

# Certikin

*PLSC300W*  
*PLSW300W*  
*PLSC400S*  
*PLSW400S*

”SMALL” LED LIGHT FOR SWIMMING POOL



**CE**

**INSTALLATION AND MAINTENANCE MANUAL**

# ENGLISH

**IMPORTANT:** The instruction manual you are holding includes essential information on the safety measures to be implemented for installation and start-up. Therefore, the installer as well as the user must read the instructions before beginning installation and start-up.

Keep this manual for future reference.

To achieve optimum performance of the "SMALL" light for LED's, follow the instructions provided below:

## 1. VERIFY THE CONTENTS OF THE PACKING:

The following accessories are included inside the box:

### Concrete pool floodlamp (PLSC300C – PLSW300C)

Housing body  
Floodlamp unit  
Bag of screws

### Panelled pool with Liner floodlamp (PLSC400P – PLSW400P)

Housing body  
2 watertight joints  
Floodlamp unit  
Bag of screws

## 2. GENERAL CHARACTERISTICS:

This floodlamp has been designed to be used fully submerged underwater in fresh water. It is a Class III electric apparatus with very low safety voltage (12 V with alternating current).

The floodlamp complies with IPX8 degree of protection (resistance to penetration of dust, solid bodies and humidity) at a nominal immersion depth of 2 m.

This floodlamp complies with international safety standards for lights, especially the EN 60598-2-18 standard: LIGHTS PART 2: SPECIFIC REQUIREMENTS SECTION 18 LIGHTS FOR SWIMMING POOLS AND SIMILAR APPLICATIONS.

The manufacturer is not responsible in any circumstances for assembly, installation or start-up of any electric components which have been inserted or handled at locations other than its own premises.

## 3. INSTALLATION:

- In order to clearly light a pool it is recommended to install a floodlamp every 5 m<sup>2</sup> of water surface. In swimming pools which are especially deep, a floodlamp is required for every 10 m<sup>3</sup> of water volume.
- In order to prevent glare, the floodlamps should be installed so that they face away from the residence or usual view of the swimming pool.
- In the event that lighting is used in training or competition pools, the floodlamps should be installed on the sides to prevent glare on the swimmers.
- To avoid emptying the pool if the projector has to be handled, it is recommended to install it in places which are accessible from the upper edge of the pool.

Prior to installation verify that the gland seal has been fully tightened.

The floodlamp should be placed on the wall of the pool at approximately 400-700 mm from the water surface (Fig. 1). The crosshead and the clamp must be placed so that that the word "TOP" is located on the upper part

The method of fastening the crosshead mount to the pool wall varies depending on whether it is a floodlamp for concrete pools or prefabricated pools.

### Concrete swimming pool (PLSC300C – PLSW300C)

To install a floodlamp in a concrete pool the housing (n°11) should be fixed in the wall of the swimming pool (Fig.1). Use eight M6x24 (n23) screws to secure the housing clamp to the pool.

### Panelled swimming pool with Liner (PLSC400P – PLSW400P)

The projector can be installed in a metal sheet or plastic panelled swimming pool, using the template, and making a circular hole of 147 mm. diameter and 4 holes Ø 4 mm (Fig. 2).

Place the recess (no. 11) through the inside of the pool and bolt the 4 DIN 7982 4.8x25 screws (no. 23) (Fig. 6). Make sure that the cable outlet from the recess is on the upper side.

Stick the adhesive joint (no. 3) on the inside of the pool and then place the liner.

Place the flange (no. 2) through the inside of the pool, fasten it to the recess (no. 11) with 8 screws (Fig 5). Make sure that the word "TOP" is located on the upper part.

Cut the Liner which is inside the flange, so that the recess is free and proceed to assemble the projector.

## 4. ASSEMBLY

After the housing has been installed and the clamp inserted with the appropriate screws, then assemble the floodlamp.

Insert the cable in the cable duct (no. 13). Then, tighten the nut on the cable duct (no. 12). Take the precaution of leaving 1.5 m of cable wound on the body of the floodlamp (no. 7) in order to be able to remove the floodlamp to the edge of the pool in the event that handling is required. (Fig. 6).

Insert the entire floodlamp assembly in the housing and secure it in the bayonet socket by turning to the right. (Fig. 7).

To completely ensure that the floodlamp is firmly secured in the housing, install the lock screw (no. 22) which is supplied with the floodlamp kit. (Fig. 8).

# A T T E N T I O N

**The Projector PLSW300C and PLSW400P does not need any control since it/she emits only white light.**

**The Projector PLSW300C and PLSW400P if it needs control for the change of color and of sequences.**

## 5. ELECTRICAL CONNECTION: Box control and Power Supply - PLCB200

Current must be supplied by the Box control and Power Supply code PLCB200. Never connect the spotlights directly to 12V. The LED projector could be damaged if the feeder is not used.

A transformer is not required as the feeder supplies a voltage of 12V to the spotlight. The Power Supply is connected directly to the 230Vac mains through the supplied cable.

Each can supply power to a maximum of four SMALL LED spotlights.

To make the connections, open the feeder box by loosening the four screws on the upper cover.

To guarantee sealing, the cables should be inserted in the Power Supply using the packing glands provided.

The spotlights are supplied with a 4-wire 1.5mm<sup>2</sup> Cu H07RNF cable. This cable is connected to the connection strips as indicated in figure 8.

Each wire should be connected to its corresponding terminal as follows:

R – Brown / B – Blue  
G – Black / COM – Green / Yellow

The spotlight could be seriously damaged if the wires are connected in a different way than indicated.

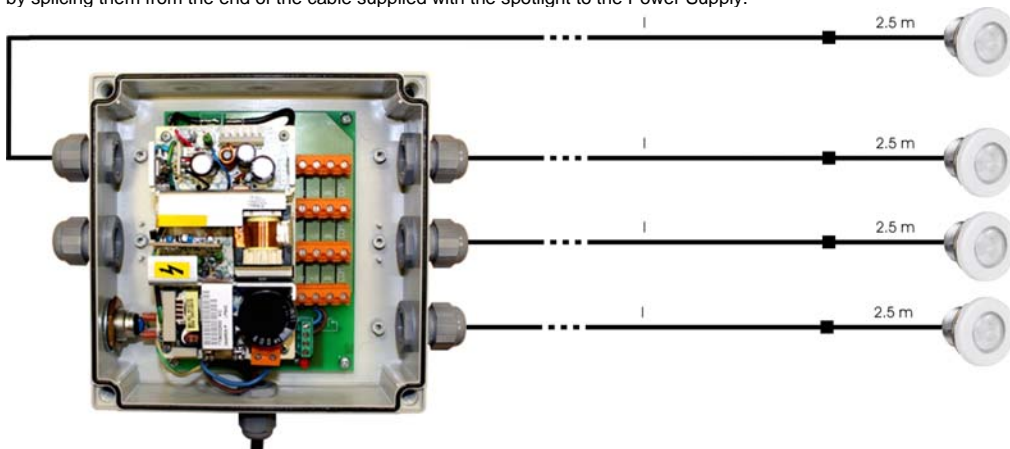
Each spotlight must be connected to a different group of connection strips. If more than one spotlight is connected to the same group of strips, the feeder could breakdown.

### 5.1. Types of connection between the Box control - Power Supply and the spotlights

· Individual connection

The spotlight is supplied with 2.5 metres of cable. If the spotlight is near the feeder it can be connected directly to its connection strip.

If the distance between the spotlights and the Power Supply is more than 2.5 metres, the cables will have to be extended by splicing them from the end of the cable supplied with the spotlight to the Power Supply.



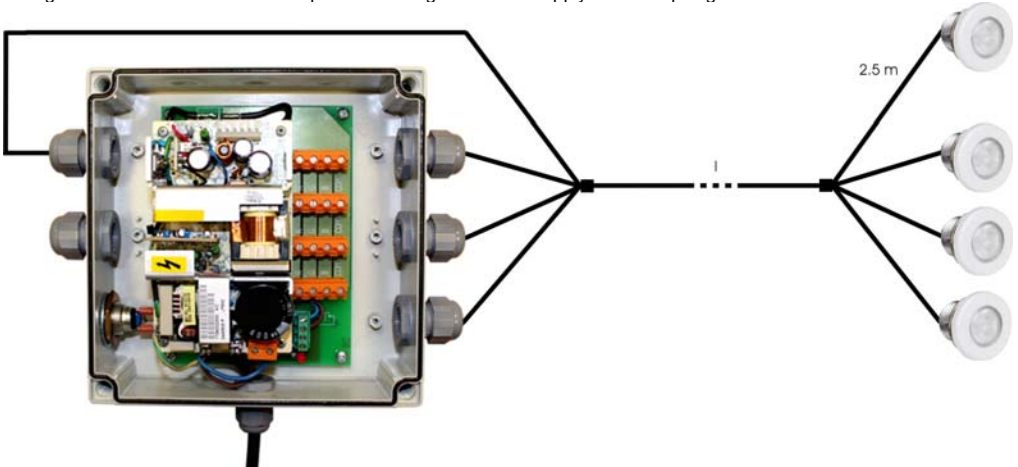
To avoid voltage drops in the electrical cables, cables with appropriate sections should be used according to their length.

Length (m)	Cable section
0-20	1.5 mm <sup>2</sup> Cu
20-30	2.5 mm <sup>2</sup> Cu
30-50	4 mm <sup>2</sup> Cu

The spotlight cable should never be changed. The supplied cable guarantees a sealing degree of IPX8. The use of a different cable could cause a loss in sealing leading to the breakdown of the spotlight.

· Joint connection

A single link cable can be used to help in connecting the Power Supply with the spotlights.



For this connection method, cables with appropriate sections should be used according to their length.

Length (m)	Cable section
0-20	2.5 mm <sup>2</sup> Cu
20-30	4 mm <sup>2</sup> Cu
30-50	6 mm <sup>2</sup> Cu

## 6. CONTROL SYSTEMS OF THE LED PROJECTORS:

Installations with SMALL LED spotlights only, can be controlled from the Power Supply itself. In installations where there are also Colorplus spotlights, the Power Supply can synchronize these spotlights with the SMALL LED spotlights.

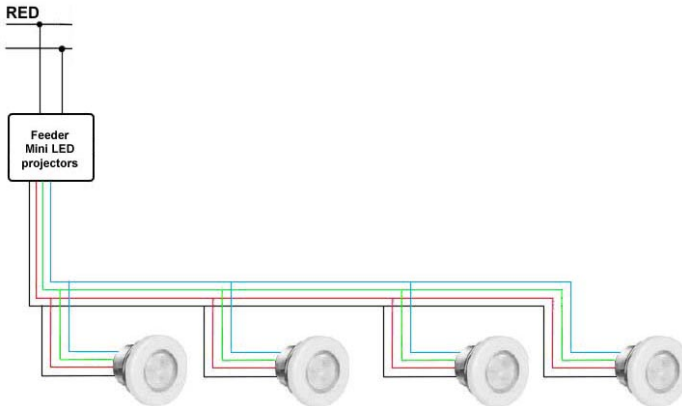
### 6.1. Control through the feeder

The feeder is provided with a pushbutton, which is the simplest way of controlling the spotlights. Each press changes the colour or sequence.

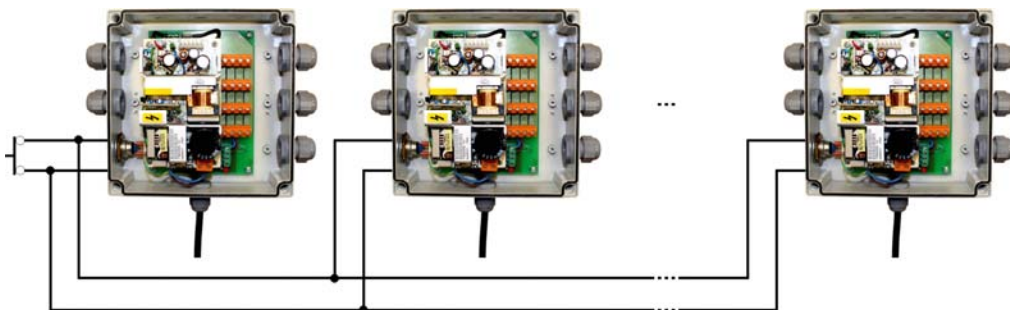
The pushbutton is normally closed (NC). It is connected in the terminals indicated “pushbutton input” shown in figure 8.

With this control system you have 12 function modes: 6 fixed colours and 6 sequences with different colours.

#### 6.1.1. Diagram of the electrical connection



In installations with more than four mini LED spotlights, which must be controlled jointly, a single pushbutton should be installed connected in parallel to the connection terminals.



## 6.2. Control

The SMALL LED spotlight can be used together with spotlights of the QUICK series.

### 6.2.1. Pushbutton control

The same functions as the Box Control.

### 6.2.2. Control by means of Box Control

The **Remote Control – Box Control – Transformer – Led Projector** unit enables you to create different lighting scenarios inside the pool with two function modes:

**Fixed colour:** Selection of a fixed colour from 6 possibilities.

**Automatic colour sequence:** Selection from among 6 programmes of colour sequences. Each programme is defined by the duration of each colour and of the transition from one colour to another.

## 6.3 OPERATION MODES

The unit enables different light scenarios to be created inside the swimming pool with two operation possibilities:

**Set colour:** Selection of one set colour out of six possibilities.

COLOUR N°	% RED	% BLUE	% GREEN	COLOUR
1	100	100	100	White
2	100	0	0	Red
3	0	100	0	Blue
4	0	0	100	Green
5	100	100	0	Purple
6	0	100	100	Cyan

**Automatic sequence of colours:** Selection of 6 colour sequence programmes. Each programme is defined by the lighting time of each colour and the transition time from one colour to another according to the following table:

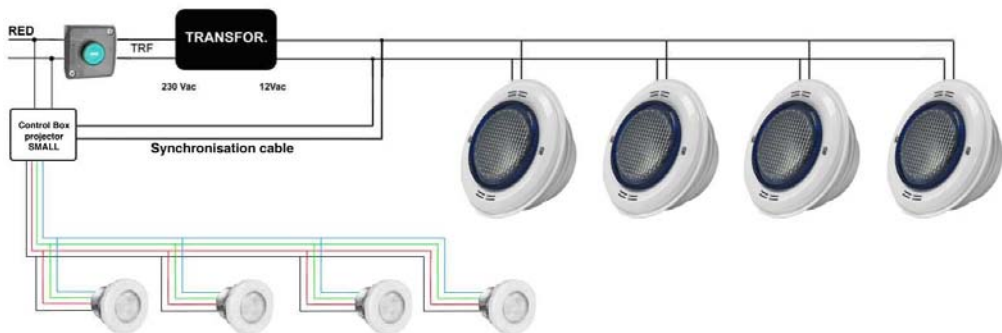
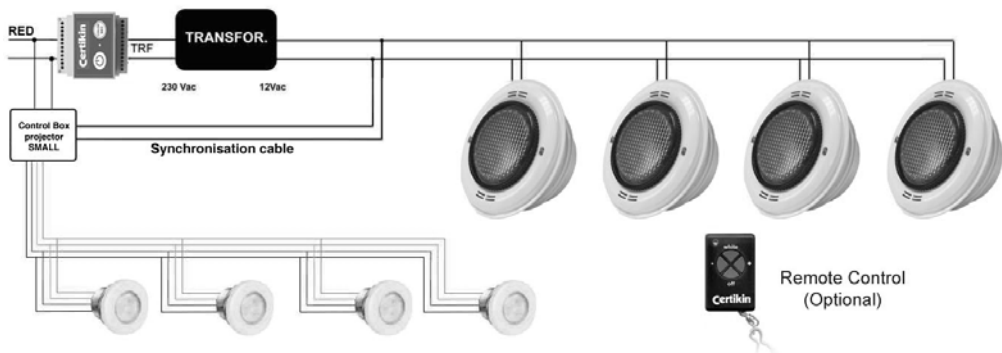
SEQUENCE	ORDER OF COLOURS						COLOUR TIMING (SEC.)	BLENDING TIMING (SEC.)
1	Red	Blue	Green	Purple	Cyan	Yellow	2	2
2	Red	Green	Cyan	Blue	Purple	Yellow	4	4
3	Purple	Cyan	Yellow	-	-	-	4	4
4	Red	Blue	Green	-	-	-	8	8
5	Purple	Cyan	Yellow	-	-	-	18	18
6	Yellow	Purple	Cyan	-	-	-	0,5	0,5

The colour or sequence is changed by pressing the pushbutton. The colour and sequence cycle is rotary. For example, if you are in colour 5, by pressing once, you will reach colour 6. If you press once again, you will go to sequence 1. If you are in sequence 6, press once and you will get to colour 1, which is White.

## 6.4 Electrical connection diagram

In both Pushbutton or Box Control configurations, two cables should be connected in the two 12VCA terminals of the feeder in parallel with any spotlight (12 V Mains), as if it were another QUICK spotlight.

The feeder will therefore interpret the signal received and will perform the same functions as the QUICK spotlights.



**\*\* Attention: The pushbutton has operation priority and should be disconnected if used jointly with the QUICK series of spotlights. If it is not disconnected, the spotlights will not work correctly.**

## 7. MAINTENANCE:

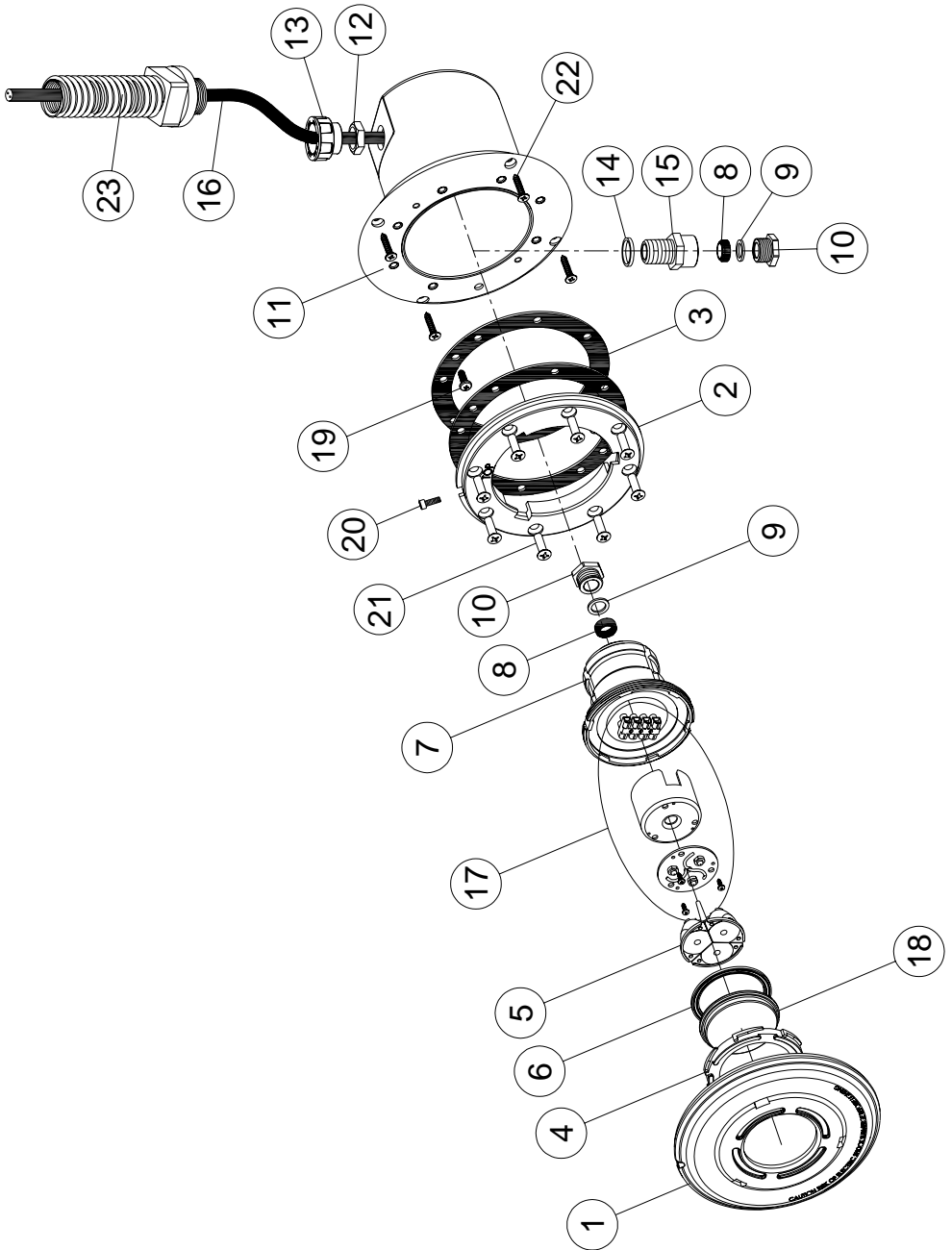
This projector does not require any type of maintenance. If the projector is not working properly, please contact our customer attention department.

The inside of the projector should not be handled under any circumstances, as this would lead to losing the guarantee.

**Attention:** Before any handling ensure that there is NO voltage supplied to the floodlamp.

## 8. SAFETY WARNINGS:

- People in charge of assembly should be suitably qualified for this type of work.
- Avoid making contact with the electric voltage.
- Comply with the current standards regarding accident prevention.
- In this regard, the IEC 364-7-702 standards must be observed: **WIRING IN BUILDINGS SPECIAL WIRING SWIMMING POOLS**
- All maintenance operations should be performed with the projector disconnected from the Mains.
- Do not handle with wet feet.
- The manufacturer is not responsible in any circumstances for assembly, installation or start-up of any electric components which have been inserted or handled at locations other than its own premises.



## ENGLISH

Nº	CODE	DESCRIPTION	PLSC300C	PLSW300C	PLSC400P	PLSW400P	Q
1	04582R0004 IP144	Face plate	X	X	X	X	1
2	04582R0002	Floodlamp housing clamp	X	X	X	X	1
3	08557R0001	Adhesive joint for floodlamp			X	X	2
4	17883R0002	Lens clamp ring	X	X	X	X	1
5	32380R0003	Reflector	X	X	X	X	1
6	17883R0005	63x52x2 butt joint	X	X	X	X	1
7	32380R0001	Lamp body plastic	X	X	X	X	1
8	32380R0004	Cable gland seal	X	X	X	X	1
9	00346R0012	Plastic washer	X	X	X	X	2
10	32380R0006	PG-9 gland seal nut PG-9	X	X	X	X	1
11	32382R0100	Dichroic floodlamp housing	X	X			1
11	34183R0100	Floodlamp housing for panelled pool				X	1
12	04582R0102	Cable duct nut	X	X	X	X	1
13	08556R0005	PG11-M25 floodlamp cable duct nut	X	X	X	X	1
14	04582R0104	22x18,6x2,5 gland seal joint	X	X	X	X	1
15	04582R0101	Floodlamp cable duct body	X	X	X	X	1
16	32380R0007	H07RN-F 4x1,5x2500 cable	X	X	X	X	1
17	32380R0200	Sink circuit unit RGB	X		X		1
17	32380R1000	Sink circuit unit		X		X	1
18	08523	Ø 63 floodlamp lens	X	X	X	X	1
19	7011448016	DIN 7981 A2 4,8x16 screw			X	X	2
20	7010704012	DIN 912 A2 M-4x12 screw	X	X	X	X	1
21	00274R0004	DIN 966 A2 M-6x24 Punt. screw	X	X	X	X	8
22	7011548025	DIN 7982 4,8x25 screw			X	X	4
23	28138 (1)	M25-¾" cable duct hose					1

(1) Optional

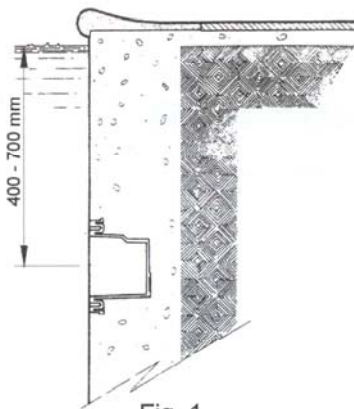


Fig. 1

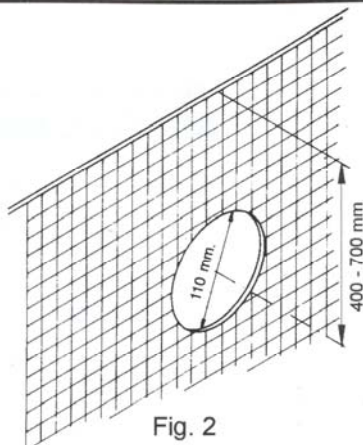


Fig. 2

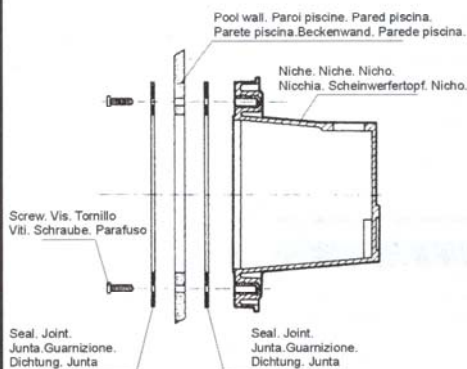


Fig.3



Fig.4

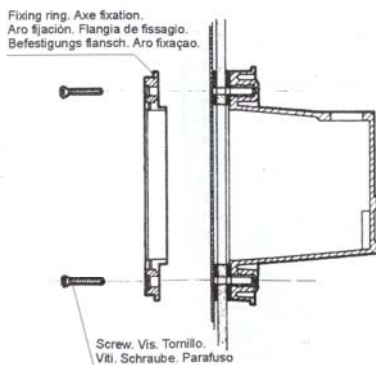


Fig.5

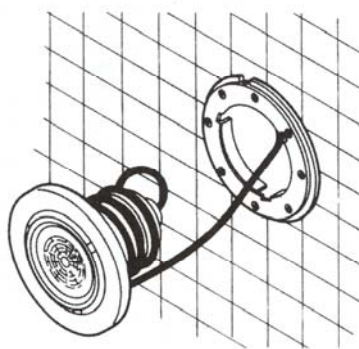


Fig.6

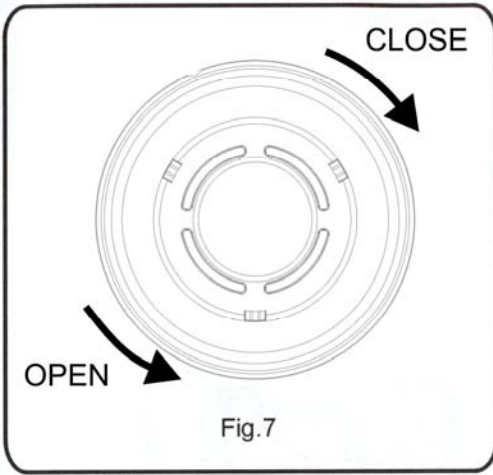


Fig.7

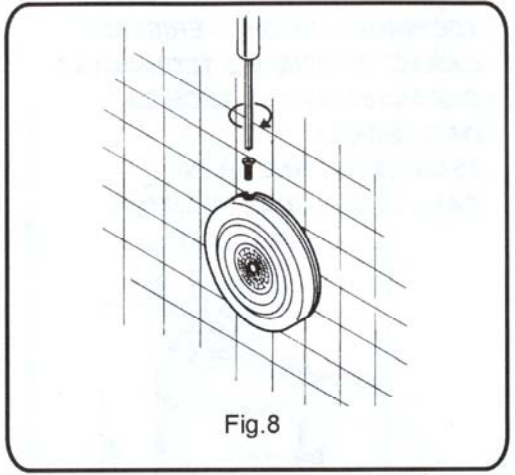


Fig.8

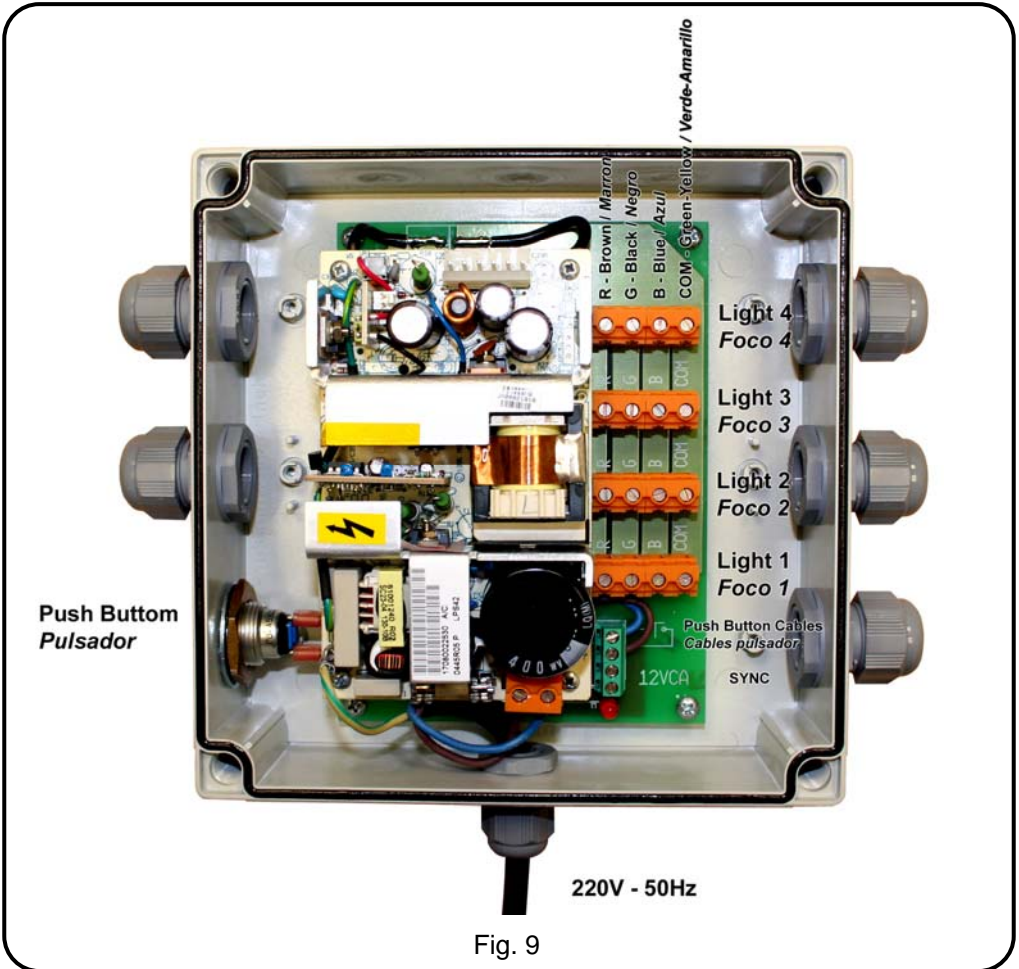


Fig. 9

**GB PRODUCTS:** "MINI" LED LIGHT FOR SWIMMING POOL

**CODE** PLSC300C – PLSW300C – PLSC400P – PLSW400P

DECLARATION CE OF CONFORMITY

The products listed above are in compliance with:  
Electromagnetic Compatibility Directive 89/336/EEC.  
Low Voltage Directive 73/23/EEC.  
European Standard EN 60598-1, EN 60598-2-18, and  
all its modifications.

St. Jaume de Llierca, 1 January of 2005

Signature / Qualification:  
Firma / Cargo:  
Signature / Qualification:  
Firma / Qualifica:  
Assinatura / Título:

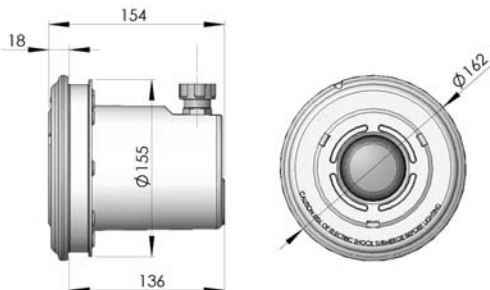
SACOPA, S.A.U.  
Pol Ind. Poliger Sud - Sector I, s/n  
17854 SANT JAUME DE LLIERCA  
SPAIN



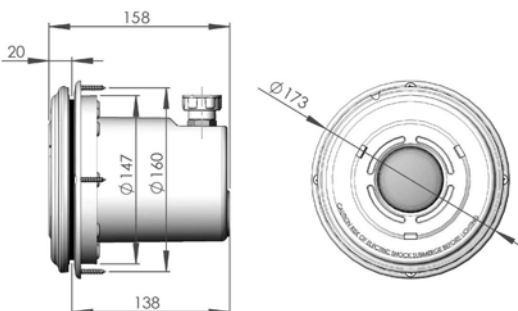
GERENT

## TECHNICAL CHARACTERISTICS

### Model PLSC300C – PLSW300C



### Model PLSC400P – PLSW400P



DESCRIPTION	CONCRETE POOL / PISCINA HORMIGÓN PREFABRICATED POOL / PISCINA PREFABRICADA
Rated voltage / Tensión nominal / Tension nominale / Tensione nominale / Tensao nominale	12 V
Current suply / Tipo de corriente / Type de courant / Tipo di corrente / Tipo de corrente	AC
Power / Potencia / Pouvoir / Potere / Poder	11W
Degree of protection / Grado de protección / Degré de protection / Grado di protezione / Grau de proteção	CLASE III IPX8
TO BE USED ONLY WITH POWER SUPPLY CODE PLCB200 / PARA USO EXCLUSIVO CON EL ALIMENTADOR CÓDIGO PLCB200 / À UTILISER EXCLUSIVEMENT AVEC L'ALIMENTATEUR CODE PLCB200 / DA USARE ESCLUSIVAMENTE CON L'ALIMENTATORE COD. PLCB200 / PARA UTILIZAÇÃO EXCLUSIVA COM O ALIMENTADOR CÓDIGO PLCB200	

32382E201 IP144-00

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17854 Sant Jaume de Llierca (Spain)

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