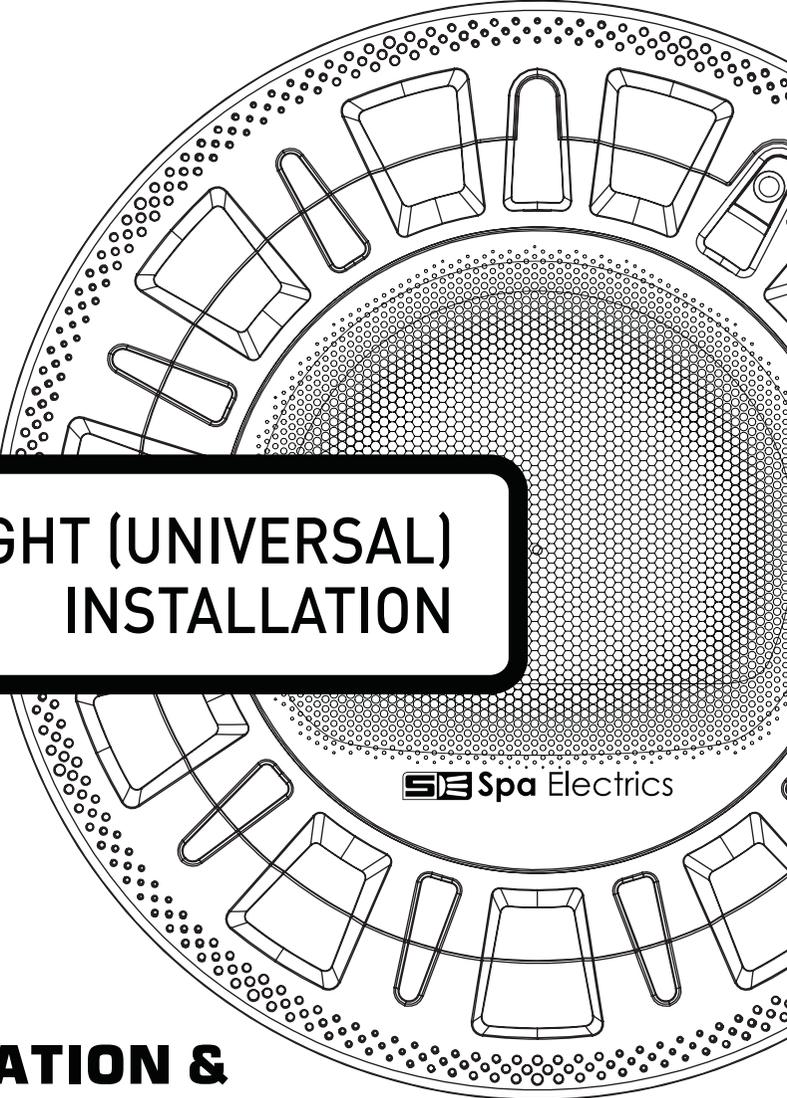




retro

REPLACEMENT LED POOL LIGHT

A technical line drawing of a circular pool light fixture. The outer ring features several rectangular and trapezoidal cutouts. The central area is filled with a dense pattern of small circles, representing the LED array. A thick black horizontal bar with rounded ends is overlaid on the left side of the diagram, containing the title text.

POOL LIGHT (UNIVERSAL) INSTALLATION

 Spa Electric

INSTALLATION & OWNER'S MANUAL

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FCC COMPLIANCE STATEMENT 24

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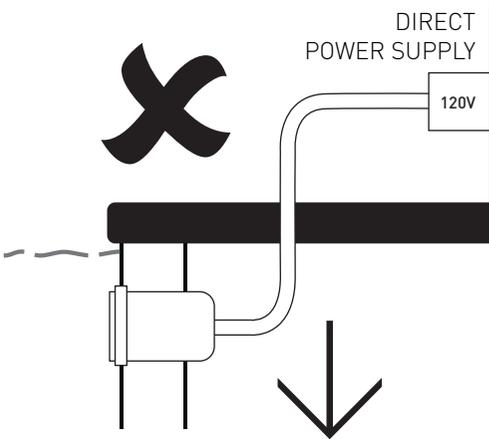
NOTICE

FRESH WATER USE ONLY
NOT INTENDED FOR OPERATION OUT OF WATER

PRE-INSTALLATION CHECK

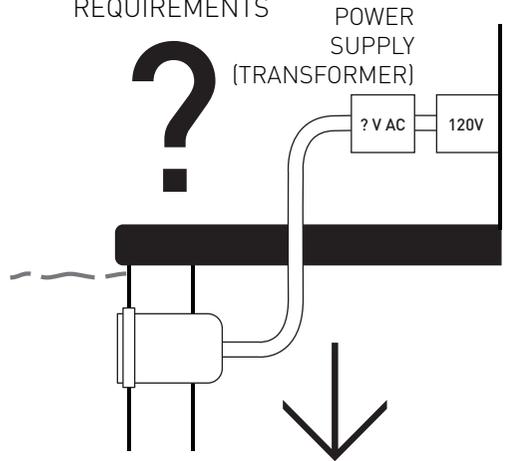
1 CHECK POWER SUPPLY

1A: IF THE POOL LIGHTS ARE DIRECTLY CONNECTED TO A 120V POWER SUPPLY, DO NOT CONTINUE INSTALLATION



1B: A 12V AC TRANSFORMER **MUST** BE INSTALLED BETWEEN THE 120V POWER SUPPLY AND POOL LIGHT

2A: IF THE POOL LIGHTS ARE CONNECTED TO A TRANSFORMER CHECK THAT IT MEETS STEP 2 REQUIREMENTS



2B: IF THE TRANSFORMER DOES NOT MEET THE REQUIREMENTS, IT WILL REQUIRE REPLACEMENT

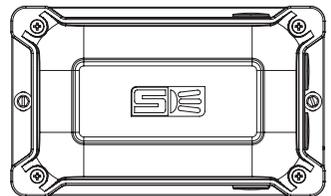
2 ADD TRANSFORMER (if needed)

EXISTING TRANSFORMER **MUST BE:**

- UL Listed Isolating Low Voltage power supply, evaluated for swimming pool use
- Installed as per current NEC wiring rules
- 12~14v AC output
- Minimum 50W per Retro Series Pool light
- In good working order

EXISTING TRANSFORMER **MUST NOT BE:**

- DC or 'LED Driver'
- Electronic or Switch mode
- Weather damaged or in otherwise pool condition



Spa Electric's recommends "LVX" safety transformers for use with **Retro Universal** lights

PRE-INSTALLATION CHECK

3 CHECK PLUG CABLE THICKNESS

RETRO UNIVERSAL CAN BE FITTED TO PLUG CABLES FROM 9/32" [7mm] UP TO 9/16" [14mm] DIAMETER

Max \varnothing
9/32 inch
(14mm)

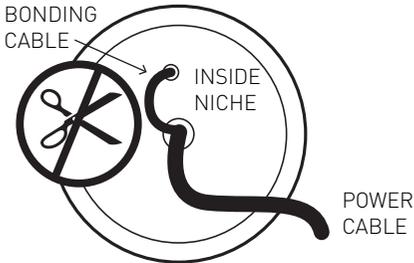


4 CHECK BONDING

ENSURE BONDING IS SECURE AT BACK OF NICHE

DO NOT CUT THE BONDING CABLE

DO NOT DISTURB THE BONDING CABLE WHEN WORKING WITH THE PLUG CABLE



! ELECTRICAL GROUNDING

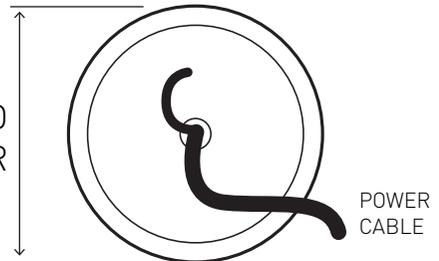
DUE TO ITS PLASTIC HOUSING DESIGN, THE RETRO UNIVERSAL LUMINAIRE DOES NOT REQUIRE GROUNDING / BONDING.

SEE PAGE 21 FOR MORE INFORMATION

5 CHECK NICHE DIAMETER

THE RETRO UNIVERSAL IS DESIGNED TO WORK WITH 10 inch OUTSIDE DIAMETER NICHE

10 inch OD
DIAMETER



REFER TO APPENDIX A FOR A LIST OF NICHE RETRO UNIVERSAL HAS BEEN UL TESTED WITH

READ THIS FIRST

Congratulations on your purchase of a Spa Electrics **Retro Universal** Series Pool Light. This light has been designed in conjunction with leading pool professionals across the USA and manufactured solely in Australia.

The Retro Series Pool light is designed to quickly and easily replace existing LOW VOLTAGE, 10" Pool Light (PAR 56) fittings from major brands. Its patented cam-lock system allows for simple installation in situations where the existing niche hardware has been damaged or is no longer serviceable.

For safe and proper installation, please read this manual in full before commencing installation and use only the parts (screws, plugs, sealant etc) as provided.

For operating instructions, please refer to the MULTI PLUS Operating Manual. (Provided)

NOTE: The use of DC / Electronic (or Switch mode) power supplies is **not** permitted as they can cause disruptions in the lights normal operation & in some cases damage the lights internal electronic components. For more information, please contact Spa Electrics Inc.



WARNING

- The **Retro Universal** Light must be water cooled at all times. DO NOT switch the light on until installation is complete and the light is fully submerged in water.
- Ensure sufficient cable is coiled behind the light to allow for servicing (~12 to 24inch)
- Ensure only circular cable not exceeding 9/16" (14mm) diameter is connected to the **Retro Universal** Light. The use of Fig. 8 or non circular cable will not seal correctly & will void the product warranty.
- The **Retro Universal** LED Light does not contain any user serviceable parts, opening the light will void the product warranty.
- Pool chemicals & PH levels: Due to the corrosive nature of unbalanced pool chemicals, Spa Electrics strongly recommend that your pool water is balanced prior to installing your pool Lights or any plastic or stainless steel components, and tested weekly to maintain these levels. pH levels should be maintained between 7.2- 7.6 at all times to ensure the longevity of these components.
 - Failure to do so can result in chemical damage to the light housing and pool fittings, including stainless steel components.
 - Please note: Lights or components found to have excessive chemical damage will not be covered under our manufacturer's warranty policy

TOOLS REQUIRED

- Phillips head screwdriver
- small Flat Blade screwdriver



IMPORTANT NOTES

- The use of power tools during installation is **not** recommended as these devices can cause faults and damage to light components.
- All installation steps should be carried out with manual tools only.
- The enclosed images are for illustrative purposes only. Appearances of parts and assemblies may vary from the enclosed illustrations.
- Please contact your reseller if you have any questions regarding the correct installation of this product.



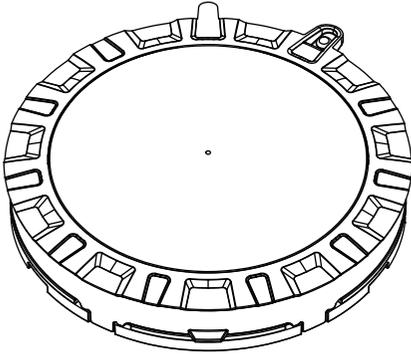
WINTERIZATION

- Lights must be removed from pool wall and cable disconnected via plug connection & stored in a safe place.
- Winterization Cover must be fitted to Plug Top prior to reinstalling into niche for winter.
- Unless niche/conduit connection is adequately sealed (i.e. via included cable gland components), pool water level must be drained down 12" below the lowest light(s) position in pool wall.
- All conduits should be checked for accumulated water and drained if required.
- Follow instructions on page 14 OR consult your local pool professional for complete pool winterization process.

PRODUCT SUPPORT & INFORMATION

For the most up to date installation information and contact information for assistance in your region, please visit www.spaelectrics.com

INCLUDED PARTS



CAPTIVE SCREW

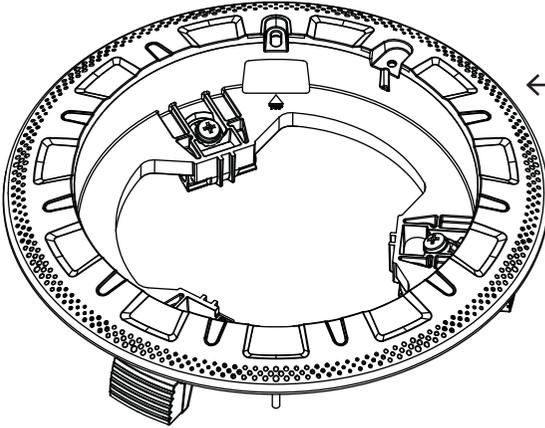
LIGHT ASSEMBLY



NUT

CAM LOCK

NICHE ADAPTOR

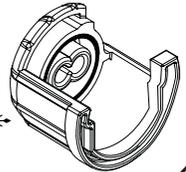


LANOLIN



LANOLIN

Also included is a Winterization Plug Cap if required for seasonal upkeep.



CONNECTOR PLUG

The Plug comes in separate components for assembly

CONNECTOR PLUG COMPONENTS



Screw Terminal End with filling screws attached



Connector Barrel



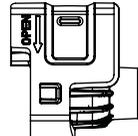
Glands x 3 sizes provided



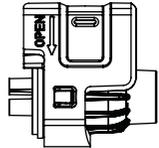
Gland Nut



Large Gland Nut (also supplied)



Connector Collar



1x INSTALLATION MANUAL



1x WARRANTY CARD



1x MULTIPLUS MANUAL



REQUIRED PART (NOT INCLUDED)

UL LISTED ISOLATING LOW VOLTAGE POWER SUPPLY, EVALUATED FOR SWIMMING POOL USE.

Installed as per current NEC wiring rules. 12-14v AC output. Minimum 50W per Retro Series Pool Light. Spa Electrics recommends "LVX" safety transformers for use with Retro Universal lights

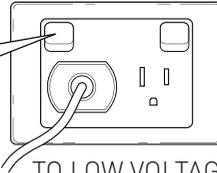
A: CONNECTION TO CABLE

**STOP! WARNING
ELECTROCUTION**

CHECK POWER IS
TURNED OFF
FIRST



TURN
POWER
OFF



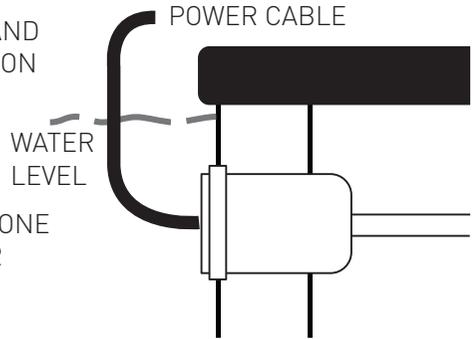
TO LOW VOLTAGE TRANSFORMER

1 REMOVE EXISTING LIGHT

REMOVE EXISTING LIGHT FROM NICHE AND
BRING TO THE SURFACE FOR CONNECTION

**ENSURE YOU DON'T DISTURB
THE BONDING CABLE**

ALL CABLE CONNECTIONS ARE TO BE DONE
AT SURFACE LEVEL, AND OUT OF WATER

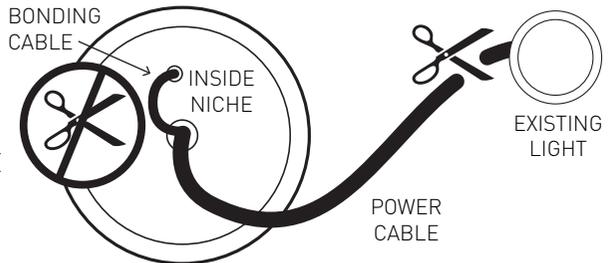


2 DISCONNECT EXISTING LIGHT

DISCONNECT LIGHT
FROM POWER CABLE

CUT POWER CABLE
AS CLOSE TO BACK OF
EXISTING LIGHT AS POSSIBLE

ENSURE BONDING CABLE
IS NOT CUT OR DISTURBED



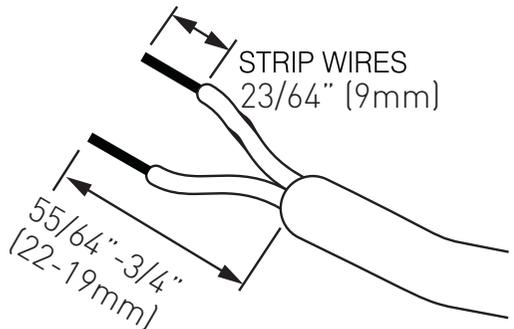
3 CABLE PREPARATION

STRIP POWER CABLE TO
SPECIFIED LENGTH



NOTE

IF CABLE LENGTH ALLOWS,
CUT CABLE BACK UNTIL
FRESH COPPER APPEARS.

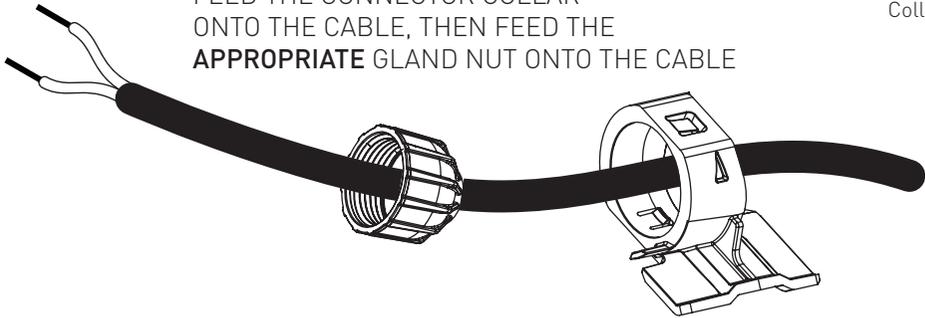


4

START ASSEMBLY OF CONNECTOR PLUG

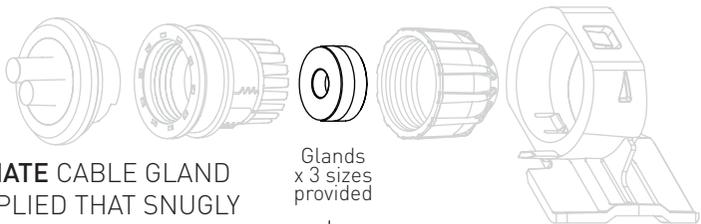


FEED THE CONNECTOR COLLAR
ONTO THE CABLE, THEN FEED THE
APPROPRIATE GLAND NUT ONTO THE CABLE

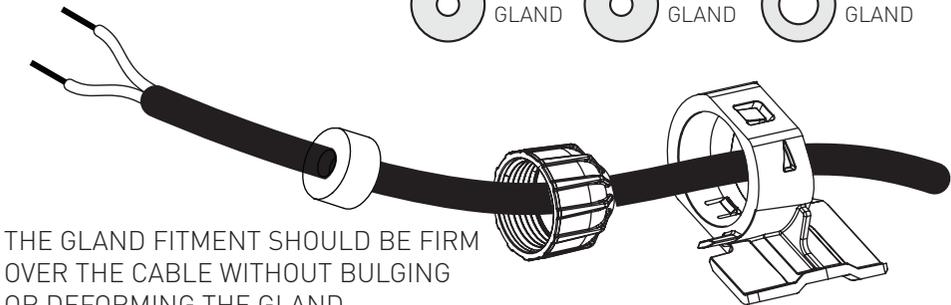


5

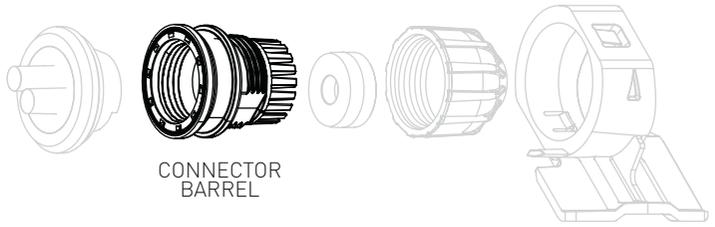
CHOOSE THE APPROPRIATE GLAND



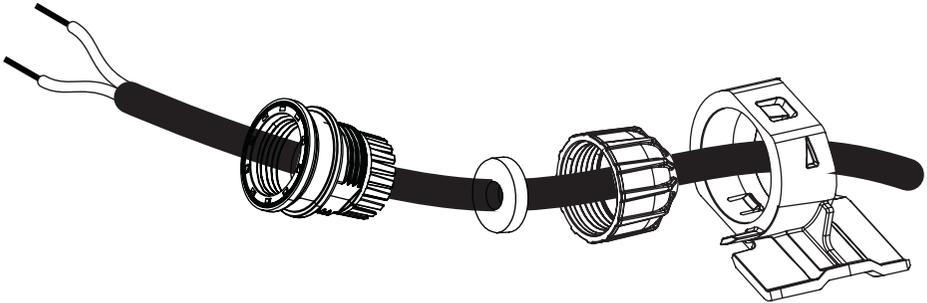
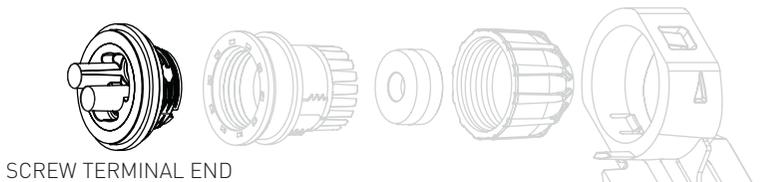
SELECT THE **APPROPRIATE** CABLE GLAND
FROM THE THREE SUPPLIED THAT SNUGLY
FITS THE EXISTING POWER CABLE
WITHOUT BULGING



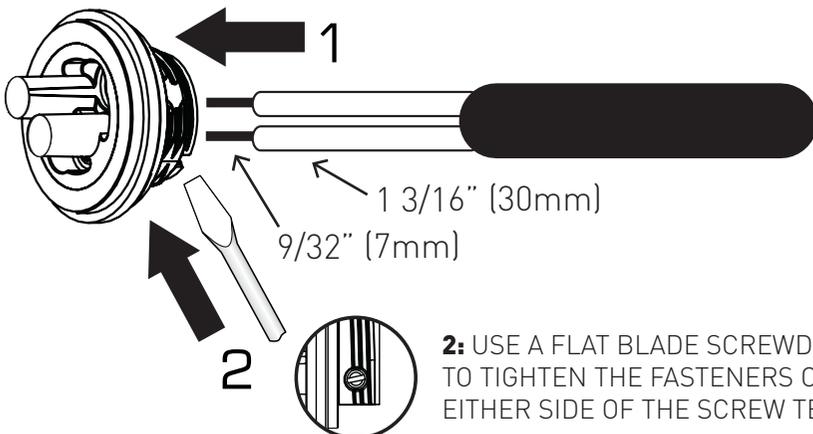
THE GLAND FITMENT SHOULD BE FIRM
OVER THE CABLE WITHOUT BULGING
OR DEFORMING THE GLAND

6**CONTINUE ASSEMBLY OF CONNECTOR PLUG**

FEED THE CONNECTOR BARREL ONTO THE CABLE

**7****CONNECT THE SCREW TERMINAL END**

1: FEED THE TWO STRIPPED CABLE ENDS THROUGH THE TWO HOLES IN THE BACK OF THE SCREW TERMINAL END



2: USE A FLAT BLADE SCREWDRIVER TO TIGHTEN THE FASTENERS ON EITHER SIDE OF THE SCREW TERMINAL

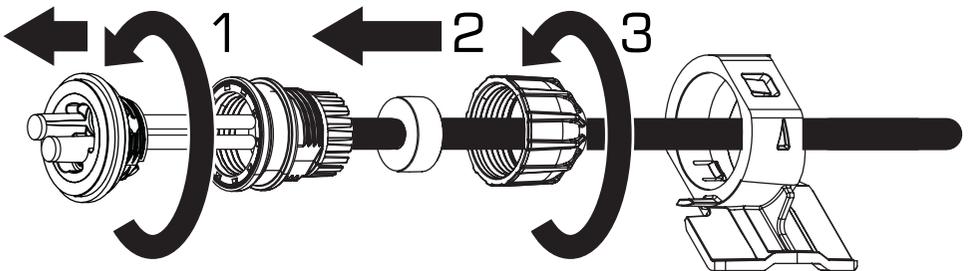
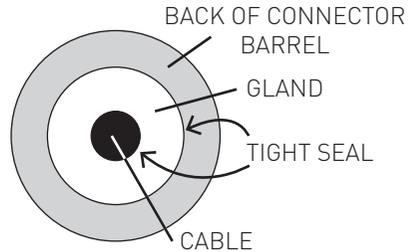
8

START ASSEMBLY OF CONNECTOR PLUG

1: CAREFULLY THREAD CONNECTOR BARREL ONTO SCREW TERMINAL AND TIGHTEN FIRMLY BY HAND

2: SEAT CABLE GLAND ALL THE WAY INTO CONNECTOR
(DO A VISUAL CHECK TO MAKE SURE A SEAL BETWEEN GLAND AND CABLE)

3: CAREFULLY THREAD GLAND NUT ONTO CONNECTOR BARREL AND TIGHTEN FIRMLY BY HAND

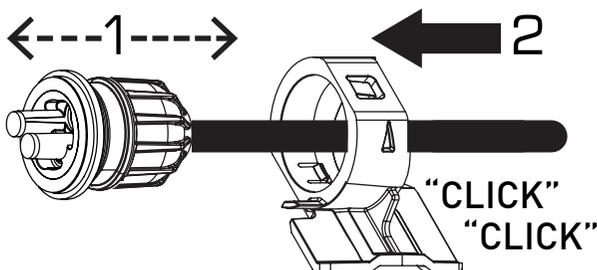


9

CONTINUE ASSEMBLY OF CONNECTOR PLUG

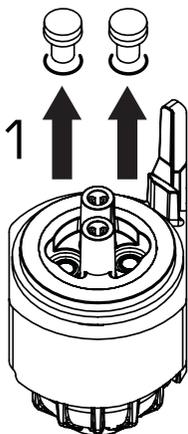
1: DO A PULL TEST ON THE PLUG ASSEMBLY SO FAR, ALL ASSEMBLED PARTS SHOULD FEEL FIRM AND TIGHT

2: PUSH CONNECTOR COLLAR ALL THE WAY IN TO THE END UNTIL THERE ARE TWO DISTINCT "CLICKS". THE END WILL BE FREE TO ROTATE

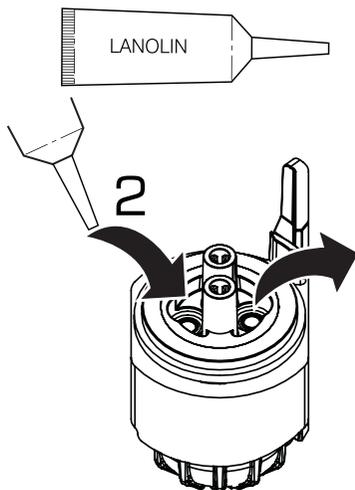


10 ADD LANOLIN

1. REMOVE
2 X FILLER SCREWS
AND O-RING SEALS
FROM SCREW
TERMINAL PLUG

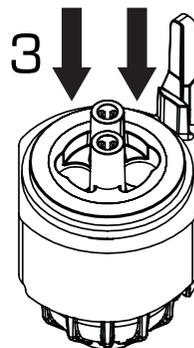


2. INJECT LANOLIN
INTO LEFT FILLER HOLE
UNTIL VISIBLE IN
RIGHT FILLER HOLE



3. REPLACE THE
O-RING SEALS AND
2 X FILLER SCREWS IN
THE FILLER HOLES

ENSURE NOT TO
OVER TIGHTEN



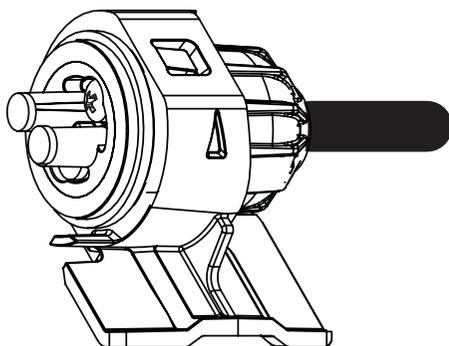
LANOLIN USE



GENTLY WARM
LANOLIN
BEFORE USE



VIEWS OF ASSEMBLED CONNECTOR PLUG



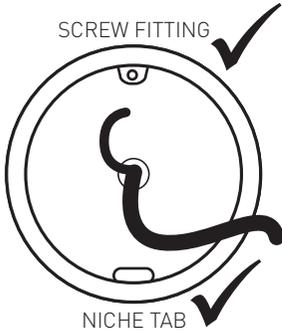
ASSEMBLED VIEW

B: ATTACH NICHE ADAPTOR

1 CHECK QUALITY OF NICHE

ENSURE NICHE TAB AND SCREW FITTING IS INTACT, NOT DAMAGED OR CORRODED AND FIT FOR PURPOSE

IF THE NICHE TAB AND SCREW FITTING IS INTACT: THEN FOLLOW **3A STEPS**
IF ANY PARTS ARE BROKEN OR NOT SERVICEABLE, FOLLOW **3B STEPS**



**USE 3A
STEPS**



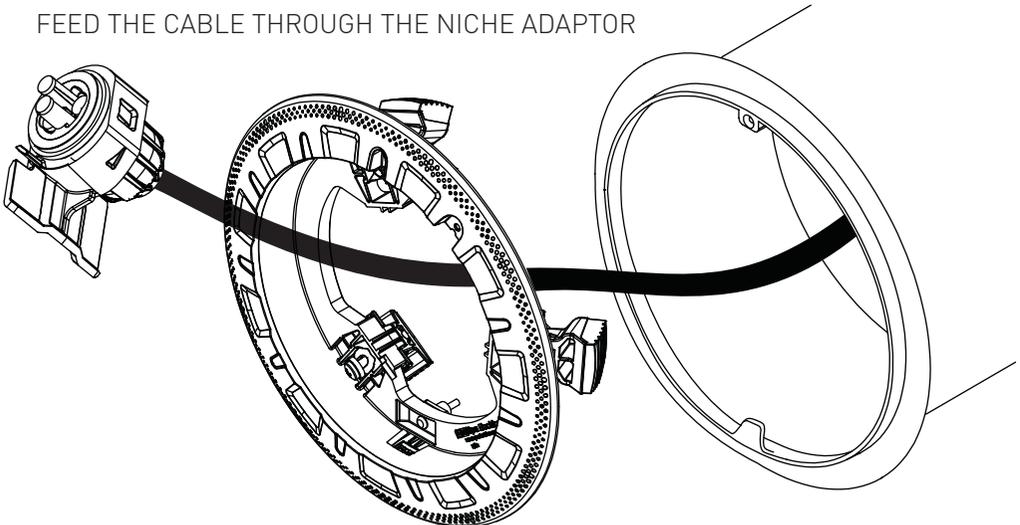
**USE 3B
STEPS**



**USE 3B
STEPS**

2 INSERT NICHE ADAPTOR

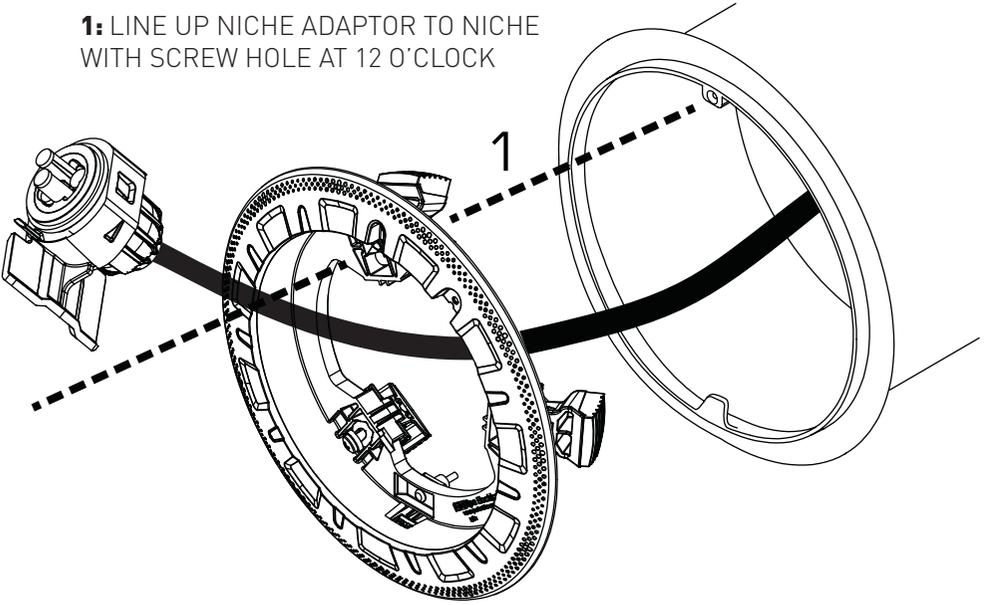
FEED THE CABLE THROUGH THE NICHE ADAPTOR



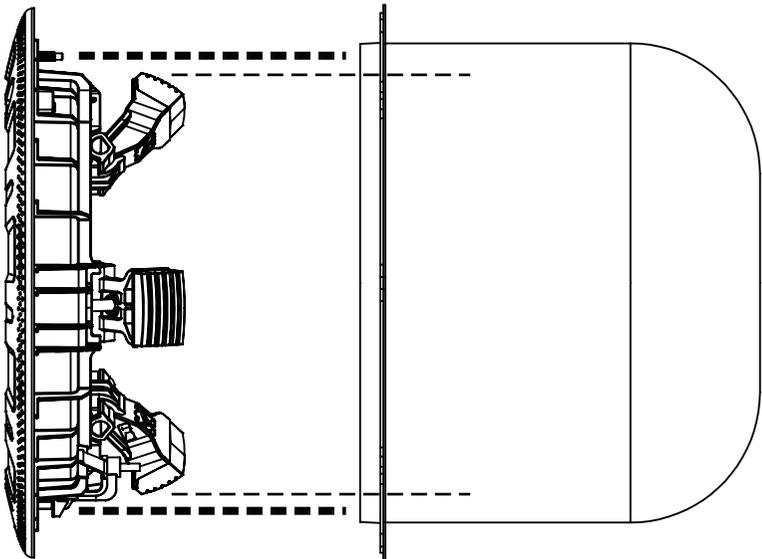
3A

IF NICHE TAB & SCREW FITTING IS INTACT:

1: LINE UP NICHE ADAPTOR TO NICHE WITH SCREW HOLE AT 12 O'CLOCK



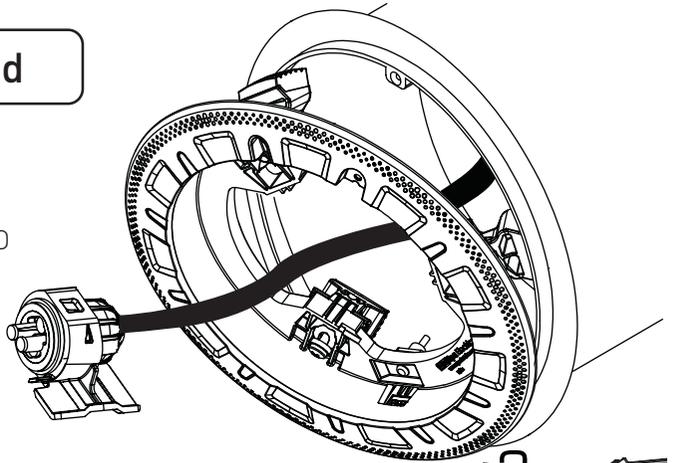
2: ENSURE CAM LOCKS FIT INSIDE NICHE NEATLY



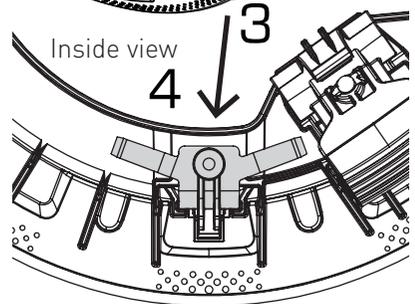
3A

... continued

3: PLACE BASE OF NICHE ADAPTOR ONTO NICHE TAB

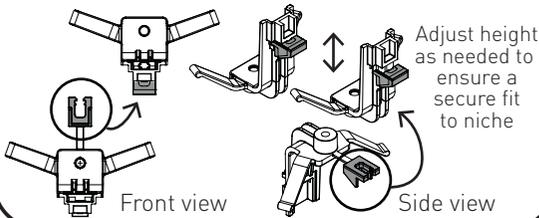


4: ENSURE THE 'HOOK' TAB AT THE BASE OF THE NICHE ADAPTOR SITS NEATLY & FIRMLY OVER THE NICHE TAB

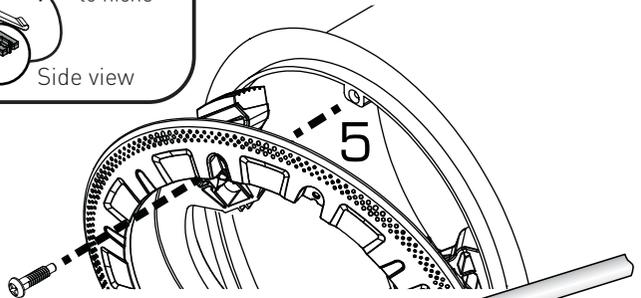


If the 'Hook' Tab does not sit neatly & firmly over the niche tab, then install the additional 'ANCHOR', which is a removable part on the 'HOOK' Tab. The 'ANCHOR' provides a firmer attachment. To install the 'ANCHOR':

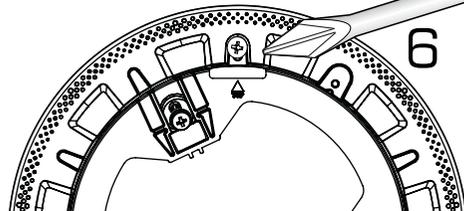
A: cut the 'ANCHOR' off the 'HOOK' Tab
B: turn it over and insert into back of 'HOOK' Tab.



5: ALIGN THE SCREW FITTINGS AT TOP



6: USE A SCREWDRIVER TO FIX NICHE ADAPTOR TO NICHE (CAPTIVE SCREW INCLUDED)



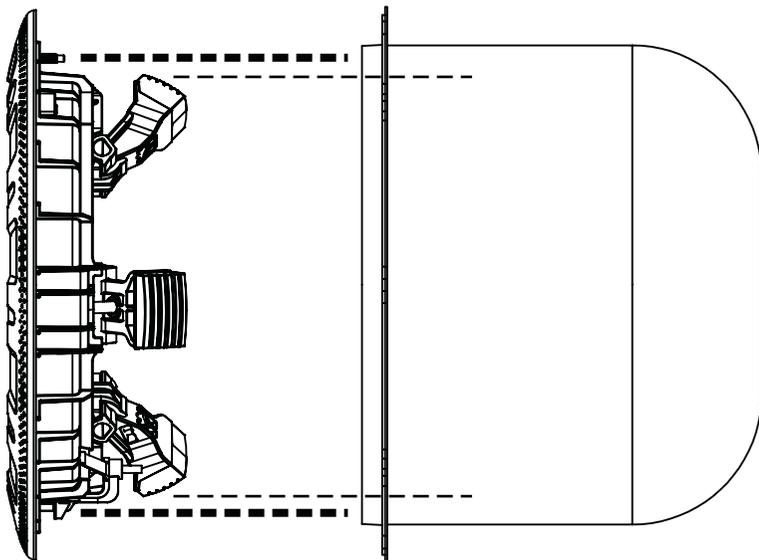
7: TIGHTEN LOWER 'HOOK' TAB SCREW TO ENSURE A TIGHT FIT

8: GO TO **SECTION C: CONNECT LUMINAIRE**

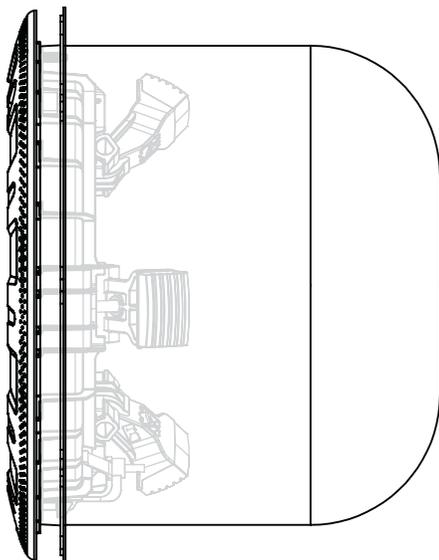
3B IF NICHE TAB & SCREW FITTING IS NOT INTACT:

CENTRE NICHE ADAPTOR INTO NICHE, SO THE SCREW HOLE IS AT 12 O'CLOCK, OR LINES UP WITH THE SCREW FITTING ON NICHE

ENSURE THE CAM LOCKS GO INTO THE NICHE EASILY



PUSH THE NICHE ADAPTOR INTO THE WALL SO IT SITS FLUSH AND IS FULLY INSERTED INTO THE NICHE



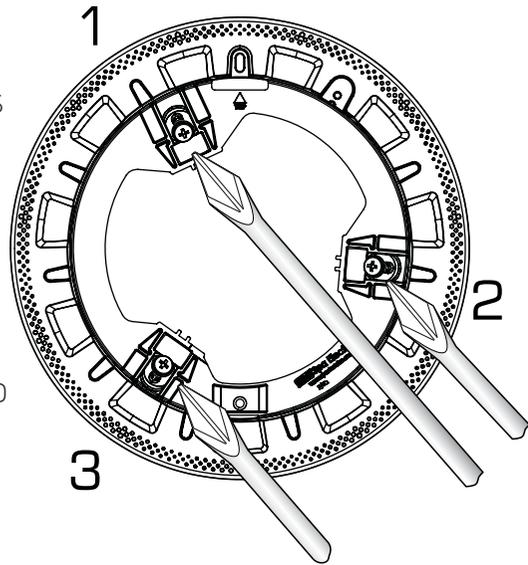
3B ... continued

TIGHTEN THE THREE CAM LOCK SCREWS EQUALLY AND IN ROTATION, AS SHOWN, BY HAND UNTIL YOU FEEL THE NICHE ADAPTOR IS SECURE IN PLACE

DO NOT OVERTIGHTEN.

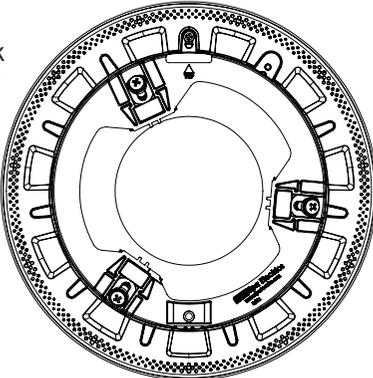
CHECK FOR SECURE FITTING, THE NICHE ADAPTOR SHOULD BE FIRM AND NOT ABLE TO MOVE EASILY BY HAND

GO TO **SECTION C: CONNECT LUMINAIRE**

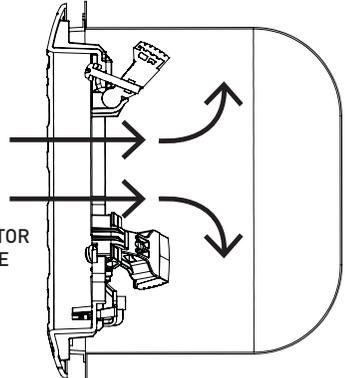


AS THE CAM LOCK SCREWS TIGHTEN, THE CAM LOCKS WILL MOVE IN AND UP, PULLING THE NICHE ADAPTOR FIRMLY INTO THE NICHE

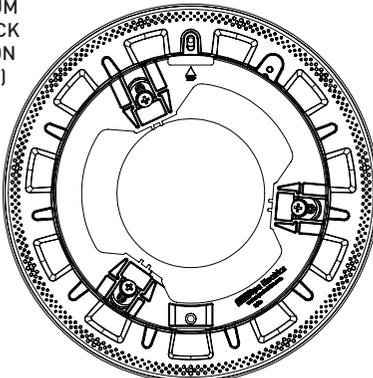
MINIMUM
CAM LOCK
POSITION
(LOOSE)



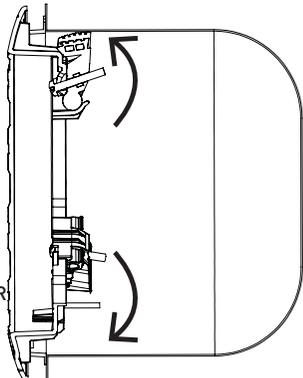
TIGHTEN
SCREWS
TO PULL
NICHE ADAPTOR
INTO NICHE



MAXIMUM
CAM LOCK
POSITION
(TIGHT)



WHEN ALL
CAM LOCKS ARE
SCREWED TIGHT,
THE CAM LOCKS
SIT TIGHT
AGAINST THE
INSIDE OF THE
NICHE, AND THE
NICHE ADAPTOR
IS PULLED FURTHER
INTO THE WALL



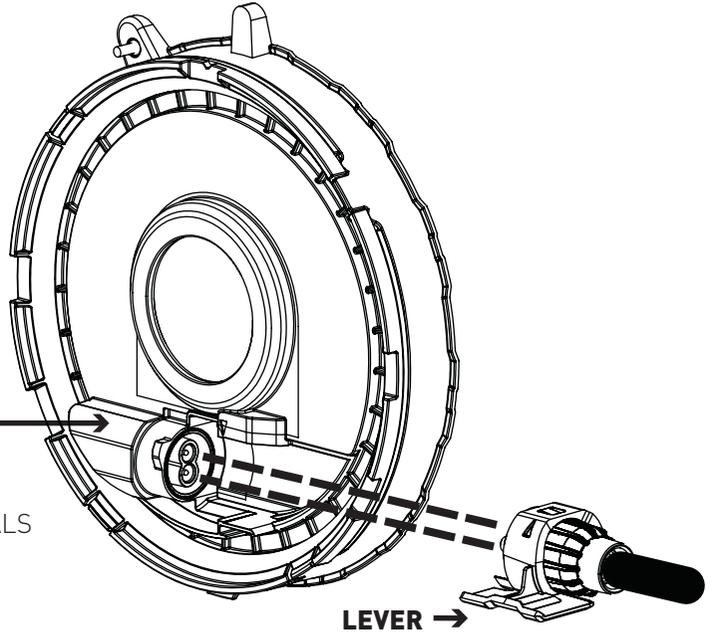
C: CONNECT LUMINAIRE

1 ALIGN UP AND CONNECT CONNECTOR PLUG

1: TURN THE LUMINAIRE OVER TO SEE THE BACK

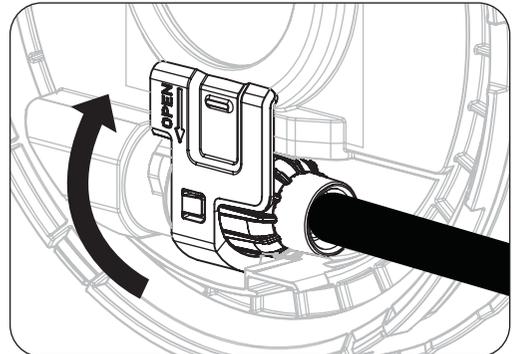
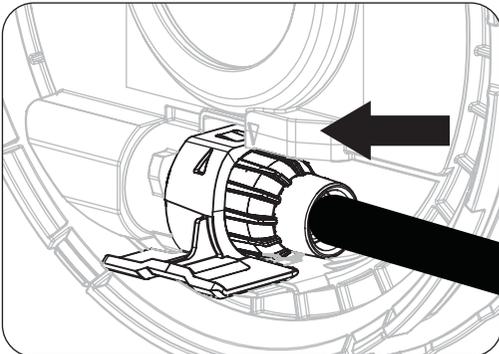
2: LOCATE THE CONNECTOR SOCKET

3: LINE UP THE TERMINALS OF THE SOCKET WITH THE CONNECTOR PLUG



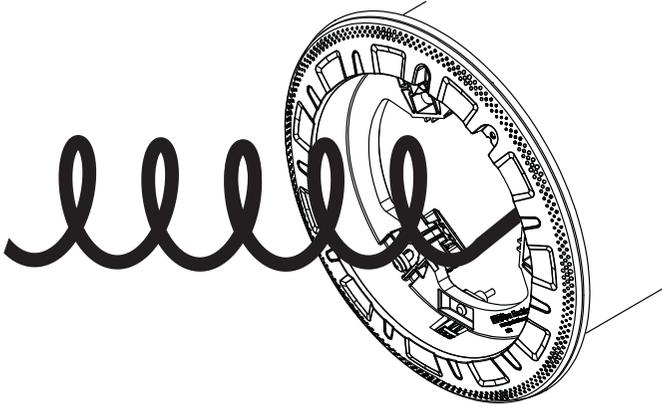
4: SLIDE THE CONNECTOR PLUG FIRMLY INTO THE SOCKET WITH THE LEVER HORIZONTAL

5: FOLD THE LEVER UPRIGHT UNTIL IT LOCKS INTO PLACE VERTICALLY

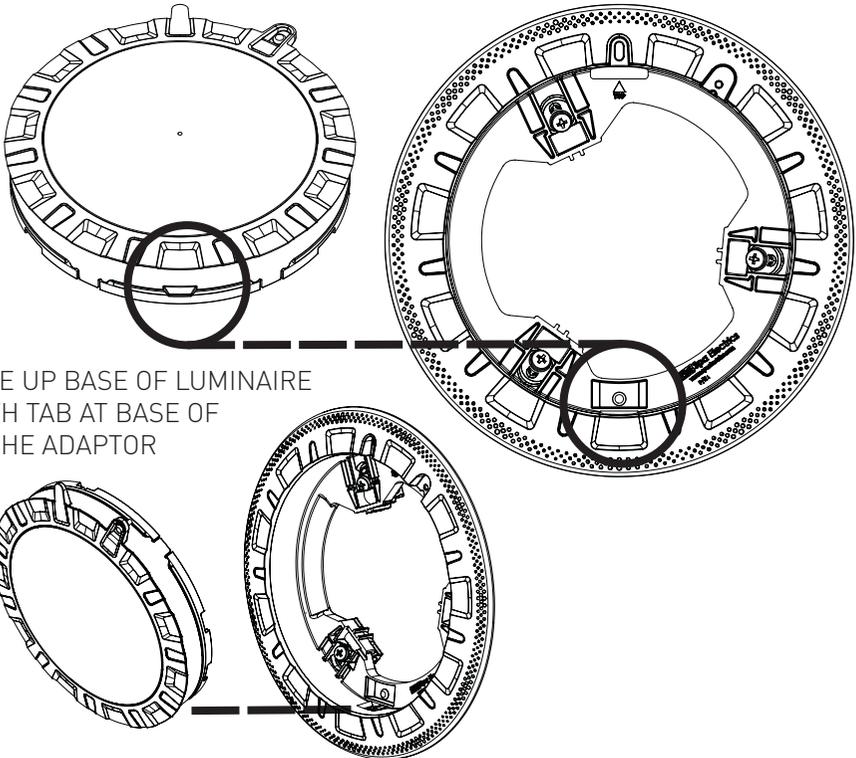


D: FIT LIGHT TO NICHE

1 COIL EXCESS CABLE INTO NICHE



2 CONNECT LIGHT ASSEMBLY



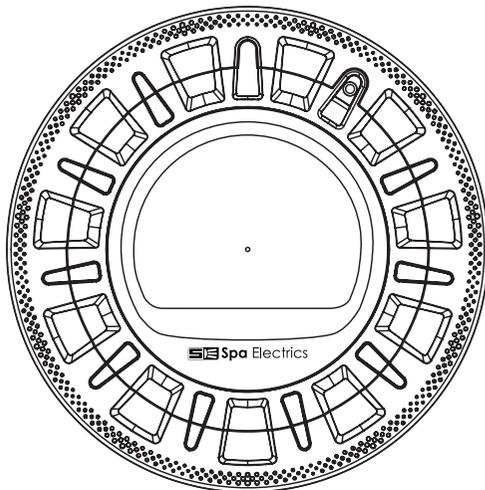
LINE UP BASE OF LUMINAIRE
WITH TAB AT BASE OF
NICHE ADAPTOR

2

CONNECT LIGHT ASSEMBLY continued

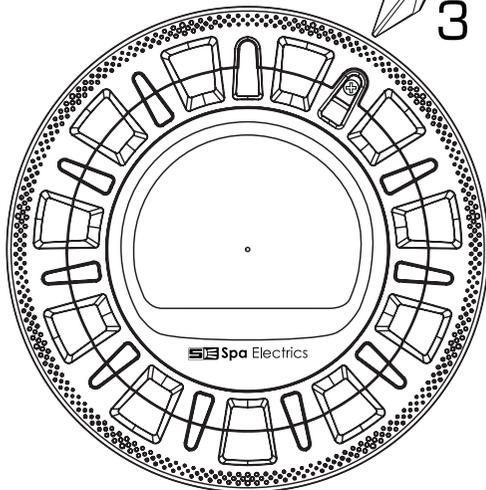
PUSH LUMINAIRE INTO PLACE
ENSURING TAB LOCATES AT TOP
AT 12 O'CLOCK

↓ 2



USE A SCREWDRIVER
TO TIGHTEN THE
CAPTIVE SCREW

3



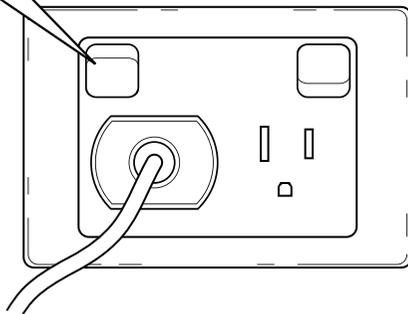
POST INSTALLATION CHECK

1

TEST SYSTEM

TURN ON POWER
AND CHECK ALL
WORKING CORRECTLY

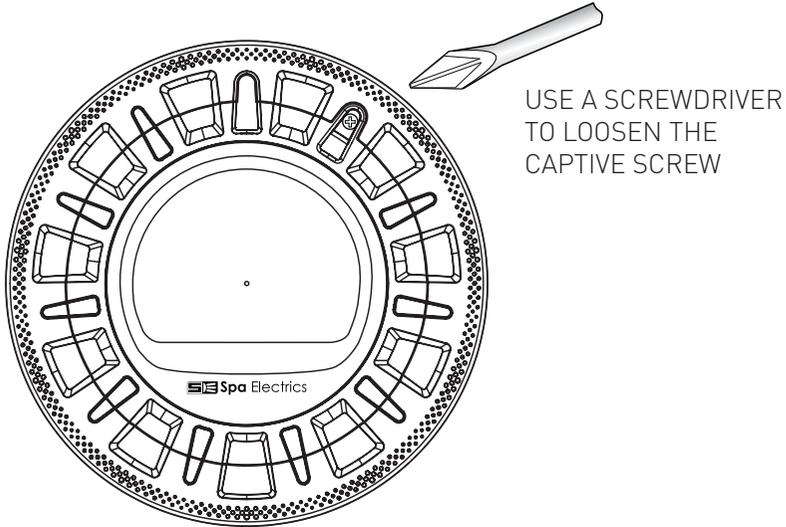
TURN
POWER
ON



WINTERIZATION

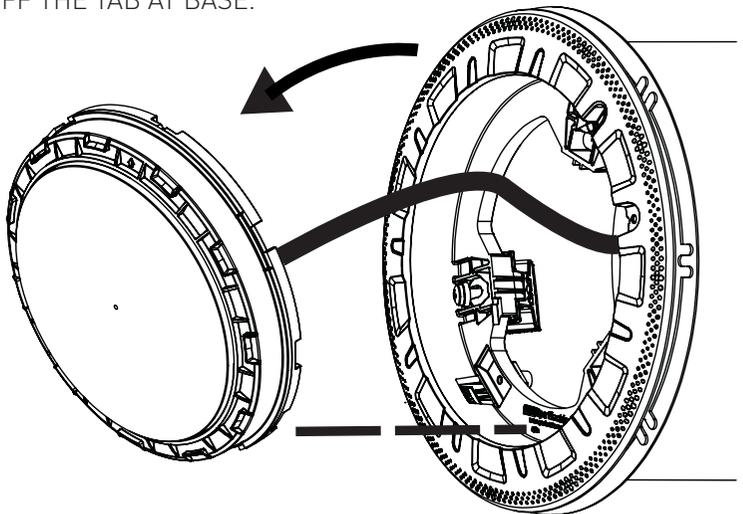
LIGHT REMOVAL

1 DETACH THE LIGHT ASSEMBLY



2 PULL OUT LIGHT ASSEMBLY

PULL THE LIGHT ASSEMBLY FORWARD AND UP SO IT LIFTS OFF THE TAB AT BASE.

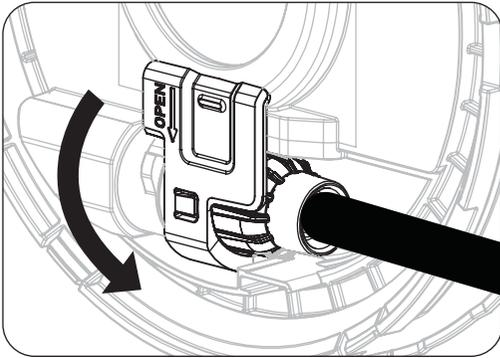


WINTERIZATION

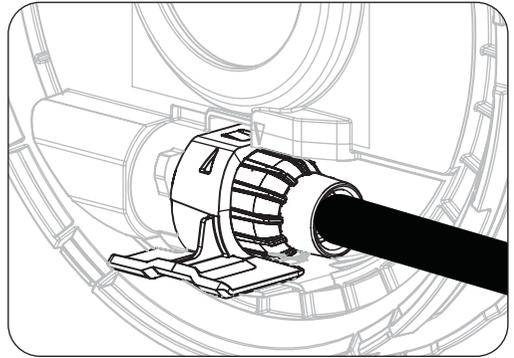
LIGHT REMOVAL

3 UNLOCK THE PLUG

FOLD THE LEVER DOWN
SO THE LEVER IS HORIZONTAL

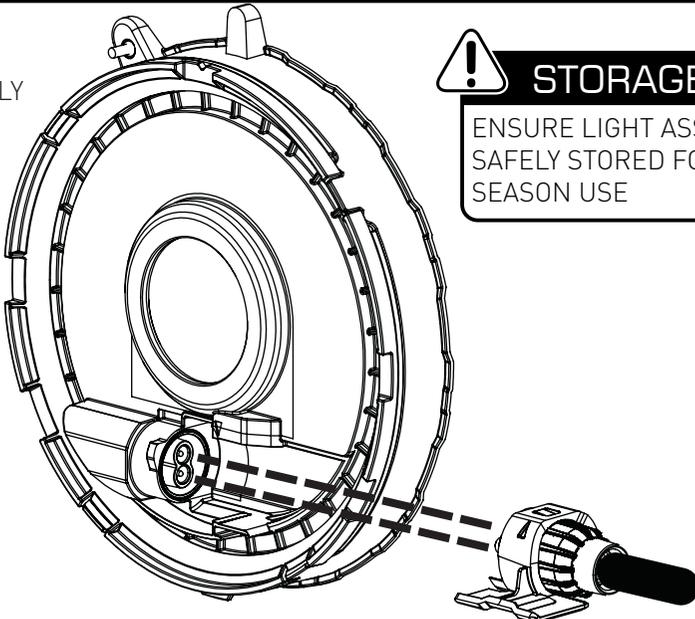


THE LIGHT ASSEMBLY IS NOW
READY TO BE REMOVED



4 REMOVE THE LIGHT ASSEMBLY

PULL OFF THE
LIGHT ASSEMBLY



STORAGE

ENSURE LIGHT ASSEMBLY IS
SAFELY STORED FOR NEXT
SEASON USE

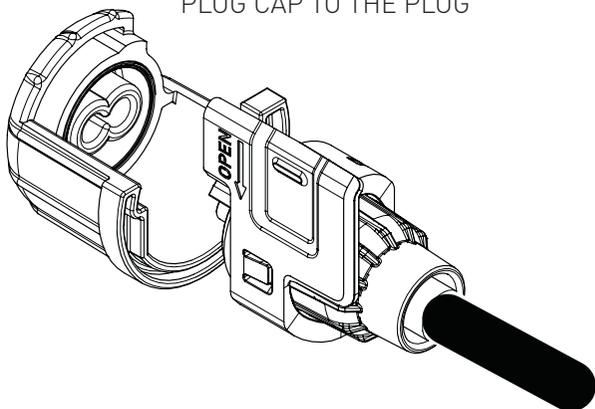
WINTERIZATION

WINTERIZATION PLUG CAP ATTACHMENT

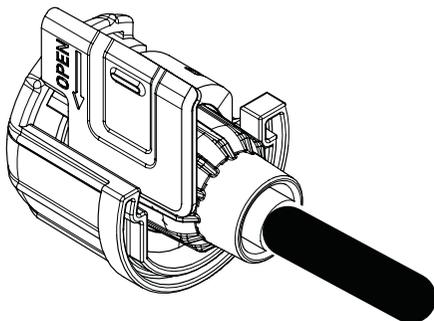
5

CONNECT WINTERIZATION PLUG CAP

LINE UP THE WINTERIZATION
PLUG CAP TO THE PLUG



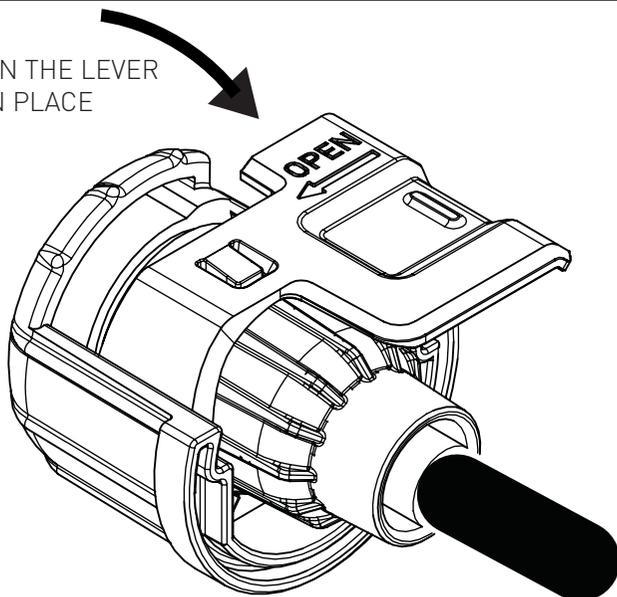
SLIDE INTO PLACE
UNTIL SECURE



6

LOCK ON WINTERIZATION PLUG CAP

FOLD DOWN THE LEVER
TO LOCK IN PLACE



TROUBLESHOOTING

ISSUE	REASON	ACTION
Light returns to WHITE colour during manual colour change.	Light synchronization process has been triggered.	Refer to MultiPlus User Guide instructions.
Light flashes red	Light over heating	Check light is fully submerged. Check vents are not obstructed
Light not operating (1)	Faulty connection to transformer	Ensure cable correctly connected to transformer terminals
Light not operating (2)	Mains power not connected	Check transformer is plugged in to GPO and switched on
Light not operating (3)	Damaged cable	Disconnect plug top and test voltage under load using multi-meter (ie. 20w 12v) Required voltage (11v ~ 13.5v)
Light not operating (4)	Transformer not working	Check fuses & test transformer using multimeter under load (ie.20w 12v)
Light not operating (5)	Damage caused by high voltage and/or incorrect power supply.	Return product to your local Spa Electrics reseller or Spa Electrics for repair
Light colours not synchronized with controller	Incorrect operating mode selected.	Refer to MULTI PLUS setup procedure

If these issues cannot be resolved with the above recommended actions, please contact your local Spa Electrics reseller or Spa Electrics directly.

ELECTRICAL GROUNDING

Underwriters Laboratories (UL) Statement

Per the NEC, NFPA 70, Article 680.23 (B)(5), states that bonding shall not be required for luminaires that are listed for the application and have no non-current carrying metal parts. In addition, per Article 680.26 (B)(4), exception states that Listed low-voltage lighting systems with non-metallic forming shells shall not require bonding.

Therefore, luminaires with polymeric/non-current carrying metal parts are not required to be grounded / bonded.

Manufacturers Statement

Spa Electrics **Retro Universal** luminaires with their plastic housing designs do not require grounding / bonding.

Spa Electrics **Retro Universal** lights have also been determined to comply with the applicable requirements for wet-niche, LED type Swimming Pool and Spa Luminaires.

FCC COMPLIANCE STATEMENT

This device complies with part 15 of the FCC rules. Operation is subject to the following two (2) conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- **Reorient or relocate the receiving antenna.**
- **Increase the separation between the equipment and receiver.**
- **Connect the equipment into an outlet on a circuit different to that to which the receiver is connected.**
- **Consult the dealer or an experienced radio / TV technician for help.**

Do not make any changes or modifications to the equipment unless otherwise specified in the manual.

APPENDIX A

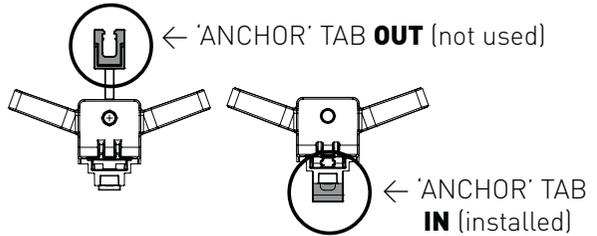
THE RETRO UNIVERSAL HAS BEEN UL TESTED WITH THE FOLLOWING NICHES

	Hayward SP0609C	Jandy Zodiac PLNICLRG	Jandy Zodiac SSNICLRG1R	Pentair 79206700	Pentair 78210300
'ANCHOR' on 'HOOK' Tab	IN	IN	IN	IN	OUT
Niche Adaptor Tab and Slot	Fitted and Aligned	Fitted and Aligned	Fitted and Aligned	Fitted and Aligned	Fitted and Aligned

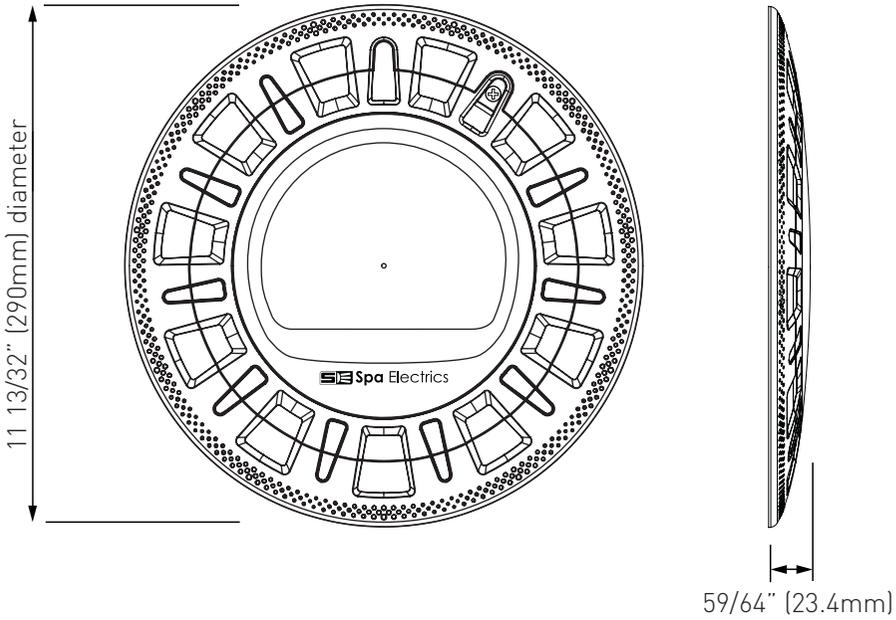
ALL THESE FITTED AND ALIGNED IN ACCORDANCE WITH SECTION:

B: ATTACH NICHE ADAPTOR > STEP 3A (see pages 13-14)

THREE REQUIRED THE INSTALL OF
THE 'ANCHOR' ON THE 'HOOK' TAB
TO FIT NEATLY AND FIRMLY
(see page 14)



KEY DIMENSIONS





NOTE

PLEASE STORE THIS
MANUAL IN A SAFE PLACE
FOR FUTURE REFERENCE



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Spa Electrics



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