

# OPERATING MANUAL

Positioning control for pool cover

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# YOUR SKILLS & OUR TOOLS

Poolmotive® strives to strengthen the swimming pool industry. By standing together and supporting people in the market, and by improving products.

Our reason for innovating is to make things better, to improve on what came before. We work together with swimming pool builders, adapting products to needs and learning and growing by listening to our clients.

As a manufacturer and innovator, Poolmotive knows what it means to build a really good and sustainable swimming pool. And what is needed to maintain it smartly and effectively. It requires knowledge, deep professional knowledge and sometimes that can be underestimated, but not by us.

It is our responsibility to support you as a professional in this beautiful industry. That starts with understanding and communication, by thinking smartly together about products, to make them better. A well-thought-out installation is the start of a better product. Our innovative products should help you deliver a better, more sustainable and more beautiful swimming pool.



## INHOUD

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1	General information	3
1.1	Important information	3
1.2	Technical data	3
1.3	Symbols legend and description	4
1.4	Information for the user, target group	4
1.5	Hazard information	4
1.6	Validity	4
1.7	Intended use	5
1.8	General safety and usage information	5
1.9	Disposal	5
1.10	Delivery Contents	6
1.11	Additional information	6
2	Operation	7
2.1	Optional stop switch	7
2.2	Key switch operation	7
2.2.1	Key switch with automatic reset	7
2.2.2	Key switch with manual reset	8
2.3	Pushbutton operation	8
2.4	Optional remote control operation	8
2.5	Operation with buttons 6 and 7	8
3	Installation site, dimensions	8
4	Construction of the Poolmotive Control Cabinet	8
5	Electrical connection	9
5.1	Wiring diagram	10
5.2	Cable inlets	11
5.3	Power connection	11
5.4	Terminals	11
5.5	Motor connection	11
5.5.1	7-wire connection cable, Standard design	11
5.5.2	7-wire standard cable, 5-wire motor connection	12
5.6	Key switch connection	12
5.7	Pushbutton connection touch control	12
5.8	Water level monitoring connection	13
6	Start-up	14
6.1	Select language	14
6.2	Programming the final positions	14
6.2.1	Activation	14
6.2.2	Testing the motor's rotation direction	15
6.2.3	Programming Open and Close Positions	15
6.3	Information shown on display	16
6.4	Service Checklist	16
7	Maintenance and upkeep	17
8	Error messages	18
9	PC connection (USB interface)	19
9.1	Relays connection functions	19
9.2	"DRIVE" function	19
9.3	Relay Function 1 (Rel.Fn.1)	19
9.4	Relay Function 2 (Rel.Fn.2)	19
9.5	Drive mode configuration	19
9.5.1	MODE EU 1, Standard configuration	19
9.5.2	MODE EU 2, France	19
9.5.3	MODE EU 3, Stop operation in both directions	19
9.5.4	MODE EU 4, TOUCH CONTROL	19
9.5.5	MODE EU 5, external 1-channel remote control	19
9.5.6	Select EU Modus	20
9.6	DIP SWITCH	21

## 1. GENERAL INFORMATION

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### 1.1 IMPORTANT INFORMATION

#### Operation Guarantee

Observance of these operating instructions is essential to ensure trouble-free operation and in order for any warranty entitlements to be honoured. Read the operating manual carefully before working with the Poolmotive control system.

#### Proper use

The Poolmotive control system is designed for use in privately-used pools. It may not be used in public swimming pools.

#### Note

This operating manual contains instructions for the operation, storage, setup and maintenance of the Poolmotive control system.

#### Start-up Maintenance Setup

The personnel entrusted with the handling, storage, installation, start-up, inspection and maintenance of the machine must be qualified for industrial, mechanical and electrical equipment.

#### Disposal

The current and regional regulations must be observed for disposal. The electronic components and plastic components are to be disposed of in accordance with environmental protection regulations.

### 1.2 TECHNICAL DATA

Model	MTN 120	MTN 150	MTN 250	MTN 300	MTN 450	MTN 600	MTN 1000
Supply voltage	230V AC						
Frequency range	50/60Hz						
Rated current	2.5A						
Rated power	160VA	160VA	200VA	300VA	400VA	400VA	400VA
Power-on time	Maximum of 15 min (S2 - 15 min)						
Motor voltage	24VDC						
Motor current limit	5.8A	6.8A	8.0A	9.0A	10.3A	13.5A	12.5A
Motor fuse	7.5A	7.5A	7.5A	7.5A	15	15	15
Ambient temperature	-10°C tot +60°C						
Site altitude	up to 1000 m above sea level						
Humidity	Max. 90%, no condensation						
Protection class	IP54, Protection classification I						
Break connection	24V DC, maximum 1.0A						
Voltage impulse transmitter	5V DC tot 24V DC						
Switching level	4.5V < High < 24V   0V < Low <1.0V						
Dimensions	240mm x 195mm x 115mm				240mm x 315mm x 135mm		
Weight	2.9 kg				4.5 kg		



Despite the technical differences, the method of programming of Nm450, Nm600 and Nm1000 are same.

### 1.3 SYMBOLS LEGEND AND DESCRIPTION



#### **DANGER DUE TO ELECTRICAL CURRENT**

Failure to observe this can result in death, serious injury or property damage.



#### **DANGER**

Failure to observe can result in personal injury or material damage.



#### **NOTE**

Note supplementary information.

### 1.4 INFORMATION FOR THE USER, TARGET GROUP

This documentation contains the necessary information for proper use of the products described therein. It is intended for technically qualified personnel. Qualified personnel are persons who – because of their education, experience, instructions, and knowledge about corresponding standards and regulations, rules for the prevention of accidents, and operating conditions – are authorised by the person responsible for the safety of the machine to perform the required actions and who are able to recognise and avoid potential hazards (definition of qualified personnel according to IEC 364).

### 1.5 HAZARD INFORMATION

The following directions are for the safety of the service personnel as well as for the safety of the described products as well as any connected devices.



**Warning!** Dangerous electrical voltage.

Failure to observe this can result in death, serious injury or property damage.

- Isolate supply voltage before installation or removal work as well as in case of fuse replacement or modifications of the setup.
- Observe the accident prevention and safety regulations that apply to the specific area of use.
- Before putting the machine into operation, check whether the rated voltage coincides with the local mains voltage.
- Emergency stop devices must remain operational in all modes of operation. Disabling the emergency stop devices may not cause an uncontrolled restart.
- The electrical connections must be covered!
- Ground wire connections must be checked for fault-free function after installation!
- The conditions described in the latest DIN VDE 0100-702 must be observed.

### 1.6 VALIDITY

This documentation applies to all Poolmotive control systems.

#### **Safety Information**

Adherence to this information is the prerequisite for trouble-free operation and the fulfilment of any guarantee claims.

## 1.7 INTENDED USE

### Note:

The devices described here are electrical equipment for use in swimming pools and other pools and may only be used under the following conditions:

### Exceptions:

the manufacturer has designed the product specifically for other applications and ambient conditions.

- The Poolmotive control system.
- must only be used for the intended purposes and those confirmed in the shipping documents.
- must only be operated under the operating conditions stipulated in the operating instructions and within the power limits.
- complies with the valid standards and regulations.
- is a component designed for use in privately-used swimming pools.

### Improper use:

- Use in potentially explosive areas
- Use in harsh environments (acids, gases, vapours, dust, oil)
- Use in a sewage area
- Control unit use in 0 zone as per the newest DIN VDE 0100-702.

## 1.8 GENERAL SAFETY AND USAGE INFORMATION

The Poolmotive control system and its components comply with the latest technological standards at the time of delivery and are fundamentally considered operationally safe.



**All transport, storage, installation/assembly, connection, commissioning, maintenance and servicing work may only be performed by qualified personnel. During such work, the qualified personnel must observe:**

- the supplementary safety instructions in the individual chapters of this documentation.
- the safety instructions in attached supplementary sheets and further documents from subcontractors.
- this documentation and the circuit diagrams.
- the warning and safety signs on the devices.
- the machine-specific regulations and requirements.
- the national and regional regulations for safety and accident prevention.



The Poolmotive control system can pose a risk to persons, the machine itself and other property belonging to the operator

- if unqualified personnel work on or with the drive system.
- if the drive system is used improperly.
- if the drive system is installed and operated incorrectly.
- if the following information is disregarded:
  - Only operate the control unit when it is in perfect working order.
  - As a general rule, any retrofitting, changes or reconstruction of the drive system is prohibited. The above work may only be performed after consultation with the manufacturer.
  - During operation and for an extended period afterwards, the components may have live parts, moving parts and potentially hot surfaces.
  - Start-up (start of proper operation) may only be carried out once there it has been confirmed that the machine complies with EMC Directive 2014/30/EU and that the machine conforms to New Machinery Directive (EU) 2023/1230.
  - EN 60204-1 must be observed.

Should you have any questions or problems, please contact your Poolmotive representative.

## 1.9 DISPOSAL

The control unit must be disposed of in compliance with the currently valid regulations of the respective country. Electronic elements and components must be disposed of through a certified specialised company.

## 1.10 DELIVERY CONTENTS

- Pre-wired control unit with mains supply line, shock-proof plug and options as per specification.
- Additional accessories in accordance with the accompanying papers.

After receiving the delivery, check the delivery contents against the accompanying papers to make sure they are complete. The manufacturer does not offer warranty for claims regarding missing parts submitted at a later date. Any transport damage that is discovered must be reported to the shipping agent without delay.

## 1.11 ADDITIONAL INFORMATION

### NOTE



The customer is responsible for professional installation and setup of the machine. Safety devices and other safety-relevant components are to be installed at the machine site.

## 2 OPERATION

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The operator must have an unobstructed view of the pool. There may not be any people in the pool when opening and/or closing the pool cover. Objects and hoses in the pool can become caught in the cover and potentially destroy the drive motor. If the water level is too low, the cover or motor may also be damaged.

Operation is carried out by a switch installed near the pool. The switch may be either a pushbutton or a key switch. An optional remote control is available for purchase. The following instructions are meant for programming with EU Mode 1 (*Section 9.2*).



**Suggestion:**

To avoid possible injuries, we recommend fully opening and closing the pool cover.

### 2.1 OPTIONAL STOP SWITCH

If an optional stop switch exists, the motor can be stopped at any time by actuating the switch. Our recommendation: A stop switch without automatic reset.

### 2.2 KEY SWITCH OPERATION

#### 2.2.1 KEY SWITCH WITH AUTOMATIC RESET

##### 2.2.1.1 TOUCH CONTROL

By briefly (less than 1 s) turning the key switch in the desired direction for “opening” or “closing”, the pool cover moves to the selected final position and the control unit switches the motor off. This movement can be stopped at any time by turning the key switch (less than 1 s) in the opposite direction or by actuating the optional stop button. By turning the key switch once again in a particular direction, the motor restarts and moves in the selected final position.

##### 2.2.1.2 HOLD CONTROL

If the key switch is held in the desired direction for a longer period (longer than 1 s), the drive returns to the final position and stops. If the operator releases the switch during the movement, the drive stops immediately and must be restarted.



## **2.2.2 KEY SWITCH WITH MANUAL RESET**

By briefly turning the key switch in the desired direction for “opening” or “closing”, the pool cover moves to the selected final position and the control unit switches the motor off. The movement can be stopped at any time by turning the key switch to the neutral position. By turning the key switch once again in a particular direction, the motor restarts and moves to the selected final position. After arriving at the final position, turn the key switch back to the neutral position to avoid possible double inputs from Remote controller.

## **2.3 PUSHBUTTON OPERATION**

### **2.3.1.1 TOUCH CONTROL**

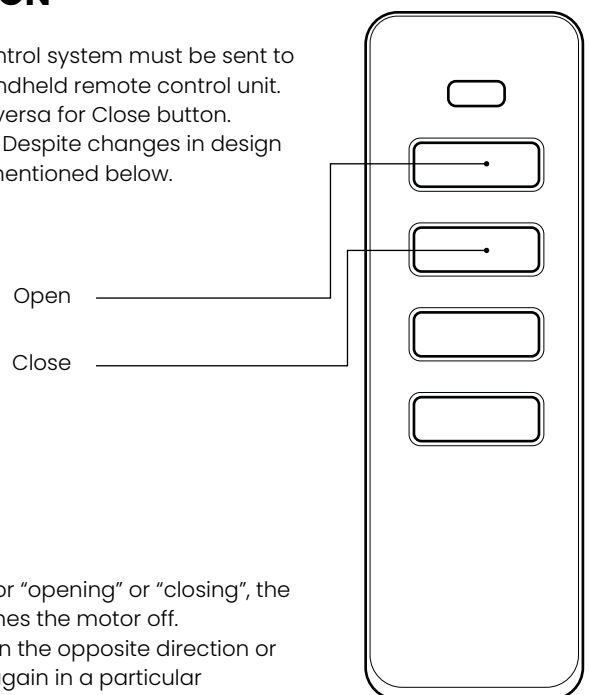
By briefly (less than 1 s) pressing the pushbutton in the desired direction for “opening” or “closing”, the pool cover moves to the selected final position and the control unit switches the motor off. This movement can be stopped at any time by pressing the pushbutton (less than 1 s) in the opposite direction or by actuating the optional stop button. By pressing the pushbutton once again in a particular direction, the motor restarts and moves to the selected final position.

### **2.3.1.2 HOLD MODE**

If the pushbutton is held in the desired direction for a longer period (longer than 1 s), the drive returns to the final position and stops. If the operator releases the switch during the movement, the drive stops immediately and must be restarted.

## **2.4 OPTIONAL REMOTE CONTROL OPERATION**

The optional remote control can be installed retroactively. For this, the control system must be sent to Poolmotive.. The pool cover is activated by the two top buttons on the handheld remote control unit. Pressing the top button rotates the motor in the Open direction and vice versa for Close button. To stop the motor at any point, press the button in the opposite direction. Despite changes in design of the remote control, the function of the top two buttons will remain as mentioned below.



## **2.5 OPERATION WITH BUTTONS 6 AND 7**

### **2.5.1 TOUCH CONTROL**

By briefly (less than 1 s) pressing the pushbutton in the desired direction for “opening” or “closing”, the pool cover moves to the selected final position and the control unit switches the motor off. This movement can be stopped at any time by pressing the pushbutton in the opposite direction or by actuating the optional stop button. By pressing the pushbutton once again in a particular direction, the motor restarts and moves to the selected final position.

### **2.5.2 HOLD MODE**

If the pushbutton is pressed down in the desired direction for a longer period (longer than 1 s), the drive returns to the final position and stops. If the operator releases the pushbutton during the movement, the drive stops immediately and must be restarted.

### 3 INSTALLATION SITE, DIMENSIONS

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- Observance of DIN VDE 0100-0702 (Installation of low voltage units, section 702: Swimming pools and other pools) is mandatory.
- Installation in area 2 in accordance with DIN VDE 0100-702 is only allowed if the required power outlet is protected by a residual current device (RCD) with a rated differential current of  $\leq 30\text{mA}$ .
- Installation in a dry room in which other technical equipment for operating the swimming pool is installed. The room should be a maximum of 10m from the pool.
- The control unit is designed for wall mounting. It is mounted by means of 4 screws,  $\varnothing 4\text{ mm}$  (not included in delivery). It must be fixed in such a way that the cable entries are on the bottom.



The Control box should be mounted at a distance of minimum 50cm away to avoid any possible interference from other electrical components such as relays, switches etc.

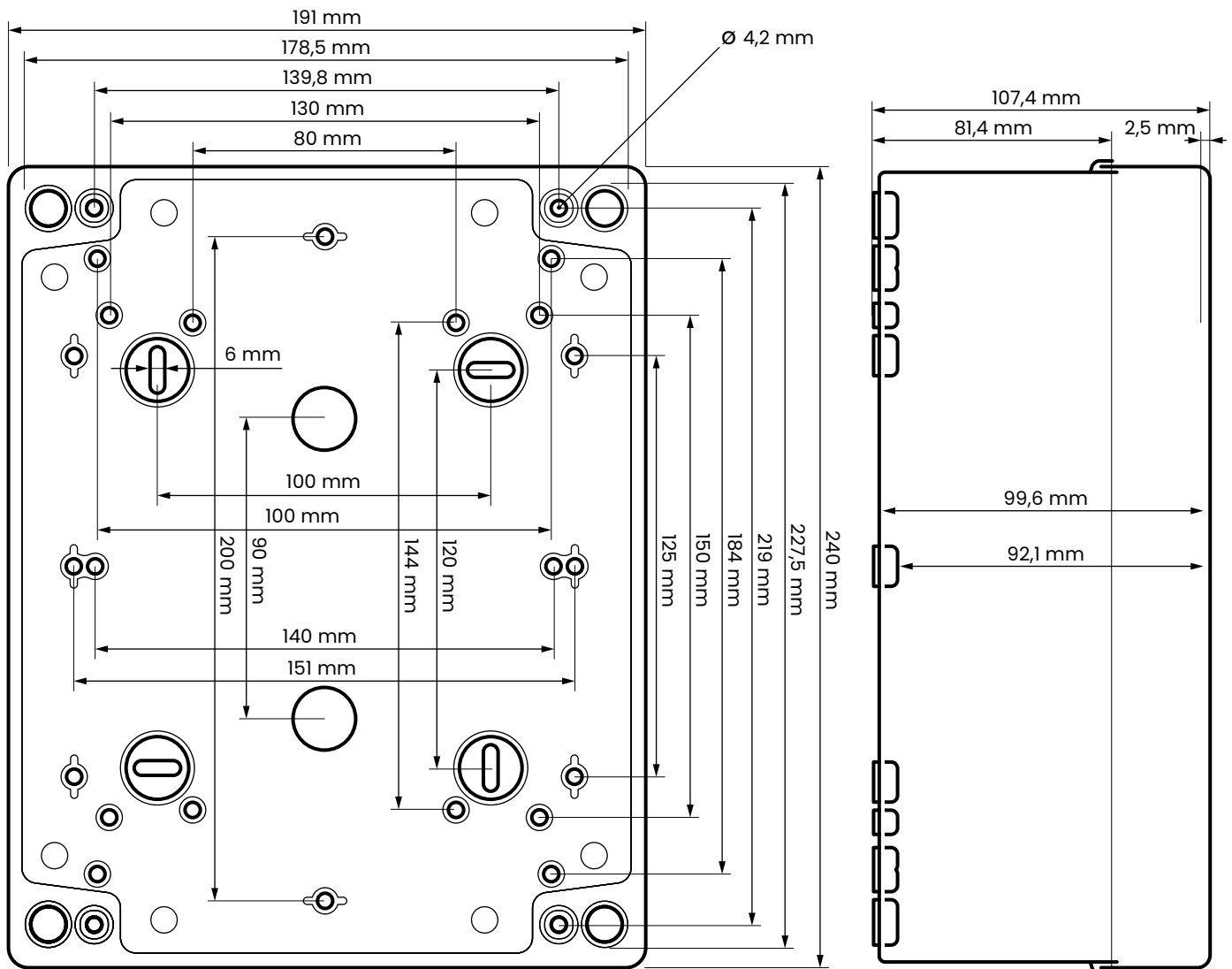


Figure 1:  
Drill pattern for the Poolmotive control system.

## 4 CONSTRUCTION OF THE POOLMOTIVE CONTROL CABINET

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1	Power switch with control lamp	11	Motor terminal
2	Cable inlets M20 x 1.5	12	Motor fuse: Blade fuse ISO 8820-3
3	Processor	13	Terminal 24VDC
4	Dip switch	14	LED voltage 24VDC
5	Programming button with LED	15	Rectifier
6	Movement direction open	16	Display
7	Movement direction close		
8	Safety transformer 230/24V	17	Mains power verifier (3.3V signal from Mains PCB)
9	Terminals labelled 1 - 17	Verborgen onder het bedieningspaneel:	
10	Brake resistance	18	Mains fuse 5 x 20 mm, IEC 60127-2

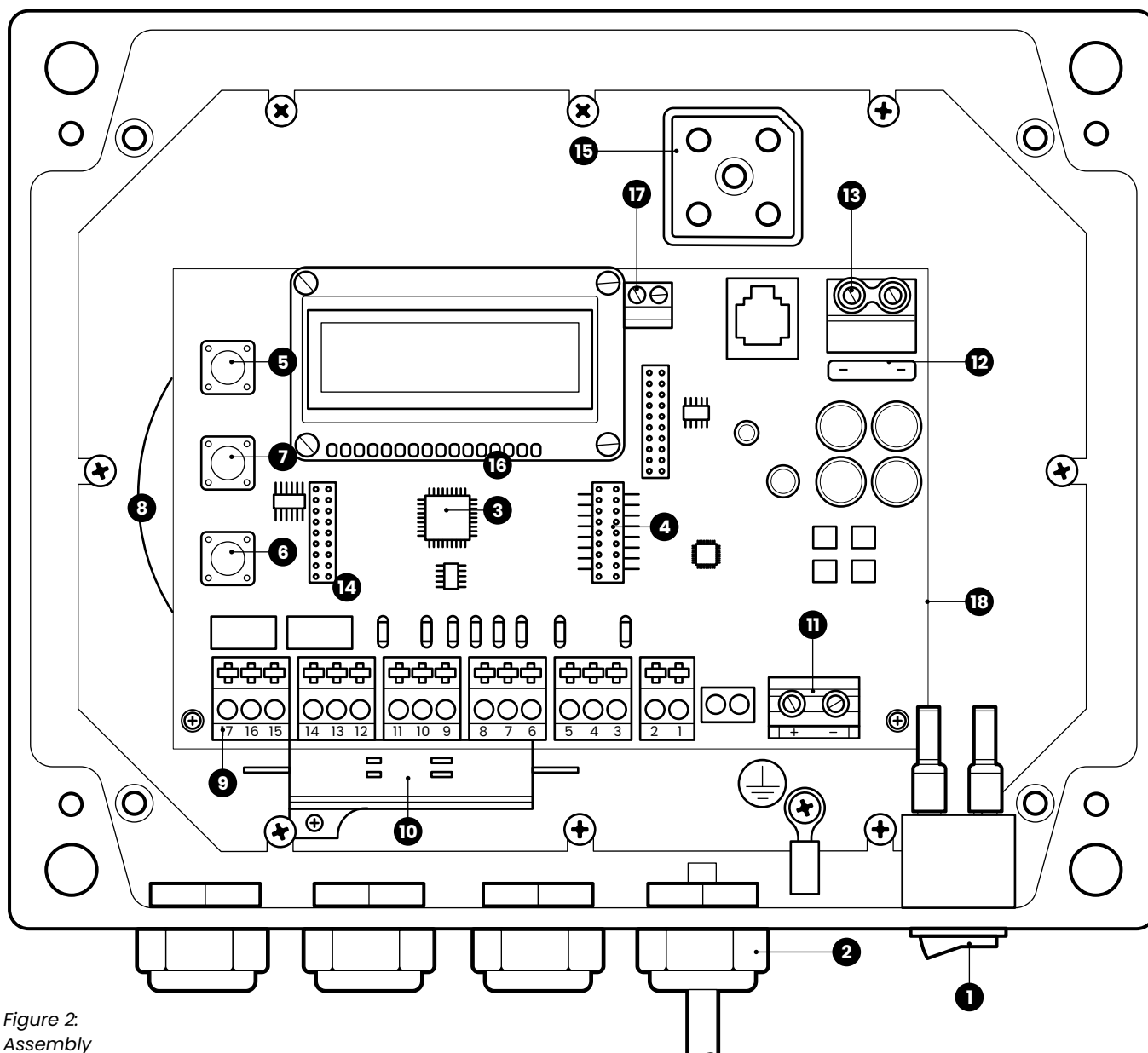
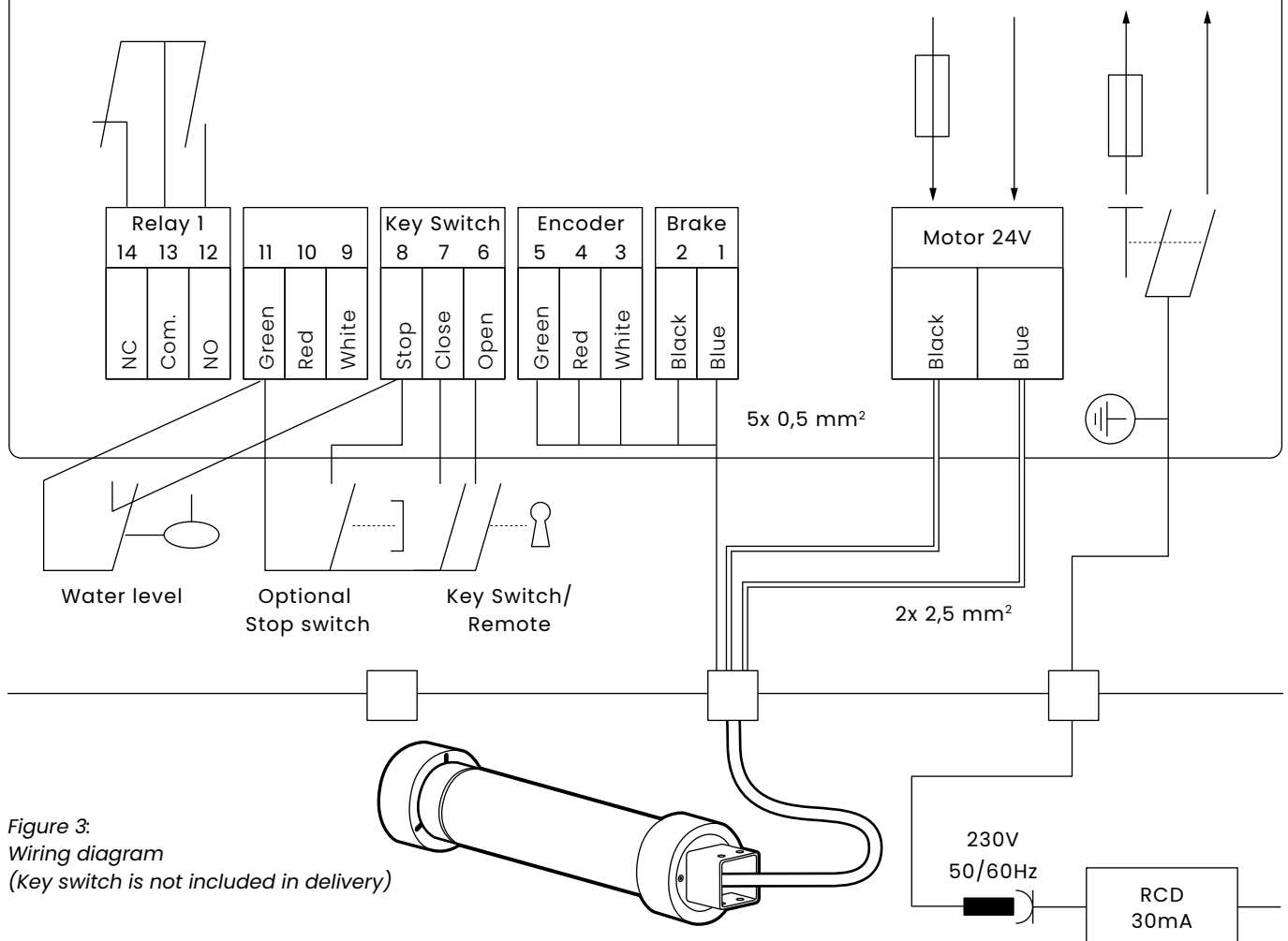


Figure 2:  
Assembly

## 5 ELECTRICAL CONNECTION

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### 5.1 WIRING DIAGRAM



### 5.2 CABLE INLETS

All cables must be fed through the plastic cable inlets in the terminal section.

- M20 screw connection for cable diameters from 9mm to 17mm.



- Compliance with IP54 protection class is only assured if
  - the cables have been properly clamped in the cable inlets.
  - all cable inlets not in use are sealed with dummy plugs.

### 5.3 POWER CONNECTION

The Poolmotive control system is delivered ready for connection with a 1m power cable and a grounded plug.

### 5.4 TERMINALS

- Motor connection (11) screw clamps maximal 4 mm²
  - Screw driver 4 x 0,5, 1.0Nm
- All other spring-loaded clamps for maximum 2.5 mm²



To release the clamps, press the plastic lever towards the control panel.



To actuate the lever, use appropriate tools. Levers can break if subjected to too much force.  
If the terminal or a component on the control panel is damaged, a warranty claim is no longer valid.

## 5.5 MOTOR CONNECTION

The Poolmotive drive motors for pool covers come with an orange connection cable.



- Do not open the motor if the motor feed line requires lengthening!
- Only use a matching cable for lengthening.
- The junction boxes must be sealed watertight with a moulding compound.
- Do not shorten the motor feed line. If shortened, all warranty claim are invalid!

### 5.5.1 7-WIRE CONNECTION CABLE, STANDARD DESIGN

The wires are color-coded or labelled with numbers as shown in the table.

- Motor connection 2 x 2,5mm<sup>2</sup>

Terminal label (11)	Cable number	Colour	Polarity 24VDC
	without number	Blue	Changeable depending on rotation direction of motor
		Black	

- Brake coil connection 2 x 0,5mm<sup>2</sup>

Terminal number (9)	Cable number	Kleur	Polarity 24VDC
1	1	Blue	Plus +
2	2	Black	Minus -

- Impulse transmitter connection 3 x 0.5mm<sup>2</sup> with mutual shielding (shielding is not connected to the device)

Terminal number (9)	Cable number	Colour	Polarity
3	3	White	Minus -
4	4	Red	Plus +
5	5	Green	Signal

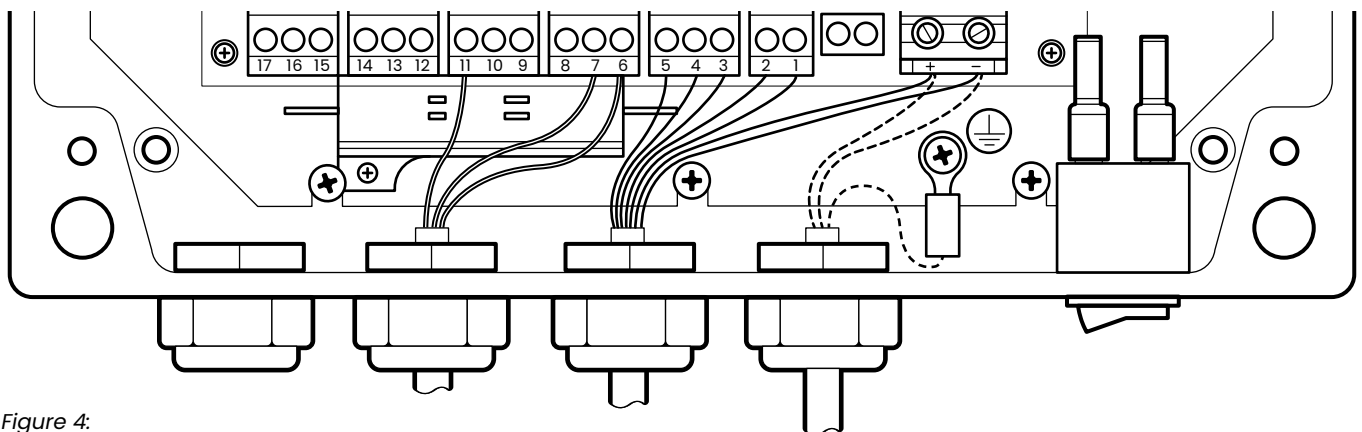


Figure 4:  
Centre: Motor connection 7-wire

### 5.5.2 7-WIRE STANDARD CABLE, 5-WIRE MOTOR CONNECTION

Special design or for other brands where the motor and brake are connected in parallel. A separate brake connection is omitted. On Poolmotive motors, the wires are marked by color or numbers according to the following table. If the brake is connected in parallel to the motor connection, DIP switch 8 must be set to OFF/left (Refer Section 9.3).

## • Motor connection 2 x 2,5mm²

Terminal label (11)	Cable number	Colour	Polarity 24VDC
	without number	Blue	Changes depending on rotation direction of motor
	without number	Black	

## • Brake connection 2 x 0,5mm² (without pin)

Terminal number (9)	Cable number	Colour	Polarity 24VDC
1 (not occupied)	1 (without pin)	Blue	Plus +
2 (not occupied)	2 (without pin)	Black	Minus -

## • Impulse transmitter connection 3 x 0.5 mm² with mutual shielding (shielding is not connected to the device)

Terminal number (9)	Cable number	Colour	Polarity
3	3	White	Minus -
4	4	Red	Plus +
5	5	Green	Signal

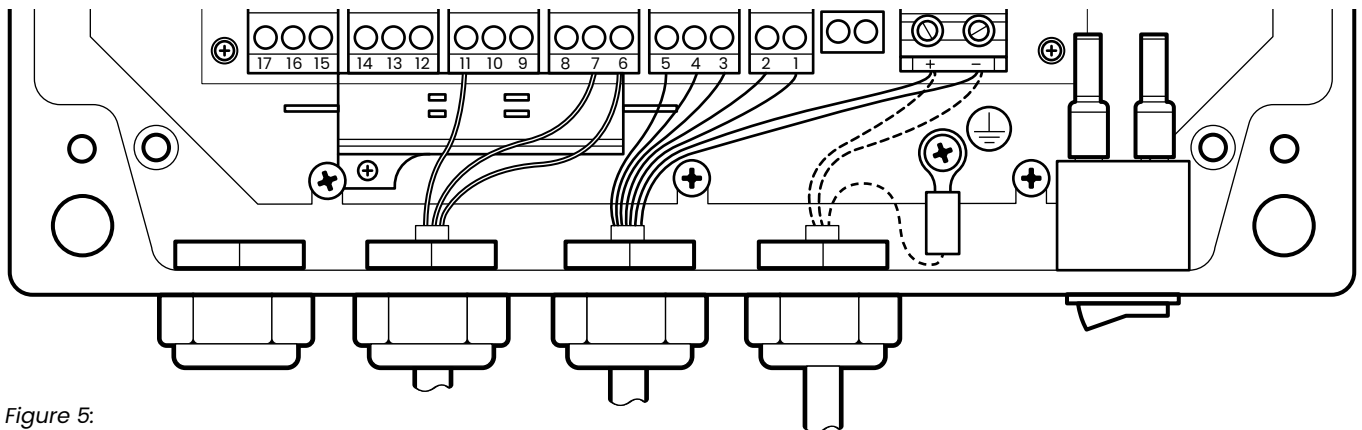


Figure 5:  
Motor Connection 5-Wire (For third party Motors)

## 5.6 KEY SWITCH CONNECTION

Terminal number (9)	Function	Colour
11	Common (0V)	Customer-specified connection
6	To open	
7	To close	

## 5.7 PUSHBUTTON CONNECTION TOUCH CONTROL

Terminal number (9)	Function	Colour
11	Common (0V)	Customer-specified connection
6	To open	
7	To close	
8	To stop	

## 5.8 WATER LEVEL MONITORING CONNECTION

The pool cover may only be opened or closed when the water level is sufficient. For switching off if the water level is not sufficient, a potential-free contact for water level monitoring is required. The contact must be closed if the water level is too low. The connection is carried out at terminal 11 and 8 on the strip terminal (9), parallel to the stop button.

## 6 START-UP

EN



### DANGER DUE TO ELECTRICAL CURRENT

**Before starting the machine up, check the operation of the residual current circuit breaker (RCCB) on the machine side!**

Check all lines for damage and make sure the electrical connections are secure.



### DANGER

Before switching the machine on, make sure that there are no swimmers in the swimming pool!

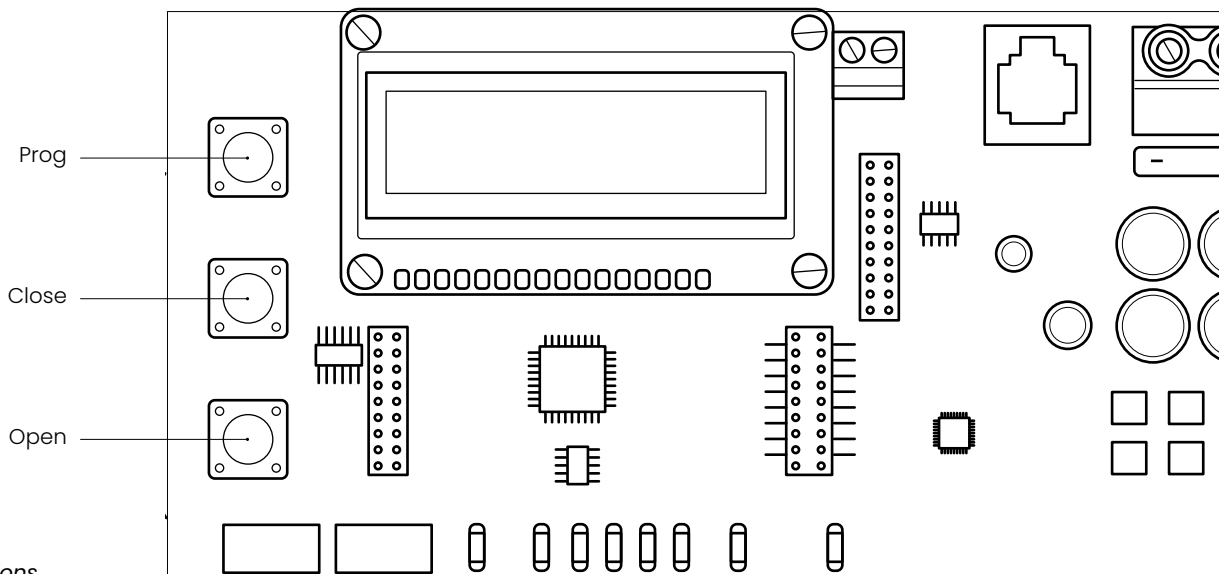


Figure 6:  
Switch functions

### 6.1 SELECT LANGUAGE

1. Press Open button (hold) and switch on the controlbox.
2. Press Open button till Sprache/Language is in the display.
3. Press Prog button Language will come in the display.
4. Press Open button till the preferred language is in the display.
5. Press Prog button to save.

### 6.2 PROGRAMMING THE FINAL POSITIONS



- When programming the final positions, the operator must have an unobstructed view of the pool.
- There is no automatic switch-off.
- Movement to the final positions can be actuated by an external switch or with the Open (6) and Close (7) button on the control panel, or by using the optional remote control.
- We recommend programming

Programming mode is automatically activated when the end points are deleted. As long as this is active, two LEDs flash. Both LEDs flash simultaneously until position 2 is programmed, after which they flash alternately until position 1 is saved.

#### 6.2.1 ACTIVATION

- Plug in the shock-proof plug.
- Press the power button (1)
  - Control lamp in the power switch is on
  - LED (14) on the control panel is lit
  - LED's for buttons 7, 6 and 5 flash briefly
  - After approximately 5 seconds, the "ready" message appears in the display.
  - The control unit is ready for additional programming

## 6.2.2 TESTING THE MOTOR'S ROTATION DIRECTION



The rotation direction can be tested by the Open (6) and Close (7) buttons on the control panel. If the pool cover is not within sight, two people are required.

- Press the open button (7).
- The closed cover must begin opening.
- **If the cover moves in the wrong direction, exchange the motor connections at terminal 11.**
- The rotation direction should then also be tested with the external switch. If the rotation direction is incorrect when the external switch is activated, correct the connections at terminals 11, 6 and 7.

### Programming Open and Close Positions

Steps	Action	Information on Display
Step 1: Deleting End Points (To program new end points)	Press all 3 buttons (PROG, OPEN and CLOSE) together for 10 seconds. Display shows „Deleting saved points and then „Deleted “. LED next to PROG button starts blinking.	Deleting Saved Points → deleted
Step 2: Programming Position „OPEN“	The cover can be rolled to the desired fully open position using OPEN and CLOSE buttons. Press the PROG and OPEN buttons together for 3 seconds to save the desired Open position. LED blinks alternately with power LED	Position 2 → Saved
Step 3: Programming Position „CLOSE“	Move the cover towards the closed position to define the end position in the fully closed state. Ensure the cover is in the correct position. Press the PROG and CLOSE buttons together for 3 seconds to save the desired closing position.	Position 1 → Saved



## 6.3 INFORMATION SHOWN ON DISPLAY

A variety of information is shown on the display, depending on operating mode.

- In standard operating mode, the motor parameters are displayed. Display information: During running, the bottom line of the display shows the number of impulses (S) on the left and Current value (C in mA) on the right.

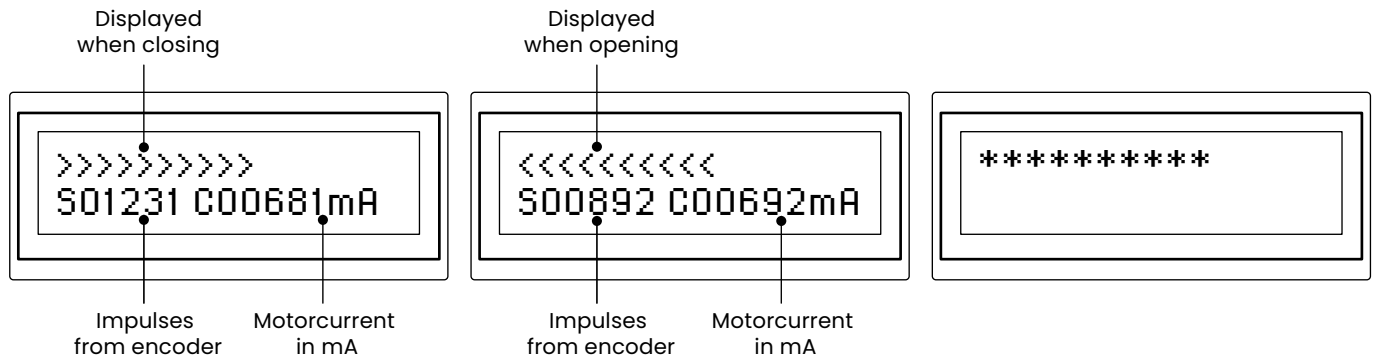


Figure 7:  
Display information

- In the event of malfunction, information regarding the possible cause are displayed. See Section 8 (Error messages) for more information.

## 6.4 SERVICE CHECKLIST

Poolmotive recommends creating a log after commissioning. The following data should be noted:

Date of Installation:	
Installer:	
Serial number of Motor:	
Motor current in Motor nameplate	A
Serial number of Control Box:	
Nominal current of Control Box in nameplate	A
Measured values:	
Motorcurrent before position „Closed“	A
Motorcurrent before position „Open“	A
Number of impulses at position “Closed”	
Number of impulses at position “Open”	
Time needed from position “Open” → „Closed“	Sec.
Time needed from position “Closed” → „Open“	Sec.

**7 MAINTENANCE AND UPKEEP****EN**

Only use a damp cloth to clean the control unit. Ensure that the control unit is not covered by objects and is always accessible. The cables must always be fastened in the intended cable inlets. If the housing or cover becomes discoloured, this indicates exposure to excessive temperatures. Pull the shock-proof plug from the mains and contact an expert.

## 8 ERROR MESSAGES

**EN**

The display will show an error message in accordance with the following table.

Error in display	Possible cause	Remedy
<b>Switch blocked</b>	Key switch is in the OPEN or CLOSE position.	Turn the key switch to the 0 position. The word "ready" appears in the display.
<b>Encoder error</b>	Encoder not functioning. Noise signals in encoder due to damaged cable/ oxidation. Flat fuse in PCB burned off.	Have the unit inspected by a professional technician. The drive could run out of control in this case. Check for water ingress in Switch box/ Junction box.
<b>Over current</b>	Motor is blocked or is overloaded. Items in pool. Cable damaged.	Remove the items. Have the unit inspected by a professional technician.
<b>Low voltage</b>	Flat fuse on the Circuit board is burned out. Motor is blocked/ overloaded.	Replace flat fuse with same amperage. Check for blockages
<b>No display</b>	Shock-proof plug has no power. Residual current circuit breaker was activated. Power switch (I) not turned on. Mains fuse on the power supply board defective.	Check house fuse, have unit inspected by a professional technician. Turn on power switch, check fuse / replace if needed
<b>None</b>	The unit only moves in one direction	Connect the key switch properly. Connect the cable from terminal 6 to terminal II, or from terminal 7 to terminal II.

## 9 RELAYS CONNECTION FUNCTIONS

EN

### 9.1 “STABLE” FUNCTION, DELIVERY STATE

**The relay switches when the final position has been reached.**

- Cover reaches the closed position: Contact 13 – 14 closed, 12 – 13 open
- This switching status remains until the final open position has been reached.
- The cover reaches the open position: Contact 12 – 13 closed, 13 – 14 open
- This switching status remains until the final closed position has been reached.

### 9.2 “DRIVE” FUNCTION

**The relay switches as soon as the motor begins to turn.**

- The control unit switched the motor off: Contact 13 – 14 closed, 13 – 12 open
- The control unit switched the motor on: Contact 12 – 13 closed, 13 – 14 open

### 9.3 RELAY FUNCTION 1 (REL.FN.1)

**Relay-1 switches only when the cover is closing.**

- The cover is open: Contact 13 – 14 closed, 13 – 12 open
- The cover is closing: Contact 13 – 14 open, 13 – 12 closed
- The cover is closed: Contact 13 – 14 closed, 13 – 12 open.
- The cover is opening: Contact 13 – 14 closed, 13 – 12 open.

### 9.4 RELAY FUNCTION 2 (REL.FN.2)

**Relay-2 switches when the motor goes out of the fully open position.**

- The cover is open: Contact 16 – 17 closed, 16 – 15 open
- The motor goes out of position “open”: Contact 16 – 17 open, 16 – 15 closed
- This switching status remains until the motor reaches the fully open position.

## 9.5 DRIVE MODE CONFIGURATION

### 9.5.1 MODE EU 1, STANDARD CONFIGURATION

Control unit behaves as described in section 6 “Operation”.

### 9.5.2 MODE EU 2, FRANCE

There are special safety regulations which must be observed in France. During the closing process, the button (key switch) must be held in place (dead man switch). The opening process can be started by briefly pressing the corresponding button as with configuration EU 1.

### 9.5.3 MODE EU 3, STOP OPERATION IN BOTH DIRECTIONS

Opening and closing transpire as long as the button or key switch are held in place (hold-down mode).

### 9.5.4 MODE EU 4, TOUCH CONTROL

Opening and closing are done automatically, after the button or key switch was actuated for at least 1 second.

### 9.5.5 MODE EU 5, EXTERNAL 1-CHANNEL REMOTE CONTROL

Is used for buttons with external 1-channel remote control.

- Press once = Open
- Press once = Stop
- Press once = Close
- Press once = Stop
- Press once = Open

## **9.5.6 SELECT EU MODUS**

Adjusting the EU mode is done as follows:

1. Press and hold the Open button and switch the red on/off button to ON. This will take you to the menu.
2. Press the Open button (twice) until you reach "Mode".
3. Press the Prog. button once.
4. Press the Open button until you reach (for example) "Mode EU1".
5. Press the Prog. button once.
6. The screen will display "Mode EU1 Saved" and then "Ready" will appear on the display.

## 9.6 DIP SWITCH

All dip switches are set by default as ON/ to the right side. The Dip switches 1 – 4 can be altered according to the required function in Section 9.1.



Please make sure that the control box is OFF when resetting the dip switch.

Dip-Switch (when switched to left side/ OFF Pos.)	Relay 1	Relay 2		
<b>Switch 1</b>	Drive	Stable	Figure 1	
<b>Switch 2</b>	Stable	Drive	Figure 2	
<b>Switch 3</b>	Rel.Fn.1	Stable	Figure 3	
<b>Switch 4</b>	Stable	Rel.Fn.2	Figure 4	

The figures 1-4 on the right show how the Dip switches can be set to according to the function needed as in the table above.

Example: Dip switch 2 (Figure 2) when switched from: OFF ← ON, causes Relay 1 to function as Stable and Relay 2 to function as Drive.

Dip-Switch (when switched to left side/ OFF Pos.)	Funktion		
<b>Switch 5</b>	Stop Inverted	Figure 5	
<b>Switch 6</b>	Close Inverted	Figure 6	
<b>Switch 7</b>	Open Inverted	Figure 7	
<b>Switch 8</b>	For 5-Wire Motors (100% Voltage-Without ramp)	Figure 8	

The figures 5-8 on the right show how the Dip switches can be set to according to the function needed as in the table above.

Example: Dip switch 7 (Figure 7) when switched from: OFF ← ON, turns on Open inverted function.



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