Smart water management
Pool & Spa

Full user guide

€ Public prices

Orkestron

CONTENTS

CONTENTS

⚠ **WARNING: Electrical hazard.**
Failure to follow these instructions may result in serious injury or death.

THE APPLIANCE IS INTENDED FOR SWIMMING POOLS AND SPAS ONLY - the installation of the appliance must be carried out by a person with proven and certain skills in electricity and hydraulics.

WARNING - Disconnect the device from the mains supply before carrying out any work.

WARNING - All electrical connections must be made by a licensed professional electrician qualified and in accordance with the standards in force in the country of installation. *

WARNING - Check that the device is plugged into an outlet that is protected against short circuits. The device must also be powered through an isolation transformer or a residual current device (RCD) whose rated residual operating current does not exceed 30 mA.

WARNING - Make sure that children cannot play with the appliance. Keep your hands, and any foreign object, away from openings and moving parts. In particular, ensure that there is no contact with electronic cards and power cables.

WARNING - Check that the supply voltage required by the product corresponds to that of the distribution network and that the power cables are suitable for the current supply of the product.

WARNING - Chemicals can cause internal and external burns. To avoid death, serious injury and / or material damage: Wear personal protective equipment (gloves, glasses, mask, etc.) when maintaining or servicing this device. This device must be installed in a sufficiently ventilated room, protected from humidity and without contact with splashing water or other liquid

WARNING - To reduce the risk of electric shock, do not use an extension cord to connect the appliance to the mains. Use a wall outlet.

WARNING - Carefully read the instructions in this manual and those on the device. Failure to follow the instructions and recommendations could be the cause of damage. This document must be given to any end user, who will keep it in a safe place.

WARNING - This device may not be used by children under the age of 18, or by persons with reduced physical, sensory or mental capacities or without experience or knowledge, unless they (if they) are properly supervised. (e) s or if instructions relating to the safe use of the device have been given to them and the risks involved have been apprehended. Children must not play with the device. Cleaning and user maintenance shall not be made by children without supervision.

WARNING - If the power cable is damaged, it must be replaced by the service provider who originally installed it, its after-sales service or persons with similar qualifications, in order to avoid any danger. Electric shock could occur.

Table of electrical connection standards

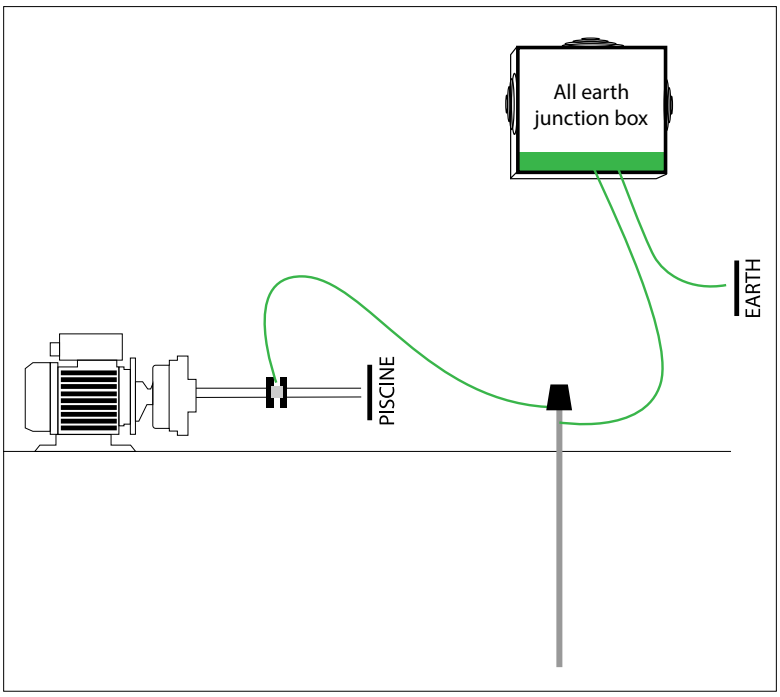
F	NF C 15-100	GB	BS7671:1992
D	DIN VDE 0100-702	EW	SIST HD 384-7-702.S2
A	ÖVE 8001-4-702	H	MSZ 2364-702:1994 / MSZ 10-533 1/1990
E	UNE 20460-7-702 1993, REBT ITC-BT-31 2002	M	MSA HD 384-7-702.S2
IRL	IS HD 384-7-702	PL	TS IEC 60364-7-702
I	CEI 64-8/7	CZ	CSN 33 2000 7-702
LUX	384-7.702 S2	SK	STN 33 2000-7-702
NL	NEN 1010-7-702	SLO	SIST HD 384-7-702.S2
P	RSIUEE	TR	TS IEC 60364-7-702

The registration date corresponds to the creation of the customer account. It is this date that triggers the manufacturer's warranty period, unless this date is later than 24 months from the day of production of the installed model.
The use of a home automation controller implies unreserved acceptance of the general conditions of use.

During the installation you must ensure that you observe the following points, to ensure a correct installation.

- a relay cannot control a power greater than its limit
- for powers above the limit, a power contactor will be installed and controlled by the relay.
- scrupulously respect the polarities of the sensors, probes and Modbus bus
- respect the electrical standards in terms of protection and power of circuit breakers.
- connect an equipotential bonding to the hydraulic circuit before filtration, in series with the earth intended for the devices if you use devices in direct contact with the pool (salt chlorinator for example)

If in doubt, contact your after-sales service or your authorized electrician.



Orkestron offers a range of intelligent analyzers and controllers, equipped with sensors and actuators around software specifically developed for swimming pools and spas. For each actuator, a digital clock is dedicated. For all automation, a set of protocols ensure optimum operation of equipment and send push alerts in the event of a problem. All types of treatment * and water balance *, filtration, heaters, roller shutters, lighting, pulsed LED lighting, are manageable. from 2 to 15 actuators depending on the selected controller

* Some equipment developed by manufacturers cannot be controlled by an external controller.

Equipment integrated on the ModBus bus makes it possible to add more actuators or intelligent sensors within the same interface. The Modbus port can support 3 devices in series on the same port not exceeding 1000 mA and up to 32 with a secondary power supply. This equipment can be wired at a maximum distance of 100 meters.

Associated products:

- PAC ModBus Norsup
- Duo Electrolysis / Modbus Ph Pump
- Redox pump / Modbus Ph pump duo
- Hammam Modbus humidifier
- Chlorine, dissolved oxygen, nitrate probe
- The Solo water analyzer range
- Air humidity / temperature analysis
- Visio screen - local wired interface
- the Glong motor range of variable speed pumps

These intelligent devices offer other advantages, such as internal alarm functions in the equipment and more extensive functionalities, in terms of efficiency, economy and finesse.

Each connected device (sensor or actuator) will be visible on the mobile interface and can be reached from anywhere in the world where a network is available.

“You know everything: no more water quality and consumption problems, no more surprises at the end of the bottle. Share your analysis data with your maintenance department for replenishment at the right time “

Orkestron connects your equipment together and records all events.

SOLO

The SOLO range offers combinations of water analysis cells up to 5 integrated probes among Potentiostatic free chlorine probe, PH probe, Redox probe (ORP) conductivity or salt probe, temperature probe, Pressure probe
SOLO also allows you to control 2 pieces of equipment, in particular a Chlorine / PH regulation system called REGULO.

SOLO exists in AUTONOMOUS version (4G integrated in more than 100 countries with a local back-up interface in direct wifi) and in MODBUS version as a slave of a larger system.

MAESTRO

+

the MAESTRO range is a global solution, analysis, control, regulation of all the equipment of the technical room and its environment.
the SOLISTA analysis chamber (Ph, conductivity, Redox, Temperature) is designed on the same structure as SOLO at a reduced cost
MAESTRO is at the center of this solution, integrated in any electrical box or in a tailor-made solution such as OCTAVO. It can control a large number of Modbus devices, such as the SOLO range, the VISIO screen and partner devices like NORSUP, CAREL, GLONG MOTOR, POOL TECHNOLOGY, AQUAGEM, NOVUS and CLEANIST.

MAESTRO can control absolutely everything (filtration, massages, jets, lighting, color LEDs, backwash valve, heating, heat pump, electrolysis, brominator, chorinators, automatic filling, regulation by dosage, opening and closing of the cover, leak detection and aspiration, robot, in situ chlorination, hammam, sauna ...)
MAESTRO can connect 15 sensors and 15 devices + modbus devices, including all sensors and probes on the market.

CALIBRATION

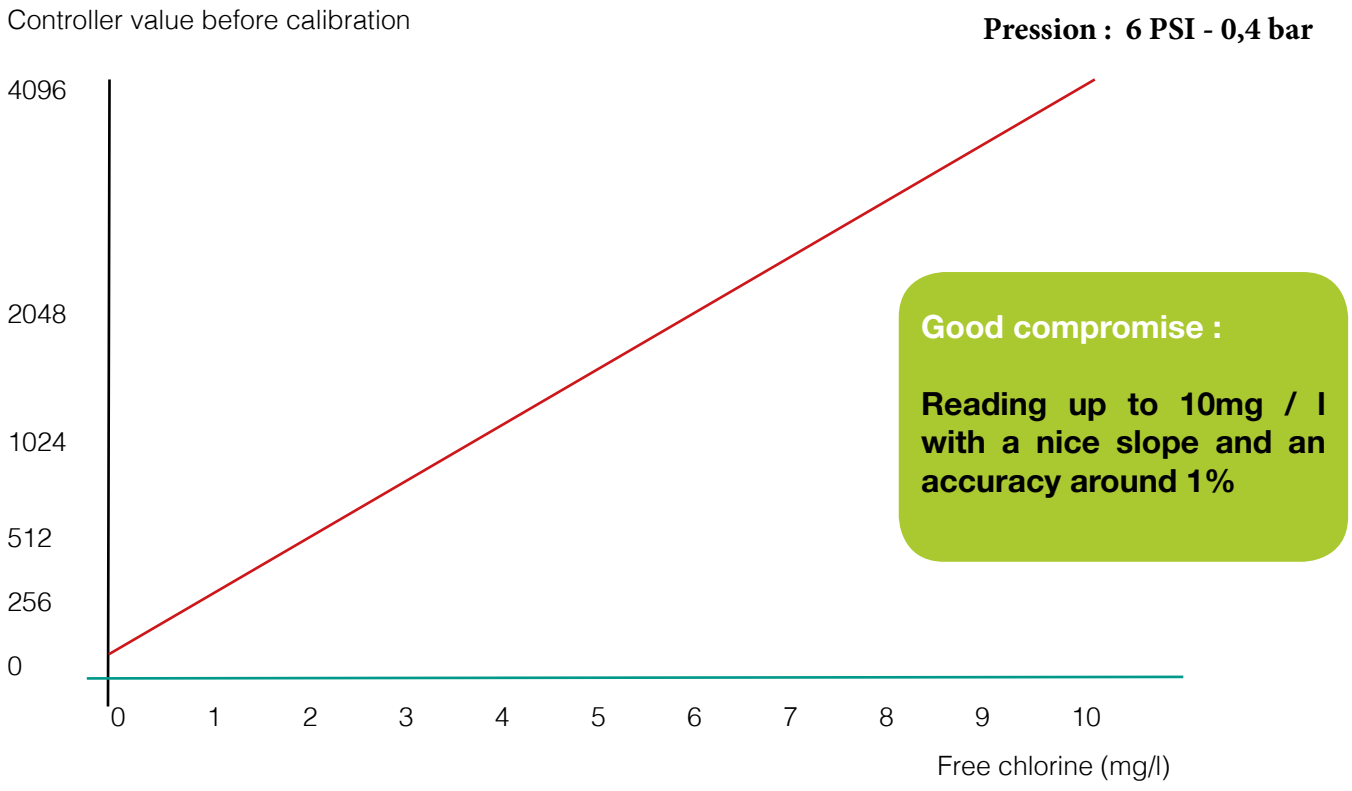
CHLORINE PROBE CALIBRATION

Calibration is performed with the SWM - smart water app.

Prerequisites:

- Do a first overall reading before starting.
- turn off the regulation and make sure that no injection has taken place for 30 minutes.
- Take a photometric reading of the pelvis, at the level of the analysis chamber or possibly a strip measurement (less precise). - (ex: 3.8 mg / l)
- Make sure you have a free chlorine level between 1 and 5 mg / l.
- The PH is between 6.8 and 7.5
- the temperature between 18 and 40 ° C.
- the pressure (factory calibration) is greater than 1 PSI and less than 10 PSI

If this is a first time installation, screw and unscrew the pressure reducer to define the possibilities and decide on the operating pressure.

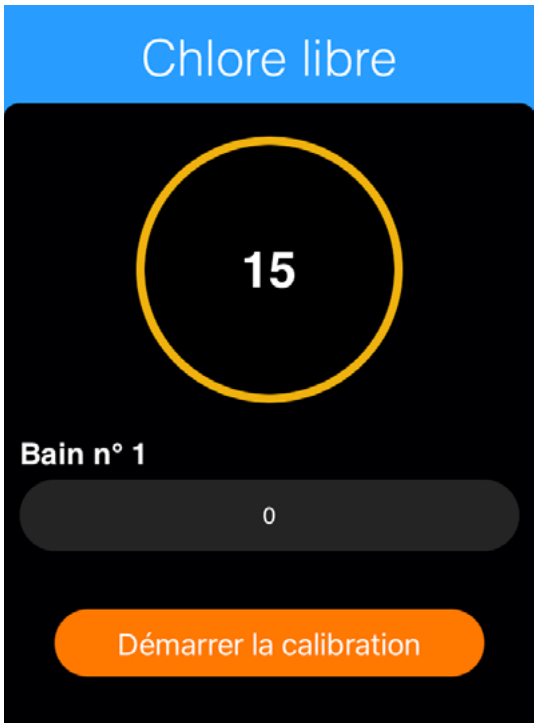


Step 1: preparation

You have read your photometric result, the filtration has been on for 30 minutes, the regulation is off.

Step 2: Zero point calibration

Indicate 0 with a 15 second timer.
at the end of the timer, click on continue.



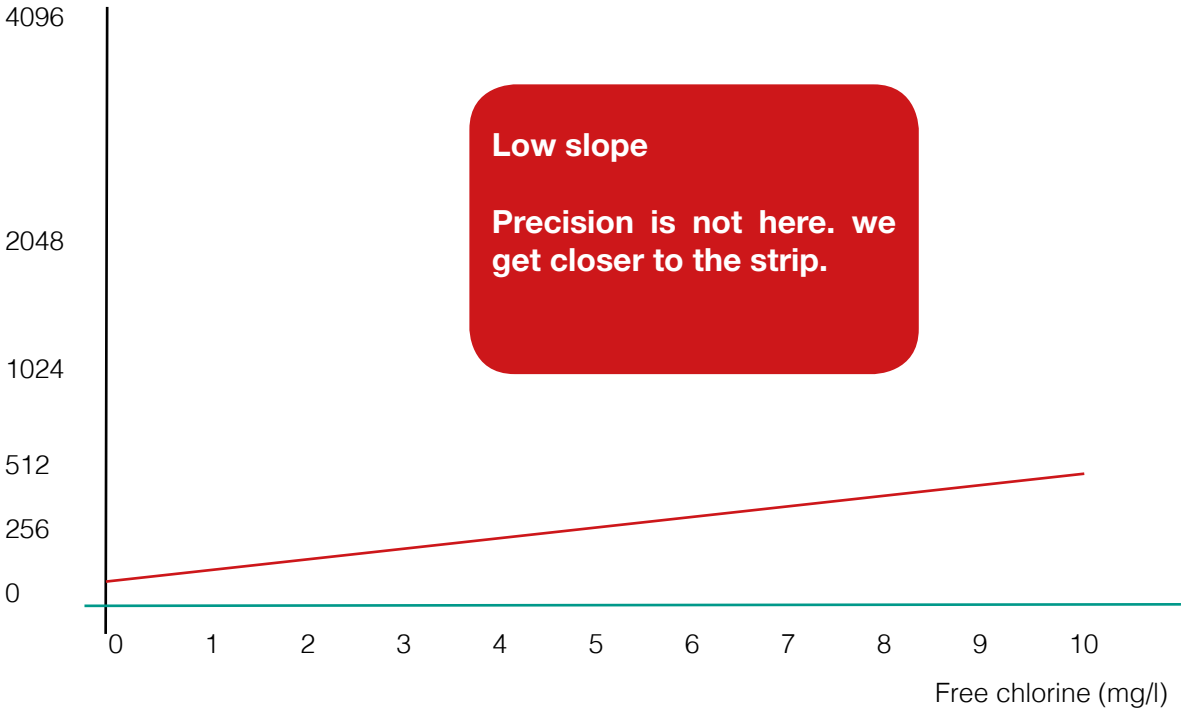
Step 3: high point calibration

Valves open, the bath indicated is n ° 2: enter the DPD1 value previously collected.
after 15 seconds, click on Finish, your calibration is done.

NOW, go to the Pressure probe,
set the min alarm / max alarm to + -20% of the current pressure.
Clean the filter and pre-filter as soon as the pressure reaches one of the alarms.

Controller value before calibration

Pression : 0,5 PSI - 0,03 bar

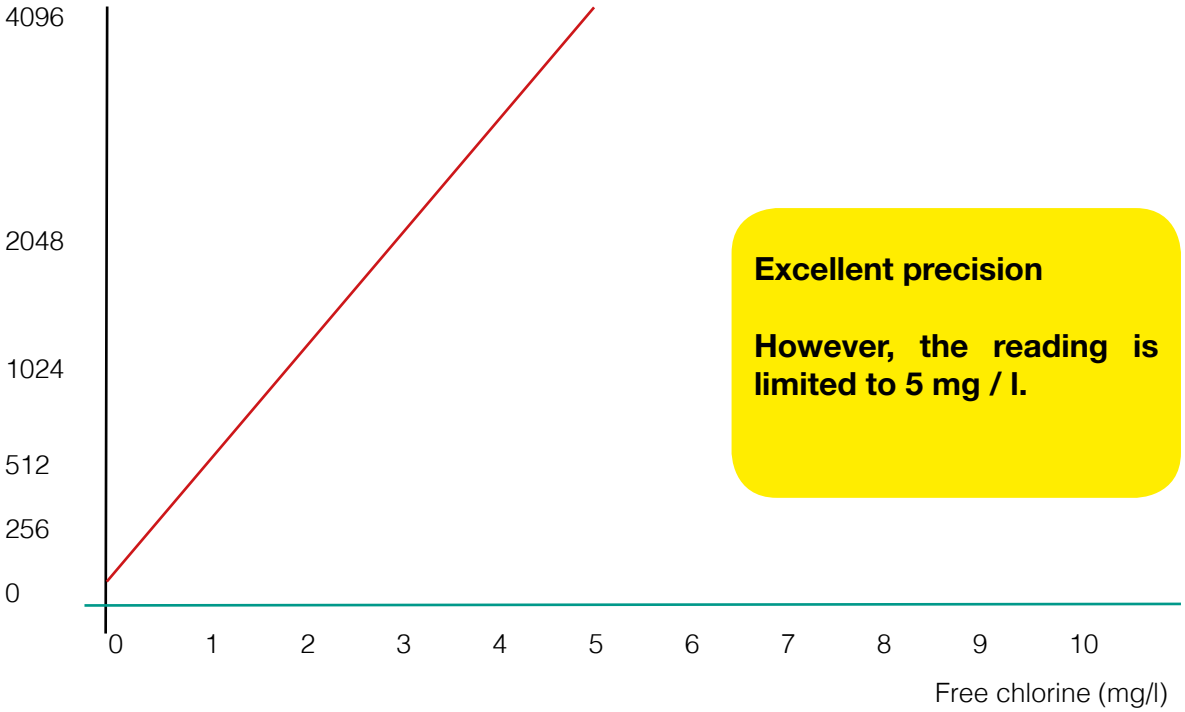


Low slope

Precision is not here. we get closer to the strip.

Controller value before calibration

Pression : 12 PSI - 0,85 bar



Excellent precision

However, the reading is limited to 5 mg / l.

Calibration is performed with the SWM - smart water app, regardless of the Solo / Solista version

Prerequisites:

- Do a first overall reading before starting.
- Take a Phenol reading in the pelvis, at the level of the analysis chamber or possibly a strip measurement (less precise).
- if one of the strip values is outside its range, do not refer to it
- Take 2 baths 4 and 7, 4 and 9, 7 and 9 ... + a glass of water for rinsing
- the temperature is between 18 and 40 ° C
- switch off the regulation

REMINDER: once a bath is used, throw it away after use.

Calibration Control:

Before performing the calibration again, a simple check may suffice.
To do this, close the valves of the analysis chamber, unscrew the jar.
- pour a little PH 7 in the protective container supplied with the probe *
- Immerse the PH probe in it, being careful not to touch its round bulb.

Wait 3 minutes then compare the value of the probe on the SWM app, it should be at 7 without offset.
If the difference is less than 0.4 pt, adjust it directly on the page in the «adjustment» field
Otherwise, let's calibrate.

* this test can be done with another bath in order to check that the slope has the same difference at ph 4 and ph 7 for example.

Always rinse the probe and container with clean water between 2 baths.

Step 1: preparation

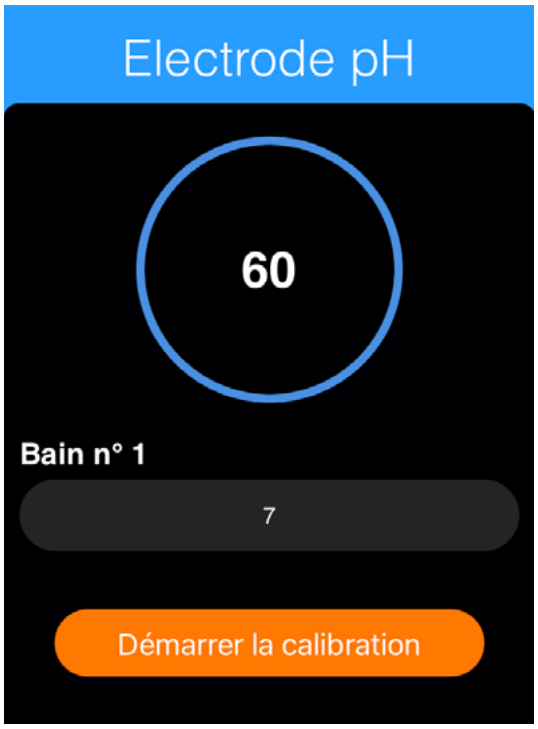
The probe has been soaking in the first bath for several minutes, this is the bath that will serve as the first bath.

Step 2: calibration point 1

The older the probe, the more the count must be increased. From 60 to 180 seconds for example.

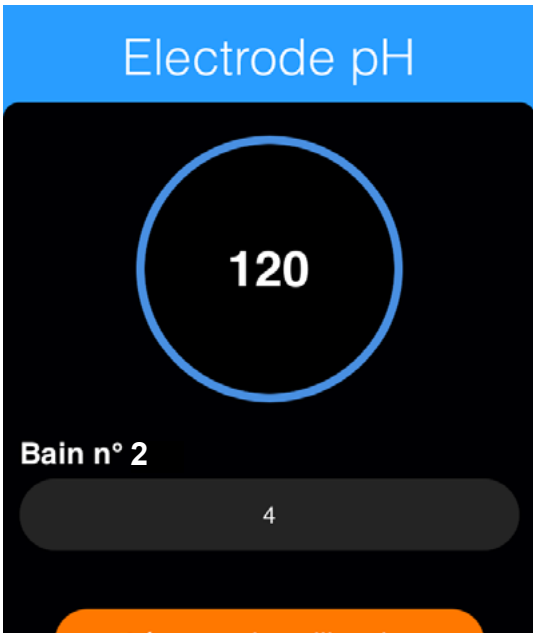
The direction of calibration is irrelevant, as long as the sequence of 2 baths is completed.

When the countdown is complete, click continue, remove the container, rinse it with water, rinse the probe with a glass of water, then prepare the next bath and immerse the probe in it.



Step 3: calibration point 2

When going from bath 1 to bath 2, we recommend a minimum of 120 seconds, or even 180 seconds in order to stabilize the signal as close as possible to the bath.
Click on «continue» to start the calibration of the 2nd point and wait for the end of the count, then click on «finish».
On the probe page, you should see the temperature compensated probe value at + - 1%.



Calibration is performed with the SWM - smart water app, regardless of the Solo / Solista version

Prerequisites:

- Do a first overall reading before starting.
- Take a photometric reading of the pool, (consider 650 mV for 1.5 mg / l at 25 ° C)
- Take 2 240 and 475 or 650 mV baths + a glass of water for rinsing
- the temperature is between 18 and 40 ° C
- the pH is between 6.8 and 7.5
- switch off the regulation

REMINDER: once a bath is used, throw it away after use.

Calibration Control:

Before performing the calibration again, a simple check may suffice.
To do this, close the valves of the analysis chamber, unscrew the jar.
- pour a little 475 mV into the protective container supplied with the RX probe *
- Immerse the probe in it, being careful not to touch its oblique bulb.

Wait 3 minutes then compare the value of the probe on the SWM app, it should be at 475 without offset at + - 30 mV
If the difference is less than 50 mV, adjust it directly on the page in the «adjustment» field
Otherwise, let's calibrate.

* this test can be done with another bath in order to check that the slope has the same difference at 240 mv and 475 mV for example.

Always rinse the probe and container with clean water between 2 baths.

Follow the 3 PH steps to recalibrate the RX probe (Redox / ORP)

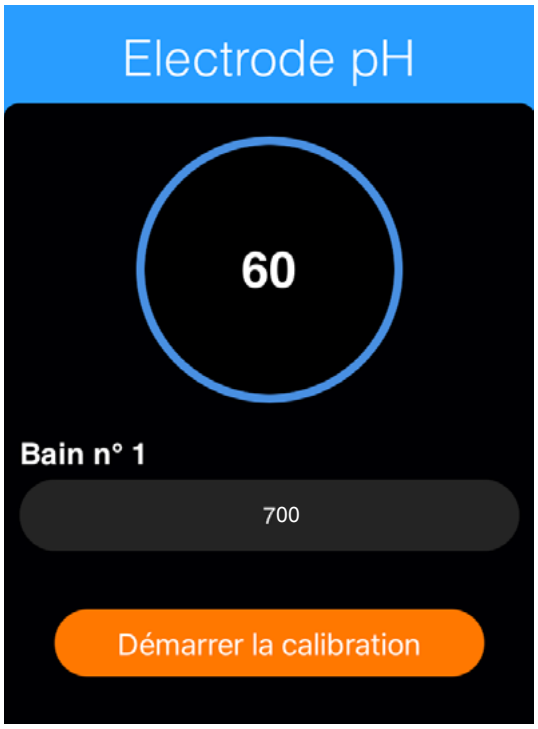
Step 1: preparation

The probe has been soaking in the first bath for several minutes, this is the bath that will serve as the first bath.

Step 2: calibration point 1

The older the probe, the more the count must be increased. From 60 to 180 seconds for example.
When the countdown is complete, click continue, remove the container, rinse it with water, rinse the probe with a glass of water, then prepare the next bath and immerse the probe in it.

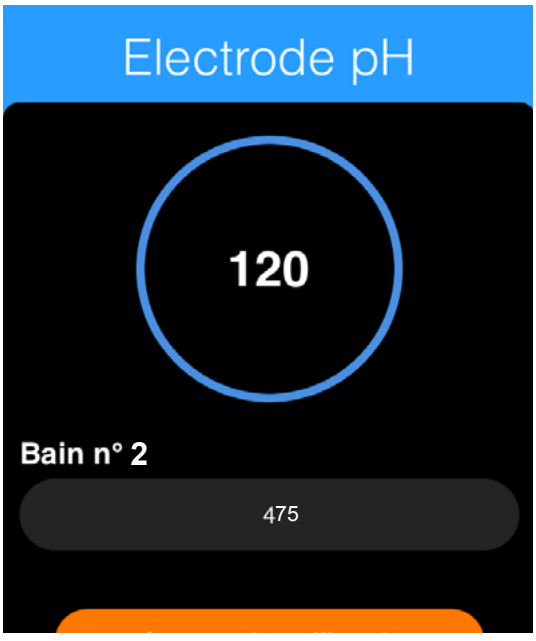
Note: the controller returns the converter step in bit corresponding to the bath value (ex: 3650 bits for 700 mV)



Step 3: calibration point 2

When going from bath 1 to bath 2, we recommend a minimum of 120 seconds, or even 180 seconds in order to stabilize the signal as close as possible to the bath.
Click on «continue» to start the calibration of the 2nd point and wait for the end of the count, then click on «finish».
On the probe page, you should see the temperature compensated probe value at + - 1%.

Make sure that the 2 return values of the converter are very different



OTHER PROBES

To ensure that a calibration is successful, the 2 reference points (the 2 converter feedback values must be significantly different.)

Note that the SWM app allows you to calibrate almost all the probes connected to the 0-5V and 4-20 mA ports on 2 reference points, whether it is the pressure, an amperometric free chlorine probe with a membrane or a total amperometric chlorine sensor with a membrane

The right gestures

Check your calibration by immersing your probe in the first bath, in order to verify that the value obtained after 120 seconds is that of the first bath, temperature compensation included. (+ -1 to 3%)

Take the time to check, calibrate and re-check to make sure that the displayed value corresponds to reality, because an incorrect calibration can only lead to poor regulation.

Accept the differences between different analysis tools that are sensitive to different environments as long as the measurement read remains within the acceptable limit.

If in doubt, always recheck before embarking on a calibration.
Question all analytical tools, baths, reagents, and your procedure if you don't get a perfect calibration to avoid a misdiagnosis.

In short :
Filter, clean filter and pre-filter, to maintain a good filtered water / time spent ratio.

Keep loaded Chlorine / Ph cans to avoid a break in regulation

Change, renew the water if necessary

When we have correctly determined the pH setpoint according to the Taylor curve or another method or even according to the needs of the treating product (bromine, chlorine, electrolysis), we will try to maintain this pH level to conserve the buffering power of water, its capacity to absorb new products, treatments, minerals with a good balance between consumption / buffer levels.

The TAC is a key element. This is the alkalinity of water. TH, its hardness, which could be simplified by limestone, roughly.
These elements correspond to its mineralization in a way.
This mineralization can be composed of more or less harmful elements:
- nitrates from intensive cultivation.
- more or less heavy metals.
- chemical elements (municipal water treatment)
- natural minerals

We cannot offer the water in our basin the perfect mineralization of Evian water.

But we will be able to give it something to rebalance occasionally with baking soda, or TAC booster, which will allow better pH stability.
The TAC is often the first buffer destroyed by chemical acids or even rains, for unprotected basins.

The hardness of the water is less important, in the sense that if it is within the norm at the time of filling, it will remain within this norm over the long term with the water supplies.

Concretely, we are going to concentrate our efforts on maintaining the pH, which is much more sensitive.

In the case at hand, treatment with Chlorine (with a pH of 13) will tend to raise the pH, making the action of chlorine less effective over time. We are therefore going to inject PH less in small doses to maintain the PH at the set point 7.1-7.5 and take advantage of the remodeling powers of free chlorine while maintaining a satisfactory environment for swimmers.

Stormy weather and swimmers are also factors in increasing the pH point.
We will always try to maintain a relatively neutral pH while gradually oxidizing the water.

In short :
Control your TAC, turn off regulation when you raise the TAC.

Balanced water consumes fewer chemicals.

If you have algae, think about filtration, filtration time, filtration status ... then treatment!

Outdoors, plan to add algaecide once a week.

With a lot of swimmers, think Flocculation

WATER ANALYSER
SOLO

The only real-time analyzer on the market in 4G in more than 100 countries, without any subscription.
Thanks to the quality and real time of its readings, it can be transformed into a PH / CL regulator

Good to know :

The SOLO analyzer can carry up to 5 probes
+ outdoor weather analysis.

That is to say 9 models available with industrial plastic or glass probes, standard on the market.

Solo is also a SIM card valid for 10 years and at least 5 years of prepaid communication.

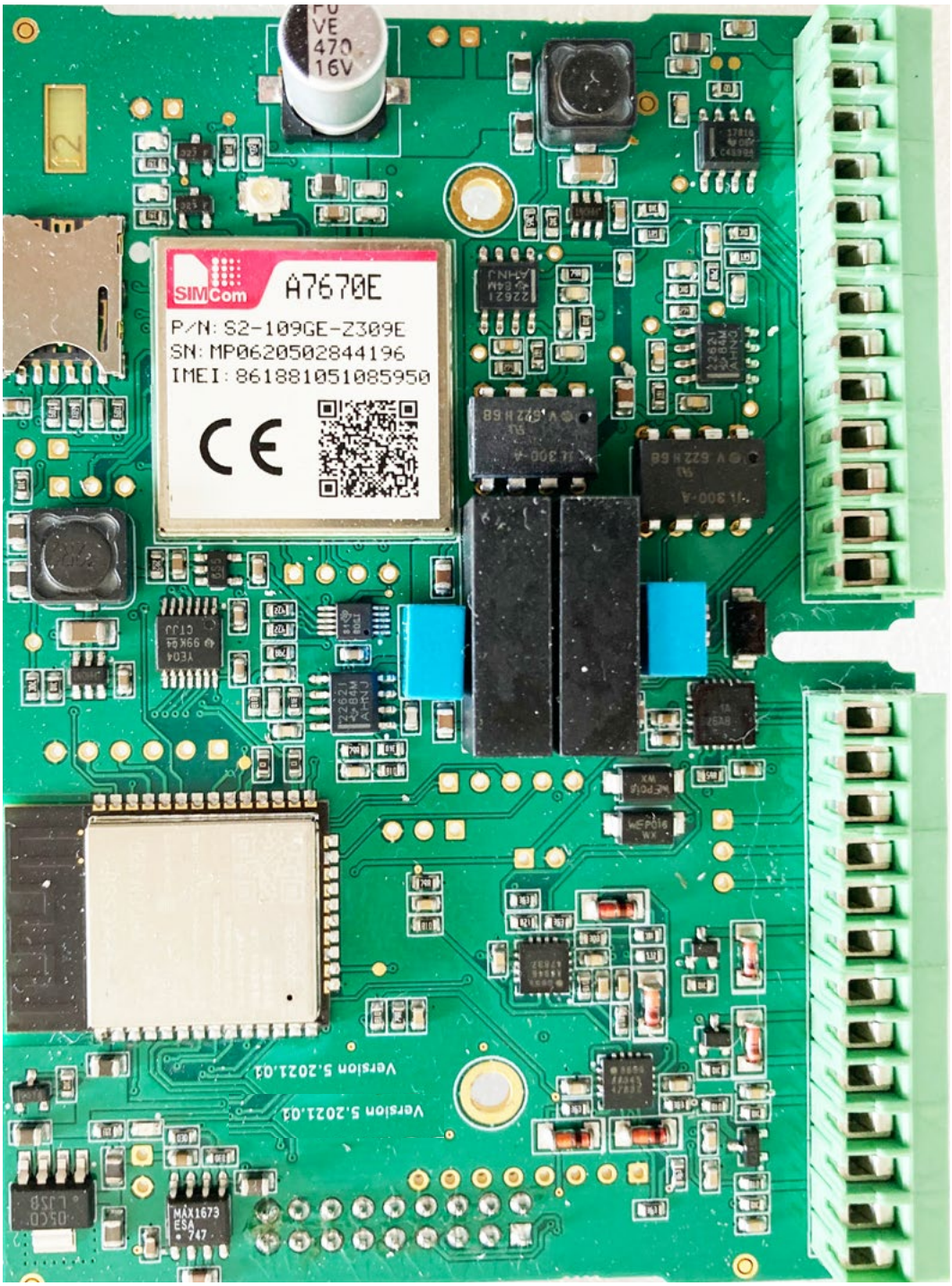
Solo are real-time readings «As soon as a value changes, it updates on your smartphone»

Solo is also compatible with the Regulation option and the Maestro range.

Solo, an analysis chamber designed and built in France supplied between 80 and 265 V by a 12VDC converter

Diameter 110 mm, height 280 mm, weight 2.8 kg

SOLO MOTHERBOARD



+12V
GND
MODBUS RS485-A
MODBUS RS485-B
PH LO (tresse)
PH HI
RX LO
RX HI
EC LO
EC HI
+5V (pression)
Signal 0-5V
GND

TEMP PT100
TEMP
Chlore R
CL IN
CL Tress
Relay 1+12V
Relay 1 0V
Relay 2 +12V
Relay 2 0V
Tor1 IN
Tor1 OUT
Tor2 IN
Tor2 OUT

PINS:	TYPE:	N° SENSOR APP	SENSOR TYPE:
PH LO	PH Probe Braid	1	PH electrode type
PH HI	PH probe		or electrode PH_RS
RX LO	ORP probe braid ORP	2	ORP electrode type
RX HI	probe		or electrode ORP_RS
EC	Conductivity	3	conductivity probe type (EC)
EC	Conductivity	7	Sels or SALT_RS probe type
+5V	Pressure probe +	5	pressure probe type
0-5V	Pressure probe		or PRES_RS
GND	Pressure Probe -		
PT100	temperature probe	4	Type temperature or TEMP_RS
PT100	temperature probe		
Chlore R	free chlorine probe	6	chlorine probe type or CL_RS
CL IN	free chlorine probe	10	active chlorine reading - ACTIV_RS type
CL Tress	free chlorine probe		
Tor1 IN	detector	8	sensor type end of container PH
Tor1 OUT	detector		
Tor2 IN	detector	9	sensor type end of container Chlorine
Tor2 OUT	detector		
		N° ACTION APP	Action Type:
Relay 1 +	12V actuator	1	Ph minus type action
Relay 1 -			
Relay 2 +	12V actuator	2	Redox pump (ORP probe)
Relay 2 -			or Chlorine pump (CL probe)

SOLO MODBUS RTU - PIN NUMBER

Slave address: 0X7E
Modbus functions: 3 or 10 (R only)
Baud / parity: 9600N1
Recovery of uncalibrated raw values on 16-bit ADC, except for temperature, RTD microchip value x 10

PINS:	Type:	**N° sensor APP**	**Sensor Type:**	**Register**
PH LO	PH Probe Braid	16	Type electrode PH_RS	0x0002
PH HI	PH probe			
RX LO	ORP probe braid ORP	17	Type electrode ORP_RS	0x0003
RX HI	probe			
EC	Conductivity	18	Type EC_RS ou SALT_RS	0x0004
EC	Conductivity			
+5V	Pressure probe +	19	type PRES_RS ou FLOW_RS	0x0006
0-5V	Pressure signal			
GND	Pressure Probe -		Type TEMP_RS	
PT100	temperature probe	20		0x0001
PT100	temperature probe		Type CL_RS	
Chlore R	free chlorine probe	21	ou type ACTIV_RS	0x000C
CL IN	free chlorine probe			
CL Tress	free chlorine probe			

For a Modbus integration outside of MAESTRO, on any PLC or KNX network, you must manage 2 calibration points for PH, ORP and Chlorine and 3 calibration points for conductivity using a polynomial.

Example for 2 points (where x is the raw_value measurement of the converter and y the value of the calibration bath)

```
calibration_c = (y1 - y2) / (x1 - x2);
calibration_d = y1 - calibration_c * x1;

calib_value += calibration_c * raw_value;
calib_value += calibration_d;

result = calib_value;
```

SP The SOLO motherboard is integrated directly into the flow cell, enclosed under an IP55 cover. This version cannot be installed outdoors in contact with bad weather

BE1-SR1

CM The Solo motherboard is integrated in a 6 Modules box for DIN rail, to be installed in an electrical box and to connect the standard probes on the market with 2 dosing pumps, in 4G or modbus version.

BE1-SR2

Ref sondes
0
1
2
3
4
5
6
7
8
9

Option
Régulation

Type
00- without pump
SR - with pumps

SP - 2 - 4G - BE - 1 - SR - 1

Block assembly
SP:
Circuit + probes mounted with 30 cm cable in Cell
SM:
probes mounted with 100 cm cable and circuit mounted in DIN box 6 modules + connectors

Com
4G: Prepaid SIM card
RTU: Modbus

Box
0
1
2

Assembly
0: not mounted
1: SP
2: SM

ELECTRODE RECOGNITION

Remove the protective cap and place the vortex under the Chlorine probe for the 2-ring Chlorine model.
The yellow glass bulb or the blue sensor is PH, the translucent glass bulb or the red sensor is ORP.
The stainless steel probe is EC (conductivity or salt)

REF:	DESIGNATION:	Public prices
SP0-RTU	Modbus Pool (Plastic PH, ORP temperature)	480€
SP0-4G	Pool 4G (Plastic PH, ORP temperature)	490€
SP1-RTU	Pool EC Modbus (plastic PH, ORP temperature, conductivity)	580€
SP1-4G	Pool EC 4G (plastic PH, ORP temperature, conductivity)	590€
SP2-RTU	Clairview modbus (Plastic PH, ORP temperature, conductivity, pressure)	680€
SP2-4G	Clairview 4G (Plastic PH, ORP temperature, conductivity, pressure)	690€
SP4-RTU	Flow Spa modbus (Glass PH, ORP temperature) + flow sensor D10	750€
SP4-4G	Flow Spa 4G (PH glass, ORP temperature) + D10 flow sensor	760€
SP5-RTU	Hydro Spa modbus (PH glass, ORP temperature) + pressure	780€
SP5-4G	Hydro Spa 4G (PH glass, ORP temperature) + pressure	790€
SP6-RTU	Glass pro Modbus (Glass PH, ORP temperature) + pressure + conductivity	880€
SP6-4G	Glass pro 4G (PH glass, ORP temperature) + pressure + conductivity	890€
SP7-RTU	Free Chlorine Modbus (Glass PH, CHLORINE, temperature) + pressure	1280€
SP7-4G	Free Chlorine 4G (PH glass, CHLORINE, temperature) + pressure	1290€
SP8-RTU	Active Chlorine modbus (Glass PH, CL2 temperature) + pressure + conductivity	1380€
SP8-4G	Active Chlorine 4G (Glass PH, CL2 temperature) + pressure + conductivity	1390€
SP9-RTU	Free Chlorine + Orp modbus (Glass PH, CL2 temperature) + pressure + ORP	1380€
SP9-4G	Free Chlorine + Orp 4G (Glass PH, CL2 temperature) + pressure + ORP	1390€
SM	Option Solo card in 6-module box + BNC / BNC cable connection> wires to card + 100 cm probe cable extension (replacement of SP)	196€
SOL-00	Solo Room (3 x PG13.5, 2 x G1 / 4, 2 x G3 / 8)	196€
KS-SOL	Stainless steel 316 wall bracket	28€
KS-FIL	10 cm pre-filter kit + wall bracket + DmFit connectors	56€
KS-TUB	Tubing kit D10 x 4 meters + connectors and valves DmFit	28€
SCM-CL	Plug in potentiostatic chlorine circuit for SOLO	98€
12V-DIN	Power supply 110/220 - 12 VDC (1000 mA) on DIN rail 1 module	38€
12V-FIL	Power supply 110/220 - 12 VDC (1000 mA) + 2 meters of cable	38€
BE0-001	Electrical box for PH / CL regulation, 2 x 13 modules with 2 6A relays, 12VDC power supply, Din rail connectors	290€
BE1-SR1	Dosing box (customizable) 2 pumps, SOLO SP assembly	580€
BE1-SR2	Dosing box (customizable) 2 pumps, SOLO SM assembly	690€

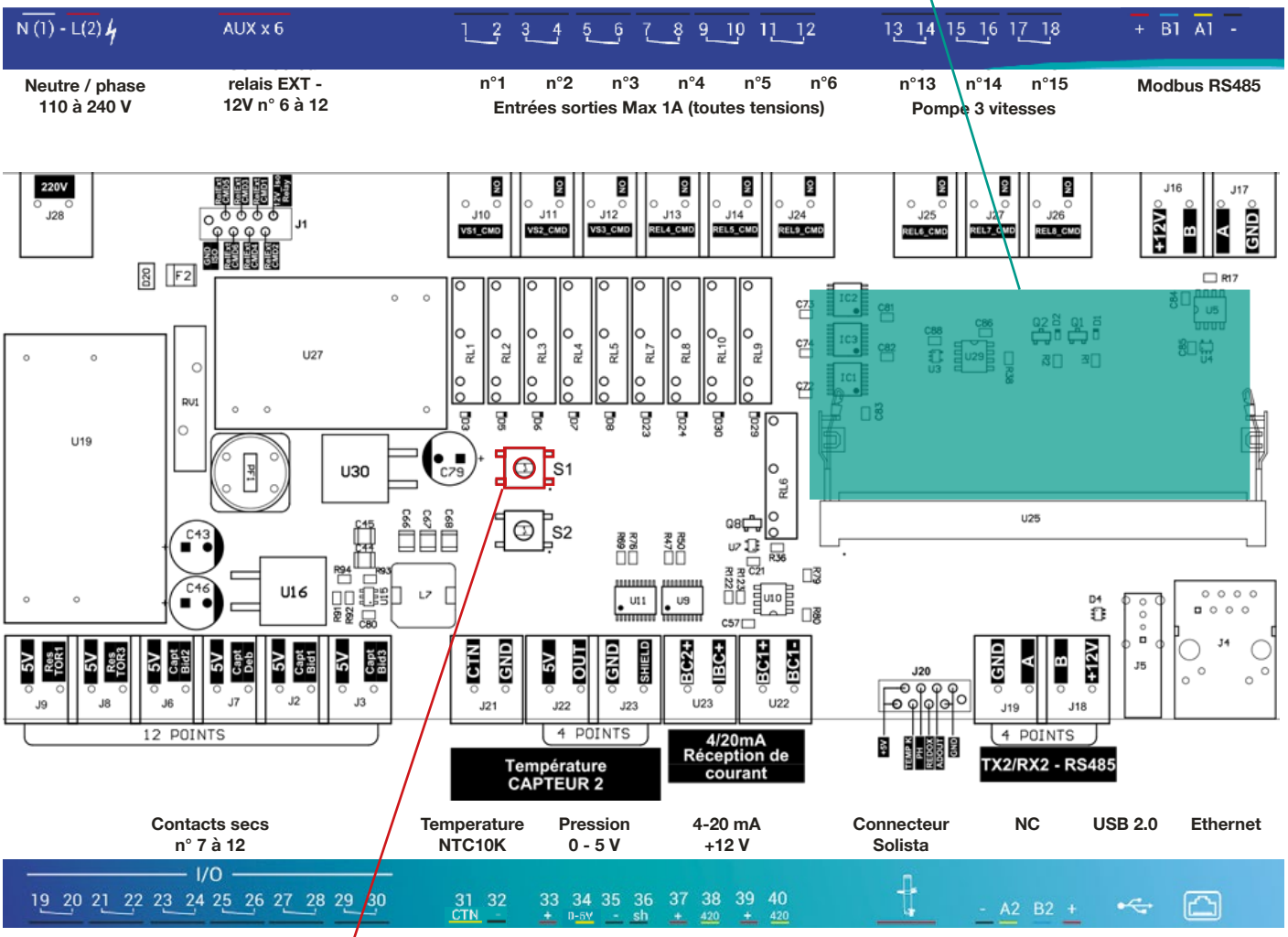
MAESTRO GLOBAL CONTROLLER

Global control of all equipment, filtration, heating, jets, massages, PH regulation, Chlorine, salt chlorinator, Ozone, UV, water level management, multicolored LED lighting, opening, closing the cover ...
timer, time slots and smart programs

Command, control and regulation with a universal SOLO RTU or SOLISTA analysis chamber ... Up to 15 control relays and 10 integrated sensor inputs.

Real time alerts and monitoring

The Linux controller which drives the Maestro motherboard is a SOC (system on chip) of the Armadeus brand, Opo-s6ull model manufactured in Alsace, it embeds the software and its updates



when you want to disconnect the Wifi and display the direct Swimo Wifi network
click this push button for 10 seconds.

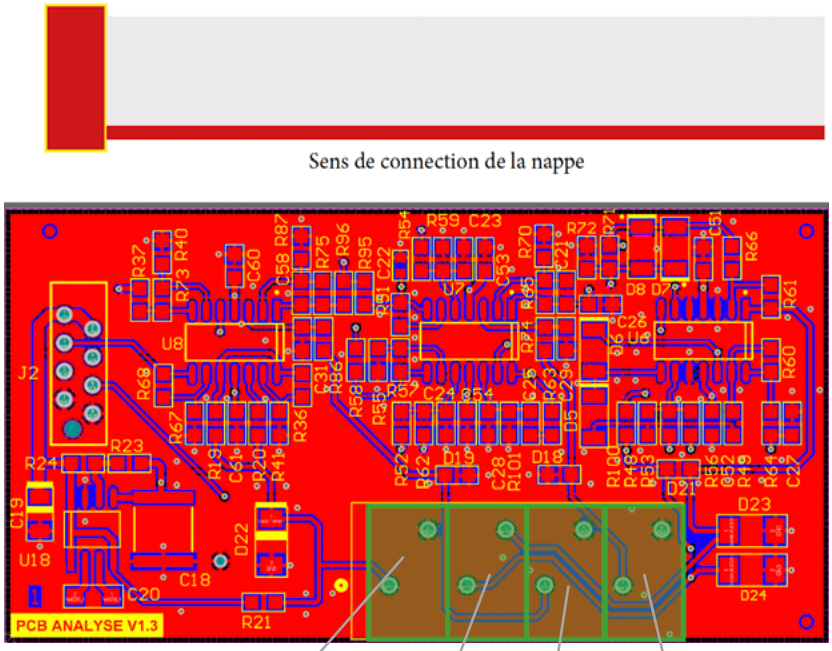
TOP

N1	Main power	APP	110/220 V
L2	Main power		
AUX x6	auxiliary relay socket	7 à 12	Choose the typical action corresponding to the use of the relay to control the equipment from the list of typical actions available below.
1	Relay input n ° 1	1	
2	Relay output n ° 1		
3	Relay input n ° 2	2	
4	Relay output n ° 2		
5	Relay input n ° 3	3	
6	Relay output n ° 3		
7	Relay input n ° 4	4	
8	Relay output n ° 4		
9	Relay input n ° 5	5	
10	Relay output n ° 5		
11	Relay input n ° 6	6	
12	Relay output n ° 6		
13	Relay input n ° 13	13	
14	Relay output n ° 13		
15	Relay input n ° 14	14	
16	Relay output n ° 14		
17	Relay input n ° 15	15	
18	Relay output n ° 15		
+12	Modbus power supply		On the modbus port, the devices are selected from n ° 16 actions and sensors up to 25
B1	TX modbus	16 et +	
A2	RX modbus		
GND	Modbus ground		

BOTT.

19	Dry contact input n ° 7	7	Choose a sensor type corresponds to the type of dry contact or reed contact input on terminals 7 to 12 in the list below
20	Dry contact output n ° 7		
21	Dry contact input n ° 8	8	
22	Dry contact output n ° 8		
23	Dry contact input n ° 9	9	
24	Dry contact output n ° 9		
25	Dry contact input n ° 10	10	
26	Dry contact output n ° 10		
27	Dry contact input n ° 11	11	
28	Dry contact output n ° 11		
29	Dry contact input n ° 12	12	
30	Dry contact output n ° 12		
31	CTN signal	14	Reserved space for CTN probe (NTC10 or 30K)
32	+ 5V CTN		
33	+ 5V		
34	0-5 V signal	15	Location for 0-5 volt probe according to the list below.
35	Mass		
36	Shield		
37	+ 12V iso		
38	4-20 mA	5	2 slots for 4-20 mA probes supplied with 12V
39	+ 12V iso		
40	4.20 mA	6	
Solista	Solista connector	1,2,3,4	Location for SOLISTA specific probe unit
USB	USB port		USB 4G key or ANDROID USB sharing
Ethernet	ethernet port		

Specific analysis circuit PH, ORP, Conductivity and Temperature in the traditional Solo flow cell with a 1 m cable



Temperature probe
type: temp PT100
assembly: 2 wires without direction
app: SOLISTA n ° 4

PH probe
type: PH electrode
assembly: direction HI - LO
app: SOLISTA n ° 1

Conductivity probe
type: conductivity or Salt
assembly: 2 wires without direction
app: SOLISTA n ° 3

ORP / Redox probe
type: ORP electrode
assembly: direction HI - LO
app: SOLISTA n ° 2

Diameter 110 mm, height 280 mm, weight 2.7 kg

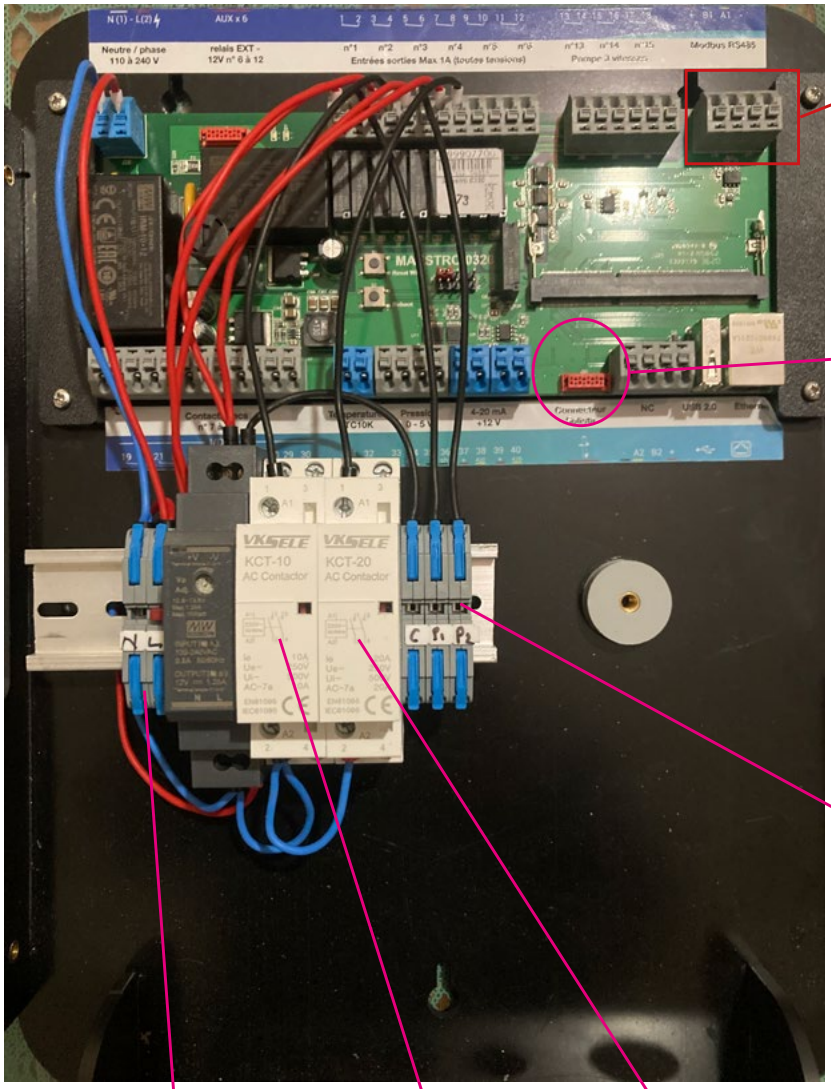
REF:	DESIGNATION:	Public prices
MAS-ETH	12 Modules DIN PLC - Maestro Ethernet (without wifi)	780€
MAS-WIF	Maestro Ethernet + Wifi PLC	840€
MAS-4G	Maestro Ethernet PLC + Wifi + 4G Key (without subscription)	1090€
SOL-01	Plastic (PH, ORP temperature, conductivity)	520€
SOL-02	Glass (PH, ORP temperature, conductivity)	660€
SOL-03	Lite Plastic (PH, ORP temperature)	490€
SOL-04	Lite Glass (PH, ORP temperature)	600€
KS-SOL	Stainless steel 316 wall bracket	28€
KS-FIL	10 cm pre-filter kit + wall bracket + DmFit connectors	56€
KS-TUB	Tubing kit D10 x 4 meters + connectors and valves DmFit	28€
PR-00	cable pressure probe 100 cm - 0.5V - 0-2 Bars stainless steel 316 -G1 / 4	108€
DB-00	In-line flow detector + 2 Dmfit for D10 tube	59€
CT-10	10A mono power contactor	25€
CT-20	20A mono power contactor	25€
NM-06	Micromatch cable for EXT maestro 6 (for 12VDC relay coil)	36€
REL-06	Relay 12 VDC - 1/2 module - 0-250V 6A max (COM / NO)	49€
REL-11	12 VDC relay - 1 module - 0-250V 11A max (COM / NO / NC)	59€
SCR-RTU	Wall / topside Visio screen + 5 meter cable (100 meters possible)	380€
	The SOLO RTU range is compatible with Maestro for analysis combinations requiring more probe or an integrated Chlorine probe. or a double analysis Note: even with a double analysis, Maestro manages one pool at a time.	

OCTAVO

OCTAVO DOS BOX

Pre-wired duo dosing box + 2 to 7 power contactors, with screen option on the front, and all the accessories supplied
Choose the SOLO or SOLISTA analysis chamber in additio.

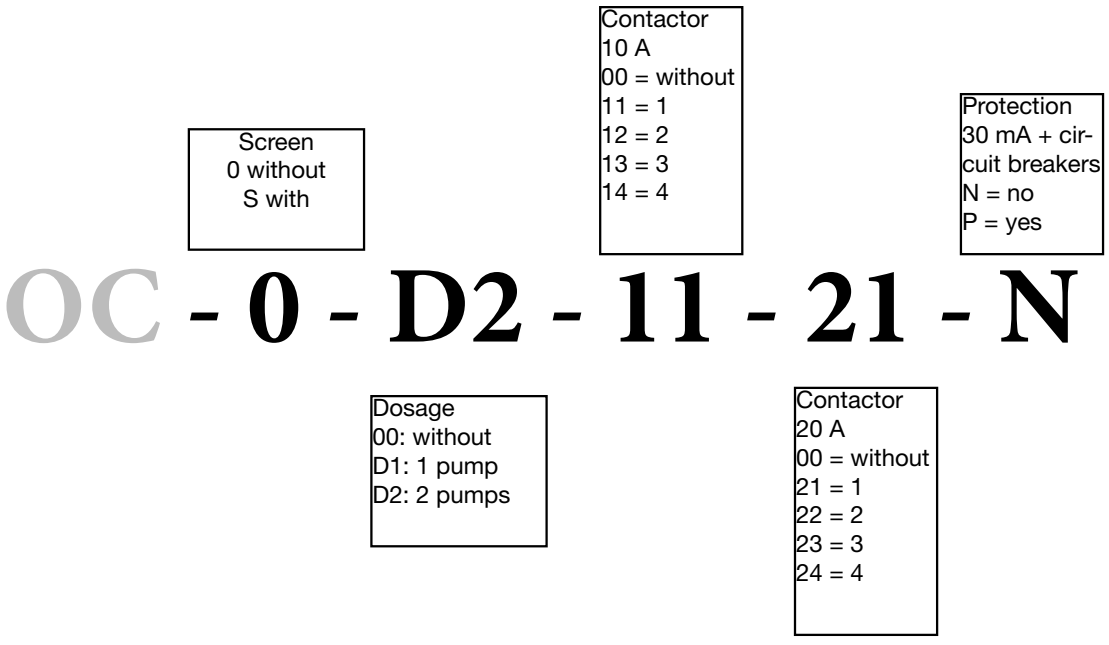
This all in one Box concept could be made at lower cost using standard electrical cabinet



Box :

All our boxes are delivered with accessories, wall brackets, flow detector, suction tubes, injectors, tubing, cables and ready to use.

REF	DESIGNATION:	Public prices
	Octavo is fitted with Maestro Eth / Wifi mother board	
0D21121N	Octavo 2 pumps 2 contactors	2435€
SD21121N	Octavo 2 pumps 2 contactors + screen	2790€
0D21121P	Octavo 2 pumps 2 contactors + 30 mA protection + circuit breakers	2890€
SD21121P	Octavo 2 pumps 2 contactors + screen + 30 mA protection + circuit breakers	3430€
0D21323N	Octavo 2 pumps 6 contactors	2635€
SD21323N	Octavo 2 pumps 6 contactors + screen	2990€
0D21323P	Octavo 2 pumps 6 contactors + 30 mA protection + circuit breakers	3090€
SD21323P	Octavo 2 pumps 6 contactors + screen + 30 mA protection + circuit breakers	3640€
CLE-4G	4G key with prepaid Sim card	290€
	The SOLO or SOLISTA analysis chamber is not included, however its support and accessories are.	



GENERAL SETUP

1 / Download the SWM - smart water management mobile application from the App Store or the Play Store depending on your type of smartphone.
2 / Create your account with a valid email address, enter the type of pool, its volume and its address (Weather widget).
3 / Then add the serial number that you will find under the Neoprene sock of your Solo analyzer, on Maestro controller or inside Octavo Box.

WARNING :

If you click «use scan service», it will generate a virtual serial number for the strip scanner service only.

Do not click a button if you have a valid serial number, the scanner service will automatically be included with your Solo or Maestro account.

4 / On the Home of the application, unlock the padlock with the code 0117.
5 / Go through the Tab Bar at the bottom of the application and add Sensors and devices according to the type of analyzer and / or regulator you have, according to the list «SOLO 4G NUMBER» or MAESTRO NUMBER»

6 / Depending on your model, wire your controller to the power supply or the electrical outlet. SOLO automatically connects to the nearest 4G network in over 100 countries when MAESTRO auto connect to your Wifi network using RJ45 cable or setup Wifi connexion.

7 / Once installed on the hydraulics of your pool, unscrew the jar and remove the protections from the probes. For the chlorine probe, turn the Black part (vortex) under the Chlorine probe (2 parallel rings).
Screw the jar back on and let the water flow.

List of automations available in Maestro and Swimo controllers on January 1, 2022

ActionType	nameAction	stateNameAct	statProgName
1	Filter pump	ON/OFF/AUTO	Scheduled/Night/Day/Winter
2	pump PH minus	ON/OFF/AUTO	Scheduled/Eco/Boost
3	pump PH plus	ON/OFF/AUTO	Scheduled/Eco/Boost
4	Chlorine pump	ON/OFF/AUTO	Scheduled/Eco/Boost
5	Algicid pump	ON/OFF/AUTO	Scheduled/Eco/Boost
6	Chlorinator	ON/OFF/AUTO	Scheduled/Eco/Boost
7	Heater	ON/OFF/AUTO	Scheduled/Eco/Boost
8	Shutter open	OUVRIR/ARRET	
9	light	ON/OFF/AUTO	Scheduled/Eco/Boost
10	3 speeds pump	ON/OFF/AUTO	Scheduled/Night/Day/Winter
11	Auxiliary Tempo	ON/OFF/AUTO	Scheduled/Eco/Boost
12	led light 4	ON/OFF/AUTO	scheduled/Eco/Boost
13	Orp Pump	ON/OFF/AUTO	Scheduled/Eco/Boost
14	Auxiliary	ON/OFF/AUTO	Scheduled/Eco/Boost
15	shutter close	FERMER/ARRET	
16	led light 18	ON/OFF/AUTO	scheduled/Eco/Boost
17	clean robot	ON/OFF/AUTO	Scheduled/Eco/Boost
18	Oxy pump	ON/OFF/AUTO	Scheduled/Eco/Boost
19	Sauna	ON/OFF/AUTO	Scheduled/Eco/Boost
20	Hammam	ON/OFF/AUTO	Scheduled/Eco/Boost
21	electrovalve	ON/OFF/AUTO	Scheduled/Eco/Boost
22	carel light	ON/OFF	
23	Euca carel pump	ON/OFF	
24	Norsup Heater	ON/OFF/AUTO	Scheduled/Eco/Boost
25	Bio Oxy	ON/OFF/AUTO	Scheduled/Eco/Boost
26	Glung Pump	ON/OFF/AUTO	Scheduled/Night/Day/Winter
27	Chlorinator tech	ON/OFF/AUTO	Scheduled/Eco/Boost
28	PH pump Tech	ON/OFF/AUTO	Scheduled/Eco/Boost
29	UVC Generator	ON/OFF/AUTO	Scheduled/Eco/Boost
30	Heater resistance	ON/OFF/AUTO	Scheduled/Eco/Boost
31	Activo	ON/OFF/AUTO	Scheduled/Eco/Boost
32	Vrac III	ON/OFF/AUTO	Scheduled/Eco/Boost
33	Provalve	WASH/FILTER/AUTO	slot/Pressure/4H Drain
34	Dimmer RVB	ON/OFF/AUTO	scheduled/Eco/Boost
35	Dehumidifier	ON/OFF/AUTO	Plage/Eco
36	Hammam Light	ON/OFF/AUTO	Scheduled/Eco/Boost
37	Pool Tec Orp Pump	ON/OFF/AUTO	Scheduled/Eco/Boost

1 / Filter Pump
Filtration Pump: 2 smart DAY / NIGHT modes calculated according to volume and type of pool and pump power in m3 / h.
1 Time slot mode where you choose up to 8 intervals per day.
1 automatic Anti-freeze mode which takes over if the pump is in AUTO.
Several pumps can be connected with different setpoints

2 / Pump PH minus
PH minus dosing pump: it can only operate in AUTO if a PH probe is integrated with a value less than 9, with a flow rate and or filtration on and or pressure above min alarm. (all safeties add up).
The ECO mode limits the daily injection according to pump power in ml / mm, volume and pool type.
BOOST mode is recommended for professionals with no daily limit.
The ON mode starts a sequence of 30 seconds then goes back to OFF.
Time slots are not accepted by default.

3 / Pump PH plus
PH plus dosing pump: it can only operate in AUTO if a PH probe is integrated with a value greater than 5, with a flow rate and or filtration on and or pressure above min alarm. (all safeties add up).
The ECO mode limits the daily injection according to pump power in ml / mm, volume and pool type.
BOOST mode is recommended for professionals with no daily limit.
The ON mode starts a sequence of 30 seconds then goes back to OFF.
Time slots are not accepted by default.

4 / Chlorine pump
Chlorine dosing pump: it can only operate in AUTO if an amperometric chlorine probe is integrated, with a flow rate and or filtration on and or a pressure above min alarm. (all safeties add up).
The ECO mode limits the daily injection according to pump power in ml / mm, volume and pool type.
BOOST mode is recommended for professionals with no daily limit.
The ON mode starts a sequence of 30 seconds then goes back to OFF.
Time slots are not accepted by default.

5 / Algicid Pump
Algicide dosing pump: it works in AUTO with one injection per week depending on the volume of the pool for outdoor pools.
The ECO and BOOST modes are indifferent to this day.
Time slots can be selected.
The ON mode starts a sequence of 30 seconds then goes back to OFF.

6 / Chlorinator
Salt chlorinator or Bromine solenoid valve: it operates in AUTO if an ORP or Chlorine probe is integrated. The BOOST mode takes over the filtration. The ON mode is only operative if the filtration is turned on and or with a flow rate and or with a pressure greater than min alarm.
Time slots can be selected.

7 / Heater
Heating (heat pump, heaters, etc.): it operates in AUTO if a temperature sensor is integrated. (the CTN probe has priority over the PT100 probe, priority over the TEMP_RS probe). The BOOST mode takes over the filtration. The ON mode is only operative if the filtration is turned on and or with a flow rate and or with a pressure greater than min alarm.
Time slots can be selected.
Several heaters can be connected with different setpoints

8 / Shutter open
Opening of the automatic cover or automatic shelter. launches an opening sequence, a timer can be indicated to change the status once the cover is open.

9 / Light
Lighting: In auto, only the Time range function is available for the moment.
Several lights can be connected with different time slots
The ON action can also be initiated by a permanent press button (switch)

10/ 3 speeds pump
3-speed filtration pump: 2 smart DAY / NIGHT modes calculated according to volume and type of pool and pump power in m3 / h.
1 Time slot mode where you choose up to 8 intervals per day and choice of speed
1 automatic Anti-freeze mode which takes over if the pump is in AUTO.
Installs only on relays 13 to 15 for speeds 1 to 3.

11 / Auxiliary tempo
Auxiliary with time delay in minutes: (massage pump, lighting, fountain, etc.)
when the ON command is issued, it returns to OFF at the end of the countdown.
The ON action can also be initiated by a momentary pressure button (piezo button)

12 / Led light 4
4-color Led lighting: lighting specific to spas, this action allows you to manage the 4 colors of this lighting from the application.
Time slots are available.

13 / ORP pump
Chlorine dosing pump: it can only operate in AUTO if an ORP (Redox) probe is integrated, with a flow rate and or filtration on and or a pressure above min alarm. (all safeties add up).
The ECO mode limits the daily injection according to pump power in ml / mm, volume and pool type.
BOOST mode is recommended for professionals with no daily limit.
The ON mode starts a sequence of 30 seconds then goes back to OFF.
Time slots are not accepted by default.

14 / Auxiliary
Auxiliary (massage pump, lighting, fountain, lift pump, etc.): In the car, only the Time range function is available for the moment.
Several Auxiliaries can be connected with different time slots
The ON action can also be initiated by a permanent pressure button (switch) or a leak detector to start a lifting pump (or cellar vacuum)

15 / Shutter close
Closing of the automatic cover or automatic shelter. starts a closing sequence by pressing the close button. This action can only be performed if the user is physically present on the site according to the regulations in France. A timer can be indicated to change the status once the cover is closed.

16 / Led light 18
Led lighting 12 to 18 colors and sequences: lighting specific to swimming pools, this action allows you to manage the 12 or 18 colors of this lighting from the application.
Time slots are available.

17 / Clean robot
Cleaning robot driven by a booster. AUTO modes for time slots, ON and OFF.

18 / OXY pump
Active oxygen dosing pump: it can only operate in AUTO if an ORP (Redox) probe is integrated, with a flow rate and or filtration on and or pressure above min alarm. (all safeties add up).
The ECO mode limits the daily injection according to pump power in ml / mm, volume and pool type.
BOOST mode has no daily limit.
The ON mode starts a sequence of 30 seconds then goes back to OFF.
Time slots are not accepted by default.

19 / Sauna
Sauna: control of the sauna heating only if a 4-20 mA temperature probe is connected to the controller, the AUTO mode allows the Sauna temperature to be managed within the limit of 70 ° in AUTO or ON

20 / Hammam
Hammam CAREL Humisteam Modbus: connected to the modbus port, it is used to start, switch off, create time slots and retrieve the value of the integrated temperature sensor.

21 / Solenoid valve
Solenoid valve (filling, emptying). Depending on the sensor (s) used, several solenoid valves can be connected, one for automatic filling with 1 to 3 sensors or without sensor for emptying by time slot or with L-shaped counter for automatic daily emptying of X liters according to user instructions
Several solenoid valves can be connected with different functions

22 / Carel Light
Lighting of the CAREL Humisteam Modbus Hammam: connected to the modbus port, it is used to start, switch off, create time slots for the integrated lighting.

23 / Euca Carel Pump
Eucalyptus pump from the CAREL Humisteam Modbus Hammam: connected to the modbus port, it allows you to start (sequence of 30 seconds), switch off the eucalyptus pump.

24 / Norsup Heater
Range of Norsup modbus heat pumps: it operates in AUTO with its own temperature and flow rate sensors displayed on the application. The BOOST mode takes over the filtration. The ON mode is only operative if the filtration is turned on and or with a flow rate and or with a pressure greater than min alarm.
Time slots can be selected.
The Norsup range also offers feedbacks.

25 / Bio Oxy
Active oxygen pump with Bio UV algorithm. the pump injects each day before each end of the time slot an amount adapted to the volume of the pool. Can only work if a filtration pump is connected.

26 / Glong Pump
Glong Motor Modbus range of variable speed filtration pumps.
2 intelligent DAY / NIGHT modes calculated according to volume and type of pool and pump power in m3 / h.
1 Time slot mode where you choose up to 8 intervals per day and choice of speed
1 automatic Anti-freeze mode which takes over if the pump is in AUTO.
2 pumps can be connected with different setpoints

27 / Chlorinator Tech
Range of Pool Technology Modbus electrolysers, and their integrated probes.
automation equivalent to n ° 6

28 / ph Pump Tech
Range of PH-Pool Technology Modbus pumps, and their integrated probes.
automation equivalent to n ° 2

29 / UVC generator
UV lamp is activated in Auto if a flow is activated.

30 / Heater resistance
Spa heaters only: it operates in AUTO if a temperature sensor is integrated. (the CTN probe has priority over the PT100 probe, priority over the TEMP_RS probe). The BOOST mode takes over the filtration. The ON mode is triggered in Auto if a flow is activated.
Time slots can be selected.
Several heaters can be connected with different setpoints

31 / ACTIVO
Activ'O Modbus is a salt-free electrolyser with its flowmeter sensors, power of the cell amperage, it requires an ORP or chlorine sensor to automate the treatment instruction.

32 / VRAC II or III
Fluidra modbus automatic 6-way valve 9600N2. If this valve is installed on the modbus port, no other modbus equipment can be controlled. It automates the cleaning of the Fluidra sand filter.

33 / Provalve (Pentair or Besgo)
Available with center-to-center distances for all brands, this type of automatic 5-way valve can be used to start filter cleaning and emptying according to a protocol set up with all types of filtration and sand filters.

34 / RGB Dimmer
RGB lighting: control of the 3 RGB wires of your lighting for 7 dedicated colors on ports 13 to 15. Time slots available.

35 / Dehumidify
Dehumidifier: in AUTO mode, this makes it possible to manage all 'deshu' with the NOVUS Modbus air analysis unit, or by dry contact from the deshu itself or by time slots without sensor.

36 / Hammam Light
Modbus management of the multicolored led lighting of the Carel humisteam hammam.

37 / Orp pump tec
Range of ORP Pool Technology Modbus pumps, and their integrated probes.
automation equivalent to n ° 13

List of sensors available for Maestro / Swimo + Solo controllers on January 1, 2022

sensorType	nameAnalyse	unitSensor
1	temperature PT100	°C
2	Salt probe	g/L
3	Pressure	Bar
4	PH value	pt
5	ORP / Redox	mV
6	conductivity	mS/cm
7	Chlore libre	mg/l
8	Turbidity	NTU
9	Flow switch	L/h
10	PH level	
11	algicid level	
12	Chlorine level	
13	shutter contact	
14	water level	
15	switch	
16	Leak	
17	Temperature Sauna	°C
18	Temperature Norsup	°C
19	Temperature Hammam	°C
20	high float	
21	middle float	
22	low float	
23	Tensio active	mg/l
24	temperature CTN	°C
25	Humidity 0-100%	%RH
26	temperature tech	°C
27	PH value tech	pt
28	ORP value tech	mV
29	salt value tech	g/l
30	battery level	%
31	Dissolved oxygen	mg/l
32	Solides totaux dissous	ppm
33	SW ORP	mV
34	Amonium	ppm
35	Nitrates	ppm
36	Production current	A
41	alcalinity	ppm
42	Total chlorine	ppm
39	Hardness	ppm
40	Stabilizer	ppm
38	Pressure Spa	Psi
37	Counter 1L/impulsion	L
43	temperature RS	°C
44	Salt probe RS	g/L
45	Pressure RS	Psi
46	PH value RS	pt
47	ORP/Redox RS	mV
48	conductivity RS	mS/cm
49	Chlore libre RS	mg/l
50	bidon PH RS	L/h
51	bidon CL RS	L/h
52	pulse flow	m3/h
53	Chlore actif RS	mg/l
54	Humidity 0-100%	%RH

1 / Temperature PT100
Standard 2 to 3-wire PT100 signal, in degrees C or F
Port: SOLISTA n ° 4
Port: MAESTRO -SOLO RTU n ° 16 to 25

2 / Salt probe
Conductivity probe, salt rate reading with unit in g / L
Port: SOLISTA n ° 3
Port: MAESTRO -SOLO RTU n ° 16 to 25

3 / Pressure
pressure probe with unit in Bar
Port: MAESTRO 0-5V n ° 15
Port: MAESTRO -SOLO RTU n ° 16 to 25
Port: MAESTRO 4-20 mA n ° 5 to 6

4 / PH value
PH probe PH reading 3 to 11
Port: SOLISTA n ° 1
Port: MAESTRO -SOLO RTU n ° 16 to 25

5 / ORP / Redox
ORP probe (redox) reading mV -1200 to +1200
Port: SOLISTA n ° 2
Port: MAESTRO -SOLO RTU n ° 16 to 25

6 / Conductivity
Conductivity probe with unit in mS / cm and TDS reading in ppm
Port: SOLISTA n ° 3
Port: MAESTRO - SOLO RTU n ° 16 to 25

7 / Free chlorine
SOLO or CLeanist potentiostatic chlorine amperometric probe or membrane probe with unit in mg / L
Port: MAESTRO RTU n ° 16 to 25
Port: SOLO RTU n ° 16 to 25
Port: 4-20 mA n ° 5 to 6

8 / Turbidity
Tubudity CLeanist modbus probe 0 to 4000 NTU
Port: MAESTRO RTU n ° 16 to 25

9 / Flow switch
Flow detector - dry contact
port: MAESTRO n ° 7 to 12

10 / PH level
PH canister end sensor
port: MAESTRO n ° 7 to 12

11 / Algicic level
Algicid bottle end sensor
port: MAESTRO n ° 7 to 12

12 / Chlorine level
chlorine canister end sensor
port: MAESTRO n ° 7 to 12

13 / Shutter contact
Limit switch for automatic coverage
port: MAESTRO n ° 7 to 12

14 / Water level
Variable level probe
Port: MAESTRO 4-20 mA n ° 5 to 6

15 / Switch
sensor or button having a momentary function
port: MAESTRO n ° 7 to 12

16 / Leak
sensor or button having a permanent function
port: MAESTRO n ° 7 to 12

17 / Temperature Sauna
Temperature probe
Port: MAESTRO 4-20 mA n ° 5 to 6

18 / Temperature Norsup
Temperature probe from the Norsup Modbus PAC range
Port: MAESTRO RTU n ° 16 to 25

19 / Temperature Hammam
Temperature probe from the Carel Modbus humisteam range
Port: MAESTRO RTU n ° 16 to 25

20 / Hi float
High float for automatic buffer tank filling management, requires a minimum additional low float and an optional middle float.
port: MAESTRO n ° 7 to 12

21 / Middle float
Middle float for automatic skimmer filling management,
port: MAESTRO n ° 7 to 12

22 / Low float
Low float for automatic filling of the tamoon tank - stops filtration when it is at 0.
port: MAESTRO n ° 7 to 12

23 / Tensio Active
ORP probe calculated as a Free Chlorine probe - requires a PH probe, a conductivity probe and a temperature probe.
port: SOLISTA n ° 2

24 / temperature CTN
Priority CTNB temperature probe
port: MAESTRO n ° 14

25 / Humidity 0-100%
0-5V humidity probe
port: MAESTRO n ° 15

26 / Temperature Tec
Temperature probe from the Pool Technology modbus electrolyte range
Port: MAESTRO RTU n ° 16 to 25

27 / PH Tec
PH probe from the Pool Technology modbus electrolyte range
Port: MAESTRO RTU n ° 16 to 25

28 / ORP Tec
ORP probe from the Pool Technology modbus electrolyte range
Port: MAESTRO RTU n ° 16 to 25

29 / Salt Tec
Salt probe from the Pool Technology modbus electrolyzer range
Port: MAESTRO RTU n ° 16 to 25

30 / Battery level
Battery level / Maestro backup solar collector
Port: MAESTRO RTU n ° 16 to 25

31 / Dissolved Oxygen
dissolved oxygen probe modbus CLeanist in mg / L
Port: MAESTRO RTU n ° 16 to 25

32 / Total dissolved
total dissolved modbus CLeanist probe in ppm
Port: MAESTRO RTU n ° 16 to 25

33 / SW - Orp Redox
ORP probe (redox) reading mV 0 to +1200 - Swimo 2019 version
Port: SWIMO BNC G

34 / Ammonium
Ammonium modbus CLeanist probe in ppm
Port: MAESTRO RTU n ° 16 to 25

35 / Nitrates
Nitrates modbus CLeanist probe in ppm
Port: MAESTRO RTU n ° 16 to 25

36 / Production Current
ACTIVO Modbus current production probe in Amps
Port: MAESTRO RTU n ° 16 to 25

37 / Pulse counter
1L pulse meter for daily drain management
port: MAESTRO n ° 7 to 12

38 / Spa Pressure
pressure probe with PSI unit
Port: MAESTRO 0-5V n ° 15

39 to 42 / Strips
Strip reading on the SWM App

43 / Temperature RS
PT100 temperature probe
Port: SOLO 4G n ° 4

44 / Salt RS
Salts probe
Port: SOLO 4G n ° 7

45 / Pressure RS
pressure probe
Port: SOLO 4G n ° 5

46 / PH RS
PH probe
Port: SOLO 4G n ° 1

47 / ORP- Redox RS
ORP probe in mV
Port: SOLO 4G n ° 2

48 / Conductivity RS
conductivity probe in mS / cm
Port: SOLO 4G n ° 3

49 / Free chlorine RS
3-electrode potentiostatic amperometric chlorine probe in mg / L
Port: SOLO 4G n ° 6

50 / Level PH RS
PH canister end detector
Port: SOLO 4G n ° 8

51 / Level CL RS
Chlorine canister end detector
Port: SOLO 4G n ° 9

52 / Pulse flow
pulse flow detector
port: MAESTRO n ° 7 to 12

53 / Active chlorine RS
3-electrode potentiostatic amperometric chlorine probe in mg / L, calculation of active chlorine according to pH and temperature
Port: SOLO 4G n ° 10

54 / Humidity RS
humidity probe for NOVUS air analyzers
Port: MAESTRO RTU n ° 16 to 25

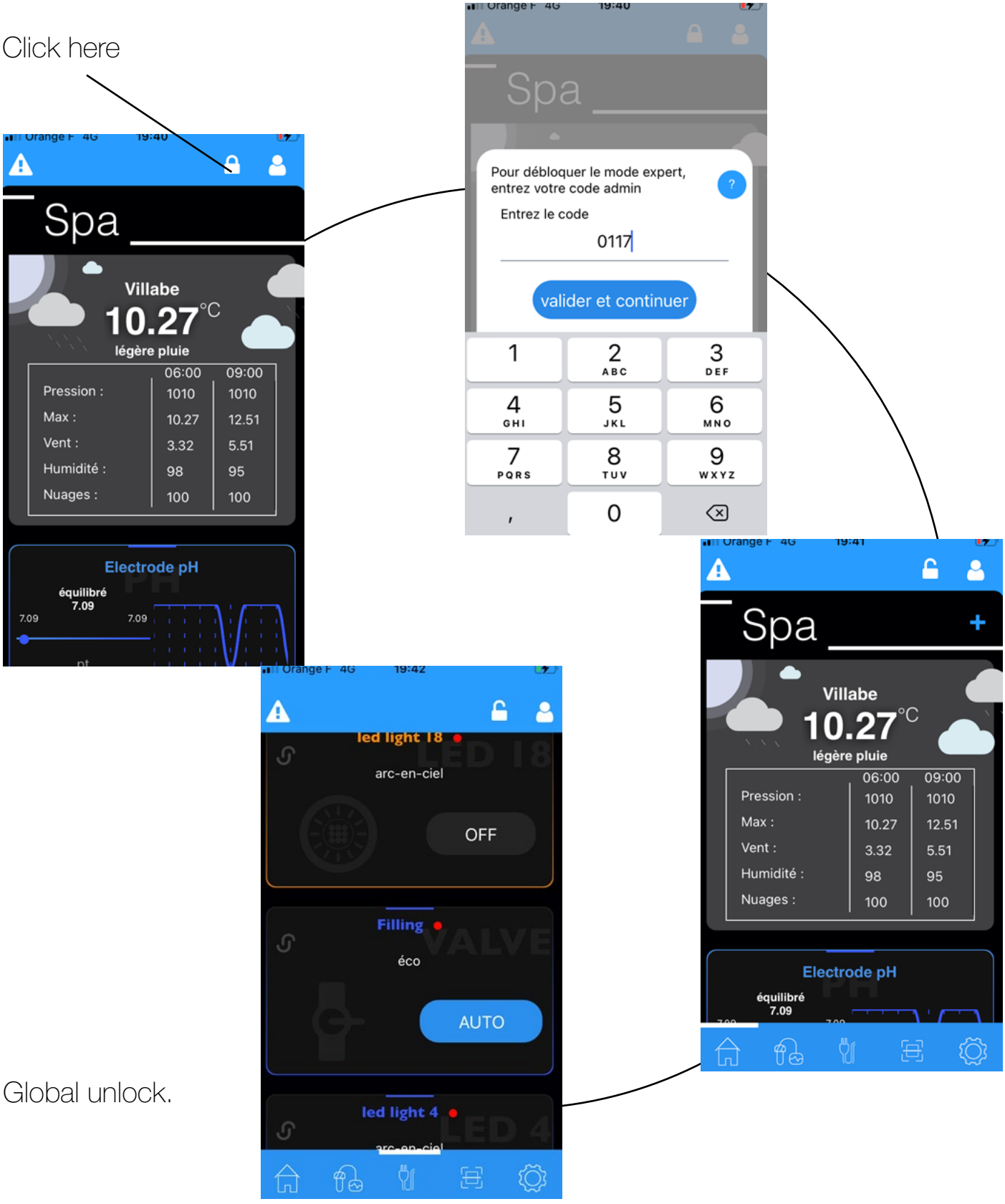
INTERFACE (IHM)
SWM - SMART WATER MANAGEMENT
APP ANDROID & IOS

https://www.youtube.com/watch?v=VGoTuumDbyQ

Click here

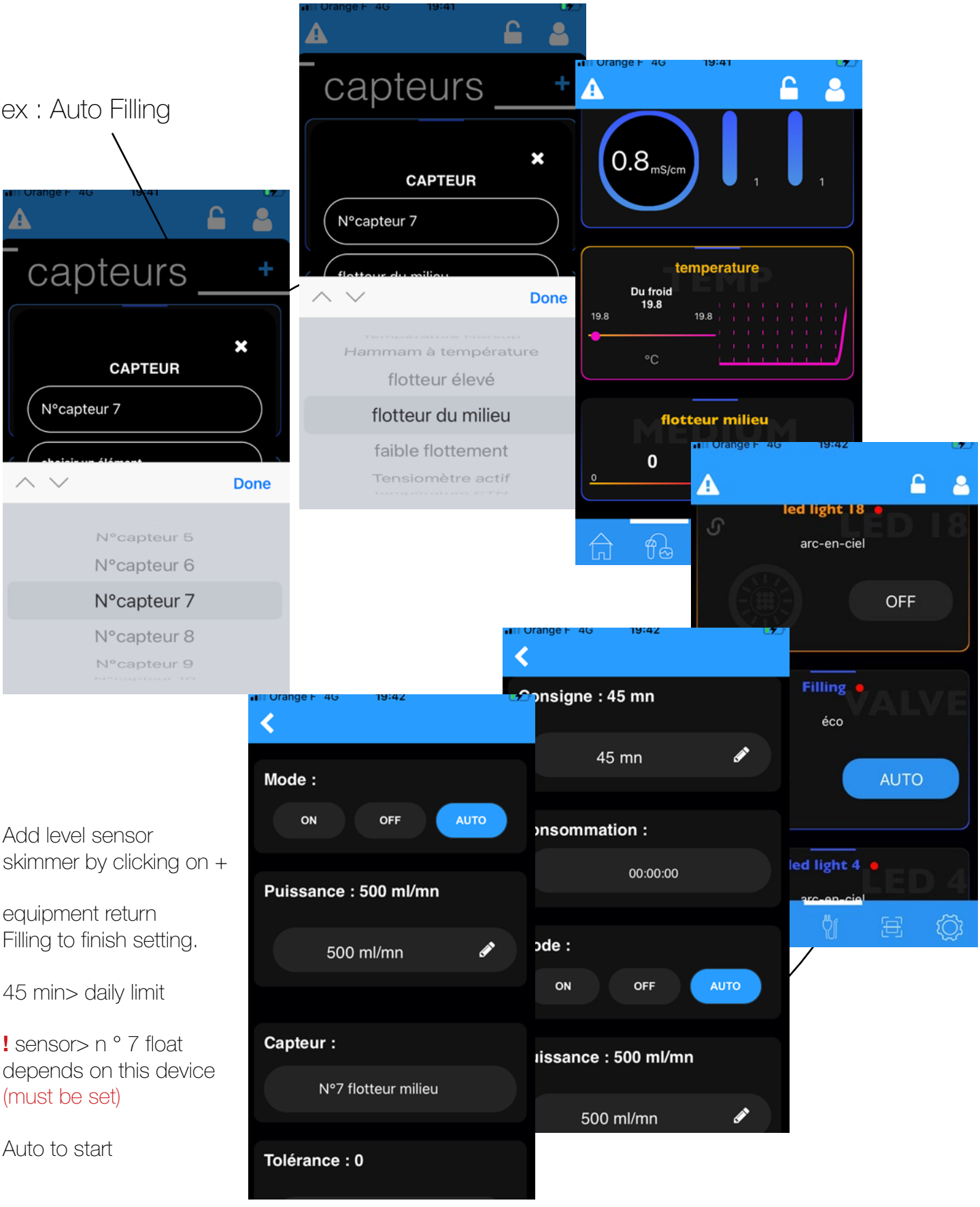
Maestro restarts on your Wifi network.

Click here



Global unlock.

ex : Auto Filling



Add level sensor skimmer by clicking on +

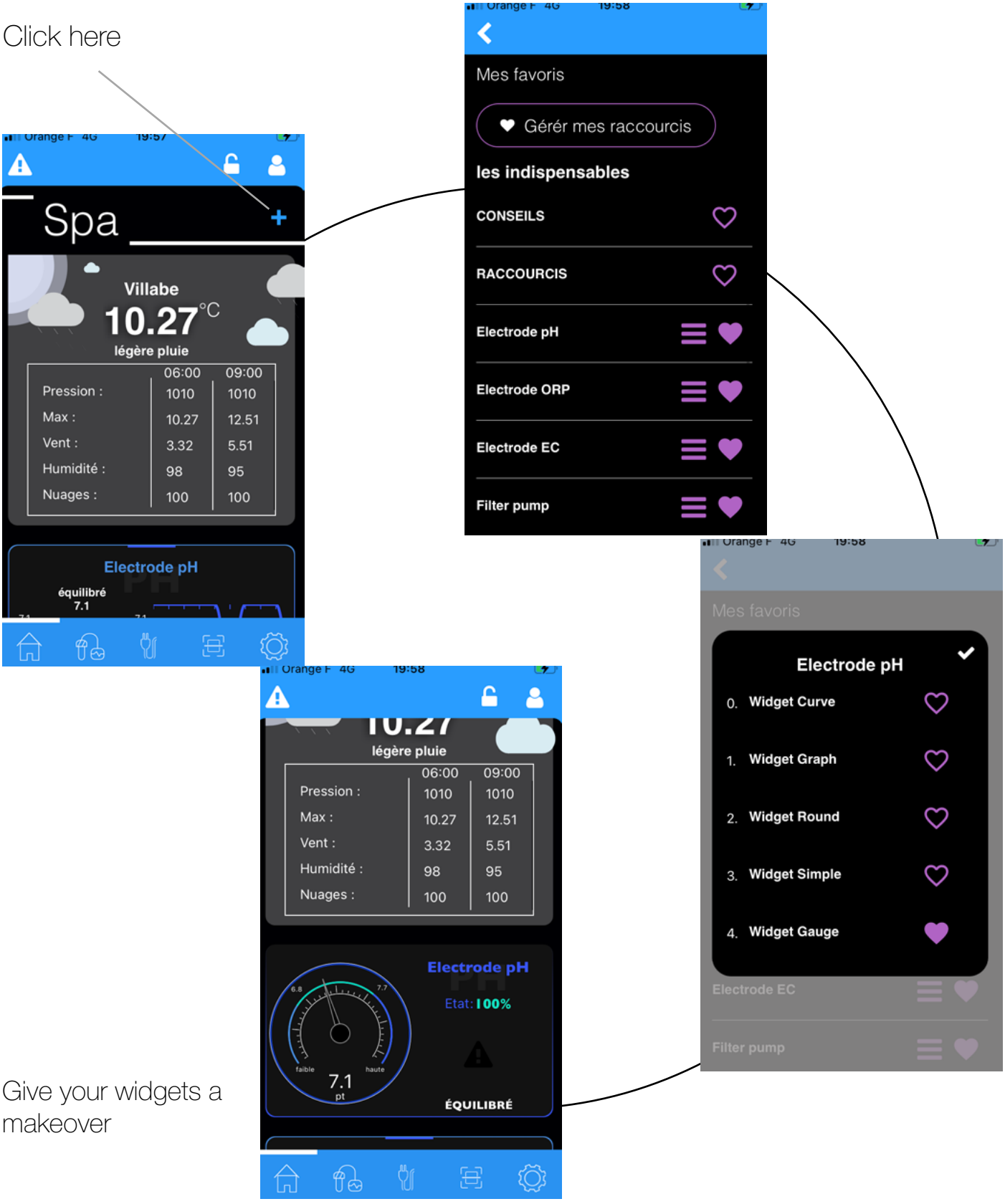
equipment return Filling to finish setting.

45 min> daily limit

! sensor> n ° 7 float depends on this device (must be set)

Auto to start

Click here



Give your widgets a makeover

Rename the sensor

last reading value

sensor status

sensor adjustment

min alarm to receive alert

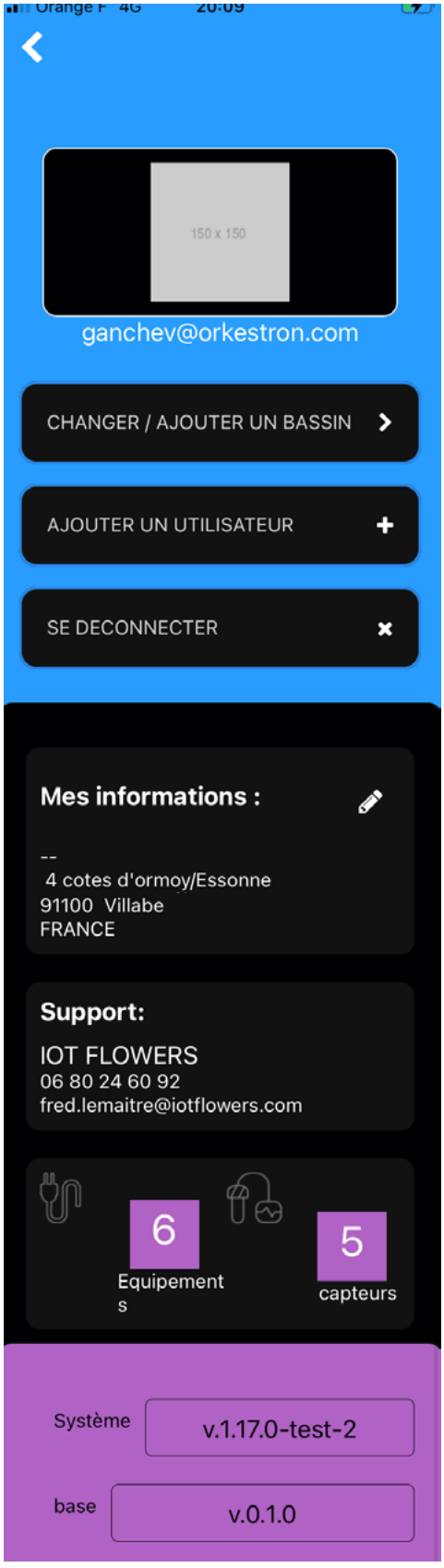
max alarm to receive alert

absolute min for Gauge widget look

absolute min for Gauge widget look

Calibration access

Remove equipment from the system.



Personal photo stored only on Telephone

email account

change or add a new pool

add a guest user for this pool

account logout

user information

Distributor / Support

number of connected equipment and sensors

software version

database version

Maestro / Swimo controller serial number ...

Personal reference displayed on the home

! basin type (impact on regulation)

! basin volume (impact on regulation)

basin situation

Basin address for Weather widget

Genius: the AI takes charge of the settings

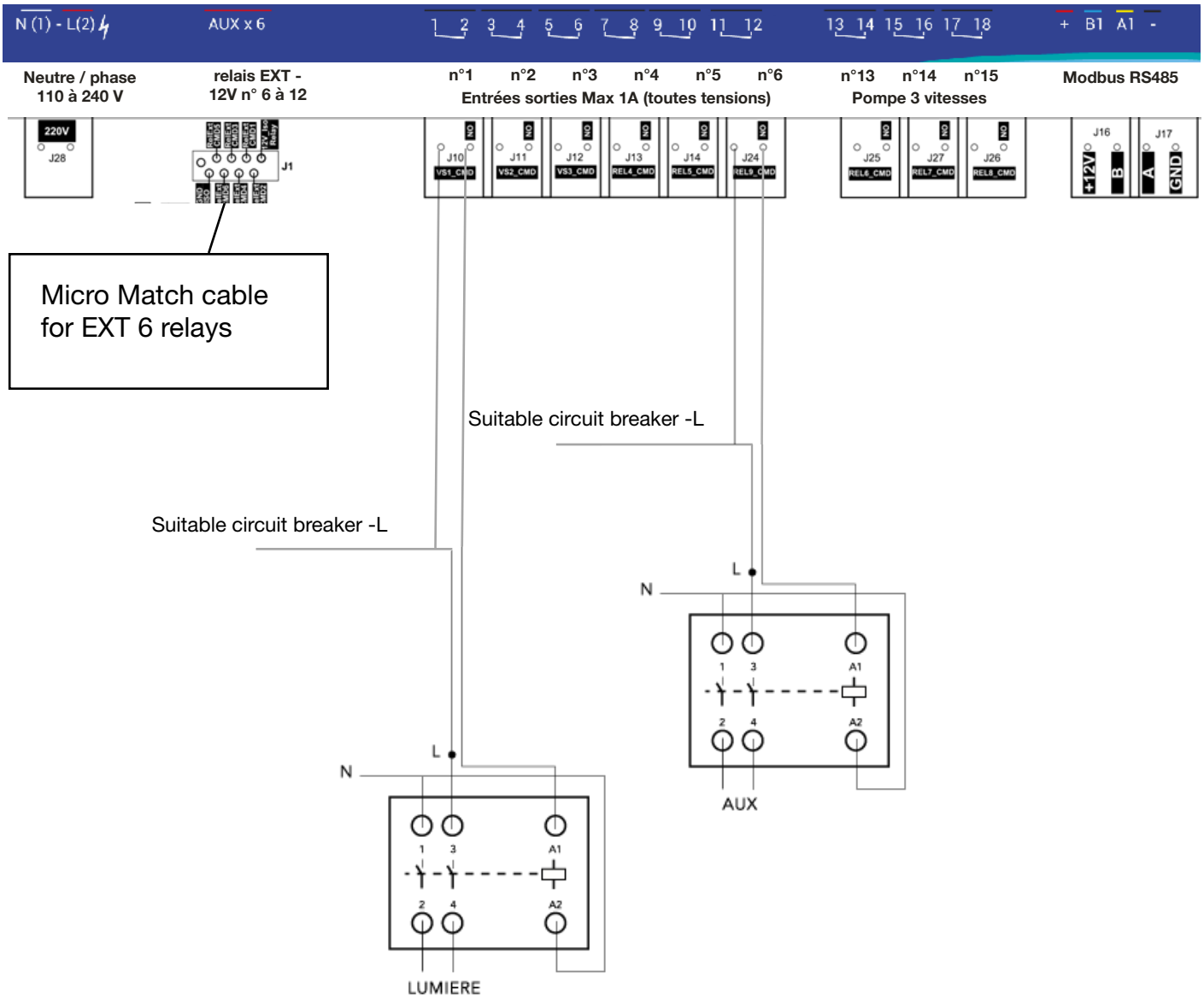
email notification

push notification

winter mode to stop receiving notifications

ELECTRICAL ASSEMBLY

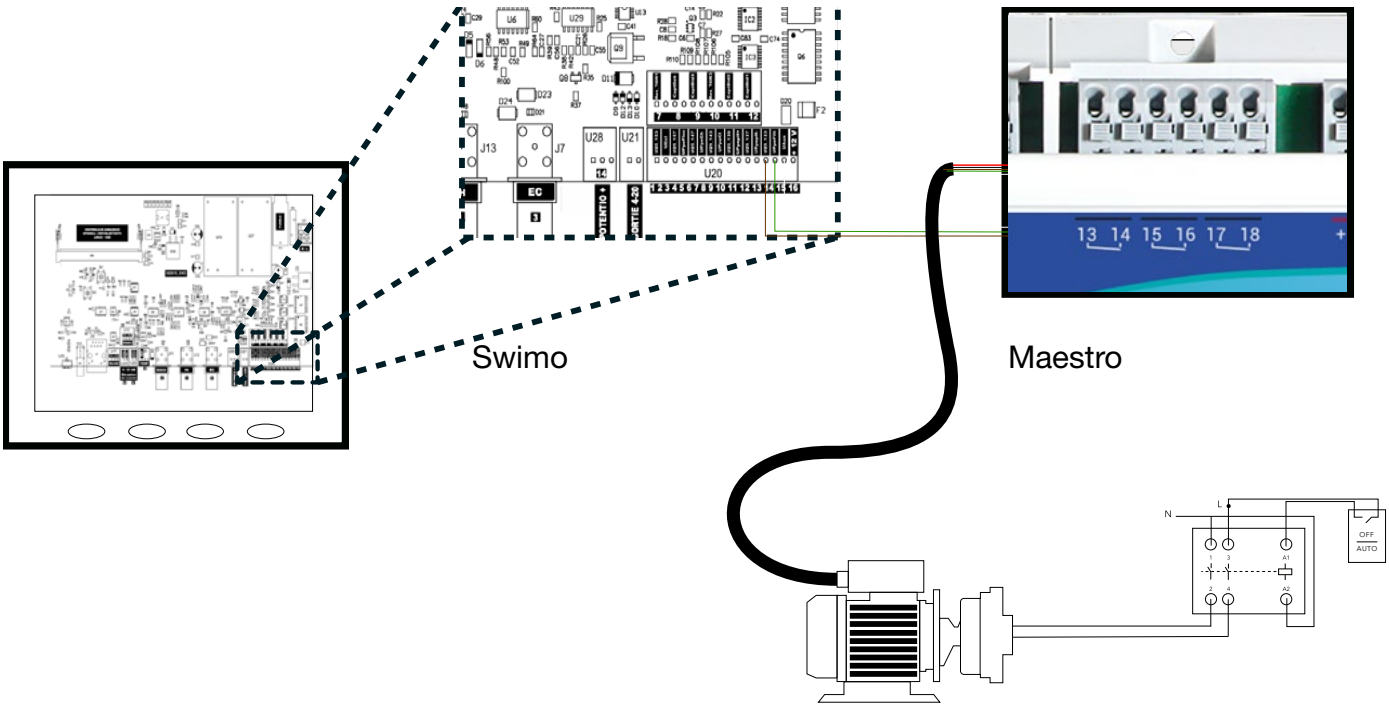
Maestro - TOP



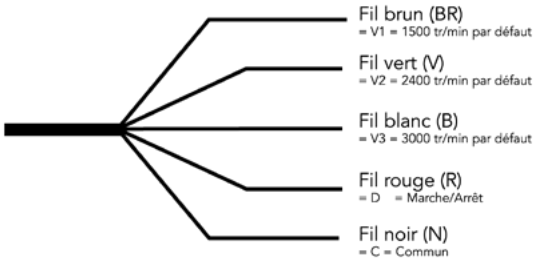
When the power of the equipment is greater than 200W, supply a power contactor, itself supplied by a circuit breaker adapted to the needs of the device to be controlled.

Double the line to allow the controller relay to drive the coil on port A1

Installation of 3 speed pump



Nam	Description	Pin	Color
V1	Low speed (V1)	14	Brown (Br)
V2	Medium speed (V2)	16	Green (V)
V3	High speed (V3)	18	White (B)
C	Common	13/15/17	Black (N)
D	Start/stop	13/15/17	Red (R)



Bridge common and start / stop on each input of the 3 selected relays. Insert each color in one of the NO ports respecting the numbers of the starting connector on the control card.

Connect the pump power to a suitable power contactor with AUTO / STOP release.

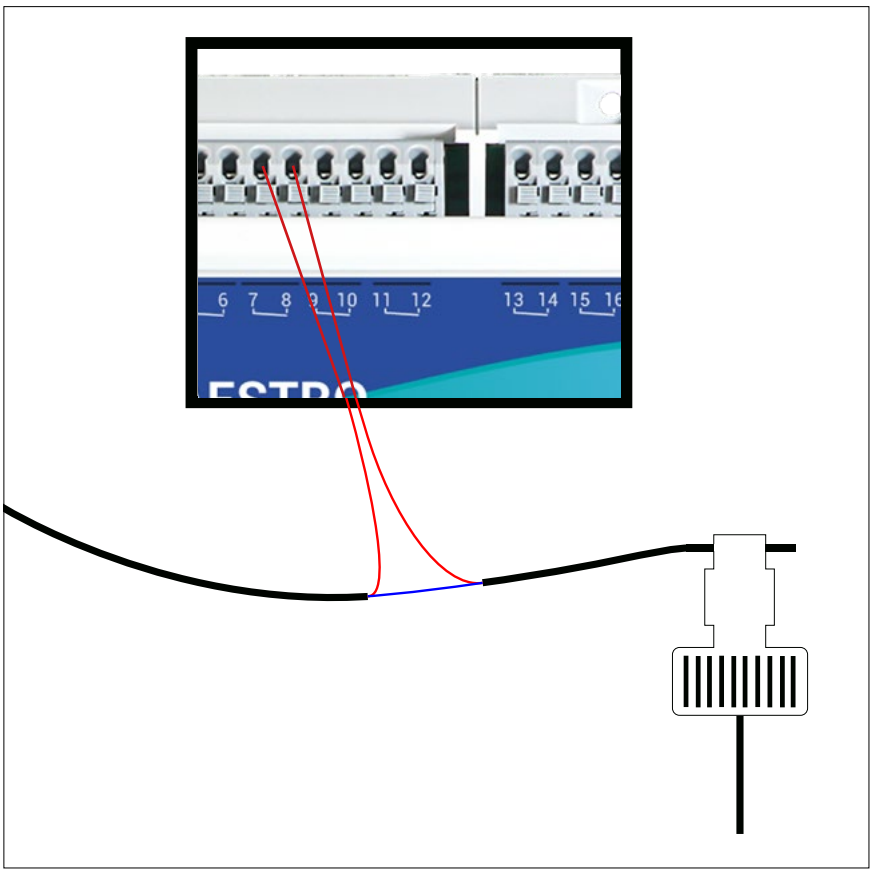
Connection of a heat pump

Regarding heating, several options are possible. We have previously seen the case where the heating is directly turned on by the power contactor. The latter case is perfectly suited to an electric heater, but for other heaters there are other equally simple solutions.

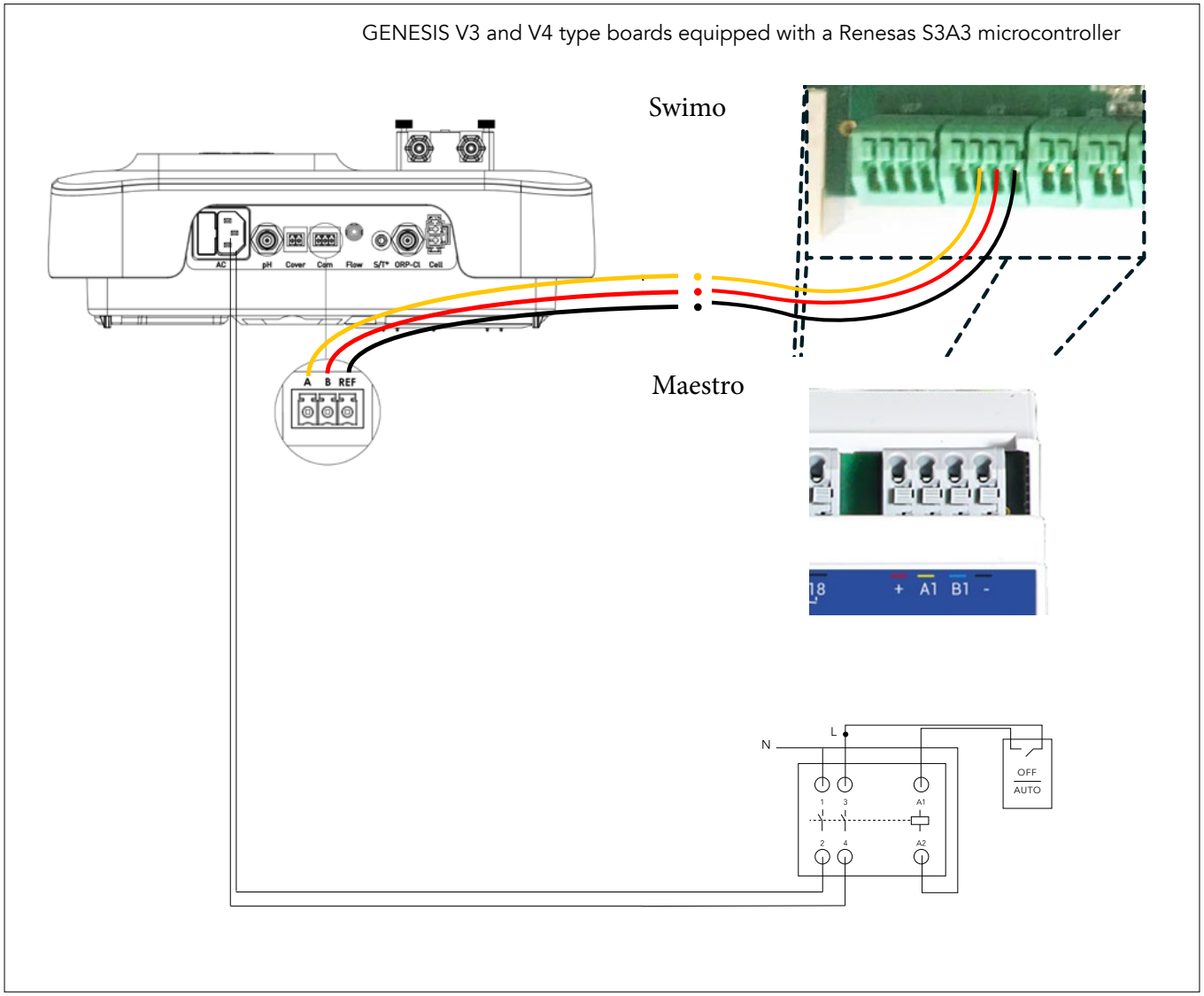
Modern heat pumps and heaters are delivered with an integrated flow meter and possibly with a 2-wire “REMOTE” connector.
If such a connector exists, it will suffice to connect a 2-wire cable between this connector and a relay on the COM and NO ports (without distinction of direction).

If such a port does not exist, it will suffice to cut one of the flowmeter wires and with a 2-wire cable, join these 2 cut ends to a relay on the COM and NO ports (without distinction of direction).

Set your heating to the maximum temperature, then use the interface to set the current setpoint, turn on and off, set time slots or even define the automation that suits you.



If you have an intelligent Modbus electrolysis, with its own algorithms, connect it to the ModBus port (swimo U12). Your controller will ensure the safety checks (flow, min and max of the PH and Redox sensors, commissioning of the filtration). Apart from these points, electrolysis will define its own course. (connect the Salt, PH, ORP and temperature probes supplied)

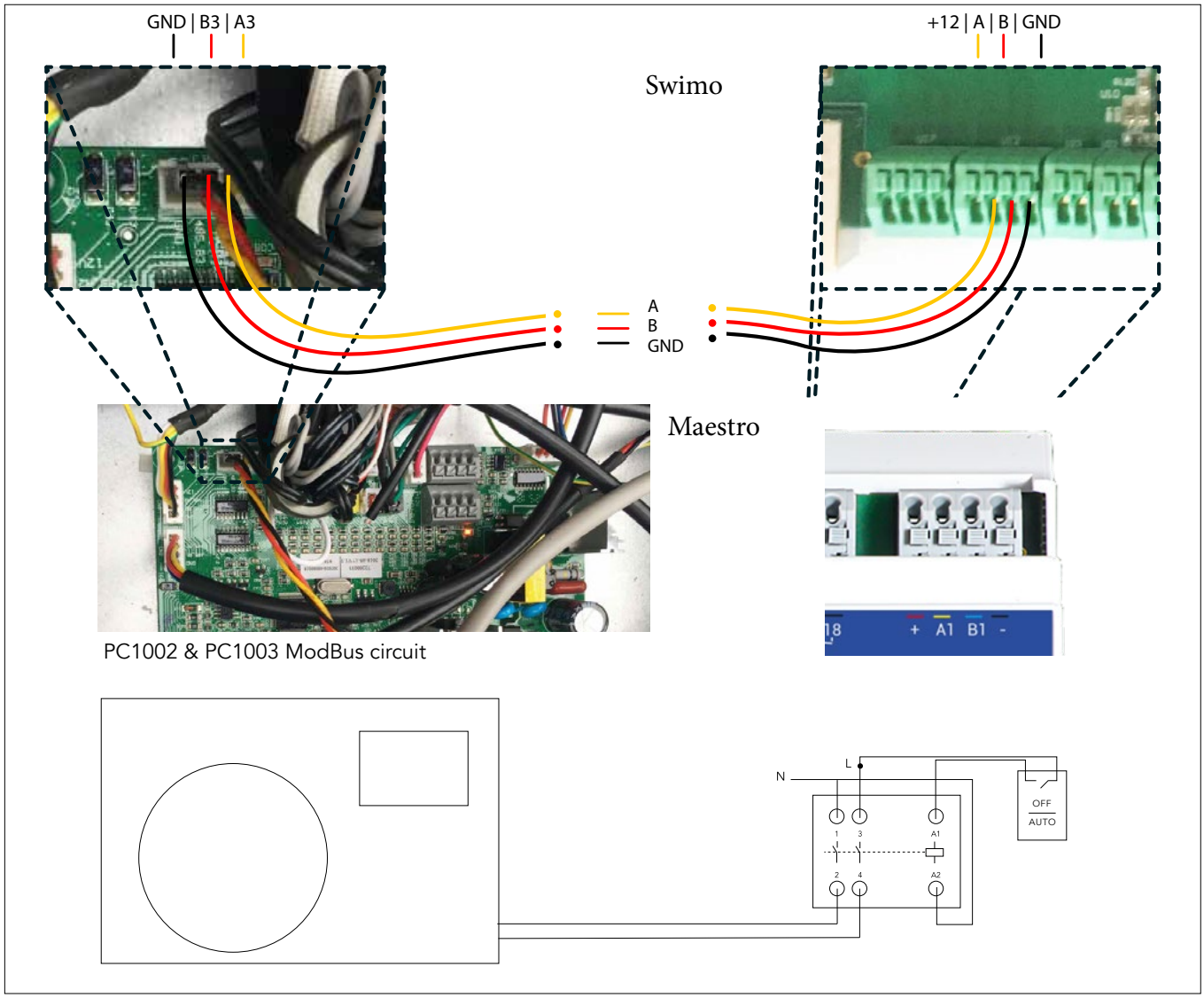


For a length of less than 20 meters, use a CAT5 telecom type crossover cable, strip a pair and connect one of the pairs to A and the other to B on the U12 port. and the reference GND (-)

Electrolyse	Description		Type
A	RS485 - A+ signal	A	cross
B	RS485 - B- signal	B	cross
REF	Common ground - 0V	GND	nc
nc	12 volts	+12v	Do not connect

WARNING :
This ModBus connection is only valid on GENESIS type V3 and V4 cards equipped with a Renesas S3A3 microcontroller at slave address n ° 10.

If you have a Modbus intelligent heat pump, benefit from its own warning or failure systems. Other advantages: the instruction from the interface updates the heat pump itself, and all the actions are synchronized. It is common management; the controller will however manage your ranges and smart programs and will give the start and stop orders.



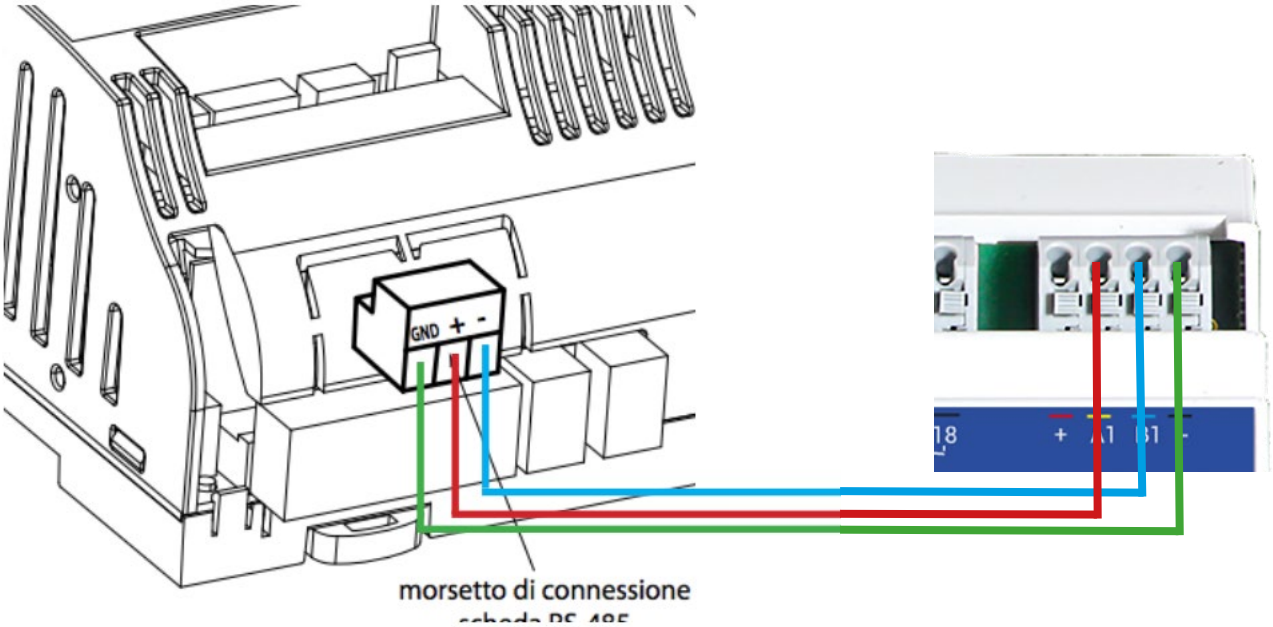
For a length less than 20 meters, use a telecom-type crossover cable, strip a pair and connect one of the pairs to A and the other to B on port U12. For a longer length, add the GND.

PAC	Description		Type
A3	RS485 - A+ signal	A	cross
B3	RS485 - B- signal	B	cross
GND	Common ground - 0V	GND	nc
nc	12 volts	+12v	Do not connect

WARNING :
This ModBus connection is only valid on the PC 1002 & PC1003 circuits installed in the PACs at slave address 50.

HUMISTEAM CAREL

Drive your Hammam with the same App, remotly start/stop in real time.



Enter the menu with the admin code 0077 and configure it according to the recommendations below

7.5 Superviseur

Superviseur (1/2)

paramètre	range	def.
Numero d'identification pour reseau BMS:	0...200	1
Baud rate	1200, 2400, 4800, 9600, 19200	19200
Protocole	CAREL, MODBUS, LON, RS232, GSM(*), WINLOAD	CAREL
Tempo offline	60...999	60

Superviseur (2/2)

paramètre	range	def.
Activer On/Off depuis superviseur	OUI / NON	NO
Enable supervisory regulation	OUI / NON	NO

superviseur 1/2

N° d'identification	2
Baud rate :	9600
Protocole :	modbus
tempo offline :	1

superviseur 2/2

activer	NO
enable	NO

Humisteam	Description		Type
+	RS485 - A+ signal	A	cross
-	RS485 - B- signal	B	cross
GND	common ground - 0V	GND	nc
nc	12 volts	+12v	do not connect

WARNING :
This ModBus connection is only valid on the Carel Modbus humsiteam at slave address n ° 2.

Always double check that your electrical assembly is correctly crimped, that there is no risk of short circuit, and test each of the relays to verify that the contacts are made correctly.

When your circuit is three-phase, never mix your phases. You can use them one by one with a neutral to generate 220V (in France).

For sensitive equipment, prefer to install one circuit breaker per equipment, rather than one circuit breaker for the whole.

Always protect your line with a 30 mA. Also note that a Powerline is unlikely to operate behind 30mA.

If in doubt, or if you do not have the necessary skills to assemble your electrical box according to the rules of the art, go through a professional who will be able to guide you or make this box according to your requirements.

Earth all your equipment. If you have more than one earth rod, connect them together to balance the potential.

A technical service is at your disposal by email only for questions that are not addressed in this document:

automate@orkestron.com

(add this email to your email box to prevent your exchanges from ending up in spam.)

HOME AUTOMATION, API

For Home Automation integration, we invite you to use the JEEDOM plug-in as a gateway to all Partners and home automation networks

https://doc.jeedom.com/fr_FR/plugins/wellness/swimo/

For a personalized integration, you can also call the local or remote API from your PLC, PC, or home automation box or even create your own web interface or application.

https://automation.ac/api/API_V2.pdf

For real-time development in tune with our WS API, you must contact the technical department

fred.lemaitre@iotflowers.com

Other plugins are being tested at this time, such as
Google Home, Siri, Crestron and Control4

www.orkestron.com

Orkestron