Zelia Connect

A connected salt electrolysis with a transparent cell

Notice technique

Réf. : PF10I300 / PF10I301

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Avertissement

Read these instructions carefully before installing, commissioning and using this product.

Avertissement

Under no circumstances should the unit be exposed to regular, heavy splashes of water. In particular, for built-in and/or in-ground technical units, it is recommended not to install the unit below the skimmer, as the skimmer may regularly overflow while people are swimming.

Avertissement

The unit is designed to be installed on a horizontal pipe only, with the control interface on top. It must not be installed on a vertical pipe.

1. Package contents

- 1 Zelia Connect power supply
- 1 Zelia Connect cell
- 1 set of 2 1.5" union fittings for 50mm-diameter pipes
- 1 packet containing
  - 3 screws and 3 mounting anchors for the power supply
  - 2 gaskets for union fittings

2. Technical Specifications

Supply voltage	230V ~ AC 50/60Hz
Power supply	100W
Maximum processed volume*	90m³
Recommended salt content	2 à 4 g/l (3 g/l idéal)
Chlorine production	Jusqu'à 20g/h
Cell Cleaning	Automatic via polarity reversal
Maximum pressure (sensor)	3 bars
Maximum flow rate (cell)	15 m3/h
Minimum flow rate (sensor)	4 m3/h
Protection rating	Power supply : IP-44 Cellule : IP-55
Overall dimensions	Power supply: 220 x 171 x 68mm Cell : 192 x 138 x 134mm Packaging box: 383 x 230 x 164mm
Installation	Alimentation : Wall mount (3 screws/anchors included) Cell : Sur tubes PVC with a diameter of 50 mm (1.5" union fittings included
Weight	Alimentation : 1 kg / Cellule : 1,2 kg Carton complet : 2,9 kg

*Volume specified for a pool at 25°C, with a pH of 7.0, 40 ppm of stabilizer, no plants in the water, and adequate daily filtration

3. Description

3.1. The principles of electrolysis

Salt water electrolysis separates salt (NaCl) into sodium (Na) and Chlorine (Cl). The chlorine is immediately dissolved in the water to produce hypochlorous acid (HClO). This powerful disinfectant destroys bacteria and algae before turning back into salt.

The quantity of chlorine needed to disinfect a swimming pool increases with the water temperature and pH.

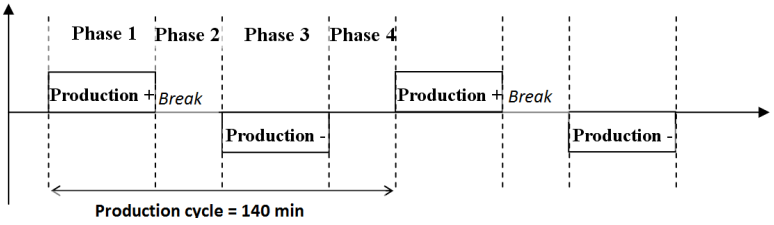
Chlorine production must be adjusted to the environment and water characteristics:

- water conductivity
- water temperature
- the volume of the pool to be treated
- water pH

Tip

For the installation's safety, the Zelia Connect only produces chlorine when the flow meter indicates that water is actually flowing through the cell.

During these filtering periods, the chlorine production time is composed of two-period cycles (Normal and Reverse) that alternate electrode polarity. This polarity reversal makes it possible to prevent the electrodes from scaling.



Thus, the production cycle is split into 4 phases:

1. Phase 1, normal production (positive)
2. Phase 2, standby
3. Phase 3, reverse mode production (negative)

4. Phase 4, standby

At the end of the filtering period, the **Zelia Connect** stops producing and restarts it exactly where it left off when filtering restarts.

The main benefit of this choice of operating mode is to always guarantee (even if there is a power failure) that normal and reverse production times are strictly identical and, as a result, guarantee the best cell descaling possible (giving quality production and long equipment service life).

3.2. Zelia Connectpresentation

CCEI has developed light-emitting electrolysis. The compact, light-emitting ZELIA salt chlorinator features a transparent cell whose color changes depending on the salinity and temperature of the pool water (patented process).

When the user opens the equipment room, they can immediately see the status of their treatment system:

- Production halted; color depends on water temperature

- Production in progress; color varies depending on salinity

Efficient and optimal production—based on water temperature—reduced when the automatic cover is closed—8 production modes to choose from

Compact, durable monoblock cell—equipped with solid titanium plates.

Compact enough to fit into even the smallest spaces.

Self-cleaning of the cell via polarity reversal.

Enhanced security with built-in flow detection.

Installs in just a few minutes; easy to connect via the connector.

Specially designed for underground utility rooms.

In AUTO mode, the production time is automatically adjusted based on the temperature.

4. Installation

4.1. Hydraulic Installation

Attention

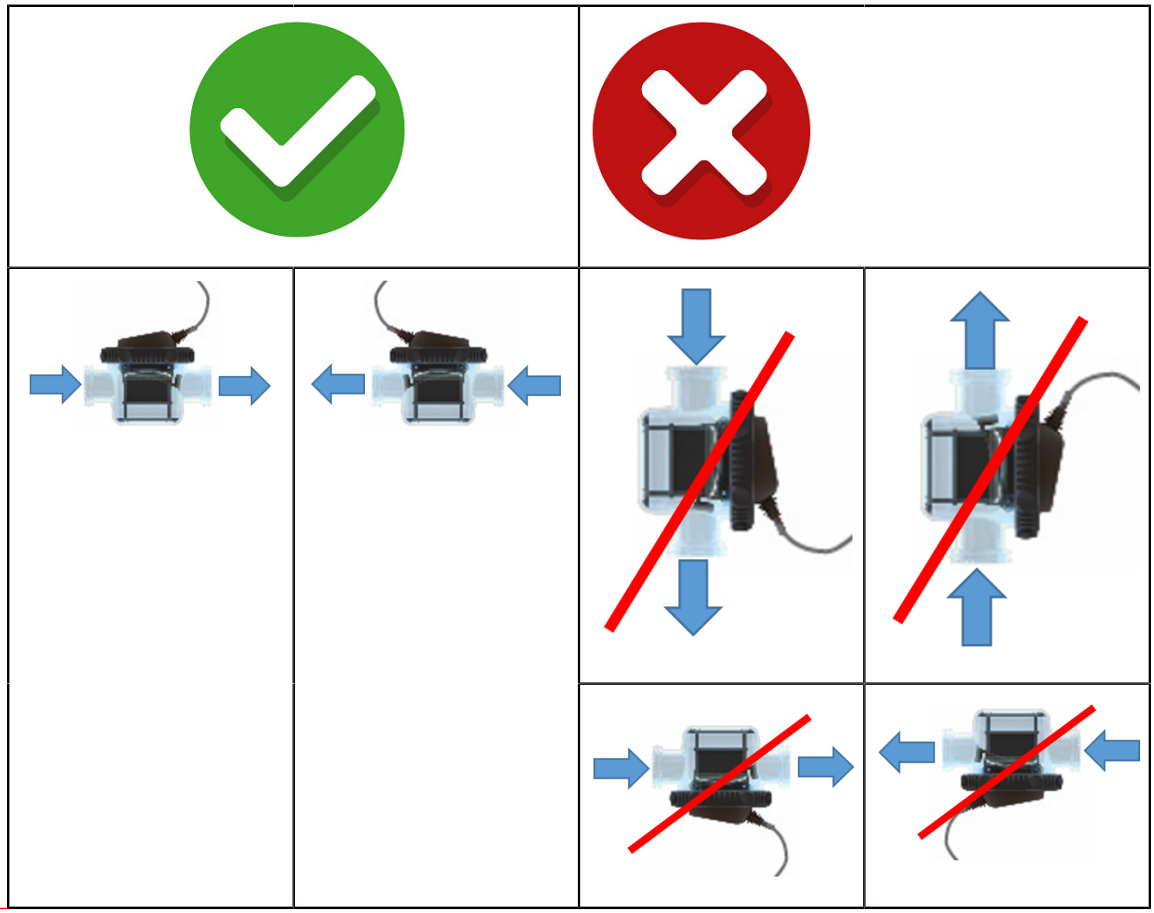
Under no circumstances should the Zelia Connect unit be exposed to regular, heavy splashes of water. In particular, for built-in and/or in-ground technical units, it is recommended not to install it below the skimmer, as the skimmer may regularly overflow while people are swimming.

The Zelia Connect unit is installed on a 50-mm diameter pipe using the union fittings provided. It is installed downstream of the filtration system (after the filter) and must be positioned horizontally, with the control interface facing upward, to ensure proper operation of the flow sensor.

Opt for a bypass installation (required for flow rates exceeding 15 m³/h) so that you can control the flow rate within the filter chamber and remove it without interrupting the filtration process.

Avertissement

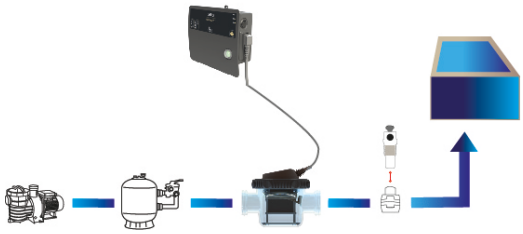
The Zelia Connect cell is designed to be installed on a horizontal pipe only, with the control interface on top. It must not be installed on a vertical pipe.



Important

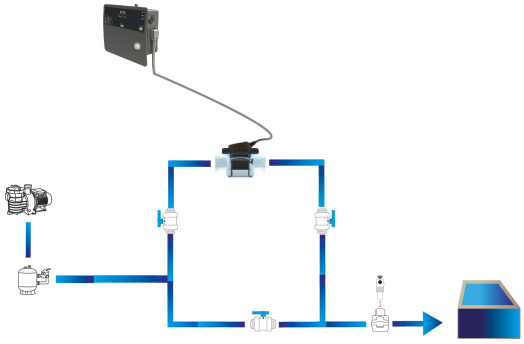
Pay close attention to the direction of water flow to ensure that the device accurately detects the flow rate!

4.1.1. Direct Installation



4.1.2. Bypass installation

Opt for a bypass installation (required for flow rates exceeding 15 m³/h) so that you can control the flow rate within the filter chamber and remove it without interrupting the filtration process.



4.2. Electrical connection

Avertissement

Installation of this project involves a hazard of electric shocks. We strongly recommend you contract a professional installer. Incorrect installation puts you in danger and may irreversibly damage the product and the equipment connected to it.

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For safety reasons and in accordance with the NF C15-100 standard, the Zelia Connect power supply box must be installed

- or more than 3.5 meters from the edge of the pool. This distance is calculated by taking into account the need to go around any obstacles. If the Zelia Connect power supply box is installed behind a wall, this is the distance required to go around the wall and reach the box.
- or in an underground room located immediately adjacent to the pool. In this case, the room must be accessible through a hatch that requires a tool to open.

Le coffret résiste aux projections d'eau mais ne doit pas être placé dans un lieu inondable. Le coffret d'alimentation du **Zelia Connect** doit être placé sur support plan et stable et fixé au mur à l'aide des chevilles et vis fournies.

4.2.1. Power supply

The power supply unit comes with a 2-meter cable fitted with a European plug. It must be connected to a 230V single-phase, 50Hz power source and protected by a 30mA ground fault circuit interrupter (GFCI) capable of providing sufficient current (e.g., a C6 circuit breaker). The gauge of the power cable must be appropriate for the total length of the cable.

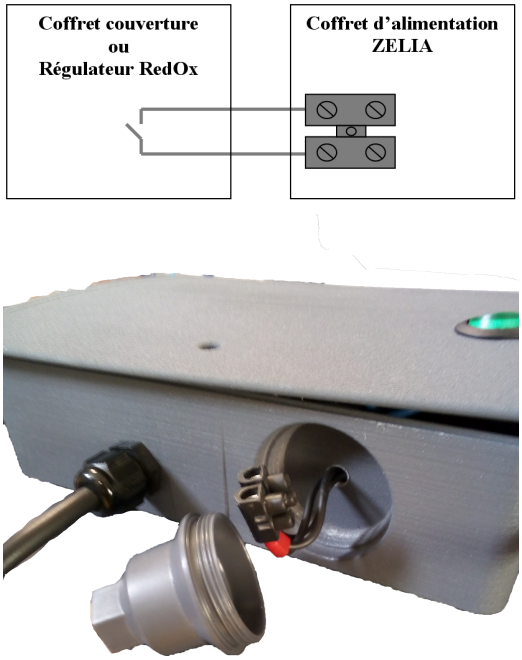
Important

The power supply must be continuous and must under no circumstances be dependent on the pool's filter pump.

4.2.2. Cover contact or RedOx control input

Avertissement

Cover contact or RedOx control input: The cover contact must be a potential-free dry contact. Incorrect connection may seriously damage the device.



4.2.3. Connecting the cell

Plug the sensor into the side connector and secure the cable

5. Start-up

Avertissement

Only through regular testing can the device settings be adjusted.

Following the steps below carefully will ensure a smooth setup.

Attention

The chemicals used in swimming pools are highly corrosive and can have a harmful effect on health and the environment.

These products must be handled with care and stored in suitable facilities.

5.1. Stabilizer

Chlorine is gaseous at room temperature. Its solid form (tablets, granules, etc.) is obtained by combining it with a cyanuric acid molecule. This cyanuric acid acts as a stabilizer, protecting the chlorine from degradation by the sun's ultraviolet (UV) rays. However, this cyanuric acid is not consumed and inevitably accumulates in pools treated with chlorine tablets, eventually inhibiting the chlorine's effectiveness. For swimming pools, the maximum recommended concentration of cyanuric acid is 80 ppm (or mg/l).

Salt electrolysis treatment prevents this overdose of cyanuric acid, but it may be useful to add between 25 and 50 ppm (or mg/l) of stabilizer when the pool is exposed to strong sunlight and the chlorine concentration is insufficient.

In fact, in strong sunlight, 90% of free chlorine is destroyed in two to three hours in the absence of cyanuric acid, whereas this proportion is reduced to 15% with 30 ppm of stabilizer (cyanuric acid).

5.2. Salt level control

The Limpido VP is designed to operate with water conductivity corresponding to a salinity level between 2g/l and 4g/l at 25°C.

To accurately monitor the salt level in your pool, we recommend using a conductivity tester. This easy-to-use device provides a direct reading of the salt level in g/l. Test strips are also available for effectively monitoring the salinity of your water.

When salinity levels are inappropriate, the Limpido VP stops production in the event of excess or insufficient salt. If one of these faults is displayed, first check that the cell is correctly connected to the control box and that it is in good condition (not scaled up), then make the necessary corrections to the pool water.

The conductivity of water is proportional to salinity, but also depends on temperature at a rate of 2.2% per degree Celsius.

Salinity (in g/l)	10°C	15°C	20°C	25°C	30°C	35°C	40°C
Mini	2,8	2,5	2,2	2,0	1,8	1,6	1,4
Ideal	4,2	3,7	3,3	**3,0**	2,7	2,4	2,1
Maxi	5,5	5,0	4,5	4,0	3,6	3,2	2,9

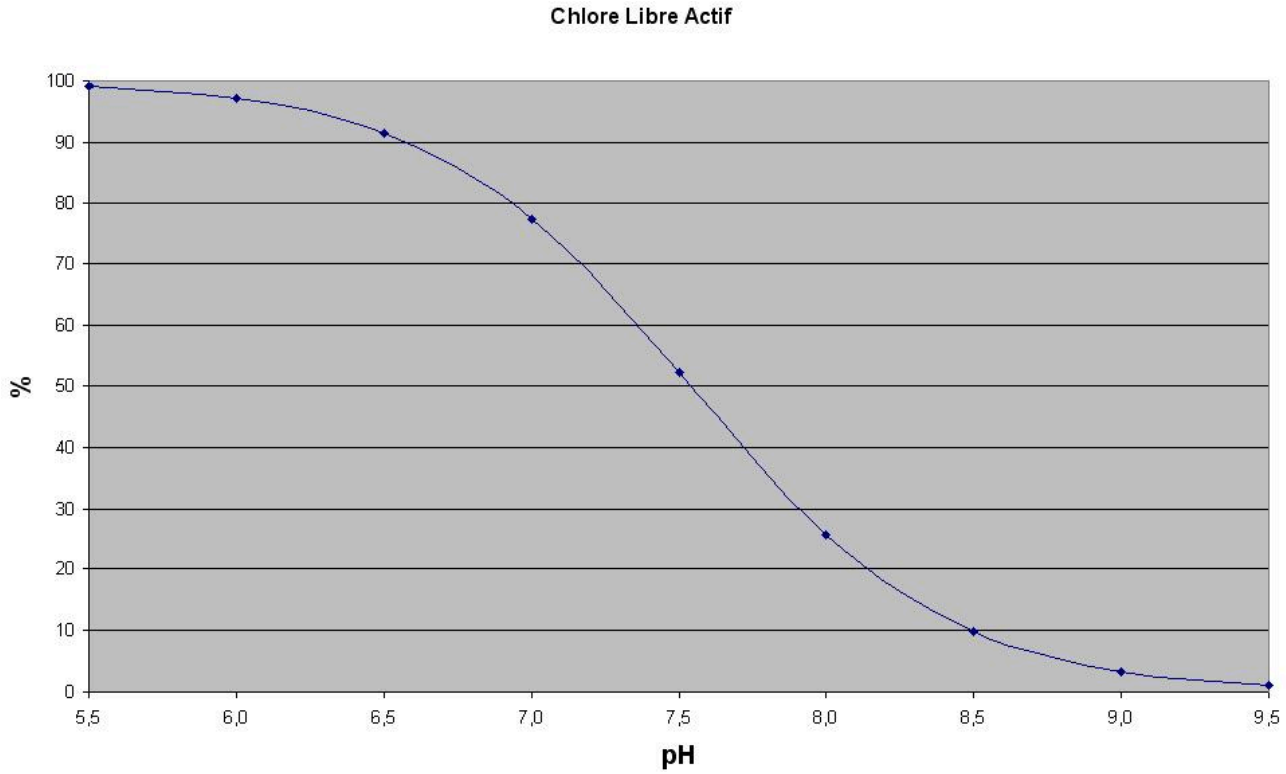
At 35°C, the maximum salt content therefore drops from 4g/l to 3.2g/l.

5.3. TAC/TH Check

At the time of installation, it is recommended that you test the pool water's TAC (Total Alkalinity) and/or TH (Total Hardness) yourself or have a specialist do so. These two measurements are generally similar and are most often expressed in French degrees (°F). If TAC and TH differ, use an average value of these two measurements. It is important to note that very soft water (TAC/TH <10°F) has the advantage of preventing scaling but is, on the other hand, highly corrosive and has a very unstable pH. Conversely, very hard water (>35°F) has a pH that is difficult to correct, is very irritating to the skin, and causes rapid scaling of the system. In extreme cases, it is therefore recommended to correct the TAC and TH using the appropriate chemicals.

5.4. pH control

pH, or hydrogen potential, measures the acidity of water. Its value ranges from 0 to 14. A solution with a pH of 7 is neutral. If it is below 7, the solution is acidic, and if it is above 7, the solution is said to be basic (or alkaline). For the comfort of swimmers, the effectiveness of the treatment, and the reliability of the installation, the pH of the pool water must be maintained at around 7.2. However, as the ideal pH value for a pool depends on all of its components (coating, materials, etc.), refer to the manufacturer's recommendations. When the pH rises from 7.2 to 8.2, the percentage of active chlorine drops from 70% to 20%.



To obtain the best treatment efficiency, it is essential to maintain the pH of the water within the ideal range specified by your manufacturer (see manuals).

6. Features

6.1. Power supply

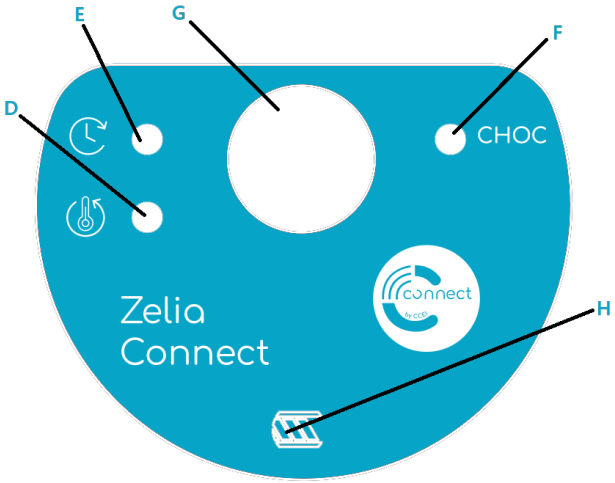
There is a switch on the power supply unit that turns the electrolyzer on. When the power is on, this switch lights up.

If an automatic cover sensor is connected to the control box, the switch on the side of the box must be set to the EXT position to enable detection. It is still possible to set the switch to 100% to override the pool coverage information and force nominal output, or even set it to 25% to reduce output by a factor of 4 without taking the cover's status into account.

If the contact is not connected, you can indicate that the pool is covered by switching the switch to the "25%" position. You must then manually switch the switch back to "100%" to resume normal operation.

6.2. Control interface

The interface consists of a multifunction button and 4 indicator lights;



Refe-rences	Description
D	**"Scheduled" indicator** : This indicator light comes on when the programmed mode (= timer) is active
E	**"Auto" indicator** : This indicator light comes on when auto mode (temperature control) is active
F	**"Shock" indicator** : This indicator light comes on when Boost mode is active
G	**Multifunction button** : Depending on the context, this key allows you to • select the operating mode (Prog, Auto, and Shock)
H	**"COVERAGE / REDOX CONTACT" indicator light** : This indicator light comes on when the cover (or the RedOx control contact) is closed (or when the 3-position switch on the power supply box is set to the "25%" position) Off if the cover is open (or if the RedOx control contact is open) Flashes when detection is in progress (delay) Lights up steadily if the cover is closed (or if the RedOx control contact is closed)

6.3. iOs / Android Applications

To download the CCEI Connect app, scan the QR code below. You can also search for CCEI Connect in the App Store or Google Play Store:

6.4. Operating modes

There are 3 operating modes to choose from, plus a boost mode: The indicator light for the current mode remains steady. To select a program, press the G button; the user has 5 seconds to select the desired program (the indicator light for that program will flash during this time) using the G button. The operating mode can also be selected from the app.

If none of the indicator lights [(D), (E), or (F)] are on, the electrolyzer is in Off mode (turned off, no production).

To switch to Off mode from the device itself, press and hold the G button.

6.4.1. Program mode

"Scheduled" mode is similar to a timer mode. In this mode, the daily operating time for zelia connect is set and repeated every day You can change this setting, which is factory-set to 8 hours per day, in the app (Daily Production Time). The filtration time must be long enough for the Zelia Connect to complete the programmed cycle.	

6.4.2. Auto mode

"Auto" mode is a temperature-controlled mode: the daily operating time is adjusted based on the water temperature. The Zelia Connect then uses the preset time* and will increase it if the water is hot, and decrease it if the water is cold. *The set time corresponds to the desired baking time at a temperature of 25°C. You can change this setting, which is factory-set to 8 hours per day, in the app (Daily Production Time). The filtration time must be long enough for the Zelia Connect to achieve the calculated time.	

6.4.3. Shock mode

"Boost" mode allows you to continuously operate at a higher power level for a certain period of time. The Zelia Connect will therefore produce chlorine without taking into account the scheduled time (daily production duration), the temperature, or any ORP readings during the shock treatment period. You can change this duration, which is factory-set to 24 hours, within the app (Intensive Treatment Duration). Filtration must run continuously 24 hours a day while in Shock mode for the Zelia Connect to produce	

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When the Shock treatment cycle ends, the device returns to the previously selected mode.

When Shock mode is selected, the indicator light for the previous mode also lights up to remind you of the mode the Zelia Connect will return to after the shock

6.5. Low temperature

The need for disinfectant decreases significantly when the water temperature drops. To prevent unnecessary wear on the electrolysis cell, the unit stops producing disinfectant when the water temperature remains below a minimum threshold for more than 24 hours.

This temperature, factory-set to 15°C, can be adjusted via the app (Minimum Temperature)

When the Zelia Connect enters this wintering mode, the device flashes cyan lights and the app sends a notification.

6.6. Automatic coverage

If the Zelia Connect is connected to your automatic cover, it detects when the cover is closed, activates the indicator light, and reduces the scheduled chlorine production time in both Scheduled and Auto modes. This feature helps reduce the risk of excessive chlorine buildup.

If an automatic cover sensor is connected to the control box, the switch on the side of the box must be set to EXT to enable detection. It is still possible to set the switch to 100% to override the pool cover status and force the system to operate at full capacity, or even set it to 25% to reduce output regardless of the cover's status.

If the contact is not connected, you can indicate that the pool is covered by switching the switch to the "25%" position. You must then manually switch the switch back to "100%" to resume normal operation.

6.7. Water Hardness

To maximize the service life of the cell, you must set the device to the hardness level of the water being treated. The device will then automatically calculate the optimal duration of the polarity reversal cycles to achieve the best balance between self-cleaning and service life. The hydrotimetric title (T.H.) is an indicator of water mineralization and is expressed in French degrees (°f). This value is provided by the water supplier, the network operator, or the local city hall where the system is installed. It can also—and preferably—be measured by a specialist.

This setting can be adjusted via the app (water hardness)

TH (°f)	0 à 7	7 à 12	12 à 20	20 à 30	30 à 40	> 40

Water	Very Soft	Soft	Rather mild	Pretty Hard	Hard	Very hard

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The hardness setting will simply affect the number of polarity reversal cycles required for the cell to self-clean. This setting does not affect daily production time.

6.8. Production level

The amount of chlorine produced is limited by the daily filtration time (since electrolysis is controlled by the pump via the flow sensor), and if there is a chlorine deficiency, the first step is to verify that the daily filtration time is sufficient. It is also possible to adjust the production level. Reducing the production level if it is too high (e.g., in small pools) will extend the cell's lifespan. Increasing this level allows for more chlorine to be produced if the standard output is clearly insufficient, but will, on the other hand, shorten the cell's lifespan.

This setting is factory-set to 100% and can be adjusted. This setting is factory-set to 100% and can be adjusted.

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To maximize the service life of your electrolysis cell, it is recommended that you limit the duration of operation at output levels exceeding 100%.

6.9. Error messages

Zelia Connect provides users with guidance through the app to help them prevent potential issues or diagnose a fault. Messages are then displayed in the app or via a notification. The unit then flashes in the colors described below:

Flashs cellule	Description	Solutions
Orange	Internal error (communication failure between the two built-in cards)	Check the connection between the two boards inside the cell
Light Blue	Internal overheating (>85°C)	Let the unit cool down, or move it to a cooler location
Purple	Water temperature measurement error	Check the connection of the temperature sensor inside the cell
Red	Current too strong / Too much salt	Check the salt level Change some of the water See the section on electrolysis
Blue	Current too weak / lack of salt	Check the salt level Descale the cell with diluted acid Add salt after confirming that it is needed*. See the section on electrolysis. This problem may simply be caused by a temporary presence of air in the tank, resulting from the filter pump running dry or air entering the system.
Cyan	Temperature < minimum temperature	This is not a defect. See the "Low Temperature" section.

Check the salt level before adding any salt to the pool, and add salt if the level is really low.

6.10. Reset

It may be necessary to perform a factory reset to restore the Zelia Connect to its default settings

1. Turn off the power to the device (using the ON/OFF switch on the power supply) and wait about ten seconds,
2. Press and hold the G button on the device
3. Turn the device back on (using the ON/OFF button on the power supply) while continuing to hold down the button,
4. Wait until all the lights flash twice,
5. Release the button. **All settings are reset to their factory defaults.**

7. Maintenance

7.1. Adding salt

When the salt level drops below 2 g/L, it is essential to add salt to the pool.

It is recommended to use salt that has been specially treated for swimming pools and contains stabilizers. This will significantly improve the efficiency of the salt chlorinator.

At the start of the season, we recommend checking the salt level and adjusting it to 3 g/L. Depending on the measured salt level, the amount of salt to add is as follows:

Poids de sel (en kg) à ajouter **pour atteindre 3g/l** :

Measured rate / pool volume	40m3	60m3	90m3
1,5 g/l	60	*90*	135
2 g/l	40	60	90
2,5 g/l	20	30	45

For example, if the measured salt concentration is 2 g/L, you should add 60 kg of salt to restore the concentration to 3 g/L in a 60 m³ pool.

7.2. Wintering

In winter, weather permitting, it is possible to continue the treatment while significantly reducing the frequency. An 8-hour filtration cycle every two weeks is sufficient in most cases.

However, it is essential to continue monitoring the salinity level to prevent the cell from operating in water that is too low in salinity (<2 g/L).

When a tarp or cover is used, the chlorine is protected from UV rays, reducing the amount of chlorine needed. In Automatic mode, when the cover sensor is connected, the chlorinator automatically reduces production.

7.3. Cell cleaning

If the indicated output remains low despite a proper salt concentration, check the condition of the cell and clean it if scale is visible on the plates. To clean it, plug one end and pour in diluted acid (10% HCl is recommended). Let the acid sit for several hours. This procedure must be performed with the utmost caution, and it is essential to follow the instructions for use of the acid being used. Translated with DeepL.com (free version)

	A specially designed cleaning plug is available from your dealer. Réf. : PF101190

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A video showing the cleaning of the cell is available: click here

CCEI declares that the product Zelia Connect meets the safety and electromagnetic compatibility requirements of European Directives 2014/35/EU and 2014/30/EU EU and the Radio Equipment Directive 2014/53/EU.		
CE UKCA		Emmanuel Baret Marseille, on 19/03/2026
Distributor's stamp		
Date of sale: . . . . . Batch N°:		