Control and dosage equipment
STATION

INSTALLATION AND USER GUIDE

Portable color display (TFT)

Worldwide remote control

WIFI and MODBUS

Upgrade possible

Controls filtration, lighting

BRILIX
SWIMMING POOL EQUIPMENT

VERZE 15/09/2022 / REVIZE: 30. 01. 2024

EN

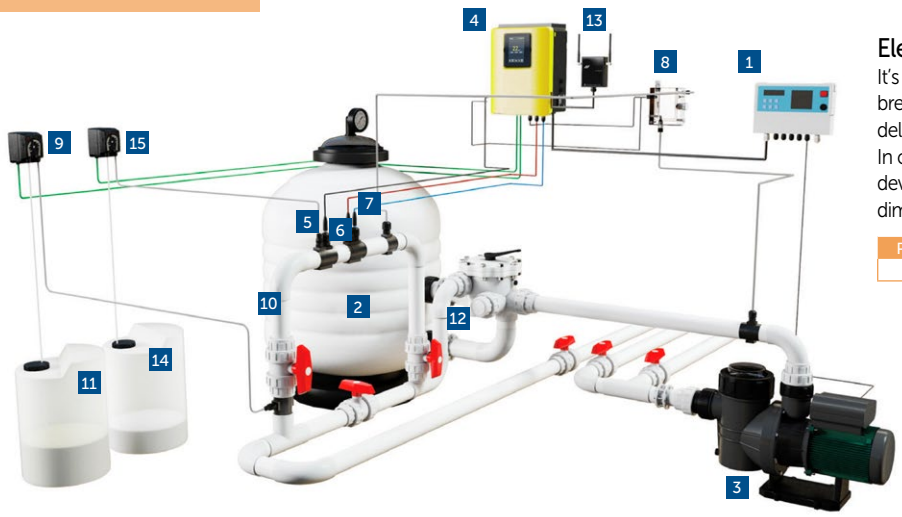
1. Description

Station is a complete pool controller which doses pool-chemicals in order to maintain the pool water in perfect conditions. The base product controls the temperature, filtration periods, pool lighting and 4 additional relays. The base product is upgraded by adding the measurement and control of up to 4 water parameters.

Electronic box

Item	Product description
1.	RCA flow detector
2.	Fuse for device 3,15 A
3.	Fuse for device 250 mA

2. System installation



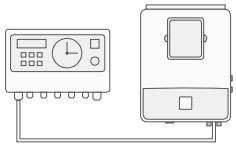
Electrical consumption

It's recommended to use a time delay circuit breaker of 25 A for domestic devices and a time delay circuit breaker of 40 A for industrial devices. In case of sharing the power supply with other devices please consult a technician in order to dimension a correct installation.

Product	Max. consumption
UV 16	230W

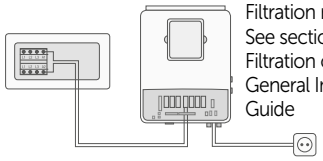
Item	Product description
1.	Filtration pump timer *
2.	Silex / glass / diatom filter
3.	Recirculation pump
4.	Electronic box
5.	Conductivity probe (optional - for models with conductivity control)
6.	pH probe (for models with pH control)
7.	redoX probe (for models with redoX control)
8.	Free chlorine control
9.	Dosing pumps for pool chemicals
10.	Acid injector (optional - for models with pH control)
11.	Container with pool chemicals
12.	Other pool equipment - not supplied with unit
13.	Module RF or RF/WIFI or WIFI - not supplied with unit
14.	Container with pH minus
15.	Dosing pump for pH regulation

* Filtration control by external timer



Filtration mode: "Manual/ON"

* Filtration control by internal timer



Filtration mode: See section 5 - Filtration of the General Installation Guide

Relay FILTER PUMP 110-230 V

Maintenance

3.

First days of maintenance

During the first 10-15 days your pool system will require more attention and the following care:

1 Make sure the pH remains on the ideal level (6,8–7,2). If the pH is unusually unstable and uses a lot of acid check the alkalinity (recommended levels between 80–120 ppm).
2 The pool must be vacuumed and the skimmers cleaned whenever necessary to ensure perfect water conditions.

General maintenance

1 DOSING PUMPS: Check regularly to ensure that the container contains liquid to prevent the dosing pump of running dry.
2 pH PROBES / redoX / CONDUCTIVITY: Probes must be cleaned whenever necessary (check every 5-6 months). To clean the probe insert in distilled water (clear liquid). After each cleaning the probes must be calibrated. Also: the probes must be kept wet (if stored). During storage, it is necessary to keep the probes in proper KCl solution for their regeneration.

Fortnightly checks

Free chlorine:	0,3–1,5 ppm
pH:	6,8–7,2

Monthly checks

Total alkalinity (tac) pH:	80–120 ppm
Cyanuric acid:	4–20 ppm

Troubleshooting

4.

Blank display

- Check if ON/OFF switch is illuminated.
- Check the connection wire between display and motherboard.
- Check fuse of the device 3.15 A – it could have tripped due to overload.
- Check the power supply 110V/60Hz – 230V/50Hz.
- If problem persists contact TECHNICAL SERVICE

White flakes in the water

- The water is excessively hard and it is unbalanced.
- Balance the water and check the cell, proceeding to clean it if necessary.
- Put 1 small bag of flocculant in the skimmer and recirculate 24 hours.

Alarm AL3 and pH dosing pump stopped

- The maximum dosing time (standard 200 min.) is accomplished and the acid dosing pump stops in order to avoid the acidification of the water.
- To delete the message and to restart the metering press ESC ( ). Do the following verifications in order to preclude errors on the device: Verify if the pH probe reading is correct (if not, calibrate the probe or substitute it with a new one); Verify if the acid/base deposit is full and if the dosing pump is working correctly; Verify the variable speed of the dosing pump.

WARNING

Keep chemical levels in pool as instructed in this manual. **Feed pumps operate using NaClO and H_2SO_4 solutions which, if reacting together, release chlorine, which is toxic to humans. Take extra care. Handle chemicals only while wearing protective equipment, and avoid mixing these two chemicals under any circumstances. If you place the dispenser in the technology shaft, it is recommended to ventilate the shaft as a precaution before each entry.**

EARTHING

All metallic components in the pool such as lamps, ladders, heat exchangers, drains or similar elements within 3 m from the pool (10 feet) must be connected to an earth below 37 Ohms. If using heat exchangers, we recommend them to be made of titanium.

SECURITY

To avoid accidents, children should not handle this product unless supervised by an adult. Children should be supervised at all times when in or near a spa, pool or jacuzzi.

The dosing pumps are colour coded so that the dosing chemistry matches the colours of the pH and redox probes. Use the dosing pump marked blue exclusively for dosing sulfuric acid and use the dosing pump marked yellow exclusively for dosing sodium hypochlorite. Never interchange the hoses feeding the chemicals to the dosing pump to avoid mixing of the chemicals and the release of chlorine gas.

5. Electronic box

TOTAL POOL CONTROL			+4	°C	pH	rH	Cl_2
Complete pool control	Filtration pump control	Light control	Control of 4 additional machines	Temperature control	PH-management	REDOX-management	Free chlorine management

Description	SAL 16
Max. production Cl_2/h	-
Salt concentration	-
Display	2,8'' TFT mobile (20 m) color display (5 languages)
Power supply	110–230 V 50/60 Hz
Outlet	-
Maximum consumption	40 W
Dimensions	270 x 220 x 115 mm
Electronic box	Fireproof plastic ABS black
Front cover	Plastic ABS orange
Electronic	Microprocessor 32 bit
Ventilation	-
Working hours recording	Yes – accessible by client
Alarms	pH dosing / pH max. dosing time / memory error
Communication	MODBUS / WIFI
110–230 V output control (3 outputs)	Acid pump / Relay AUX 1 / Relay AUX 2
Potential-free output control (4 outputs)	Filtration / Lighting / Heating (AUX 4) / Relay AUX 3
Inlets	2 analogue and configurable inlet signals

6. Automatic controls

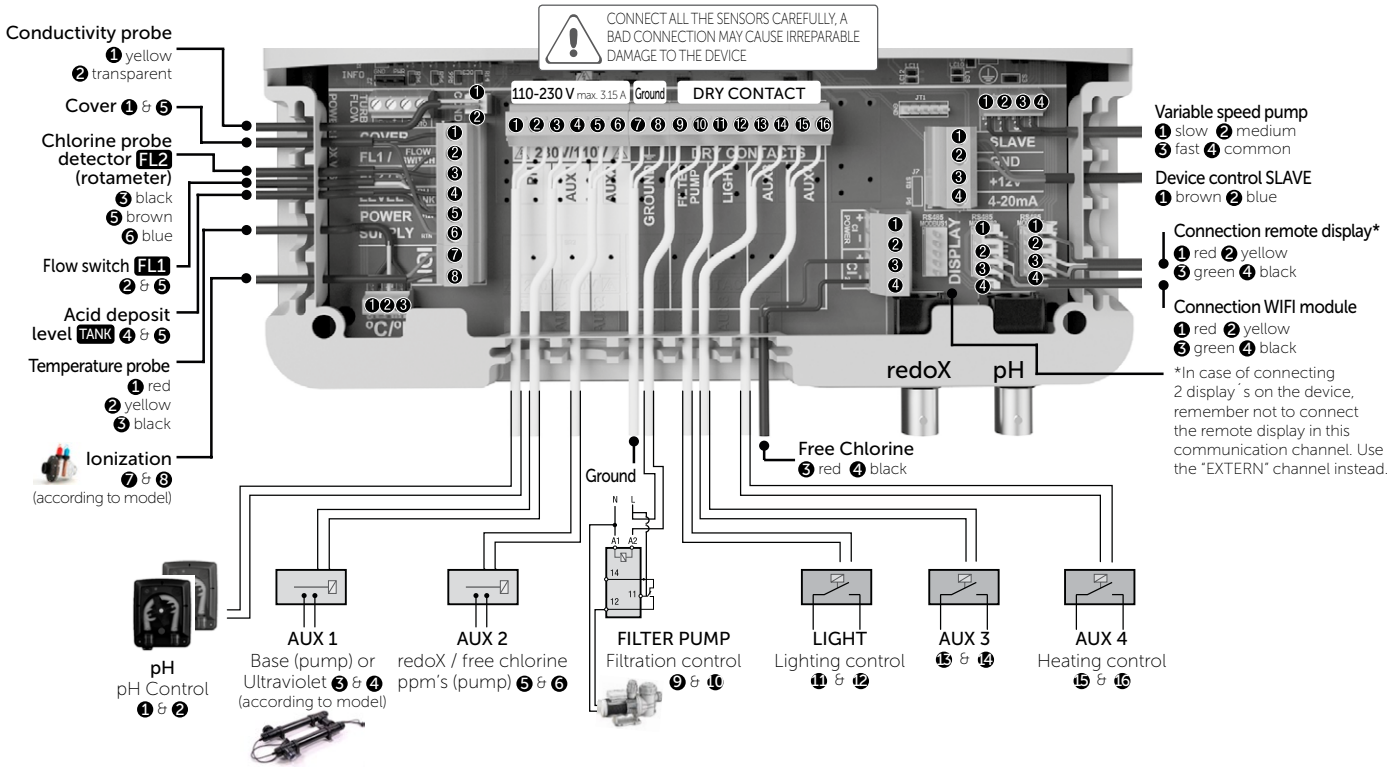
Description	pH	Redox	Free chlorine	Conductivity	Temperature
Measuring range	0-12 pH	0-1000 mV	0-10 ppm	0-20,000 MS	0-100°C
Measuring precision	0,1 pH	1-3 mV	0,10 ppm	10 MS / 100 MS	1°C
Material	Ag/Cl gel	Gold disc	Copper / gold		Stainless steel
Probe holder	ABS 50/63 mm		Transparent methacrylate	ABS 50/63 mm	
Supplementary equipment			Includes 2 m of flexible tube/valve		
Cable	2 m coax		2 m		
Plug	BNC with protection	BNC with protection	Inductive sensor connectors / BNC	Connectors	Connectors

Dimensions

7.

8. Control unit wiring diagram

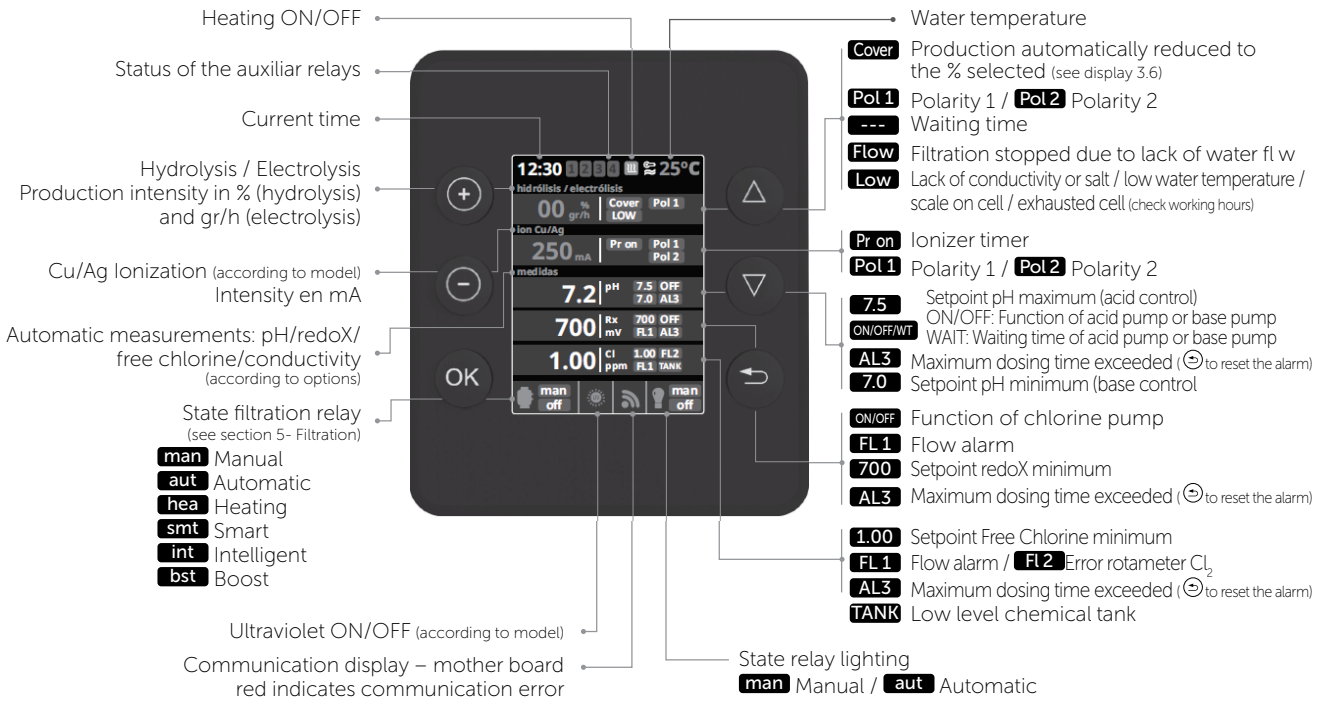
Water treatment system for swimming pools.
This installation and user manual is a general guide for all Salt water treatment models supplied by spol. Albixon a.s. Some of the features and settings listed in this guide are valid only for applicable models that support these features or for optional equipment that is not included in the basic package.



Main screen

9.

Button display



PLUS key
Modify value/selection

MINUS key
Modify value/selection

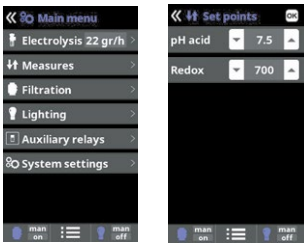
OK key
Select/confir

UP key
Navigation up

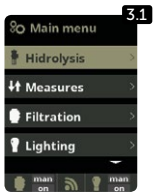
DOWN key
Navigation down

RETURN/ESCAPE key

Touch display

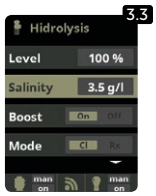


10. Hydrolysis / electrolysis (according to model)

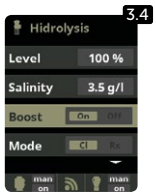


3.1 Hydrolysis/Electrolysis: Programming of hydrolysis or electrolysis functions (according to model).

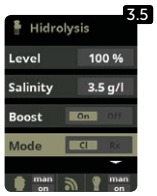
3.2 Level: Electrolysis - Desired production of chlorine (gr/h). Hydrolysis - Desired disinfection production (%).



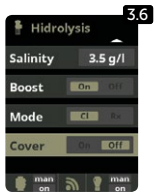
3.3 Salinity: Measuring gr/l of salt in water. See section 9-Salinity.



3.4 Boost: Filtration during 24h at max intensity. Automatic return to programmed filtration mode. During the boost period the redoX control can be deactivated.



3.5 Mode: If the device has Free Chlorine and redoX probes, choose the parameter that controls the cell's chlorine generation.



3.6 Cover: connection of automatic cover. See section 10-Cover.

11. Measures

Setpoints

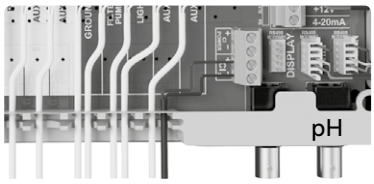
4.1 Measures: Adjustment of setpoints and measuring probes.
4.2 Setpoints for each measurement.
4.3 Setpoints settings: Ideal setpoints for each of the parameters. The default values are:
pH: 6,8-7,2; redoX: 600-800; Free Chlorine: 0,3-1,5 mg/l
Conductivity: 1500-2500 for Hydrolysis and 7000-10000 for Electrolysis.

pH Calibration

Optional pH control
Metering and control of the pH of the water

4.4 Calibration of pH probe: Recommended every month during usage season.
4.5 Calibration with buffers (buffer solutions pH7 / pH10 / neutral): Follow the instructions in 7 steps that appear in the display (screen **4.6** corresponds to step 1).

The option Reset Cal clears the calibrations made previously.



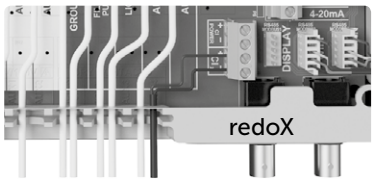
4.7 Manual calibration: Allows to adjust the probes at 1 point (without buffers) – only recommended to adjust small deviation in the readings.
4.8 Without removing the probe from the water, use the plus/minus keys to adjust the reading so it matches with your reference value (photometer or other measurement).

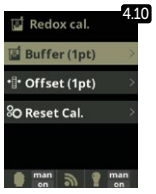
redoX Calibration

The redoX value advises us of the oxidation/reduction potential and is used to determine the level of water sterilization. The parameters or setpoints are the minimum/maximum accepted redoX levels before the titanium cell is connected/disconnected. Adjusting the ideal redoX level (setpoint) is the last step in the system start up sequence. To find the optimum redoX levels for your pool foll w these steps:

1. Connect the pool filtration system (the salt in the pool must be adequately dissolved).
2. Add chlorine to the pool till a level of 0,3–1,5 ppm is achieved (approx. 0,3–1,5 ppm/m^3 of water). pH levels should be between 6,8–7,2.
3. After 30 min. test the free chlorine levels in the pool (manual test kit DPD1) if the free chlorine level is between 0,3-1,5 mg/l. Look at the redoX screen and memorize this level as the setpoint to CONNECT/DISCONNECT the electrolysis/hydrolysis cell.
4. The next day check free chlorine levels (manual test kit DPD1) and redoX. Raise/lower setpoint if necessary.
5. Remember to check the redoX set-point every 2-3 month and/or if the water parameters change (pH/temperature/conductivity).

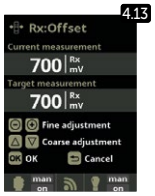
Optional redoX control
Metering and control of the redoX as check value of the free chlorine.





4.9 Calibration of the redoX probe: Recommended every 2 months during usage season.
4.10 Calibration with buffer (buffer solution 465 mV): Follow the instructions in 4 steps that appear in the display (screen **4.11** corresponds to step 1).

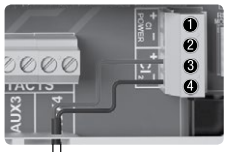
The option Reset Cal clears the calibrations made previously.



4.12 Manual calibration: Allows to adjust the probes at 1 point (without buffers) – only recommended to adjust small deviation in the readings.
4.13 Without removing the probe from the water, use the plus/minus keys to adjust the reading so it matches with your reference value (photometer or other measurement).

Free Chlorine calibration

Optional Free Chlorine control
Metering and control in ppm of the free chlorine of the water.

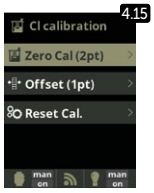


Free Chlorine probe
❸ red ❹ black

Chlorine probe detector
Fl 2 (rotameter)

❸ black
❺ brown
❻ blue

In case of using a Variable Speed Pump, calibrate the probe using the most common filtration speed.



4.14 Calibration of the Free Chlorine probe: Recommended every month during usage season.
4.15 Calibration with buffer (photometer DPD1): Follow the instructions in 6 steps that appear in the display.
4.16 Step 1 of 6 - Calibrate Cl at 0 ppm (offset): Close the water flow through the probe and wait until the reading is less than 0,10 ppm. Wait between 5 to 60 min. Press OK when the reading is close to 0.

The option Reset Cal clears the calibrations made previously.

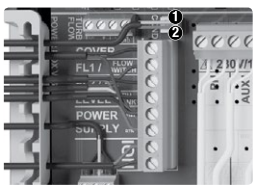
4.17 Step 3 of 6 - Calibrate Cl: Open the water flow until achieving 80-100 liters/hour. Wait until obtaining a stable reading of ppm. Wait between 5 to 20 min. Press OK when the reading is stable.
4.18 Step 5 of 6 - Establish the real ppm values with the plus/minus keys according to your analysis result of DPD1 (free chlorine).
4.19 Step 6 of 6 - If this screen is not shown repeat the calibration process.

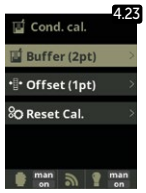
4.20 and **4.21** Manual calibration: Open de water fl w and set the fl wmeter (rotameter) at the right level of fl w (80- 100l/h). Wait some minutes until the current level is stable. With the plus/minus keys, insert manually the water chlorine level (use a manual DPD1 test kit). Press OK when the DPD1 value is correct on display (target measurement).

Conductivity calibration

Optional Conductivity probe
Metering and control of the conductivity of the water in Msiemens.

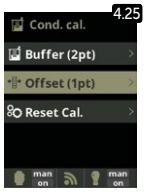
Conductivity probe
❶ yellow
❷ transparent





4.22 Calibration of the Conductivity probe: Recommended every month during usage season.
4.23 Calibration with buffer (buffer solution 1413 µS/ 12880 µS/ neutral): Follow the instructions in 7 steps that appear in the display (screen 4.24 corresponds to step 1).

The option Reset Cal clears the calibrations made previously.



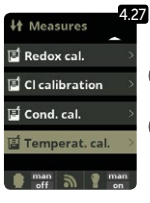
4.25 Manual calibration: Allows to adjust the probes at 1 point (without buffers) – only recommended to adjust small deviation in the readings.

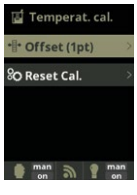
4.26 Without removing the probe from the water, use the plus/minus keys to adjust the reading so it matches with your reference value (photometer or other measurement).

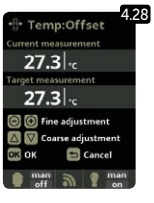
Temperature calibration

Optional Temperature
Temperature probe necessary to activate the filtration modes: heating, intelligent, smart.

Temperature probe
❶ red
❷ yellow
❸ black





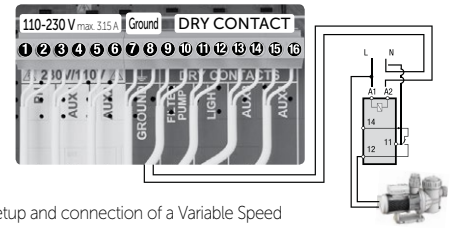


4.27 and **4.28** Temperature calibration: To set difference between the measured value of the probe and the actual temperature, use the plus/minus and up/down keys. Set to the actual temperature of the probe and press OK.

The option Reset Cal clears the calibrations made previously.

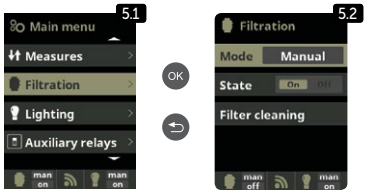
12. Filtration

Manual mode



Setup and connection of a Variable Speed Pump, see section 13 - Variable Speed Pump

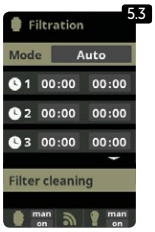
FILTER PUMP
Filtration control 9 & 10



5.1 Filtration:
Configuration control of the filter pump To set, select Filtration and confirm by pressing OK The mode selection is done in Mode line with the plus/minus keys.

5.2 Manual:
Manually turns ON/OFF the filtration process. No timing or additional functions. The State line indicates whether the filtration pump is ON.
See section Filter Cleaning below.

Automatic mode



5.3 Automátic (or with timer):
In this mode the filtration is switched in accordance with a timer that allow to adjust the start and end of the filtration. Timers always operate daily, in cycles of 24 hours.
To set the ON/OFF times (up to 3 possible time programmable), select with the up/down keys in the timer line you want to change (1-3).
The plus/minus keys opens the selected start time field Set the time with plus/minus keys. Scroll with the up key to the minute field and set it up with plus/minus keys. To confirm press OK and to cancel press return/sc pe. To set the OFF timer, proceed accordingly.
See section Filter Cleaning below.

Smart mode

5.4 Smart*: This mode uses, as a basis, the automatic or timer mode, with its 3 intervals of filtration, but adjusting the filtration time in function of the water temperature. For that reason 2 parameters of temperature are provided: The maximum temperature, from which on the filtration times will be the ones from the timer setting. The minimum temperature: below this value the filtration time will be reduced to 5 minutes, which is the minimum working time. Between these 2 temperatures the filtration times will climb linearly.
Use the plus/minus keys to set the desired minimum and maximum temperatures.

There is an option to activate the antifreeze mode in which the filtration will start if the water temperature is below 2° C.
To set the ON/OFF times (up to 3 possible time programmable), follow the instructions of the Automatic Mode.
See section Filter Cleaning below.

* Note: Mode only visible if the option to use temperature probe and/or heating is activated in the "Installer Menu".

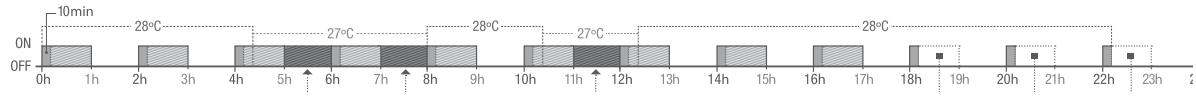
Heating mode

5.5 Timed heating with option of climatization*: This mode acts equally to the automatic mode, but besides it includes the option to work on a relay to control the temperature. The desired temperature is set in this menu, and the system works with a hysteresis of 1 degree (example: the setting temperature is 23° C, the system will activate itself when the temperature goes below 22° C and will not stop before it passes 23° C). Use the plus/minus keys to set the desired temperatures and ON/OFF of the Heating.
Clima OFF: The heating only works within the set filtration periods.
Clima ON: Keeps the filtration working when the filtration period is finished if the w ter temperature is below the setting temperature. When the setting temperature is reached the filtration and the heating will stop and will not switch on till the next programmed filtration period.
To set the ON/OFF times (up to 3 possible time programmable), follow the instructions of the Automatic Mode.
See section Filter Cleaning below.

* Note: Mode only visible if the option to use temperature probe and/or heating is activated in the "Installer Menu".

Intelligent mode

5.6 Intelligent*: In this mode the user has 2 working parameters to guaranty the desired water temperature with a minimum of filtration hours: You select the desired water temperature and the minimum filtration time (minimum of 2 hours and maximum of 24 hours). The device divides the selected "minimum filtration time" in 12 fragments which start up every 2 hours. If one of these fragments finishes without the temperature reaching the desired level, the filtration/heating continues until the desired temperature is accomplished. In order to keep the filtration-electricity-cost to a minimum, this additional filtration time is subtracted from the following fragments of the "minimum filtration time". The first 10 minutes of each fragment will not be subtracted.
Example (see diagram): Minimum temperature = 28°C and minimum filtration time = 12 hours.
The desired water temperature and the minimum filtration time is set with the plus/minus keys .
See section Filter Cleaning below.



* Note: Mode only visible if the option to use temperature probe and/or heating is activated in the "Installer Menu".

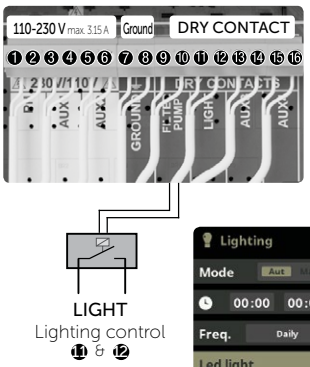
Filter cleaning

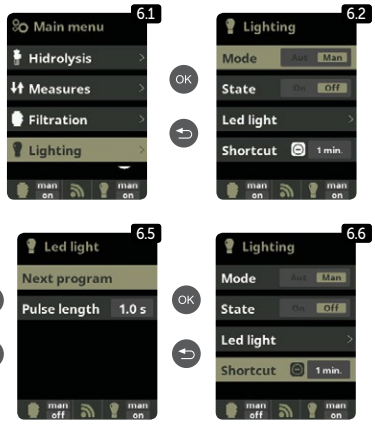
5.7 Filter cleaning mode (and pool cleanig by sucction): From this menu (accessible from any Filtration mode) It can be easily performed a backwashing cleaning of the sand filter. Activating this menu from any filtration mode (Manual, Automatic, Heating, Smart, Intelligent), will disconnect electrolysis/hydrolysis cell. Then proceed as follows:

- Put the filter pump OFF with plus/minus keys.
- Place the filtration pump valve in backwashing cleaning position.
- Put back ON in the filtration pump. Control the time that lasted the backwash cleaning on the clock display. Make sure it has made adequate and complete backwash of your filter.
- When finished the backwashing leaning, again turn OFF the filtration pump and put back the valve in the filtering position If you wish, now you can perform a rinse cycle.
- Proceed as backwashing cleaning, this time placing the filtration pump valve in the rinsing position.
- When leaving the Filter Cleaning menu, the system will be back to the previous programmed mode.

Lighting

13.



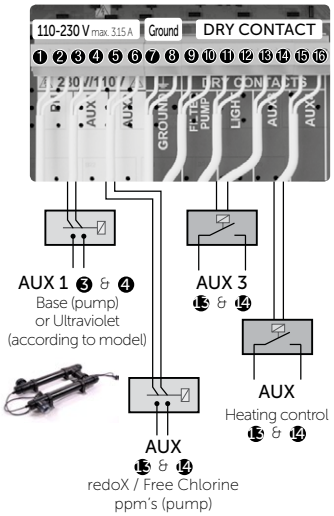


6.1 Lighting
6.2 Manual Mode (ON/OFF).
6.3 Automatic Mode: Shuts lights ON/OFF according to a timer. The timers can be configured with a frequen y: Daily; Every 2 days; Every 3 days; Every 4 days; Every 5 days; Weekly; Every 2 weeks; Every 3 weeks; Every 4 weeks.

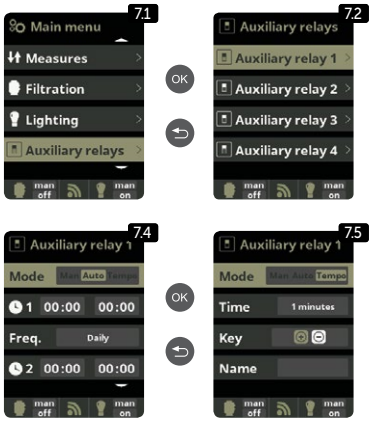
6.4 LED spotlight: In case of having installed led lights in your pool, use this menu to set the lighting.
6.5 From this menu you can change the color of the lights in your pool. Select the length of the sign in seconds in Pulse length and press Next Program option to apply the pulse. Refer to your LED spotlight manual to set its different colors.
6.6 Shortcut: From main screen press "minus" to activate lighting during selected time.

Auxiliary relays

14.



The auxiliary relays are configured by default.
If you want to reassign the relays for other accessories, you must access the "Service Menu". Contact your authorized installer.



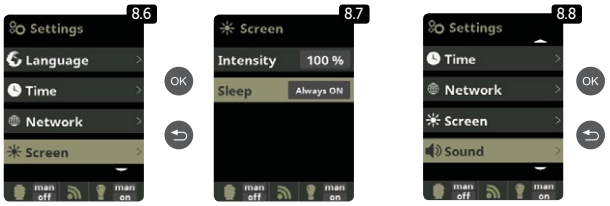
7.1 Auxiliary relays
7.2 It is possible to control up to 4 extra auxiliary relays (water features, fountains, automatic irrigation systems, built-in cleaning systems, air pumps for spas, garden lighting, etc.). This menu displays the relays which are still available on your device and allow configuration.
7.3 Manual mode (ON/OFF).

7.4 Automatic mode: ON/OFF according to a timer that adjust the start and end of the program. The timers can be configured with a frequen y: Daily; Every 2 days; Every 3 days; Every 4 days; Every 5 days; Weekly; Every 2 weeks; Every 3 weeks; Every 4 weeks.
7.5 Timer mode: Working time is programmed in minutes. Each time the key on the front panel in relation to the relay is pressed, it will start up for the time programmed. This function is recommended for the timing of air pumps for spas.

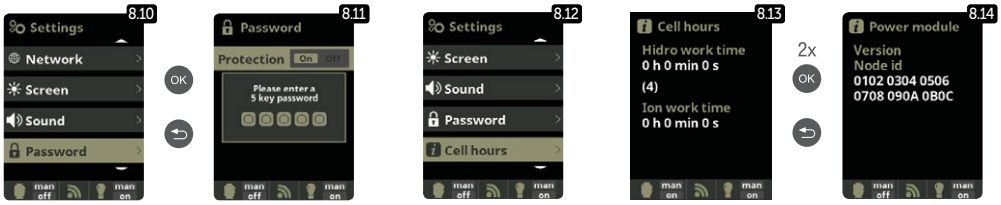
7.6 Rename relays: It is posible to rename each auxiliary relay to suit the use you want to assign. By pressing the plus/minus keys, a pop-up keyboard will appear. Scroll up and down with the up/down keys and left to right with the plus/minus keys. To select a letter press the OK.

15. System settings

8.3 Setting of preferred language.
8.5 Setting of day and current time.
8.7 Setting of the intensity of the display lighting (0-100%) and programming its ON/OFF time.

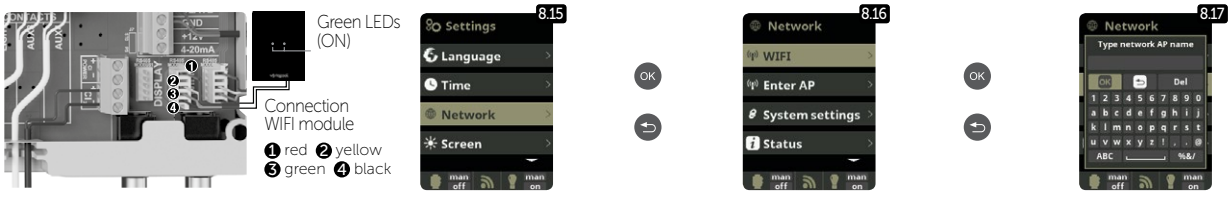


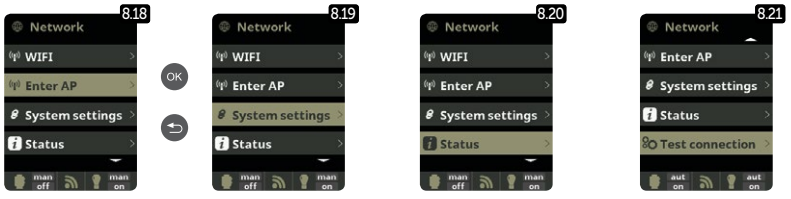
8.9 Sound: Programming of the system to emit sound for the functions: Keyboard (keys); Notices (pop-up message); Alarms (working alarm); Filtration (start of the filtration).
8.11 Password: Allows to protect the access to the user´s menu by activating a password. To enter your password press a combination of 5 keys and the system will memorize. If you forget the password, there is a "master password". Ask your installer/provider.



8.12 and **8.13** Cell hours: The system memorizes the operation times of the different modules. Includes (in parentheses) the number of performed resets of the electrolysis / hydrolysis hours counter.
8.14 System info: Information about the available software version of the TFT display and the power module. It also shows the ID node which is necessary for the configuration of the WIFI connection of the system.

Wifi settings



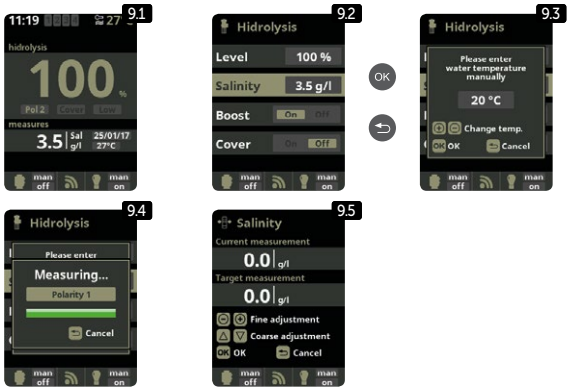


Once the WIFI module is connected to the network with both lights ON, enter in www.vistapool.es. Access the Register option and enter all the data requested. The unit ID node can be found on your device (see section 8. System Settings - screens 8.13 & 8.14). Upon completion of the process, you will have total control of your pool, will be able change parameters such as setpoints, filtration hours and turn ON/OFF any auxiliary relays.

8.15 Internet: Once the WIFI module is connected, restart your unit. In the Settings menu will appear the Internet option.
8.16 WIFI: Select WIFI to scan the available networks accessible to the module. The search will be done automatically. Select the desired network accessible to the WIFI module.
8.17 Enter the password in the pop-up keyboard. Scroll up and down with the up/down keys and left to right with the plus/minus keys. To select a letter press the OK.
8.18 Select AP: Write manually the name and the pasword of the network selected.
8.19 Configuration: For a more detailed configuration enter this menu or contact your installer.
8.20 Status: Check the status of your connection.
8.21 Test connection: Check that your connection has been successfully established.

Salinity*

16.



9.1 Salinity: The device shows a measurement of salt in water in g/l, as well as the date and water temperature of the last reading.

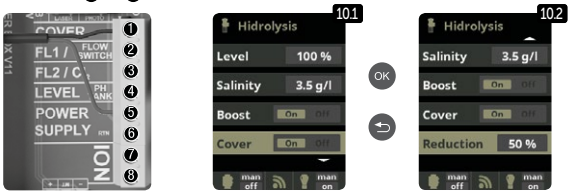
9.2 To acknowledge this measure, press OK in Salinity in the Electrolysis/ Hydrolysis menu (the process takes between 2 and 5 minutes–display 9.4). You can adjust the system measure using a external salt measurer (display 9.5).

9.3 If you do not have a temperature probe, enter the value manually for greater accuracy. The lecture is influenced by ma y factors, like the water temperature or the pH. Remenber to do the adjustment every 2-3 months.
* Atenttion: Option only available for some models.

Cover

17.

COVER ❺ & ❹



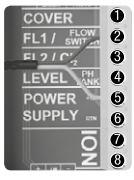
10.1 Cover: Connection of automatic cover.

10.2 Reduction of chlorine production in percent, when the pool cover is closed. With the cover closed is not necessary for the system to run at 100%. With this parameter the system regulates the optimum amount of chlorine generation.

Flow switch

18.

Flow switch
Mechanic security flow switch. Stops the hydrolysis/electrolysis and the dosing pumps if there is no water flow.



Flow switch FL1 ❷ & ❺

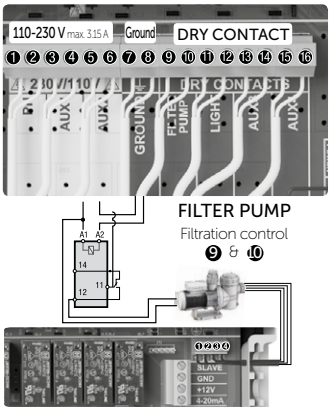
Connect as shown in the image and contact your installer for activation.

19. Level sensor (tank)

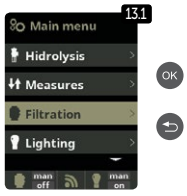
Acid deposit level TANK ❹ & ❺

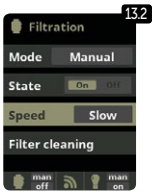
Connect a level sensor to your device so you can control at all times the volume available in the tanks of chemicals that your system commonly uses. Contact your installer/provider to activate the sensor. This way you can ensure that the dosing pumps never run out of product and doses in vacuo, avoiding possible damages.

20. Variable speed pump

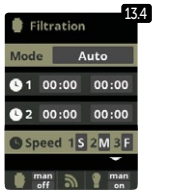


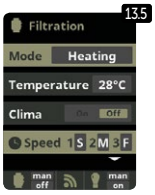
Variable Speed Pump
❶ slow ❷ medium ❸ fast ❹ common





13.1 Variable Speed Pump: To install a Variable Speed Pump contact your installer.
13.2 to **13.6** After connecting the pump, you can individually assign each filtration period a different speed
F: fast, M: medium and S: slow.





13.7 Filter cleaning: To clean the filter with a Variable Speed Pump, you should use the fastest speed.

Notes

Thank you for using ALBIXON products

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SWIMMING POOL EQUIPMENT

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