



**OVER 8000 SPARKIES
HAVE MADE THE SWITCH**



LAE[®]_{AU}

LAE 2.5W-5W LED Emergency Kit Self-Testing 10-90V Output

Application

- Emergency kit with self-motion testing, used for connecting driver of led lighting.
- For LED Lighting with driver rated:output voltage10-90Vdc and output current is under 1.5A.
- SELV for output voltage
- Plug-in Lithium Iron Phosphate battery
- 3 years guarantee electronic
- 3 years guarantee battery
- With Self-Test series

Properties

- Non-maintained operation
- 1.5h - 3h rated duration
- Compatible with all dimmable and non-dimmable constant current LED driver
- Automatic shutdown of output if LED load is out of range
- Constant power output, output current self-adjustable
- Electronic charge system
- Deep discharge protection
- Short-circuit-proof battery connection
- Open-circuit-proof
- Polarity reversal protection for battery

Technical Date

Rated supply voltage	220~240VAC
Mains frequency	50/60Hz
Mains input current, min	25mA
Mains input current, max	38mA
Input power in mains operation, min	3.5W±10%
Input power in mains operation, max	4W±10%
Battery charge time	16h
Ambient temperature ta	0°C~45°C
Max. Casing temperature tc	60°C
Type of protection	IP20

1.All specifications are typical on the 230/240VAC unless otherwise stated.

2.The emergency function test must be performed when a battery is fully charged for 16 hours.

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Battery Discharge & Charge Specification

Parameter	Min.	Typ.	Max.	Note
Battery discharge current	300mA	-	400mA	* Measured at 6.4V input from batteries and "EM 2.5W"
Output voltage	10Vdc	-	90Vdc	
Output constant current	13mA	-	185mA	
Emergency power	2W	-	2.6W	

Parameter	Min.	Typ.	Max.	Note
Battery discharge current	500mA	-	610mA	* Measured at 6.4V input from batteries and "EM 3.5W"
Output voltage	10Vdc	-	90Vdc	
Output constant current	30mA	-	250mA	
Emergency power	3.3W	-	3.9W	

Parameter	Min.	Typ.	Max.	Note
Battery discharge current	700mA	-	820mA	* Measured at 6.4V input from batteries and "EM 5W"
Output voltage	10Vdc	-	90Vdc	
Output constant current	34mA	-	380mA	
Emergency power	4.6W	-	5.2W	

Item Code	Batteries	Emergency Power	Emergency Duration	Charge Current	Charge Time
EEC30L-ST-2.5W-3H	6.4V/1500mAhLiFePO4 battery	2.5W	3h	200mA±10%	16h
EEC30L-ST-3.5W-2H	6.4V/1500mAhLiFePO4 battery	3.5W	2h	200mA±10%	16h
EEC30L-ST-5W-1.5H	6.4V/1500mAhLiFePO4 battery	5W	1.5h	200mA±10%	16h

Note: All specifications are typical at 25°C unless otherwise stated.

Battery

Comply with UN 38.3 and IEC 62133 (safety testing) protected against over charge, over discharge, over current protection, short-circuit and over current.

- (1) Max. temperature of battery is 60°C
- (2) Change current of the controlgear : 135mA-165mA Change limit of the controlgear: 3.55V-3.65V
- (3) Discharge current by the controlgear : 560mA-600mA Discharge limit by the controlgear: 2.5V-2.6V
- (4) Temperature rating to provide the controlgear performances: 0-45°C
- (5) Protection of battery : Over discharge and Over charge protection

Storage

- Batteries should be stored within the specified temperature range in low humidity conditions. Optimal storage conditions are:
 - Temperature : -20°C to +40°C
 - Humidity: 45% - 85%
- Avoid atmosphere with corrosive gas
- It is recommended to disconnect the battery before storage or delivery
- Battery should be charged once in three months in order to keeping it in initial performance

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Description

The series is non-maintained mode design, operate 220-240Vac input range, and provide constant current 200mA output.

These units will provide 5W maximum output power at emergency mode.

The system shift to emergency mode when the mains fails or the mains is less than 65% of rated voltage.

LiFePO₄ Battery

- High-temperature grade battery cells
- 6.4V High temperature grade LiFePO₄ battery
- Male/female socket for simple connection

Case temperature range to ensure 4 years design life

0°C to +55°C

Battery voltage

3.2V per cell

Capacity 18650

1500mAh

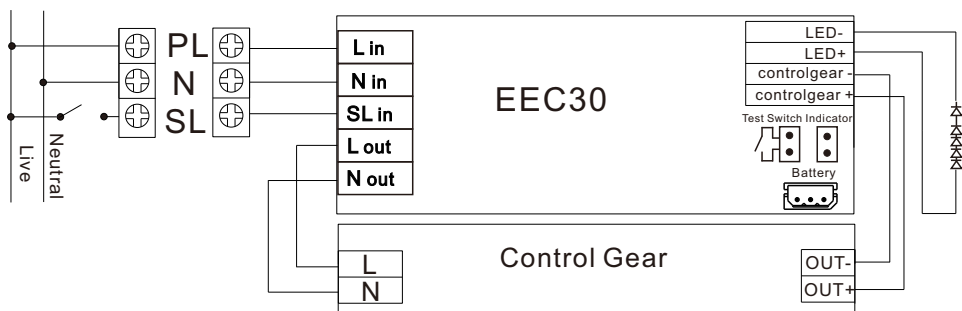
Service Life

Average life-time 50,000 hours under rated conditions with a failure rate of less than 10% for the emergency converter as rated power. Average failure rate of 0.2% per 1000 operating hours.

Wiring Diagram

The output current of LED driver is under 1.5A.

220-240V
50-60HZ



With the following cases, the indicator will be off

1. Mains power off, the light goes into emergency mode
2. Battery is disconnect when mains power on

3. Battery be connected again after disconnected when mains power on

(Attention: In that case, please re-connect the battery when mains power off, and then re-set the AC mains power)



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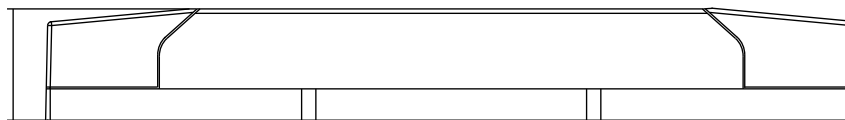
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Mechanical Outline

unit:mm

24,5



unit:mm

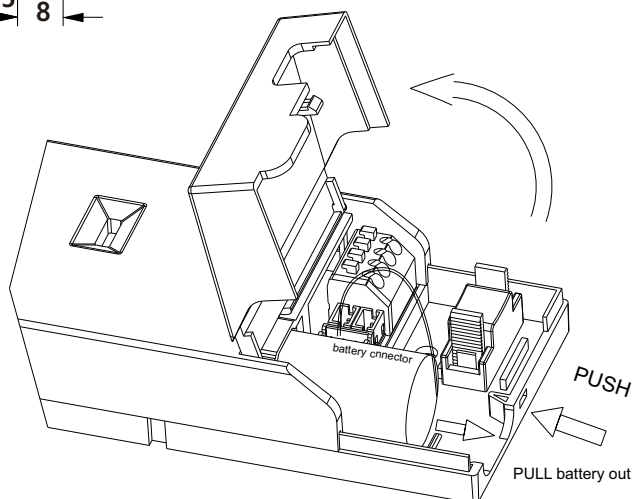
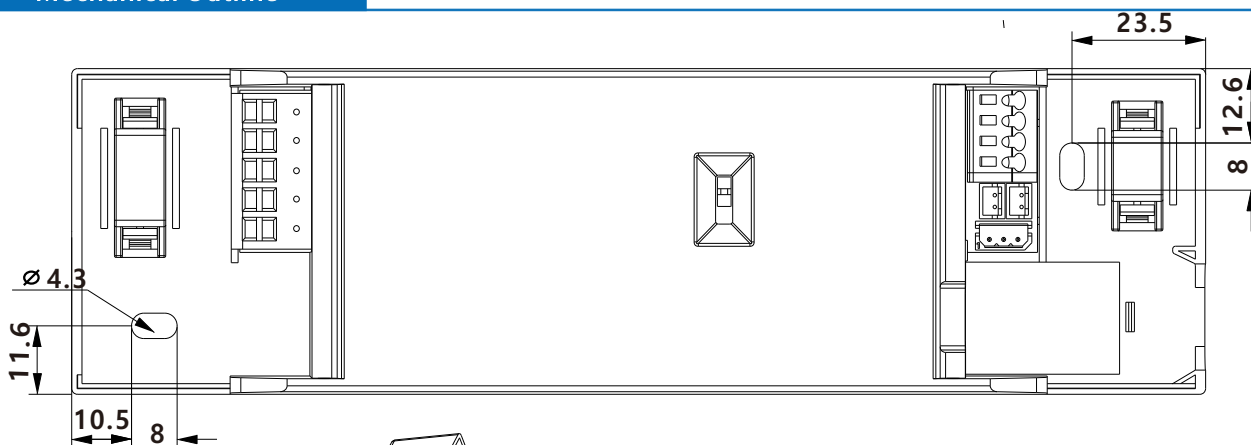


EEC30

55,2

199

Mechanical Outline



Battery replacement steps:

1. Open the top cover first
2. take off the battery
3. setup the battery
4. Close up the cover

Remark:

- The battery should be changed when the battery be failed on charging's ability
- The battery is replaceable
- Building insulation may abut the sides of the led module



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Testing/Commissioning(self test)

Functionality of the test switch

- 1) A short press (>1s) on the button start a function test lasting 5 seconds (The battery's capacity should be more than 5%=charging 30mins)
- 2) Holding down the button(>10s) resets the timer(System-resets)

Functional test

The 5 second long, each 7 days' function test serves to check the functionality of the emergency unit, the batteries and LED module.

Notice.

-If a mains supply failure occurs whilst a functional test is in progress, the test shall be postponed and the system shall enter emergency operation. Following restoration of the mains supply, a postponed functional test shall re-commence automatically as soon as conditions permit.

Duration test (EN)

- Initial duration test: The test will be carried out exactly 24 hours later after the initial installation.
- Half year duration test: The test will be carried out on each 180-182days.

Notice.

- A duration test shall only be started when the battery supply is fully charge if a mains supply failure occurs whilst a duration test is in progress, the test shall be postponed and the system shall enter emergency operation. Following restoration of the mains supply, a postponed duration test shall re-commence automatically when the battery supply is fully re-charge

-The indicator will be slow flashing Green within 5 days if the duration test be carried out success fully.

Indicator LED

System status is locally by a bi-color indicator LED.

LED Indication	Status	Commentary
Permanent green	Standby, System OK	Mains Operation, battery is charged
Fast flashing green (0.25s on – 0.25s off)	Function test underway	Function test underway
Slow flashing green (1 s on – 1 s off)	Duration test underway	Duration test underway
Permanent Red	Lamp failure	Open Circuit or Short Circuit or LED failure
Fast flashing red (0.25 s on – 0.25 s off)	Battery capacity failure	Battery failed duration test
Slow flashing red (1 s on – 1 s off)	Battery fault	Incorrect battery voltage or Short Circuit or Open Circuit
Green and red off	Battery Operation	Emergency mode: Mains disconnected or Mains failure

NOTICE

Fault status:

If an error is detected, the indicator LED switches to RED. If the error has been corrected please re-connecting the battery after the mains power off, the indicator LED immediately switches back to GREEN when mains power on.

NOTICE

Battery failed duration test:

After an exchange of the battery and holding down the button (>10S) reset the timer, the indicator LED switches to GREEN.



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Status Indication Green LED

- A green LED indicates that charging current is flowing into the battery
- Plug connection 1



Test Switch

- For connection to the emergency lighting unit
- For checking the device function
- Plug connection



Status Indication Green LED

- Plug connection 2
Recess this panel into ceiling and clip the green LED indicator light into it. then user can see the light under the ceiling.

Panel Ø24.5mm, cutout Ø20mm



Compliance

Safety Category	Countries	Standard
SAA	AUS	AS 61347.2.7:2019

EMC Category	Countries	Standard
EMC	Europe	EN 55015
C-TICK(EMC)	Australia	AS/NZS CISPR 15

Rohs Compliance

Our products comply with the European Directive 2011/65/EU, calling for the elimination of lead and other hazardous substances from electronic products.