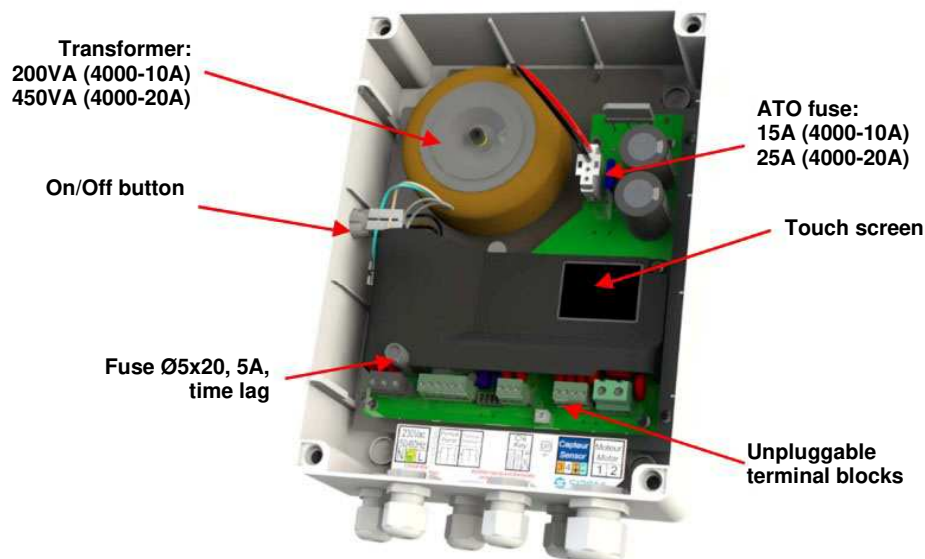
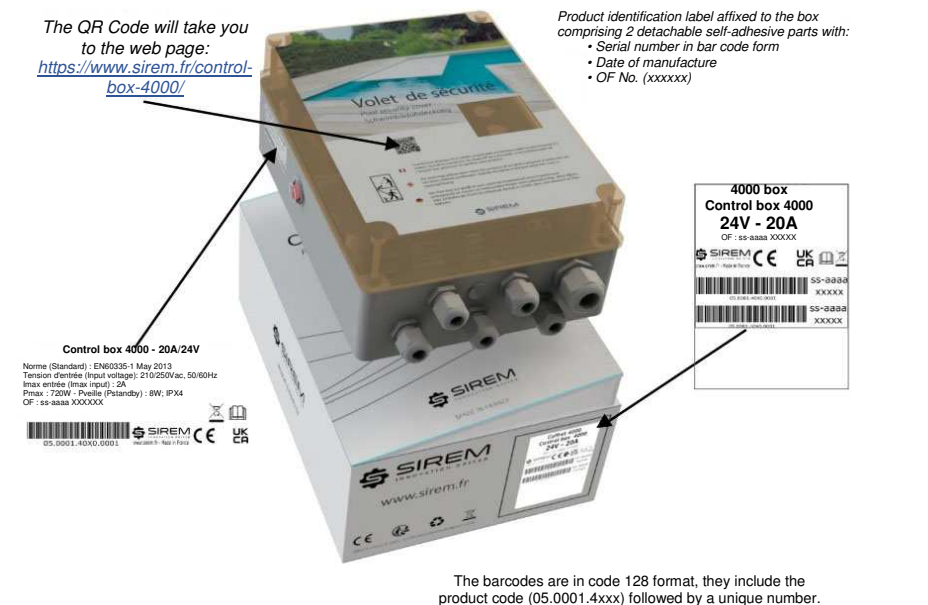


Control Box – Series 4000

ASSISTANCE WITH RESOLVING TECHNICAL PROBLEMS

Your control box has a technical problem.. This document will help you to identify the problem and try to resolve it. If the problem continues, we invite you to contact your pool cover manufacturer.



1 Error messages

- No motor voltage
- Sensor error
- Motor not connected
- Over-current
- Electronic fault
- Mains supply fault

2 Operating defects

- The cover only moves in one direction
- The box does not turn on or Black screen
- The pool cannot be opened during initialisation

3 Introduction

Important	
	The information contained in this document is designed to help diagnose the problem. It does not guarantee that the genuine causes for the defect will be identified.
	You may not use the elements contained in this document against your retailer in the event that the warranty is refused.
	This document is intended for persons with electrical expertise and who are familiar with the product instructions NT-5218-3 SIREM
	If the detailed information does not resolve your problem, Please contact your retailer.

Equipment recommended for the operation:

Multimeter
 Battery to test the motor
 Box input fuse - Ø5x20, T5ALH250V (timelag fuse 5A)
 Box output fuse - ATO 25A
 Screwdriver

Pre-requirements for the work:

➔ **The wiring between the box, the motor and the key control must be compliant.**

That is to say that the wires between these different components must not be inverted .

E.g.: the red wire powering the motor at the control box must match the red wire of the motor. The polarities must not be inverted, which can occur when wiring the junction box or when adding a cable.

The same care must be taken with the OUV (open) and FERM (close) wires between the box and the key control.

➔ Otherwise there is a risk of the motor operating in the reverse direction!

4 No motor voltage

4.1 Screen

NO MOTOR VOLTAGE

Flash the QR Code
and read the
online assistance

Reboot the box.

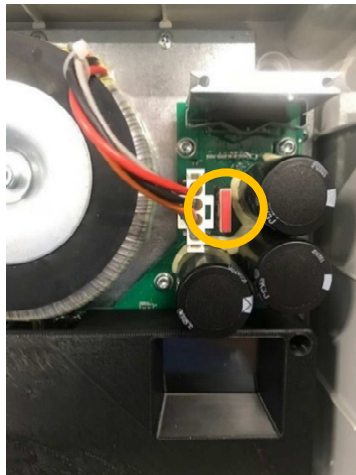
4.2 Cause

The box isn't sending voltage to the motor.

4.3 Search for the underlying causes

➔ Has the ATO fuse blown?

1. Remove the fuse



2. Test the continuity



➔ If the fuse is ok – the transformer is probably out of service.

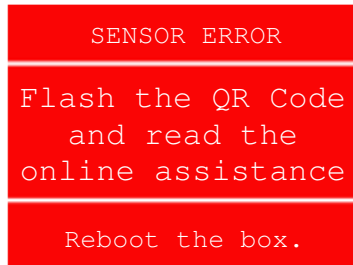
In this case, contact the person who sold you the equipment.

End of the Diagnosis

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www.sirem.fr

5 Sensor error

5.1 Screen



5.2 Cause

Sensor signals are not reaching the unit.

1 – Is the defect still occurring?

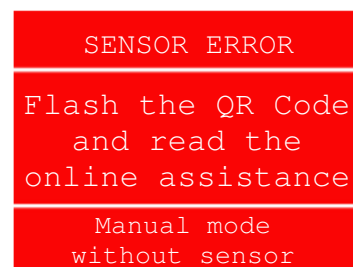
1. Switch off the box then switch it back on
2. Switch to manual mode
3. Move the cover

If the defect does not reappear: Then the sensor error was only temporary.
Return to normal Auto/Manual mode.

Open the junction box to check:

1. That there are no signs whatsoever of moisture.
2. That there is no corrosion of the copper wires / No copper wires covered with verdigris.
3. No wire has been cut - pull each of the connections to check this.
4. All the wires are correctly screwed to the terminal block (under the copper) and/or tightly clamped to the Wago connectors.

If a new message appears again, then continue to diagnose



Also check:

1. The configuration: MENU > BASIC SETTINGS > TYPE OF SENSOR (MIS 3 wires or COVEO 4 wires).
2. That the motor cable is not damaged - Check that the first blade of the cover is not "scraping" the cable (not taut and forms a gooseneck).
3. That the OF of the box is higher than or equal to 06-2023 OR at minimum with a version of 3.2/2.2.
The OF is on a label stuck to the side of the box.



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4. Is the cable cross section correct? This can cause this fault (if it is too small) due to a drop in voltage.

Coveo 120 Nm: (7A max)

Motor control box distance	2m<L≤10 m	10m<L≤ 20 m	20m<L≤ 30 m	30m<L≤ 50 m
Recommended cross-section	2.5 mm ²	2.5 mm ²	4 mm ²	6 mm ²

MIS (old generation), Coveo 200Nm and 300 Nm: (10A max)

Motor control box distance	2m<L≤10 m	10m<L≤ 20 m	20m<L≤ 30 m	30m<L≤ 50 m
Recommended cross-section	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²

Coveo 300+/600Nm: (20A max)

Motor control box distance	2m<L≤10 m	10m<L≤ 20 m	20m<L≤ 30 m	30m<L≤ 50 m
Recommended cross-section	4 mm ²	6 mm ²	10 mm ²	16 mm ²

5. Is the motor chosen sturdy enough for the dimensions of the pool and the depth of immersion of the shaft? Refer to the NT of the motors.

POOL LENGTH		POOL WIDTH								
		3m*	4m*	4,5m*	5m*	5,5m*	6m**	6,5m**	7m**	7,5m**
SHAFT IMMERSION DEPTH	0,5m	14m	14m	11m	9m	7m	20m	17m	15m	12m
	1m	20m	20m	20m	15m	12m	14m	12m	10m	8,5m
	1,5m	20m	18m	13m	10m	8m	8,5m	/	/	/
	2m	14m	12m	8m	7m	5,5m	/	/	/	/

E.g. With a COVEO 300Nm immersed at a depth of 1m in a pool that is 6m wide, the maximum cover length is 14m

6. Is there a mechanical problem with the installation? Is there a grating or rubbing noise when the cover is moved?

2 - Is the box sending voltage to the motorisation sensor board by activating a direction in manual mode?

Attach the voltmeter to the terminal blocks of the box between sensor Blue and Brown ($\pm 27\text{Vdc}$).

- If NOK (0Vdc) have the box changed.
- If OK perform the same measurement at the junction box:
 - If NOK then the cable path (between the junction box and the box) is defective.
 - If OK, go to the next step.

3 - Is the sensor board emitting a compliant electric signal?

Is the motorisation sending electrical impulses to the box when the cover moves?

Voltmeter at the junction box between Blue and White, then Blue and Orange (from $\pm 5\text{Vdc}$ to $\pm 12\text{Vdc}$).

- If NOK possible motor failure (contact your retailer to confirm the diagnosis).
- If OK, perform the same measurements at the box:
 - If NOK at the box, then the cable path (between the junction box and the control box) is defective.
 - No OK possible at this stage.
- If there is a SENSOR ERROR at the end of the travel then check the date of manufacture of the box
 - If the box dates back to before 06-2023 and does not have the version 3.2/2.2 or later then it needs to be updated.

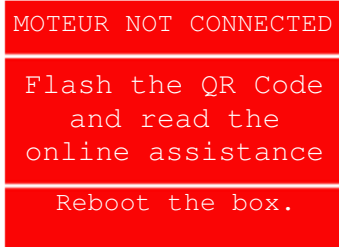
To continue using the pool until the repairs are carried out:

While waiting for the replacement of the defective part of the equipment, the owner can continue to use the cover in "manual" mode despite the red screen, but IMPORTANT, without end of travel stop.

End of the Diagnosis

6 Motor not connected

6.1 Screen



The cover no longer moves when the ignition key is activated.

6.2 Cause

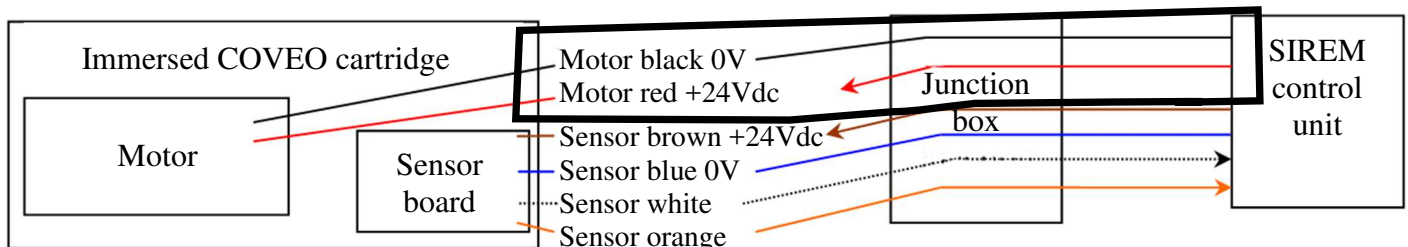
The box is sending voltage to the motor but there is no current passing.

6.3 Diagnosis

You will need to check:

1. That there is no disconnected wire along the cable path from the box to the motor.
2. That the motor is working

Reminder of the basic diagram of electrical exchanges /



Note: Your facility may not be equipped with an intermediate junction box. In this case, there is a direct connection from the box to the COVEO cartridge.

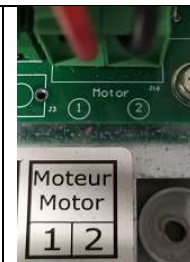
What are the first checks to perform?

At the junction box:

Are the black and red wires correctly screwed to the terminal block (on the copper) and/or tightly clamped to the Wago connectors?

At the control box:

Are the red and black motor wires correctly screwed (on the copper) to the 1--2 motor terminal block of the control box?



Check that the first blade of the cover is not “scraping” the cable (not taut and forms a gooseneck)
--

Start of the diagnosis: Look for the faulty element (Motor? Electrical connection?)

With a multimeter in ohmmeter position and the continuity beep

At the junction box, test the black and red motor => the ohmmetre must beep (there must be continuity).

If the result is not the one given, then contact your retailer for a more in-depth motor diagnosis.

At the control box, test the black and red of the motor terminal block => the ohmmeter must beep (there must be continuity)

If the result is negative, then the cable path (between the junction box and the control box) is defective.

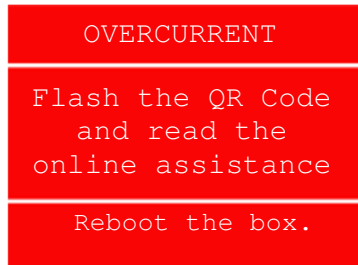
Test the motor with a battery.

/!\ Be careful with new batteries (for example: Dewalt) that can switch to safety mode!!!

End of the Diagnosis

7 Over-current

7.1 Screen



7.2 Description

The cover stops each time the key is turned after moving just a few centimetres.

OR

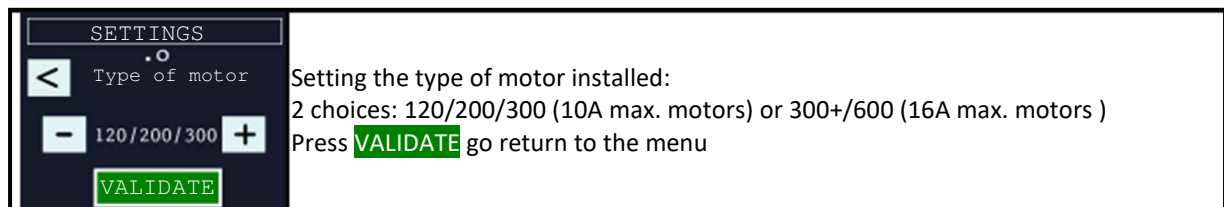
The cover has stopped, but it has not reached the end.

7.3 Cause

This exceeds the current threshold set when the box was calibrated.

7.4 Diagnosis

- ➔ Check the correct settings for the motor in MENU / SETTINGS / Type of motor.



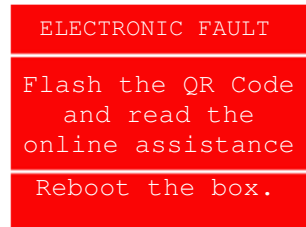
- ➔ Check that there is nothing blocking the movement of the cover.
- ➔ Check that the motor torque (Nm) matches the size of the pool and the depth of the axis.
(Contact your retailer)
- ➔ Recalibrate (reboot + 5 deploy/retract movements) to see if the problem persists.
- ➔ Check the date of manufacture of the box and the software version.

If the box is prior to OF: 11-2022 and its software version 2.3/1.8 then contact your retailer to have the software updated.

End of the Diagnosis

8 Electronic fault

8.1 Screen



8.2 Description

Internal fault on the circuit board, communication error.

8.3 Cause

The 2 micro-controllers aren't communicating.

8.4 Diagnosis

Return to SIREM Service Dept. for analysis, reprogramming or changing of the board.

End of the Diagnosis

9 Mains supply fault

9.1 Screen

MAINS SUPPLY FAULT

Flash the QR Code
and read the
online assistance

Reboot the box.

9.2 Description

The covr cannot be commanded when this fault occurs.

9.3 Cause

Disturbance present in the power supply grid (230Vac):
The unit cannot operate with such disturbances.

9.4 Diagnosis

Check the mains power supply to the box.

End of the Diagnosis

10 The cover only moves in one direction

10.1 Description:

You can close it, but you cannot open it

Or

You can open it, but you cannot close it

No error message displayed for this defect

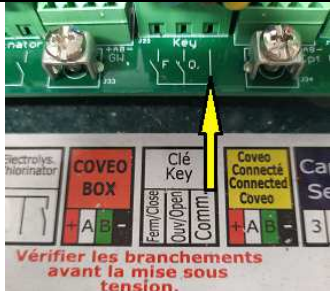
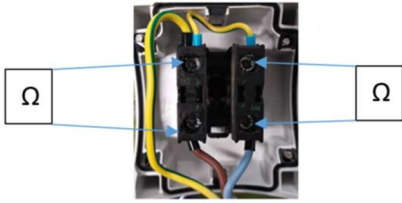
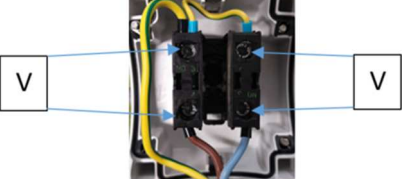
In manual mode: The motor does not respond when one of the two directions is triggered using the key command.

In auto mode: Impossible to reset

10.2 Cause

Incorrect wiring

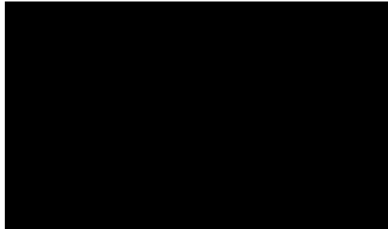
10.3 Procedure to follow Diagnosis

Check that the key command common is connected to the common of the key terminal of the box.	
Check the connection between the 2 contactors of the key command. The common should link the 2 contactors (green/yellow wire in the photo below).	
Check the continuity of the 2 contactors of the key command:	
 Either with a multimeter in Ohmmeter position and the continuity beep. The keys on each side of a contactor, the ohmmeter must ring when you launch the direction. Perform the same action with the other contactor	
 Or with a multimeter in Voltmeter position The keys on each side of a contactor, 26Vdc should appear if the key command is not in one direction. This value falls to 0Vdc when you activate the ignition. Perform the same action with the other contactor	

End of the Diagnosis

11 The box does not switch on / Black screen.

11.1 Screen



11.2 Observation:

The cover can no longer be moved.
The control box screen remains blank.

11.3 Procedure to follow

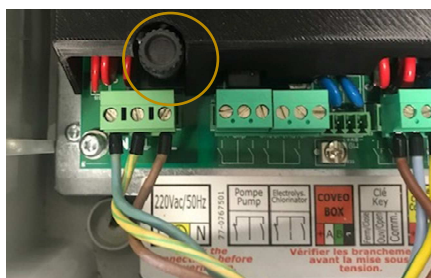
The diagnosis is based on checking that there is power running from the circuit breaker of the unit to the board

Case 1 / If I have a black screen + there is no light at the button -



Check that the circuit breaker ahead of the box is fully operational.

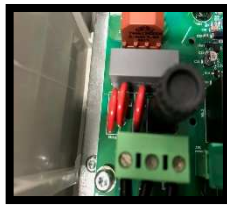
Check that the board fuse is not out of service.



Test the continuity



Visually check the condition of the board G-move



If these checks are not sufficient to return the box to working order or identify the problem, please contact your retailer.

Case 2 / If I have a black screen + there is no light at the - button



Check the transformer connections

Board connector -> Transformer



Transformer connectors -> Board



If these checks are not sufficient to return the box to working order, Please contact your retailer.

End of the Diagnosis

12 The pool cannot be opened during initialisation.

As a reminder, here are the pre-requisites for the wiring:

Pre-requisites for the work:

→ **The wiring between the box, the motor and the key control must be compliant.**

That is to say that the wires between these different components must not be inverted .

E.g.: the red wire powering the motor at the control box must match the red wire of the motor. The polarities must not be inverted, which can occur when wiring the junction box or when adding a cable.

The same care must be taken with the OUV (open) and FERM (close) wires between the box and the key control.

→ Otherwise there is a risk of the motor operating in the reverse direction!

Firstly, check the direction of rotation sent to the box:

In manual mode.

Turn the key switch to Open.

Check that the display shows “Open”.

If “Close” is displayed, then the OUV (open) and FERM (close) wires of the key switch need to be inverted.

Invert them on the terminal block of the 4020 box (it is easier).

Repeat the test, remaining in manual mode.

And verify that when the Open command is requested, the display shows “Open”.

Next, check the motor connections:

In manual mode.

Turn the key switch to Open.

Check that the cover winds correctly and that the pool cover opens.

If not, then invert the BLACK and RED wires powering the motor on the box terminal block.

Lastly, remain in manual mode and close the pool cover and run an initialisation phase.

End of the Diagnosis