USER GUIDE

ezevo

The box that connect
YOUR POOL AND YOUR GARDEN

SAFETY INSTRUCTIONS

- Before using, please read this manual carefully and keep it for future reference.
- Any use not in accordance with this manual will void the warranty and absolve the manufacturer from liability.
- Use only original parts and components from the EZPool brand.
- Refer to the technical specifications for operating temperature ranges and permitted humidity levels.
- Leave a minimum of 10 cm of space on the left and right sides of the EVO unit to ensure proper ventilation.
- EZ EVO allows you to check the quality of your water and ensure the proper functioning of treatment devices. Under no circumstances do we replace physical action, and we cannot be held responsible if the quality of your water does not meet your expectations. If this is the case, we advise you to contact your pool specialist to check and/or adjust your devices.
- Your product must be installed away from dust and adverse weather conditions.

WARNING

- Ensure that the Evo unit and all its accessories are present in the box.
- Find an optimal location to install the electronic product as close as possible to the pool equipment.
- Ensure that the product is sufficiently far from water to avoid risks of damage from splashes and humidity.
- Please follow the connection rules, the maximum relay powers, and install necessary protections for each equipment.

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USER GUIDE

CONTENTS OF THE PACK

Your EVO Pack contains:

1 x EZ EVO Unit

1 x Water temperature sensor

1 x Air temperature sensor

1 x Flow detection sensor

1 x Pressure sensor

1 x pH sensor

1 x ORP sensor

1 x pH buffer solution kit

1 x ORP buffer solution kit

1 x EZ HUB

1 x Hydraulic adapter kit

2 x Probe holder

- Check the equipment in your pool's technical room and your garden.
- Analyze your pool water. You will be able to interact with your technical room from anywhere.

Paired with numerous sensors, EZ EVO measures:

- Outdoor air temperature
- The water temperature of your pool
- The presence of flow in your hydraulic circuit
- The pressure in your hydraulic circuit
- The pH level in your pool

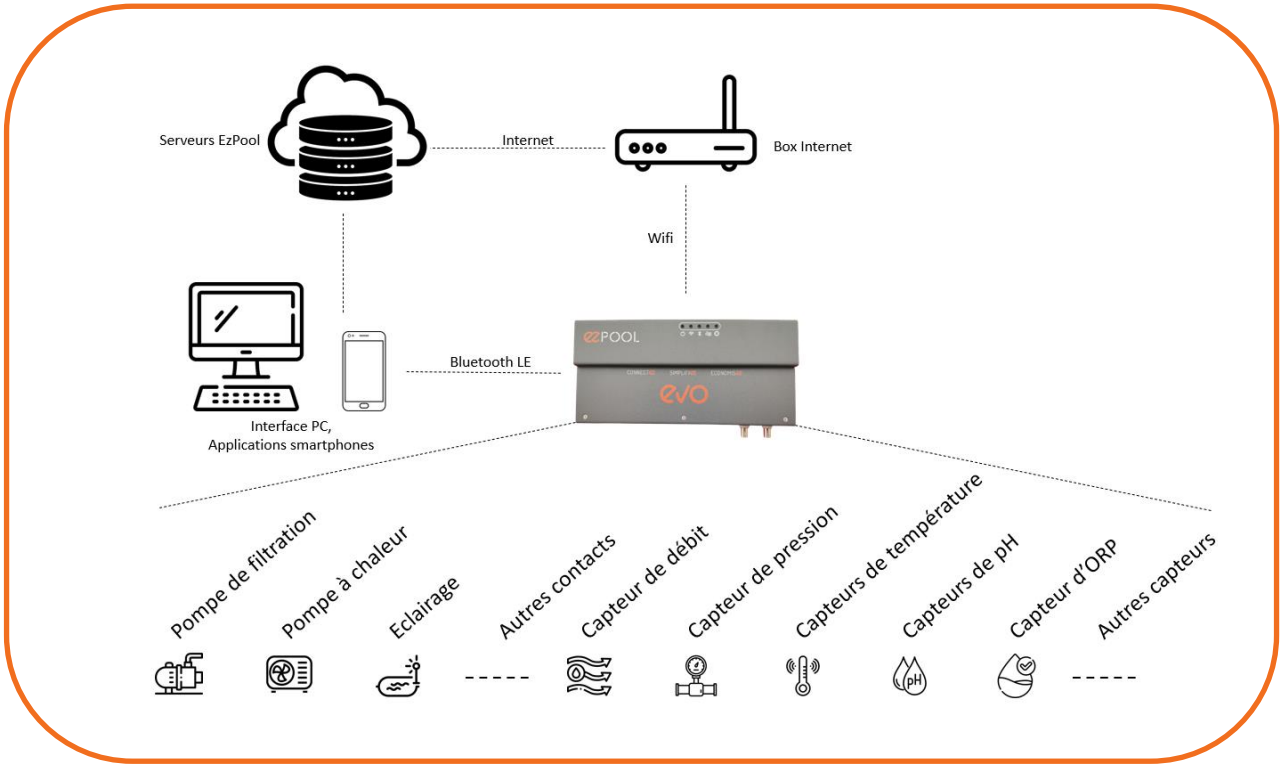
- The disinfectant level in your pool (oxidation-reduction potential)

EZ EVO can control up to 20 devices: filtration pump, heat pump, solenoid valve, lighting, electrolyzer, ORP/pH pump, etc. Depending on the devices, this control can be done:

- By power supply control (230VAC / 50Hz)
- By dry contact
- Via Modbus over RS485

EZ EVO communicates with your smartphone via Wi-Fi and Bluetooth Low Energy.

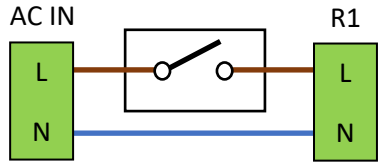
EZ EVO communique avec votre smartphone en Wi-Fi et en Bluetooth Low Energy.



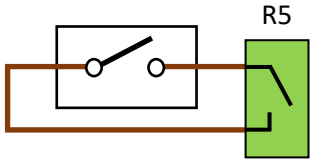
1.2 Relay Outputs

EZ EVO can control up to 20 devices. For this purpose, four types of relays are used:

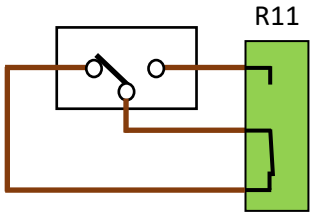
- R1 to R4: Normally open relay with power output (Phase/Neutral) 85V-250VAC, maximum 8A



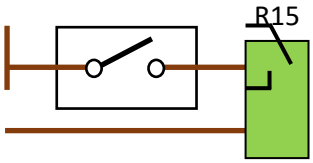
R5 to R10: Normally open relay with potential free contact 85V-250VAC, maximum 5A



R11 to R14, R19, and R20: Normally open/normally closed relay with potential free contact 85V-250VAC, maximum 2A



R15 to R18: Normally open relay with potential free contact 85V-250VAC, maximum 2A



2 PRESENTATION OF SUPPLIED SENSORS

2.1 Air Temperature Sensor

Label on the connection terminal : **AT**

The air temperature sensor allows you to know the air temperature. This information is accessible on the mobile application but also allows the EZ EVO unit to adapt its intelligent operation (e.g., winterization).

2.2 Water Temperature Sensor

Label on the connection terminal : **WT**

The water temperature sensor allows you to know the temperature of your pool water. This information is accessible on the mobile application but also allows the EZ EVO unit to adapt its intelligent operation (e.g., pump runtime, winterization, etc.).

2.3 Water Flow Sensor

Label on the connection terminal: **WFS**

The water flow sensor (or Water Flow Switch) checks if water flow in your hydraulic circuit is present during filtration periods. If not, you will receive an alert to check and resolve the anomaly to avoid damaging your filtration pump.

2.4 Water Pressure Sensor

Label on the connection terminal : **WP**

The water pressure sensor checks the water pressure in your hydraulic circuit. When pressure decreases, it is advisable to check if your skimmers and/or your filtration pump basket are not clogged. When pressure increases, it is advisable to perform a backwash and rinse of your filter.

2.5 pH Sensor

Label on the unit: **PH**

he pH sensor checks the pH level of your pool. The reference measurement stored in the device is 7.1. You have the option to modify the reference value, but it is strongly discouraged to do so unless recommended by your pool specialist.

- The pH value is correct when it is within +/- 0.1 of the reference point (green zone on the application).
- The pH value is borderline when it is between +/- 0.1 and +/- 0.3 (yellow zone on the application).
- The pH value is critical when it is above or below +/- 0.3 (red zone on the application). An alert will be sent to you.

2.6 RedOx Sensor

Label on the unit: ORP : **ORP :** The RedOx sensor (or ORP) checks the disinfecting power of your pool. The measurement is done in mV (millivolts). The reference measurement stored in the device is adjusted according to the treatment used by your pool:

- Chlorine: 725mV
- Electrolysis: 725mV
- Active oxygen: 340mV
- Bromine: 615mV

You have the option to modify the reference value, but it is strongly discouraged to do so unless recommended by your pool specialist.

- The oxidation-reduction potential value is correct when it is within +/- 25mV of the reference point (green zone on the application).
- The oxidation-reduction potential value is borderline when it is between +/- 25mV and +/- 50mV (yellow zone on the application).
- The oxidation-reduction potential value is critical when it is above or below +/- 50mV (red zone on the application). An alert will be sent to you.

3 PRESENTATION OF SOME ADDITIONAL SENSORS TO CONNECT

3.1 Water Level Sensor (not included)

Label on the connection terminal: **LEVEL**

Level sensors identify the filling level of your pool or the overflow buffer tank level of your infinity pool. Connect 3 to 5 sensors depending on the granularity of information desired.

An alert will be sent to you in case of water level too high or too low.

3.2 pH Canister End Sensor (not included)

Label on the connection terminal: **TpH**

The pH canister end sensor stops the pH injection (+ or - depending on the case) and alerts you when the canister or the suction tube is empty.

3.3 ORP Canister End Sensor (not included)

Label on the connection terminal: **T2**

The ORP canister end sensor stops the disinfectant injection and alerts you when the canister or the suction tube is empty.

3.4 End-of-Track Sensor for Electric Pool Cover (not included)

Label on the connection terminal: **Cov**

The end-of-track sensor for the electric pool cover allows you to know the state of your pool cover (open/closed).

Reminder: It is strictly forbidden to open or close an electric cover remotely without the ability to visually monitor this action.

3.5 Current Sensor (not included)

Label on the connection terminal: Amp1 and Amp2 Current sensors allow you to know the electrical consumption of a piece of equipment or a group of equipment by surrounding one of the two power conductors (Phase or Neutral).

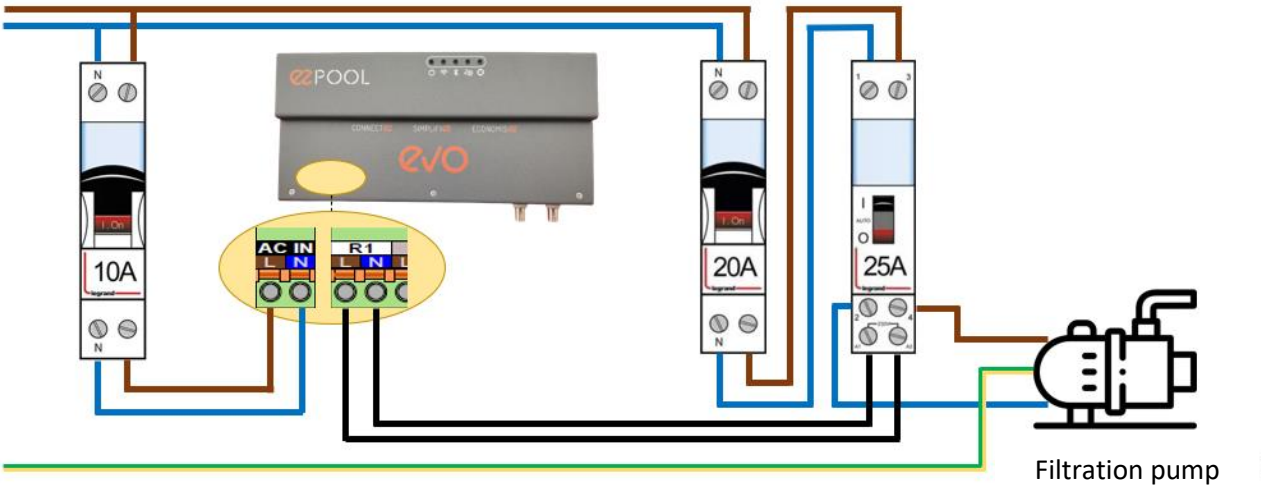
4 PRESENTATION OF SOME EQUIPMENT TO CONNECT

4.1 Filtration pump

Label on the connection terminal: **R1**

EZ EVO provides a direct power supply at 230VAC / 50Hz with a maximum of 10A. This allows you to turn on or off your filtration pump and program up to two operating schedules (PROG mode).

Let EZ EVO manage your filtration pump based on water and air temperatures, the flow rate of your filtration pump, and the size of your pool (summer and winter).



4.2 Pool Light

Label on the connection terminal: **R2**

EZ EVO provides a direct power supply at 230VAC / 50Hz with a maximum of 10A. This allows you to turn on or off your pool light and program an operating schedule (PROG mode).

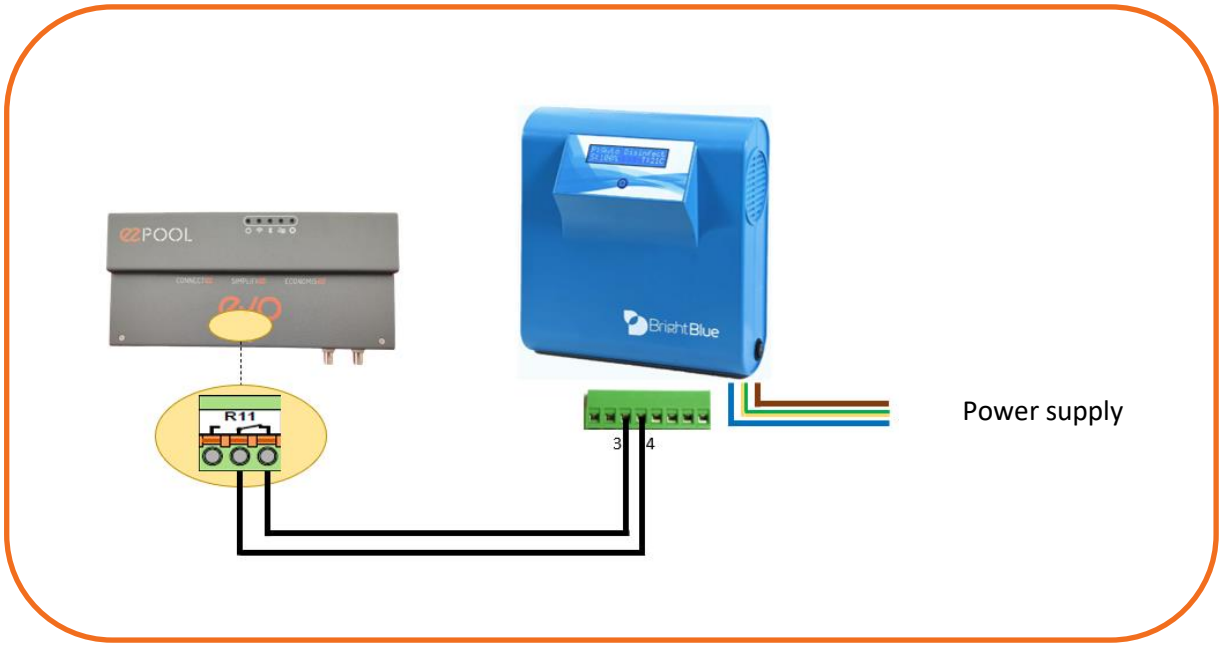
4.3 Electrolyzer or Treatment System

Label on the connection terminal: **R3 ou R11**

EZ EVO provides a direct power supply at 230VAC / 50Hz with a maximum of 10A (R3) or can control a dry contact (NO or NC) of maximum 1A (R11), see recommended wiring below. Associate your electrolyzer (or any other treatment system) with the EZ EVO unit and let it act on your pool treatment to optimize water quality based on data collected by the ORP sensor. EZ EVO will take into account all events inherent to pool operation (e.g., filtration pump status, flow sensor, end-of-canister sensor, etc.).

4.4 pH Injection Pump

Label on the connection terminal: **R4 ou R12**



EZ EVO provides a direct power supply at 230VAC / 50Hz with a maximum of 10A (R4) or can control a dry contact (NO or NC) of maximum 1A (R12). Associate your pH injection pump with the EZ EVO unit and let it adjust the pH of your pool to optimize water quality based on data collected by the pH sensor. Install the pH type (+ or -) that corresponds to your needs. EZ EVO will take into account all events inherent to pool operation (e.g., filtration pump status, flow sensor, end-of-canister sensor, etc.).

4.5 Heat Pump

Label on the connection terminal: **R7**

EZ EVO controls a dry contact (NO) of maximum 5A. You can turn on or off your heat pump and program an operating schedule (PROG mode). EZ EVO will follow the set minimum acceptable temperature from which you can swim.

Tip: Set it 2°C lower than the temperature programmed on your heat pump. The application will then activate your filtration pump until the set minimum temperature is reached.

4.6 Garden Lights

Label on the connection terminal: **Selection on the application**

EZ EVO controls a dry contact (NO) of maximum 5A. You can turn on or off your garden lights and program an operating schedule (PROG mode).

4.7 Counter-current Swimming

Label on the connection terminal: ***Selection on the application***

EZ EVO controls a dry contact (NO) of maximum 5A. You can turn on or off your counter-current swimming system.

4.8 Robot

Label on the connection terminal: ***Selection on the application***

EZ EVO controls a dry contact (NO) of maximum 5A. You can turn on or off your robot.

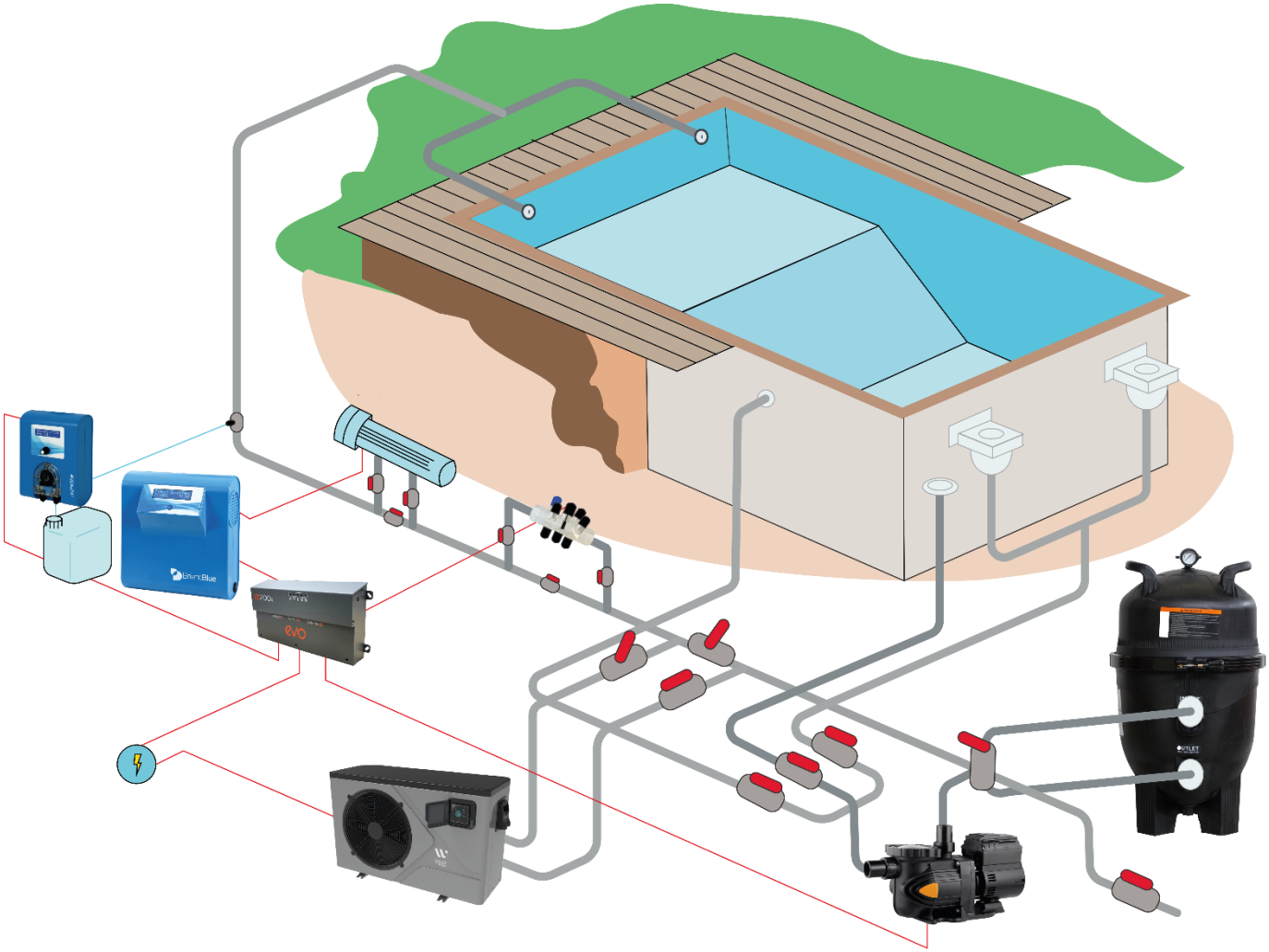
4.9 Fountain

Label on the connection terminal: ***Selection on the application***

Label on the connection terminal: Selection on the application EZ EVO controls a dry contact (NO) of maximum 5A. You can turn on or off your fountain and program an operating schedule (PROG mode).

5 INSTALLATION

- Mount the EZ EVO unit inside your technical room on a wall using 4 screws (not provided).
- Install the EZ HUB on your pool's hydraulic network, following the recommended position on the diagram below.



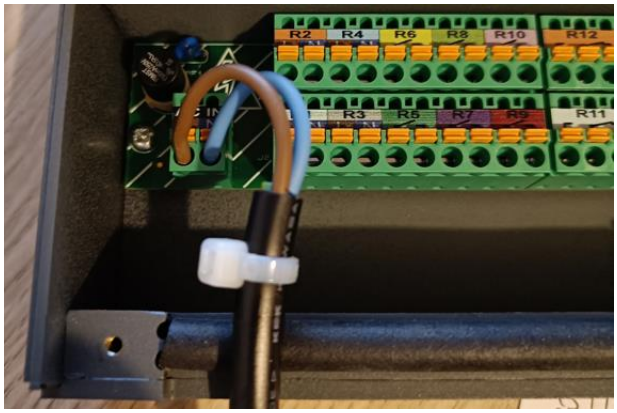
- Install the air temperature sensor outside of the technical room and away from direct sunlight.
- Install the water temperature sensor on the bottom part of the EZ HUB.
- Install the water flow detection sensor on the top part of the EZ HUB.
- Install the pH sensor using the probe holder on the top part of the EZ HUB.
- Install the ORP sensor using the probe holder on the top part of the EZ HUB.
- Install the water pressure sensor on the filter.

6 WIRING

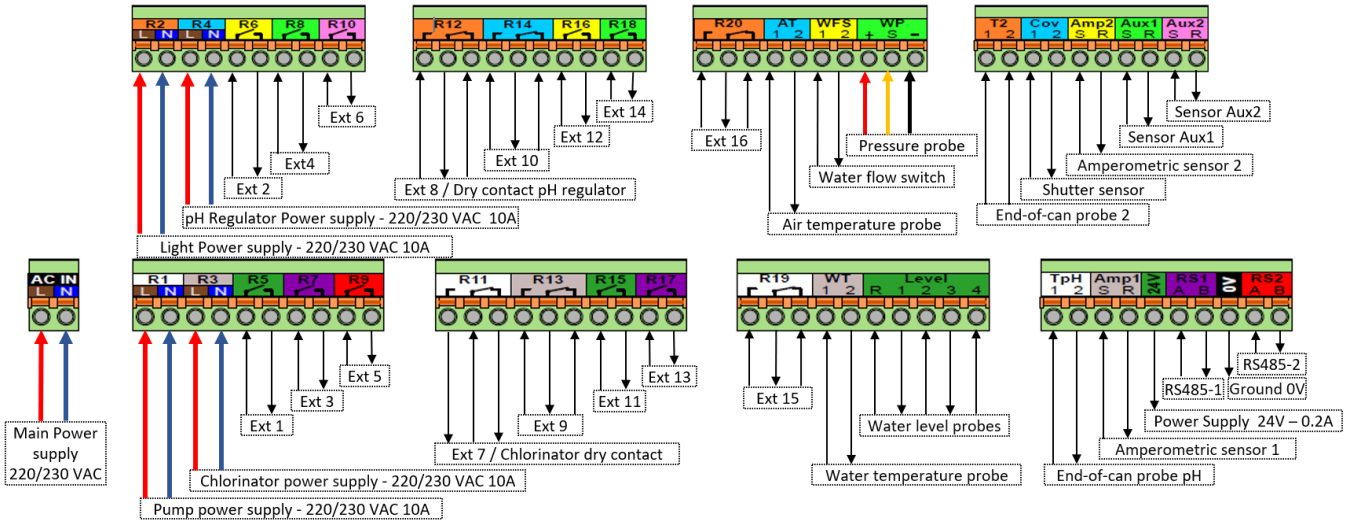
6.1 Wiring Tips

To facilitate the connection of sensors and equipment, it is advisable to:

- Use wire diameters consistent with the consumption of the devices (maximum 1.5mm²).
- Unlock the terminals using a small flathead screwdriver on the orange tabs.
- Lay out all cables along the two horizontal openings.
- Use the provided seals to ensure the waterproofing of the unit.
- Make the electrical connection of the EZ EVO power supply to an independent 10A circuit breaker on the electrical panel as the final step.
- Secure a cable clamp on the unit's power cable to prevent any electrical risk in case of tension on the cable.



6.2 Connection Diagram



7 USING YOUR EZ EVO

7.1 Getting Started

Once all connections have been properly made and the EZ EVO enclosure has been closed, power on the EZ EVO enclosure.

7.2 Meaning of Indicator Lights

The indicators on the front panel of the EZ EVO provide information about its status.

EZ EVO Power Indicator

- OFF : EZ EVO is powered off.
- WHITE: EZ EVO is powered on and operational.

EZ EVO Internet Connection Indicator via Wi-Fi

- Solid orange: EZ EVO is initializing Wi-Fi.
- Solid red: EZ EVO is not connected to the internet.
- Solid green: EZ EVO is connected to the internet.
- Blinking green: EZ EVO is sending/receiving a message.

Indicator for EZ EVO connection to a smartphone via Bluetooth Low Energy

- Off: EZ EVO not connected to a smartphone.
- Solid green: EZ EVO connected to a smartphone via Bluetooth.

Filtration Pump Operation Indicator

- Off: Filtration pump is off.
- Green: Filtration pump is on, functioning properly (flow is present).
- Red: Filtration pump is on, functioning incorrectly (no flow).

System Status Indicator for Your Pool Monitoring System

- Off: No faults detected.
- Red: One or more faults detected (for more information, the user must log in to their mobile application).

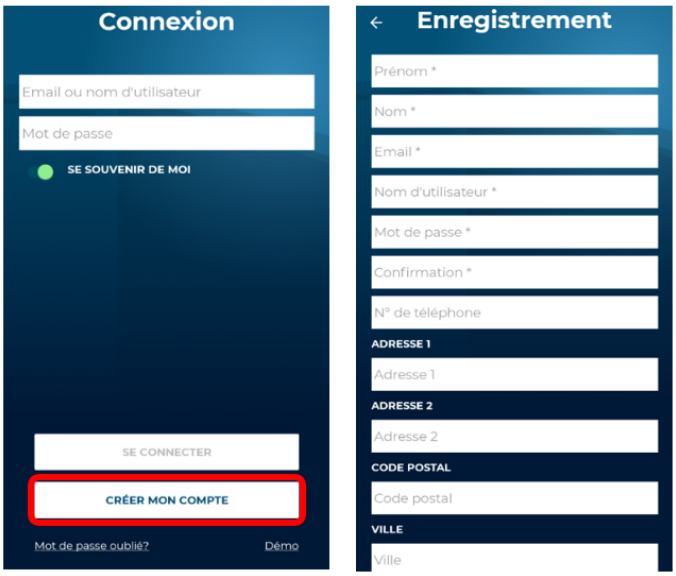
Note: During a software update of the EZ EVO card, the green indicator  is illuminated while the red indicator  blinks.

7.3 Setting up Your Application

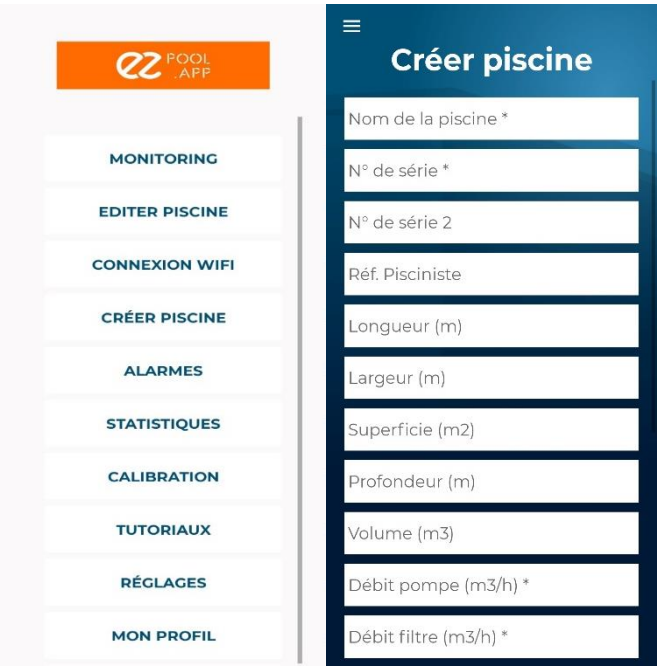
- Download the mobile application for Android or iOS according to your phone model.

DISPONIBLE SUR Google Play DISPONIBLE SUR App Store

- Create an account:



- Create a pool by pressing ☰ to access the menu, then select "Create pool."
- Complete the form by entering the serial number of the EZ EVO enclosure (SN indicated on the side of the enclosure), information about your pool, etc...



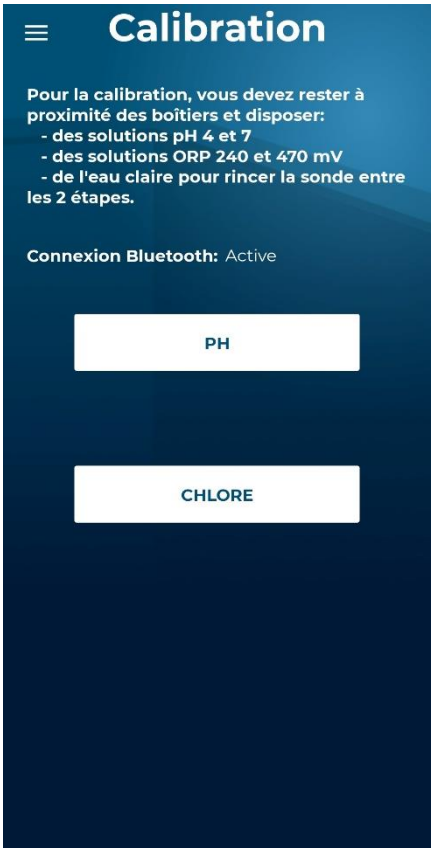
- Press [☰] to access the menu, then select "Wi-Fi Connection.".

- ⇨ The smartphone attempts to connect to the EZ EVO enclosure.
- ⇨ The Bluetooth indicator on the EZ EVO should illuminate green.
  - Enter the name of your Wi-Fi network (SSID of your Internet Box).
  - Enter your Wi-Fi password.
  - Press "Connect."
- ⇨ EZ EVO should receive all connection information and restart.
- ⇨ If the information entered is correct, the Wi-Fi indicator should illuminate green.
- ⇨ EZ EVO is communicating successfully via Wi-Fi, and you can take advantage of the full power of the mobile application to manage your pool!

<u>Tips for Wi-Fi Connection:</u>

- The connection of the enclosure to your Wi-Fi network is done in 2.4GHz (5GHz Wi-Fi networks are not compatible).
- Your smartphone must have Bluetooth, Wi-Fi, and Location services enabled for the initial operation.
- Initial settings are done via Bluetooth; therefore, you must be near the EZ EVO enclosure.
- If the Wi-Fi connection is not strong enough, you must improve it; there are several ways to do so. Here are some examples:
  - Wi-Fi Powerline Adapter (CPL Wi-Fi)
  - Wi-Fi Extender

7.4 pH and ORP Probe Calibration



To properly perform calibration, two solution kits are provided with your EZ EVO enclosure:

- ORP buffer solutions of 240mV and 470mV for ORP probe calibration.
- pH buffer solutions of pH 4 and 7 for pH probe calibration. Additionally, remember to use:
- A container of clear water to rinse the probes at each step.
- A soft, dry cloth to dry the probes at each step.

Tips for calibration:

- It is important that your pool is properly balanced before proceeding with probe calibration.
- Rinse the probes in clear water and dry them with a soft cloth before and after each use of solution (pool water, rinsing, solution 1, rinsing, solution 2, rinsing, pool water).

To perform calibration:

- Press [button name] to access the menu, then select "Calibration."

  ➔ The Bluetooth indicator should illuminate green.

- Follow the instructions in the mobile application:

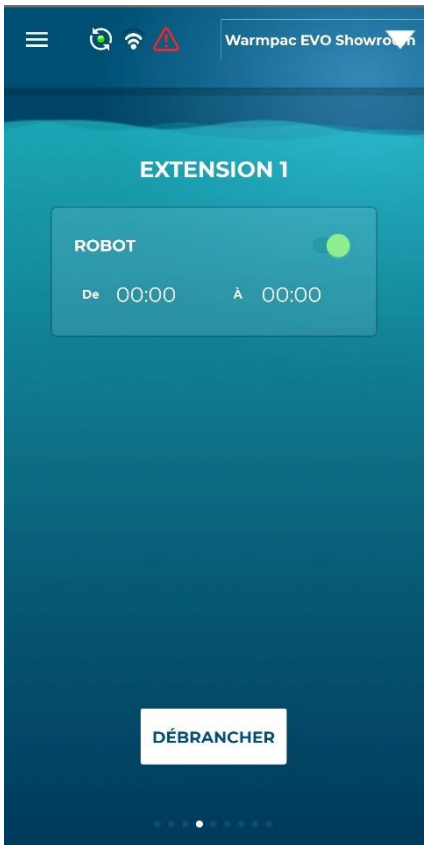
  ➔ For pH probe calibration, you will need to place the probe in pH 4 solution and then in pH 7 solution.

  ➔ For ORP probe calibration, you will need to place the probe in 240mV ORP solution and then in 470mV ORP solution.

7.5 Presentation of Your Application Interface

When you are logged into your mobile application, you can access:

- The status of your EZ-EVO: connected or not
- Wi-Fi reception quality
- Air temperature
- Water temperature of your pool
- Flow presence in your hydraulic circuit
- Status of your filtration pump: on or off
- Status of your pool light(s)
- Water pressure in your hydraulic circuit
- ORP level in your pool
- pH level in your pool
- Water level
- Status of all your extensions (fountain, heat pump, …)

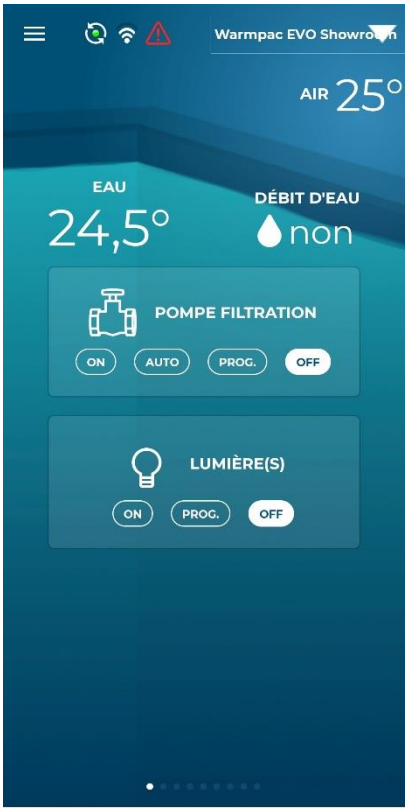


EZ EVO monitors your pool and alerts you in case of:

- Defective ORP probe
- Low disinfectant product level
- High disinfectant product level
- Discontinuation of disinfectant product injection due to lack of significant ORP evolution
- Empty disinfectant product container
- Defective pH probe
- Low pH level
- High pH level
- Discontinuation of pH injection due to lack of significant pH evolution
- Empty pH container
- Low water level
- High water level
- Non-existent water flow
- ...

You can also control your equipment:

- Filtration pump: ON / AUTO / PROG. / OFF
- Light(s): ON / PROG. / OFF
- Extensions (commands are specific to each extension)



Your application is constantly evolving!

8 TECHNICAL SPECIFICATIONS OF EZ EVO

8.1 Mechanical Specifications

Dimensions (L x H x D): 285mm x 158mm x 53mm

Weight: 850g

Protection Rating: IP44

8.2 Electrical Specifications

Voltage: 100 - 250VAC

Frequency: 50 - 60Hz

Power Consumption: 10W

Protection: Fuse F1 500mA

8.3 Functional Specifications

Temperature: from -10°C to +50°C

Relative Humidity: from 30% to 70%

8.4 Connectivity

Wi-Fi: Frequency: 2.412 – 2.484GHz

Protocol: IEEE 802.11 b/g/n

Bluetooth: Frequency: 2.412 – 2.484GHz

Protocol: Low Energy

8.5 Sensors

pH :	Range: from 0 to 14
	Accuracy: +/- 0.1
	Resolution: 0.1
ORP:	Range: from 0 to 2V
	Accuracy: +/- 10mV
	Resolution: 1mV
Air Temperature:	Range: from -10°C to +60°C
	Accuracy: +/- 0.2°C
	Resolution: 0.1°C
Water Temperature:	Range: from 1°C to +60°C
	Accuracy: +/- 0.2°C
	Resolution: 0.1°C
Pressure:	Range: from 0 to 4 bars
	Accuracy: +/- 0.1 bar
	Resolution: 0.1 bar

8.6 Mobile Applications

Operating Systems: Android, iOS

Languages: French, English, Spanish, Italian, Portuguese, German, Thai

9 GENERAL INFORMATION

9.1 Warranty

EZ EVO : 2 years

Probes : 2 years

9.2 Recycling

As manufacturers of electrical and electronic equipment (EEE), we comply with legal obligations regarding the treatment of electronic waste. We implement a selective collection system that allows consumers to return their electronic waste free of charge. We finance the appropriate treatment of electronic waste. This includes costs related to collection, transportation, recycling, and disposal of electronic waste.

We comply with environmental standards and applicable regulations regarding electronic waste treatment. This includes adherence to recycling standards, reuse, raw material recovery, and management of hazardous substances present in EEE. We ensure to choose certified recyclers and to ensure that electronic waste treatment operations are carried out in compliance with current environmental standards. By fulfilling these obligations, we actively contribute to the responsible management of electronic waste and the preservation of the environment.

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9.3 Declaration of Conformity

CE

The EZ EVO product complies with the provisions of the following directives:

- Low Voltage Directive: 2014/35/EU
- Electromagnetic Compatibility Directive: 2014/30/EU
- Radio Equipment Directive: 2014/53/EU
- RoHS2 Directive: 2011/65/EU
- WEEE Directive: 2012/19/EU