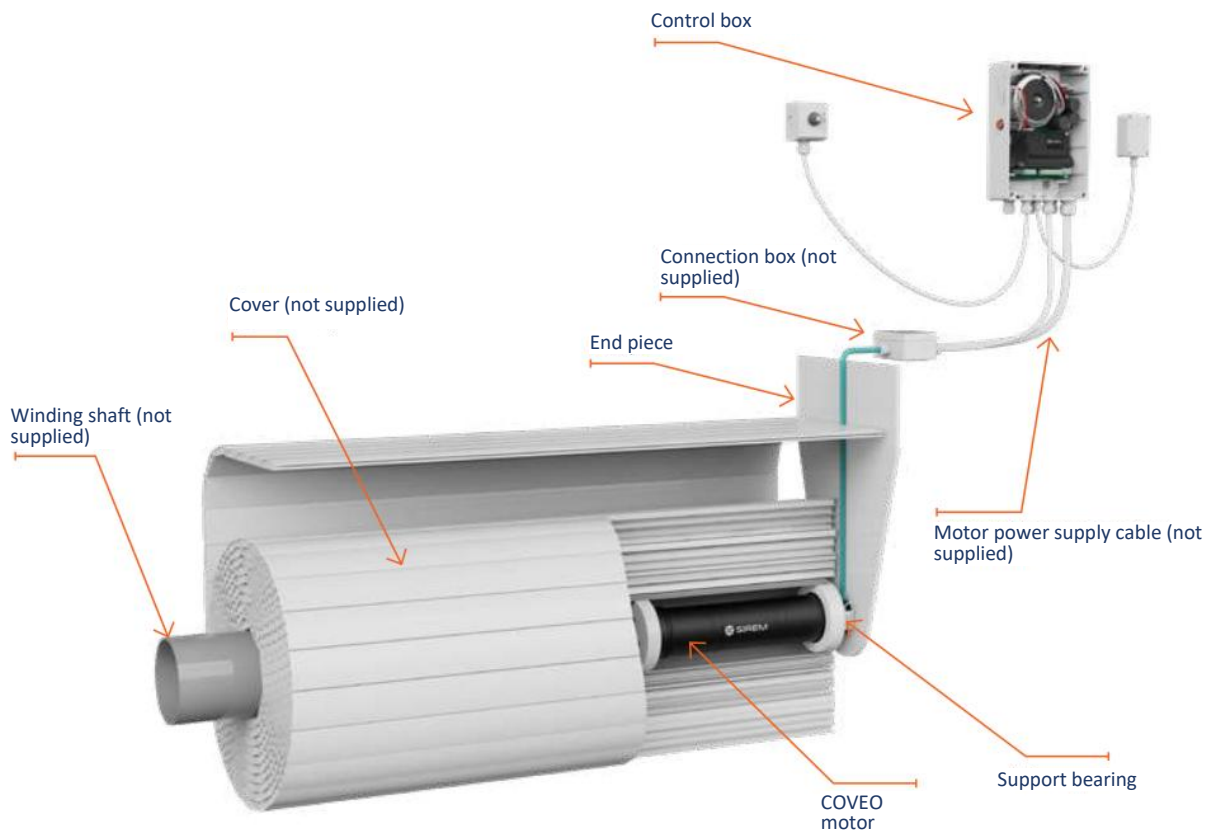





Diagnostics manual

-

40XX Control box Immersed COVEO



This document will help you to identify the origin of the problem and try to resolve it.
If the problem persists after troubleshooting, we invite you to contact your motorised cover manufacturer.

	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

Contents

2 Diagnostics on the main features with an error message: Erreur ! Signet non défini.

2.4	No motor voltage	Erreur ! Signet non défini.
2.5	Sensor error	Erreur ! Signet non défini.
2.4	Overcurrent.....	Erreur ! Signet non défini.

3 Diagnostics on the main features WITHOUT an error message: 10

3.1	The cover only moves in one direction:	10
3.2	The pool cannot be opened during initialisation:.....	12
3.3	Impossible to enter manual mode or reset:	12

	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

2.3 Motor not connected



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

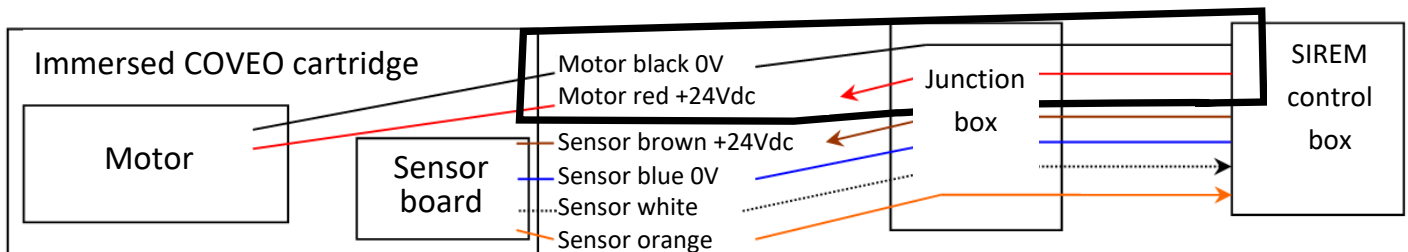
The detection of this fault indicates a motor disconnection.

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

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.

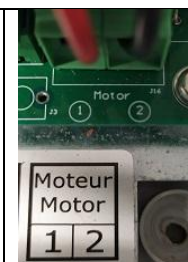
What are the first checks to perform?


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?



	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

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

Start of the diagnostics: 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 wires of the motor => the ohmmeter must beep (there must be continuity).

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

At the control box, test the black and red wires 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.

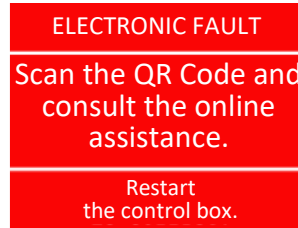
Test the motor with a battery.

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

End of the diagnostics

	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

2.4 Electronic fault:



In summary: Internal fault on the circuit board, communication error.

*When the board is powered up, the electronics are checked.
The software checks that the motor current measurement chain is compliant.
The voltage indicated by the sensor must be $V_{DC}/2$ (approx. 1.65V).
The software checks that the voltage is between $V_{DC}/2 \pm 50mV$.
If the voltage is not compliant then the software reports the fault.*

This fault can only be generated at start-up, i.e. when the power supply appears.

(The 2 micro-controllers are no longer communicating.)

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

End of the diagnostics

	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

2.5 Communication fault:



Corrupted factory programme
Return to SIREM After Sales /service for reprogramming.

End of the diagnostics


2.6 Please reset the cover:



When you arrive at the installation site and the message is a request to reset the cover.

Identify the origin of the error:

- Perform the requested end stop reset.
- Next, open and close the cover.
 - **If a sensor error appears ->** Follow the steps in the Err2 sensor error diagnostics.
 - **If opening and closing presents no problems:**
 - Switch the control box On and Off without moving the cover:

	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

- If the **'Please reset the cover'** message appears immediately and this operation is repeated. **Replace the control box.**
- If there is no message, you have to follow the sensor error diagnostics from point 4. With a control box version higher than 4.0/4.0 you can also check the logbook to confirm that there really was a sensor error (Err2). **Sensor Error Diagnostics**

If the message is present again. Replace the hardware subject box. A component is damaged.

End of the diagnostics

	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

2.7 No movement and the control box does not switch on / Black screen:



The cover can no longer be moved. (It is not a matter of it being in standby mode)
The control box screen remains blank.

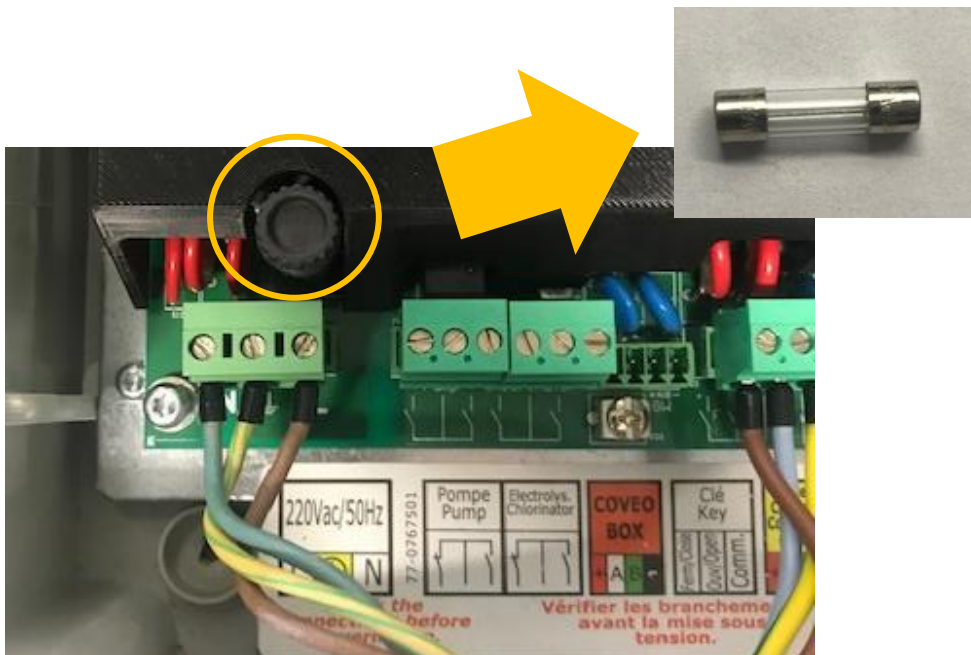
The diagnostics are based on checking that there is power running from the circuit breaker of the installation to the board.

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



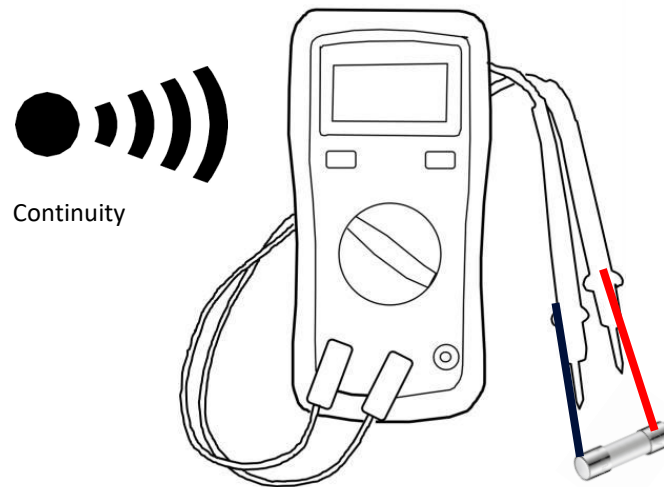
Check that the circuit breaker ahead of the box is fully operational.

Check that the board fuse is not out of service.

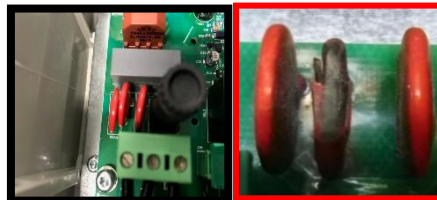


	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

To do this, test its continuity



Visually check the condition of the board's varistors. They should be intact. A varistor with burn marks is a sign of an overvoltage.



If these checks are not sufficient to identify the causes and make a correction, please contact your retailer.

	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

Case 2 / If I have a black screen + there is light at this button:



Check the transformer connections

Board connector -> Transformer



The wires are well secured in the connector.

The connector is correctly connected.

Transformer connectors -> Board



The wires are well secured in the connector.

The connector is correctly connected.

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

End of the diagnostics

	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

3 Diagnostics on the main features WITHOUT an error message:

3.1 The cover only moves in one direction:

You can open it, but you cannot close it

or

You can close it, but you cannot open it

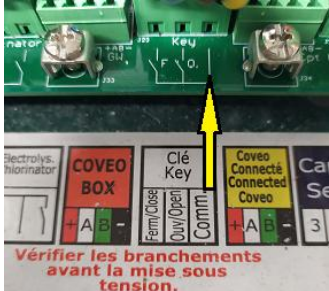

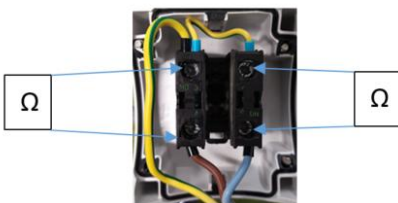
No error message displayed for this fault.

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

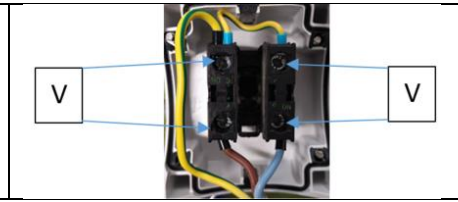
Cause: Incorrect wiring

Diagnostics protocol:

<p>Check that the key command common wire is connected to the common wire of the key terminal of the control box.</p>	 <table border="1" data-bbox="965 1178 1393 1290"> <tr> <td>Vérifier les branchements avant la mise sous tension.</td> <td>Check the connections before powering on.</td> </tr> </table>	Vérifier les branchements avant la mise sous tension.	Check the connections before powering on.
Vérifier les branchements avant la mise sous tension.	Check the connections before powering on.		
<p>Check the connection between the 2 contactors of the key command. The common wire should link the 2 contactors (green/yellow wire in the photo below).</p>			
<p>Check the continuity of the 2 contactors of the key command:</p>			
<p>➔ 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</p>			

	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

 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 diagnostics

	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

3.2 The pool cannot be opened during initialisation:

Reminder of the prerequisites for wiring compliance:

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 control 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 diagnostics

2.3 Impossible to enter manual mode or reset:

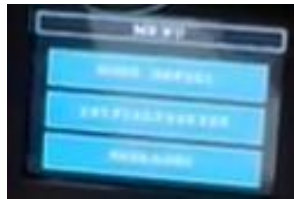
When activating MANUAL mode



Instead of this screen being displayed



It returns to the MENU screen



When activating RESET mode



Instead of this screen being displayed



It returns to the MENU screen



Start of diagnostics

Is the key control correctly positioned at zero (no direction activated)?

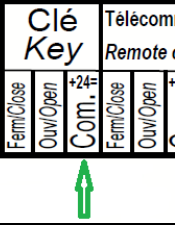


No => Problem resolved

Yes => Next question

Is the key control neutral wire properly connected to the Com. position on the key terminal block?

	Title	COVEO Diagnostics Manual - 4020	Product	COVEO
	Cat.		Instruction	Rev.
			Property of SIREM	

	<p>No => Problem resolved</p> <p>Yes => Software fault, replace the control box (has never happened to date)</p>
---	--

End of the diagnostics