Diagnostics manual

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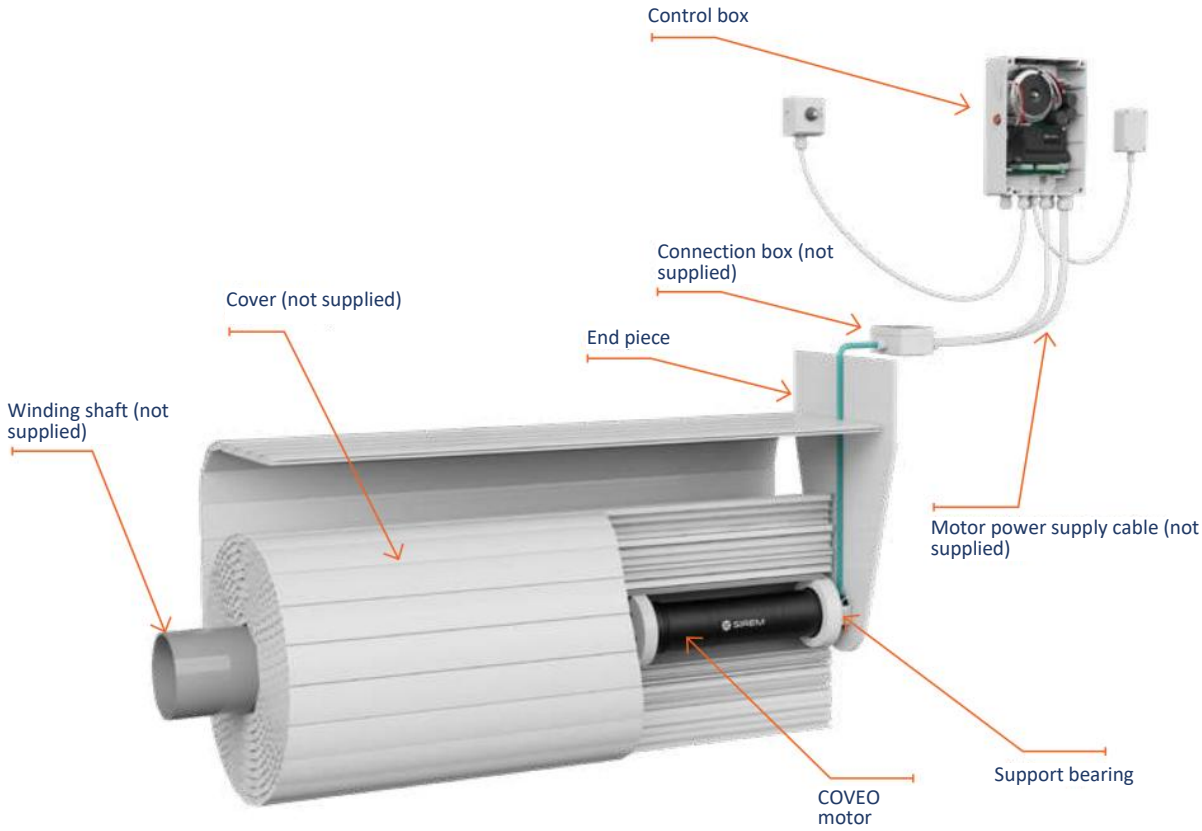
40XX Control box
Immersed COVEO



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.

1.4 Sensor error

SENSOR ERROR

Scan the QR Code and consult the online assistance.

Restart the control box.

We will check whether the sensor fault is permanent or not.

1. Switch off the control box then switch it back on
2. Perform a reset.
3. Move the cover in automatic mode

A new sensor error will appear.

Switch to manual mode

SENSOR ERROR

Scan the QR Code and consult the online assistance.

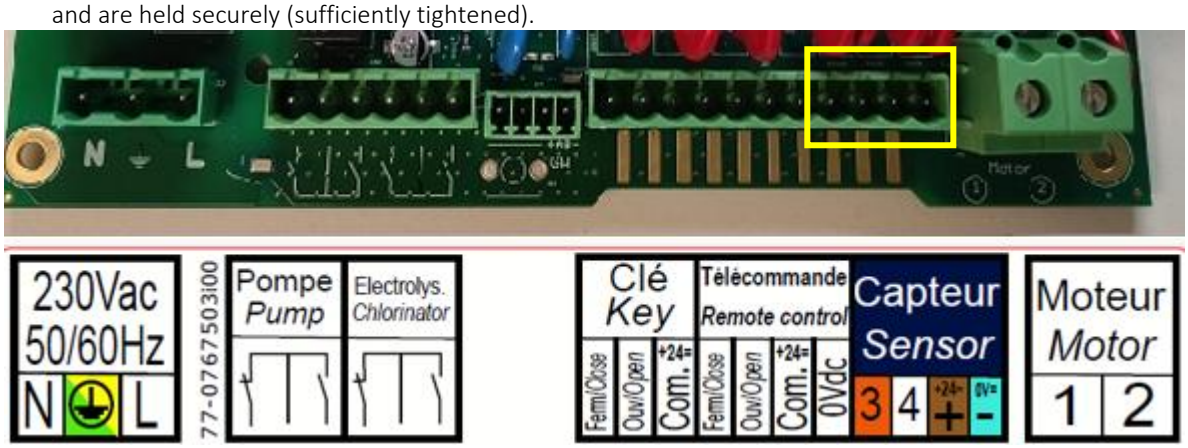
Manual mode without sensor

Black button => for the blue wire
Red button => for +brown, white and orange

In the control box:

1. **Sensor terminal block?** (At start-up)

- Check that it is in the correct location. Not in the wrong socket.
- On this terminal block, also check that the contacts are indeed made of copper (sufficiently stripped) and are held securely (sufficiently tightened).



2. **Are the settings for the motor correct in the control box?**

- MENU > BASIC SETTINGS > TYPE OF SENSOR (MIS 3 wires or COVEO 4 wires).
- The size of the motor is correct.

3. **Does the control box supply the necessary power to the motorisation sensor board?**

- Switch the control box to manual mode.
- Attach the voltmeter in DC mode to the terminal blocks of the box between the Blue and Brown sensors.
- Start the motor. You should then see a voltage of +27VDC displayed.
    - If NOK (0VDC) disconnect the sensor terminal block
        - If NOK (0VDC) it is a control box fault. -> Replace the control box.
        - If OK (+27VDC) it is a line, junction box or motor fault.

4. **Is your installation using a cable cross-section that is sufficient for the actual distance separating the motor from the control box?**

An unsuitable cross-section leads to drops in voltage. This will have an effect on the motor's speed of movement, which can cause jerks and therefore sensor signal disturbances.
This can also have an effect on the sensor signal to the point of preventing its interpretation

<u>Coveo 120 Nm: (7A max)</u>

Motor-control box distance	2m<L<=10m	10m<L<= 20 m	20m<L<= 30 m	30m<L<= 50 m
Recommended cross-section	2.5 mm²	2.5 mm²	4 mm²	6 mm²

<u>MIS (old generation), Coveo 200Nm and 300 Nm: (10A max)</u>

Motor-control box distance	2m<L<=10m	10m<L<= 20 m	20m<L<= 30 m	30m<L<= 50 m
Recommended cross-section	2.5 mm²	4 mm²	6 mm²	10 mm²

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

Motor-control box distance	2m<L<=10m	10m<L<= 20 m	20m<L<= 30 m	30m<L<= 50 m
Recommended cross-section	4 mm²	6 mm²	10 mm²	16 mm²

Class 5 copper linear resistance at 20°C: around 19 ohm.mm²/km

Sensor cable cross-section:

Cable used to connect COVEO motor sensors (brown/blue/white/orange wires) to the unit.
It is preferable to use a shielded cable in order to protect the motor from atmospheric surges. This protection will only be effective if the shielding is connected to 0VDC.
The cross-section of this cable's wires will be at least 0.75mm².
Max. length: 50m.

5. Is a sensor signal correctly returned by the motor to the control box?

- Select manual mode.
- Connect the voltmeter between Blue and White
- When starting cover movement, you should read a voltage of between +5VDC and +12VDC
  - If NOK Repeat the operation on the next junction box.
  - If OK Repeat the operation between the Blue and Orange.
- When starting cover movement, you should read a voltage of between +5VDC and +12VDC.

In the junction box:

6. Is my electrical connection at the junction box compliant?

- Am I receiving the supply voltage from the

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

Voltmeter at the junction box between Blue and White, then Blue and Orange (from +5VDC to +12VDC).

- If NOK possible motor failure (contact your retailer to confirm the diagnosis).
- If OK, perform the same measurements at the control box:
  - If NOK at the control box, then the cable path (between the junction box and the control box) is defective.
  - No OK possible at this stage.

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 diagnostics

7. 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 goose-neck).
8. That the terminals are properly tightened.

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

You must continue with the diagnostics to understand the origin of this sensor error and ensure that you will not have to intervene again.

1. No damage to cables and perfect insulation of electrical connections.

You should check that there is no copper in contact with damp or immersed areas.
Copper corrodes when in contact with humidity. The motor cable is not damaged by the movement of the blades. The junction box is sealed with gel and does not show any signs of humidity.

2. **All copper connections are well made.** All the wires are correctly screwed to the terminal blocks (under the copper) and/or tightly clamped to the Wago connectors. Stripping is sufficient.

3. **Is this error linked to the control box?**

If all the checks are OK, you should return to how the sensor error appeared:

If there is a SENSOR ERROR at the end of the opening travel then check the date of manufacture of the control box

- If the control box dates back to before 06-2023, then it needs to be updated.