EN ISO 13849-1 PL b, Category B, are no longer valid. This is because the legal requirements from the standard are no longer met.

If you activate the function, perform a new risk new assessment to meet the higher safety requirements according to EN 60335-1. Please note that these cannot currently be met by the product.

LOGICDATA is not liable for injuries or damage resulting from the activation of the double-click function.

NOTICE

If you press any key while the table moves to a saved position, the table top will stop moving immediately. To continue, you must select the saved position again.

9.4 MANUAL RESET

If the table top position no longer corresponds to the displayed table top height, or to an already configured control box on another identically constructed work station, you must re-align the table's lowest position.

To do this, proceed as follows:



Press and hold the **table top down key**

Hold the **key** until the table top has reached its lowest position (programmed table top limit position).



Press and hold the **table top down key**.

After about 5 seconds, the table top will move downwards until the absolute lowest table top height is reached.

Release the **table top down key**. The electrically height-adjustable workplace can be used as normal again.



⚠ DANGER

Danger due to inactive collision protection

During system reset processes, collision protection (ISP) is inactive. This leads to an increased risk of collision.

9.5 OPERATING WITH LOGICCELL

NOTICE

Do not connect LOGICcell and the mains supply to the control box at the same time.

NOTICE

LOGICcell uses a buzzer to indicate faults and other settings.

NOTICE

Further information about LOGICcell can be found in the product's manual at www.logicdata.net.

Checking the state of charge:

1. Push the button on the LOGICcell.
2. The LEDs will indicate the current state of charge.

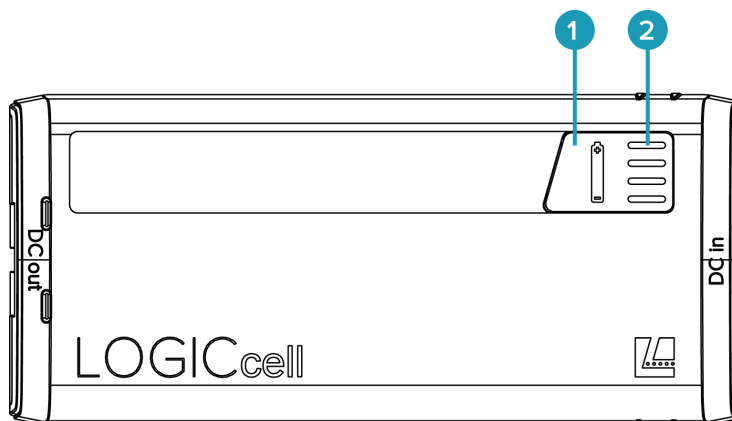


Fig. 9: State of charge indication (SOC)

① Button

② LEDs

**You can replace a flat LOGICcell as follows:**

1. Disconnect the battery pack by sliding it out of the docking bay
2. Slide in a new, charged battery pack

**NOTICE**

LOGICcell will give an audible and visible signal when it is connected correctly

NOTICE

It is not possible to charge the LOGICcell via the control box. You must connect the LOGICcell to the mains via the USB charger when you want to charge it.

NOTICE

Do not disconnect the LOGICcell while the table is in motion.



10 SOFTWARE-DEPENDENT FUNCTIONS

The SMARTneo-pro is parameterized before delivery. The following functions can only be used when the control box is parameterized appropriately.

10.1 SLOW SPEED RANGES

This function causes movement speed to reduce automatically before the following positions are reached:

- Maximum and minimum table top height
- Saved positions (e.g.: memory positions, container stop position)

10.2 SAFETY AREA

This function causes a safety stop at a defined table top height. This height is configured through the software. The safety stop functions are as follows:



Press and hold the **table top down key**.

The table top is adjusted to the start of the safety area.

The table stops moving when the safety area is reached.



Press the **table top down key** again. The table top is then adjusted to the minimum table top height.

NOTICE

You cannot save table positions that fall within the safety area.



10.3 CONTAINER STOP AND SHELF STOP POSITIONS

These two features can be used to limit the movement area of the table top (e.g. if a container is below the table top or a shelf is above it). A container stop position can be set in the lower half of the movement area, a shelf stop position in the upper half. If a container stop position is set, then this is used as the new lowest end position, while a shelf stop position is equivalent to a new upper end position of the movement area. Proceed as follows to save a container stop / shelf stop position:



Move the table top to the position that you want to use as new container stop / shelf stop position. Use the **table top down key** or **table top up key** until the desired position is reached.



Press and hold the **save key** for 10 seconds. The control box clicks **twice** when the position is saved.

or



If your hand control is equipped only with an up and a down key (i.e. there is no display), the function can be carried out by pressing both the up and the down key simultaneously for 10 seconds.

&



simultaneously

NOTICE

A container stop position can only be saved in the lower half of the movement area. Shelf stop positions can only be saved in the upper half of the movement area. You must set each new position separately.



Proceed as follows to **deactivate** a container stop / shelf stop position:



Move the table top to any position in the lower half of the movement area in order to deactivate the container stop. Move the table top to any position in the upper half of the movement area in order to deactivate the shelf stop.



Use the **table top down key** or **table top up key** until the required position is reached.



Press S for 10 seconds. The control box clicks **once** when the position is saved.

or



If your hand control is equipped only with an up and down key, the function can be carried out by pressing both the up and the down key simultaneously for 10 seconds.

&



simultaneously

NOTICE

You must deactivate each new position separately.



10.4 PLUG DETECTION

The SMARTneo-pro control box can detect whether a motor is connected to its respective motor socket. The control box can also detect whether a motor has been replaced, although the availability of this function depends on the control box type and the drives used.

When a motor is missing or has been replaced, the SMARTneo-pro clicks three times. The display also shows an error code if the hand control is equipped with a display. Proceed as follows to solve each error:

Possible causes:

A motor was unplugged from the SMARTneo-pro while the control box was connected to the mains supply system.



Error code **E36, E37 or E38** is shown on the hand control display depending on which motor was removed.

Disconnect the mains supply of the SMARTneo-pro and wait at least 5 seconds.

Reconnect the missing motor

Reconnect the mains supply of the SMARTneo-pro

Perform a **manual reset** (see Chapter 9.4)



10.5 AUTO-DETECT NUMBER OF DRIVES

The SMARTneo-pro can automatically detect how many drives are connected to the system. This means that it can be determined during commissioning how many motors must be controlled, without having to change the parameterization of the control box. To use the SMARTneo-pro again after a change in drive configuration, proceed as follows:

Possible causes:

- First start-up of the SMARTneo-pro
- Factory settings have been restored



The error code E70 is shown on the hand control display.

Disconnect the mains supply of the SMARTneo-pro and wait at least 5 seconds.

Connect the required number of motors.

Reconnect the mains supply of the SMARTneo-pro.

Perform a **manual reset** (see Chapter 9.4).



10.6 SLIMDRIVE-DETECTION

The SMARTneo-pro can automatically detect the type of connected SLIMdrive drive (i.e. whether it is a SLIMdrive-660s or a SLIMdrive-500). To use the SMARTneo-pro after connecting SLIMdrives to the system, proceed as follows:

Possible causes:

- First start-up of the SMARTneo-pro
- Factory settings have been restored
- A different type of SLIMdrive has been connected to the control box (e.g. a SLIMdrive-660S instead of a SLIMdrive-500).



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

Disconnect the mains supply of the SMARTneo-pro and wait at least 5 seconds.

Connect the desired type and quantity of SLIMdrives.

Reconnect the mains supply of the SMARTneo-pro.

Perform a **manual reset** (see Chapter 9.4).

If you are using the same SMARTneo-pro but decide to change the drive type (e.g. you change from SLIMdrive-500 to SLIMdrive-660S drives), reset the control box to the factory settings and follow the instructions above again.

**NOTICE**

Automatic drive detection is only compatible with LOGICDATA SLIMdrives.

NOTICE

Automatic drive detection is only compatible with motor group 1.

NOTICE

Automatic drive detection depends on the settings in the software parameters of the SMARTneo-pro. Contact LOGICDATA for additional information.

NOTICE

If you change the number or type of connected drives, you must reset the SMARTneo-pro to its factory settings.

10.7 DUTY CYCLE MONITORING

Duty cycle monitoring causes the control box to shut down for a defined period of time when a defined duty cycle is reached.

NOTICE

Information about the duty cycle for the SMARTneo-pro can be found in the product's data sheet.



10.8 CHANGING THE DISPLAYED UNIT OF MEASUREMENT

This function can be used to switch the unit of measurement displayed by the hand control from centimetres to inches and vice versa. The table top height itself is not changed by this function.

1

Press the **memory position keys 1 and 2**, as well as the **table top up key**. Hold this key combination for approximately 3 seconds, then release the keys.

2

▲

S 7

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

▲

Press the **table top up key** until the display shows **S 5**.

S 5

The display shows **S 5**.

SAVE

Press the **memory key**.

If the display was previously set to cm, height will now be displayed in inches.

If the display was previously set to inches, height will now be displayed in cm.



NOTICE

The menu has a timeout of 5 seconds. This means that the menu closes automatically if no entry is made within 5 seconds. In this case, settings will not be saved.

NOTICE

When the menu appears, the display shows **S and a number**, e.g. **S 7**. The number shown depends on the parameters of the control box.



10.9 CHANGING THE NUMBER OF DRIVES

It is possible to adjust the number of drives that can be controlled by a SMARTneo-pro. A SMARTneo-pro can be controlled by one or two motors, depending on its configuration.

DANGER

Only skilled technical staff

Incorrectly changing the number of drives can lead to injury and damage to the table. Ensure that only skilled persons are allowed to change the number of attached drives.

NOTICE

The factory settings for the SMARTneo-pro allow for the control of 2 motors.

NOTICE

A hand control with a display and memory keys is required for this procedure.

In order to change the settings, proceed as follows:



1

Press the **memory position keys 1 and 2**, as well as the **table top up key**. Hold this key combination for approximately 3 seconds, then release the keys.

2



S 5

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



Press the **table top up key** until the display shows **S 8**.

S 8

The display shows **S 8**.

 **SAVE**

Press the **memory key**.

The display will show the currently detected number of motors (1 or 2)



Press the **table top down key** in order to reduce the number of motors. The lowest possible number is 1.

or



Press the **table top up key** in order to increase the number of motors. The highest possible number is 2.

The display now shows the selected number of motors.



Press the memory key to confirm the changes to settings.



When **000** flashes on the display, a manual reset is necessary. This process is explained in Chapter 9.4.



NOTICE

The menu has a timeout of 5 seconds. This means that the menu closes automatically if no entry is made within 5 seconds. In this case, settings will not be saved.

NOTICE

When the menu appears, the display shows **S and a number**, e.g. **S 5**. This number depends on the parameters of the control box.

10.10 RESETTING THE CONTROL BOX TO ITS FACTORY SETTINGS

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

1

Press the **memory position keys 1 and 2**, as well as the **table top up key**. Hold this key combination for approximately 3 seconds, then release the keys.

2



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



Press the **table top up key** until the display shows **S 0**.



The display shows **S 0**.



Press the **memory key**.

The control box has now been reset to its factory settings. It is now in the same state as it was during the first start-up.

! DANGER

Reset to factory settings

If you change the number or type of connected drives, you must reset the SMARTneo-pro to its factory settings.



NOTICE

The menu has a timeout of 5 seconds. This means that the menu closes automatically if no entry is made within 5 seconds. In this case, settings will not be saved.



NOTICE

When the menu appears, the display shows **S and a number**, e.g. **S 5**. The number displayed depends on the parameters of the control box.

If a hand control with only one up and one down key is used, proceed as follows:

Disconnect the mains supply of the SMARTneo-pro and wait at least 5 seconds.



While the control box is disconnected from the mains supply, press and hold the **table top up key** and **table top down key** simultaneously.

&



Keep holding this key combination while you connect the control box to the mains supply.

&



Continue to hold the key combination until the control box starts to click twice every second. Then, release both keys.

&



The control box is reset to factory settings. It is now in the same state as during the first start-up.



! DANGER

Reset to factory settings

If you change the number or type of connected drives, you must reset the SMARTneo-pro to its factory settings.



11 COLLISION PROTECTION

11.1 INTELLIGENT SYSTEM PROTECTION (ISP)

ISP is LOGICDATA's collision prevention system. It reduces the damage to the system in case of a collision.

NOTICE

ISP sensitivity and the ISP shutdown values depend on the complete system (mechanical and electronic components). Contact LOGICDATA to determine the ISP suitability of a height-adjustable table.

NOTICE

Ensure that a mechanical brake is integrated into the system. This should be effective during downward movement of the height-adjustable table.

NOTICE

If no mechanical brake is installed, ISP shutdown sensitivity with loaded table tops will be reduced. However, if there is no load on the table top, ISP will function properly without a brake.

NOTICE

After ISP has been activated (i.e. the table was stopped by the system), the next movement of the table may only be in the opposite direction. This means that if ISP has stopped the table from moving down, the next movement can only be up.

NOTICE

ISP shutdown values can be adjusted in the parameters of the control box.





11.2 DRIVE BACK

NOTICE

The drive back function will only work when the ISP system is activated.

After ISP is triggered, the table top automatically moves a defined distance in the opposite direction. This prevents the risk of crushing.



⚠ DANGER

Increased safety risk

The control box is not solely responsible for system shutdown. Shutdown sensitivity is also influenced by mechanical equipment, motors, and environmental conditions. In certain exceptional situations, the ISP system will not prevent collisions, due to one or more of these external factors. This can lead to injury through crushing between parts. LOGICDATA cannot rule out this residual risk and does not assume liability.

12 MAINTENANCE

SMARTneo-pro is maintenance-free for its entire service life. If cleaning is necessary, wipe the housing of the SMARTneo-pro with a soft, dry cloth.

13 TROUBLESHOOTING

If you are experiencing technical problems, please contact LOGICDATA support:

Phone: +43 (0) 3462 51 98 0

Fax: +43 (0) 3462 51 98 1030

E-mail: office.at@logicdata.net

Always provide the product name and revision status (found on the type plate) when making a support request. If the system is defective, replace the SMARTneo-pro.

13.1 POSSIBLE FAULTS AND THEIR SOLUTIONS



Problem	Possible cause	Solution
The table does not move	The control box is not connected to the mains	Plug the control box into the mains
	One or more drives are not connected properly	Plug the motor cable into the control box
	There is a poor plug connection	Plug in the motor cable, mains supply cable, and hand control properly
	The control box is defective	Contact LOGICDATA
	The hand control is defective	Contact LOGICDATA
The table only moves in one direction	The power supply was interrupted while the table was in motion	Perform a manual reset*
	The control box is defective	Contact LOGICDATA
	The hand control is defective	Replace the hand control
	The drive is defective	Contact LOGICDATA
The control box or hand control does not work	The control box is not connected to the mains	Plug the control box into the mains
	The hand control is not plugged in	Plug in the hand control
	The control box is defective	Contact LOGICDATA
	The mains cable is defective	Contact LOGICDATA
	The hand control is defective	Replace the hand control
	Poor plug contact	Plug in the motor cable, mains supply cable, and hand control properly
	The product came into contact with liquids	Replace the hand control

* If drives move only downwards

For possible faults and solutions relating to LOGICcell, please refer to the LOGICcell manual on the LOGIC-DATA website.



13.2 ERROR MESSAGES ON THE DISPLAY OF THE HAND CONTROL

Problem	Cause	Solution
 The display shows HOT.	The SMARTneo-pro control box is equipped with overheating protection. It was activated because of overheating.	Wait until the control box has cooled down. The message HOT on the display will then disappear and the control box SMARTneo-pro will become operational again.
 The display shows E and an error number.	There was a fault relating to the SMARTneo-pro control box.	Look up the error code and follow the instructions.



Number	Description	Solution
00	Internal error channel 1	Unplug the control box. Contact LOGICDATA
01	Internal error channel 2	
12	Defect channel 1	Unplug the control box. Fix the external short circuit. or Plug the correct motor into the affected socket. Start the control box again.
13	Defect channel 2	
24	Overcurrent motor M1	Remove any objects from the table's range of movement. Remove excess load from the table top. Contact LOGICDATA.
25	Overcurrent motor M2	
48	Overcurrent motor group 1	
60	Collision protection activated	
62	Overcurrent of the control box or battery pack	
36	Plug detected in motor socket M1	Plug the correct motor into the affected socket. Perform a manual reset.
37	Plug detected in motor socket M2	
61	Motor replaced	
55	Synchronisation of motor group 1 not possible	Remove excess load from the table top Carry out a manual reset. If the error is still displayed after the manual reset, contact LOGICDATA.
67	High voltage detected	Disconnect the mains supply cable and contact LOGICDATA.
60	Collision protection activated	Remove any objects from the table's range of movement. Remove excess load from the table top. Contact LOGICDATA
70	Motor configuration changed	Disconnect the mains supply for 5 seconds. Connect the required motors and plug the mains supply back in. Perform a manual reset (see chapter 10.5).



Number	Description	Solution
71	Changes to the anti-collision configuration	Refer to the DMS sensor manual in order to activate or deactivate the anti-collision configuration
81	Internal error	Perform a manual reset. Disconnect the mains supply cable and plug it back in after a few seconds. If this error occurs frequently, disconnect the mains supply cable and contact LOGICDATA.
93	Connection error during cascading The error is shown for 15 seconds on the display. The control box then switches to the reset mode and shows the flashing display ooo , if necessary.	Check all cable connections and try to reset the drives. If a drive reset is not possible, disconnect the mains supply from all control boxes. Wait for at least 5 seconds and connect all control boxes to the mains supply again. Try to perform the drive reset again. If a drive reset is still not possible, contact LOGICDATA.

NOTICE

PowerFail Detection detects power failures and saves your data before the control box shuts down. In some cases, this is not possible and results in the error **E81** during the next restart. If this occurs, perform a manual reset to continue (see chapter 9.4).

NOTICE

If there is a power failure (or if the mains cable is unplugged) while the table is in motion, a manual reset may be necessary.



13.3 CLICK CODES

As soon as the SMARTneo-pro is connected to a power source, the control box uses installed relays to inform the user about system status and the reason for the last shutdown. The following table shows what each click code means.

Number of clicks	Status information
2x	Normal operation: The system is working without problems
1x	Emergency operation: The system is in emergency operation mode and the drives cannot be used. Check the LEDs and/or the error code on the display of the hand control.
3x – 6x	Last shut-off incomplete / forced reset: Check the error code on the display of the hand control. If the control box could not complete a data-saving process before power was lost, it will click 4–5 times during its next start-up and go into the reset mode. However, error code 81 will not be shown in this case.





14 ADDITIONAL INFORMATION

14.1 TECHNICAL SPECIFICATIONS

You can find all the relevant technical data of the SMARTneo-pro in the product's data sheet.

14.2 DISPOSAL



The SMARTneo-pro is an electrical and electronic device that must be disposed of separately from household trash in accordance with the WEEE directive 2012/19/EU. This type of product is labeled with the symbol shown on the left.

Before disposing of any materials or components, check if they can be recycled. Recycle as many parts as possible.

Dispose of all materials and parts according to local guidelines and regulations. Ensure that the disposal is lastingly compatible for humans and nature.

MOTION FOR YOUR LIFE

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