



SA LUMIN EX LED RECHARGEABLE FLOODLIGHT

ATEX & IECEX APPROVED FOR ZONE 1 & 2 (GAS), 21 & 22 (DUST)



USER MANUAL

IT IS MANDATORY TO READ THIS USER MANUAL
TO ENSURE THIS EQUIPMENT IS USED
CORRECTLY AND SAFELY.



WELCOME TO...

Thank you for choosing to use one of SA Equip's range of high quality portable lighting products. This SA LUMIN EX LED Rechargeable Floodlight should give you many years of safe and reliable service.

With over 90 years of experience in providing solutions for workers in dangerous environments, we have earned a global reputation for innovation and first class service. All products combine maximum safety with proven effectiveness and low lifetime costs.

For further information or product support please contact us on:

T: +44 (0)333 240 6111

info@saequip.com

www.saequip.com

It is mandatory to read this User Manual to ensure that this equipment is used correctly & safely.

This will also ensure you get maximum performance and service life from this equipment.

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PRODUCT INFORMATION

The **SA LUMIN EX** LED Rechargeable Floodlight is a fully ATEX and IECEx certified portable light

THIS USER MANUAL COVERS THE FOLLOWING PRODUCTS:-

- SARF300 – SA LUMIN EX LED Rechargeable Floodlight



BEFORE USE

IMPORTANT! - ELECTRICAL SAFETY

- This SA LUMIN EX LED Rechargeable Floodlight must not be taken into a Zone 0 Hazardous Area.
- The Rechargeable Floodlight **MUST** be charged in a Safe area only.
- The screw-on cap shall be attached to the Floodlight's charging point connector when the equipment is in the hazardous area.
- Ensure the unit is fully charged as soon as possible after a full discharge cycle.
- It is recommended that the unit is first connected to mains power supply via the supplied charger unit, ensuring a full charge before first use. This should take approx. 6 hours.

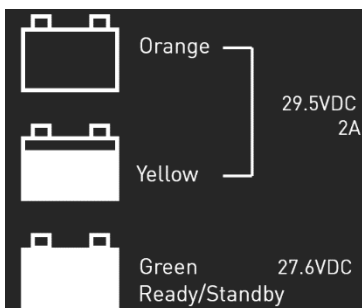
- The equipment shall only be used with the mounting frame provided.
- Always ensure you know how to use any electrical equipment before use.
- Misuse of electrical equipment can result in injury or death.
- Never put Floodlights where they could be damaged or could become a hazard to yourself or someone else.
- The equipment is to be used properly and according to its ratings, documentation and local site regulations.
- You are responsible to ensure that any equipment is suitable for the environment in which it will be used. The personnel using the unit have to be authorized by the operator or his representative.
- The operator is also responsible for the safety of the equipment.
- You must make sure that the equipment is selected, installed and used in accordance with regulations (EN60079-14) and is checked before use.
- The unit housing is constructed from marine grade aluminium and toughened glass, gaskets are silicone sponge, black encapsulant and o-rings are silicone rubber, inner domes on LEDs are polycarbonate. Indication LED housing is constructed from polycarbonate. The end user must ensure these materials are suitable for the environment the unit will be installed in.
- This equipment must be kept in a suitable state by regular inspection and maintenance, see page 7.
- This equipment must only be used for its intended purpose.
- If you are unsure about anything, get help before proceeding

Caution: Do not continually stare at lamp.

BATTERY SAFETY

IMPORTANT

- The Rechargeable Floodlight **MUST** be charged in a non-explosive atmosphere only.
- It is recommended that the unit is first connected to mains power supply via the supplied charger unit, and ensuring a full charge before first use. This should take approx. 6 hours.
- The Floodlight must be connected to the supplied charger only.
- The screw-on cap shall be attached to the Floodlight's connector when the equipment is in the hazardous area.
- You will notice the charger has an LED indicator to show the charging status. Below is a diagram for the charger's status as it is shown on the charger label.



- The charger has a 3-step charge control with timer. Maximum charging current is $2A \pm 0.2$ and maximum output voltage during 'Timer' charge is $29.5V \pm 0.2$ and during 'Float' charge is $27.6V \pm 0.3$. The charger has a current limiting, overvoltage, overload, and reverse polarity protection circuitry. The charger is 'CE' and 'UL' marked and complies with the Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU.
- If Rechargeable Floodlight overheats during charging immediately disconnect it from the charger. Allow the unit to cool. **DO NOT** operate the unit or try and charge it until you have inspected it. Once cool and only in a safe area remove the front cover and visually inspect the batteries - see page 10
- If batteries go into deep discharge state it will cause permanent damage.

DURING USE

- Having checked that the Floodlight is safe for use and has no defects, it can be carried to the area in which it is required.
- If the Floodlight gets damaged during use it must be immediately moved to a safe area for inspection and test.
- Correct use of the Floodlight and any fixing systems supplied with it should help to ensure that it is not damaged.
- If you would like more information on ancillary products, please contact the Sales Team on +44 (0)333 240 6111.

Power Switch

- The piezo-electric switch is positioned at the top of the unit, next to the LED indicator, as shown below:



- 1) First Press: **ON**
- 2) Second Press: **BOOST**
- 3) Third Press: **OFF**

Switch

- A few seconds after the floodlight has been turned off the LED's will flash to confirm to internal electronics are switched off

Battery Level Indicator

- The Floodlight's LEDs will flash three times to indicate low battery & the LED's will reduce to 25% output to allow enough light & time to remove the floodlight from the hazardous area and recharge it.
- The floodlight will continue to flash 3 times approx. every 5 mins to further remind you that it needs to be recharged

AFTER USE

Take the following steps after the light has been taken out of the EX area:

- The floodlight should be fully charged immediately after full usage or prior to being placed into storage for any period of time.
- Clean the unit with a damp cloth (do not use detergents or solvents).
- Change the protective film or guard if light is being obscured or the Floodlight is damaged.
- Have a visual check on the unit (e.g. integrity of seal and tightness of parts).
- Let the unit dry in open air if necessary.
- The operator is responsible for keeping up to date record of the condition of this equipment according to EN/IEC 60079-14.

STORAGE

The following procedure for storage must be followed to avoid permanent loss of battery capacity

- The floodlight should be fully charged prior to being placed into storage for any period of time.
- Floodlight should be stored at 20°C or below (10°C is beneficial) in a low humidity environment (RH<65%) if possible.
- Even when not in use the batteries will continue to discharge due to the self-discharge characteristics of the battery technology.
- Floodlights held in storage should be re-charged **every 3 months**.
- Charging the floodlight less than a full charge will reduce the useful life of the battery.
- Failure to recharge the floodlight every 3 months even when not in use could cause the batteries to go into deep discharge.
- If the floodlight has been stored for longer than 3 months without being charged then perform a battery inspection as per page 10, if it passes then proceed to charge the floodlight following instructions on page 5

MAINTENANCE

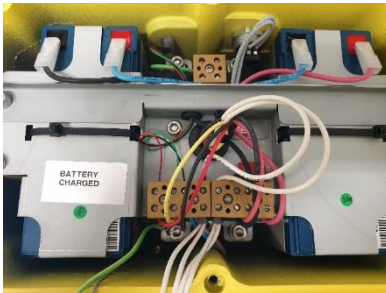
The following procedure should be taken in case the light needs to be repaired:

- Maintenance may be carried out only outside the EX area.
- Allow the Floodlight to cool before carrying out any maintenance work.
- Basic repairs can be carried out by a competent Complex electrician in accordance with the detailed instructions – available on request.
- Only original spare parts from SA Equip should be used. The use of any other parts will invalidate any warranty and could compromise the safety and functionality of the Floodlight. (Please note that there are no components in this unit which can be repaired by using glue, silicone or any other similar method).
- The dissipation feature (antistatic) on the Protective Film and Shield may be damaged because of external affects like solvents or chemicals or mechanical stress. If the surface of any of these is damaged in one area greater than 100 cm² the part has to be changed. The surface resistance of the transparent parts has to be between 1 MΩ and 1 GΩ.
- Maintenance instructions, exploded-view diagram and spare parts list are available on request.
 - SA Equip offer a full repairs service. Contact the SA Service Centre on +44 (0)333 240 6111 for more details.
- Tests and records of repairs are to be done according to EN/IEC 60079-19 before the repaired unit is back in operation. The following tests should also be carried out to ensure safe operation of repaired equipment:
 - Operational test
 - Test of expected use (vibrations, shaking)
- Further information can be found in the following regulations: EN/IEC 60079-14 EN/IEC 60079-17 and EN/IEC 60079-19
- Disposal of packaging, Floodlight unit, old batteries and LED assemblies should be carried out in accordance with national regulations.

BATTERY INSPECTION

Important

- If the Rechargeable Floodlight has been operating incorrectly such as:
 - Overheating during charging
 - Not lasting long enough when fully charged
 - Not reaching full charge
- Then the battery **MUST** be inspected before using the Rechargeable Floodlight. Follow these steps to inspect the battery:
 - A. Lay the SARF300 with the LEDs facing up
 - B. Remove the 6 screws holding the front lens on
 - C. Lift the front lens and place beside the body without damaging the wires
 - D. Visually check carefully for:



1. Any signs of corrosion
2. Swollen Batteries
3. Damaged Batteries
4. Any leakage from the batteries

If you see any evidence of any of these then the batteries will need to be replaced.

Please contact SA Equip - 0845 844 4000 or info@saequip.com for advice.

- E. The front of the lens can now be reassembled to the SARF300 body
- F. Do not overtighten screws

TROUBLESHOOTING

Fault	Action	
1. GENERAL		
Light's main LED is blinking	1.1.1	This feature is to show the SARF300's batteries are low - Charge the batteries for a full charge duration
Boost mode isn't working	1.2.1	Replace the power supply
	1.2.2	Replace the piezo switch
Light not switching on	1.3.1	Check the batteries are charged
	1.3.2	Check the internal fuse (red block) for continuity
	1.3.3	Check the internal wiring is correct.
Do you have to have the charging cap in place to operate the light, and why?	1.4.1	Certification requires that the socket cap is fitted when the unit is not being charged
One side of the lamp is not working	1.6.1	Check unit is wired correctly
	1.6.2	Replace light engine
2. BATTERY		
Battery not charging	2.1.1	Check charger is operating correctly (plug it in and see if its LED works)
	2.1.2	Check charging socket is not damaged
	2.1.3	Check power supply
Battery does not last for expected duration	2.2.1	Check batteries are fully charged
	2.2.2	Check charger is operating correctly
	2.2.3	Replace battery pack
If the floodlight overheats during charging	2.3.1	Disconnect charger and allow floodlight to cool
	2.3.2	Visually inspect the batteries following the guide on Page 10, replace batteries if required
3. CHARGER		
Charger not working	3.1.1	Check charger's connector
	3.1.2	Check charger LED indicator
	3.1.3	Check mains input
	3.1.4	Check mains plug fuse
	3.1.5	Check battery pack is wired correctly
	3.1.6	Check power supply

SPECIFICATION


Specification of the product range is as follows:

• Light Output	1,250Lm (Normal Output) 2,000Lm (Boost Output) 24 LEDs CRI 70+ 6000K+ 50°x50°
• Battery Duration	Up to 12 Hours (Normal Output) Up to 6 Hours (Boost Output)
• Type of Battery	2x 12V 8.5AH Sealed Lead Acid
• Charging Input	90-264 VAC
• Time to Charge	6 Hours
• Battery Lifetime	Up to 6 Years
• Max Recharge Cycles	500
• LEDs	24
• Weight	14.2 Kg
• Dimensions (WxDxH)	370 x 260 x 400mm
• Construction	Toughened glass lens Aluminium light housing Sturdy Aluminium Frame Waterproof and dustproof Easily adjustable head with vertical swivel Maintenance friendly – Easily access all components for replacing.
• Features	In-built deep discharge protection Piezo electric touch-activated switch 24V charger with 90-264V domestic UK/EU plug – for safe area use only.

CERTIFICATION

Each **SA LUMIN EX** LED Emergency Floodlight has a marking plate bearing the specific product information and certification details as follows:

- ATEX CERTIFICATE NUMBER: CML 17ATEX3323
- UKEX CERTIFICATE NUMBER: CML 21UKEX3171
- IECEX CERTIFICATE NUMBER: IECEX CML 17.0175
- CERTIFICATION MARKING:

 II 2 GD
 Ex eb mb ib IIC T4 Gb
 Ex tb ib IIIC T82°C Db
 Ta -20°C to +43°C

Gas Certification - II 2 G Ex eb mb ib IIC T4 Gb

Ex	Explosive Atmospheres Symbol - Indicates compliance with EX directives
II	Equipment Group II - Certified for use above ground (i.e. not mines)
2 G	Equipment Category 2 - Gas - Certified for Zone 1 classified areas
eb mb ib op is	Indicates protection methods used to achieve Ex gas certification
IIC	Gas Equipment Group IIC – Suitable for areas with IIA, IIB and IIC gases
T4	Temperature Classification (Gas) – will not exceed 135°C
Gb	Equipment Protection Level - High level of protection (Zone 1)

Dust Certification - II 2 D Ex tb ib IIIC T82°C Db

2 D	Equipment Category 2 - Dust Certified for Zone 21 classified areas
tb ib op is	Indicates protection methods used to achieve Ex dust certification
IIIC	Dust equipment group IIIC - Suitable for areas with IIIA, IIIB & IIIC Dusts
T82°C	Temperature Classification (Dust) - Surface temperature will not exceed 82°C
Db	Equipment Protection Level – High Level of Protection (Zone 21)

Ta = Certified for use in areas with ambient temperatures within range shown.

- AMBIENT TEMPERATURE: -20°C to +43°C
- INGRESS PROTECTION: IP66

DECLARATION OF CONFORMITY

Manufacturer: SA Equipment Ltd
Address: 10 Clifton View
East Mains Industrial Estate
Broxburn
EH52 5NE

EU Address: SA Equip Europe BV
Oud Camp 22
3155 DL Maasland
The Netherlands

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SA Equipment
10 Clifton View
East Mains Industrial Estate
Broxburn EH52 5NE
United Kingdom



This is to declare that Equipment Types:

SA LUMIN Rechargeable Floodlight

SARF300

Have been designed and manufactured in accordance with the following directives and regulations: **Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 - SI 2016 No. 1107 and 2014/34/EU (ATEX)**

Provisions of the directive and regulations fulfilled by the Equipment:

Ex II 2 G D
Ex eb mb  IIC T4 Gb
Ex tb  IIC T82°C Db IP66
Ta -20°C to +43°C

Notified Body for Type Examination:	CML B.V.
Approved Body for Type Examination:	Certification Management Limited
EC-Type Examination Certificate:	CML17ATEX3323
UK Type Examination Certificate:	CML21UKEX3171
Notified Body for production:	SGS Fimko Oy 0598
Approved Body for production:	SGS Baseefa 1180

2014/30/EU SI 2016 No. 1091. EMC
2011/65/EU SI 2012 No. 3032. RoHS

Harmonised/designated standards used:

- EN 60079-0:2018 Explosive atmospheres. Equipment. General Requirements
- EN 60079-7:2015 +A1:2018 Explosive atmospheres. Equipment protection by increased safety "e"
- EN 60079-11:2012 Explosive atmospheres. Equipment protection by intrinsic safety "i"
- EN 60079-18:2015 +A1:2017 Explosive atmospheres. Equipment protection by encapsulation "m"
- EN 60079-31:2014 Explosive atmospheres. Equipment and dust ignition protection by enclosure "t"

This declaration is issued under the sole responsibility of the manufacturer.

On behalf of the above named company, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives and regulations.

Signed

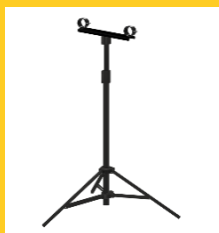


M Shimwell,
Managing Director

Issue 3 - 03/2022

WARRANTY

- The SA LUMIN EX Rechargeable Floodlight has a product warranty of 5 years from the date of delivery. The warranty does not include the battery. The warranty covers only materials and manufacturing defects.
- User abuse and/or failure to comply with the instructions above will invalidate the warranty and may also invalidate the certification of the Floodlight
- The information supplied in this User Manual does not in any way remove any responsibility from the user of the Floodlight.
- For more information please see our full Conditions of Sale, available on request.



COMPATIBLE WITH THE FOLLOWING SA Products:

SAFL/SB – Scaffold Bracket for SA LUMIN EX LED Floodlight

Quick-fixing bracket for attaching the SAFL onto a 48mm scaffold pole. Simply undo the fastener, and tighten to secure onto vertical or horizontal scaffolding. **IMPORTANT** – Always use a secondary safety.

SAFL/PS – Protective Shield for SA LUMIN EX LED Floodlight *(shown)*

SAFL/PS-C – Protective Shield for SA LUMIN EX LED Compact Floodlight

Fix this anti-static polycarbonate shield protector in front of the Floodlight lens to limit abrasion when used in a blasting environment. Ensure surface is not damaged beyond the limits given in page 7 of this manual. Wipe with damp cloth only.

SAFL/PF – Protective Film for SA LUMIN EX LED Floodlight *(shown)*

SAFL/PF-C – Protective Film for SA LUMIN EX LED Compact Floodlight

Anti-static removable film designed to help prevent build-up of paint damage on the lens. Fix into place with the two black adhesive strips, and replace when necessary.

SAFL/TS – 2m Tripod Stand for SA LUMIN EX LED Floodlight *(shown)*

SAFL/MB – Magnetic Bracket for SA LUMIN EX LED Floodlight



Bringing you



Heat



Light



Air



Power

For more information about
SA Products and Services
please contact our customer
support team on:

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