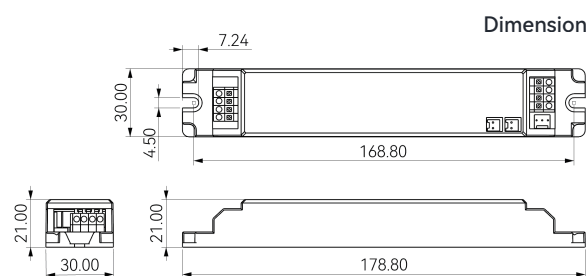


LED Emergency converter and battery YH18 selftest series



○
White
Size: 178.8x30x21 mm



Product description

This self-test LED emergency converter is designed to convert standard LED luminaires into emergency lighting systems. It features an integrated relay for control of the standard LED driver and is compatible with luminaires using external drivers. The unit operates with lithium iron phosphate (LiFePO₄) batteries and is supplied with a test switch and charge indicator for system monitoring.

Protection & Limitations

- 5-year warranty
- Deep discharge protection
- Reverse polarity protection (battery connection)
- Ambient temperature (ta): 0 ... +50°C
- Protection class: IP20 (for installation within luminaire enclosure)
- Supports maintained or non-maintained operation depending on wiring configuration
- Not suitable for high-risk task area lighting

Relevant standard

- IEC 61347-1:2015+A1:2021
- IEC 61347-2-7:2012+A1:2019+A2:2022
- EN 55015
- EN 61547
- EN 61000-3-2
- EN 61000-3-3
- EN 62493
- AS/NZS 60598-2-22
- AS2293.3

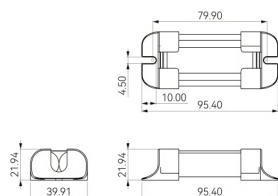
Technical data

- Input rated voltage: 220-240V AC, 50-60Hz- AC input current: 50mA- AC Input power: 3.5W max
- Power factor: >0.5
- Charge time : 24 hours
- Charge mode: trickle re-charging on battery.
- Output emergency power 2-6 wattage DC10.. .50V, DC50-300V, Constant power output.
- Output voltage DC10...50V(SELV), DC50-300V 350V max
- Surge : L-N 1KV
- Compatible luminaire input : 200Vdc/0.5A/60W max
- Battery capacity (LiFePO4) 1600mAh, 2200mAh, 3200mAh, 4500mAh
- Battery Charging Current: 0-350mA
- 3 hours rated duration
- Max. casing temperature to 80°C- Lumen Factor: 140lmWattage
- Reinforced insulation between mains supply and the battery circuit.
- This unit can recharge the battery normally after reconnecting of battery.

Ordering data

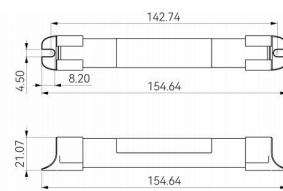
Type	Mode	Battery	Duration
YH18-2031050Li	DC 10-50V 2W	LiFePO4 6.4V1.6AH	3 Hours
YH18-203H300Li	DC 50-300V 2W	LiFePO4 6.4V1.6AH	3 Hours
YH18-3031050Li	DC10-50V3W	LiFePO4 6.4V2.2AH	3 Hours
YH18-303H300Li	DC 50-300V3W	LiFePO4 6.4V2.2AH	3 Hours
YH18-4031050Li	DC10-50V4W	LiFePO4 6.4V3.2AH	3 Hours
YH18-403H300Li	DC 50-300V4W	LiFePO4 6.4V3.2AH	3 Hours
YH18-6031050Li	DC10-50V6W	LiFePO4 6.4V4.5AH	3 Hours
YH18-603H300Li	DC 50-300V6W	LiFePO4 6.4V4.5AH	3 Hours

Battery size



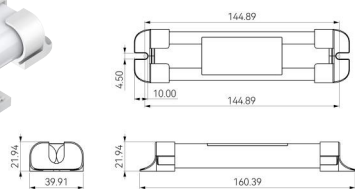
YHBL-2-1.6B

95.4x39.9x21.9mm 3.76x1.57x0.86"



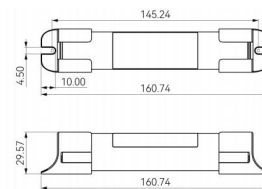
YHBL-2-1.6Z

154.6x21.8x20.1mm 6.09x0.86x0.79"



YHBL-2-3.2

160.4x39.9x21.9mm 6.32 x1.57x0.86"



YHBL-2-4.5

160.7x30.6x29.6mm 6.33x1.20x1.17"

Battery technical data

Battery model	Battery voltage	Battery capacity	Charge Operating Temperature	Discharge Operating Temperature	Max short term temperature	Type of cells	Number of cells
YHBL-2-1.6B	6.4V	1600mAh	0...+65°C	-20...+65°C	75°C	18650-1600mAh	2cells 2S1P
YHBL-2-1.6Z	6.4V	1600mAh	0...+65°C	-20...+65°C	75°C	18650-1600mAh	2cells 2S1P
YHBL-2-2.2	6.4V	2200mAh	0...+55°C	-20...+55°C	65°C	18650-2200mAh	2cells 2S1P
YHBL-2-3.2	6.4V	3200mAh	0...+65°C	-20...+65°C	75°C	18650-1600mAh	4cells 2S2P
YHBL-2-4.5	6.4V	4500mAh	0...+55°C	-20...+55°C	65°C	26700-4500mAh	2cells 2S1P

*2S1P S:Series connection P:Parallel connection

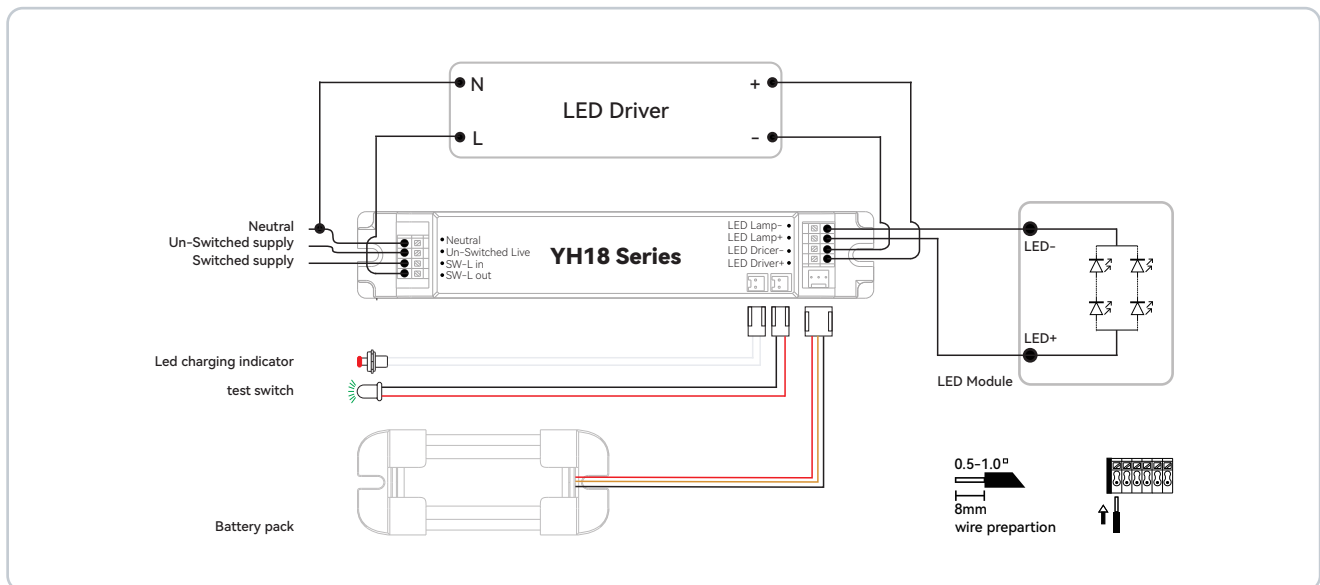
Battery Declaration

- Batteries' lifetime is 5 years. If you are using or stocking the batteries for 5 years, please replace the batteries
- The batteries can not be charged for 5000 hours consistently,It should be discharged for once at least, during the 5000 hours charging time.

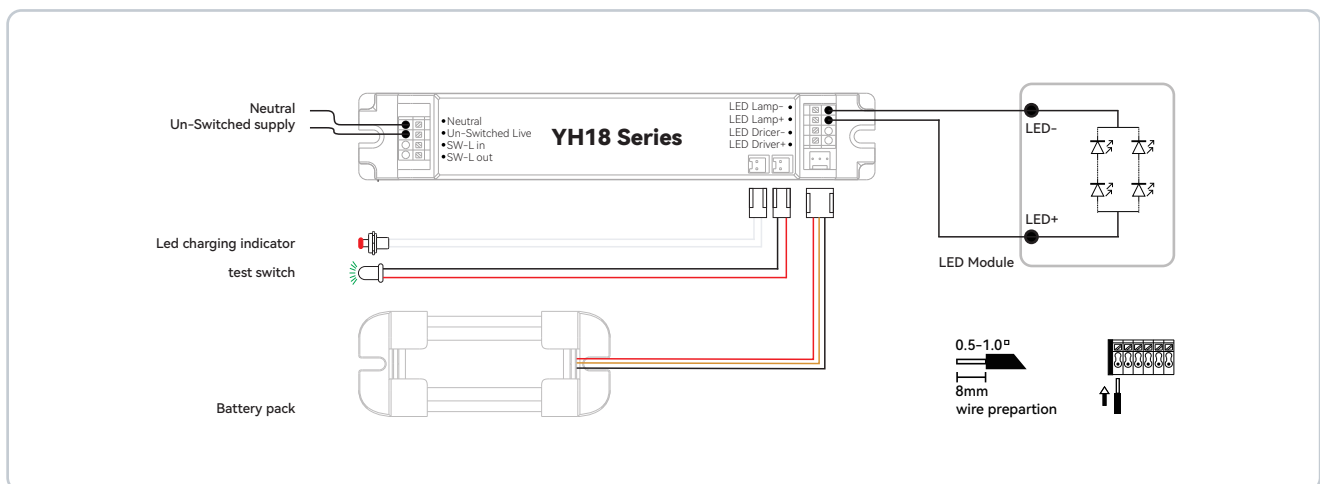
Install

- It should be built in lighting fixture.
- Only professional people (e.g. electrical Engineer) can wire it.
- Please confirm that the electrical parameters of this product match with the luminaire.
- Please check the wiring method carefully before installation.
- Please power off mains supply before installation, and confirm the wiring is correct, then connect the battery, the last step is to turn on mains supply.

Wiring diagram (Maintained)



Wiring diagram (Non-maintained)



SelfTest

The emergency kits carry out self-tests automatically to ensure its functionality. The self-test includes 3 types of tests:

1.Initial test

- As soon as mains supply is connected, the emergency kit will carry out a 3-seconds functional test automatically.
- In case of a failure, the LED will turn permanent red. Otherwise, the charge mode will start.

2.Functional test

- Refers to charging, discharging and the functioning of load.
- Carry out for 10 seconds automatically every 30 calendar days.

3.Duration test

- Refers to the test of batteries capacity.
- Carry out every 180 calendar days.

Rest mode

Rest mode can be initiated during emergency mode by pressing test switch longer than 3 seconds.

The rest mode will be exited automatically after reconnect AC mains.

Please note

If mains supply is off during self-test period, emergency conversion module would terminate self-test immediately and go into emergency mode.

Self-test is under the regulation of EN62034.

Explanation of LED indicator

Cutline	Color	LED indication	Status	Comment
	Green	Permanent green	Charging Mode Fully Charged	AC mode
	Green	Fast flashing green (0.1 sec on, 0.1 sec off)	Function test underway	/
	Green	Slow flashing green (1 sec on, 1 sec off)	Duration test underway	/
	Red	Permanent red	Load failure	Open circuit/ Short circuit Led failure (emergency mode)
	Red	Slow flashing red (1 sec on, 1 sec off)	Battery failure	Battery failed the duration test or functiontest/No battery
/	/	Green and red off	DCmode	Battery operation (emergency mode)

Test switch

The test button is a open switch, if you press it, it connects, and then you release it, it cuts off automatically. When you are doing the daly maintenance, if you press the test button, the emergency driver goes into emergency mode, if you release the button, the emergency driver will go back to normal mode.



Test switch

LED indicator

It can reflect charging or not charging. LED charging monitor willbe light if battery is connected while it willbe off without battery connecting



LED indicator