

LUMIPLUS FLEXI RGB/ MONOCOLOUR 12VAC SPOTLIGHT



INSTALLATION AND MAINTENANCE MANUAL



ASTRALPOOL 

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 LumiPlus Flexi, follow the instructions provided below:

1. VERIFY THE CONTENTS OF THE PACKING:

- LumiPlus Flexi.
- Bag of accessories: FlexiNiche cable gland, FlexiRapid cable gland, 1 seal, 1 O-ring seal, gasket, cable and mounting screws (1 for screwing the spotlight to the faceplate + 3 for screwing the cable gland).
- Warranty booklet.
- Instruction manual.

MODELS AVAILABLE ACCORDING TO CHARACTERISTICS

LumiPlus Flexi V1		LumiPlus Flexi V2
Monocolour	RGB	RGB
71200 71200WW	71203	71204

The 71200 and 71200WW models do not need any control as they only emit monocolour light.

The 71203 and 71204 models do need control for colour change and sequences.

2. GENERAL CHARACTERISTICS:

LumiPlus Flexi has been designed to be used fully submerged in fresh water. It is a Class III electric apparatus with very low safety voltage (**12 V with alternating current**). LumiPlus Flexi is class 116, in accordance with standard EN 50065. LumiPlus Flexi complies with IPX8 degree of protection at a nominal immersion depth of 2 m.

LumiPlus Flexi 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:

- To correctly light a swimming pool we recommend you:
Install a LumiPlus Flexi V1 for every 20 m² of water surface.
Install a LumiPlus Flexi V2 for every 25 m² of water surface.

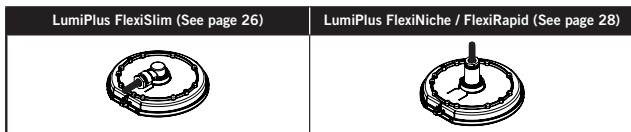
Note: Strongly recommended for pools in light colors. In pools with a dark or stainless steel finish, it is recommended to use more spotlights per m².

- It is the responsibility of the fitter to ensure that the area around the connectors is completely watertight.
- The junction boxes should be placed at least 2 m from the edge of the pool or water facility.
- The 230/12 V transformer that feeds the LumiPlus Flexi should be installed at a distance of 3.5 m from the edge of pool or water facility.
- Cable ducts laid less than 3.5 m away from the edge of the pool must not be made of metal.
- The smallest cable cross-section that fits the LumiPlus Flexi is a 2 x 1 mm² H07RN-F.
- The largest cable cross-section that fits the LumiPlus Flexi is a 2 x 2 x 5 mm² H07RN.

ATTENTION

UNDER NO CIRCUMSTANCES SHOULD SCREWS OTHER THAN THOSE SUPPLIED BE USED FOR SCREWING THE LUMIPLUS FLEXI CABLE GLAND AS THEY COULD PIECE IT AND RESULT IN WATER GETTING INTO IT.

4. ASSEMBLY:



A description is given below of how to connect the LumiPlus Flexi to the cable to ensure the connection area is water-tight. It is important to follow these steps:

1. Ensure that there is no voltage before handling any cable.
2. Put the O-ring seal in place.
3. Thread the cable through the cable gland seal nut.
4. Connect the cable to the spotlight and tighten the two screws.
5. Fit the cable gland to the body of the projector, as shown. Then screw in the three screws.
6. Ensure that the cable sleeve remains in place in the connection area and then tighten the cable gland using a wrench (6Nw).
7. Ensure that that cable is firmly tightened so that it does not work loose from the cable gland.
8. Once connected, the projector can be fitted to the pool (see faceplate manual).

5. MAINTENANCE:

The LumiPlus Flexi does not require any maintenance. If you become aware that it is not working properly, please contact our customer service department.

⚠ DO NOT ATTEMPT TO HANDLE THE INSIDE OF THE SPOTLIGHT AS THE PRODUCT WARRANTY WILL NO LONGER BE VALID.

6. ELECTRICAL CONNEXION

For the LumiPlus Flexi to work properly, it must have a 12 V AC power supply. LumiPlus Flexi is supplied with a 2.5 meter 2 x 1 mm² H07RN-F cable. Should this be too short, it can be replaced by another cable (see page 31). Should the original cable be replaced or extended, a specific calculation must be made of the cross-sections for each installation to ensure a 12-volt power supply reaches the LumiPlus Flexi and to prevent voltage drops.

6.1. MONOCOLOR LUMIPLUS FLEXI

The 12 V AC monocolour LumiPlus Flexi connects directly to a safety transformer. It does not require any type of control device. It can only be used to switch the projector On and Off (See page 30).

6.2. RGB LUMIPLUS FLEXI

The LumiPlus Flexi can be controlled using two different systems: a push button that is usually off, or a modulator and remote control (optional).

In both cases, ensure that the power supply to the LumiPlus Flexi is never above 12 V AC.

LumiPlus Flexi must only work completely submerged and fitted to the vertical walls of a pool. Working it outside of the water could cause irreparable damage.

6.2.A. LumiPlus ECO: pushbutton control

The system has 14 operating modes: 7 fixed colors and 7 different color sequences. Each time the push button is pressed, the color or sequence will change. If pressed for several seconds, LumiPlus Flexi emits white light.

• Diagram of the wiring (see page 30)

The LumiPlus ECO system is made up of a LumiPlus Flexi, a transformer and a push button that is usually off (NC). The transformer must be sized to supply the corresponding VAs to each spotlight that is wired (see table on the back cover). For example, if you wish to control two 29 VA RGB V1 spotlights they must be wired in parallel to a transformer of at least 100 VA. The push button must be sized to withstand the power consumed by the number of spotlights in a facility.

• **Operation modes**

The LumiPlus ECO 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 seven possibilities.

COLOUR N°	COLOUR
1	White
2	Red
3	Blue
4	Green
5	Magenta
6	Cyan
7	Yellow

Automatic colour sequence: Selection from among seven programmes of colour sequences. Each programme is defined by the duration of each colour and of the transition from one colour to another, according to the following table:

SEQUENCE	ORDER OF COLOURS					
1	Red	Blue	Green	Magenta	Cyan	Yellow
2	Red	Green	Cyan	Blue	Magenta	Yellow
3	Magenta	Cyan	Yellow	-	-	-
4	Red	Blue	Green	-	-	-
5	Magenta	Cyan	Yellow	-	-	-
6	Yellow	Magenta	Cyan	-	-	-
7	Green	Red	Blue	-	-	-

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 7. If you are in sequence 7, press once and you will get to colour 2, which is Red.

Colour 1, corresponds to white and is reached by one long press.

6.2.B. LumiPlus TOP: Modulator control and/or Remote control

The system has 20 operation modes: 12 set colours and 8 sequences of different colours.

The Modulator controls switching LumiPlus Flexi On and Off, changes of colour and sequences and switching off timing. If you have a remote control, apart from the modulator operations, you can also switch colours of a sequence on and off and select the switching off time.

• **Electrical connection diagram (see diagram page 30)**

The modulator, transformer and LED spotlights are required for an installation to work properly. Optionally, this system can be controlled by a remote control.

The modulator must be connected to a power supply of 230 V AC through the two terminals marked RED and to the primary windings of the transformer (230 V AC) through the terminals marked TRF.

The transformer must be sized to supply the corresponding VAs to each LumiPlus that is wired (see table on the back cover). For example, if you wish to control three 29 VA RGB V1 spotlights they must be wired in parallel to a transformer of at least 100 VA.

Each modulator can support up to a maximum of 900VA.

Once the unit is connected, proceed as follows to start-up the projector for the first time:

Switch on the unit by activating the 230 V-ac at the input of the Modulator, which will automatically synthesize with the transformer. The green LED of the Modulator will flash every 2 seconds and the LumiPlus Flexi will remain off.

• **Types of lighting**

The **Remote Control – Modulator – Transformer – LumiPlus Flexi** unit enables you to create different lighting settings inside the pool with two operation options:

Set colour: Selection of a set colour among twelve possibilities.

COLOUR N°	COLOUR
1	Red
2	Green
3	Blue
4	Yellow
5	Cyan
6	Magenta

COLOUR N°	COLOUR
7	Pale violet
8	Sky-blue
9	Orange
10	Pink
11	Emerald green
12	White

Automatic sequence of colours: Selection of eight 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											
1	Red	Green	Blue										
2	Cyan	Magenta	Yellow										
3	Green	Esmerald green	Cyan	Sky-blue									
4	Red	Orange	Green	Orange									
5	Red	Pink	Blue	Pink									
6	Red	Orange	Green	Cyan	Blue	Pink							
7	Pale violet	Magenta	Cyan	Yellow	White	Yellow	Cyan	Magenta					
8	Red	Green	Blue	Yellow	Cyan	Magenta	Pale violet	Sky-blue	Orange	Pink	Esmerald green	White	

7. SAFETY WARNINGS:

- 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 LumiPlus Flexi disconnected from the mains.
- Do not handle with wet feet.
- LumiPlus Flexi is designed **TO BE USED ONLY SUBMERGED IN WATER** and **TO OPERATE ONLY WITH A SAFETY TRANSFORMER.**
- LumiPlus Flexi withstands to the treatments of swimming pool described next as long as the values of concentration do not surpass the following values:

TYPE OF TREATMENT	CONCENTRATION IN WATER
Chlorine	2 mg/l
Bromine	5 mg/l
Salt electrolysis (Na Cl)	✓

Attention : Please note that the Ph of pool water always must be between 7.2 and 7.6.

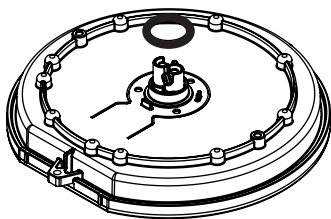


FIG. 1

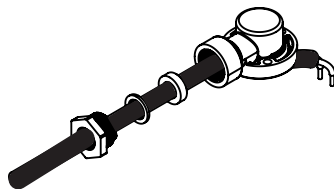


FIG. 2

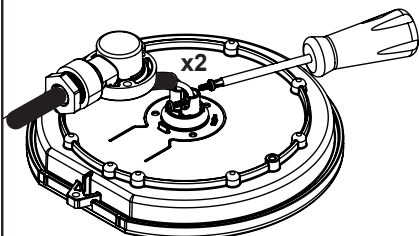


FIG. 3

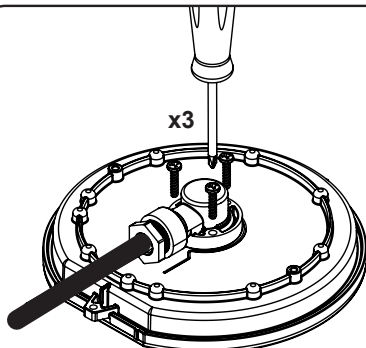


FIG. 4

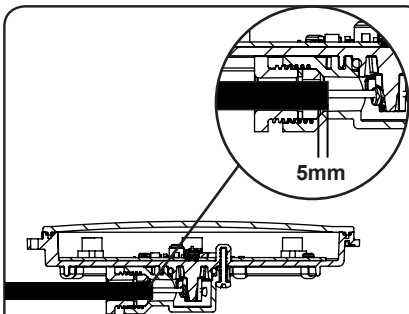


FIG. 5

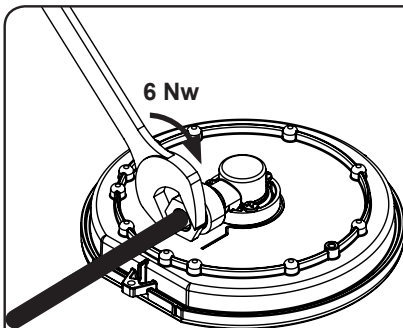


FIG. 6

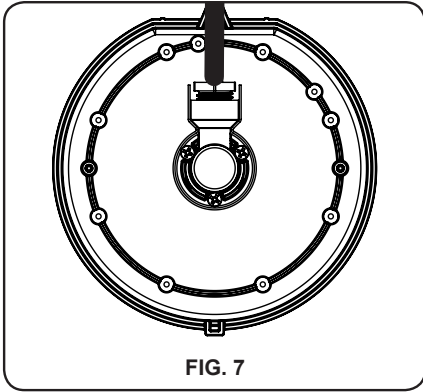


FIG. 7

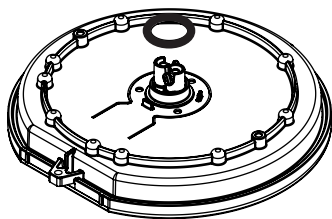


FIG. 1

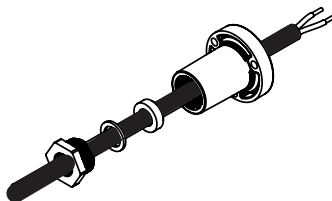


FIG. 2

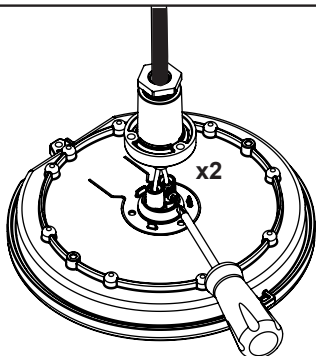


FIG. 3

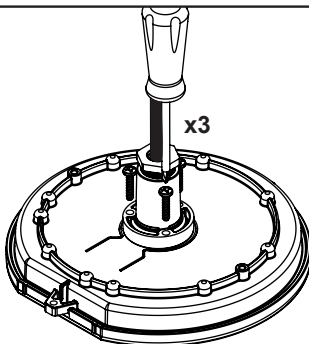


FIG. 4

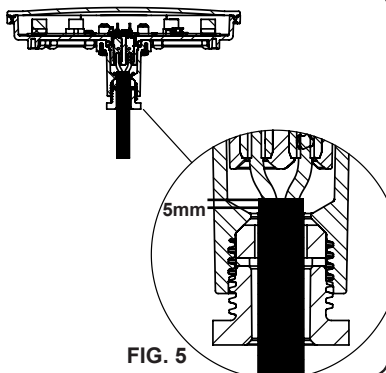


FIG. 5

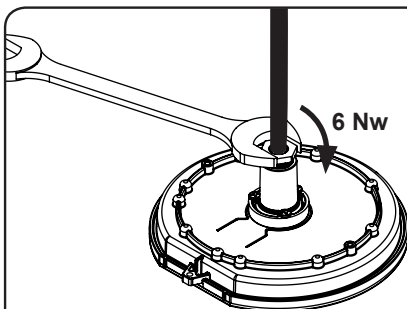
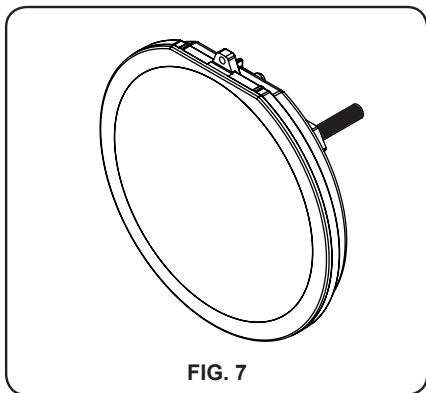
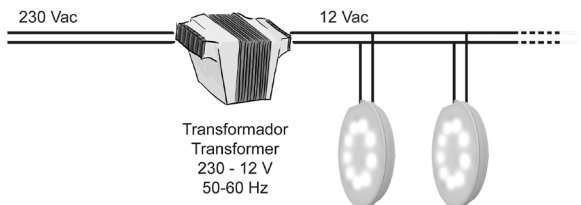


FIG. 6

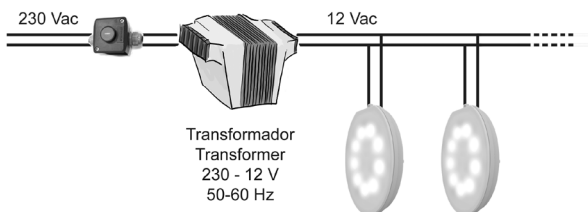


ELECTRICAL CONNECTION DIAGRAM
DIAGRAMME DES CONNEXIONS ELECTRIQUES
DIAGRAMA DE CONEXIONADO ELECTRICO
DIAGRAMMA DELLE CONNESSIONI ELETTRICHE
ELEKTRISCHER SCHALTPLAN
DIAGRAMA DAS LIGAÇÕES ELÉTRICAS

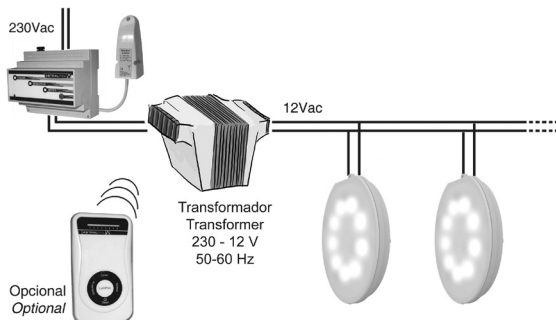
6.1. LumiPlus Monocolor



6.2A. LumiPlus RGB ECO



6.2B. LumiPlus RGB TOP



CABLE CROSS-SECTION TABLE ACCORDING TO LENGTH
(WITHSTANDS A MAXIMUM VOLTAGE DROP OF 5%).

TABEAU DE SECTION DE CÂBLE SELON LA LONGUEUR
(EN ACCEPTANT UNE CHUTE DE TENSION MAXIMUM DE 5%).

TABLA DE SECCIÓN DE CABLE SEGÚN LONGITUD
(ACEPTANDO UNA CAÍDA DE TENSIÓN MÁXIMA DEL 5%).

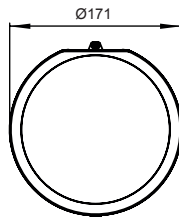
TABELLA DI SEZIONE DEL CAVO A SECONDA DELLA LUNGHEZZA
(AMMETTENDO UNA CADUTA DI TENSIONE MASSIMA DEL 5%).


TABELLE DER KABELDURCHMESSER JE NACH LÄNGE
(MIT EINEM MAXIMALEN ZULÄSSIGEN SPANNUNGSABFALL VON 5%).

TABELA DE SECÇÃO DE CABO CONSOANTE O COMPRIMENTO
(TENDO EM CONTA UMA QUEDA DE TENSÃO MÁXIMA DE 5%).

CODE	DESCRIPTION	COMPATIBLE WITH LUMIPLUS FLEXI
71649	Cable Flexi 2x2,5mm ² of 30 mts	71201, 71201WW, 71213, 71215, 71217, 71202, 71202WW.
71648	Cable Flexi 2x2,5mm ² of 25 mts	71201, 71201WW, 71213, 71215, 71217, 71202, 71202WW.
71647	Cable Flexi 2x2,5mm ² of 20 mts	71201, 71201WW, 71213, 71215, 71217, 71202, 71202WW, 71200, 71200WW, 71212, 71214, 71216.
71646	Cable Flexi 2x2,5 mm ² of 15 mts	71201, 71201WW, 71213, 71215, 71217, 71202, 71202WW, 71200, 71200WW, 71212, 71214, 71216, 71203, 71205, 71206, 71207.
71645	Cable Flexi 2x2,5 mm ² of 10 mts	71201, 71201WW, 71213, 71215, 71217, 71202, 71202WW, 71200, 71200WW, 71212, 71214, 71216, 71203, 71205, 71206, 71207, 71204, 71208.
71644	Cable Flexi 2x2,5 mm ² of 5 mts	71201, 71201WW, 71213, 71215, 71217, 71202, 71202WW, 71200, 71200WW, 71212, 71214, 71216, 71203, 71205, 71206, 71207, 71204, 71208.

- TECHNICAL CHARACTERISTICS
- CARACTERISTIQUES TECHNIQUES
- CARACTERÍSTICAS TÉCNICAS
- DATI TECNICI
- TECHNISCHE ANGABEN
- CARACTERISTICAS TECNICAS



DESCRIPTION	LumiPlus Flexi V1		LumiPlus Flexi V2
	Monocolour	RGB	RGB
Code / Code / Código / Codice / Code / Código	71200 71200WW	71203	71204
Power / Pouvoir / Potencia / Potere / Macht / Poder	16W (24VA)	22W (29VA)	43 (54VA)
Rated voltage / Tension nominale / Tensión nominal / Tensione nominale / Anschlussspannung / Tensão nominal	12 V AC - 50/60 Hz		
Protection / Protection / Protección / Protezione / Schutz / Proteção	CLASS III - IPX8		
	TO BE USED ONLY WITH A SECURITY TRANSFORMER / À UTILISER UNIQUEMENT AVEC UN TRANSFORMATEUR DE SECURITÉ / PARA USO EXCLUSIVO CON TRANSFORMADOR DE SEGURIDAD / PER USO ESCLUSIVO CON TRANSFORMATORE DI SICUREZZA / NUR ZUSAMMEN MIT EINEM SICHERHEITSTRANSFORMATOR ZU BENUTZEN / PARA USO EXCLUSIVO COM TRANSFORMADOR DE SEGURANÇA		
LUMIPLUS FLEXI NEVER TO BE SWITCHED ON IF IT IS NOT SUBMERGED / N'ALLUMER LE LUMIPLUS FLEXI QUE SUBMERGÉ DANS L'EAU / NO ENCENDER NUNCA LUMIPLUS FLEXI SI NO ESTA SUMERGIDO EN AGUA / NON ACCENDERE MAI IL LUMIPLUS FLEXI SE NON È IMMERSO IN ACQUA / LUMIPLUS FLEXI NUR UNTER WASSER GETAUCHT ANZUMACHEN / NÃO ACENDER NUNCA O LUMIPLUS FLEXI SE NÃO ESTIVER SUBMERGIDO NA AGUA.			

Made in Spain

Sacopa, S.A.U.

Pol. Ind. Poliger Sud – Sector I

17854 Sant Jaume de Llierca (Spain)

ASTRALPOOL

Avda. Francesc Macià, 60, planta 20

08208 Sabadell (Barcelona) Spain

71200E202

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