m^3
30-180

Tech
8.000
10.000

pH

ORP

g/L
ºC

WiFi

EN Instruction Manual

Salt Chlorinator for swimming pools

Models

7 / 7 Scalable
12 / 12 Scalable
21 / 21 Scalable
30 / 30 Scalable
40 / 40 Scalable

FLUIDRA pool

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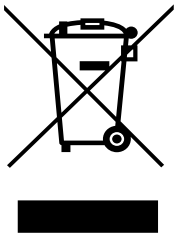
Index:

IMPORTANT: This instruction manual contains essential information about the safety measures to be taken during installation and start up. Therefore, both the installer and the user must read the instructions prior to assembly and start up. Keep this manual for future reference regarding the operation of this appliance.



Treatment of electrical and electronic devices after their useful life (only applicable in the EU).

Any product marked with this symbol indicates that it cannot be disposed of with other household waste at the end of its useful life. It is the user's responsibility to dispose of this type of waste by depositing it at a suitable site for the selective recycling of electrical and electronic waste. The proper treatment and recycling of this waste makes an essential contribution to the conservation of the environment and the health of users. For more detailed information on collection points for this type of waste, please contact your local authorities.

The instructions contained in this manual describe the operation and maintenance of Salt Electrolysis systems. In order to achieve optimum performance of the Salt Electrolysis systems, follow these instructions:

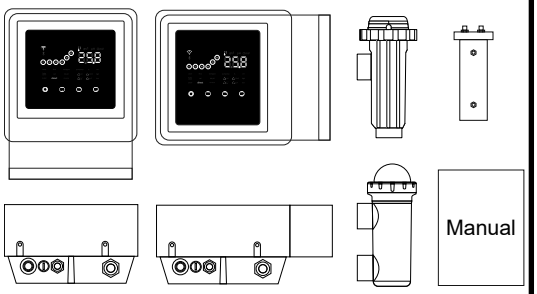
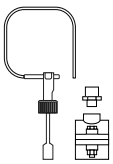
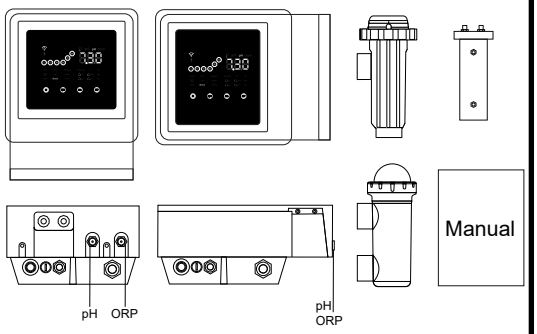
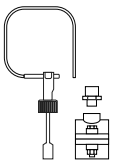
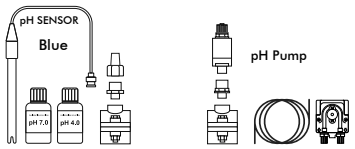
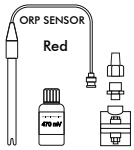
1. General characteristics:

- Once your Salt Electrolysis system is installed, some salt must be dissolved in the water. The Salt Electrolysis system consists of two elements: an electrolysis cell and a control unit. The electrolysis cell contains a number of titanium plates (electrodes), so that when an electric current and the saline solution pass through them, free chlorine is produced.
- Maintaining a certain level of chlorine in the pool water will ensure it is sanitary. The Salt Electrolysis system will produce chlorine when the pool's filtration system (pump and filter) is in operation.
- The device features several safety mechanisms, which are activated in the event of abnormal system operation, as well as a control microcontroller.
- Salt Electrolysis systems have an automatic cleaning system for the electrodes that prevents scale buildup.

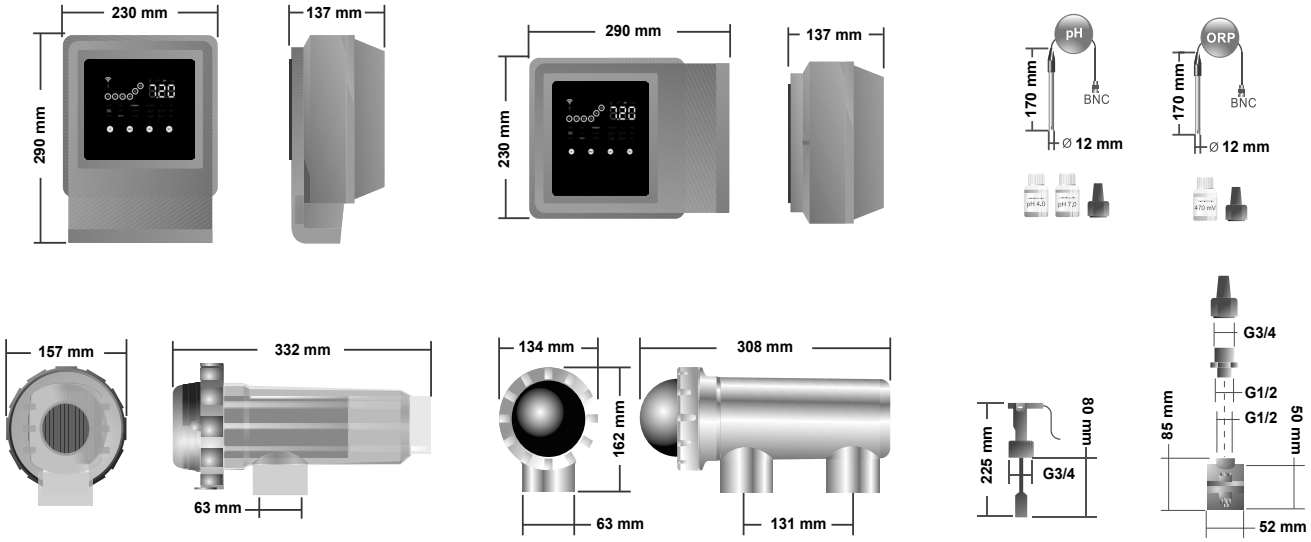
2. ⚠ Safety warnings and recommendations:

- Assembly or handling must be carried out by suitably qualified personnel.
- The applicable regulations for accident prevention and electrical installations must be observed.
- In the installation, it must be taken into account that to disconnect the device from electricity, a switch or circuit breaker that complies with IEC 60947-1 and IEC 60947-3 and ensures the all-pole disconnection must be incorporated. It must be directly connected to the power supply terminals and must have a contact separation in all its poles that completely disconnects in cases of category III surge conditions, in an area that complies with the safety requirements of the site. The switch must be located in the immediate vicinity of the device and must be easily accessible. In addition, this must be marked as the device cut-off switch.
- The device must be powered by a residual current mechanism that does not exceed 30mA (RDC). The device must be electrically grounded.
- The manufacturer is in no way responsible for the assembly, installation or startup, nor for any manipulation or incorporation of components that have not been carried out at the manufacturer's premises.
- This appliance can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given suitable supervision or instruction concerning the safe use of the appliance and they understand the hazards involved. Children must not play with the appliance. Unsupervised children must not perform cleaning and maintenance tasks.
- If the power cable is damaged, it must be replaced by the manufacturer, after-sales service provider or similarly qualified personnel in order to prevent any hazards.
- Do not attempt to alter the control unit to run at a different voltage.
- Be sure to make secure electrical connections to avoid contact failures, as these may cause overheating.
- ⚠ Before installing or replacing any system component, make sure that it has been disconnected from the power supply and that there is no water flowing through it. Only use original replacement parts.
- Because the device generates heat, it is important to install it in a sufficiently ventilated place. Do not install it near flammable materials.
- Although the device has an IP code, under no circumstances should it be installed in areas exposed to flooding.
- This device is intended to be permanently connected to a water supply and must not be connected with a temporary hose.
- This appliance is equipped with a mounting bracket. See assembly instructions.

3. Contents

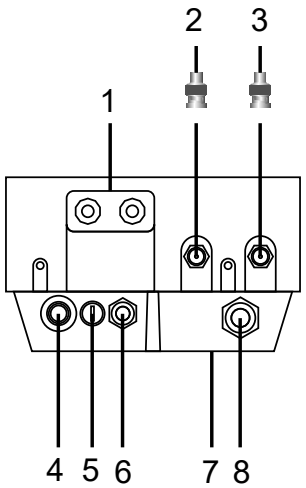
Models 7 g/h Models 12 g/h Models 21 g/h Models 30 g/h Models 40 g/h		Flow sensor KIT (optional) 	
Models Scalable 7 g/h Models Scalable 12 g/h Models Scalable 21 g/h Models Scalable 30 g/h Models Scalable 40 g/h		Flow sensor KIT (optional) 	pH KIT (optional)  ORP KIT (optional) 

4. Dimensions



5. Description

1) pH pump
2) pH sensor
3) ORP sensor
4) ON/OFF switch
5) Power fuse
6) Power supply 230 V ac
7) Flow sensor
8) Cell connection



6. Technical description

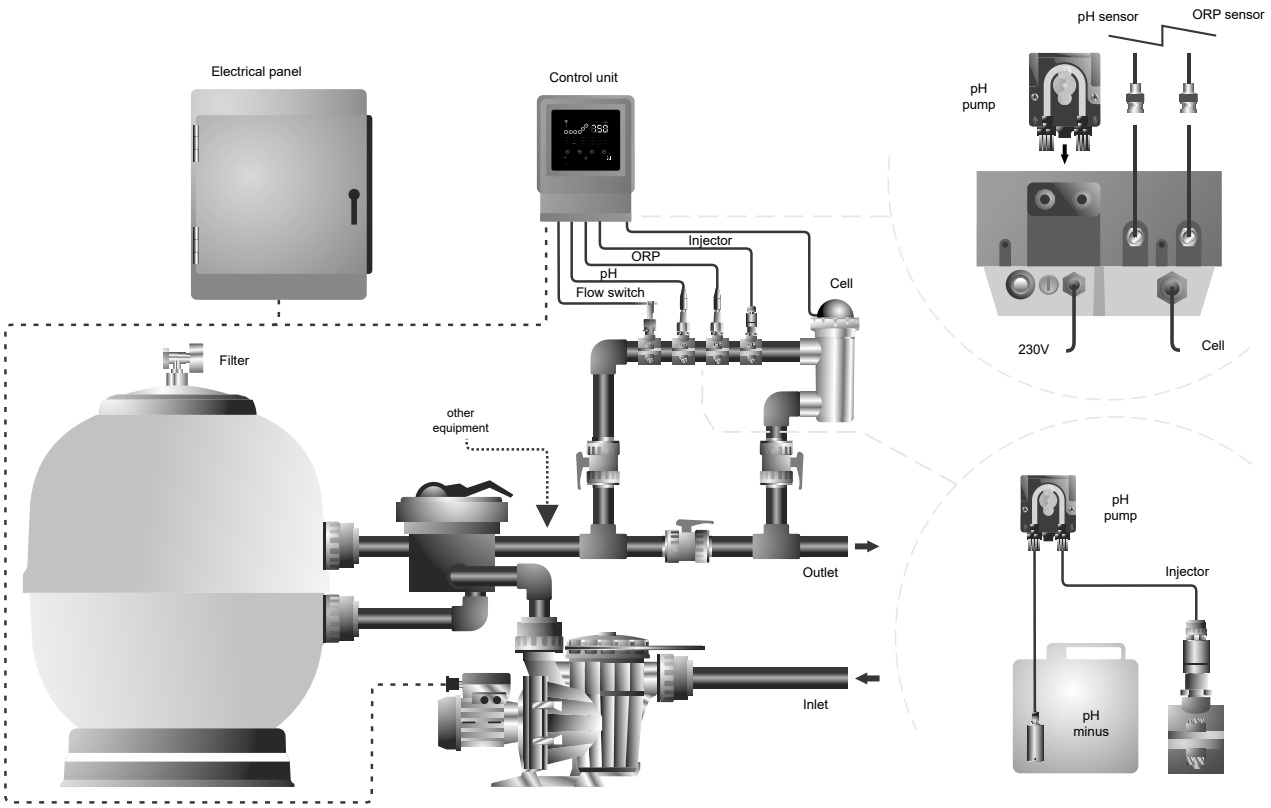
Control unit	**MODEL**				
Description	**7**	**12**	**21**	**30**	**40**
Operating voltage	230 V ac 50/60 Hz.				
Consumption (A ac)	0.2 A	0.4 A	0.4 A	0.75 A	1 A
Fuse (5x20 mm)	1AT	2AT	2AT	3.15AT	4AT
Outlet (Adc)	3.5 A X 2	6 A X 2	3.5 A X 2	6 A X 2	6.5 A X 6
Output (gr Cl2/hr)	6 - 7	10 - 12	17 - 21	24 - 30	31 - 40
m^3 Pool (16 - 24 ºC)	30	60	100	140	180
m^3 Pool (+25 ºC)	25	50	80	120	160
Salinity	3 - 12 g/L (5 g/L recommended)				
Ambient temperature	max. 40ºC				
Casing	ABS				
Polarity inversion	2h, 3h, 4h, 7h and test 2' (soft)				
Output control	0-100% (5 output levels)				
Flow detector (gas)	Yes (Factory setting ON)				
Flow switch detector	Yes (factory setting OFF)				
Output Control by cover	Menu configuration (20-80%). Volt-free contact.				
External Output Control	Yes. Volt-free contact.				
Electrode Diagnos.	Yes				
pH safety shutdown	Yes, soft setting 1...120 min				
Salinity indicator	Yes, g/L				
Temperature indicator	Yes, 0 - 50ºC (ºC/ºF)				
Salt alarm indicator	Yes. High and Low LED				
Temperature alarm indicator	Yes. High and Low LED				
System conf. menu	Yes				
Modbus	Yes				
Wi-Fi	Yes				

Electrolysis Cell	**MODEL**				
Description	**7**	**12**	**21**	**30**	**40**
Electrodes (self-cleaning activated titanium)	Tech Grade 8,000 - 10,000 hr.				
Min. flow rate (m^3/h)	2	3	5	6	8
Number of electrodes	3	5	7	11	13
Material	Methacrylate derivative				
Pipe connection	Ø 63 mm PVC gluing				
Maximum pressure	1 kg/cm^2				
Working temperature	15 - 40ºC max				
Temperature sensor	Yes				

pH/ORP sensors	**MODEL**
Description	pH - mV (ORP)
Measuring range	0.00 - 9.99 pH / 000 - 999 mV (ORP)
Control range	7.00 - 7.80 pH / 600 - 850mV (ORP)
Biopool ON control range	6.50 - 8.50 pH / 300 - 850mV (ORP)
Precision	± 0.01 pH / ± 1 mV (ORP)
Calibration	Automatic (pH-ORP standards)
Control outlets (pH)	One 230 V / 500 mA outlet (dosing pump connection)
PH/ORP sensors	Epoxy body, single connection

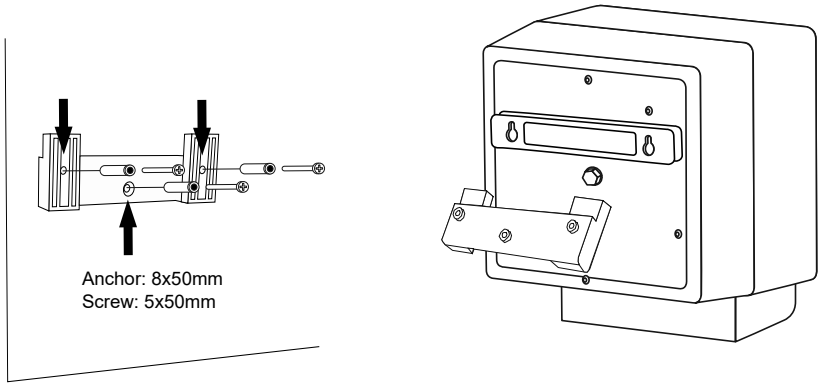
IP Grade	IP45	
Bluetooth	Band Freq.: 2400-2483.5 MHz	RF Output Power: 11.23 dBm
Wi-FI 2.4 GHz	Band Freq.: 2400-2483.5 MHz	RF Output Power: 19.91 dBm

7. Installation diagram



Note: This schematic represents an installation of a scalable model with all options installed. This schematic may vary depending on the model purchased.

8. Device installation on a wall



- The control unit must always be installed VERTICALLY and on a smooth wall surface. It must also be far enough away from the cell so that it cannot be accidentally splashed with water.
- The cell should always be installed VERTICALLY and on the floor as shown in the recommended installation diagram.
- To ensure that the device is kept in good condition, it should always be installed in a dry and well-ventilated part of the machine room. Installing the control unit outdoors is not recommended.
- The control unit must be connected to the mains power supply at the control panel of the purifier in such a way that the pump and the system are switched on at the same time.

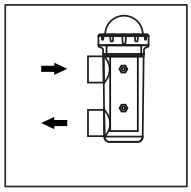
In particular, avoid the formation of corrosive atmospheres due to solutions that lower pH (especially those formulated with hydrochloric acid “HCl”). Do not install the salt chlorinator near where these products are stored. To this end, we strongly recommend the use of sodium bisulphate or dilute sulphuric acid based products.

9. Electrolysis cell installation

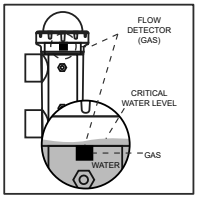
The electrolysis cell is made of a transparent polymer inside which the electrodes are housed. The electrolysis cell should be installed in a weather-protected location and **always behind the filtration system** and any other devices in the installation such as heat pumps, control systems, etc.

The installation should allow the user easy access to the installed electrodes. The electrolysis cell must always be located in a place in the pipe that can be isolated from the rest of the installation by means of two valves, so that maintenance work can be carried out without the need to empty the pool completely or partially.

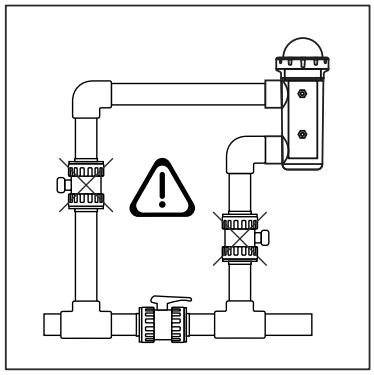
When the cell is installed in bypass (recommended), there must be a valve to regulate the flow through the cell. Before proceeding with the final installation of the system, the following points should be taken into account:



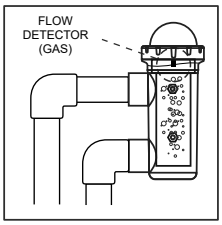
The direction of flow marked on the cell must be respected. The recirculation system must guarantee the minimum flow rate specified in the Technical Data Sheet.



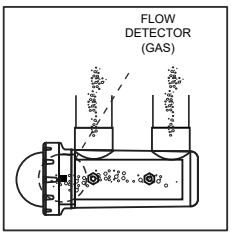
The flow detector system (gas detector) is activated in the event of zero or very low recirculation (flow) of water through the cell. Non-evacuation of the electrolysis gas generates a bubble that electrically isolates the auxiliary electrode (electronic detection). Therefore, when inserting the electrodes into the cell, the gas detector (auxiliary electrode) must be placed at the top of the cell. The safest layout is as shown in the recommended installation diagram.

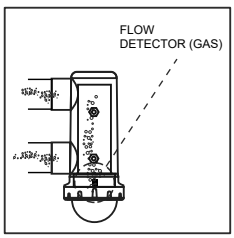


WARNING: if the inlet and outlet valves to the pipe where the electrolysis cell is installed are closed simultaneously, the flow detector (gas detector) will not work properly, leading to risk of rupture of the cell. Although this is an unusual situation, it can be avoided by blocking the return valve to the pool once the device has been installed, so that it cannot be tampered with accidentally.



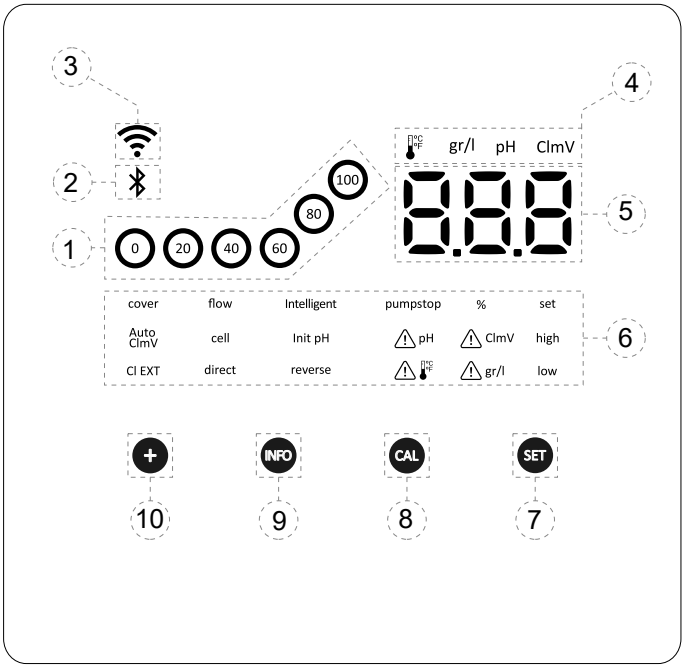
RECOMMENDED installation





UNACCEPTABLE installation

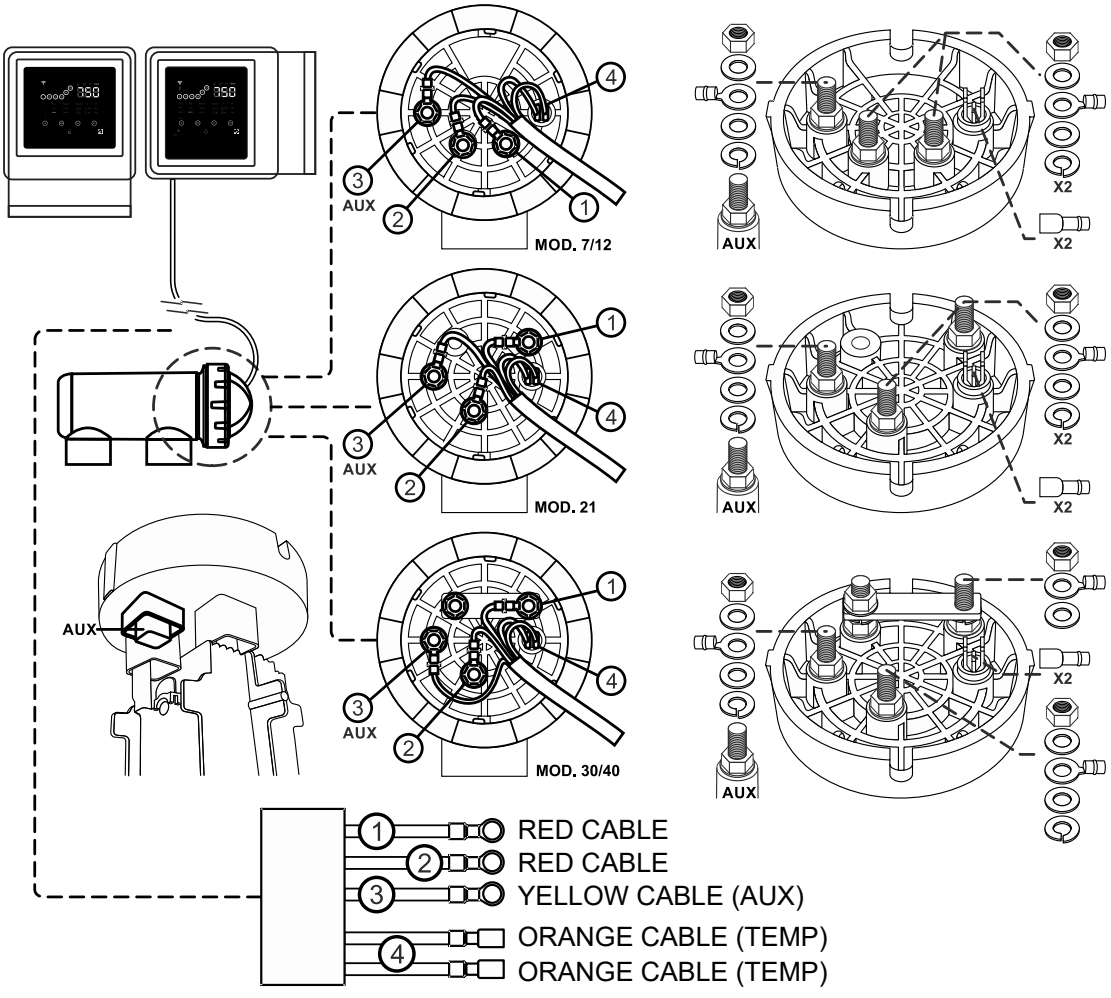
10. User interface



1) Output % indicator.
2) Bluetooth indicator
3) Wi-Fi indicator
4) Operating information: pH, electrolysis, ORP, salinity (g/L) and temperature
5) Value display: Electrolysis, pH, ORP, salinity (g/L) and temperature
6) Informative indicators (alarms, cover, smart, etc.)
7) Setpoint menu access button
8) Calibration button
9) Info / configuration menu access button (hold for 5s)
10) Button for direct access to output setpoint modification / value or parameter modification

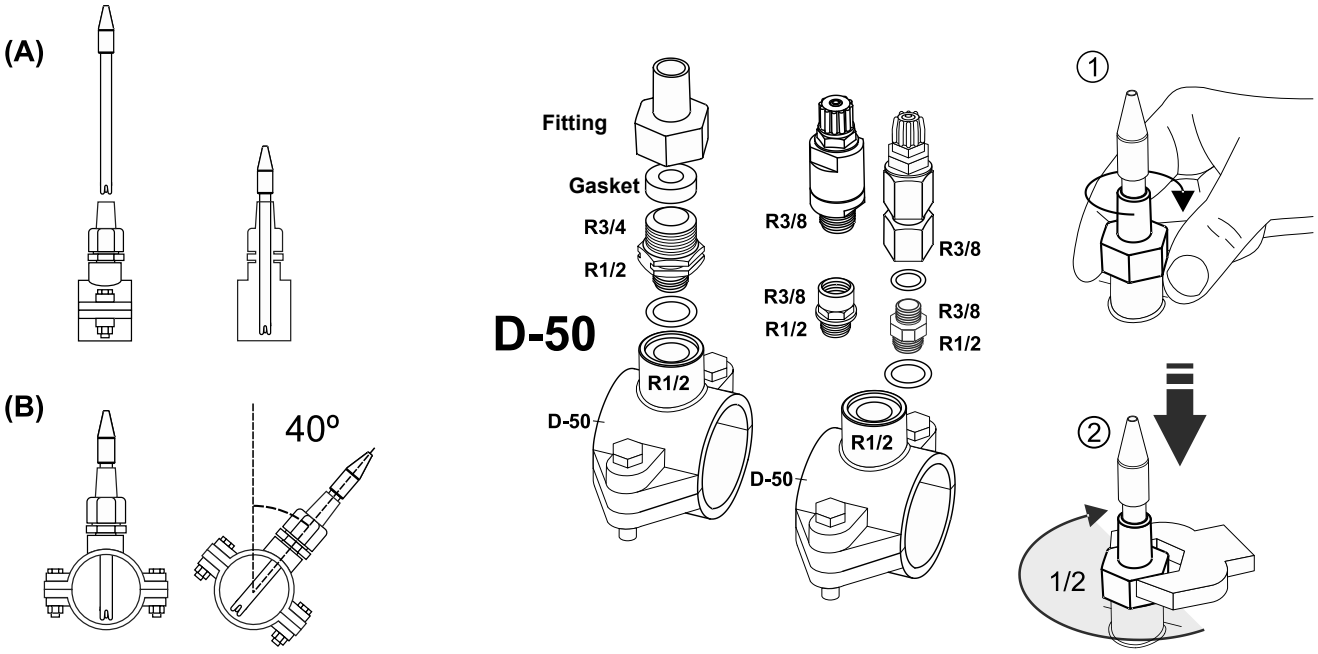
11. Electrolysis cell connection

Connect the electrolysis cell to the control unit according to the following diagrams. Due to the relatively high current flowing through the electrolysis cell cables, under no circumstances should the length or section of the cables be changed without first consulting your authorised distributor.



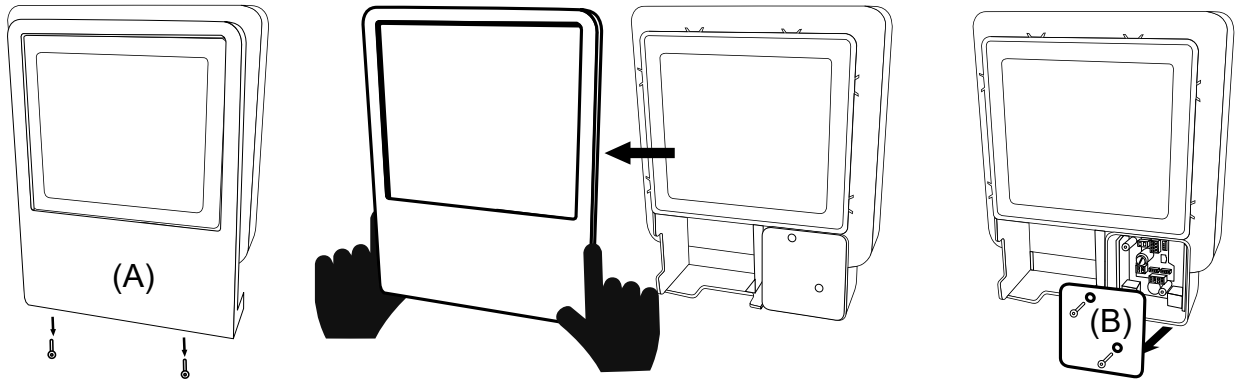
12. Installation of the PH / ORP probe (pH KIT and ORP KIT only available for scalable models)

1. Insert the pH/ORP probe supplied with the device into the corresponding housing of the probe holder (A).
2. To do this, loosen the fitting nut and insert the sensor into the holder.
3. The sensor must be inserted into the fitting in such a way as to ensure that the sensor at the end is always submerged in the water flowing through the pipe.
4. Always install the pH/ORP probe either in a vertical position or at a maximum inclination of 40° (B).



13. Removal of front cover and connection cover

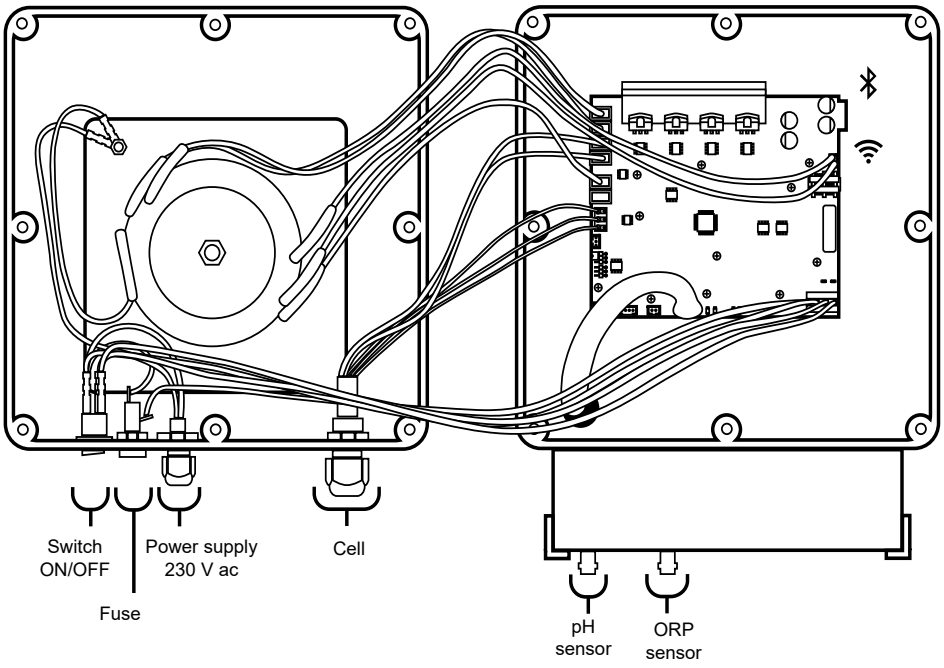
1. Remove screws under the outer frame (A).
2. Remove outer frame (A)
3. Unscrew the fixing screws (B) on the front of the unit.
4. Pull the cover (B) out to give access to fuse pump and connections.

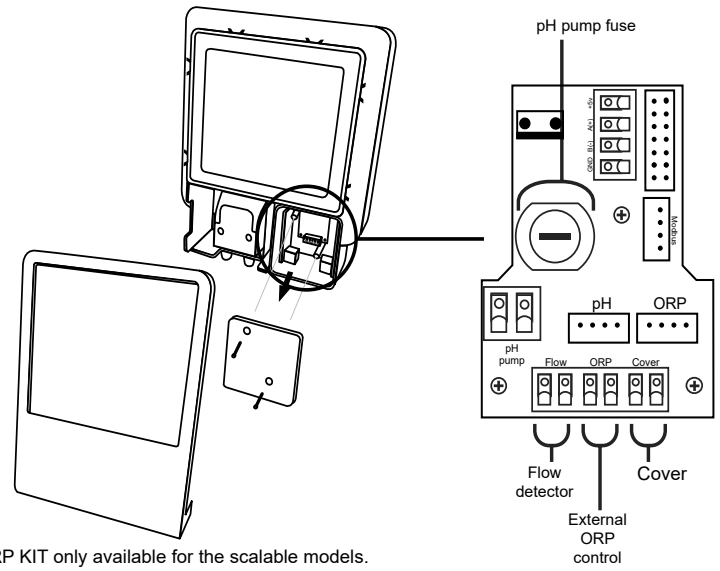


14. Start up

1. Ensure that the filter is clean and that the pool and system is free from copper, iron and algae, and that any heating equipment installed is compatible with the presence of salt in the water.
2. Balance the pool water. This will allow you to achieve a more efficient treatment with lower free chlorine concentrations in the water, as well as a longer operation of the electrodes together with a lower formation of calcareous deposits in the pool. a) The pH should be 7.2-7.6 b) The total alkalinity should be 60-120 ppm.
3. Although the system can operate in a salinity range of 5-12 g/L, the recommended optimum salt level of 5 g/L should be maintained, adding 5 kg for every m³ of water if it did not previously contain salt. Always use common salt (sodium chloride), without additives such as iodides or anti-caking agents, that is suitable for human consumption. Never add salt through the cell. Add it directly to the pool or in the balance tank (away from the pool drain).
4. Chlorine treatment should be carried out when salt is added, and if the pool is to be used immediately. As an initial dose, 2 mg/L trichloroisocyanuric acid may be added.
5. Before starting the work cycle, disconnect the control unit and run the purifier pump for 24 hours to ensure the salt is completely dissolved.
6. Next, turn on the salt electrolysis system, setting the salt electrolysis output level so that the free chlorine level is maintained within the recommended levels (0.5-1.5 ppm). NOTE: a test kit must be used to determine the free chlorine level.
7. In pools exposed to strong sunlight or intensive use, it is advisable to maintain a level of 25-30 mg/L of stabiliser (isocyanuric acid). Under no circumstances should a level of 75 mg/L be exceeded. This will help to prevent the destruction of free chlorine in the water by sunlight.

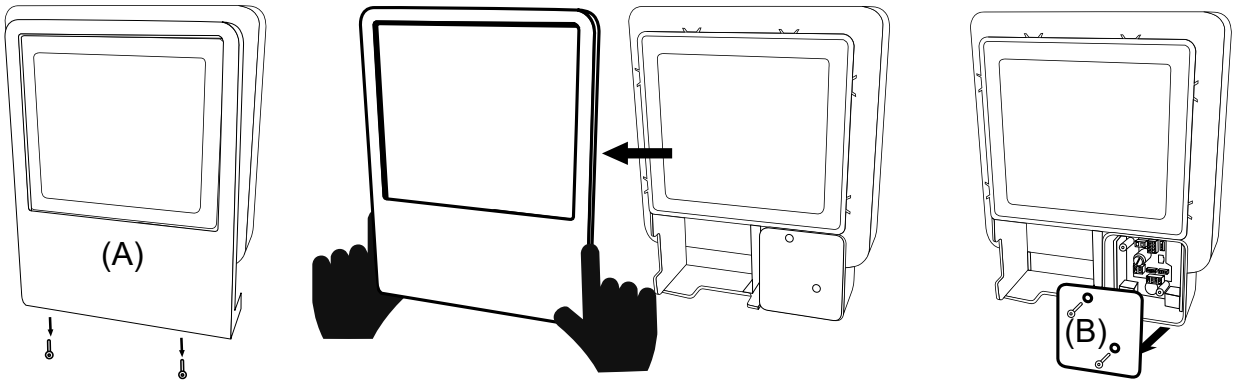
15. Inside view of the control box

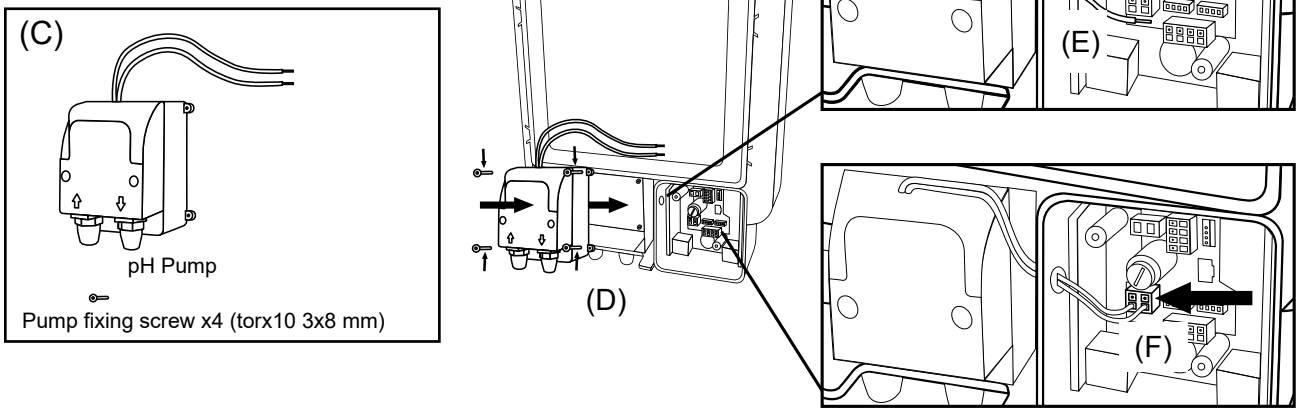


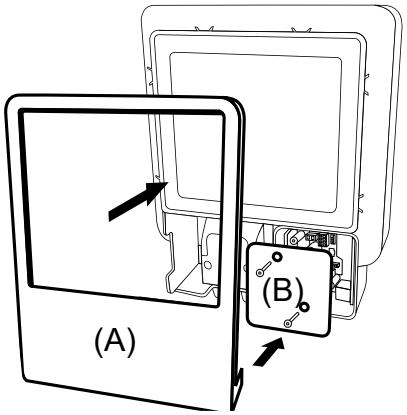


Note: pH KIT and ORP KIT only available for the scalable models.

16. Installation of the pH pump (only available in scalable version with pH Kit)

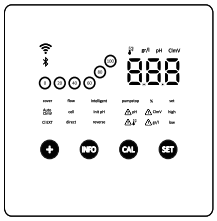






1. Remove screws under the outer frame (A).
2. Remove outer frame (A)
3. Remove the connection cover fixing screws (B) on the front of the unit.
4. Pull the cover (B) out to give access to fuse pump and connections.
5. Take the pH pump and screws included in the pH Kit (C)
6. Place the pH pump into the compartment (D) and tighten screws
7. Insert the pH pump cable through hole (E)
8. Connect the pH pump cable to connector (F)
9. Fit the junction box cover and fixing screws (B)
10. Fit the front cover (A) and secure by pressing both edges simultaneously.

17. Activation/deactivation of pH/ORP drivers (pH KIT and ORP KIT only available for scalable models)



Switch on the device

When the device model appears, press the "INFO" key

Use the "+" key to enable/ disable the pH driver

Confirm with the "INFO" key

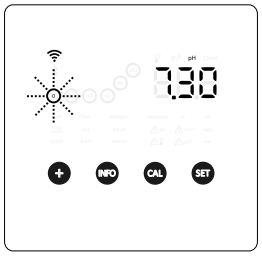
Use the "+" key to enable / disable the ORP driver

Confirm with the "INFO" key

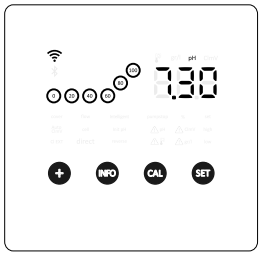
Leave the device to start up completely, and the pH / ORP drivers will become operational

18. Main screen information

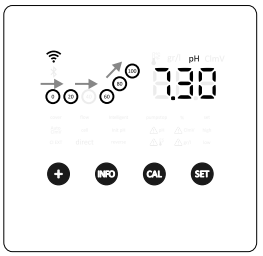
Sleep mode
After 60" of inactivity, the device goes into sleep mode, lowering the light brightness.



Output setpoint 0%
When electrolysis percentage is 0%, the device flashes 0% on the output indicator.

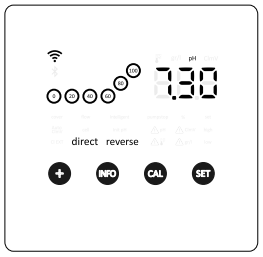


Output setpoint 20 - 100%
When the electrolysis percentage is between 20 - 100%, the device shows this value in the output indicator.

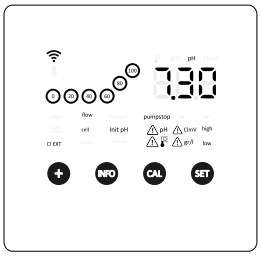


Boost mode
When boost mode is activated, the device will be producing at 100% for 24h, and the effect is displayed (0 - 100) on the output indicator.

Cover
With the cover activated and closed, the "cover" indicator will flash, and the output percentage will be adjusted to the set percentage. Circle shows animation with two different light tones.

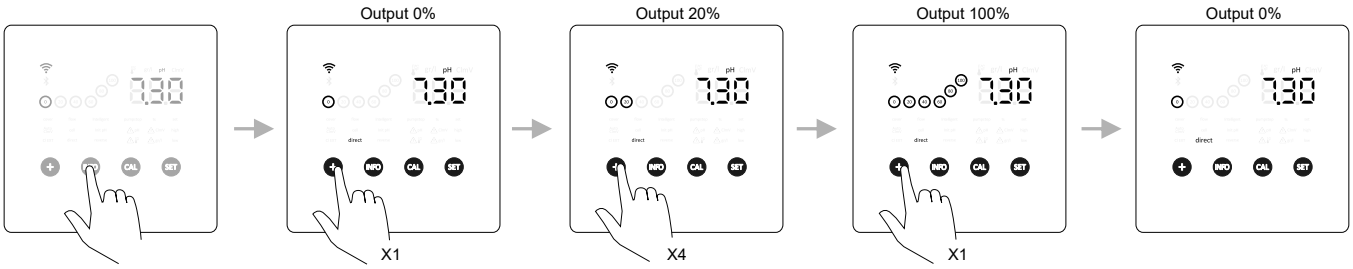


Polarity indicator.
On the main screen, the device displays information on the polarity in which the electrode is working (direct or reverse).

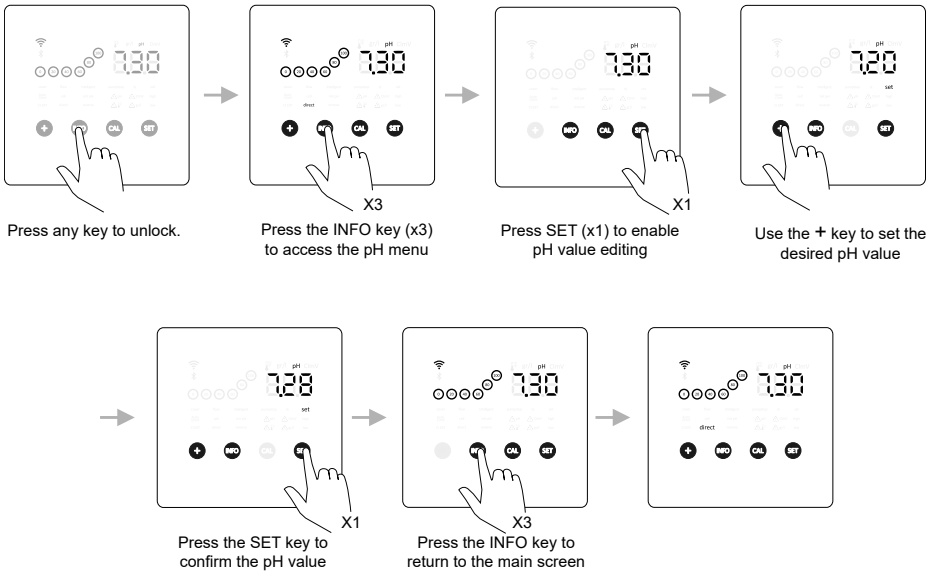


Alarms
The device indicates the alarms set at all times.

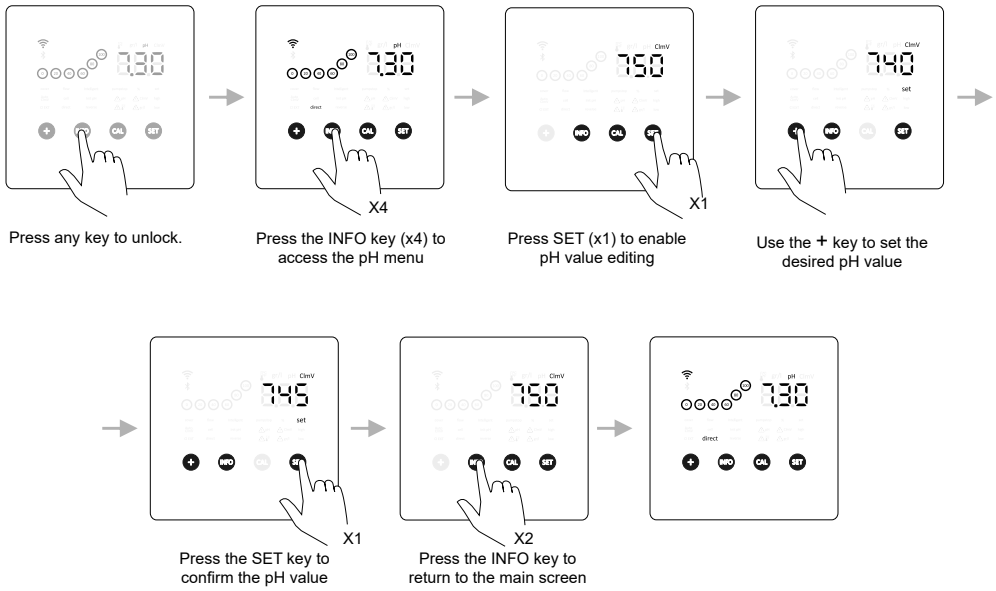
19. Output setpoint editing



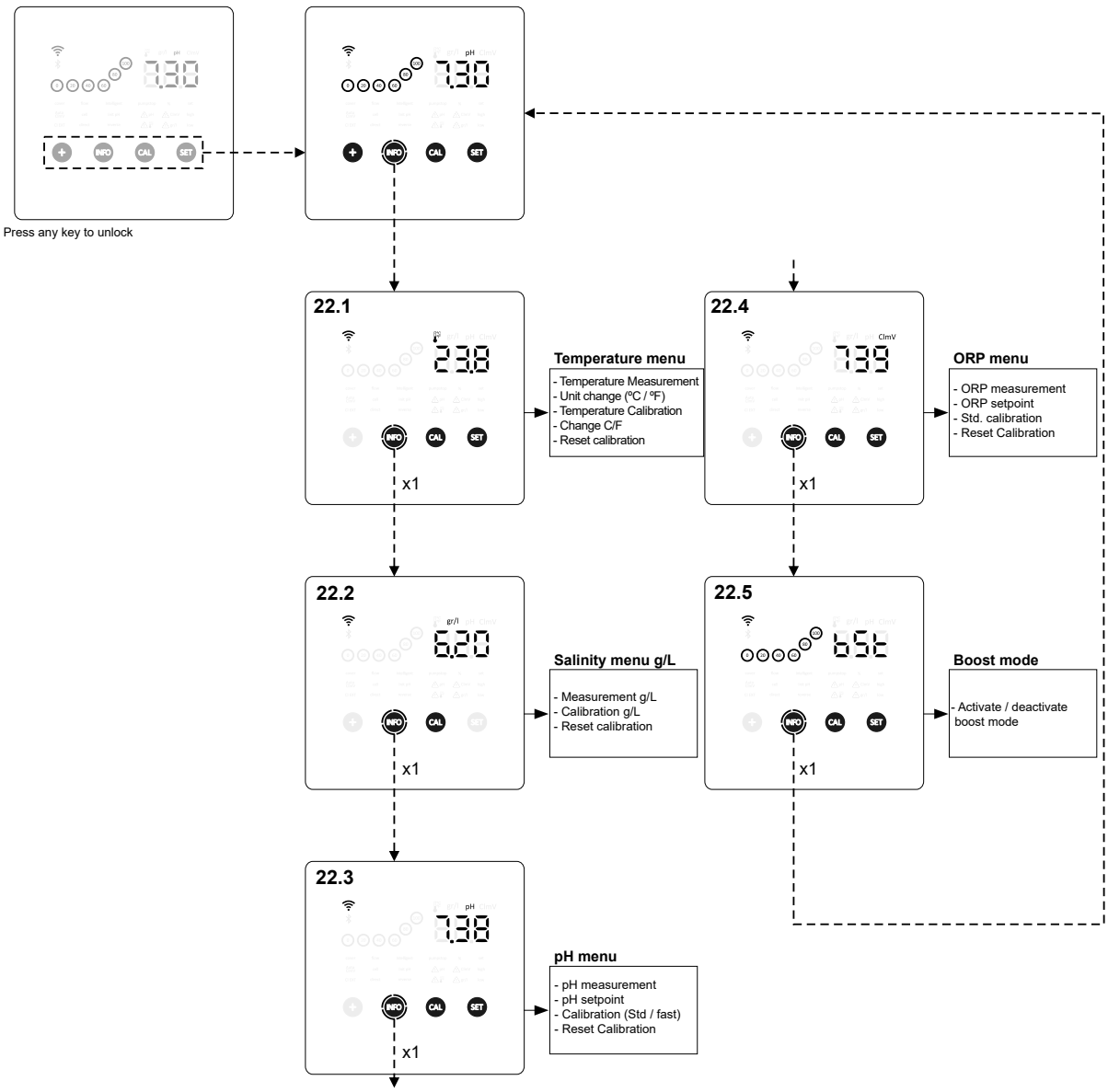
20. pH setpoint editing



21. ORP setpoint editing

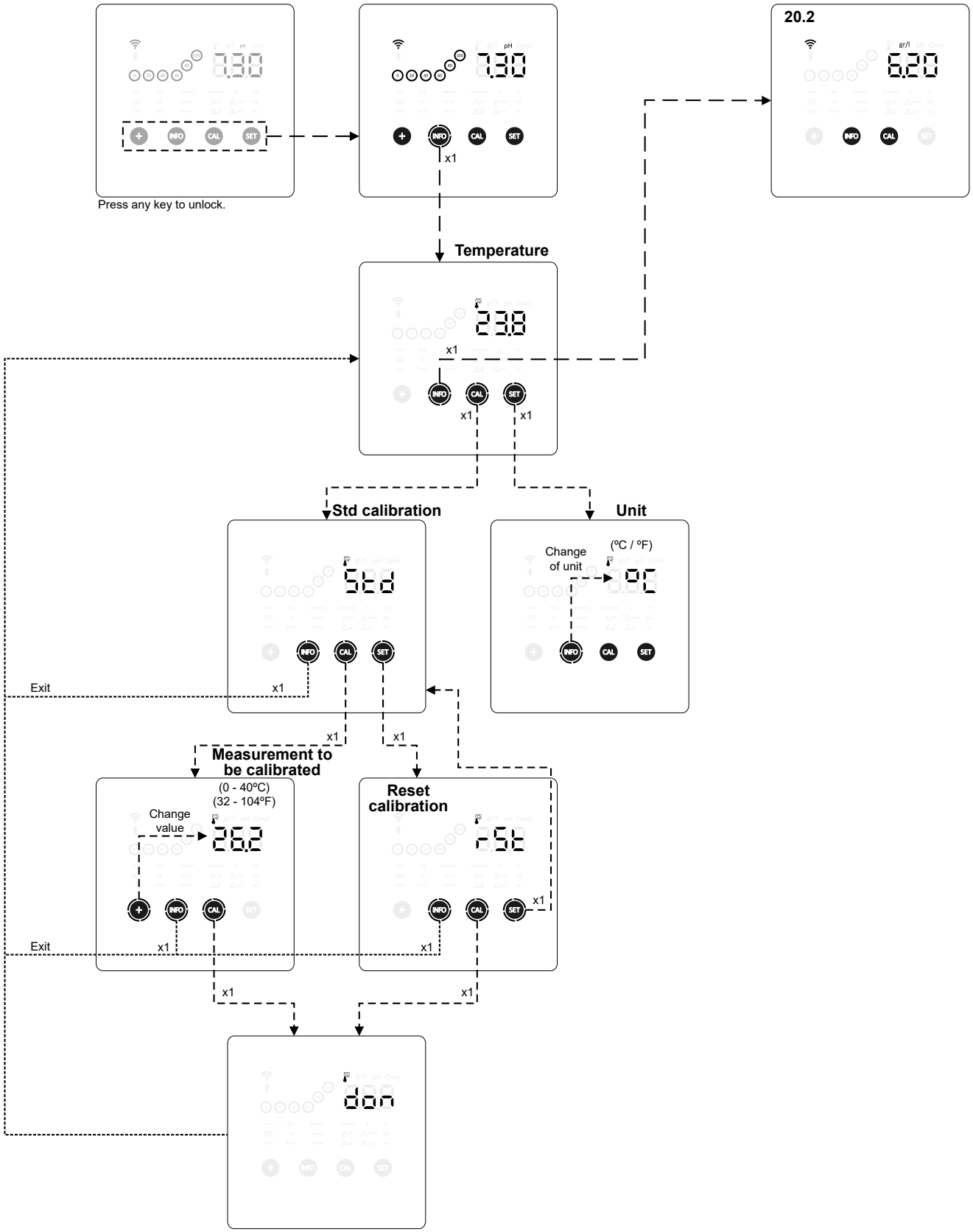


22. INFO menu navigation

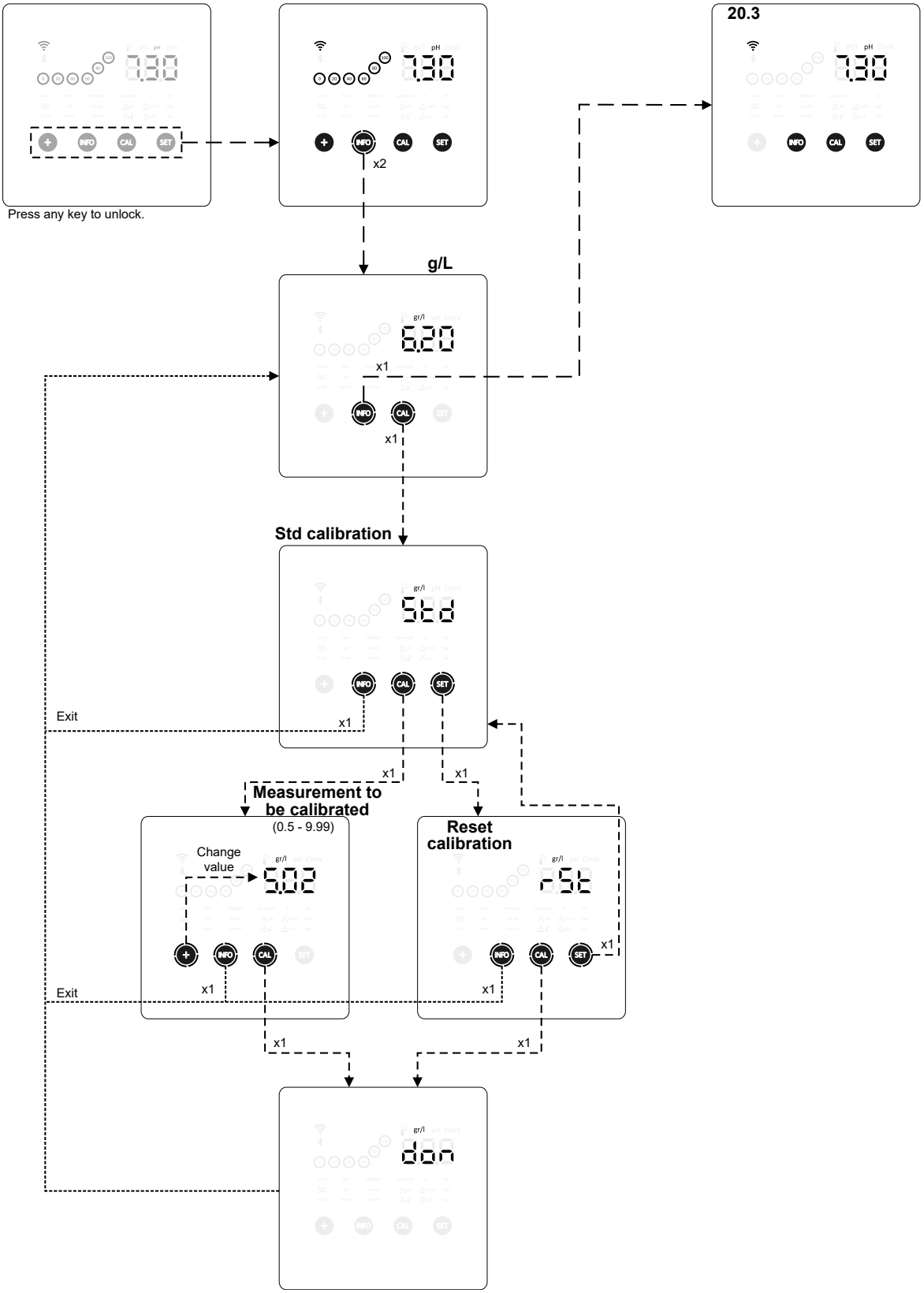


Note: pH KIT and ORP KIT only available for the scalable models.

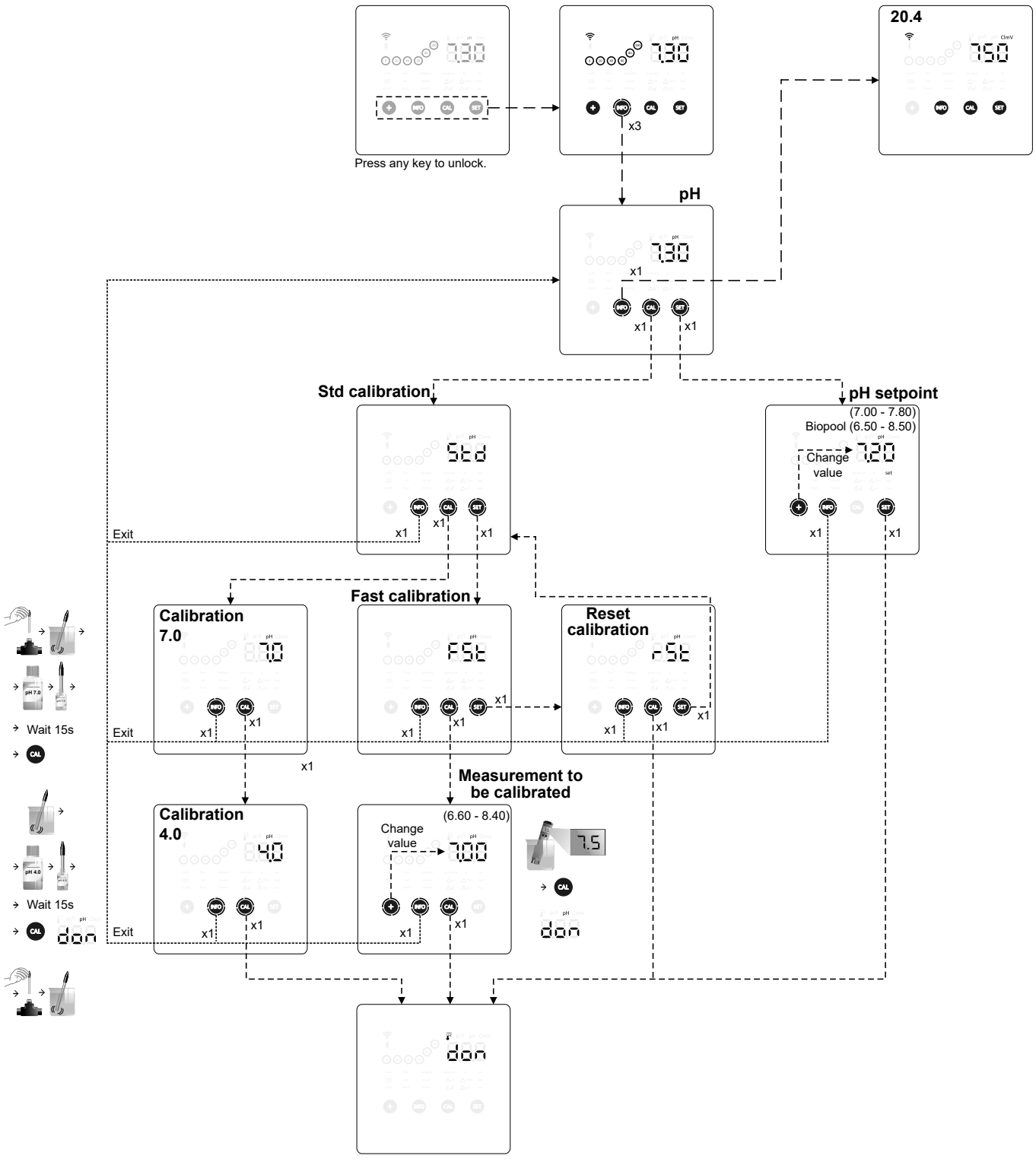
22.1. Temperature menu: Current measurement, unit change (ºC / ºF), calibration and reset.



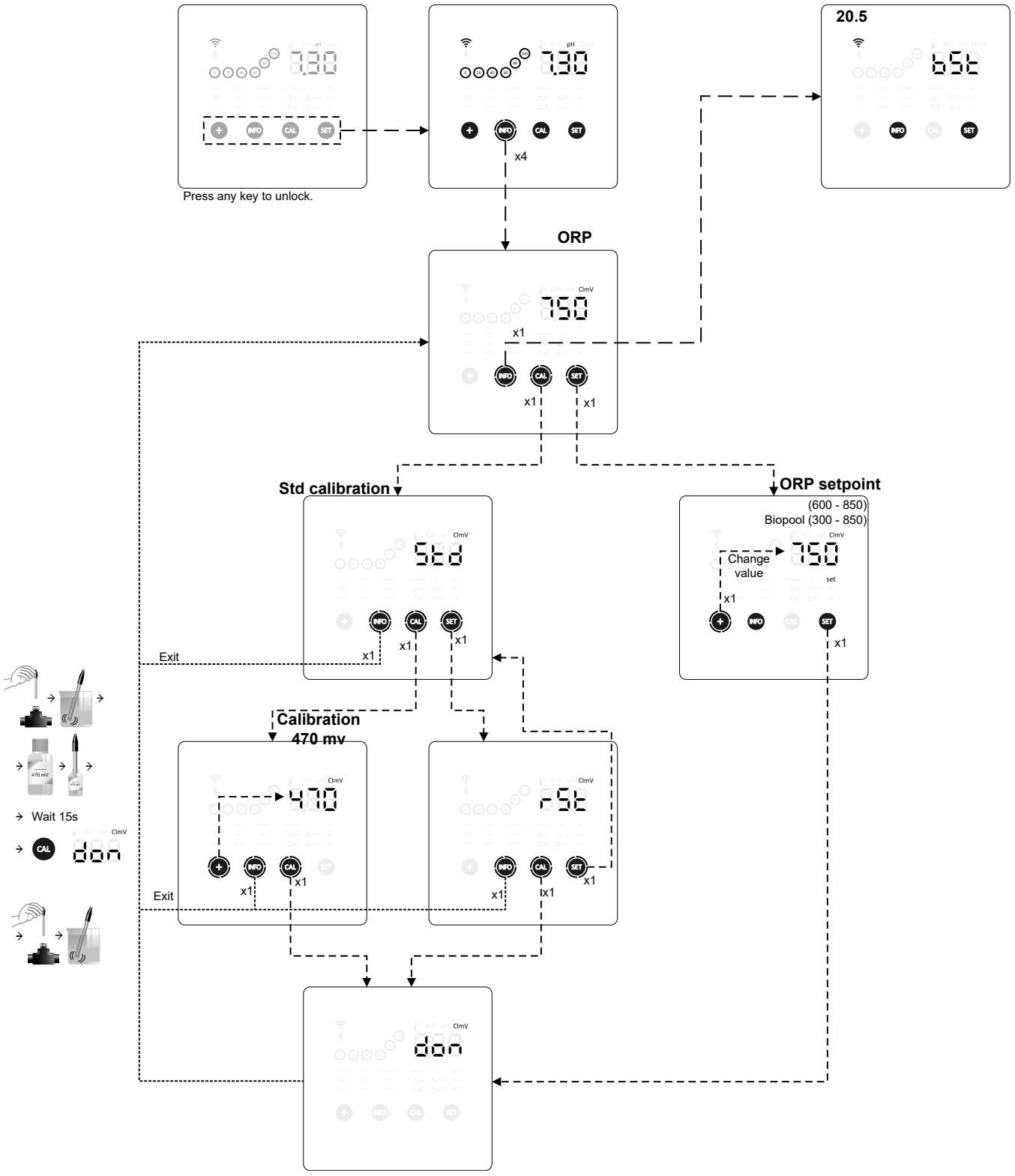
22.2. Salinity menu (g/L): Current measurement, calibration and reset.



22.3. pH menu: Current measurement, calibrations (Std./ Fast) and reset.

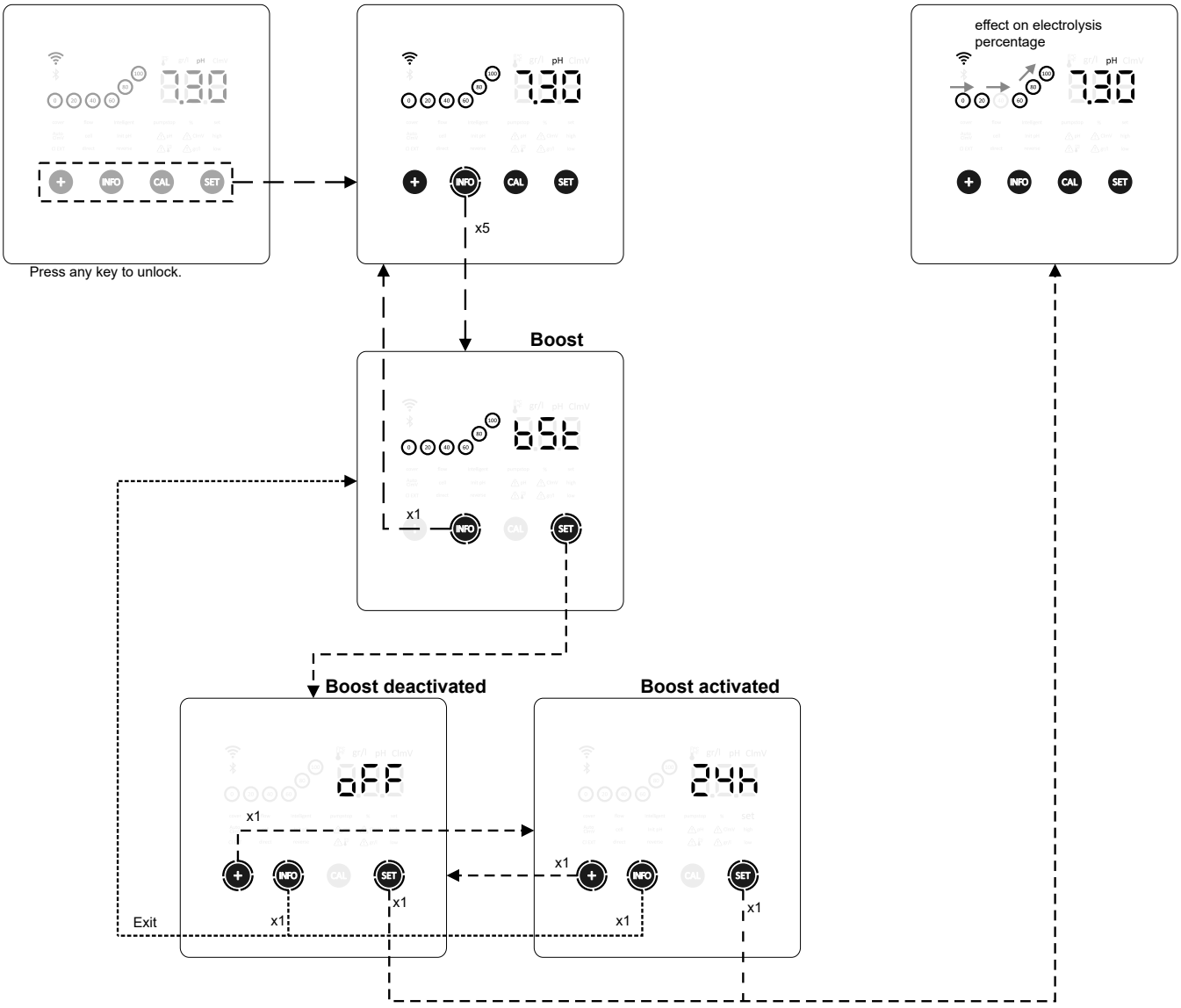


22.4. ORP menu: Current measurement, calibration (Std) and reset.

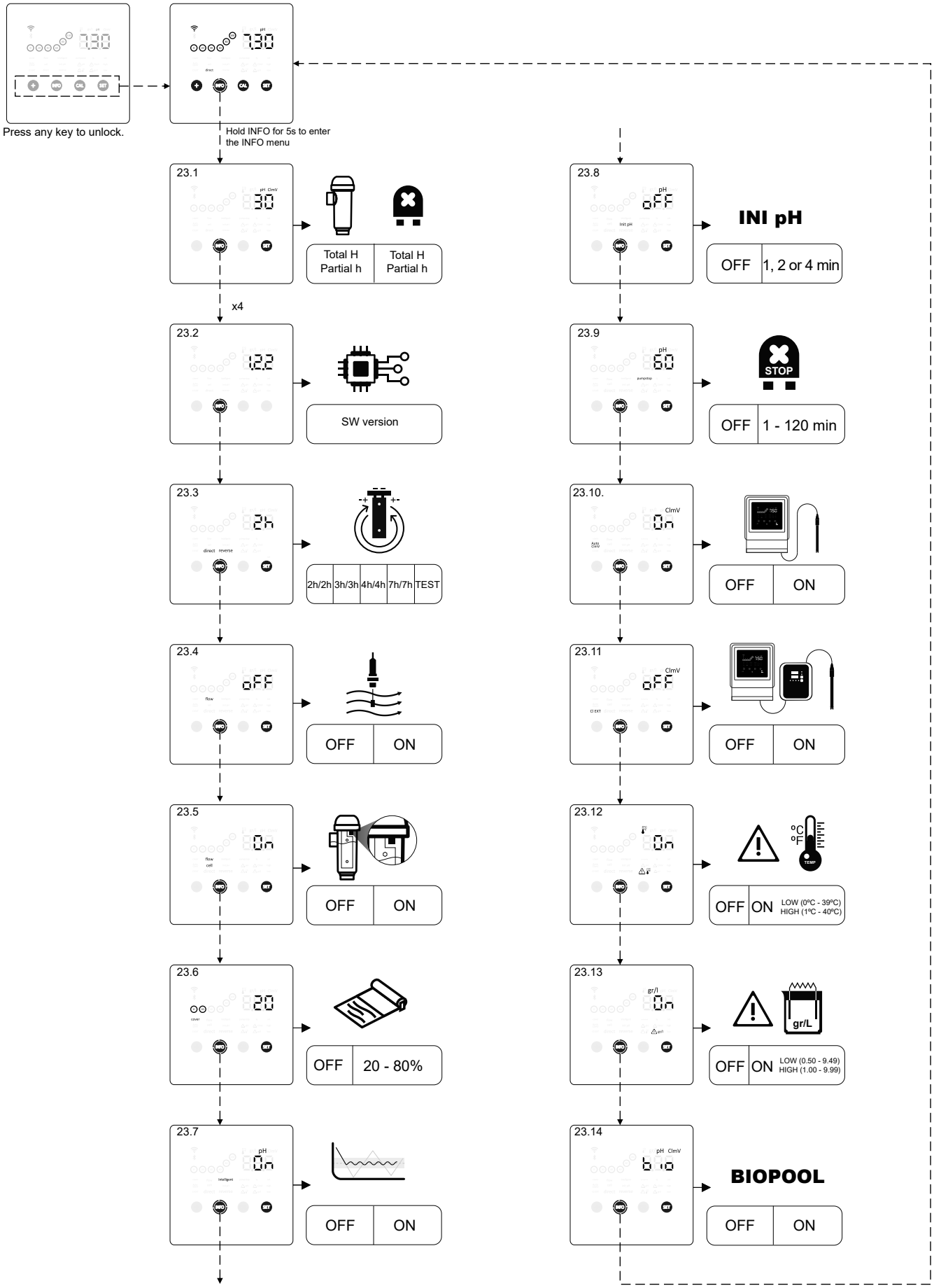


22.5. Boost mode

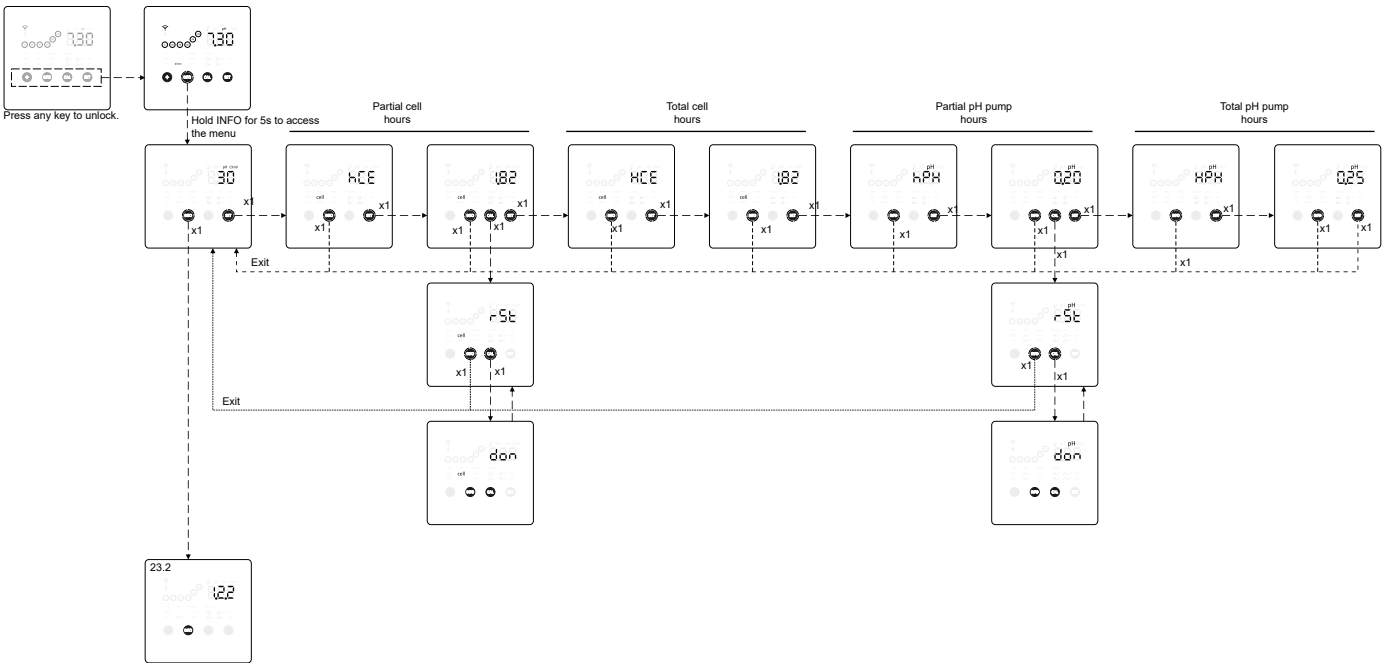
- **Boost mode:** Boost mode allows you to quickly increase the chlorine level in your pool. When the boost mode is activated, the device will operate for 24 consecutive hours at an output level of 100% regardless of the output setpoint configured. After 24 hours, the output level will return to the setpoint value.



23. Configuration menu navigation



23.1. Verification of power, cell hours and pH pump hours



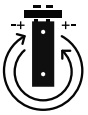
- **Device model:** Displays the device model information (Energy Connect 7/12/21/30/40).
- **Total electrolysis hours:** Displays the electrolysis hours information of the device since its installation. Information displayed in thousands (example: 0.09 = 90 hrs - 1.20 = 1200 hrs - 12.5 = 12500 hrs)
- **Partial electrolysis hours:** Displays the electrolysis hour information of the device since the last hour reset.
- **Total pH pump hours:** Displays the hour information of the pH pump since installation. Information displayed in thousands (example: 0.05 = 50 hrs - 0.60 = 600 hrs)
- **Partial electrolysis hours:** Displays the hour information of the pH pump since the last hour reset.

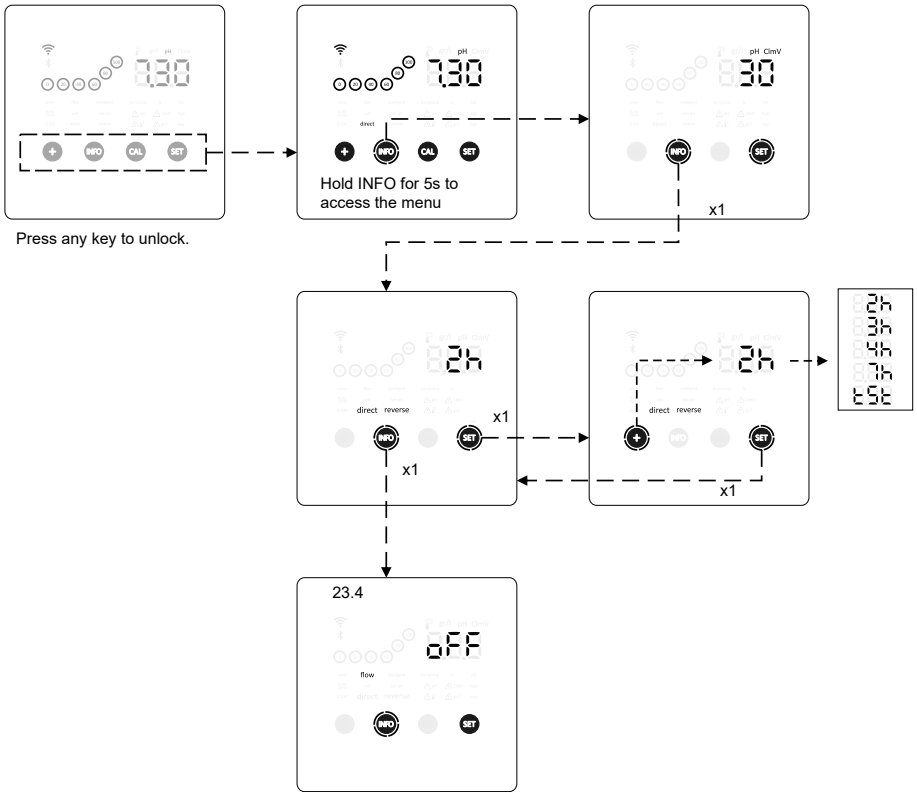
* pH pump hours information only available in Energy Connect scalable version with pH Kit

23.2. SW version information

- SW version: Displays the version number of the software installed on the device.

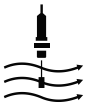
23.3. Polarity inversion (2h / 3h / 4h / 7h / Test)

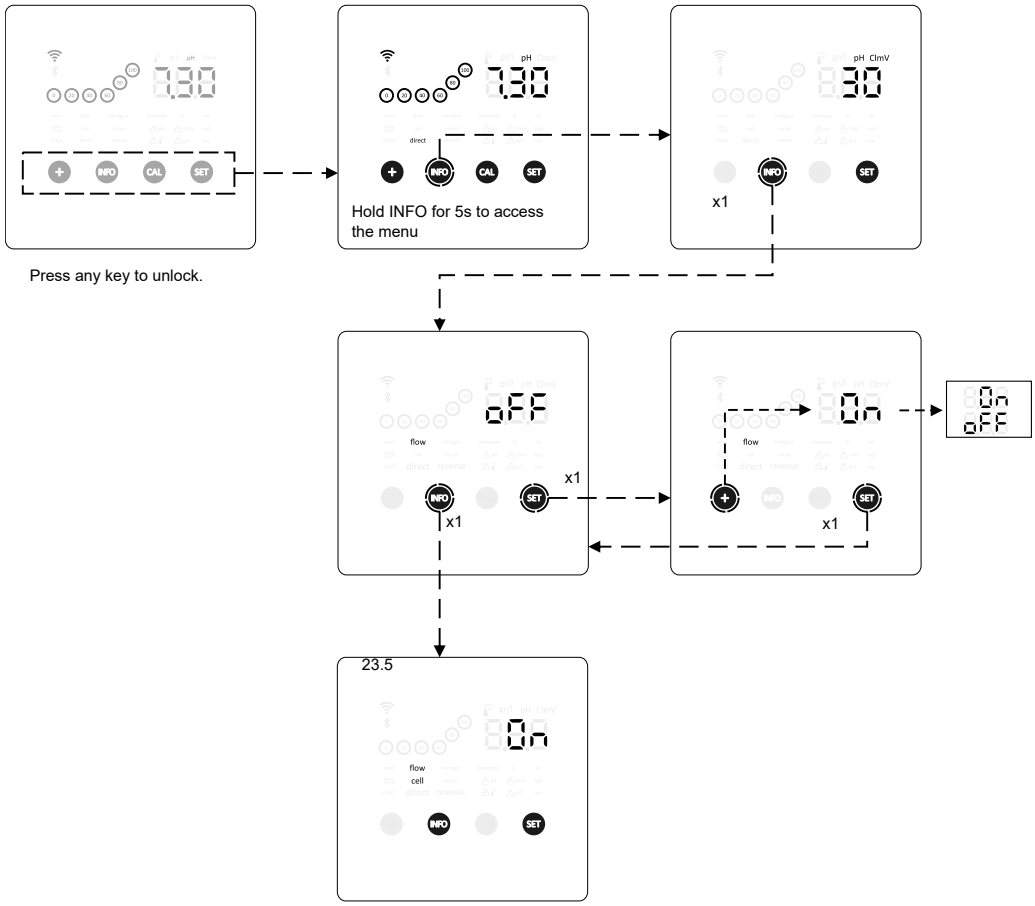




23.4. Flow sensor

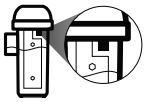
- By activating this function, the device will stop chlorine output when no flow is detected by the sensor.

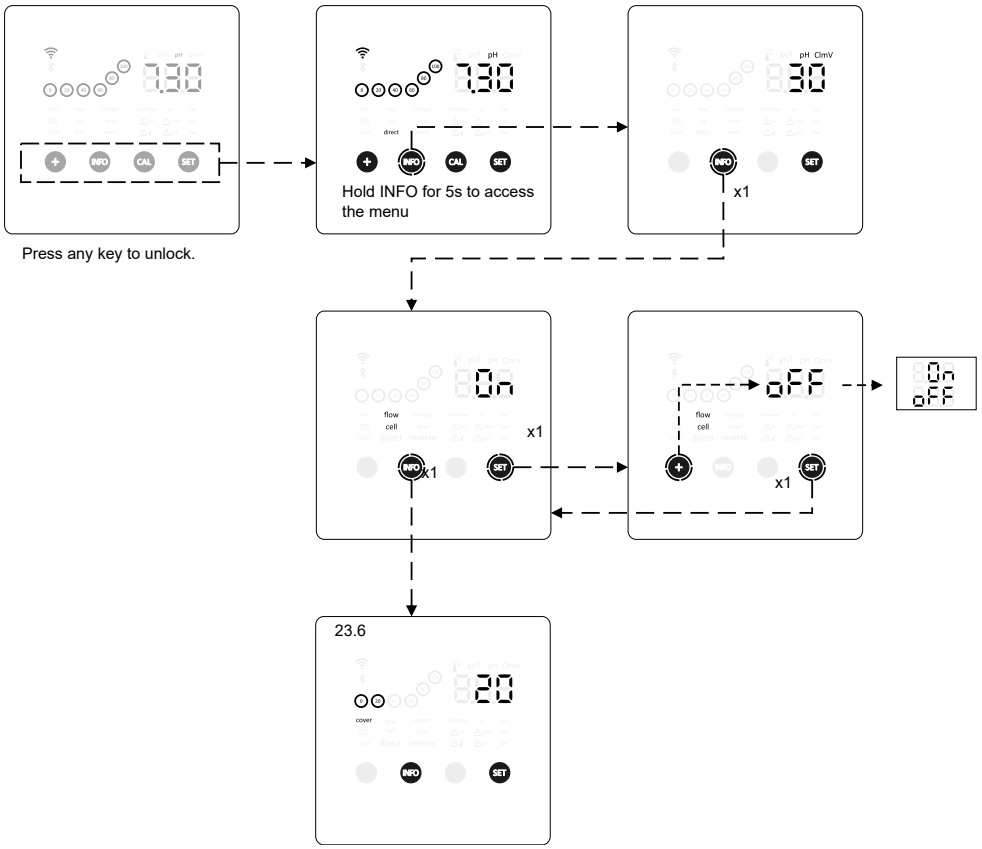




23.5. Cell flow sensor (flow gas)

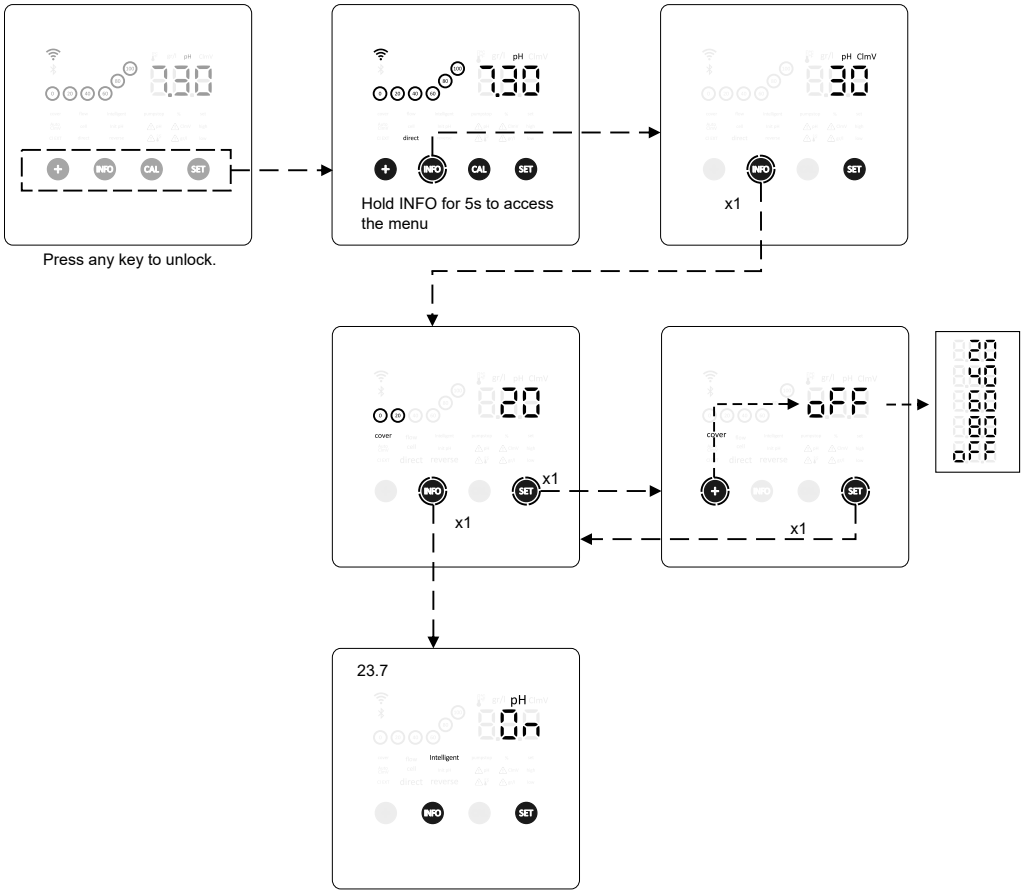
- The flow detector system (gas detector) is activated in the event of zero or very low recirculation (flow) of water through the cell. Non-evacuation of the electrolysis gas generates a bubble that electrically isolates the auxiliary electrode (electronic detection). Therefore, when inserting the electrodes into the cell, the gas detector (auxiliary electrode) must be placed at the top of the cell.





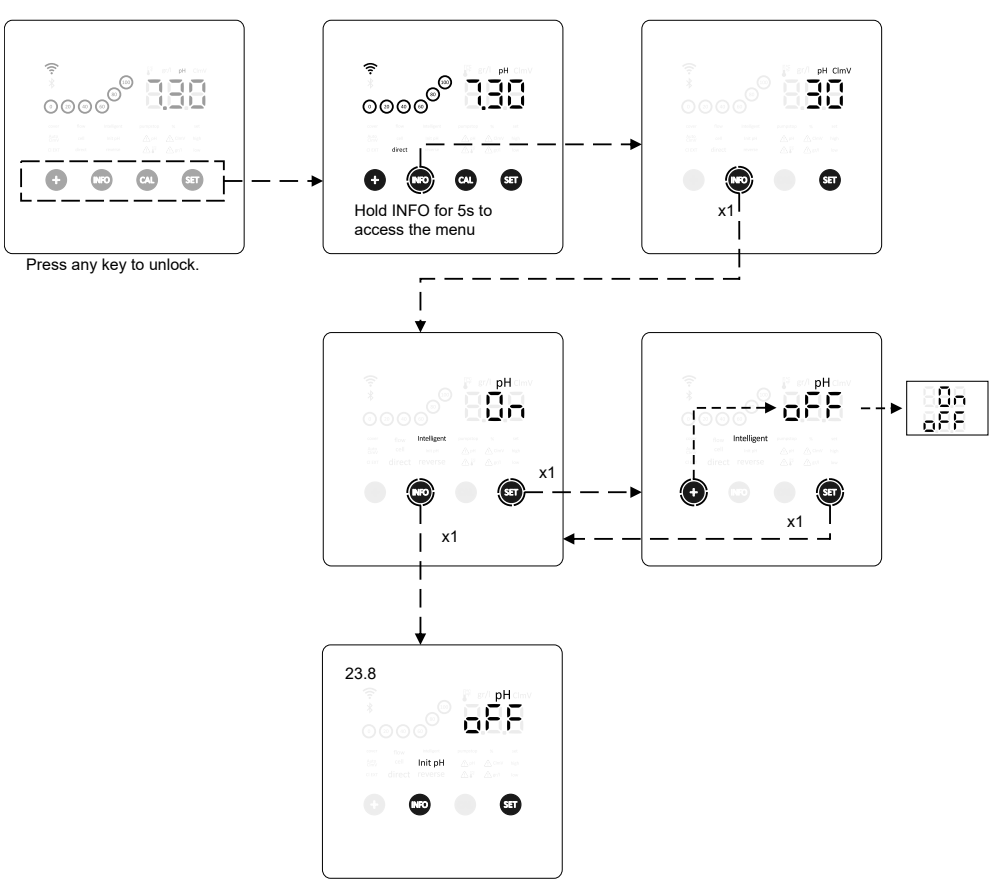
23.6. Cover

- The cover control is designed to automatically adjust the output setpoint of the device when the pool cover is closed.



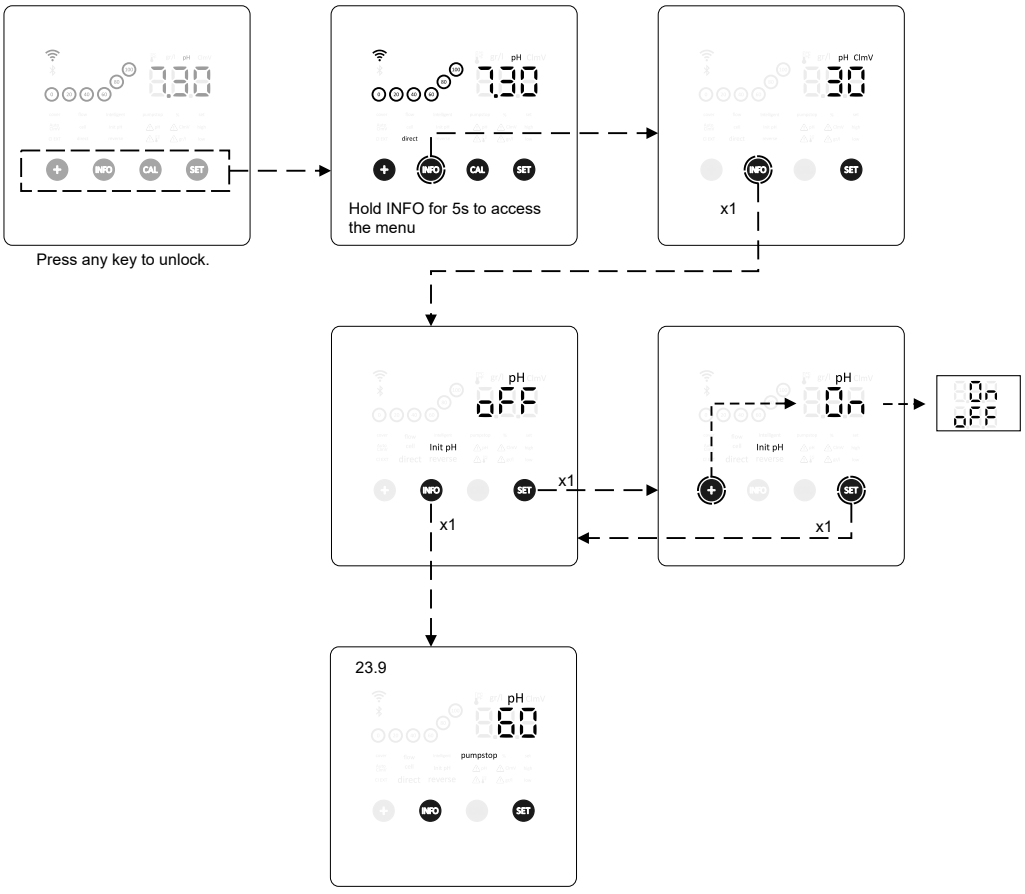
23.7. Smart pH dosing

- This function provides more precise pH regulation. The working cycle of the pump is updated dynamically according to the measurement.



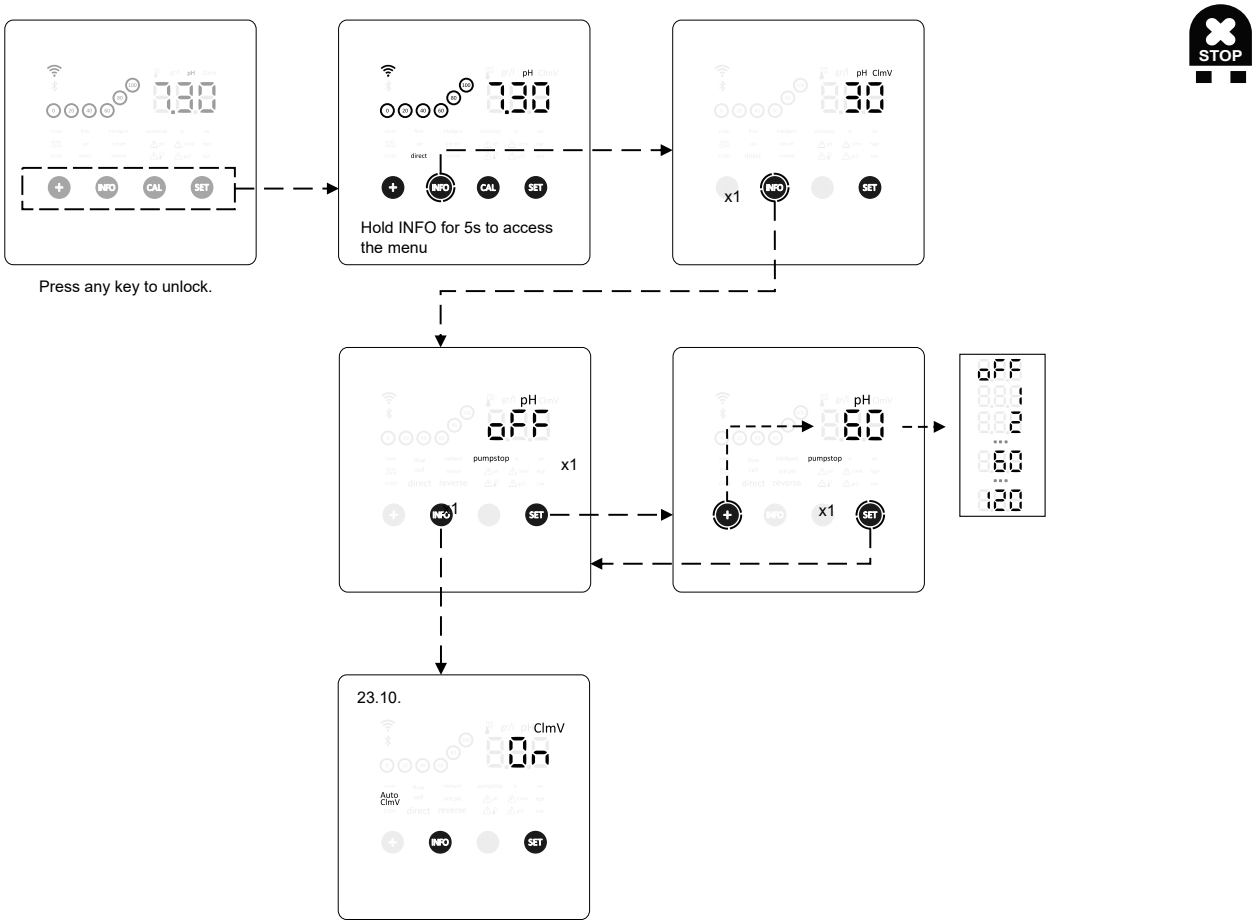
23.8. pH initialisation

- Time for the stabilisation of the pH reading. After switching on the device, a time of 1 min/2 min/4 min can be set to obtain a stable pH reading.



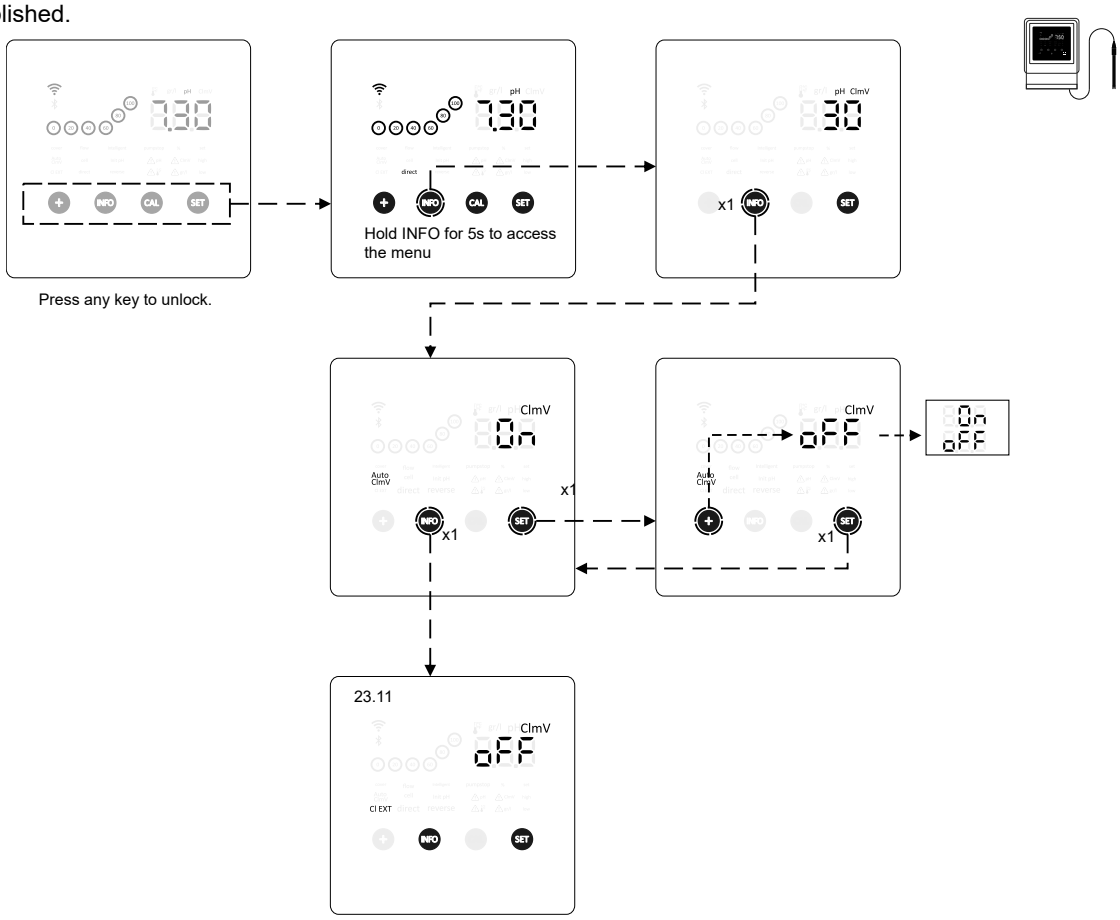
23.9. Pump Stop

- When the function is activated (default), the system stops the dosing pump after a set time in minutes without having reached the pH setpoint. The Pump Stop is configurable between 1 - 120 min. It can also be deactivated, but this is not recommended.



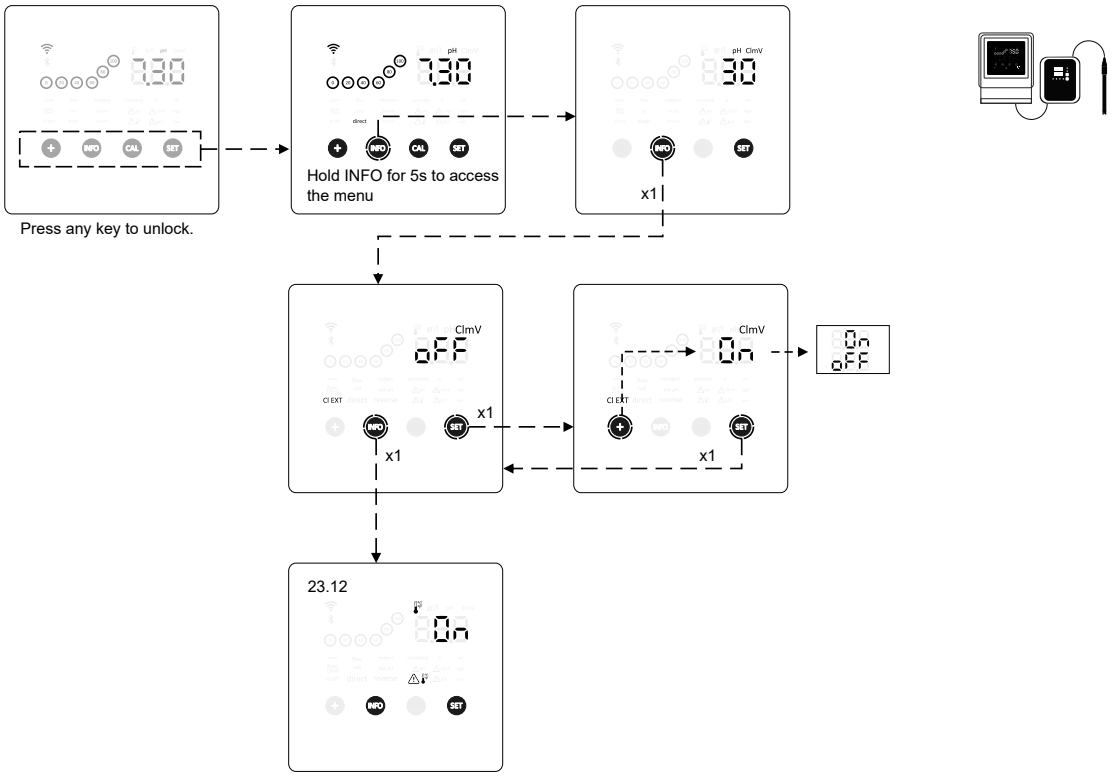
23.10. Internal chlorine control

- Depending on the ORP reading of the device, it will activate/stop the electrolysis to adjust it to the ORP setpoint value previously established.



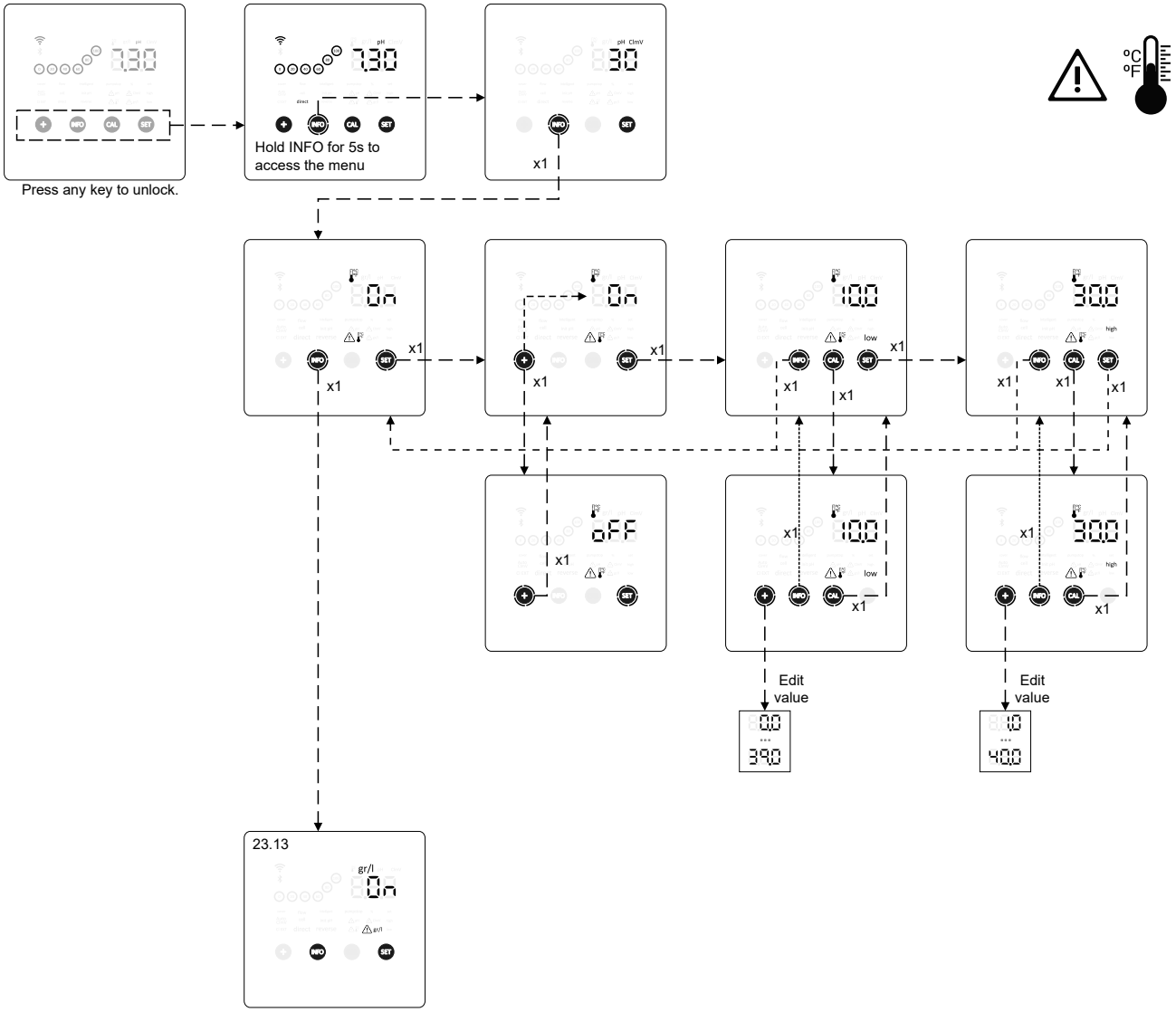
23.11. External chlorine control

- Depending on the chlorine reading sent from an external device, the electrolysis will be activated/stopped.



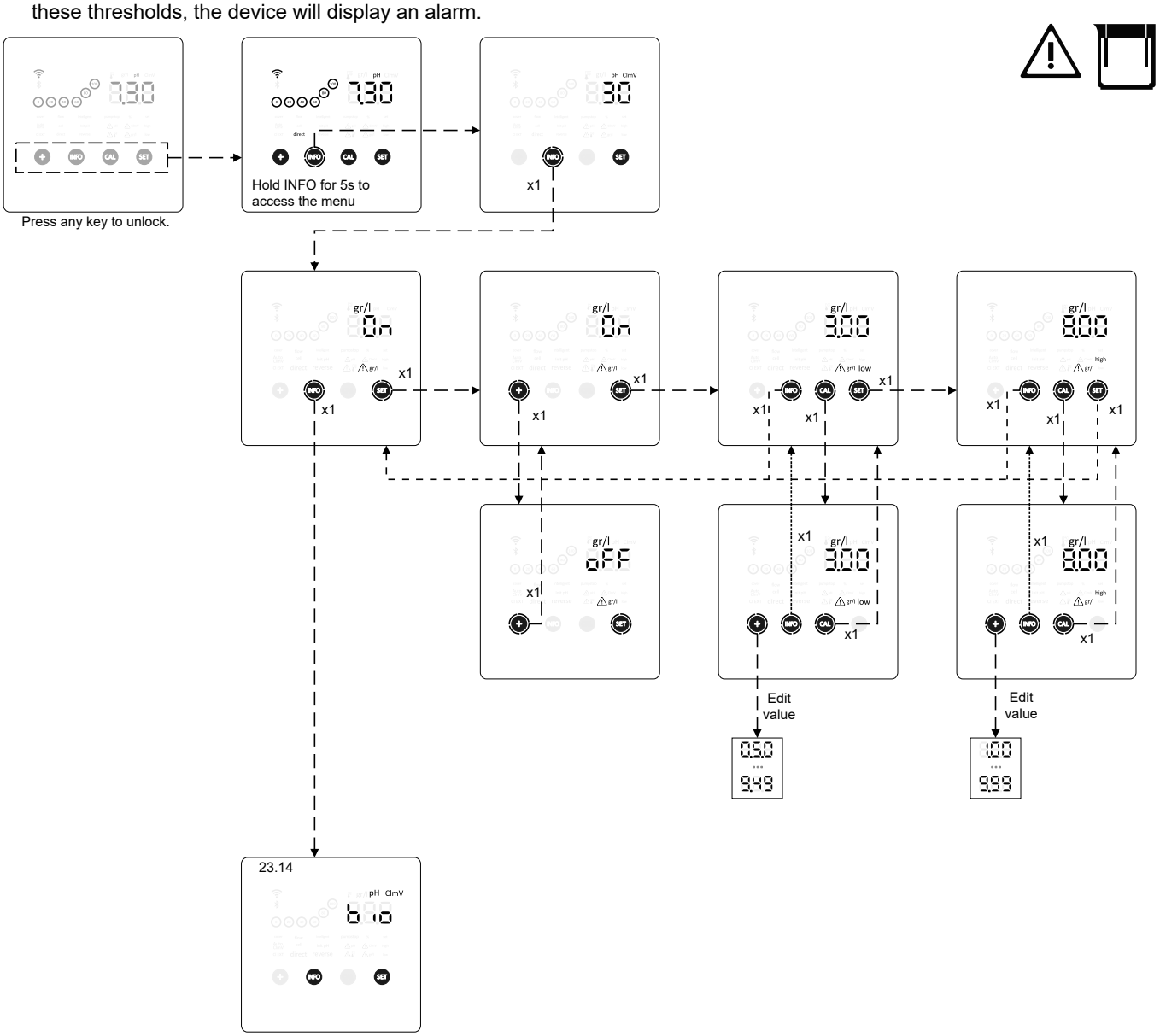
23.12. Temperature alarm configuration

- The device allows you to configure the working temperature range by setting a high and low temperature value. When the temperature is outside these thresholds, the device will display an alarm.



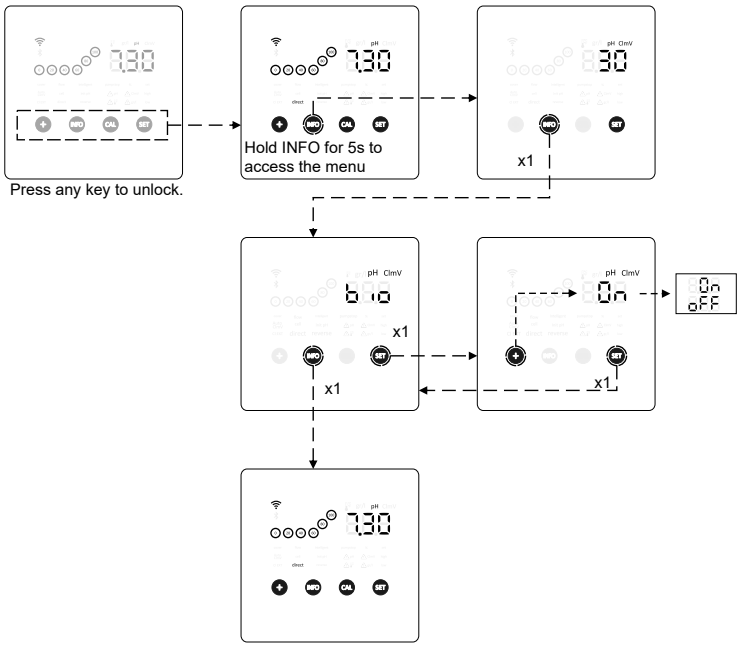
23.13. Salinity alarm configuration g/L

- The device allows you to configure the working range g/L by setting a high and low salinity g/L value. If salinity is outside these thresholds, the device will display an alarm.



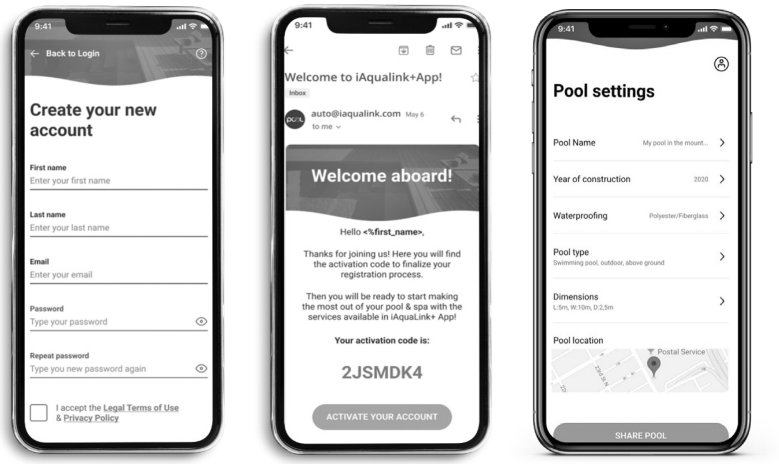
23.14. Biopool

- With biopool activated, the range of pH and ORP settings is extended. (pH: Biopool OFF 7.00 - 7.80 / biopool ON 6.50 - 8.50) (ORP: Biopool OFF 600 - 850 / biopool ON 300 - 850)

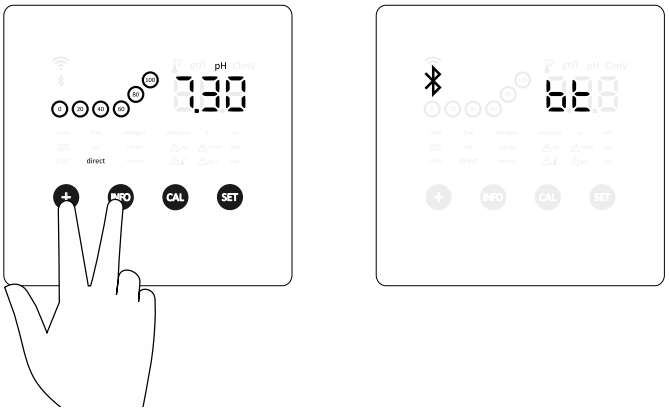


24. Pairing with Fluidra Pool application

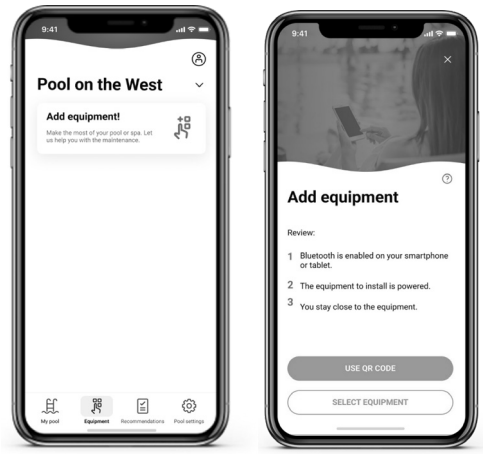
1) Download and install the FLUIDRA POOL app



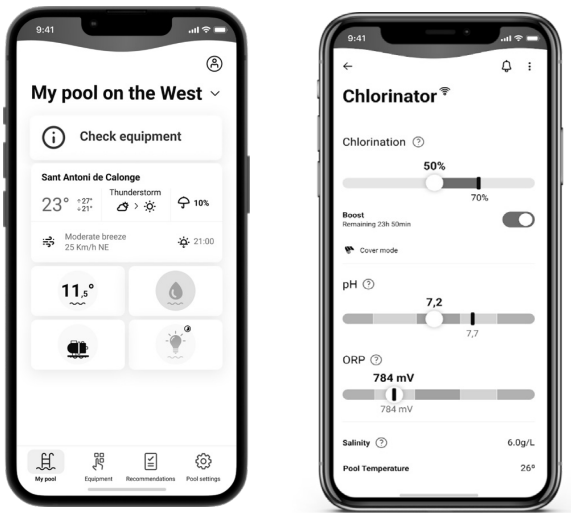
2) Create a user account and define a new installation



3) Configure the device in pairing mode (hold “+” & “INFO” simultaneously for 5 seconds)



4) Tap add device and follow the FLUIDRA POOL instructions



25. Characteristics and technical specifications

Standard operating voltage
230 V AC - 50/60 Hz.
Cable: 3 x 1.0 mm2, leng. 2 m.
MOD. 7 0.2 A
MOD. 12 0.4 A
MOD. 21 0.4 A
MOD. 30 0.75 A
MOD. 40 1 A

Fuse
MOD. 7 1 A T (5x20 mm)
MOD. 12 2 A T (5x20 mm)
MOD. 21 2 A T (5x20 mm)
MOD. 30 3.15 A T (5x20 mm)
MOD. 40 4 A T (5x20 mm)

Output voltage
Cable 3 x 2.5 mm2, leng. 2 m.
MOD. 7 10.5 V DC / 3.5 A
MOD. 12 10.5 V DC / 6.0 A
MOD. 21 23.0 V DC / 3.5 A
MOD. 32 20.0 V DC / 6.0 A
MOD. 42 24.0 V DC / 6.5 A

Output
MOD. 7 6-7 g
MOD. 12 10-12 g
MOD. 21 17-21 g
MOD. 30 24-30 g
MOD. 40 31-40 g

Minimum recirculation flow rate
MOD. 7 2 m^3/h
MOD. 12 3 m^3/h
MOD. 21 5 m^3/h
MOD. 30 6 m^3/h
MOD. 40 8 m^3/h

Number of electrodes
MOD. 7 3
MOD. 12 5
MOD. 21 7
MOD. 30 11
MOD. 40 13

Net weight (including packaging)
MOD. 7 9 kg.
MOD. 12 11 kg.
MOD. 21 13 kg.
MOD. 30 15 kg.
MOD. 40 17 kg.

Control system
- Microprocessor.
- Tactile control buttons and operation indicator LEDs.
- Control I/O: 3 volt-free contact inlets for automatic cover status, ORP / residual chlorine and external flow controller.
- Outlet to cell: output control (10 discrete levels).
- Salinity / Temperature range:
3 - 12 g/L / +15 - 40ºC
- Integrated pH/ORP controller (pH and pH/ORP models only).
- Non-isolated MODBUS
- 220 V / 0.5 A outlet for pH pump control (pH and pH/ORP models only).

Self-cleaning
Automatic, by polarity inversion

Working temperature
From 0ºC to +50ºC
Natural convection cooling

Material
- Control unit
ABS
- Electrolysis cell
Methacrylate derivative Transparent

pH sensor
Body: plastic (blue)
Range 0 - 12 pH
Solid electrolyte

ORP sensor
Body: plastic (red)
Range 0 - 1000 mV
Solid electrolyte

26. Maintenance

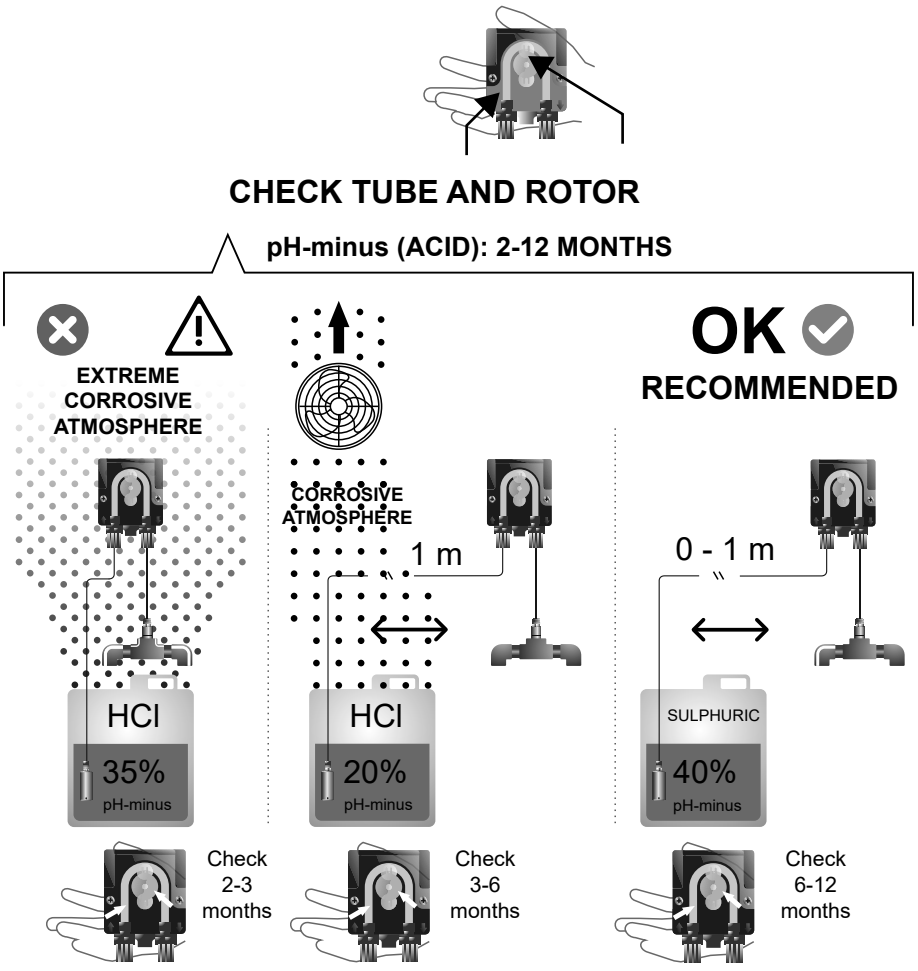
Maintenance of pH/ORP probes

Service 2 - 12 months

1. Check that the sensor membrane remains wet at all times.
2. If the sensor is not to be used for a long period of time, keep it immersed in a preservation solution.
3. When cleaning the sensor, avoid using abrasive materials that could scratch the measuring surface.
4. The sensors are a consumable part and will need to be replaced after a certain period of operation.

pH pump maintenance

Service 3 - 6 months



Electrolysis cell maintenance

The cell must be maintained in good condition to ensure it remains operational for a long time. The salt electrolysis system has an automatic electrode cleaning system that prevents scale buildup on the electrodes, so it is unlikely that there will be any need to clean them. However, if it is necessary to clean the inside of the cell, proceed as follows:

1. Disconnect the 230 V AC power supply from the device.
2. Unscrew the locking nut at the end of the electrode and remove the electrode pack.
3. Use a dilute solution of hydrochloric acid (one part acid to 10 parts water), immersing the electrode pack in the solution for a maximum of 10 minutes.
4. NEVER SCRAPE OR BRUSH THE CELL OR ELECTRODES.

The electrodes of a salt electrolysis system consist of titanium plates coated with a layer of noble metal oxides. The electrolysis processes that take place on their surface cause their progressive wear, so the following aspects should be taken into account in order to optimise the lifetime of the electrodes:

1. Although these are SELF-CLEANING salt electrolysis systems, prolonged operation of the system at pH values above 7.6 in hard water can cause scale deposits to build up on the surface of the electrodes. These deposits will progressively deteriorate the coating, leading to a decrease in its service life.
2. Frequent cleaning/washing of the electrodes (as described above) will shorten their service life.
3. Prolonged operation of the system at salinities below 3 g/L causes premature deterioration of the electrodes.
4. Frequent use of algaecide products with a high copper content can lead to the deposit of copper on the electrodes, gradually damaging the coating. Remember that the best algaecide is chlorine.

Electrodes
The system has a malfunction indication LED for the electrodes of the electrolysis cell. This malfunction will normally be due to electrode passivation once they have reached the end of their service life. However, despite being a self-cleaning system, this malfunction could also be due to excessive scale buildup on the electrodes if the system is used in hard water or water with high pH.

27. Troubleshooting

Message	Solution
FLOW alarm -Gas Sensor (F.E) / Flow Switch (F.S)	The flow alarm will appear due to the cell not being completely flooded (Electrode gas sensor) or due to lack of water flow (optional flow detector). • Check pump, filter and selector valve. Clean if necessary. • Check the flow detector and electrode gas sensor cable connections.
STOP CL alarm	The STOP Cl alarm can appear for one of these 3 reasons: CL EXT = Stopped by an external controller • Check the external ORP regulator (mV) and check the reading. • If you do not have an external regulator, disable the AUTO CL EXT function or production will not start. CL INT = Stopped by the appliance ORP value (mV). • Check the pool chlorine levels with a photometer or test strip. • Clean and calibrate the ORP (mV) sensor if necessary.
ORP(mV) - Low/High Alarm	Low and high alarms appear if the measurement is outside the set safety values. High and low ClmV safety values cannot be modified. Standard mode: ClmV > 855 = HIGH ORP ALARM = Electrolysis stops Biopool mode: ClmV > 855 = HIGH ORP ALARM = Electrolysis stops • Check the pool chlorine levels with a photometer or test strip. • Clean and calibrate the ORP sensor, if necessary. • If you have a low free chlorine value and a high total chlorine value, perform a shock chlorination (with sodium hypochlorite) to reduce chloramines. • If during the calibration process deviation is high, the instrument will report an error and the probe must be replaced. Standard mode: ClmV <600 = LOW ORP ALARM Biopool mode: ClmV <295 = LOW ORP ALARM • Check the pool chlorine levels with a photometer or test strip. • Clean and calibrate the ORP sensor, if necessary. • If the chlorine concentration is high and the mV reading is low, check the cyanuric acid concentration. In case of values above 60 ppm, partially empty the pool. • Increase daily filtration time. • If during the calibration process deviation is high, the instrument will report an error and the probe must be replaced.
Low/High pH Alarm	Low and high alarms appear if the measurement is outside the set safety values. The pH safety values cannot be modified. If the high pH alarm appears, the pH pump will be switched off for safety reasons. Standard mode: pH > 8.5 = HIGH PH ALARM = Pump off Biopool mode: pH > 9.0 = HIGH PH ALARM = Pump off • Check the pool pH levels with a photometer or test strip. • Clean and calibrate the pH sensor if necessary. • If during the calibration process deviation is high, the instrument will report an error and the probe must be replaced. • The pool pH must be manually reduced to 8.45 (standard mode) or 8.95 (biopool mode) for the pump to resume dosing. Standard mode: pH <6.5 = LOW PH ALARM Biopool mode: pH <6.0 = LOW PH ALARM • Check the pool pH levels with a photometer or test strip. • Clean and calibrate the pH sensor if necessary. • If during the calibration process deviation is high, the instrument will report an error and the probe must be replaced.
PUMP-STOP alarm	When the PUMP-STOP FUNCTION is activated (default 60 min), the system stops the dosing pump after a set time without having reached the pH setpoint. • Check the pool pH value with a photometer or test strip. • Clean and calibrate the pH sensor if necessary. • Check and adjust the alkalinity of the water (consult your pool specialist). • Check the pH-minus level of the carboy.
Cell alarm	The cell alarm will appear when the mechanisms detect that the electrode is at the end of its lifetime (passivated). Estimated electrode lifetime = 8,000 - 10,000 h • Replace electrode if necessary.
Low/High TEMPERATURE Sensor Alarm	• The temperature alarm will appear when the temperature values are outside our set values. • When the water temperature is very low, the device will not reach 100% output due to the low conductivity.
Low/High g/L Alarm	• Like the temperature alarm, this alarm will appear when the salt g/L values are outside the set values. • Normally, when the g/L value is too low or too high, it will affect the output of the appliance due to the conductivity of the water.

28. Warranty

GENERAL ASPECTS

- In accordance with these provisions, the seller guarantees that the product corresponding to this warranty does not present any lack of conformity at the time of its delivery.
- The warranty period of the product is determined by the legal provisions of the country in which the product has been purchased by the consumer.
- The warranty period will be calculated from the moment of its delivery to the buyer.

Particular warranties:

* The electrodes are covered by a 2 YEAR warranty or 8,000 hours (whichever comes first), without extensions.
* The pH/ORP sensors are covered by a 1 YEAR warranty without extensions.
* These particular warranty periods are especially subject to the limitations set out in the “LIMITATIONS” section.

- If a lack of conformity of the Product occurs and the buyer notifies the seller during the Warranty Period, the seller must repair or replace the Product at his own cost at the place he deems appropriate, unless this is impossible or disproportionate.
- When the Product cannot be repaired or replaced, the buyer may request a proportional reduction of the price or, if the lack of conformity is sufficiently important, the resolution of the sales contract.
- The parts replaced or repaired under this warranty will not extend the term of the original Product's warranty, although they will have their own warranty.
- For the effectiveness of this warranty, the buyer must prove the date of purchase and delivery of the Product.
- When more than six months have elapsed since the delivery of the Product to the buyer and the latter alleges a lack of conformity of the former, the buyer must prove the origin and existence of the alleged defect.
- This Warranty Certificate does not limit or prejudice the rights of consumers under mandatory national standards.

PARTICULAR CONDITIONS

- For the effectiveness of this warranty, the buyer must strictly follow the Manufacturer's instructions included in the documentation accompanying the Product, when this is applicable according to the range and model of the Product.
- When a calendar is specified for the replacement, maintenance or cleaning of certain parts or components of the Product, the warranty will only be valid when this calendar has been correctly followed.

LIMITATIONS

- This warranty will only apply to those sales made to consumers, understanding by "consumer", that person who acquires the Product for purposes that do not fall within the scope of their professional activity.
- No warranty is granted regarding the normal wear and tear of the product, nor regarding the parts, components and/or consumable or fungible materials.
- The warranty does not cover those cases in which the Product: (1) has been subject to incorrect treatment; (2) has been inspected, repaired, maintained or handled by an unauthorized person; (3) has been repaired or maintained with non-original parts or (4) has been installed or started up incorrectly.
- When the lack of conformity of the Product is a consequence of an incorrect installation or start-up, this warranty will only respond when such installation or start-up is included in the purchase-sale contract of the Product and has been carried out by the seller or under his responsibility.
- Damage or failures of the product due to any of the following causes:

1. System programming and/or inadequate calibration of pH/ORP sensors by the user.
2. Use of explicitly unauthorized chemicals.
3. Exposure to corrosive environments and/or temperatures below 0ºC or above 50ºC.
4. Operating at a pH higher than 7,6.
5. Operating at salinities lower than 3 g/L of sodium chloride and/or temperatures below 15 ºC or above 40 ºC.

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EU DECLARATION OF CONFORMITY

TLC2-XY-AB-P-Z CE

I.D. ELECTROQUÍMICA, S.L., DECLARES under its own responsibility that the products:

ID number:	**IDEGI230301.01**
Description:	**Disinfection equipment for swimming pools**
Product Code:	**TLC2-XY-AB-P-Z**

Where:

X - case type	could be H or V
Y - case colour	could be from A to Z
A - PBA driver pH	could be Ø, D, T or L
B - PBA driver ORP	could be Ø, D, T or L
P - pump	could be 0 or 1
Z - ratings	could be P1, P2, P3, P4 or P5

Ø Means that the field may be absent.

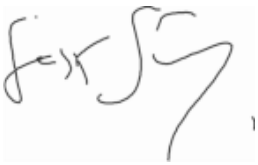
Conforms to the following harmonized standards or specifications:

- **EN 60335-1:2012+AC:2014+A11:2014+A13:2017+A1:2019+A14:2019+ A2:2019+A15:2021**
- **EN 62233:2008+AC:2008**
- **EN IEC 55014-1:2021**
- **EN 55014-2:2021**
- **EN IEC 61000-3-2:2019+A1:2021**
- **EN 61000-3-3:2013+A1:2019+A2:2021**
- **ETSI EN 301 489-17 V3.2.4**

And, therefore answers to the essential requirements of the European Directives:

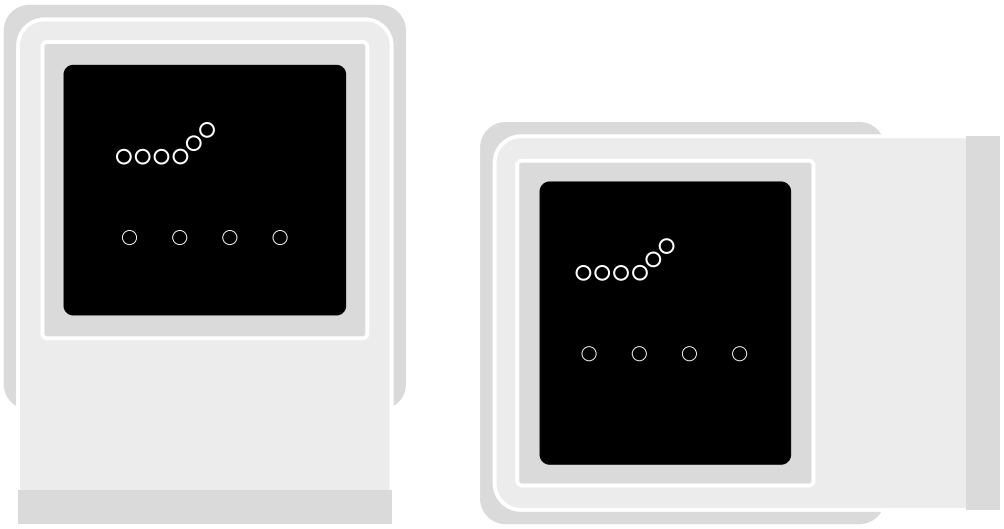
- **2014/35/EU** - Low Voltage directive.
- **2014/30/EU** - Electromagnetic Compatibility directive.
- **2014/53/EU** - RED
- **2015/863/EU** - Amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances.

Alicante, 23/10/2023



Gaspar Sánchez Cano
General Manager
I.D. Electroquímica, S.L.

Rev. 1.0



CE

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