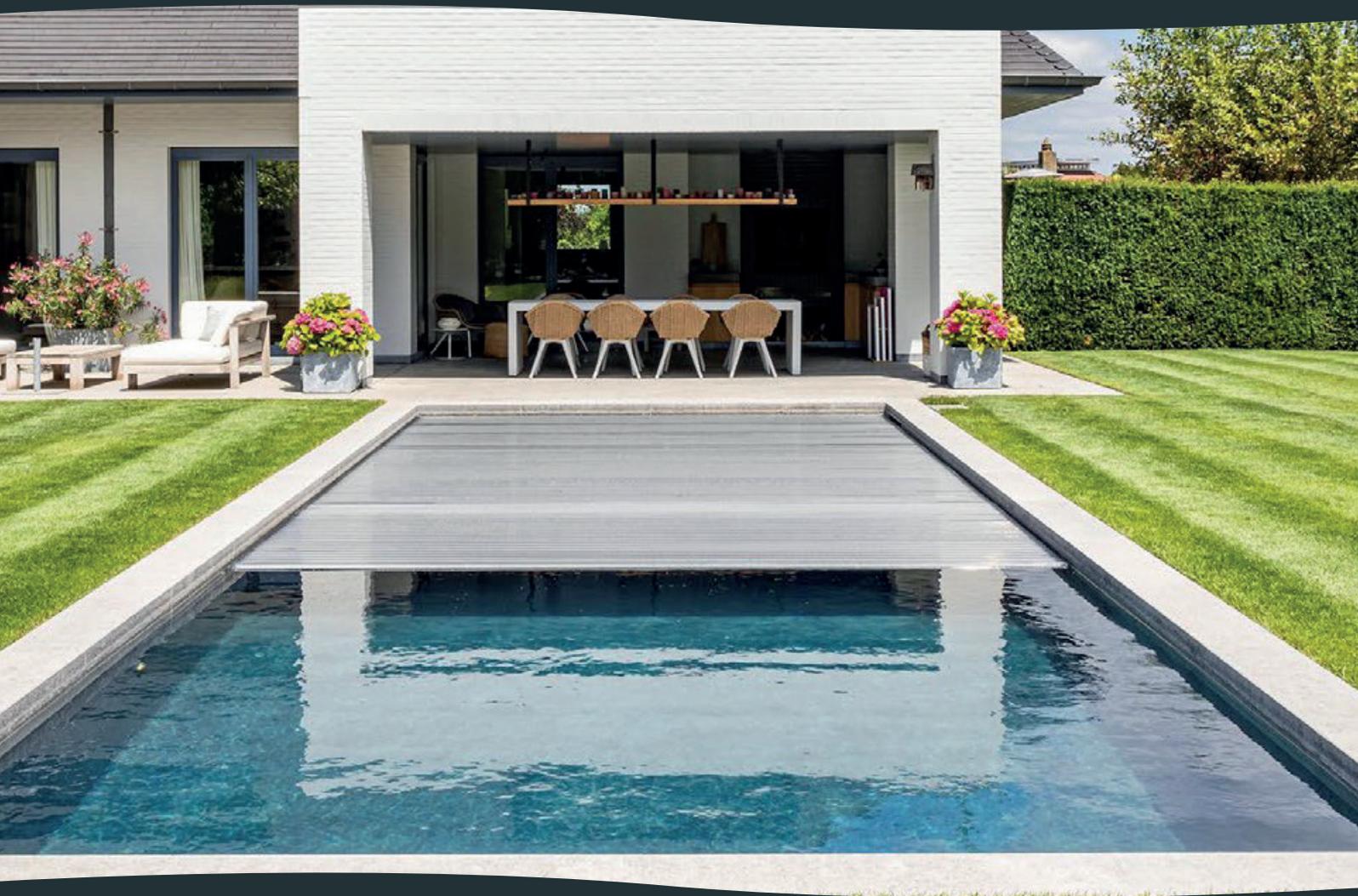


PCS POOL COVER — SYSTEMS —

WIRING DIAGRAM + MANUAL

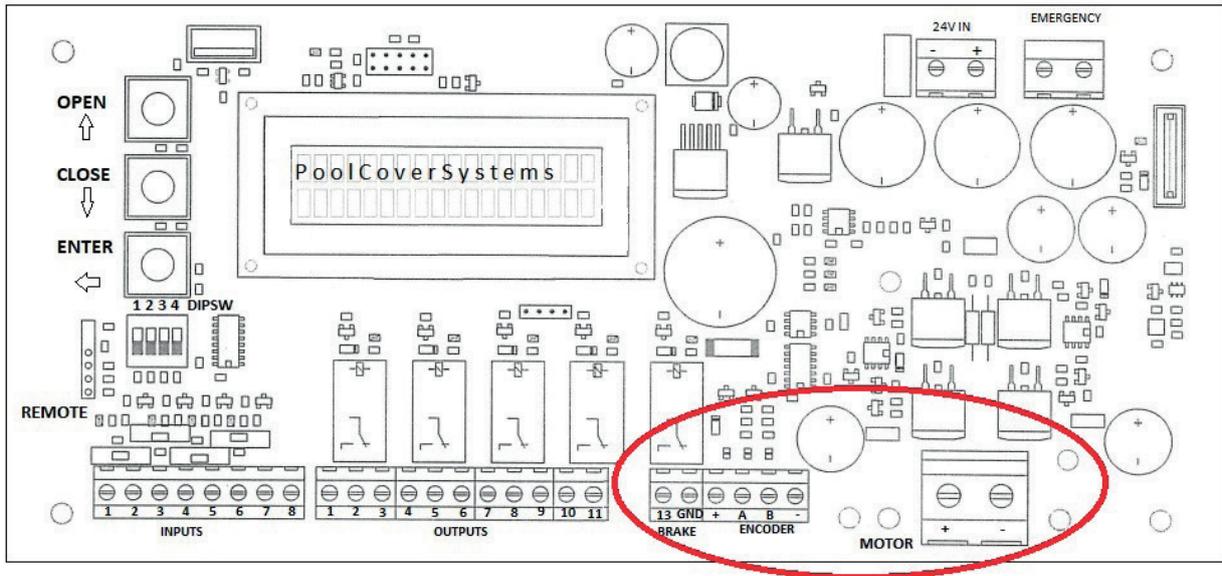




Inhoud

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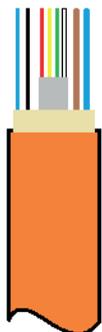
a) Wiring Diagram Motor



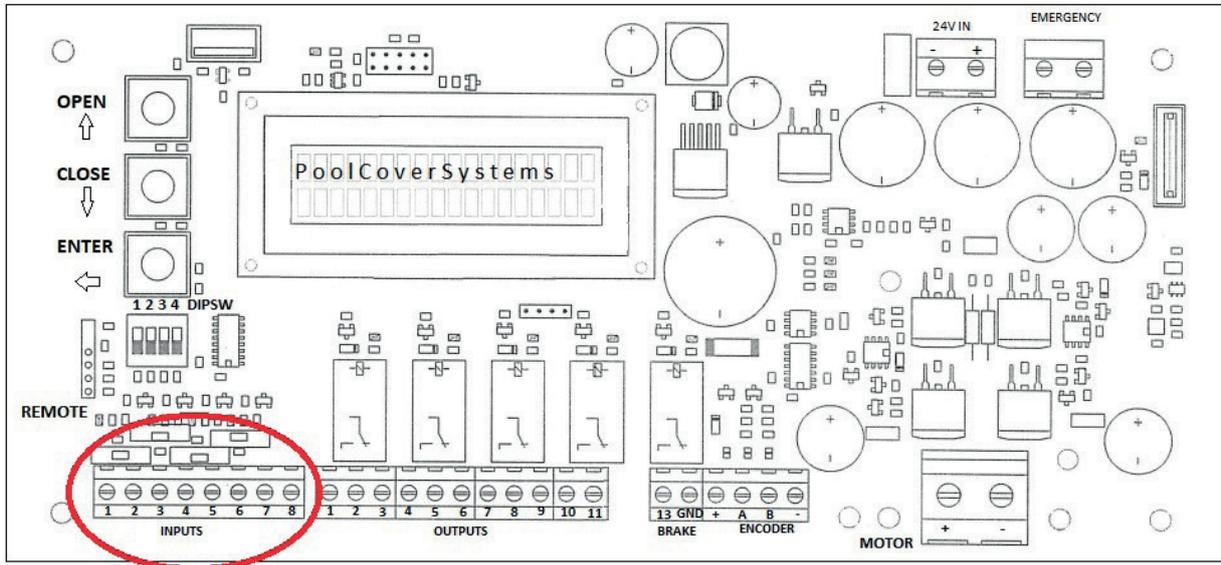
13	GND	+	A	B	-	+	-
BLUE	BLACK	RED	YELLOW	GREEN	WHITE	BROWN	BLUE
BRAKE 2 x 0,5mm ²		ENCODER 4 x 0,5mm ²				MOTOR 2 x 4mm ²	

CAUTION:

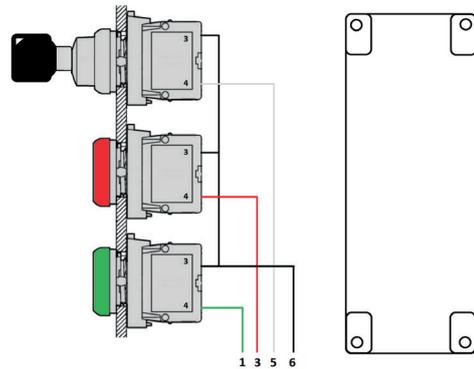
The connections of the wires should **NEVER** be switched around.
The configuration of the control box guarantees a proper operation.



b) Wiring Diagram Key Switch



1	3	5	6
OPEN	CLOSE	KEY	COM



Inputs Control Box:

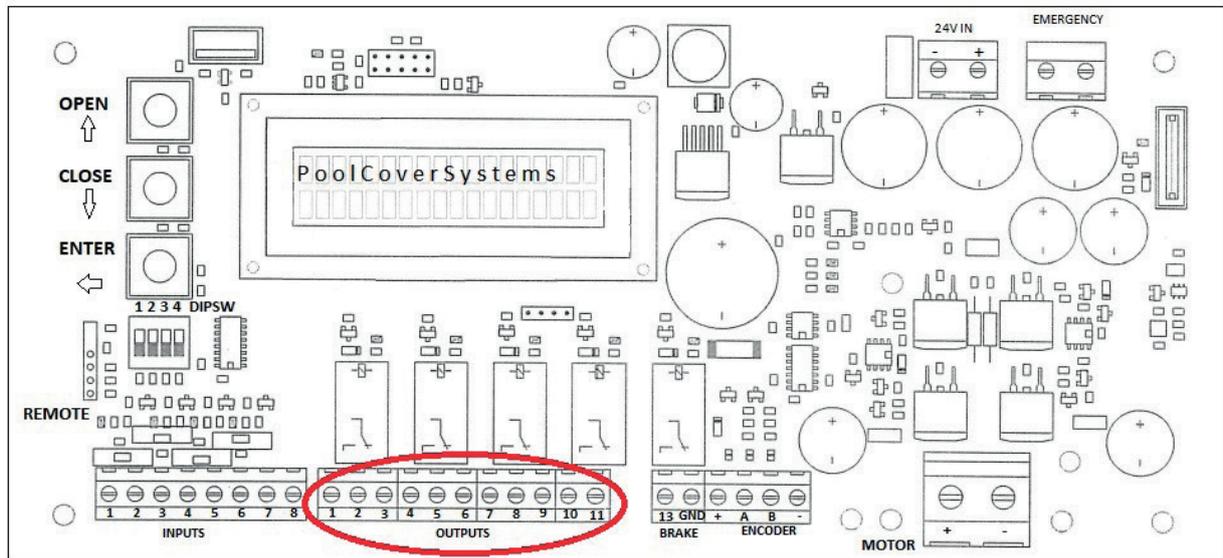
- 1) OPEN command
- 2) COM
- 3) CLOSE command
- 4) COM
- 5) KEY switch (emergency stop)
- 6) COM
- 7) LIGHTING (Output 10-11(-12))
- 8) COM

A potential free contact between input 7 and 8 will switch output 10-11(-12).

CAUTION:

The control box will only work when the key contact is in position 1!

c) Outputs



At the bottom of the print there are 11 (12) output connections. All are potential free and will switch as following:

- Output 1-2(com)-3: Changeover switch contact in function of an active pool cover
 - Output 1-2 : Closed contact while **working** pool cover
 - Output 2-3 : Closed contact when **pool cover stands still**
- Output 4-5(com)-6: Changeover switch contact in function of the position of the pool cover.
 - Output 4-5 : Closed contact when cover is **open**
 - Output 5-6 : Closed contact when cover is **closed**
- Output 7-8(com)-9: Changeover switch contact in function of the encoder
 - Output 7-8 : Closed contact when **endposition open is reached**
 - Output 8-9 : Closed contact when **endposition open is not (yet) reached**
- Output 10-11(com)-12: Pre-programmed output that switches by pressing the right button of the remote, OR by pulsing input 7-8. (example: turning on/off pool lighting)

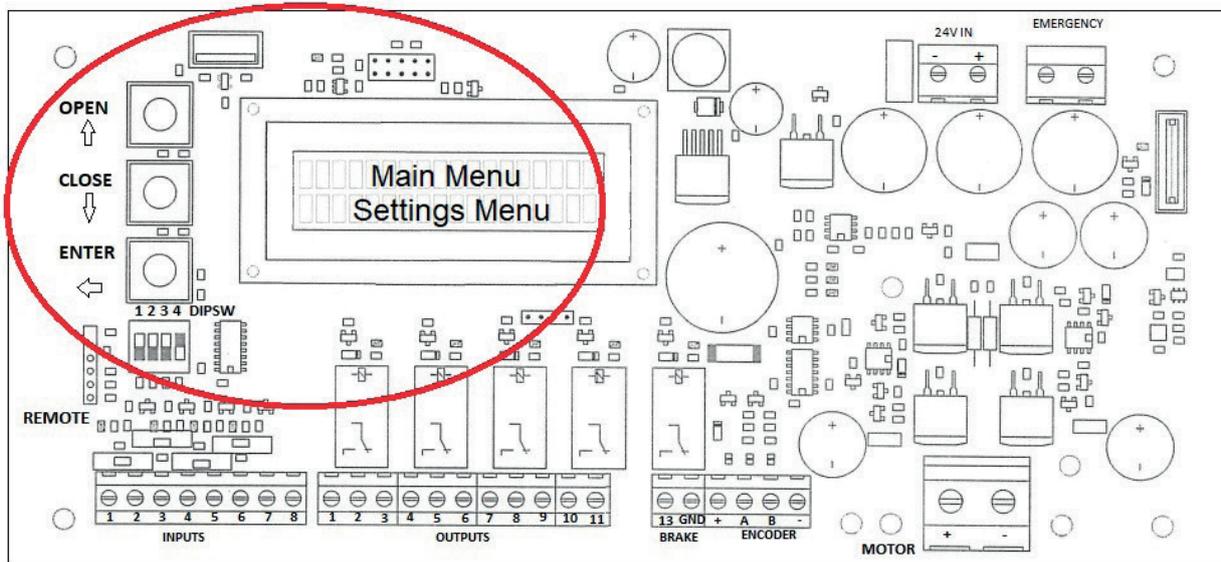
Use this contact to interrupt only 1 main supply wire of the transfo that powers the lights, or to switch an external relay. (max 250V / 10A)

CAUTION: This output **DOES NOT** provide power, but is also a **POTENTIAL FREE** contact, like the other outputs. **NEVER** connect both main supply wires here.

This contact is working as an ON/OFF switch, but can also be configured as a pulse:

Settings Menu: Light → Key = Toggle / On

2 — SETTINGS MENU



General:

- To get access to the Settings Menu, **DIPSWITCH 4 needs to be up!**
(During normal operation, all dipswitches are down)
- To save settings, you've got to **PRESS AND HOLD ENTER FOR 3 SECONDS** until the display confirms saving.
- To navigate and change settings we use the 3 buttons on the left of the display:
 - **Open:** Scroll up through the menu
 - **Close:** Scroll down through the menu
 - **Enter:** Confirm (1x) and save (3sec)

Dipswitches / Functions:

STAND DIPSWITCH (1 2 3 4)	FUNCTION
0000	Automatic opening and closing until the configured endpositions (pulse command)
1000	Automatic opening and manually closing until the configured endpositions (pulse and dead man's operation)
0100	Manually opening and closing until the configured endpositions (dead man's operation)
1100	Automatic opening and closing by using 1 single push button (input 1) or only the button 'open' from the remote until the configured endpositions. (pulse command)
0010	Manually opening and closing without caring about the configured endpositions ! CAUTION: The cover can reach further than the endpositions! (dead man's operation)
0001	Gain access to the menu for configuration through the open/close/enter buttons.

a) Change language

Default language is set to 'DUTCH'.

To adjust this:

- Put dipswitch 4 up
- Press 'OPEN' , the display shows '**Hoofd Menu / Main Menu – Settings Menu**'
- Press 'ENTER' , the display shows '**Settings Menu – Taal / Language**'
- Press 'ENTER' , and change the language by pressing open/close
- Select the right language and PRESS AND HOLD 'ENTER' for 3 seconds
- The display shows '**SAVE**' , and steps back in the 'Settings Menu
- Scroll with open/close to '**Settings Menu – Exit**' and press 'ENTER'
- You're back at the main screen, put dipswitch 4 down for normal operation

b) Setting the right direction of rotation

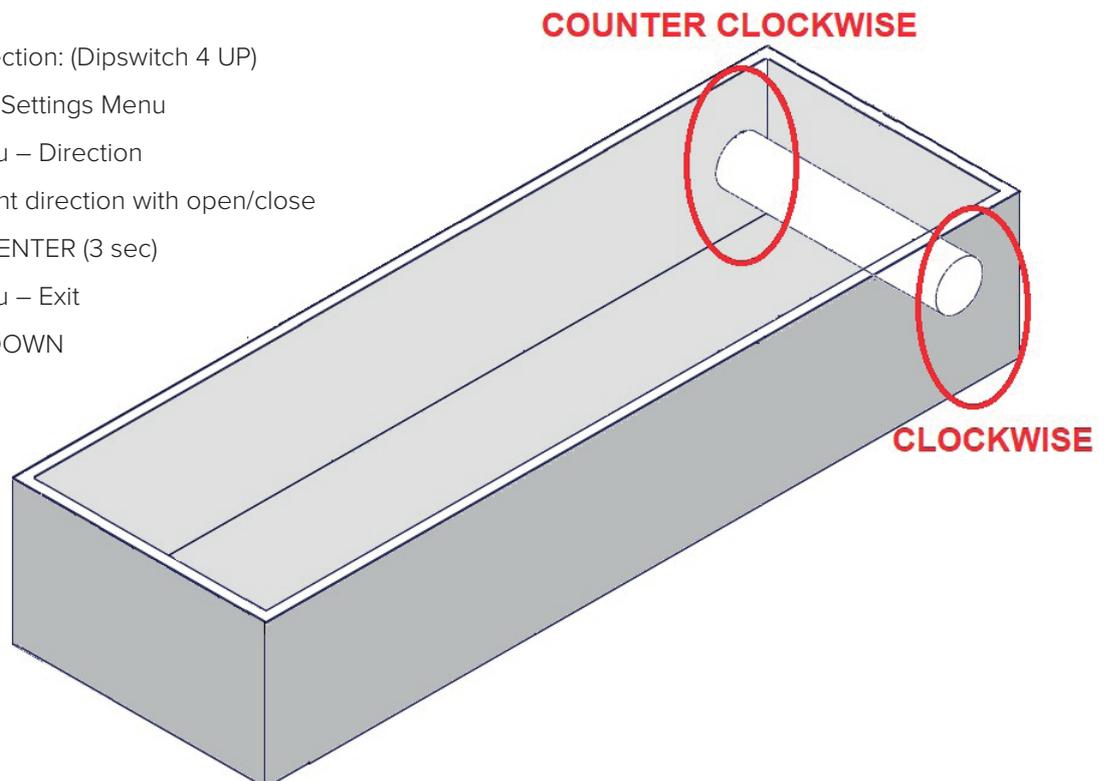
Default direction is set to 'CLOCKWISE'.

The right direction is determined by looking at the motortube from across the pool:

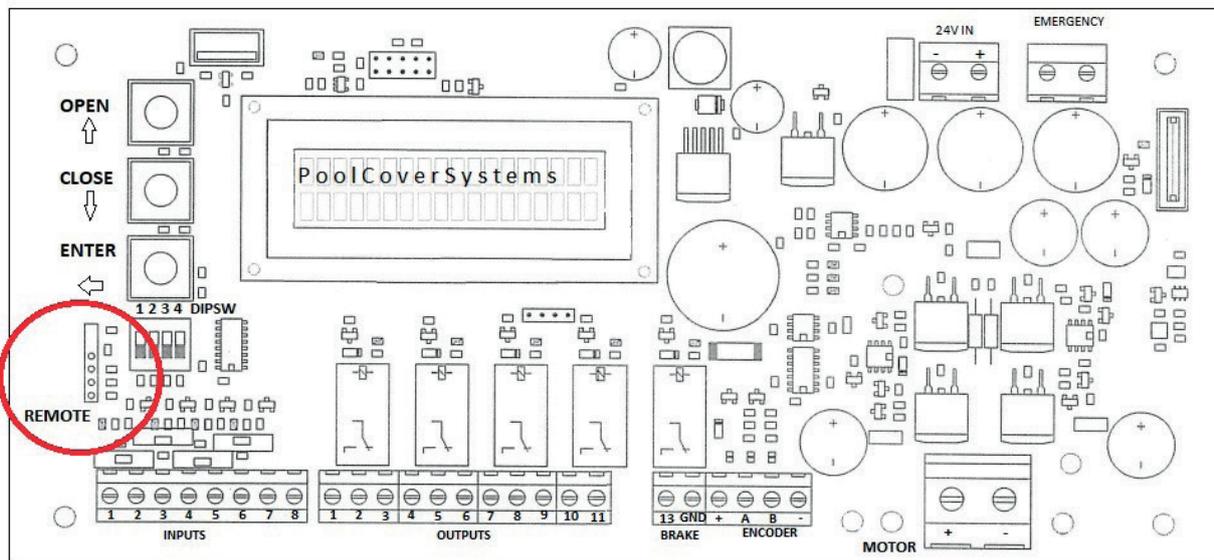
- Is the motor located on the right = CLOCKWISE
- Is the motor located on the left = COUNTER CLOCKWISE

To adjust the direction: (Dipswitch 4 UP)

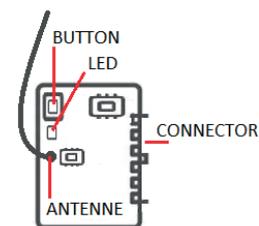
- Main Menu – Settings Menu
- Settings Menu – Direction
- Select the right direction with open/close
- Press + Hold ENTER (3 sec)
- Settings Menu – Exit
- Dipswitch 4 DOWN



c) Connecting and pairing a PCS remote

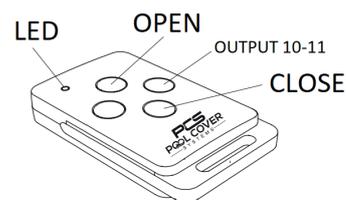


- Shut down the control box by turning off the power button at the bottom right
- Connect the PCB-receiver on the REMOTE connector (antenna should be on the left)
- Turn the power back on



Pairing the remote:

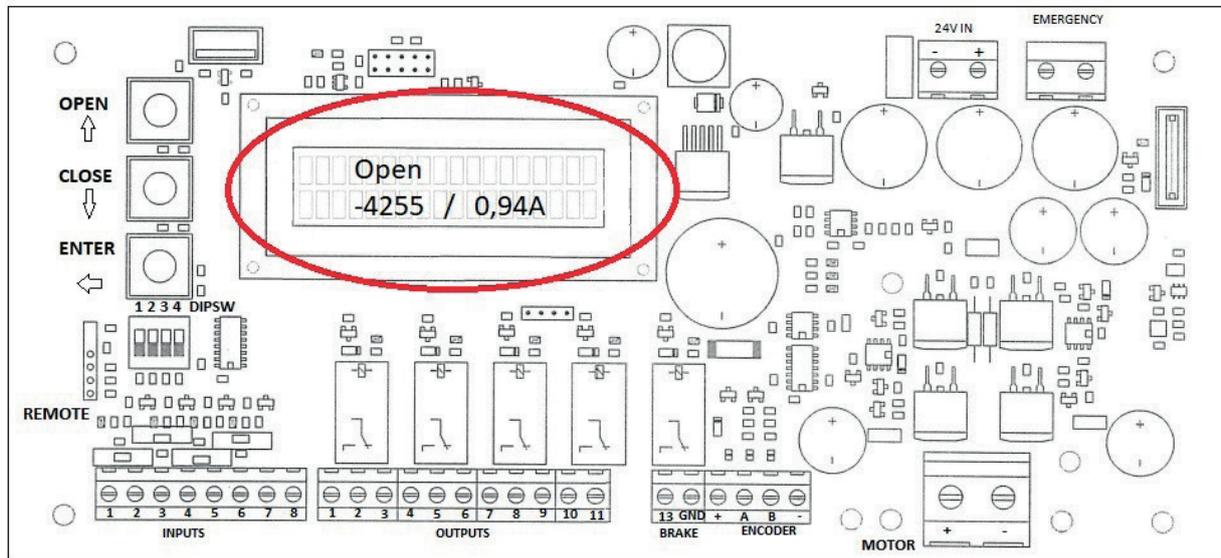
1. Press 3x times shortly on the white button of the receiver
2. The red LED will flash with intervals of 3x
3. Press AND HOLD the upper button (OPEN) of the remote
4. The red LED will light continuously and after ± 5 sec starts flashing again
5. Release the upper button of the remote
6. Press 1x time shortly on the white button of the receiver
7. The red LED will go out and your remote is paired correctly!



Erase all channels and reset the receiver:

1. Press and hold the white button of the receiver for 3sec
2. The red LED starts flashing rapidly
3. Release the button of the receiver, and press and hold the button again
4. The LED will start to light continuously, release the button, the LED will flash again
5. Press 1x time shortly on the white button, the red LED will go out
6. All channels are erased, and the receiver has been reset

d) Setting the endpositions



CAUTION: While **OPENING** the cover, the encoder pulses should decrease (**COUNT DOWN!**) The encoder pulses are represented by the left number on the display.

(when a minus '-' precedes the number, and the number is going negative, this number should count up)

IF NOT: Check the direction of rotation! Never change any wiring!

(2b.Setting the right direction of rotation)

After saving the position opened, the encoder pulses should be (approx) '0'.

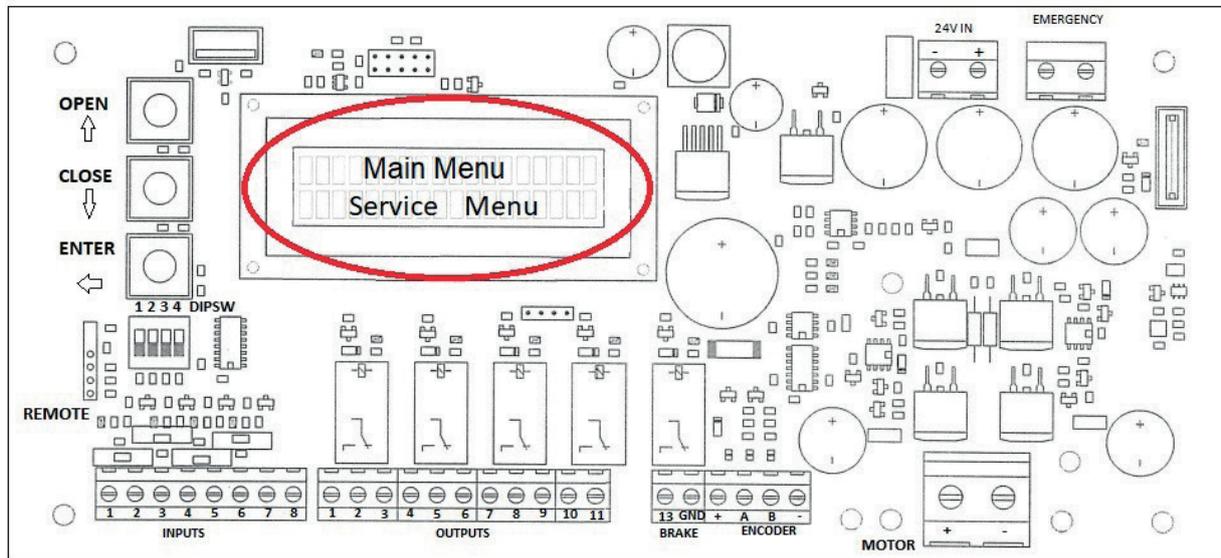
1) Setting the position opened: (Dipswitch 4) (Always start with this position)

- Main Menu – Settings Menu
- Settings Menu – Position opened
- Open the cover to the desired position by: (press and hold)
 - The OPEN button next to the display OR
 - The green button of the key switch (input 1) OR
 - The upper button from the transmitter
- While opening the cover, the encoder pulses should decrease.
- When the cover is in the desired position, press and hold enter for 3sec.
- The display shows 'SAVE' and steps back in the Settings Menu.

2) Setting the position closed: (Dipswitch 4)

- Main Menu – Settings Menu
- Settings Menu – Position closed
- Close the cover to the desired position by: (press and hold)
 - The CLOSE button next to the display OR
 - The red button of the key switch (input 3) OR
 - The lower button of the transmitter
- The encoder pulses should start counting up from ' 0 ' (open position)!
- When the cover is in the desired position, press and hold enter for 3sec
- The display shows 'SAVE' and steps back in the Settings Menu, now Exit

e) Service Menu (Only to be used by a certified installer!)



To get access to the 'Service Menu':

- Dipswitch 4 up
- Main Menu – Service Menu
- Access code:
 - 2 x OPEN
 - 1 x CLOSE
 - 2 x ENTER
- Service menu – Service settings

The main and most important settings are:

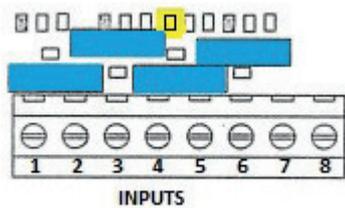
- Max Current: Adjust the maximum allowed power that the motor can use
 - Default is set to: 7 Amperes
- Speed: Adjust the speed at which the motor rotates
 - Default is set to: 1500-1700 rpm (Recommendation: not higher than 2000)
- Encoder: Adjust whether the encoder uses 1 or 2 signals
 - Default is set to: Two wires (if there's a defect you can test a Single wire)
 - When setting is 'Single Wire' , you can only use channel A as a connection.

General:

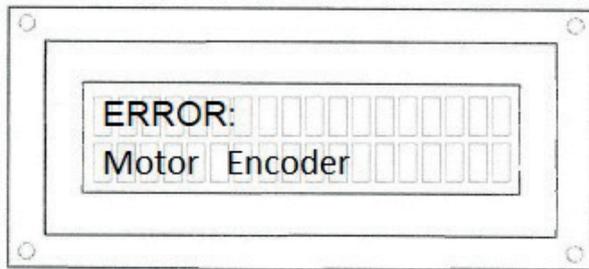
Every (one time) error can be confirmed by pressing the ENTER button. Or you can easily restart the control box by switching on/off the power button on the bottom right. The display will show 'PoolCoverSystems' when in rest position.

→ Doesn't the control box react by pressing OPEN/CLOSE:

- Check if the key switch is turned on (position 1)
- If so, there should be lighting a yellow LED above the inputs.



If this LED is not lit, the motor will never receive any signals or currents. Check if the emergency input 5-6 is a closed contact (key switch).



While opening/closing the cover, the control box doesn't receive pulses from the encoder on channel A or B.

When the encoder setting is default (Two Wires) the control box doesn't receive pulses on channel A or B. When the setting is 'Single Wire' the control box doesn't receive pulses on channel A **OR** there's still a wire connected on channel B. (disconnect channel B)

INSPECTION / CONTROLE:

- Check the cable, connections and/or the junction box (with resin) for:
 - Damage
 - Moisture and dirt inside the cable and/or junction box
 - Proper connection inside the control box and no loose wires
 - Check whether the resin has hardened correctly inside the junction box
- DO NOT USE ANY TYPE OF REUSABLE GEL!
- Check whether there's 12VDC on the (+ and -) terminals of the encoder
- Check that there's no short circuit on the encoder
- Change the settings of the encoder in the 'Service Menu – Encoder' to:
 - Single wire

Disconnect terminal B of the encoder and try if this works. If not, disconnect terminal A of the encoder and reconnect the original wire from B (green) on the channel A terminal.

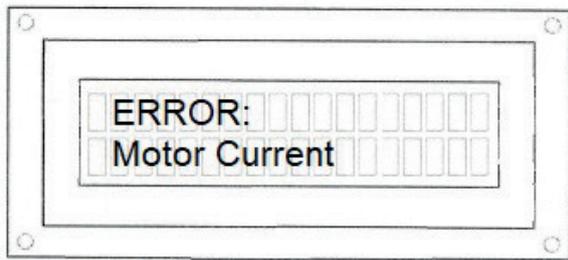
If this works, you can re-configure the end positions.

If there's a connection in a junction box, cut of the wire that comes directly of the motor, and connect this cable directly to the control box. If the motor works, you're sure that the junction box or the cable to the control box is defect!

→ If the error keeps appearing, the motor will have to be replaced!

TIP:

Put Dipswitch 3 up, and try operating the motor manually. Hold and press open/close for getting the motor to work.



The current that is used by the motor peaks above its permitted value. (7A)

This is due to a blockage or a defect of the motor.

INSPECTION / CONTROLE:

- Check the cable, connections and/or the junction box (with resin) for:
 - Damage
 - Moisture and dirt inside the cable and/or junction box
 - Proper connection inside the control box and no loose wires
 - Check whether the resin has hardened correctly inside the junction box
- DO NOT USE ANY TYPE OF REUSABLE GEL!
- Check that there's no short circuit on the '+' and '-' of the brake, encoder or motor connections.
- Fully disconnect the encoder connections (+, A, B, -) and try to operate the motor manually by putting dipswitch 3 up and press+hold open or close.
- If the motor starts turning without an error, there's a problem with the encoder.

Check all the connections!

If there's a connection in a junction box, cut of the wire that comes directly of the motor, and connect this cable directly to the control box. If the motor works, you're sure that the junction box or the cable tot he control box is defect!

- If the error keeps appearing, the motor will have to be replaced!



☄ Pool Cover Systems



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