ASTRALPOOL

Control
Connect

FLUIDRA pool

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pH
ORP
PPM

ºC

Wi Fi

VSP 123

Modbus

EN Instruction Manual

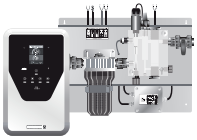
Control panel for swimming pools

Models

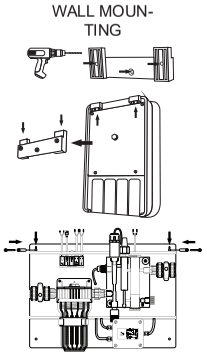
Control Connect-PH/ORP_line
Control Connect-PH/ORP_Pro
Control Connect-PH/ppm_Pro

Ver.20240429

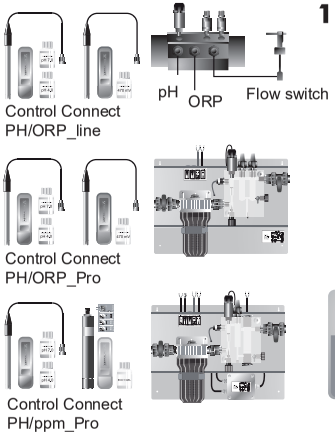
1) Unpacking



Control Connect-PH/ORP_line
Control Connect-PH/ORP_Pro
Control Connect-PH/ppm_Pro

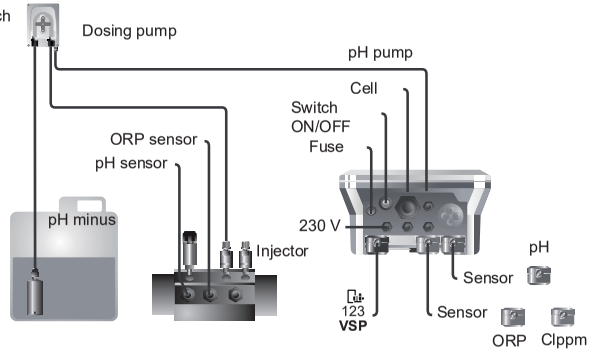


Wall plug: 8 x 50 mm
Screw: 5 x 50 mm

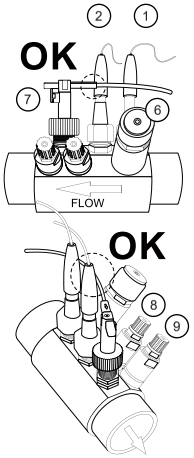


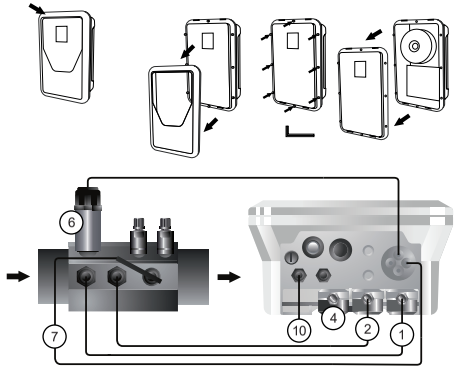
Optional accessory
VSP driver

1.1) Installation of pH, ORP, ppm sensors

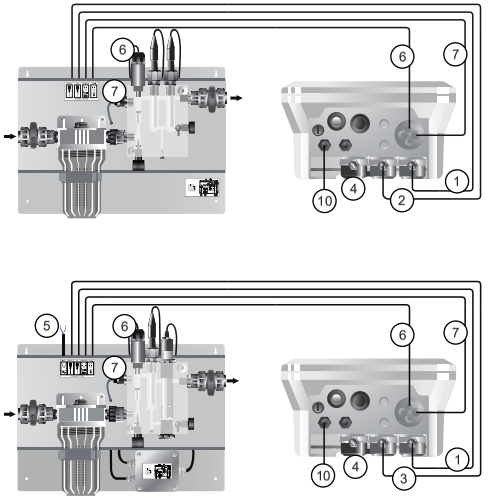


2) Connections

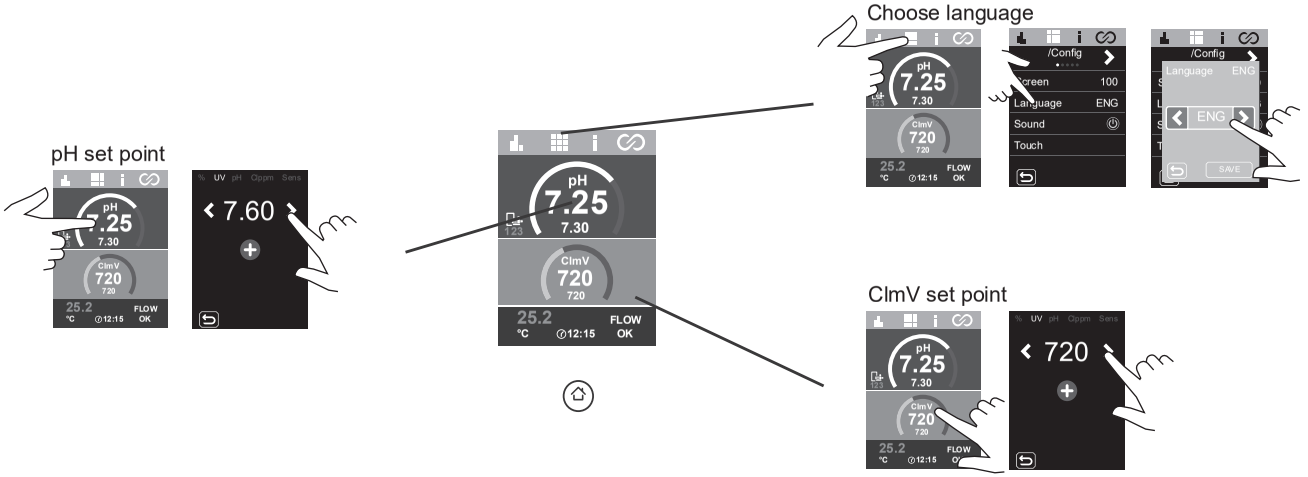


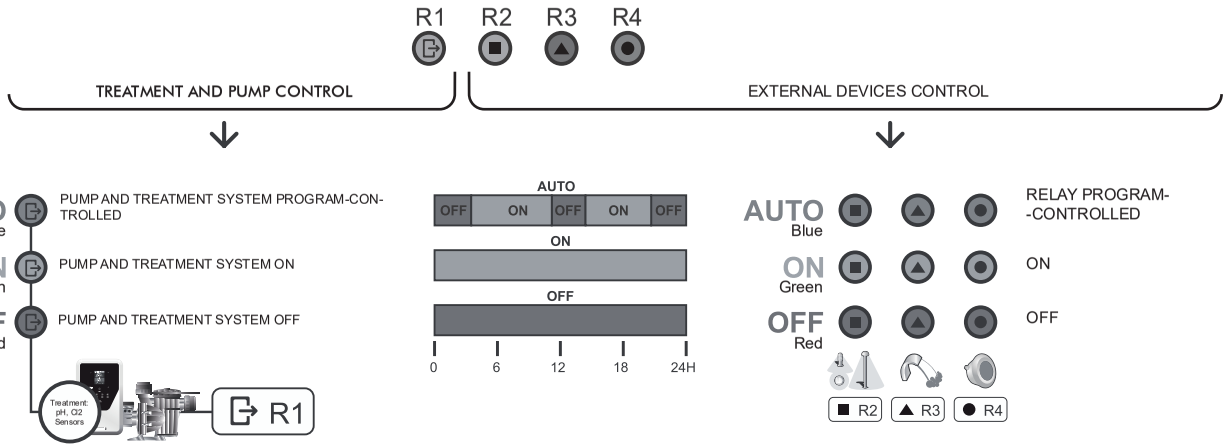


1) pH sensor
2) ORP sensor
3) Clppm sensor
4) VSP
5) 230 V
6) Temperature
7) Flow switch/inductive sensor
8) pH injection
9) Cl injection
10) 230 Vac feed



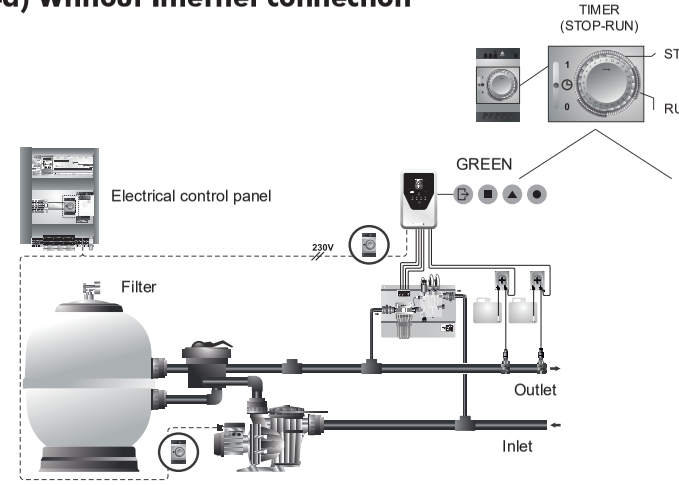
3) Configuration:





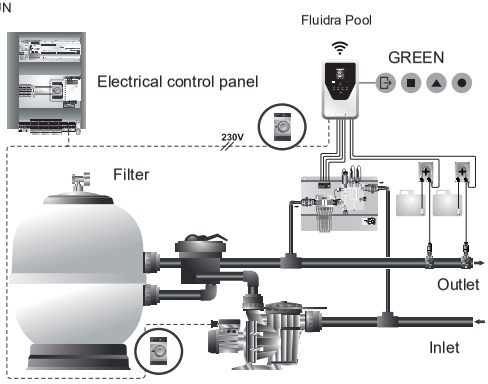
4) Pump and Control Connect system controlled by external timer (stop-run)

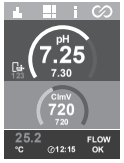
4a) Without Internet connection



4b) With Internet connection

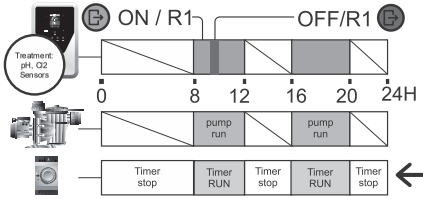
Internet connection only available when
TIMER: ON

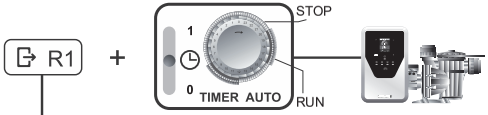




Pump ON (Timer: ON)
Treatment ON
Fluidra Pool ON

PUMP ON (Timer: RUN)
Treatment OFF
Fluidra Pool ON





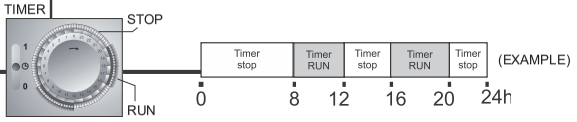
AUTO Blue — **NOT RECOMMENDED**

RECOMMENDED **ON** Green — **TIMER: AUTO + R1: ON**
If "TIMER: AUTO(RUN)": Treat. Active + (Fluidra Pool Active & PUMP ON).

MAINTENANCE **OFF** Red — **TIMER: AUTO + R1: OFF**
If "TIMER: AUTO(RUN)": Treat. not active + (Fluidra Pool Active & PUMP ON).

EXTERNAL TIMER AUTO
(stop-run)

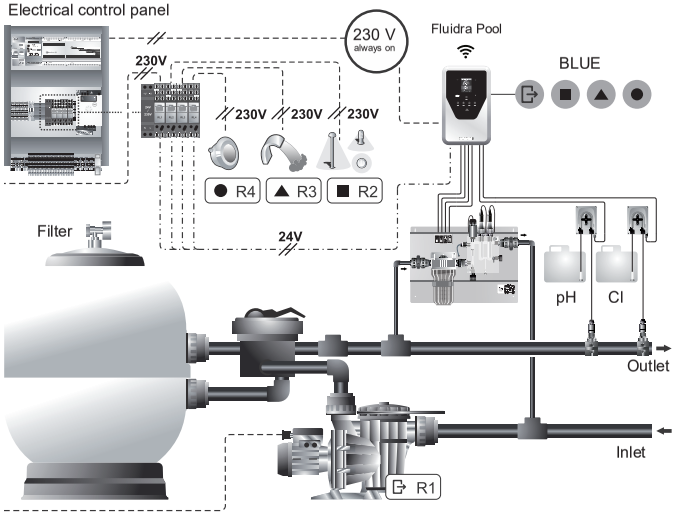
ON= 8–12 h + 16–20 h

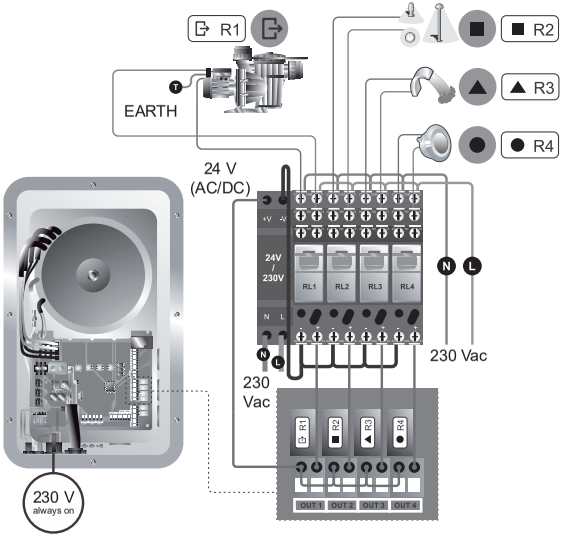


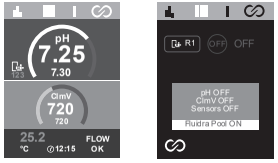
QUICK GUIDE

5) With connection to Internet

CONTROL CONNECT SYSTEM ALWAYS ON AT 230 V
PUMP CONTROLLED BY R1-FLUIDRA POOL

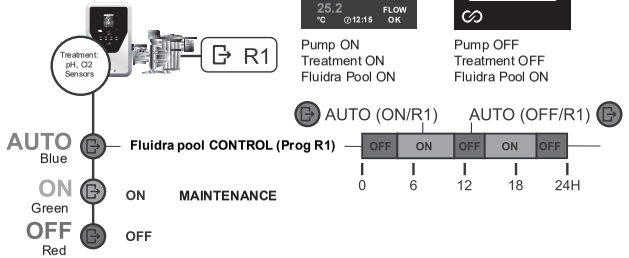


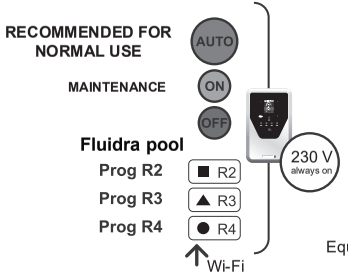


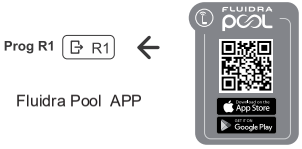


Pump ON
Treatment ON
Fluidra Pool ON

Pump OFF
Treatment OFF
Fluidra Pool ON

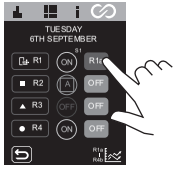






Fluidra Pool APP

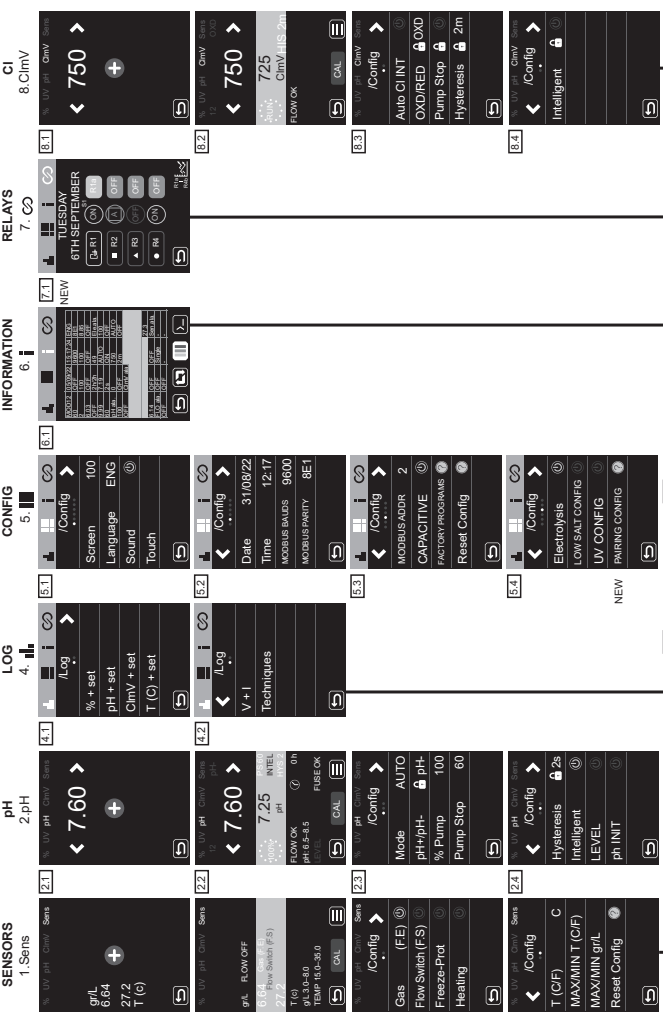
Equipment relay menu



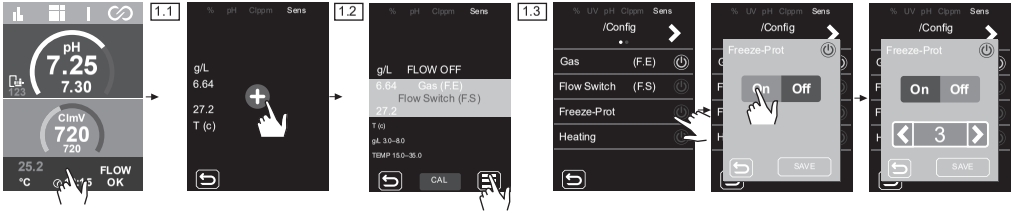
QUICK GUIDE

QUICK GUIDE

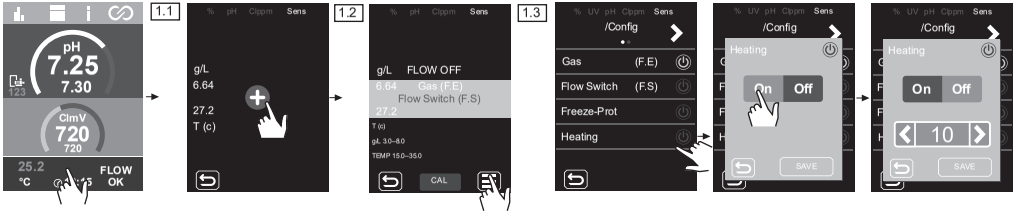
6) Navigation Map



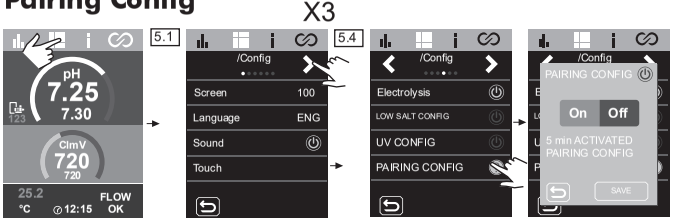
7) Freeze-Prot



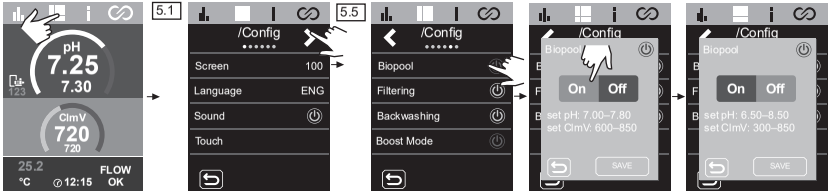
8) Heating



9) Pairing Config

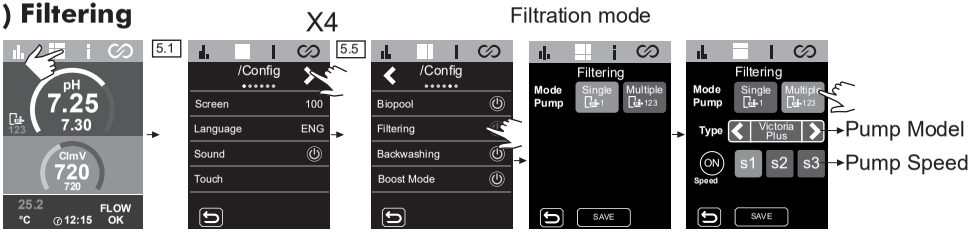


10) Biopool

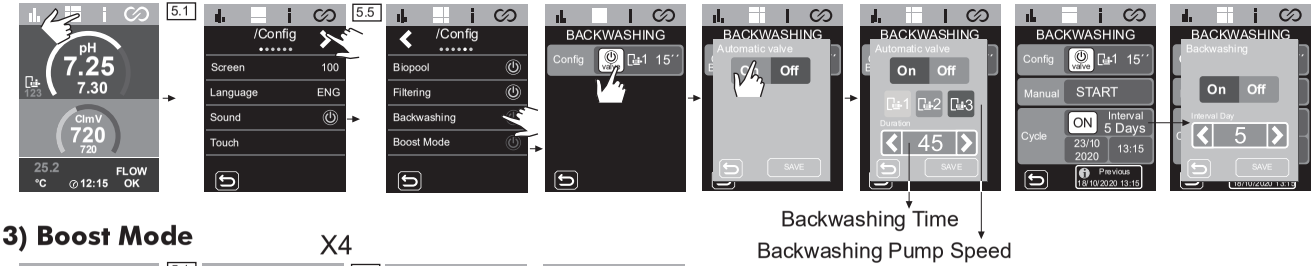


QUICK GUIDE

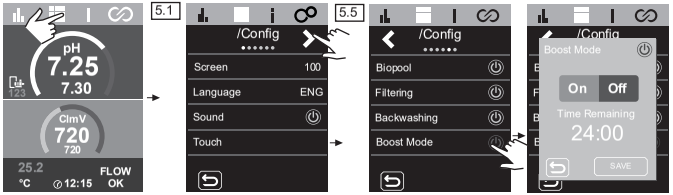
11) Filtering



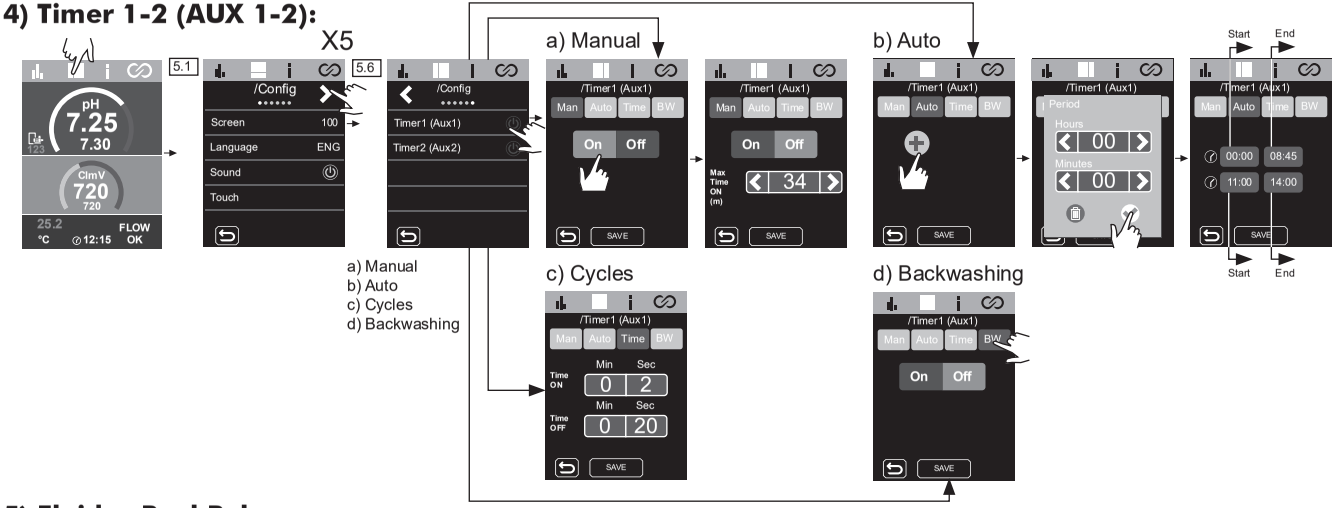
12) Backwashing



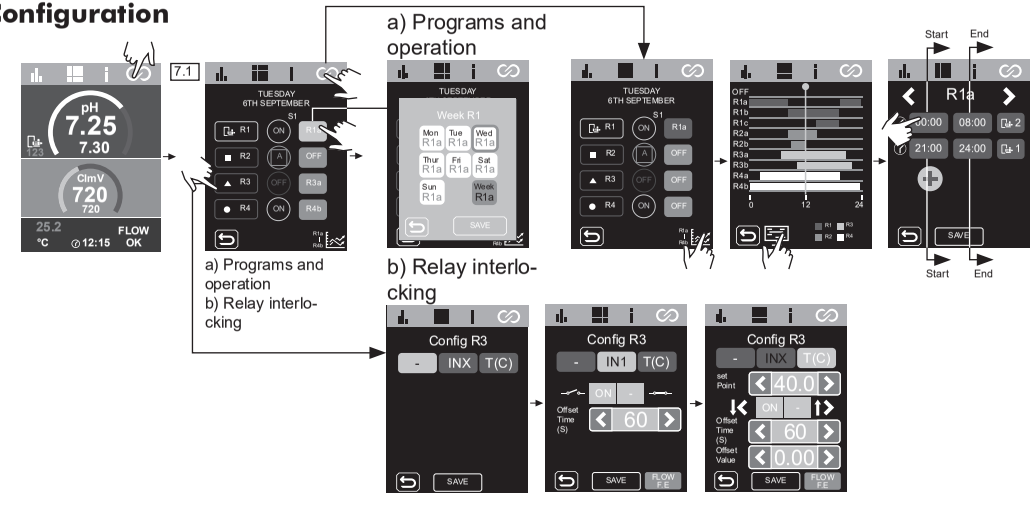
13) Boost Mode



14) Timer 1-2 (AUX 1-2):

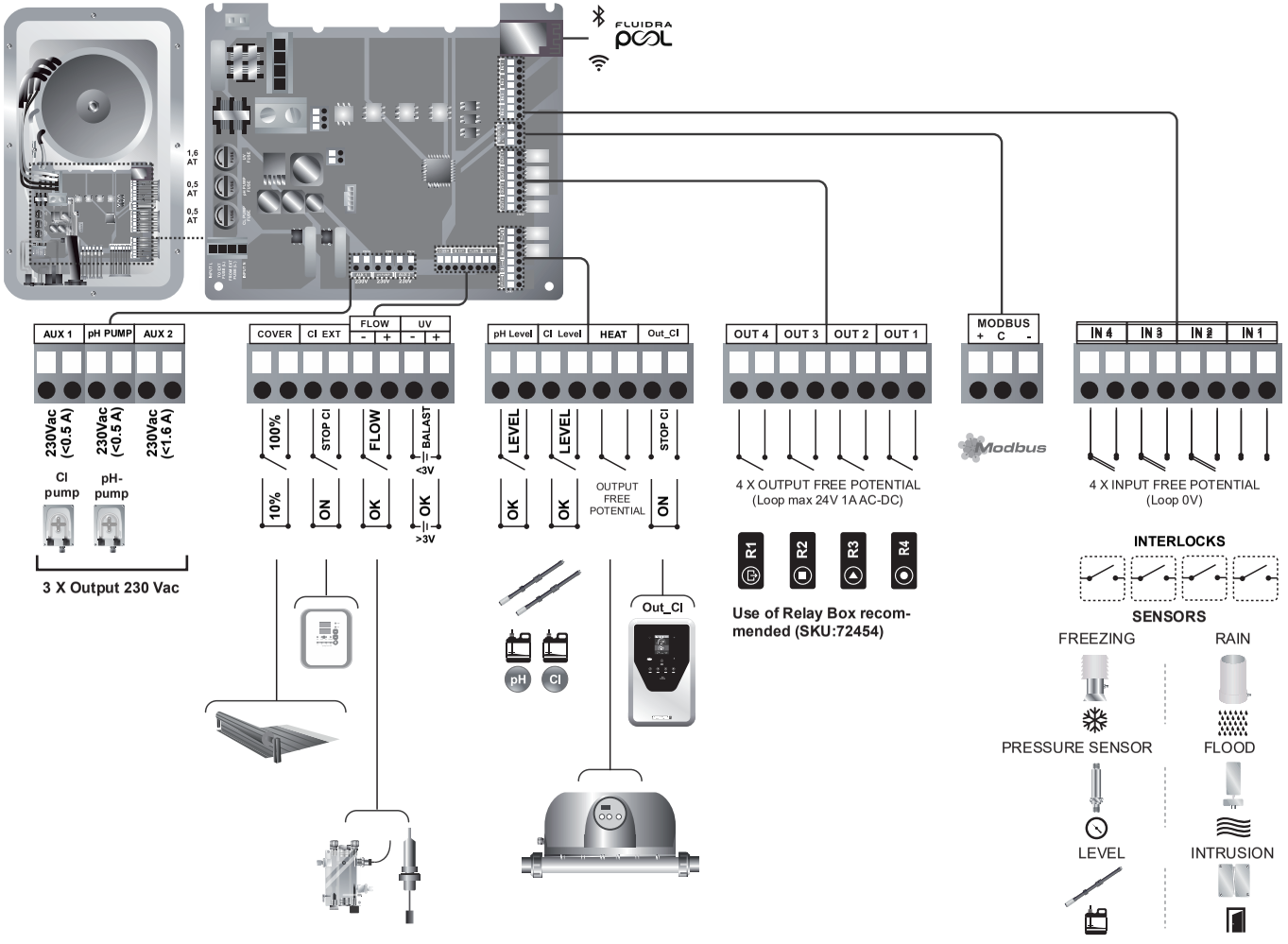


15) Fluidra Pool Relay Configuration

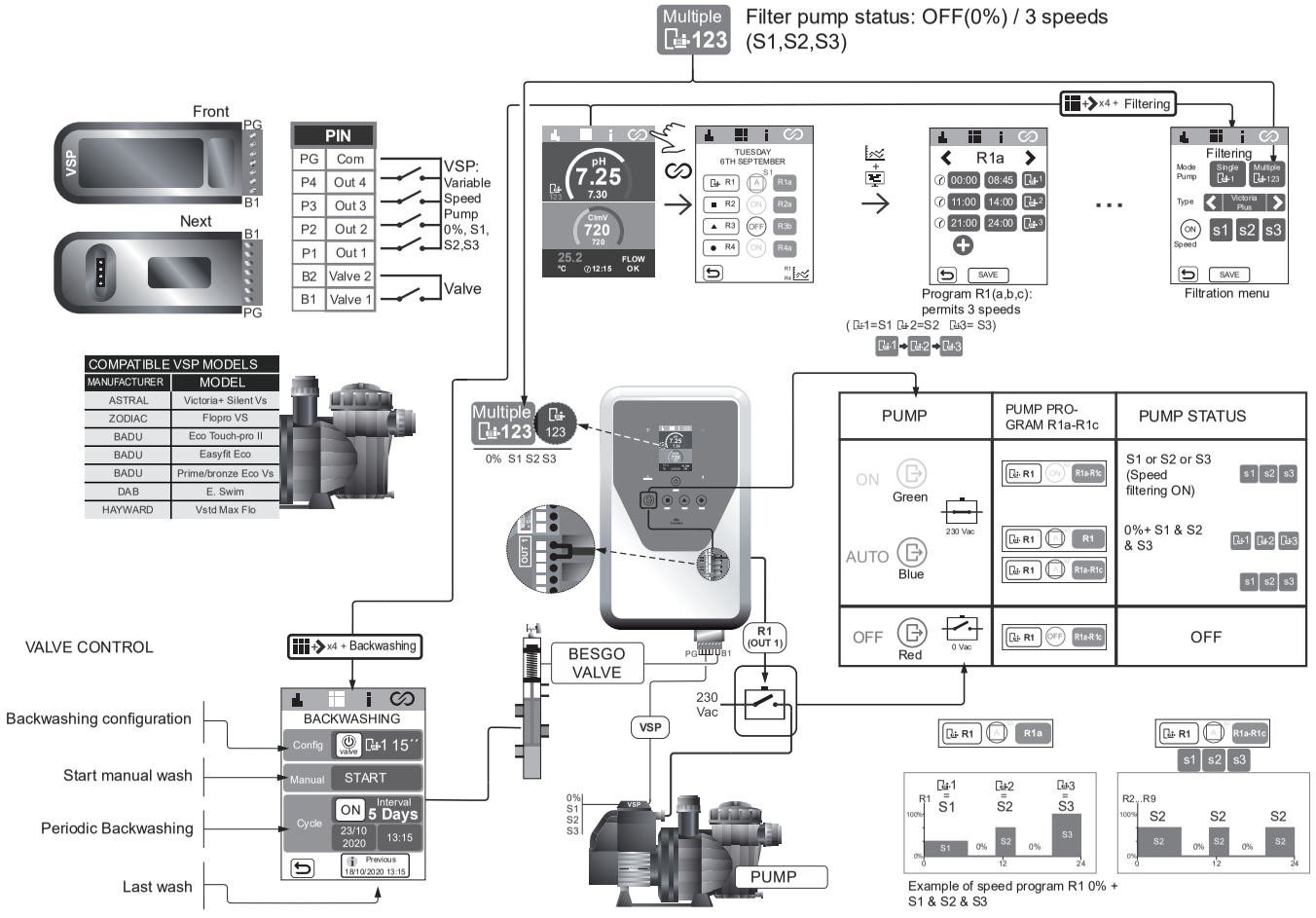


QUICK GUIDE

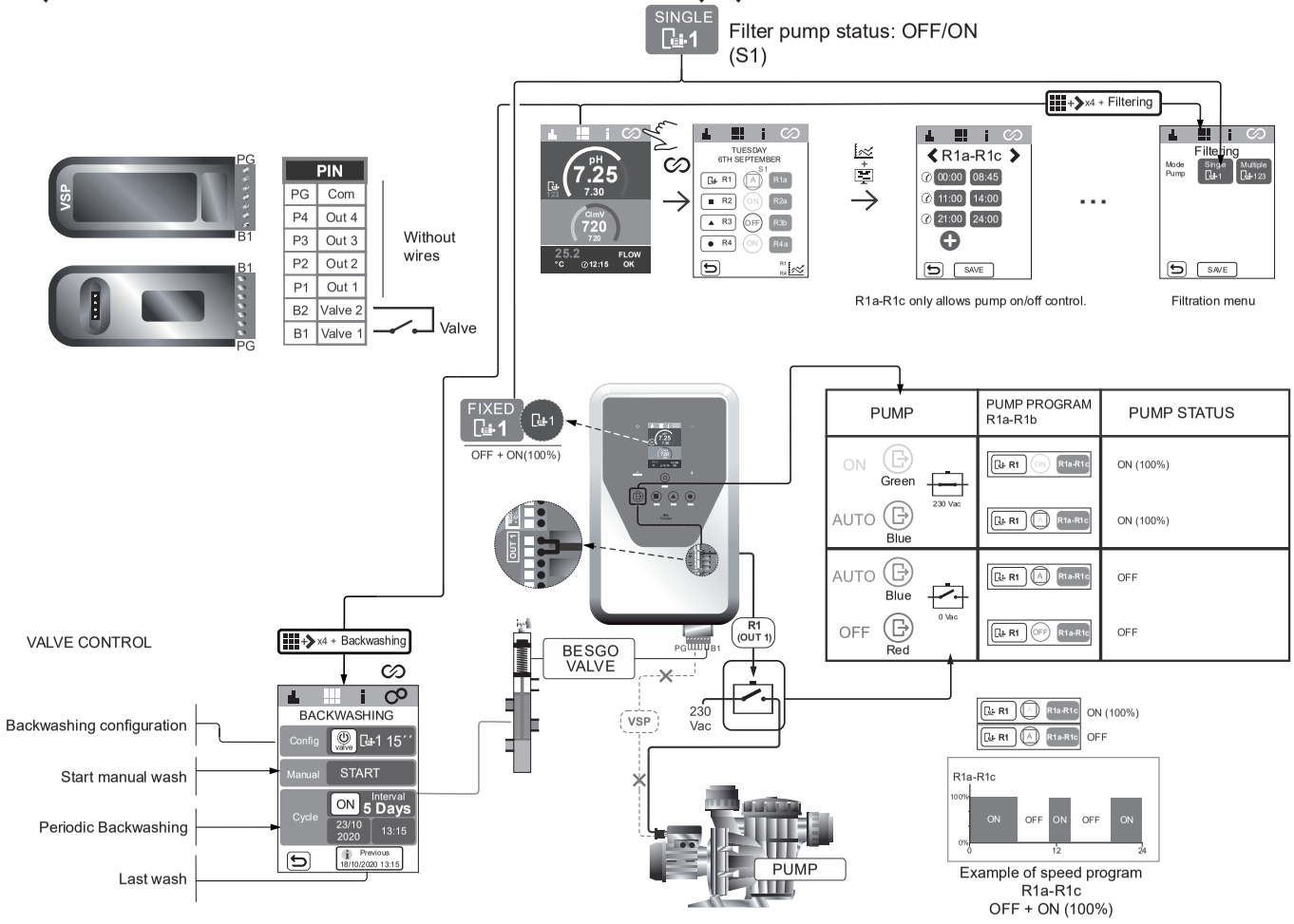
16) Electronic Board and Connections



11) SD-VSP VARIABLE SPEED PUMP CONFIGURATION (S1,S2,S3)

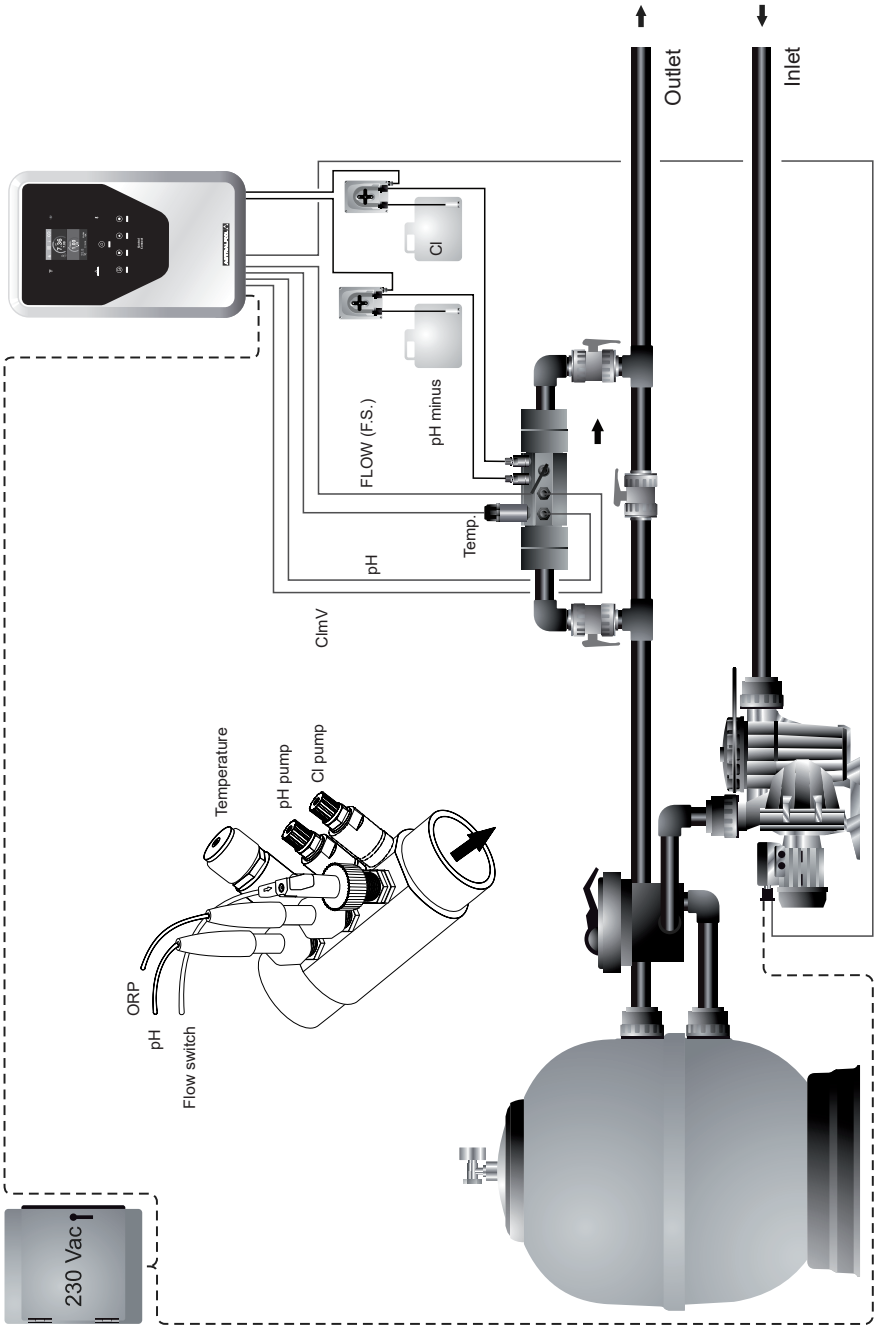


12) SD-VSP VARIABLE SPEED PUMP CONFIGURATION (S1)

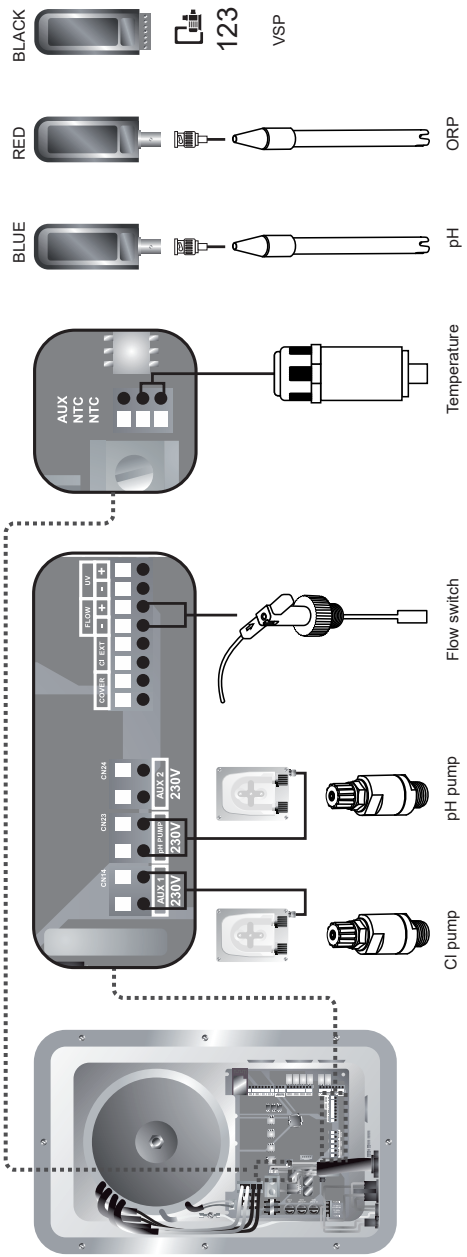


QUICK GUIDE

13) CCONNECT-PH/ORP-LINE

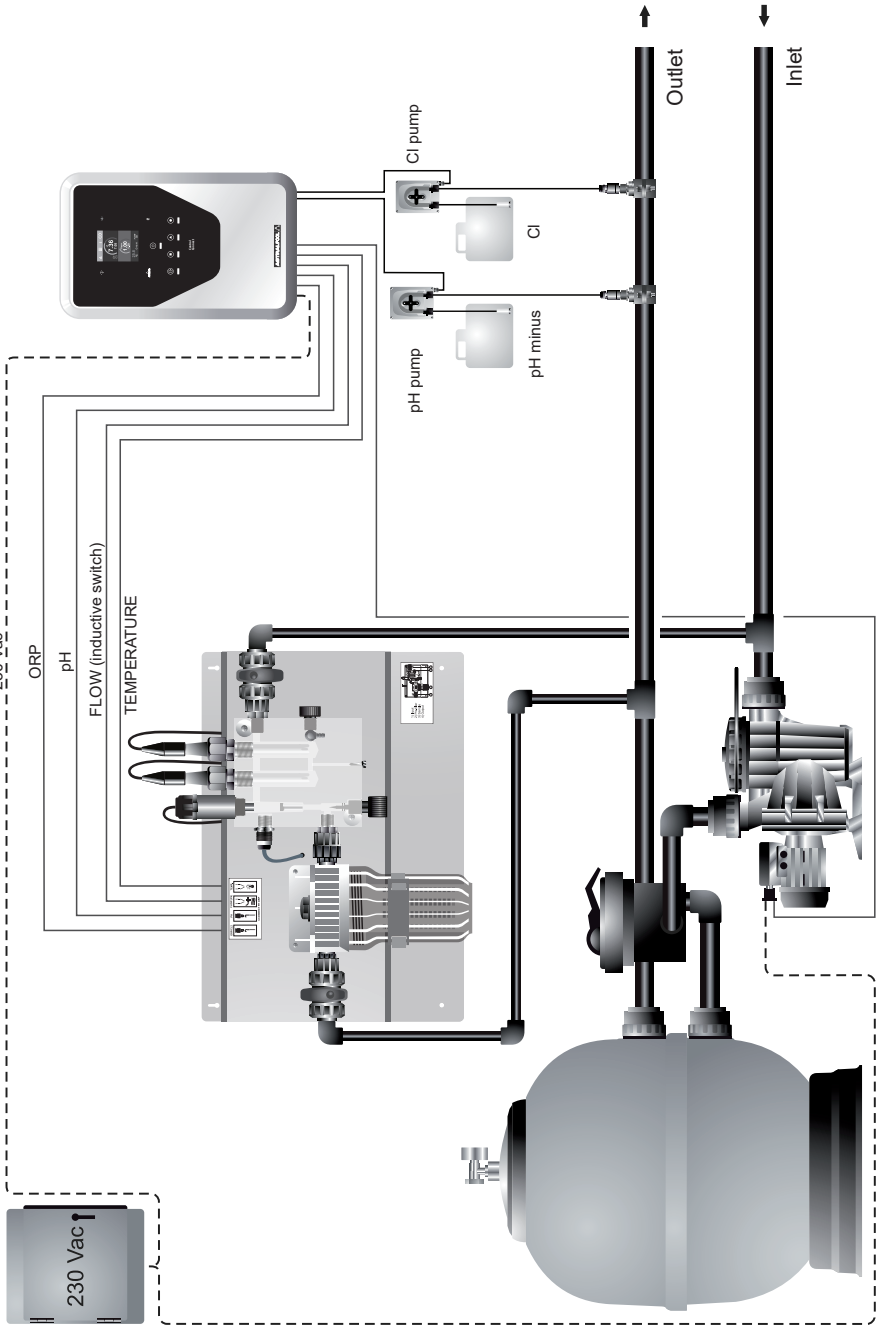


QUICK GUIDE

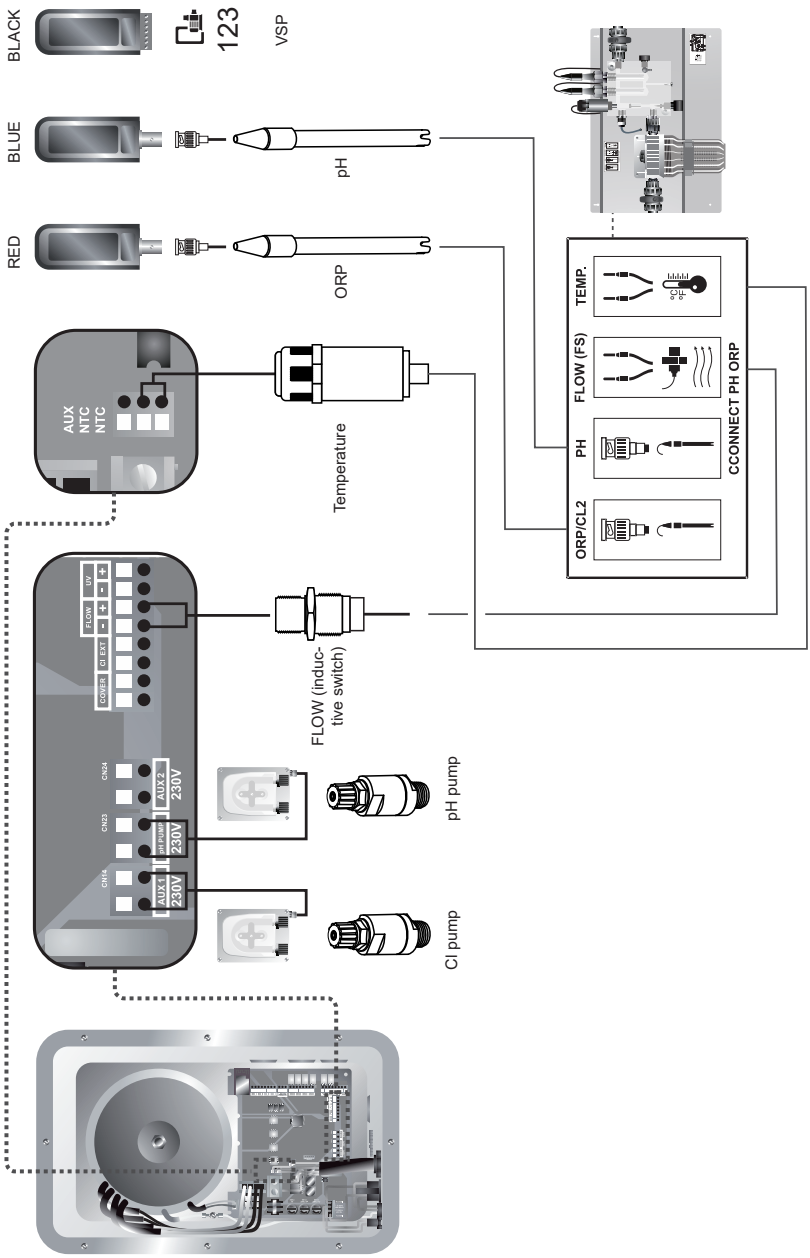

BLACK
123
VSP
RED
ORP
BLUE
pH
AUX
NTC
NTC
Temperature
Flow switch
pH pump
Cl pump

QUICK GUIDE

14) CCONNECT-PH/ORP-PRO

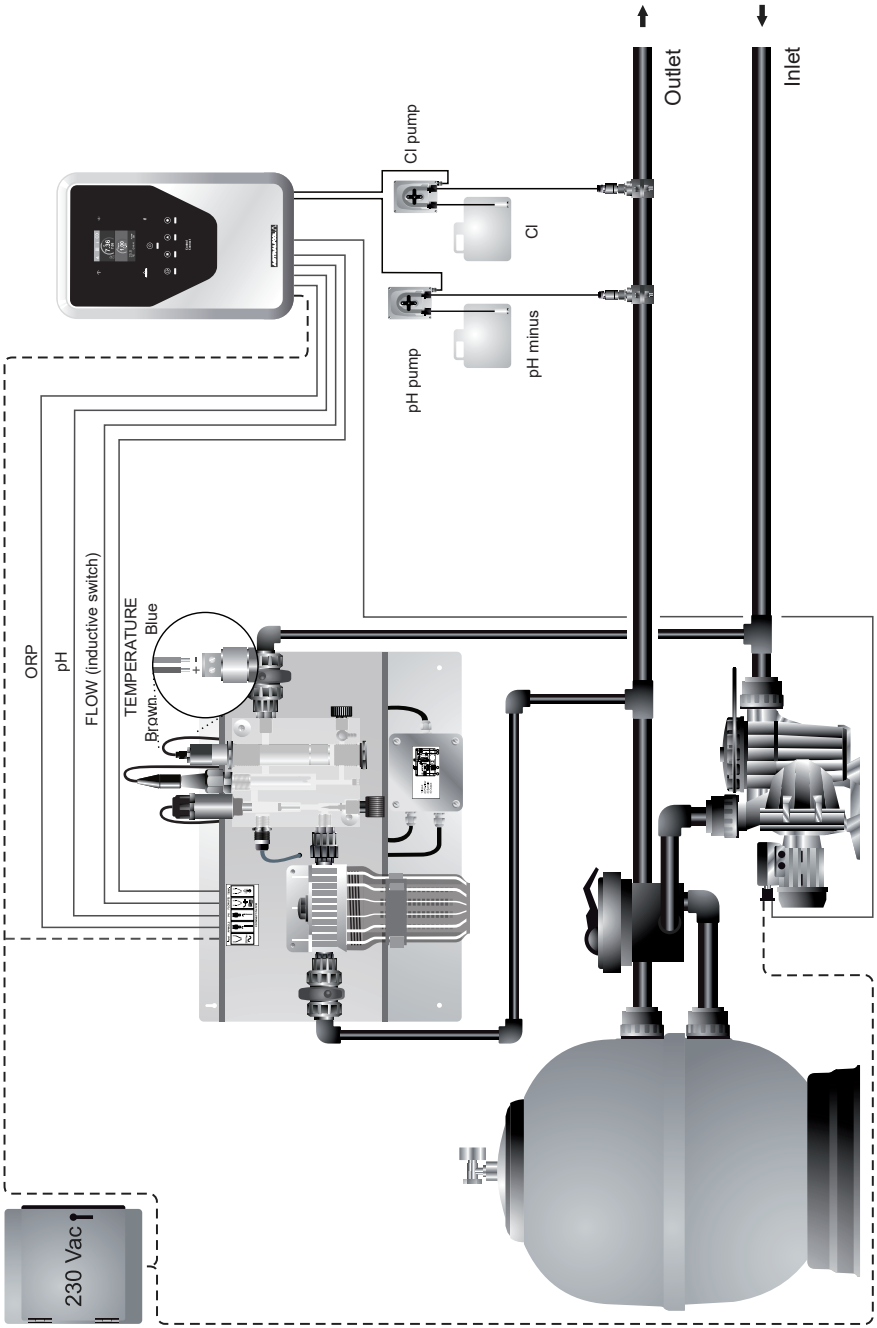


QUICK GUIDE

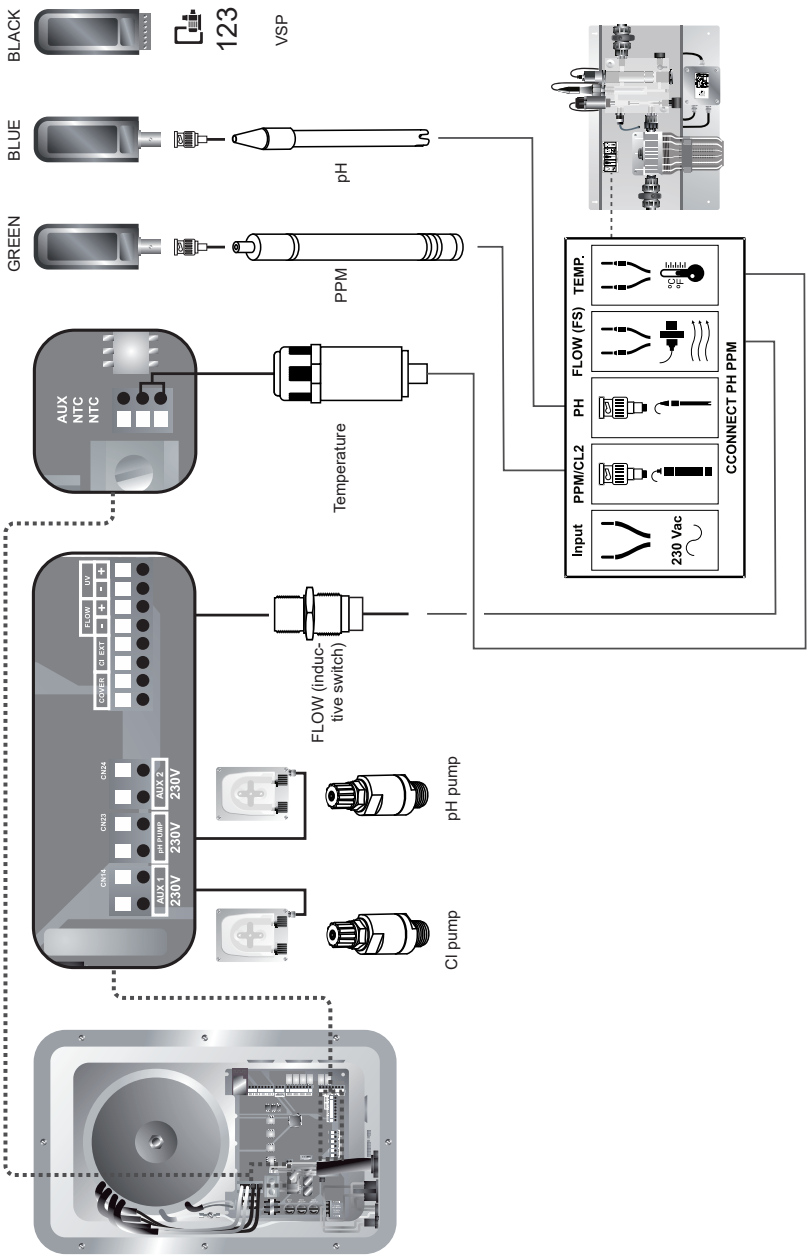

BLACK
BLUE
RED
123
VSP
pH
ORP
Temperature
FLOW (induc-
tive switch)
pH pump
Cl pump
AUX
NTC
NTC
TEMP.
FLOW (FS)
PH
ORP/CL2
CCONNECT PH ORP
AUX 1
230V
AUX 2
230V
230V

QUICK GUIDE

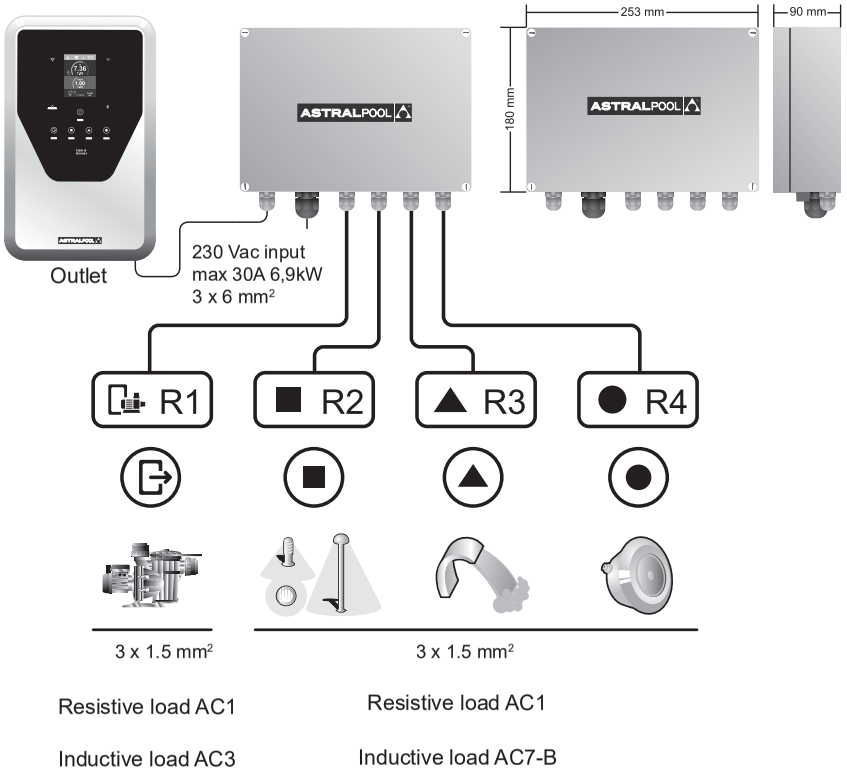
15) CCONNECT-PH/PPM-PRO



QUICK GUIDE


BLACK
123
VSP
BLUE
pH
GREEN
PPM
AUX
NTC
NTC
Temperature
FLOW (induc-
tive switch)
pH pump
Cl pump
CONNECT PH PPM
TEMP.
FLOW (FS)
PH
PPM/CL2
Input
230 Vac

20) 72454 KIT4SAL FULL AUTOMATION FOR YOUR POOL



DESCRIPTION

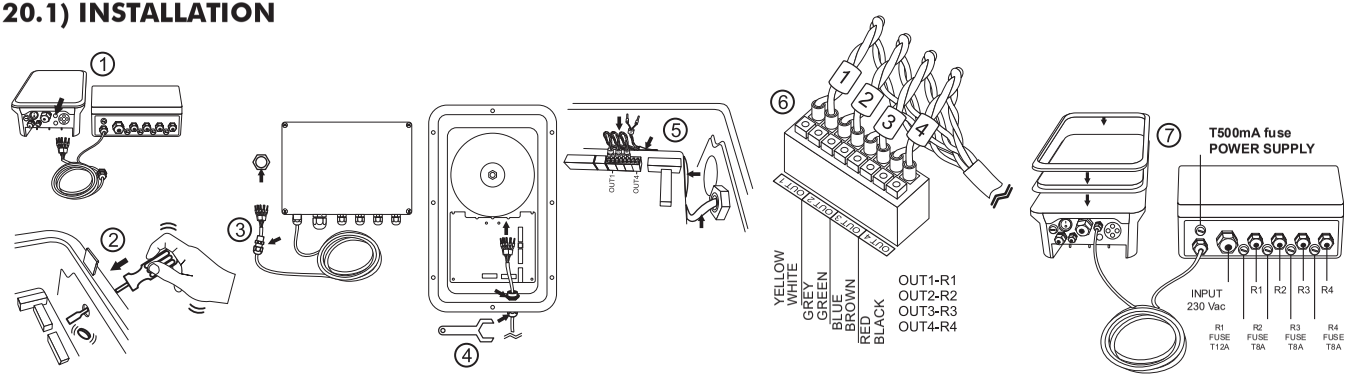
Compact BOX (IP55)
For Elite Connect

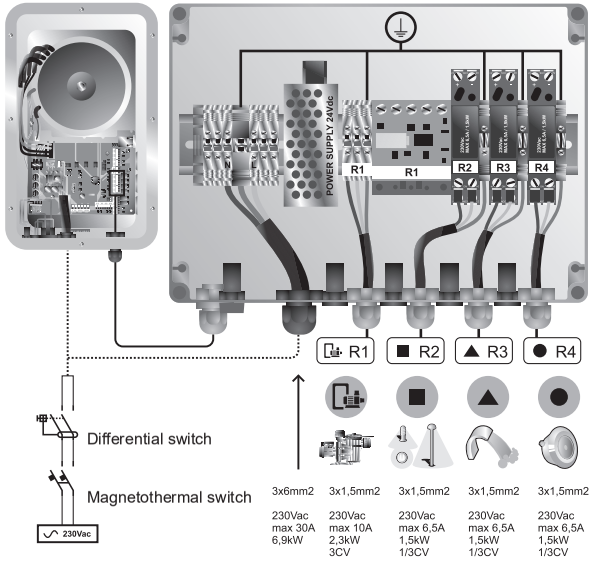
ADVANTAGES

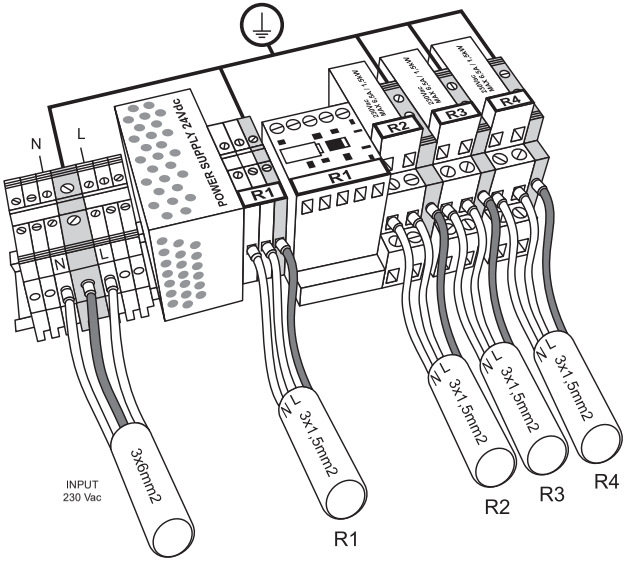
1X 230 Vac Output (R1)
-Pump up to 3 CV
-Device up to 10A/2.3kW

3X 230 Vac Outputs (R2,R3,R4)
-Pump up to 1/3 CV
-Device up to 6.5A/1.5kW

20.1) INSTALLATION







EN

PLEASE NOTE: This instruction manual contains essential information about the safety measures to adopt during the installation and commissioning. Hence, it is essential, that both the installer and the user read these instructions before installing and using the equipment. Keep this manual for future reference about operating this device.

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

Products marked with this symbol cannot be thrown out with domestic rubbish when they reach the end of their useful life. The user is responsible for depositing this type of refuse in a recycling point for electrical and electronic waste. Proper treatment and recycling of this type of waste makes an essential contribution to the conservation of the environment and general health. For more precise information on the collection points for this type of waste, contact your local authorities.

The instructions in this manual describe the control panel operation and maintenance for MOD. XX-PH/ORP LINE, MOD. XX-PH/ORP PRO and MOD. XX-PH/PPM PRO. To obtain the best control panel performance, please follow the instructions below:

1 General Characteristics:

Once your control panel has been installed, the pool water must be balanced.

Its pH should be 7,2–7,6.
Total alkalinity should be 60–120 ppm.
Level of chlorine in the water should be 0,5–2 ppm.

The control panel comprises two elements: a probe holder and a control unit.
Maintaining a certain level of chlorine in the pool water guarantees its healthiness. The control panel will dose chlorine when the pool's recirculation system (pump and filter) are running.
The power supply has several safety devices, which are activated in the event of abnormal system operation, as well as a control micro-controller.
The control panels include an automatic pH, ORP and ppm controller.

⚠ 2 Safety Warnings and Recommendations:

- Installation and manipulation should only be performed by properly-qualified technicians.

- Applicable standards for prevention of accidents and for electrical installations must be respected. During installation, bear in mind that electrically disconnecting the equipment requires a switch or circuit breaker according to standards IEC 60947-1 and IEC 60947-3 which ensures an omnipolar cut-off, directly connected to the power supply terminals and with a contact separation in all poles, providing total disconnection under overvoltage category III conditions, in an area that fulfils the safety requirements of the site. The switch must be located in the immediate vicinity of the equipment and must be easily accessible. Additionally, it must be marked as the equipment's disconnection element.

- The equipment must be fed from a residual current device (RCD) not exceeding 30mA.
- The manufacturer accepts no responsibility for assembly, installation or setting up, nor for any manipulation or addition of components other than when 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 supervision or instruction concerning how to use the appliance safely and understand the hazards involved. Children must not play with the appliance. Cleaning and user maintenance must not be carried out by children without supervision.
- If the power cable is damaged, it must be replaced by the manufacturer, by the their after-sales service, or by equivalent qualified technicians in order to avoid any type of danger.
- The control unit operates at 230 Vac / 50/60 Hz. Do not attempt to alter the power supply to operate at any other voltage.
- Ensure that all electrical connectors are properly tightened, to avoid bad connections leading to overheating.

⚠ - Before installing or replacing any component in the system, ensure that it is disconnected from the power supply beforehand and only use spare parts supplied by the manufacturer.
- Since the equipment generates heat, it is important to install it in a sufficiently ventilated place and to keep the ventilation openings free of any obstructions.
Do not install near flammable materials.
- Salt electrolysis systems have an IP rating. They should never be installed in areas at risk of flooding.
-This equipment is intended to be permanently connected to the water supply and should not be connected using a temporary hose.

- This device is equipped with a mounting bracket; see mounting instructions on page 30.

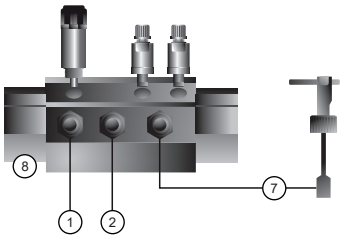
- This equipment is intended to be permanently connected to the water supply and should not be connected using a temporary hose.

Keep this Instruction Manual for future reference.

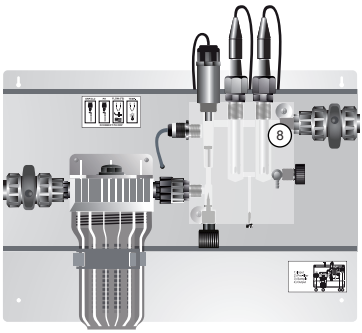
Please read the instruction manual before continuing to install the equipment.

3 Contents

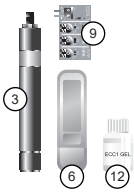
CONTROL CONNECT
PH-ORP LINE
71537

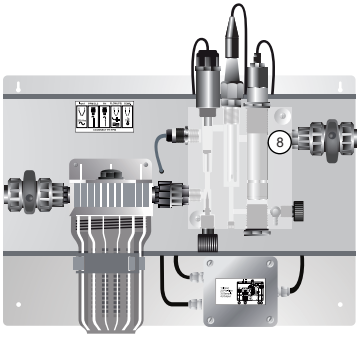


CONTROL CONNECT
PH-ORP PRO
71538



CONTROL CONNECT
PH-PPM PRO
71539





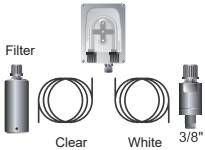
1 pH probe
2 ORP probe
3 PPM probe
4 pH driver
5 ORP driver
6 PPM driver
7 Flow switch
8 Probe holder
9 IDECAL
10 Calibration solutions pH
11 Calibration solution ORP
12 Probe GEL ppm

Optional accessories

VSP driver
73471 AP SD-VSP

Black

70054 SD-PUMP
Peristaltic pump



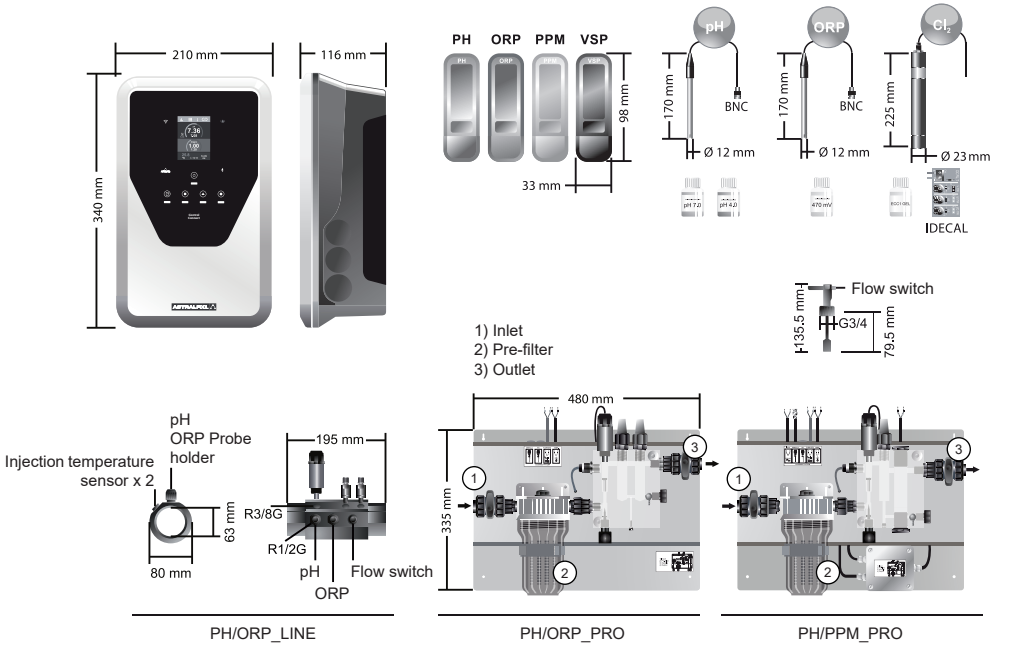
4 Description

Power Supply	MODEL		
Description	**PH/ORP_LINE**	**PH/ORP_PRO**	**PH/PPM_PRO**
Operating voltage	230 Vac 50/60 Hz.		
Consumption (W)	27 W		
Parameters	PH/ORP T (°C)	PH/ORP T (°C)	PH/Cl_2 (PPM) T (°C)
Control output	pH: relay (NO, 0.5A max) ORP, Cl2: relay (NO, 0.5A max) 4 x (potential-free max 24 V)		
Control inputs	4 potential-free (interlocks)		
Range / Biopool Control OFF / Accuracy	pH: 0.00–9.99 / 7.00–7.80 / 0.01 ORP: 0–999 / 600–850 / 1 mV Cl2 (ppm): 0.00–5.00 / 0.30–3.50 / 0.01 ppm Temp. T (°C): 0–50 °C / 0–50 °C / 0.1 °C		
Range / Biopool Control ON / Accuracy	pH: 0.00–9.99 / 6.50-8.50 / 0.01 ORP: 0–999 / 300–850 / 1 mV Cl2 (ppm): 0.00–5.00 / 0.30–3.50 / 0.01 ppm Temp. T (°C): 0–50 °C / 0–50 °C / 0.1 °C		
Inductive sensor	Configuration menu: active-inactive		
Flow switch sensor	Configuration menu: active-inactive		
Config. Menu System	Colour LCD touchscreen		
Remote control (cable)	4 digital – 4 relay		
Data acquisition	pH, ORP, Cl2 (ppm), temperature (24 days)		
Surround	ABS		
Modbus & Fluidra Pool (compatible)	Yes		
Probe holder material (PRO)	ABS (LINE) / methacrylate derivative (PRO)		
Connection to piping	PVC gluing Ø 63 mm		
Maximum pressure	1 kg/cm^2		
Operating temperature	15–40 °C max		

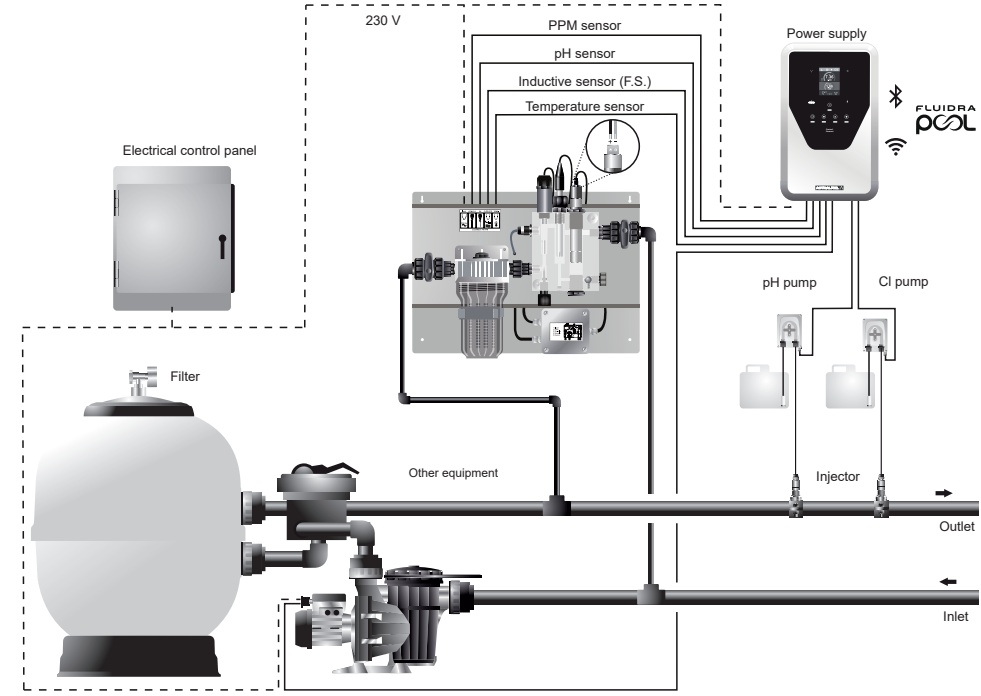
pH/ORP/Clppm Sensors	MODEL
Description	AP SD-pH, AP SD-ORP, AP SD-PPM
Measurement range	0.00–9.99 (pH) / 000–999 mV (ORP) / 0.00–5.00 (Clppm)
Biopool control range OFF	7.00–7.80 (pH) / 600–850 mV (ORP) / 0.30–3.50 (Clppm)
Biopool control range ON	6.50–8.50 (pH) / 300–850 mV (ORP) / 0.30–3.50 (Clppm)
Accuracy	± 0.01 pH / ± 1 mV (ORP) / ± 0.01 (Clppm)
Calibration	Automatic (pH-ORP solutions, ppms electronic board)
Control outputs (pH) (ORP/PPM)	Two 230 V / 500 mA outputs (connection for dosing pumps)
pH and ORP sensors	Epoxy body, single joint
Clppm sensor	PVC body + diaphragm.

VSP driver	
Description	73471 AP SD-VSP
Variable speed pump control, up to three speeds	
Automatic pneumatic-hydraulic valve control	
Automatic filter backwashing	
Hourly programming at various filtering rates	

5 Dimensions



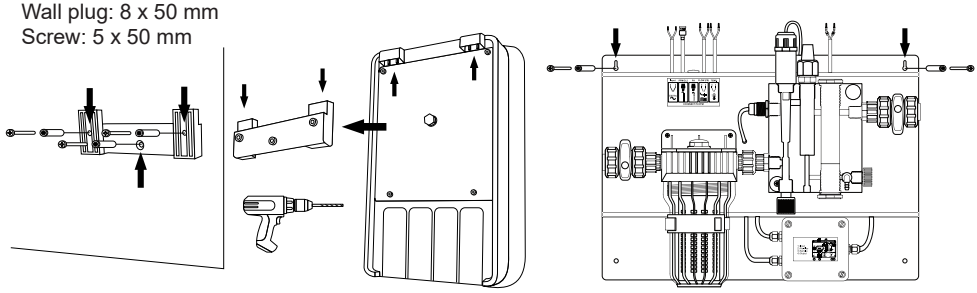
6 Installation Diagram



7 Control Unit Installation

Wall-mounted control unit

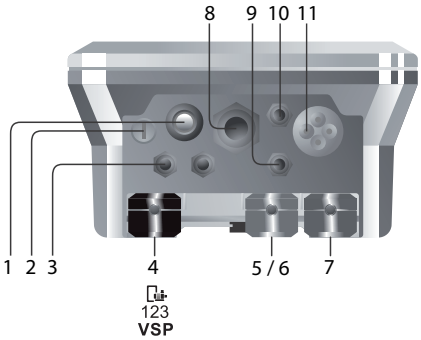
Wall plug: 8 x 50 mm
Screw: 5 x 50 mm



Always install the system's control unit VERTICALLY and on a rigid surface (wall), as shown in the recommended installation diagram. To ensure that the equipment remains in good condition, it should always be installed in a dry, well-ventilated location. The equipment should not be installed outdoors The POWER SUPPLY should preferably be installed far enough away from the electrolysis cell to prevent it from being accidentally splashed with water.

It is important to avoid the formation of corrosive atmospheres due to pH reducers (specifically, those based on hydrochloric acid, "HCl"). Do not install the system close to areas where these products are stored. We strongly recommend that products based on sodium bisulphate or dilute sulphuric acid be used. The control unit must be connected to the mains in the control panel of the filter system, such that the pump and the system are connected simultaneously.

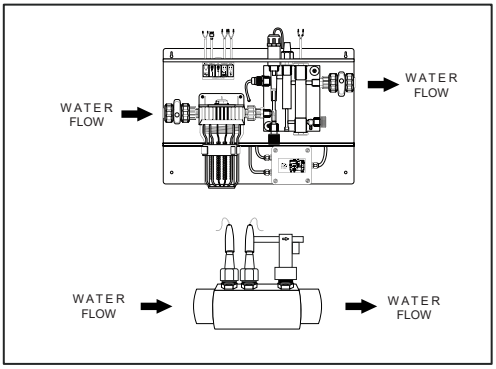
8 Connection



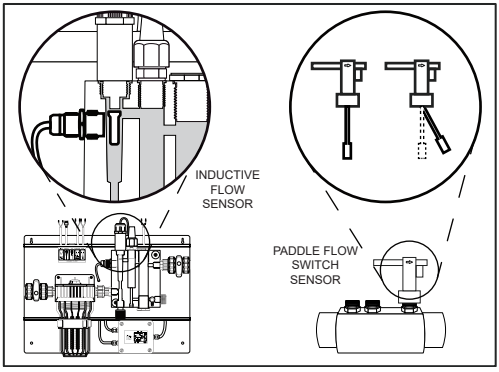
1) Switch
2) Fuse
3) 230 Vac feed
4) VSP driver
5) Clppm driver
6) ORP driver
7) pH driver
8) pH pump
9) Cl pump
10) Temperature sensor
11) Flow switch/inductive sensor

9 Probe Holder Panels and Cell Installation

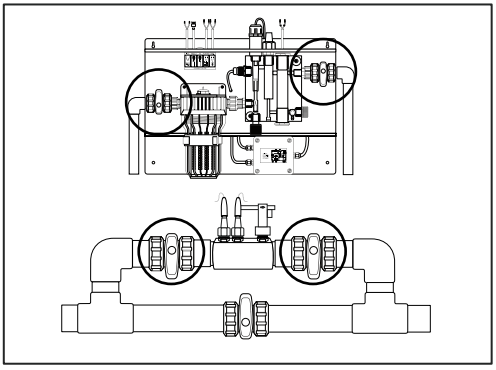
The probe holder panels and cell should be installed in a location protected from the weather and **always downstream of the filtration system** and any other devices in the installation such as heat pumps, control systems, etc.
The installation should allow easy user access to elements of the probe holder panel and cell. The probe holder panels and cell should always be fitted on a part of the pipes that can be isolated from the rest of the installation by means of its two valves, enabling their maintenance to be carried out without having to partially or completely empty the pool.
The installation must be in the form of a bypass, with flow controlled by means of the valves. Before proceeding with the final installation of the system, the following should be taken into account:



Direction of flow must be as marked on the probe holder panel and cell.



The inductive or paddle switch flow sensor system is activated when there is little or no water recirculation (flow) through the probe holder panel or cell. The existence of a flow of water is shown as it keeps the float at the level of the inductive sensor. If water flow is interrupted, the float descends and a flow alarm is shown. The paddle flow sensor has a tab which remains vertical when the fluid stands still and moves when the fluid circulates. The safest arrangement is shown in the recommended installation diagram.

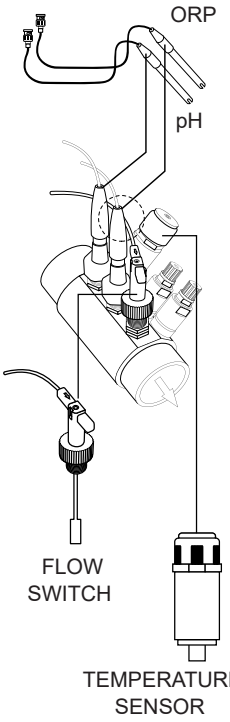


WARNING: The inductive flow sensor will not work correctly, with the resulting risk of high pressure in the bypass, if the inlet and outlet valves are closed simultaneously. Although this is unlikely to happen, it can be avoided by blocking the return valve to the swimming pool once the equipment is installed, so that it may not be accidentally manipulated.

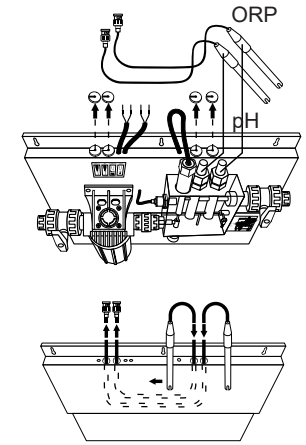
10 Power Supply and Panel Connections

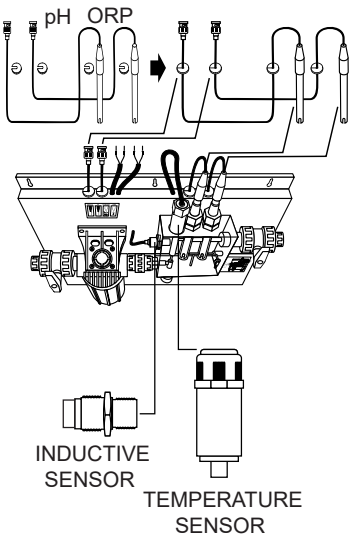
Connections between probes and panels must be as shown in the following diagrams. Never alter their length or cross-section without first consulting your authorised distributor.

CCONNECT PH/ORP_LINE

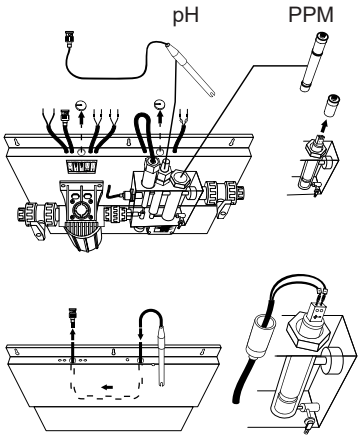


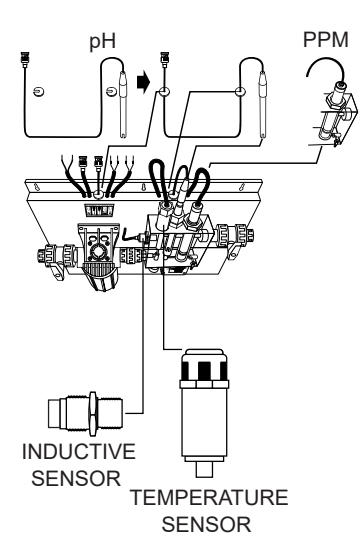
CCONNECT PH/ORP_PRO





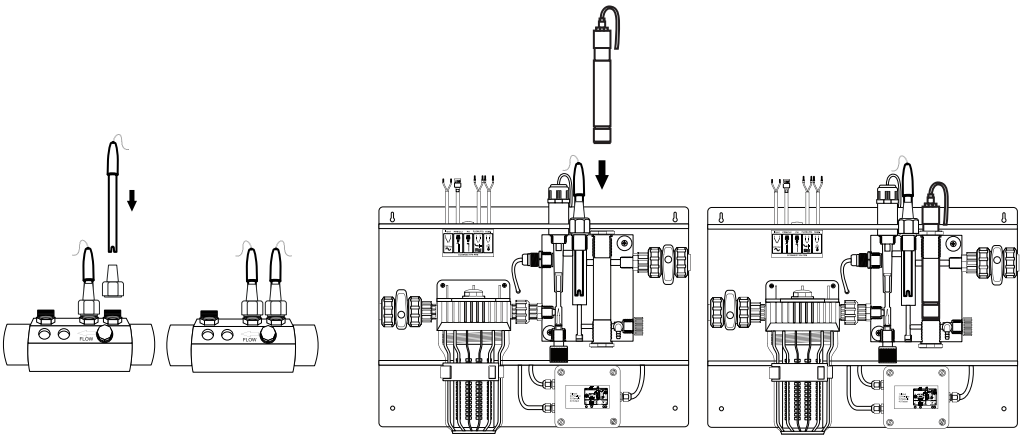
CCONNECT PH/PPM_PRO



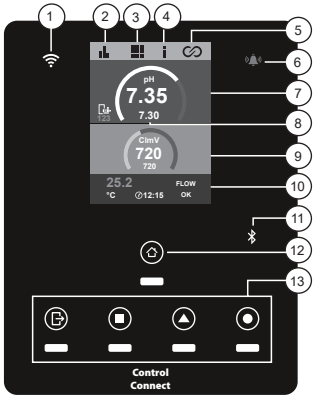


11 pH/ORP/PPM Sensor Installation

1. Insert the pH/ORP/PPM sensor supplied with the equipment in the appropriate housing in the probe holder.
2. To do this, loosen the nut on the probe socket and insert the sensor.
3. The sensor should be inserted far enough to guarantee that the probe at its tip will always be submerged in the water flowing through the probe holder.
4. Always install the pH/ORP/PPM sensor vertically.



12 Cover and Functions



1) Wi-Fi status LED
2) Statistics menu
3) Configuration menu
4) Information menu
5) Relay menu
6) Alarm LED
7) Electrolysis production
8) pH
9) ORP / Clppm
10) Sensors (temperature / salinity)
11) Bluetooth connectivity
12) Home menu
13) Relay status

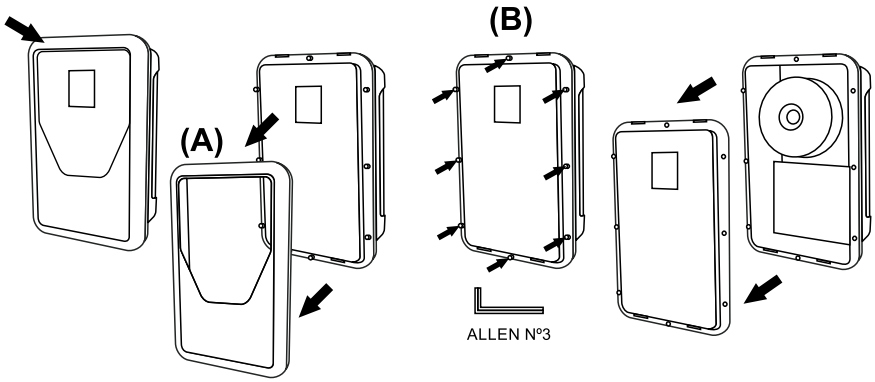
13 Removal

Removing the power supply housing:

1. Remove the trim panel (A) from the front cover.

2. Unscrew the front cover fixing screws (B).

3. Pull off the front cover.



14 Initial Start-up

1. Ensure that the filter is 100% clean, and that the pool and installation is free of 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 us to achieve a more efficient treatment with a lower concentration of free chlorine in the water, and to extend the operating life of the electrodes with less lime scale in the swimming pool.

a) The pH should be 7.2–7.6
b) Total alkalinity should be 60–120 ppm.

N.B.: to determine the level of free chlorine, a test kit must be used.

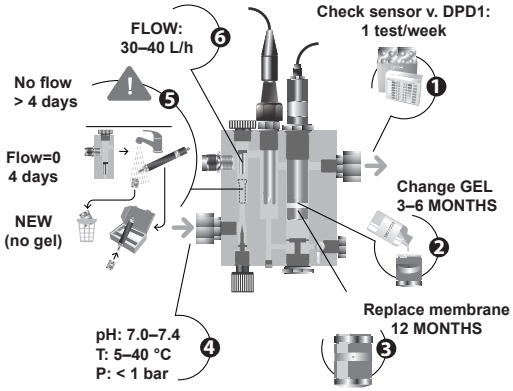
7. In pools that are exposed to strong sunshine or intensively used, it is advisable to maintain a level of 25–30 mg/L of stabiliser (isocyanuric acid). Under no circumstances should a level of 75 mg/L be exceeded. This will help to prevent the destruction of free chlorine in the water by sunlight.

15 Maintenance

pH/ORP Sensor Maintenance (Maintenance 2–12 months).

1. Ensure that the sensor membrane is always damp.
2. If a sensor is not going to be used for an extended period of time, store it in a storage solution.
3. To clean a sensor, do not use abrasives that could score its surface.
4. Sensors are consumable items that must be replaced after a certain period of use.

Ppm CHLORINE Sensor Maintenance



1) Check sensor v. DPD1: once/week

2) Change gel: every 3–6 months

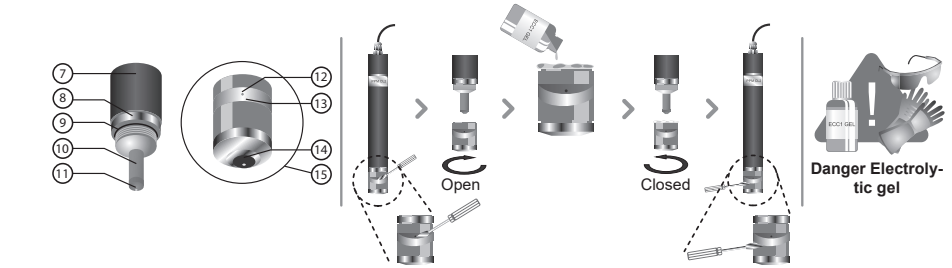
3) Change membrane: every 12 months

4) pH: 7.0...7.4
Temperature: 5…40 °C
Pressure: 1 bar max.

5) No FLOW for more than 4 days → store the sensor with a new membrane (without gel).

6) FLOW: 30…40 L/h

If calibration is not possible, because the reading is too low, then the sensor electrode [11] should be sanded with the paper supplied in the installation kit (blue paper), and the membrane and electrolyte should also be replaced as described below:



PROCEDURE:

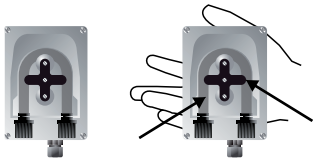
- Use a small screwdriver or similar tool to remove the transparent cover [13] protecting the bleed hole [12], and move it to one side so that the bleed hole [12] is accessible.
- Unscrew the membrane head [15] from the sensor body [7].
- IMPORTANT: Never unscrew the membrane head [15] without the vent hole [12] being open, as the vacuum that would be created could damage the membrane, rendering it unusable.
- Use the special sandpaper supplied to clean only the sensor electrode [11]. To do this, place the special sandpaper on a smooth surface, hold it in place by pressing on a corner, and holding the sensor vertically, drag the tip of the sensor over the sandpaper two or three times.
- Fit a new membrane, if necessary.
- Fill the head [15] with the supplied electrolyte.
- Slide the transparent cover [12] to one side.
- Holding the electrode body [7] vertical, screw on the head [15], allowing the excess electrolyte to drain through the bleed hole [12].
- Press the transparent cover [13] until it snaps back into position and the bleed hole [12] is closed.
- The gasket [9] is initially resistant when the head [15] is screwed on, which makes for a perfect seal.
- When the membrane head [15] is completely screwed on, the sensor electrode [11] must not hit the membrane [14], as this would damage the membrane and render it unusable.
- The lifetime of the membrane will depend very much on the quality of the water, being one year approximately in normal conditions of use. Heavy contamination of the membrane must be avoided at all times.
- As a general rule, the electrolyte should be replaced at least once every three months.
-After replacing the membrane and/or electrolyte, keep the electrode polarised for at least 1 hour before recalibration. Recalibrate again approximately 24 hours after start-up.

If the sensor needs to be stored or transported, follow the procedure below:

Procedure for storing the sensor and period of non-use:
- The sensor must be stored correctly when the equipment is not being used or if the system will have no flow for more than 4 days.
- Use a small screwdriver or similar tool to remove the transparent cover [13] protecting the bleed hole [12], and move it to one side so that the bleed hole [12] is accessible.
- Unscrew the membrane head [15] from the sensor body [7].
- Rinse the active parts of the sensor [10,11] with distilled water, removing any remaining electrolyte, and allow them to dry.
- Once dry, screw the membrane head [15] carefully onto the sensor body. The membrane [14] must not touch the sensor electrode [11], as this would damage it and render it unusable.

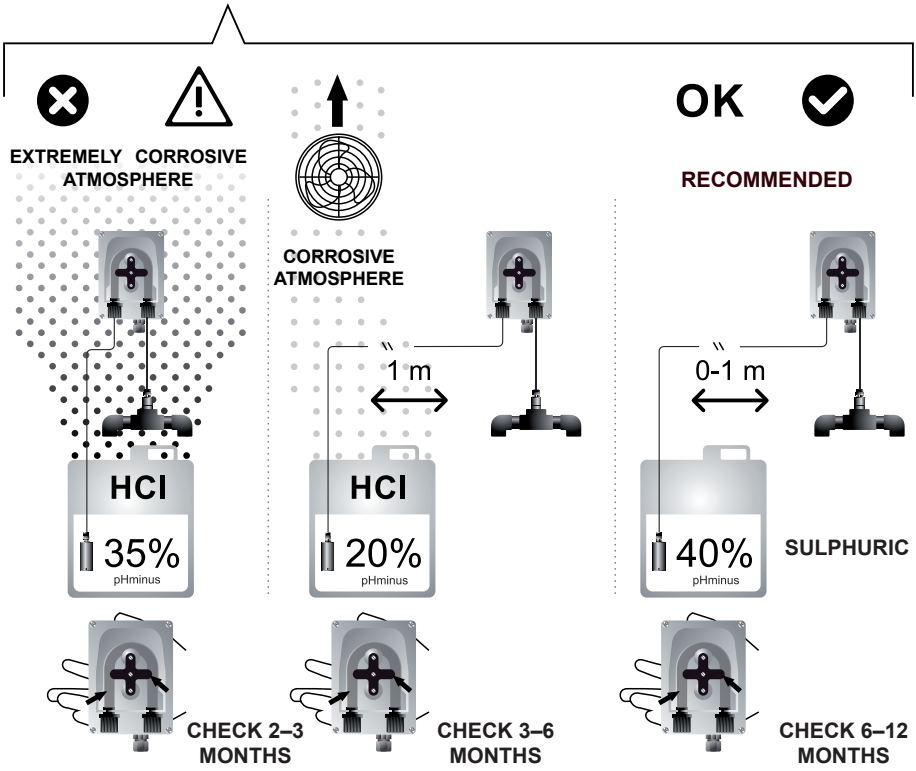
Reusing the sensor after prolonged storage:
- Clean the sensor electrode [11] as described above with the special sandpaper provided.
- Replace the membrane head [15] with a new one, following the procedure described above.

Pipe Maintenance (Maintenance 3–6 months).

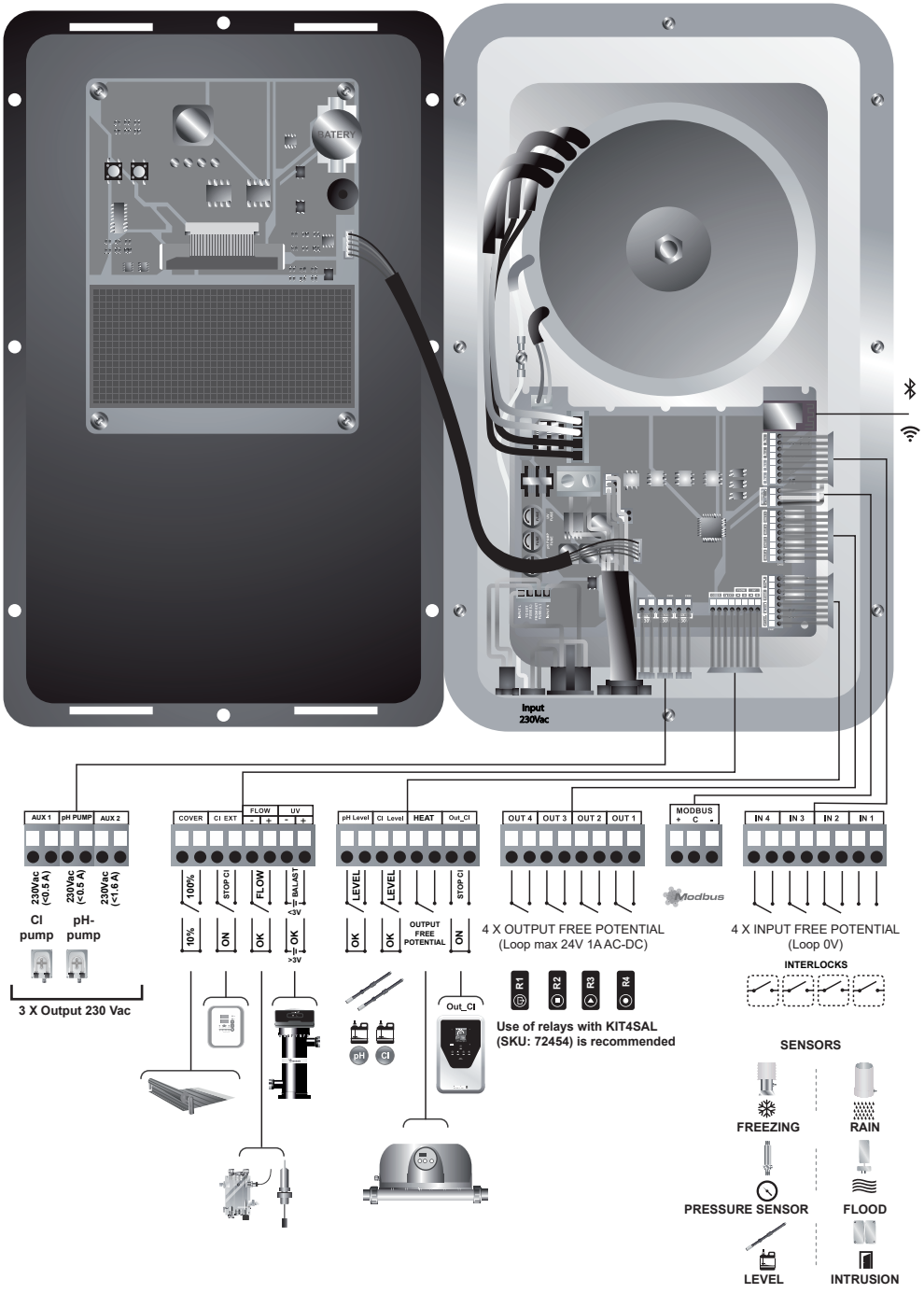


CHECKING THE TUBE AND ROTOR

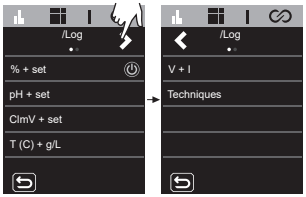
pHminus (ACID): 2–12 MONTHS



16 Electronic Board



17 Statistics Menu



% + set: Production log and established production set point disabled.

pH + set: pH measurement and setpoint.

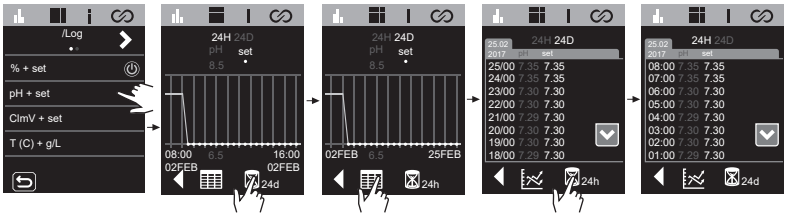
Clppm or ClmV + set: Clppm or ClmV measurement (depending on the slot installed) and setpoint.

T(ºC) + g/L: Temperature and grams of salt in the water.

V + I: Voltage output (Vdc) and amperage (Adc) of the devices.

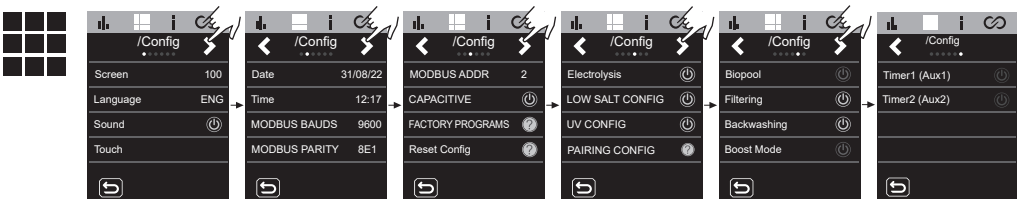
Techniques: Records 24 hours/24 days of Clppm or ClmV measurement and pH measurement.

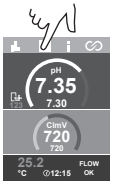
Statistics show a history of the production parameters (pH, ClmV, Clppm, T (°C), g/L) during the operation of the device. You can choose between displaying statistics for the last 24 hours or the last 24 days.



24 hour log | 24 day log | 24 day log | 24 hour log

18 Configuration Menu





Screen: Sets the screen brightness.

Language: Language selection. Available languages: ESP, FRA, NED, ITA, POR, DEU, POL, ENG.

Sound: Enable/Disable device's sound.

Touch: Touchscreen calibration.

Date: Set day/month/year (equipment date). Not configurable if the device is connected to Fluidra Pool.

Time: Set time. Not configurable if the device is connected to Fluidra Pool.

ModBus Bauds: Sets the MODBUS speed to 9600 or 19200.

ModBus Parity: Sets between 8E1, 8N1, 8N2.
- 8E1: 8 bits, PAR parity, 1 stop bit.
- 8N1: 8 bits, no parity, 1 stop bit.
- 8N2: 8 bits, no parity, 2 stop bits.

ModBus Addr: Configurable MODBUS address (default 2).

Capacitive: Enable/disable capacitive buttons.

Reset Configuration: Restores default values:
- **Screen:** 90
- **Language:** English
- **Sound:** Enabled
- **Reset** to tactile calibration factory values.
- **Date and Time:** 01/01/2024 00:00
- **Modbus:** Baud: 9600 Parity: 8E1 Addr: 2.

Electrolysis: Enabled by default in electrolysis devices. This function switches the electrolysis function on/off.

LOW SALT CONFIG: Enabled by default on low salinity devices, disabled on devices with standard salinity. This function resets the g/L by indicating on the main display that the device is a low salt (LS) system. **Do not activate this function if the device is not a low salt system. Otherwise, the g/L measurement will not be correct.**

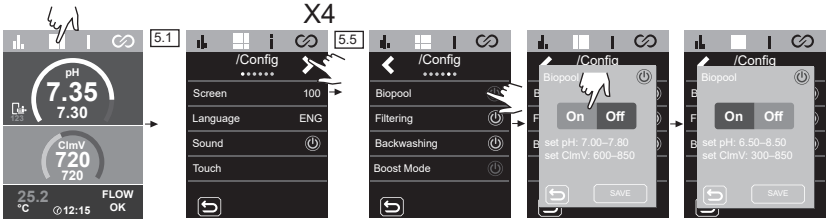
UV Config: Enabled by default in the Neolysis system. Displays lamp hours and ballast status.

Pairing configuration: to connect to the Fluidra Pool app.

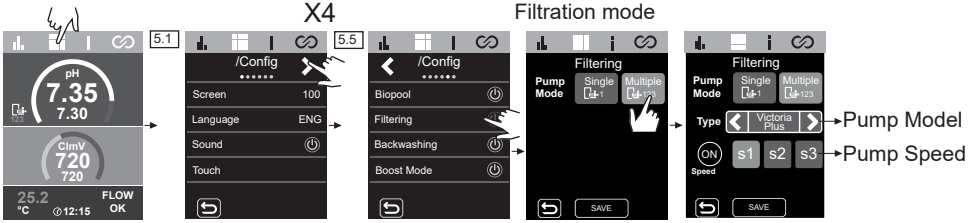
Connection with Fluidra Pool

1. Download and install the FLUIDRA POOL app.
2. Create a user account and set up the pool parameters.
3. Activate pairing mode on the equipment.
4. Press Add Equipment and follow the FLUIDRA POOL instructions.

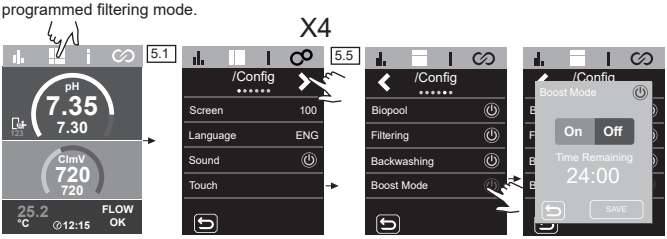
Biopool: Increased range of pH and ClmV settings.
pH: BIO OFF = 7.00–7.80 / BIO ON = 6.50–8.50
ClmV: BIO OFF = 600–850 / BIO ON = 300–850



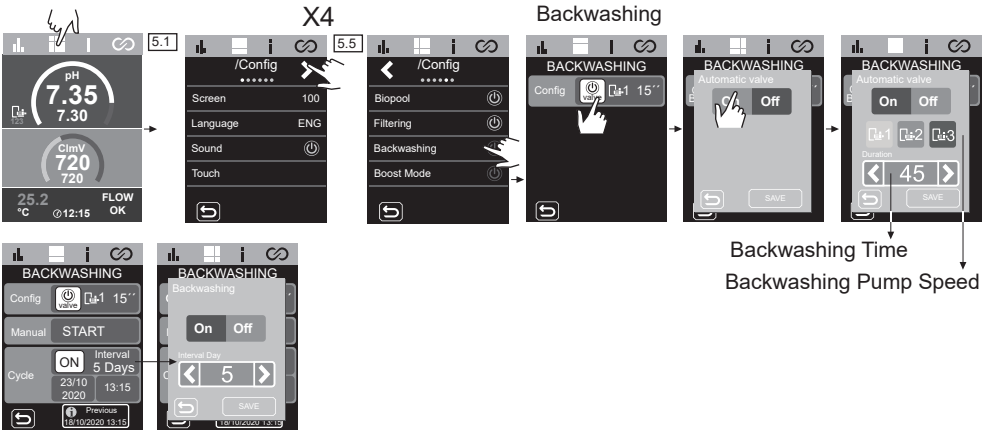
Filtering: this function can only be enabled with the VSP driver. Variable speed pump control.



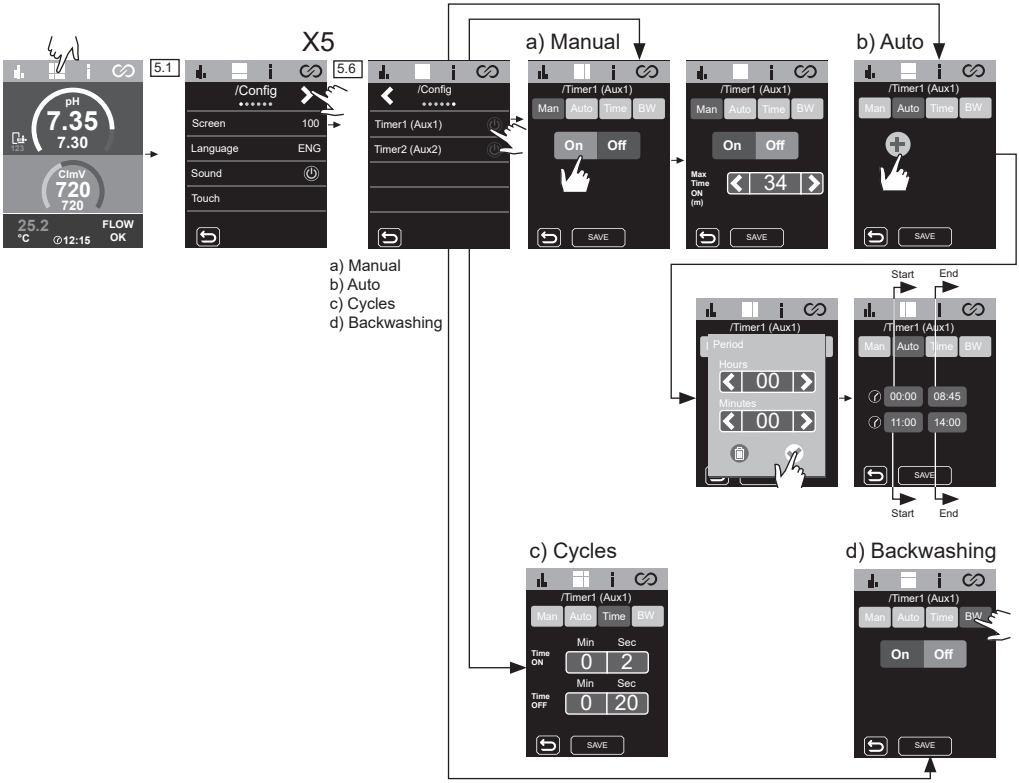
Boost (Shock) Mode: Activates filtering for 24 hours at full (100%) production. After this time, it reverts to the programmed filtering mode.



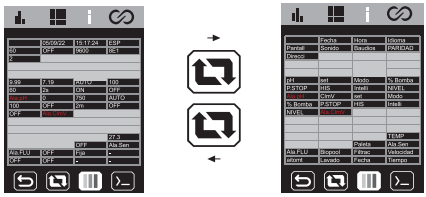
Backwashing: Filter cleaning can be selected manually or cleaning cycles can be programmed. To programme backwashing periods, you can select their speed, frequency and duration. At the top of the menu you can check the date that backwashing was last carried out.



Timer 1-2 (AUX 1-2):
For configuring 2 additional auxiliary relays with associated timers (e.g. flocculant dosing pumps, lighting, BW, etc.). This function allows selection among manual, automatic, cycles and BW options.



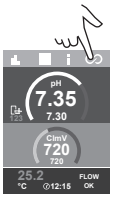
19 Information Menu

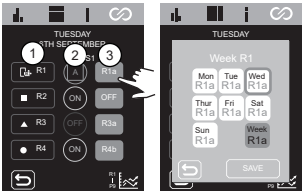


The information menu will show all the equipment's values on a single screen.

20 Relays Menu (Fluidra Pool)

Allows relay programs to be modified and interlocks to be set if necessary.





1. Relay selection.

2. Relay mode

Automatic mode (program) A

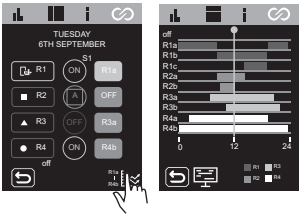
Relay on ON

Relay off OFF

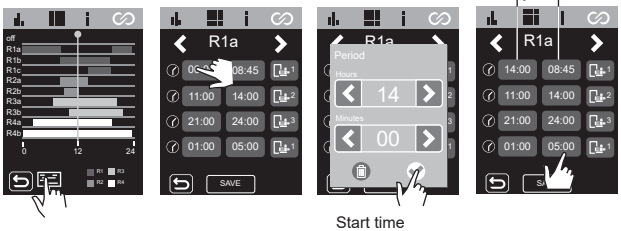
3. Select the programs. The equipment offers a choice of 9 modifiable programs: R1(a-c), R2(a-b), R3(a-b), R4(a-b), plus OFF.

Program modification:

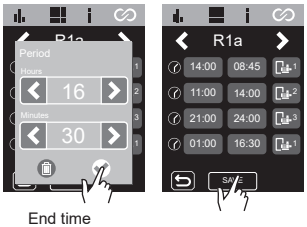
Relays R1–R4 have 9 different configurable programs R1(a-c), R2(a-b), R3(a-b) R4(a-b).



Each program has 4 time slots to be configured.



Start time

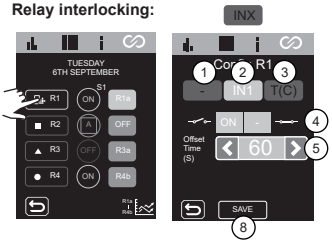


End time

Only program R1 can set S1,S2,S3 in the VSP driver.

R2–R4 can only set a fixed speed.

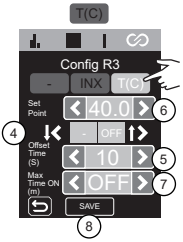
Relay interlocking:



- 1) No interlocking.
- INX 2) Digital interlocking selection (IN1, IN2, IN3, IN4).
- T(C) 3) Analog interlocking selection: temperature.

4) Digital input status

- \- No interlocking.
- ON When the contact is open/closed, the relay will switch to ON.
- OFF When the contact is open/closed, the relay will switch to OFF.
- AUTO When the contact is open/closed, the relay mode will switch to AUTO.

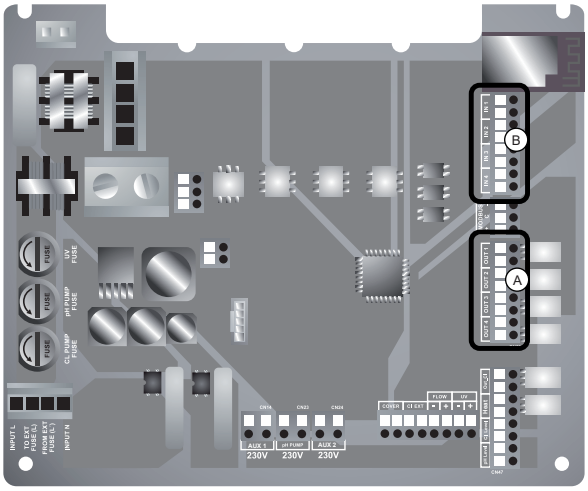


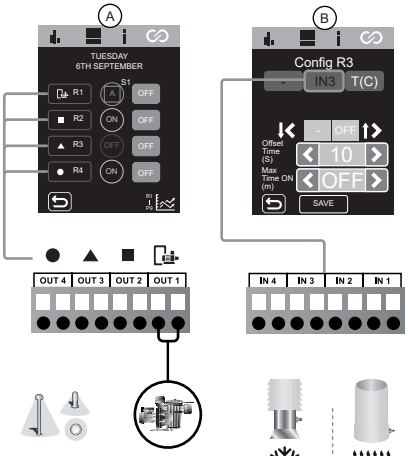
5) Time OFFSET configuration: 0 ... 999 s. Time range to set relay status
ON / OFF/ AUTO.

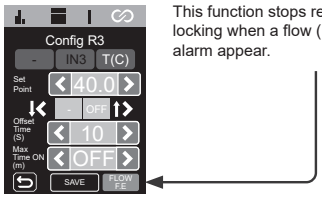
6) Temperature setpoint value configuration: 0 ... 40°.

7) OFFSET value configuration: 0 ... 40°.
Temperature range for setting relay status
ON / OFF / AUTO.

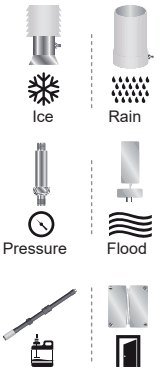
8) Save changes.





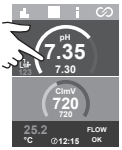


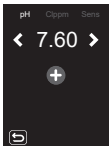
This function stops relay safety interlocking when a flow (FS) or gas (FE) alarm appear.

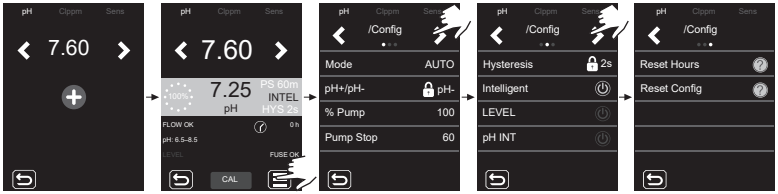


21 pH Configuration

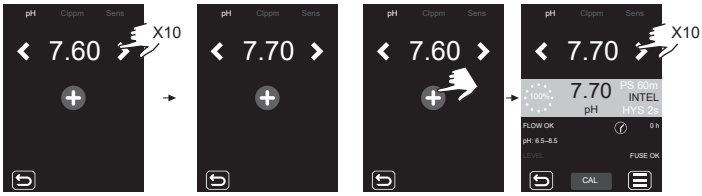
pH







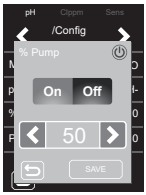
pH: Sets the setpoint value.



Mode: Sets the pump working mode.
- **AUTO:** This function will switch the pump on when the pH value is above the setpoint.
- **DOSE:** With this function, the product is dosed for 15 minutes, regardless of the pH value of the water. It is useful during start-up.
- **OFF:** The pump will never switch on.

pH-: Sets the pH product to be used. When electrolysis is enabled the non-modifiable value is PH-. 🔒

% Pump: Sets the working period of the pump for each minute of dosing. E.g. 50% = 30 s on 30 s off.



Pump Stop: The pH has a safety system **(PUMPSTOP FUNCTION**) which acts on the dosing pump and prevents the following:

- Damage caused by dry running the pump (depleted pH-minus product).
- Overdosage of pH-minus product (damaged or aged sensor).
- pH regulation problems due to high alkalinity of the water (freshly filled pool, high carbonate levels).

When the **PUMP STOP FUNCTION** is activated (default), the system stops the dosing pump after a time set in minutes without having reached the pH set point.

Hysteresis: Time that the pump continues dosing when the measurement reaches the desired setpoint (Value cannot be changed).

Intelligent: Smart pH- dosing function for more precise regulation. The working cycle of the pump is updated dynamically depending on the measurement.

LEVEL: Function for the use of a liquid level sensor (pH-). It will stop the pump dosing if the liquid level is below the level sensor.

pH INIT: pH reading stabilisation time. After switching on the device or changing the status of RELAY1 to ON / AUTO-ON, a time of 1min/2min/4min can be set to obtain a stable pH reading.

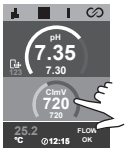
Reset Hours: Resets the pump partial hours value.

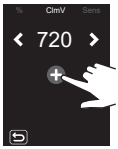
Reset Config: Resets the default configuration parameters. A message appears showing the values to be changed.

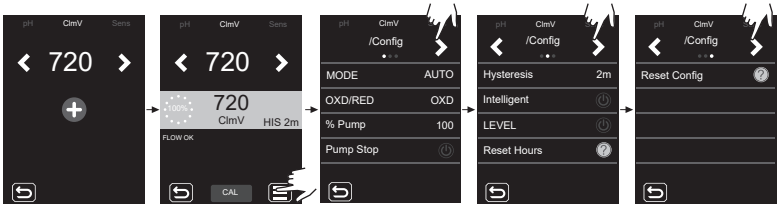
- **Mode**: AUTO
- **% Pump**: 100%
- **PS**: 60m
- **HYS:** 2m
- **Intelligent**: OFF
- **LEVEL**: OFF
- **Set:** 7.20

22 ClmV/Clppm Configuration

ClmV
Clppm







ClmV/Clppm: Sets the setpoint value.

Mode: Sets the pump working mode.
- **AUTO:** This function will switch the pump on when the ClmV/Clppm value is below the set point.
- **DOSE:** With this function, the product is dosed for 15 minutes, regardless of the ClmV/Clppm value of the water. It is useful during start-up.
- **OFF:** The pump will never switch on.

OXD/RED: Oxidiser/Reducer configuration.

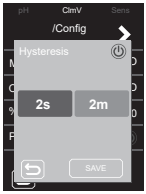
% Pump: Sets the working period of the pump for each minute of dosing. E.g. 50% = 30 s on 30 s off.

Pump Stop: The ClmV/Clppm has a safety system **(PUMP STOP FUNCTION**) which acts on the dosing pump and prevents the following:

- Damage caused by dry running the pump (depleted Cl product).
- Cl product overdose (damaged or old sensor).

When the **PUMP STOP FUNCTION** is activated, the system stops the dosing pump after a time set in minutes without having reached the Cl set point.

Hysteresis: Time during which the pump continues dosing when the measurement reaches the desired set point.



Intelligent: Smart ClmV/Clppm dosing function for more precise control. The working cycle of the pump is updated dynamically depending on the measurement.

LEVEL: Function for the use of a liquid level sensor (Cl). It will stop the pump dosing if the liquid level is below the level sensor.

Reset Hours: Resets the pump partial hours value.

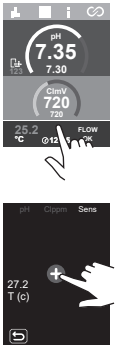
Reset Config: Resets the default configuration parameters. A message appears showing the values to be changed.

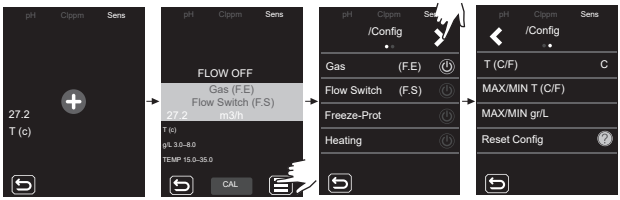
- **Mode**: AUTO
- **% Pump**: 100%
- **PS**: 60m
- **HYS:** 2m
- **Intelligent**: OFF
- **LEVEL**: OFF
- **Set:** 750

23 °C Sensor Configuration

°C

g/L





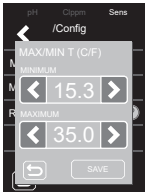
Gas: Enable/disable gas sensor detection.

Flow switch: Enable/disable flow sensor detection.

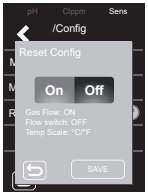
Freeze-Prot: Prevents water from freezing in the pipes. Filtering is switched on if the water temperature drops below the set value (of 1–5 °C). Once the temperature has increased to the set value, filtering stops.

Heating: The heater activates automatically to maintain the desired temperature of the water. The temperature can be set within the range 6–50 °C.

T (C/F): Temperature measurement section: Fahrenheit or Celsius.



MAX/MIN T (C/F): Sets the maximum/minimum value of the temperature alarm. At these values the device will display the temperature alarm.



Reset Config: To return to the default settings. A message appears showing the values to be changed.

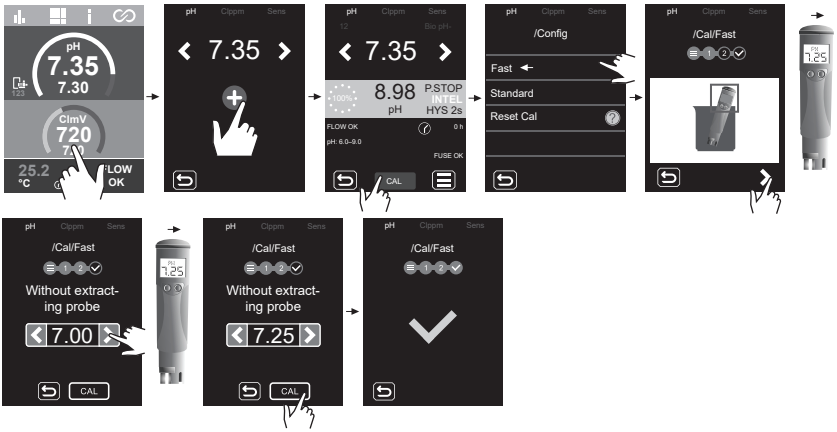
- **Gas Flow**: ON
- **Flow switch**: OFF
- **Temp Scale**: °C/°F

24 Sensor Calibration (pH, ORP, PPM, TEMPERATURE)

Fast pH Calibration

'Fast' mode allows routine recalibration of the sensor when there are small errors in calibration **with no need to remove the sensor or use calibration solutions.**

PROCEDURE:
1. Ensure that the sensor is immersed in water and that the filter system is running.
2. Use a pH kit to measure the existing pH of the water in the pool.
3. Follow the procedure shown in the pictures below:



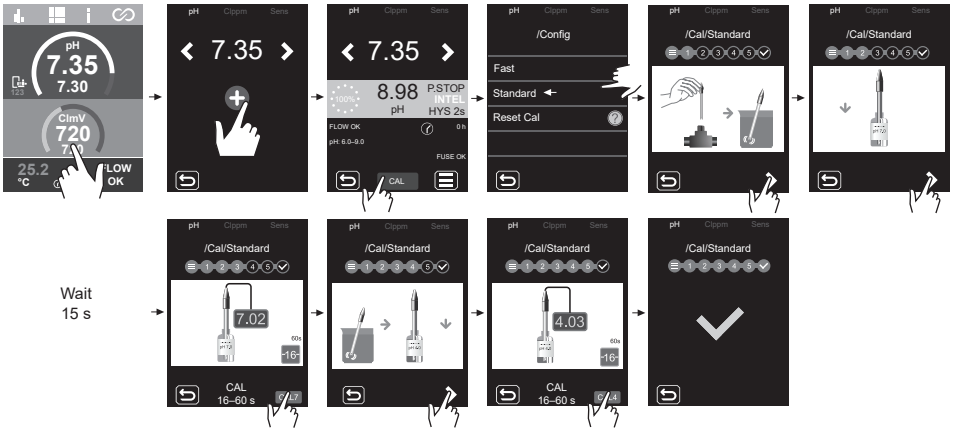
Standard pH Calibration

'Standard' mode allows precise calibration of the sensor using two control solutions with pH 7.0 and pH 4.0. However, this requires that the sensor be removed from the installation.

PROCEDURE:

IMPORTANT: Before closing the bypass valves, stop production by the equipment.

1. Remove the sensor from the probe holder and rinse it in an abundance of water.
2. Follow the procedure shown in the pictures below:



Standard ClmV Calibration (ORP)

The controller's calibration frequency must be individually determined in each application. However, we recommend this be done at least once a month while the swimming pool is in use. The ClmV has an automatic calibration system for ORP sensors based on the use of a 470 mV reference solution.

PROCEDURE:

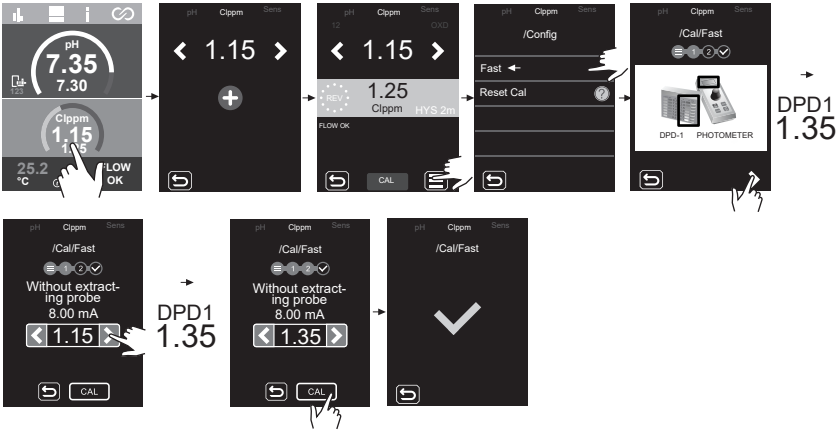
IMPORTANT: Before closing the bypass valves, stop production by the equipment.

1. Remove the ORP sensor from the holder and rinse it with tap water.
2. Follow the procedure shown in the pictures below:

Fast Clppm Calibration (PPM)

'Fast' mode allows routine recalibration of the sensor when there are small errors in calibration **with no need to remove the sensor or use calibration solutions.**

PROCEDURE:
1. Ensure that the sensor is immersed in water and that the filter system is running.
2. Use a measuring kit or a photometer to measure the existing DPD-1 value of the pool water.
3. Follow the procedure shown in the pictures below:

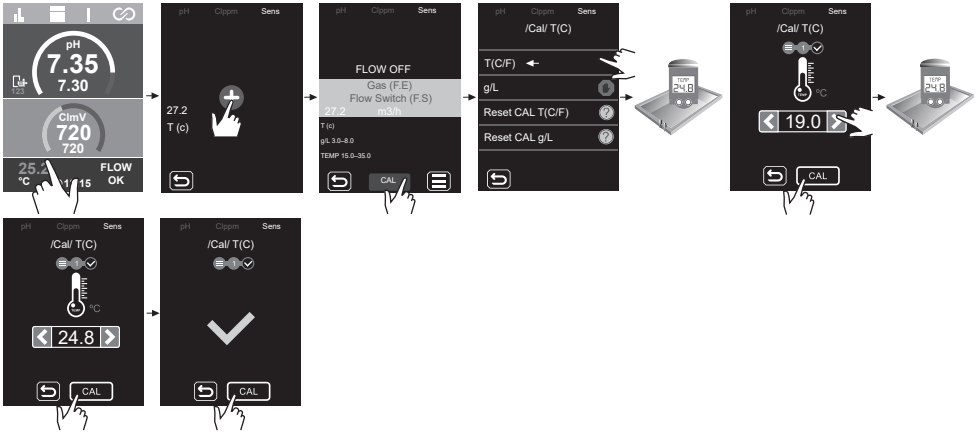


Calibration T(C/F)

Temperature calibration makes it possible to adjust the value in the event of small deviations.

PROCEDURE:

1. Use an external temperature sensor to measure the current value of the pool water.
2. Follow the procedure shown in the pictures below:



25 Alarms

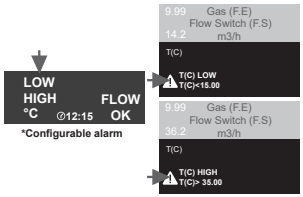
Ext Text in grey =Option disabled

Int White text = Option enabled

gr/d Text in red = Alarms

Sens

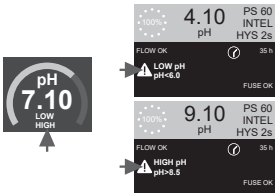
25.1 Temperature alarm



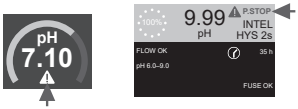
25.2 Gas / Flow Switch alarm

pH

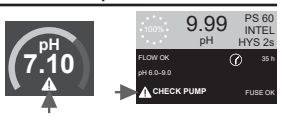
25.3 Low/high pH alarm



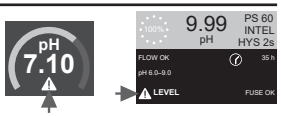
25.4 Pump Stop alarm



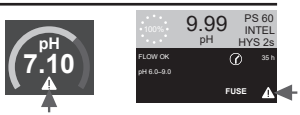
25.5 Check Pump alarm



25.6 Level alarm

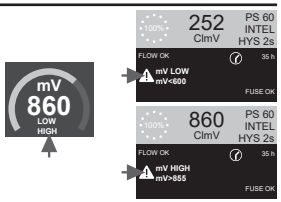


25.7 Fuse alarm

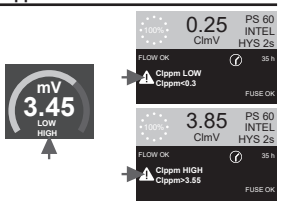


ClmV
Clppm

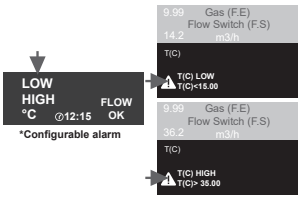
25.8 mV alarm



25.9 ppm alarm



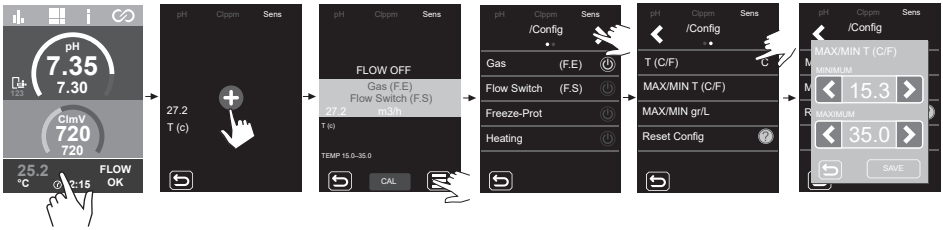
25.1 Low/High TEMPERATURE Sensor Alarm



- The temperature alarm will appear when the temperature values are out of range.

- When the water temperature is very low, the equipment will not reach 100% production due to low conductivity.

Temperature sensor – Temperature alarm configuration (max/min).

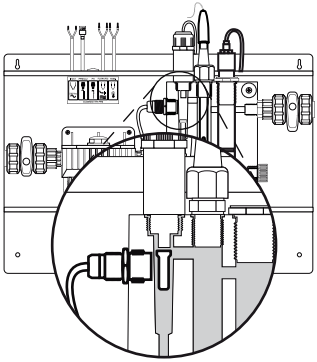


25.2 pH – Flow switch/inductive sensor alarm

- The flow alarm will appear if there is no water flow (inductive or flow switch sensor).

Inductive sensor

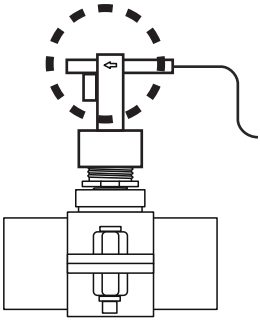
71538 CConnect-PH/ORP_Pro
71539 CConnect-PH/ppm_Pro



When the contact connected to this input is open (inductive sensor) and [FS] is activated in the equipment, dosing switches off due to the flow alarm.

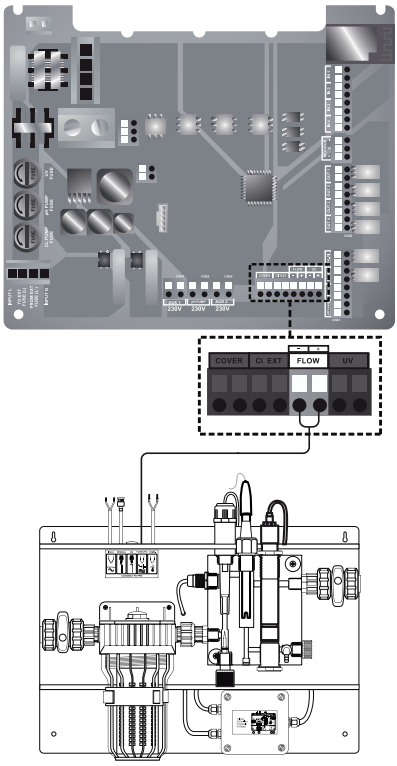
Flow switch sensor

71537 CConnect-PH/ORP_line

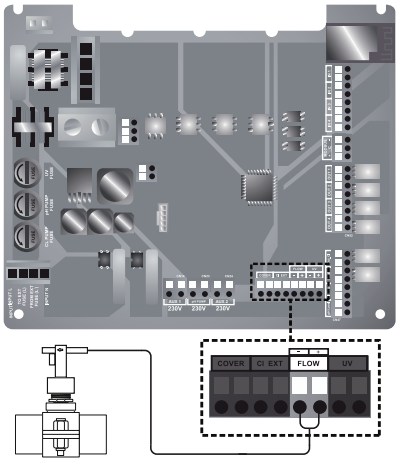


When the contact connected to this input is open (external flow detector idle) and [FS] is activated in the equipment, dosing switches off due to the flow alarm.

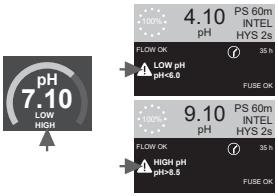
Connecting the inductive sensor to the main board



Connecting the flow switch sensor to the main board



25.3 pH - High/low alarm



- Low and high alarms appear if the reading is outside the set values. These values cannot be modified.

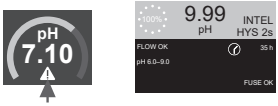
If the high pH alarm appears, the pH pump will be switched off according to the safety values set.

Standard mode
pH > 8.5 = PH HIGH ALARM = Pump off
pH < 6.5 LOW PH ALARM

Biopool mode
pH > 9.0 = HIGH PH ALARM = Pump off
pH < 6.0 LOW PH ALARM

The pH of the pool must be manually reduced to 8.45 (standard mode) or 8.95 (biopool mode) for the pump to start dosing again.

25.4 pH – PUMP-STOP alarm



- The integrated pH has a safety system (PUMP-STOP) that acts on the dosing pump and prevents the following situations.

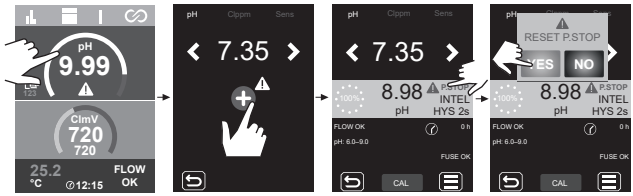
- Damage caused by dry running of the pump (depleted pH-minus product).
- Overdosage of pH-minus product (damaged or aged sensor).
- pH regulation problems due to high alkalinity of the water (freshly filled pool, high carbonate levels).

- When the PUMP-STOP FUNCTION is activated (default), the system stops the dosing pump after a programmed time without having reached the pH setpoint.

The PUMP-STOP FUNCTION is factory set to 60 minutes.

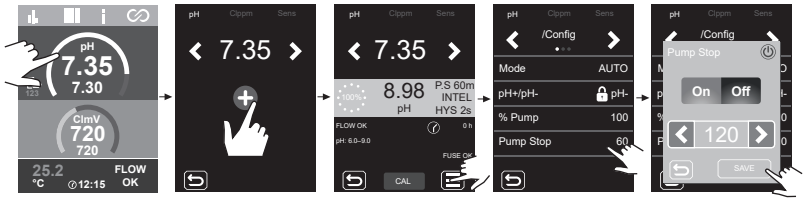
Reset the PUMP-STOP alarm.

After resetting the PUMP-STOP alarm, the pump will restart if the pH value is above (0.2) of the setpoint and is below 9.0.

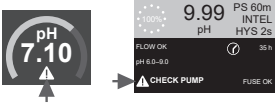


PUMP-STOP Function Configuration.

ON – OFF.
Value 0…120min.



25.5 pH – CHECK PUMP

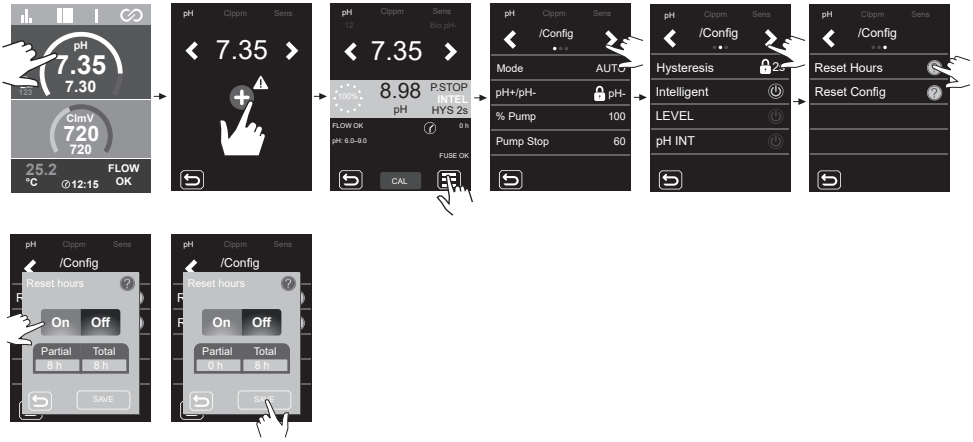


-The pump check alarm is a visual warning to check the condition of the peristaltic pipe.

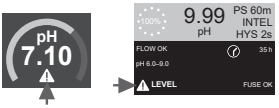
- This alarm will appear every 500 hours (not configurable value) but will not affect the start/ stop of the pump.

- To clear the alarm, reset the pump's partial dosing hours to zero.

Restart dosing pump hours



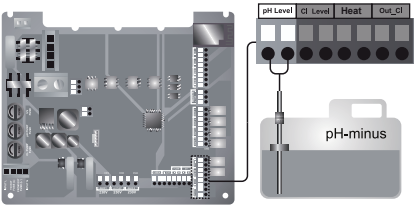
25.6 pH – Level sensor alarm (container)



The level sensor is an electronic device that measures the height of liquid in a tank or other container. Generally, this type of sensor functions as an alarm, indicating the low level alarm.

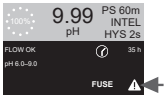
Operating logic:
- Level above the set level = closes the contact
- Level below set level = opens contact and displays level alarm.

Level sensor connection (container)

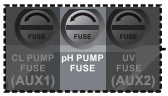


Level sensor ON/OFF (container)

25.7 pH – pH fuse alarm



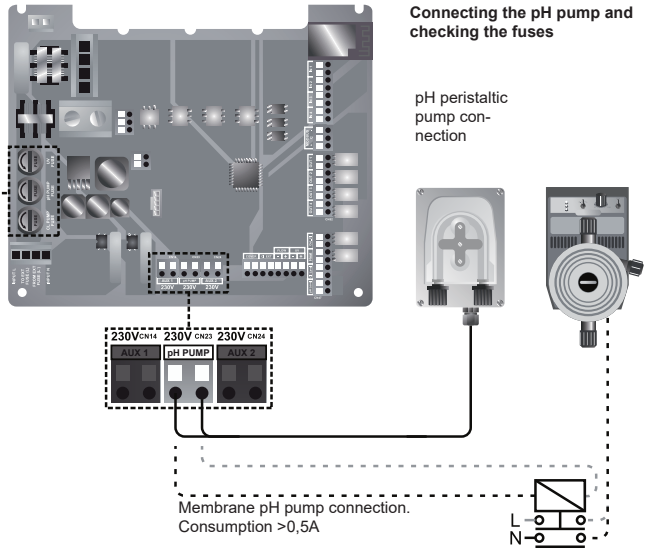
- This alarm will appear when the internal fuse of the board is blown.



Check the fuse and replace it with a new one.

Fuse type "T" (delayed fusing)

T 500mA

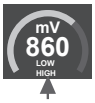


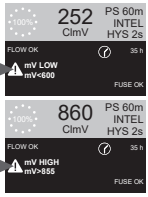
Connecting the pH pump and checking the fuses

pH peristaltic pump connection

25.8 ORP(mV) – High/low alarm

mV alarm





- Low or high alarms appear if the reading is not within established safety limits. High and low ClmV values cannot be changed.

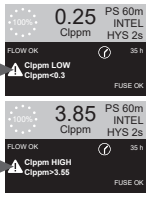
- If the high ClmV alarm appears, electrolysis will stop if the reading is not within the established safety limits.

ClmV > 855 = HIGH ORP ALARM = Electrolysis is stopped
ClmV < 600 = LOW ORP ALARM

Biopool:
ClmV > 855 = HIGH ORP ALARM = Electrolysis is stopped
ClmV < 300 = LOW ORP ALARM

25.9 PPM – High/low alarm

ppm alarm



- Low and high alarms appear if the reading is outside the set values. High and low Clppm values cannot be modified.

- If the high Clppm alarm appears, electrolysis will stop.

Clppm > 3.55 = HIGH PPM ALARM = Electrolysis is stopped
Clppm < 0.3 = LOW PPM ALARM

26 Basic Troubleshooting

Message	Solution
FLOW switch alarm (F.S)	The flow alarm will appear if there is no water flow (paddle flow switch sensor). - Check the pump, filter and backwash valve. Clean if necessary. - Check the paddle flow switch sensor wiring connections.
ORP (mV) – High/low alarm	Low or high alarms appear if the reading is not within established safety limits. High and low ClmV safety limits cannot be changed. Standard mode: ClmV > 855 = HIGH ORP ALARM = Electrolysis is stopped Biopool mode: ClmV > 855 = HIGH ORP ALARM = Electrolysis is stopped Check the level of chlorine in the pool using a photometer or a test strip. If necessary, clean and calibrate the ORP sensor. If the free chlorine value is low and the total chlorine value is high, reduce the chloramines by superchlorinating with sodium hypochlorite. If the deviation is high during the calibration process, the equipment will report an error and the probe must be replaced. Standard mode: ClmV < 600 = LOW ORP ALARM Biopool mode: ClmV < 300 = LOW ORP ALARM Check the level of chlorine in the pool using a photometer or a test strip. If necessary, clean and calibrate the ORP sensor. If chlorine ppm are high and the mV reading is low, check cyanuric acid concentration. Should the values be above 60 ppm, partially drain the pool. Increase daily filtering. If the deviation is high during the calibration process, the equipment will report an error and the probe must be replaced.
pH Low/High alarm	Low or high alarms appear if the reading is not within established safety limits. These safety limits cannot be changed. If the high pH alarm appears, the pH pump will be switched off for safety reasons. Standard mode: pH > 8.5 = pH HIGH ALARM = Pump off Biopool mode: pH > 9.0 = pH HIGH ALARM = Pump off Check the pH of the pool water using a photometer or a test strip. If necessary, clean and calibrate the pH sensor. If the deviation is high during the calibration process, the equipment will report an error and the probe must be replaced. The pH of the pool must be manually reduced to 8.45 (standard mode) or 8.95 (biopool mode) for the pump to start dosing again. Standard mode: pH < 6.5 = LOW pH ALARM Biopool mode: pH < 6.0 = LOW pH ALARM Check the pH of the pool water using a photometer or a test strip. If necessary, clean and calibrate the pH sensor. If the deviation is high during the calibration process, the equipment 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 programmed time without having reached the pH set point. Check the pool's pH and ORP/ppm values using a photometer or a test strip. If necessary, clean and calibrate the pH and ORP/ppm sensors. - Check and adjust the alkalinity of the water (consult your pool specialist). - Check the levels of acid in the container.
Low/High TEMPERATURE sensor alarm	- The temperature alarm will appear when the temperature values are out of range. - When the water temperature is very low, the equipment will not reach 100% production due to low conductivity.

27 Warranty

GENERAL CONSIDERATIONS

- In accordance with these conditions, the seller guarantees that the product covered by this guarantee conforms to its specifications at the moment of its delivery.
-The warranty period of the product is that which is determined by the legal requirements of the country in which the product was acquired by the consumer.
-The warranty period will be calculated from the date of delivery to the purchaser.
Specific warranties:
*The pH/ORP sensors are covered by a 1-YEAR warranty without extensions.
*These specific warranty periods are particularly subject to the limitations set out in the "LIMITATIONS" section.
-If the Product fails compliance and the purchaser informs the seller during the Warranty Period, the seller shall repair or replace the Product, at its own expense, in the place that they deem appropriate, unless this proves impossible or involves a disproportionate effort.
-If the Product cannot be repaired or replaced, the purchaser may request a proportional reduction in the price, or, if the compliance failure is sufficiently important, the termination of the sales contract.
-All parts replaced or repaired under this warranty will not extend the warranty period of the original Product, although they will be covered by their own warranty.
-In order for this warranty to be effective, the purchaser will provide proof of the date of purchase and delivery of the Product.
-When more than six months have elapsed since the delivery date of the Product to the purchaser, and if the purchaser claims a compliance failure of said Product, the purchaser shall provide evidence of the origin and the existence of the alleged fault.
-This Warranty Certificate does not limit nor prejudge any consumer rights under other national laws in force.

SPECIFIC CONDITIONS

-For this warranty to be effective, the purchaser shall strictly adhere to the Manufacturer's instructions included in the documentation provided with the Product, whenever these are applicable according to the Product range and model.
-When a schedule has been set for the replacement, maintenance or cleaning of certain Product parts or components, the warranty will only be valid if said schedule has been duly adhered to.

LIMITATIONS

- This warranty will only be applicable for sales made to consumers. By "consumer", we refer to any individual who acquires the Product for any purpose that falls outside their professional activity.
-No guarantee is offered for normal product wear, nor for any fungible parts, components, materials or consumables.
-The warranty does not cover instances where the Product: (1) has been misused; (2) has been inspected, repaired, maintained or manipulated by unauthorised personnel; (3) has been repaired or maintained with non-original parts or (4) has been incorrectly installed or commissioned.
-When compliance failure of the Product is due to incorrect installation or commissioning, this warranty will only be effective if such installation or commissioning process is included in the sales contract of the Product and has been performed by the seller, or under the seller's responsibility.
-Damages or fault in the Product due to any of the following causes:
1. Inadequate system programming and/or calibration of the pH/ORP sensors by the user.
2. Use of chemicals that have not been specifically authorised.
3. Exposure to corrosive environments and/or temperatures below 0 °C or above 50 °C.
4. Operation at a pH greater than 7.6.
5. Operation at salinities below 3 g/L of sodium chloride and/or temperatures below 15 °C or above 40 °C.

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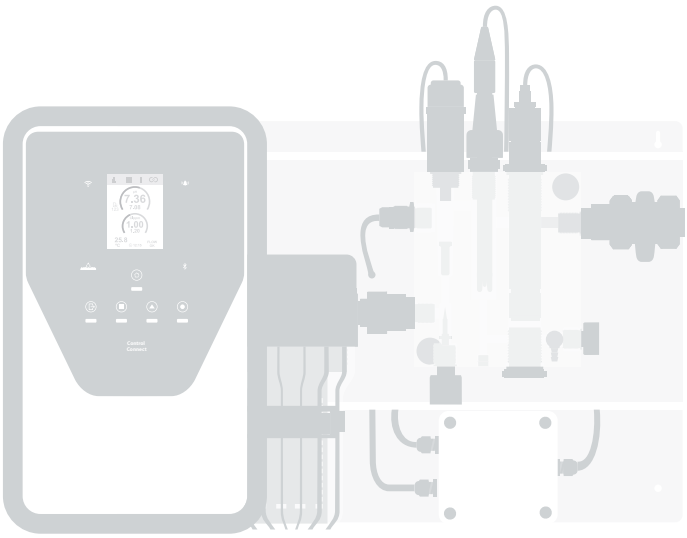
Technical Information

Models	CONTROL CONNECT PH/ORP_line	CONTROL CONNECT PH/ORP_Pro	CONTROL CONNECT PH/ppm_Pro
Input	230 Vac 50/60 Hz		
Consumption	0.6 A		
Operating temperature	max 40 ºC		
IP rating	IP32		

Bluetooth	Freq. band: 2400–2483.5 MHz	RF output power: 11.23 dBm
WI-FI 2.4 GHz	Freq. band: 2400–2483.5 MHz	RF output power: 19.91 dBm

SIMPLIFIED EU DECLARATION OF CONFORMITY
I.D. Electroquímica S.L. hereby declares that Elite Connect R equipment complies with the 2014/53/EU and 2011/65/EU + 2015/863 Directives.
The full text of the EU Declaration of Conformity is available at the following web address: (www.astralpool.com).



ASTRALPOOL