

Instructions  
SWIMEO S1-A2

# SWIMEO

Swim with no limit



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NT-5222-1-01 ind.:00 12/01/2022



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# 1. Safety instructions

## 1.1. Safety instructions – installation



Important:

The SWIMEO S1 and A2 is intended for professional integrators. The information contained in these instructions may not be used to install the SWIMEO S1 and A2 product unless it is integrated into a system guaranteeing compliance with the standards in force in the country of installation.

The final installation's compliance is the responsibility of the installer. SIREM cannot be held liable for the direct or indirect consequences of incorrect installation of the SWIMEO S1 and A2 product.

### 1.1.1. Electrical risk

- Installation and commissioning must only be carried out by qualified and specialised electricians. They must comply with all the standards in force for the electrical installation.
- The box must be connected to:
  - o A residual current differential device (30mA)
  - o A separation device with a 3 mm contact gap in all poles.
- The box must be secured in a room that is protected from moisture and water splashes.



### 1.1.2. Mechanical risk

- The turbine must be handled using suitable means to avoid the risks associated with carrying heavy loads.
- The turbine must be secured to the pool in such a way as to avoid any movement during use.
- The installation of protective measures is the responsibility of the installer. Risks include:
  - o Risk of injury by contact with the moving propeller
  - o Risk of drowning by becoming caught up or by suction.
- The turbine must always be handled using the metal chassis.

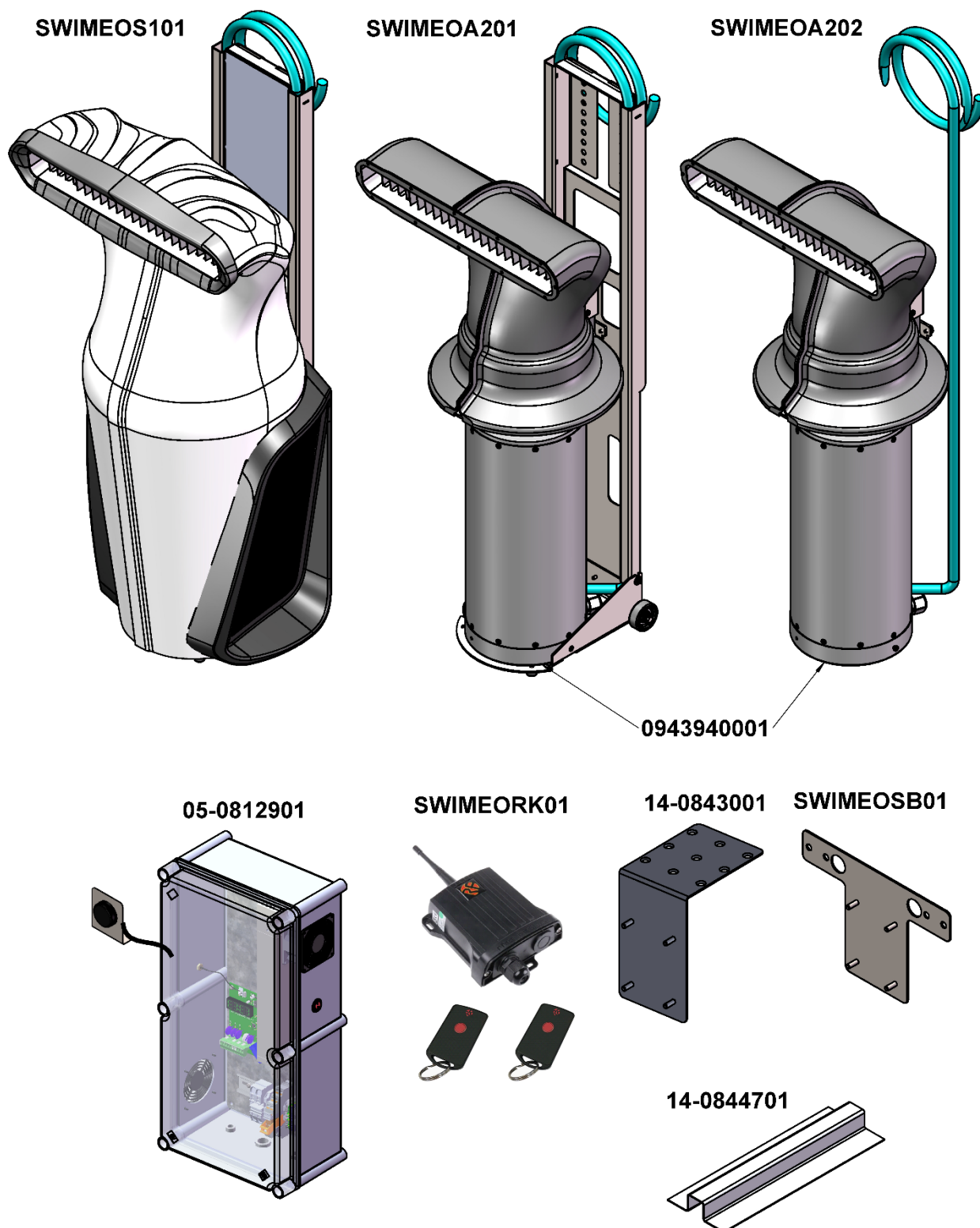
## 1.2. Safety instructions – use

- This appliance is not designed for use by persons (including children) with reduced physical, sensory or mental capacities, or by persons with no experience or knowledge, unless they are supervised by the person responsible for their safety or have previously received instruction in the use of the appliance.  
Moreover, the strong current created by the appliance can put inexperienced swimmers in difficulty, resulting in a risk of drowning.
- The control elements supplied with the kit (remote control) must be kept out of the reach of children.
- Always switch off the power when the appliance is not in use.
- The device is not intended to be used as a seat, a diving board or a step for getting out of the pool.
- The product cannot be used to bear any load.



## 2. Technical description of the product

### 2.1. Product references:



Reference	Name	
SWIMEOS101	SWIMEO SPORT	
SWIMEOA201	BUILT-IN SWIMEO	
SWIMEOA202	BUILT-IN SWIMEO WITHOUT CHASSIS	
0943940001	TURBINE	Standard
05-0812901	CONTROL BOX WITH ANTENNA	Standard
14-0843001	MOUNTING BRACKET	Standard on SWIMEOS101-A201
14-0844701	DUCT	Standard on SWIMEOS101-A201
SWIMEORK01	RADIO KIT (1 receiver + 2 remote controls)	Optional
SWIMEOSB01	SHEET METAL UPRIGHT MOUNTING KIT	Optional

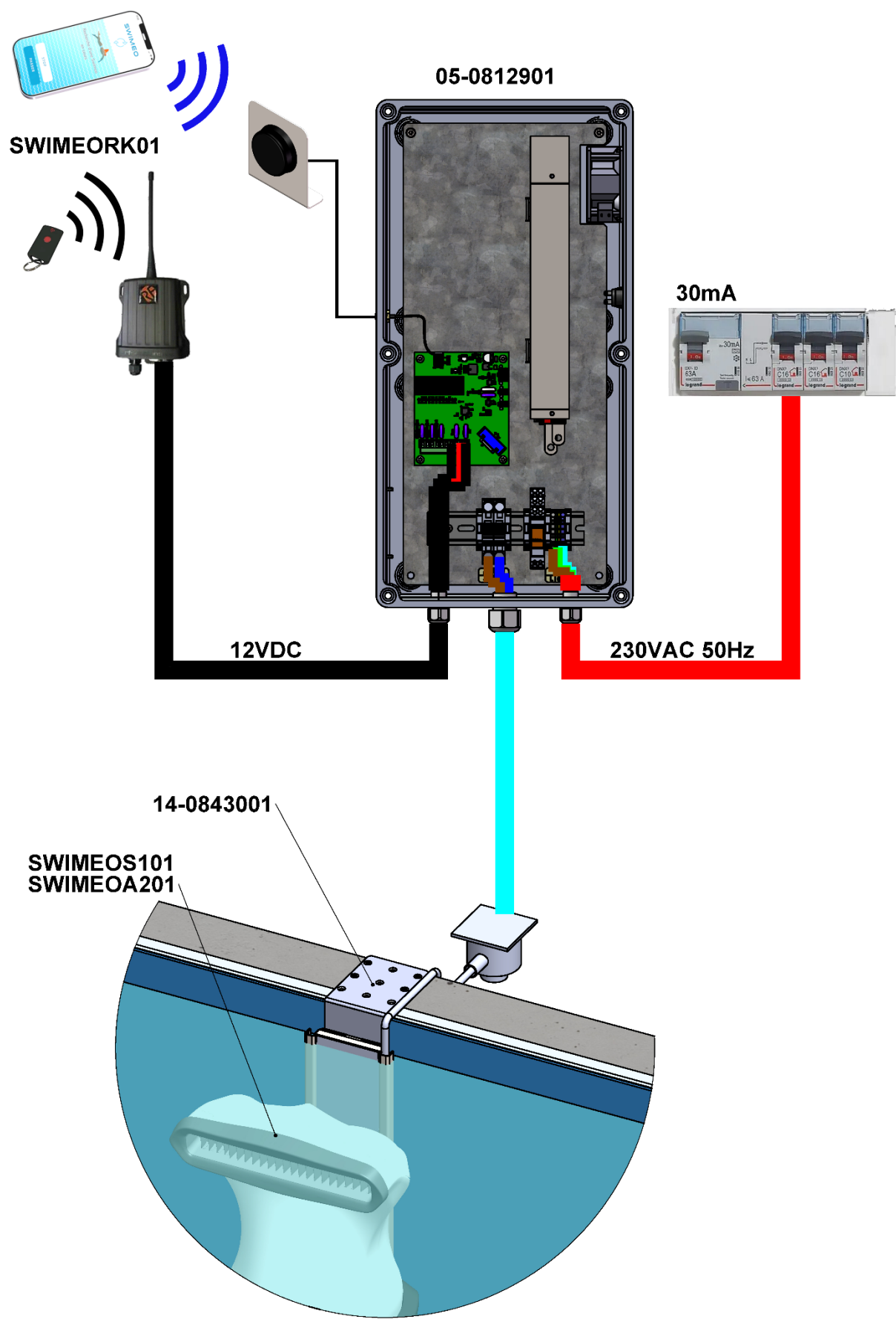
In case of missing or broken elements, contact your dealer

The applicable warranty conditions are those specified by your seller.

The manufacturer Sirem guarantees the product for 2 years in the context of the strict application of its general terms and conditions of sale, which are available on the <https://www.sirem.fr/> website.

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Basic diagram:



## 2.2. Technical characteristics

	Swimeo A2	Swimeo S1	Unit
Weight	40	45	Kg
Box 05-0812901			
Mechanical			
Weight	7		kg
Dimensions (HxWxD)	565 x 275 x 170		mm
Waterproofing	IP20		
Mounting	6 M6 screws		
Waterproofing	IP20		
Electrical			
Power supply voltage	230 +/- 10%		Vac
Power supply frequency	50		Hz
Current consumption	6 +/- 10%		A
Bluetooth			
Number of radio technologies	1		
Radiated power	4.25		dBm
Frequency band	2400 – 2483.5		MHz
Antenna	Ref.: 2J7402B Manufacturer: 2J		
Turbine 0943940100			
Mechanical			
Weight	36		kg
Space requirements (HxWxD)	1050x450x350		mm
Flow speed*	3.13		m/s
Outlet size	26,724		mm²
Propeller speed in a vacuum	0-1960		RPM
Waterproofing	IP68		
Electrical			
Voltage	0-30		24 Vdc
Current	0-36		Adc
Remote control module			
	See specific instructions supplied with the remote control		
Complete kit packaging			
Number of pallets	1		
Package size (LxWxH)	700x600x1250		mm
Weight	65		Kg

\*measured in the middle of the outlet. Value given as a guide only, the conditions for integration may affect this value.

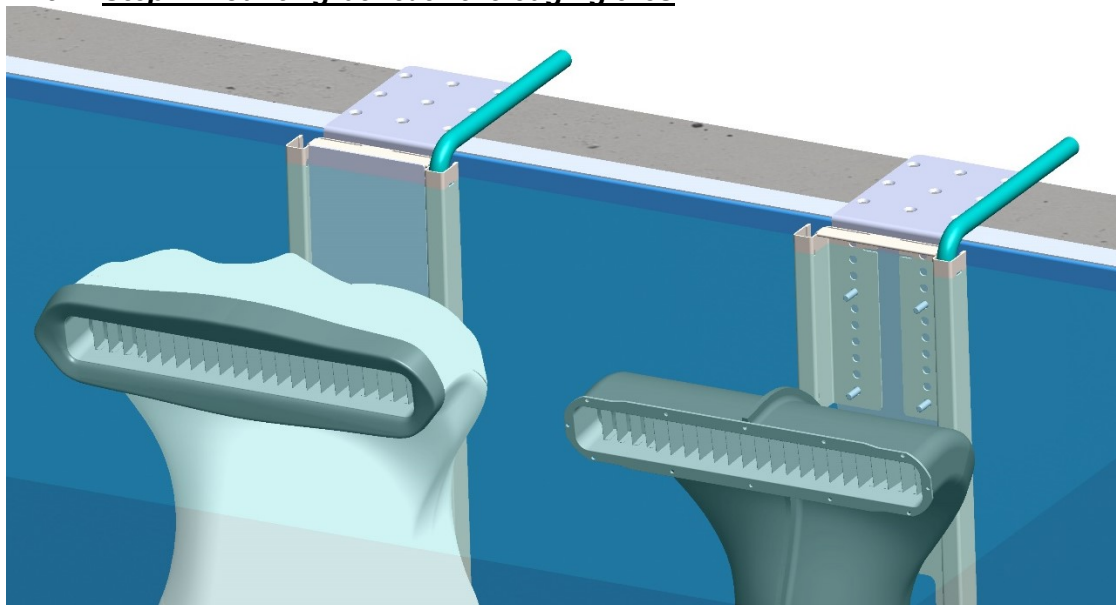
### 3. Installing the turbine in the pool:



Before installing, refer to the safety instructions in 1.1

Remove all film wrap and packaging before installing your turbine in the pool.

#### 3.1. Step 1 Mounting beneath the edging tiles

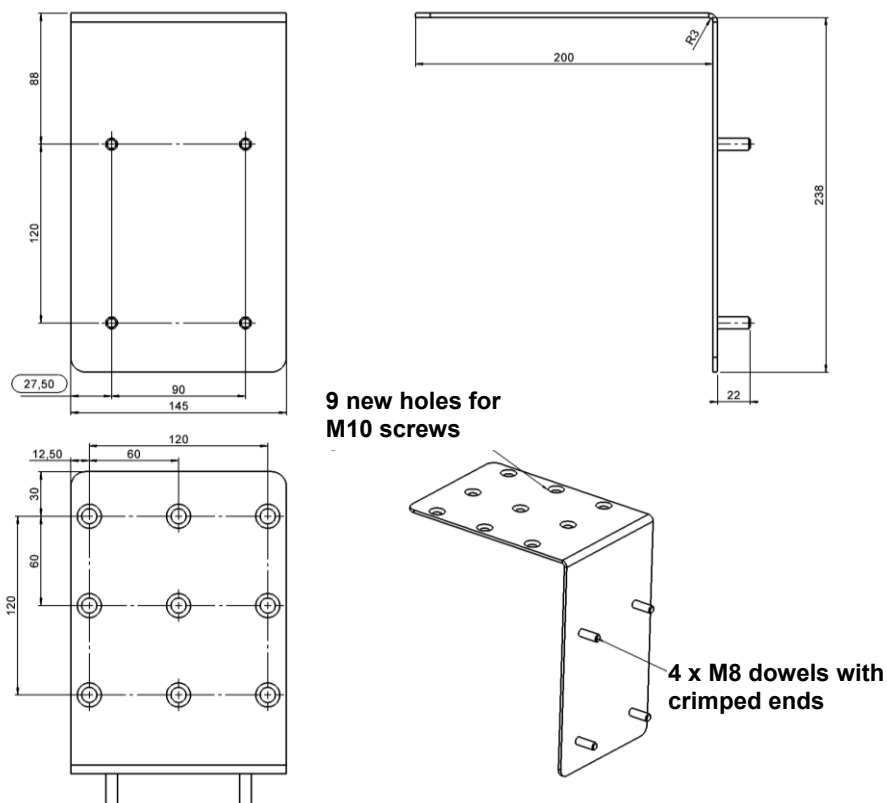


The 14-0843001 plate is mounted on top of the concrete wall, with no need to go through the wall of the pool



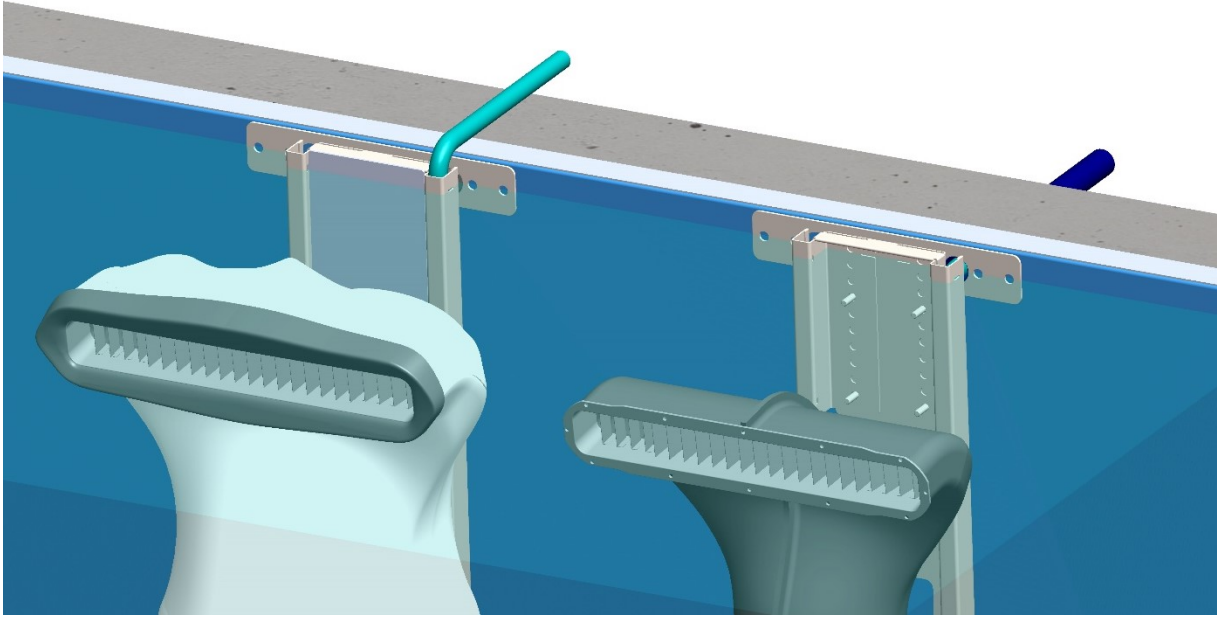
Wall fixings are not supplied in the kit. Use a minimum of 3 attachment points of the 9 available and preferably with A4 / 316L stainless steel fittings.

The Swimeo is then fitted and mounted to at least two of the 4 studs, positioning it in relation to the water level.



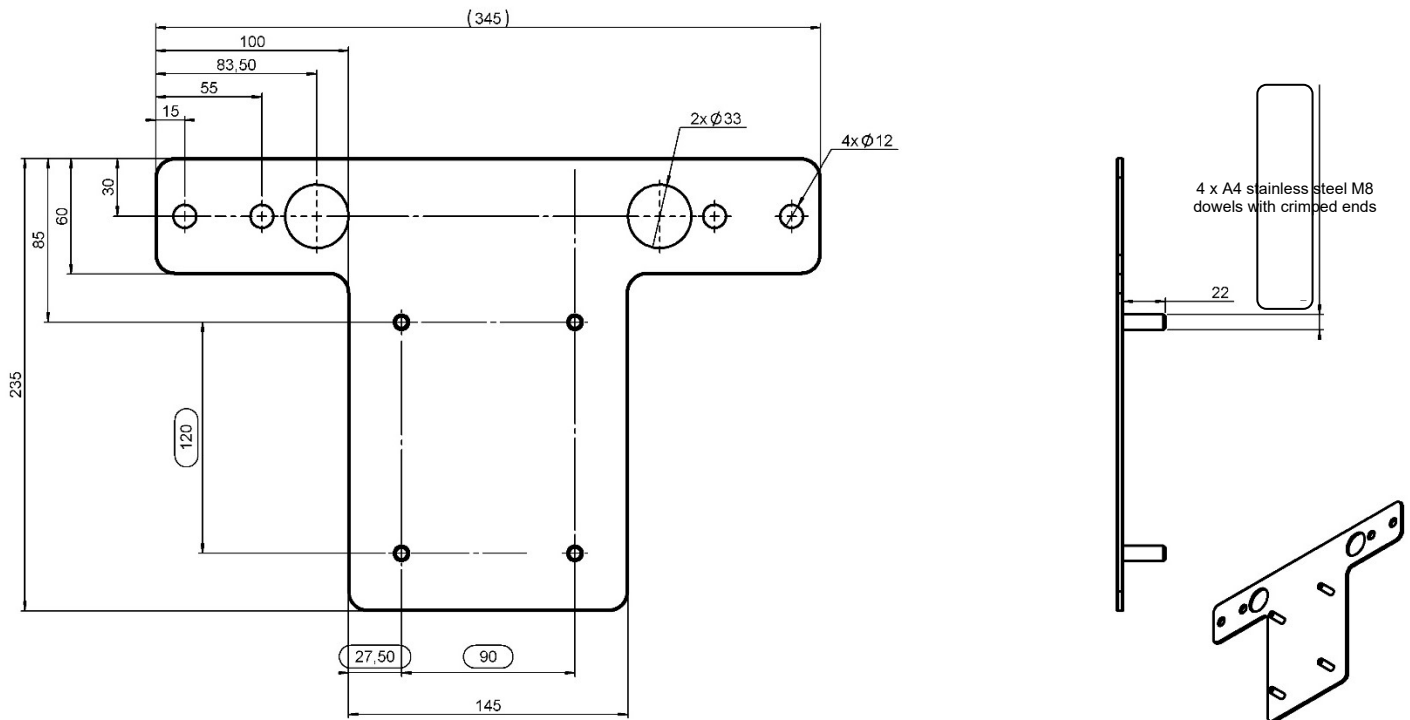


### 3.2. Step 1a Wall mounting the SWIMEOSB01 above the water line (optional)




Wall fixings are not supplied in the kit.  
The liner must be pierced above the water line and preferably using A4 / 316L stainless steel fittings.

The Swimeo is then fitted and mounted to at least two of the 4 studs, positioning it in relation to the water level.

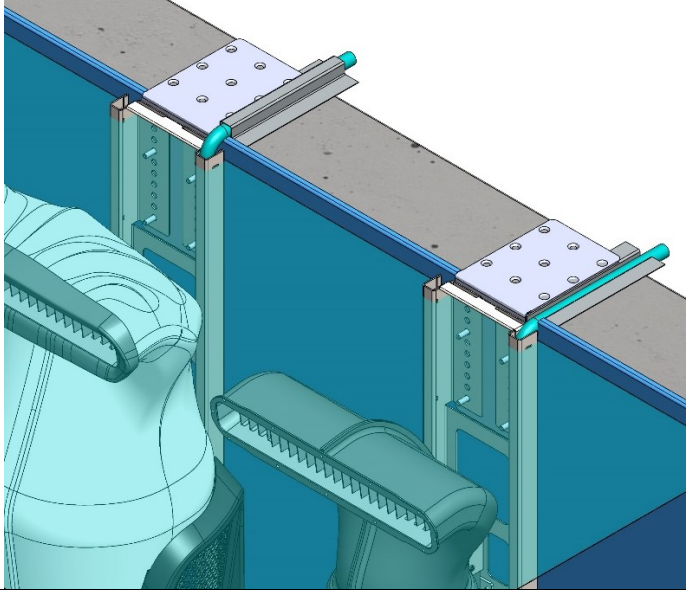
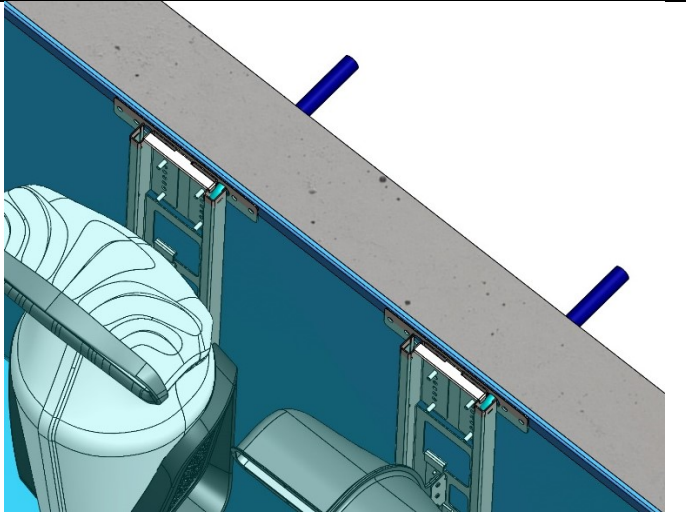
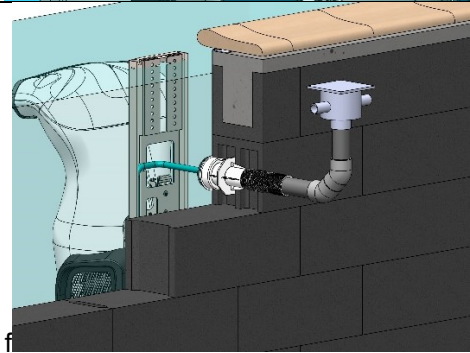
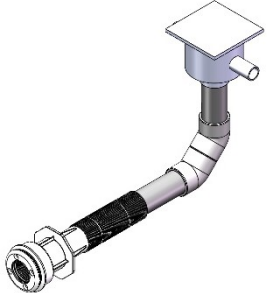


### 3.3. Step 2 Routing the turbine cable:

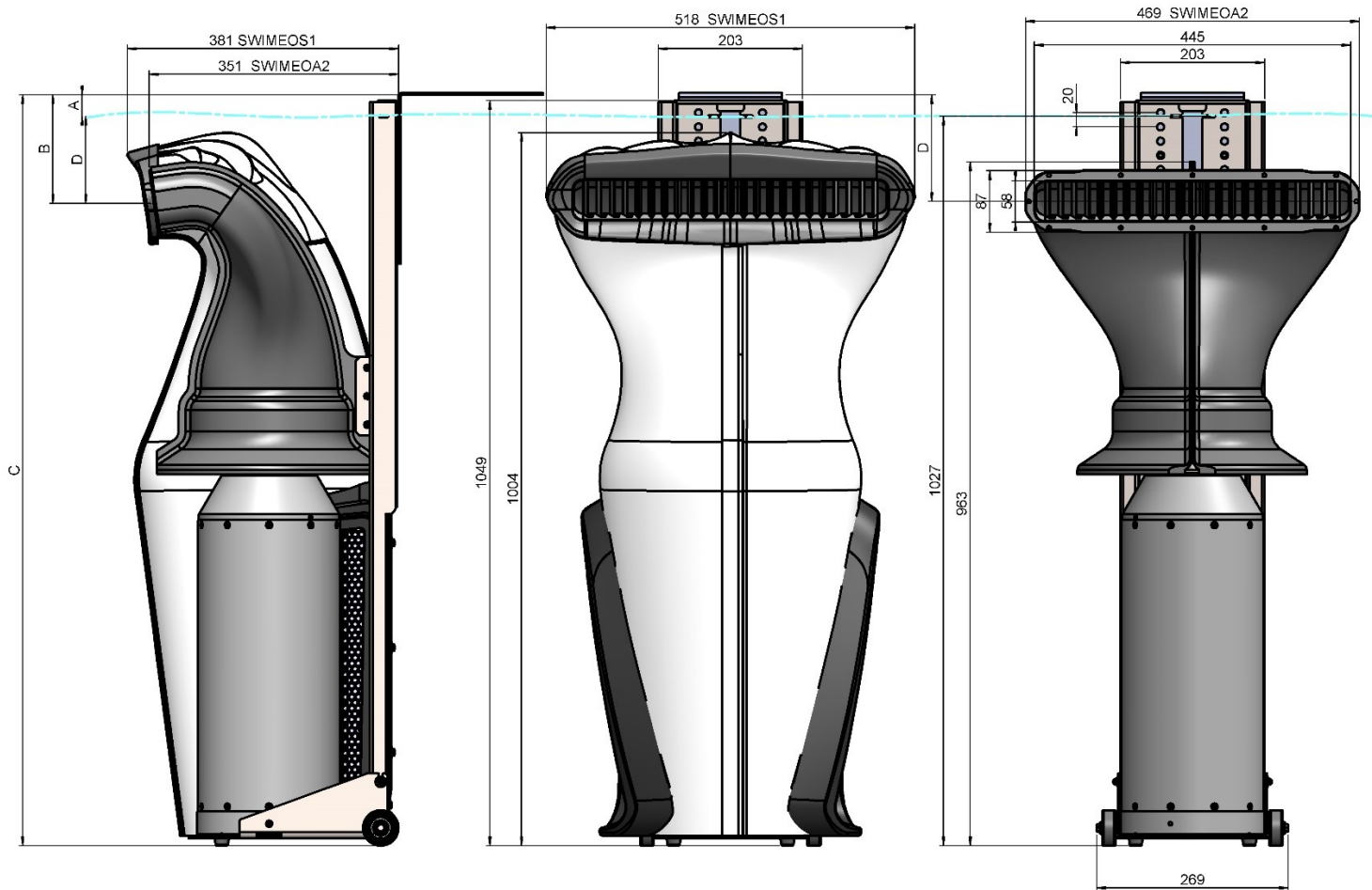
 The cable routing solution chosen depends on your installation (type of swimming pool, water level, surrounding layout, etc.) and must be defined by a swimming pool specialist.

After mounting the support (see paragraphs 3.1 and 3.2), lower the turbine into the pool using the castors to avoid scraping the pool wall and then route the cable through the defined location.

Cable routing examples:

Where	Example	Hardware
Above the water line		-Duct supplied 14-084470
		-PVC tube -ICT sheath
Below the water line		Pool liner brush socket and connection box 

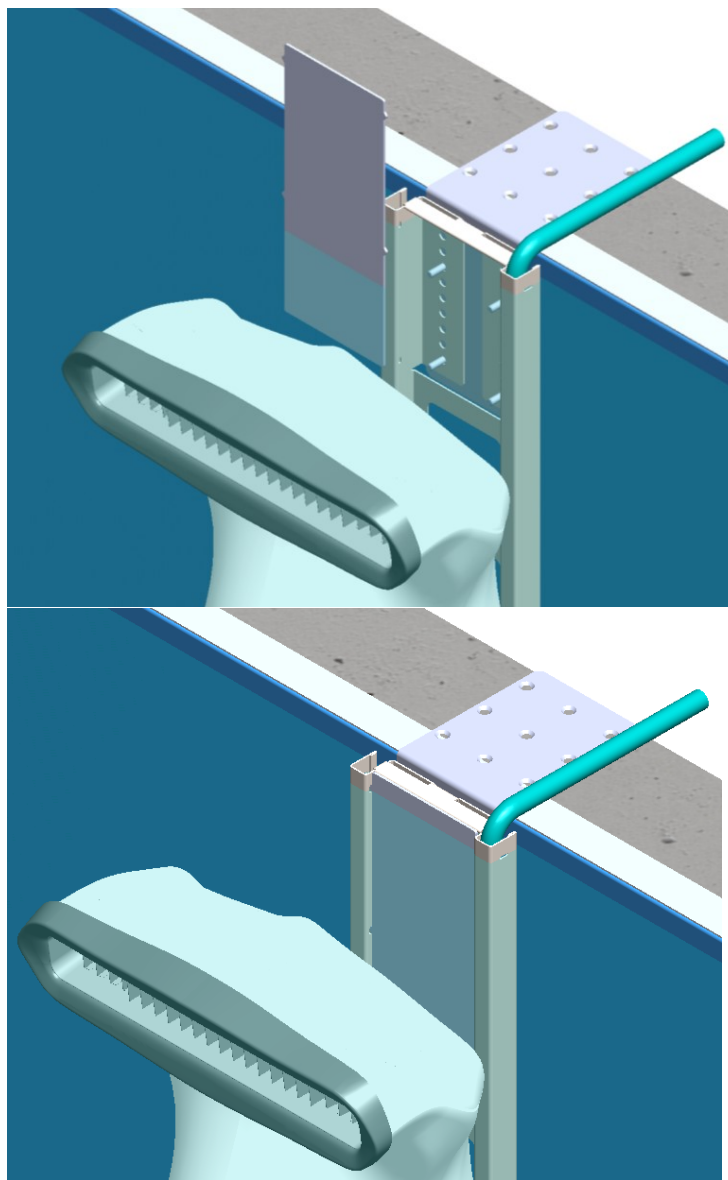
### 3.4. Step 3 Adjusting the height of the turbine:



A (mm)	B (mm)	C (mm)	D (mm)
Distance from top of wall to water line	Adjustment height	Min. wall height	Recommended flow depth
30	150	1057	120
50	170	1077	
70	190	1097	
90	210	1117	
110	230	1137	
130	250	1157	
150	270	1177	
170	290	1197	
190	310	1217	
210	330	1237	

### 3.5. Step 4 Final installation in the pool:

Secure with the 2 nuts then (SWIMEOS101 only) clip the plastic screw cover into the notches in the stainless steel frame

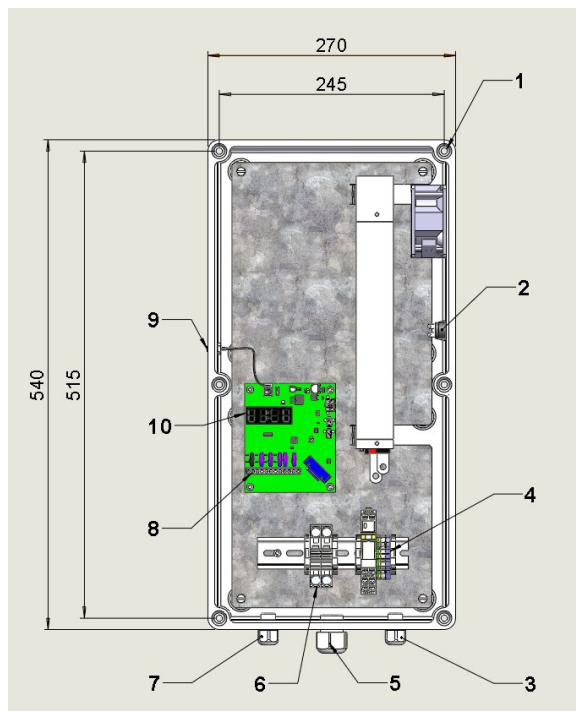


## 4. Installation and connection of the electrical box



Before installing, refer to the safety instructions in 1.1  
In order to ensure that the box operates correctly, the physical integrity of the box must be preserved.  
Existing cable glands must be used.

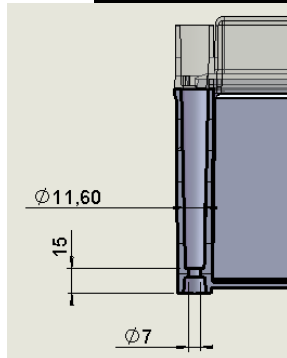
### 4.1. Description of the box



- (1) Mounting points Ø7 (x6)
- (2) Switch
- (3) M16 cable gland for power cable
- (4) Supply terminal block: 4 mm<sup>2</sup> max. cross-section
- (5) M25 cable gland for turbine cable
- (6) Turbine terminal block: 25 mm<sup>2</sup> max. cross-section
- (7) M16 cable gland for control cable
- (8) Disconnectable control terminal block: 2.5 mm<sup>2</sup> max. cross-section
- (9) SMA Bluetooth antenna connector
- (10) Display

Wiring must meet the current standards in the country of installation.

### 4.2. Securing the box



The box is intended for installation in a location sheltered from the weather (not exposed to sunlight or rain). It should be secured to a vertical wall at a height of at least 1.5 m from the ground with the cables connected at the bottom.

It is secured beneath the cover's fixing points (1) once the cover has been removed.  
The box must always remain closed after commissioning.

The screws and wall plugs required to secure the box are not supplied with it.

### 4.3. Cable routing and connection

The cable glands are delivered mounted on the box.

All cables connected to the box must pass through the glands:

Cable	Cable gland	Cable diameter	Connector	Cross-section of copper:
Mains power	(3) ISO M16	5 – 10 mm	(4) TOPJOB ® terminal block	1.5 – 4 mm <sup>2</sup>
Turbine	(5) ISO M25	10 – 17 mm	(6) TOPJOB ® terminal block	4 – 25 mm <sup>2</sup>
Controls	(7) ISO M16	5 – 10 mm	(8) Disconnectable screw-in terminal block on circuit board	0.75 – 2.5 mm <sup>2</sup>

**Caution: there is no cable strain relief in the box. Cables must be secured or routed through cable ducts.**

#### 4.4. Connection to the mains



**Installation and commissioning must only be carried out by qualified and specialised electricians. They must comply with all the standards in force for the electrical installation.**

The connection to the mains is made on terminal block (4) and must comply with the colour code. The box will be connected to a 30mA residual current device.

#### 4.5. Connection to earth

Protection against over-voltages will only be fully effective if the connection to earth has a resistance of less than 20 Ohms. If the building's main earthing is a long way from the installation site, this may not be the case. Under these circumstances, it may be necessary to separate the main building earthing from this installation. A residual current device must then be installed specifically for the pool, in accordance with standard NF C15-100 or CEI 60364.

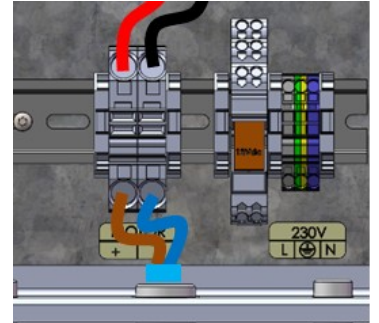
#### 4.6. Connecting the turbine

The turbine is supplied with 2m of cable. The customer can add an additional length of cable to suit their constraints. In this case, the connection must be made in a waterproof connection box preferably filled with gel or resin.

The connection is made at terminal block (6) as indicated in the diagram above, observing the brown for '+' and blue for '-' colour code.

The copper cross-sections to be used for the motor cable are:

- 10mm<sup>2</sup> for extra length < 5m
- 16mm<sup>2</sup> for extra length > 5m and < 16m
- 20mm<sup>2</sup> for extra length > 16m and < 20m
- 25mm<sup>2</sup> for extra length > 20m and < 25m

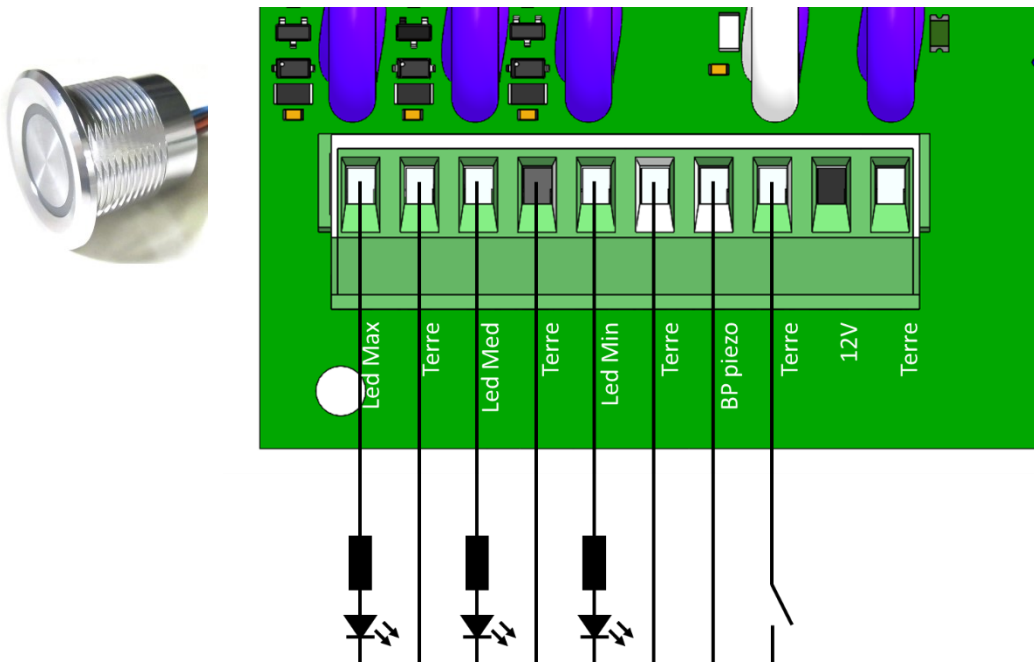


#### 4.7. Connecting the control terminal block

On the circuit board, a terminal block (8) is available for connecting an external control. The terminal block includes:

- 1 x 12V 100mA power output
- 3 'LED' 12V (20mA max.) outputs indicating the speed of the turbine (see 5.2).
- 1 'PIEZO push button' input to which a dry contact can be connected to vary the speed by pressing it in succession (stop, speed 1 → speed 2 → speed 3 → speed 4 → stop...)

This terminal block may be used, for example, with an illuminated Piezo button.



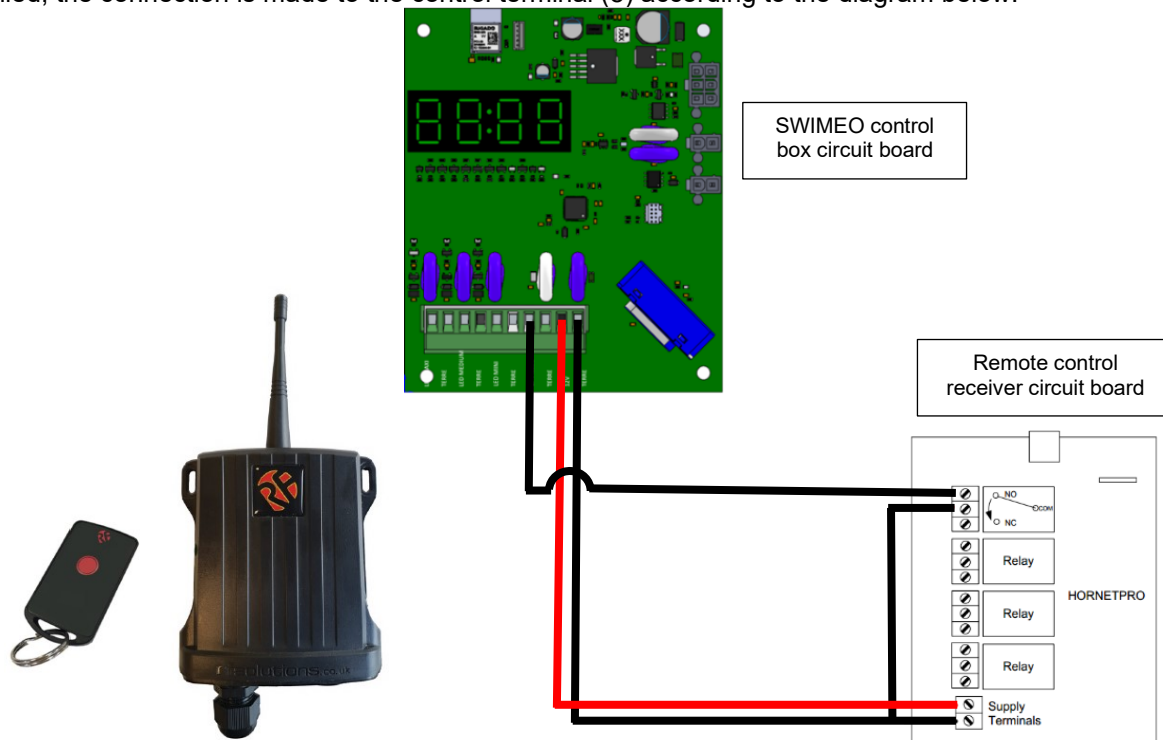


#### 4.8. Connecting the remote control unit terminal block

An optional SWIMEORK01 remote control kit is supplied with the Swimeo kit. Its specific instructions must be followed when installing and programming it.

In order to have the best possible signal, the receiver unit must be placed in the immediate vicinity of the swimming pool (max. distance 50m in an open area)

Once installed, the connection is made to the control terminal (8) according to the diagram below:



#### 4.9. Connecting the Bluetooth antenna

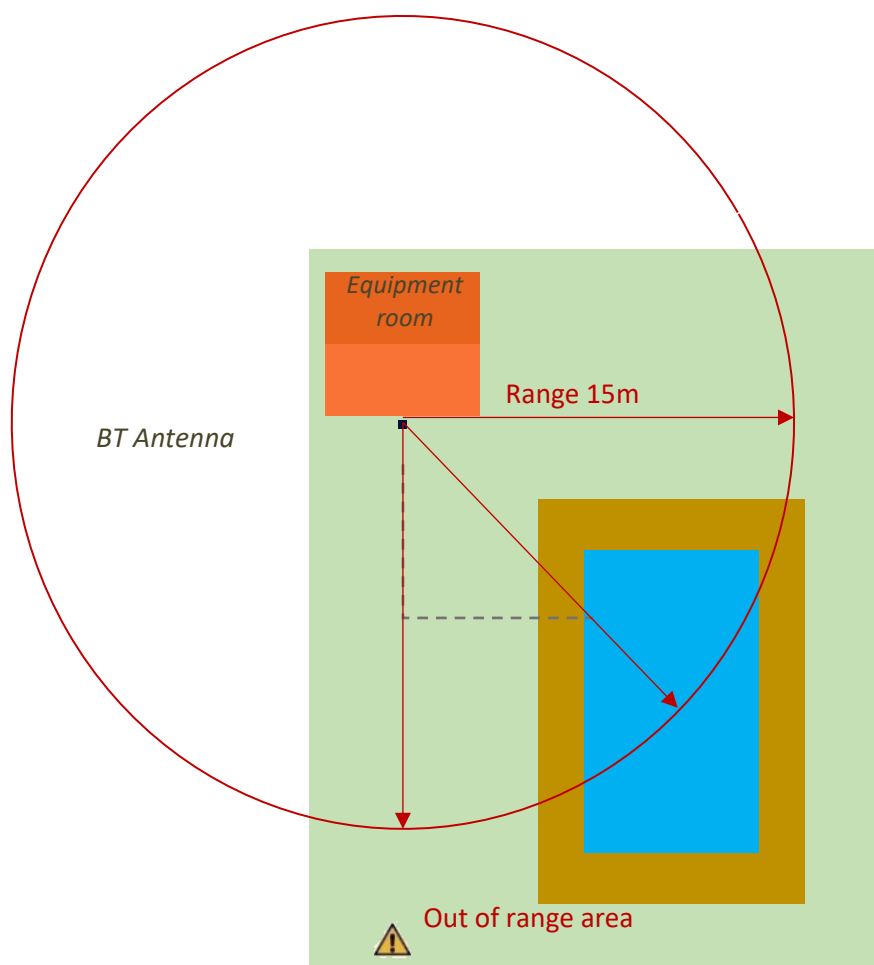
A Bluetooth antenna is supplied with the Swimeo to work with the smartphone app available on iOS and Android.



The antenna support shown here is included in the kit to make installation easier.



It must be placed within range of the pool and connected to the box via the connector (9).  
Check that the Bluetooth signal can be received from the pool.  
The antenna must be placed outside the equipment room pointing towards the pool:





## 5. Use

Once the turbine and the box have been installed and the wiring is complete, the power is switched on via the switch (2). The turbine is then ready for use.



Before installation refer to the safety instructions in 1.2

### 5.1. Controlling the turbine

Pressing down the remote control button or the hard-wired button on the customer connector in succession varies the speed as shown in the diagram below:

- 1<sup>st</sup> press: switch from standby status to speed V1
- 2<sup>nd</sup> press: switch from V1 speed to V2 speed
- 3<sup>rd</sup> press: switch from V2 speed to V3 speed
- 4<sup>th</sup> press: switch from V3 speed to V4 speed
- 5<sup>th</sup> press: return to standby mode

After 1 hour of continuous operation, the appliance automatically switches to standby mode.

### 5.2. Led output feedback

When the turbine is in operation the LED outputs of the circuit board are activated as follows:




Status	Max. LED / LED 3	Med. LED / LED 2	Min. LED / LED 1
Power on	ON (5s)	ON (5s)	ON (5s)
Stop			
Speed 1			ON
Speed 2		ON	
Speed 3	ON		
Speed 4	ON	ON	ON

## 6. Circuit board display and error messages

The display screen on the box shows:

- In standby mode, the number of operating hours since start-up.
- In operation, the operating speed

In the event of a fault, the following codes may appear

Error code	Description of fault / likely causes	Corrective action
Err1	Electrical box heating fault	 Check that fan is working and that it is not obstructed. Switch off the power and wait for the box to cool down before restarting a cycle
Err2	High amperage fault: - the motor is braked	 Switch off the power supply. Clean the propeller Check the integrity of the power cable and connections
Err3	Low amperage fault: - the motor cable is disconnected - the propeller is broken - the power supply has failed - there is a short circuit in the motor cable - the motor is jammed	 Switch off the power supply. Check the cable between the box and the turbine Check the integrity of the propeller

To clear the error, switch off the power supply to the box for 10s.

## 7. Environment

### 7.1. Water characteristics

SWIMEO should be used in water with the following characteristics:

Water characteristics	Value
pH*	Between 6.9 and 7.7
Concentration of active free chlorine*	Between 0.4 mg/l and 1.4 mg/l (non-stabilised chlorine) Between 2 mg/l and 4 mg/l (stabilised chlorine)
Total chlorine concentration*	0.6 mg/l greater than the free chlorine content
Bromine concentration*	Between 1 mg/l and 2 mg/l
CAT (Complete Alkalimetric Title)	Between 8°f (32 mg/l) and 14°f (56 mg/l)
CH (Calcium Hardness)	Between 10°f (32 mg/l) and 30°f (56 mg/l)
Stabiliser (isocyanuric acid)*	Less than 75 mg/l
Salt for chlorinator (NaCl in accordance with EN 16401)	5 g/l max.
Water temperature when operating	Between 0°C and 35°C (no freezing)
Water temperature when stored	Between 0°C and 40°C (no freezing)
Air temperature when operating	Between -20°C and 40°C
Air temperature when stored	Between -20°C and 50°C

\*Values taken from the decree of 7 April 1981 (Consolidated decree in [French legislation](#))

### 7.2. Protection against electrolytic corrosion

The Swimeo can be susceptible to the phenomenon of electrolyte corrosion. In order to prevent this phenomenon, the difference in potential between the water in the pool and the surrounding topsoil should be less than 300mV.

In order to maintain this criterion, we recommend installing a system for the capture and evacuation of stray currents on the pool water circuit (Pool Terre). In order to be fully effective, we recommended having a Pool Terre resistance of less than 20 Ohm.

## 8. WINTERIZING

### 8.1. Active winterizing (recommended)

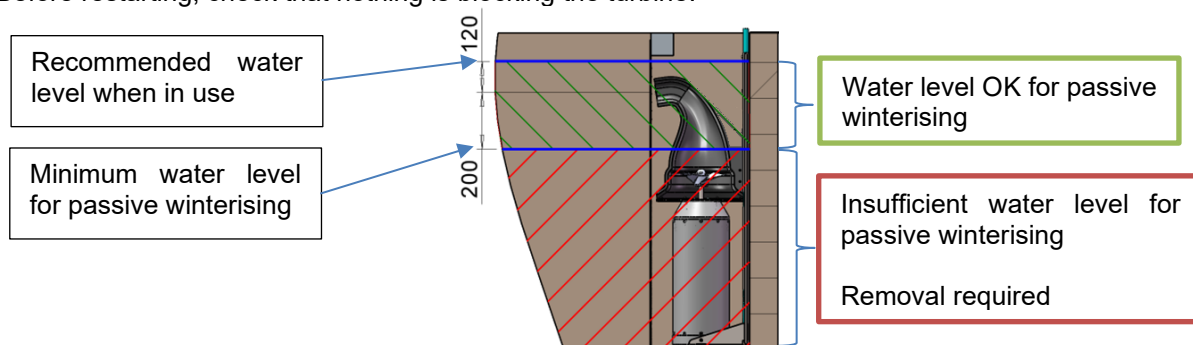
If active winterizing is chosen, the turbine must remain completely immersed. No ice should form around the unit. In this case:

- Before winterising, switch off the power supply at the electrical box
- Before restarting, check that nothing is blocking the turbine

### 8.2. Passive winterizing

In the case of passive winterizing, the water level must remain at an adequate level to prevent ice forming on the propeller or the motorisation. The thickness of the ice on the surface of the pool must not exceed 5cm. In this case:

- Before winterizing:
  - o Switch off the power supply at the electrical box
  - o Put winterizing floats around the turbine.
- Before restarting, check that nothing is blocking the turbine.



### **8.3. Removing the turbine**

If the above conditions cannot be met, the turbine must be removed from the pool. The installation in the pool must take this into account.

- Before winterizing:
  - o Switch off the power supply at the electrical box
  - o Remove the turbine (unplug from the connector box, see 4.6)
  - o Rinse the turbine in clear water
  - o Store the turbine in a dry, dark place.
- Before restarting, refit the turbine following the steps of these instructions.

**EC – Declaration of conformity**

We,

**SIREM**

Located at,

3 Chemin du Pilon  
CS 40303  
01700 - Saint-Maurice-de-Beynost  
FRANCE

Declare as the product manufacturer, and in our sole responsibility, that the following product,

**SWIMEO**

Part Number,

**SWIMEOXXXX**

Is in conformity with the requirements of the following regulations

**2014/35/EU** Low voltage Directive  
**2014/30/EU** Electromagnetic compatibility Directive  
**2014/53/EU** Radio equipment and repealing Directive  
Directive **RoHS 2011/65/EU** and **2015/863/EU**

The CE marking is included on the product's traceability label.

Saint-Maurice-de-Beynost, 04/01/2021.

G. MALPHETTES  
CEO

G. PEYTAVIN  
Technical Director

T. PONSARD  
Quality Manager

**UK – Declaration of conformity****UK  
CA**

We,

**SIREM**

Located at,

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**2014/53/EU** Radio equipment and repealing Directive  
Directive **RoHS 2011/65/EU** and **2015/863/EU**

The UK marking is included on the product's traceability label.

Saint-Maurice-de-Beynost, 04/01/2021.

G. MALPHETTES  
CEOG. PEYTAVIN  
Technical DirectorT. PONSARD  
Quality Manager

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code 2711Z – VAT No. FR 48 351 138 169

