

# Installation & Wiring Instructions

## TLP/1S High Voltage Emergency Conversion Kit



**PLEASE READ** THESE INSTRUCTIONS BEFORE COMMENCING INSTALLATION & LEAVE WITH END USER

### Description:

The Liteplan range of TLP/1S modules are designed to convert a wide range of high voltage LED types. The TLP/1S will convert most standard LED luminaires and arrays between 50V and 300V. This makes the TLP/1S suitable for linear luminaires, high voltage boards and even some mains voltage lamps (subject to testing). The modules are designed to generally be installed by breaking into the low voltage connection between the mains driver and the LEDs and allows the LEDs to be operated as normal under mains healthy conditions and operated at reduced light output in an emergency.

The module automatically adjusts the output LED current to provide the best match between the battery and the load, providing maximum illumination whilst ensuring full battery duration and are compatible with a wide range of lighting. The unit will recharge the batteries after the test of clause 22.3 of BS EN 61347-2-7:2012.

The product features battery temperature protection in accordance with IEC 61347-2-7: 2012+A12:2022.

### Specification:

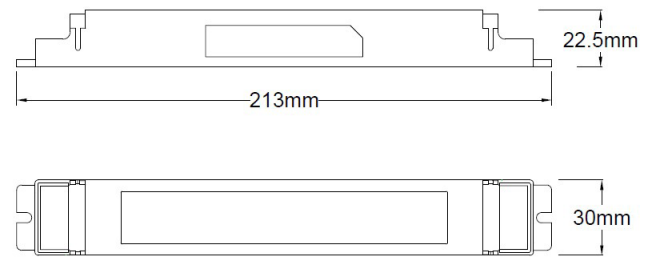
Input Voltage	230-240 Volts AC 50/60 Hz
Power Rating (Charging)	2.5W 15mA $\lambda = 0.70$
Power Rating (Standby)	1.3W 9mA $\lambda = 0.60$
Insulation between supply & battery	Double Reinforced
Duration	3 hours
Maximum Module Tc	70°C
Minimum Battery Tc	0°C
Maximum Battery Tc	55°C
Recharge Period	24 Hours
Battery Type	3.2V 4.8Ah LiFePO <sub>4</sub>
Charge Current	225mA nominal
Discharge Current	900mA nominal
Charge Voltage Limit	4.0 Volts
Discharge Voltage Limit	2.4 Volts
Ingress Protection	IP20
Recharge Period	24 Hours
Module Size (L x W x H)	213mm x 30mm x 22.5mm
Module Fixing Centers	207mm
Module Weight	0.11Kg

#### Battery Details (mm)

Stick 230mm x 24mm x 22mm FC = 220mm

Remote 220mm x 32mm x 34mm

Battery Weight	0.14Kg
Cable Entry Size	0.5mm - 1.5mm



Fixing Centres 207mm

### TLP/1S

Rated - 2.4W

Rated - 48-7mA

Voltage Range 50 - 300 Volts

Open Circuit Voltage (U-OUT) = 350 Volts

### Warning

**Avoid running the LED mains driver and emergency pack without the load connected. Failure to do so may result in damage to the LED array**

### Important

It is recommended that the module is installed by a competent person ensuring the installation complies with the necessary standards. Liteplan accept no responsibility for injury, damage or loss, which may arise as a result of incorrect installation, operation or maintenance.

The conversion requires an unswitched supply for charging the battery and a switched supply if the unit is being used for maintained operation.

**ISOLATE BOTH MAINS SUPPLIES AND DISCONNECT THE BATTERY BEFORE INSTALLATION OR MAINTENANCE.**

### Installation

When converting a luminaire observe the following points:-

1. Ensure that the module and battery pack will operate within their temperature ratings at their chosen location.
2. Wire the module & battery into the luminaire as per wiring diagram on Pg2.
3. Ensure that the Permanent Live & Switched Live feeds are connected correctly.
4. Arrange the wiring to avoid running the 240 Volt AC cables next to the modules output to the LED to obtain the best EMC results.
5. Requirements for 'F' markings must be observed.
6. Identify clearly the NEW Un-switched supply.
7. Ensure the LED Charge Indicator is clearly visible in every day use.
8. If fitted within a metal enclosure, connect earth terminal to metal gear tray for improved EMC.
9. This module is not intended for use in luminaires for high-risk task area lighting.
10. This module is protected against battery polarity reversal.
11. Do not connect the battery until an assured permanent supply is present.

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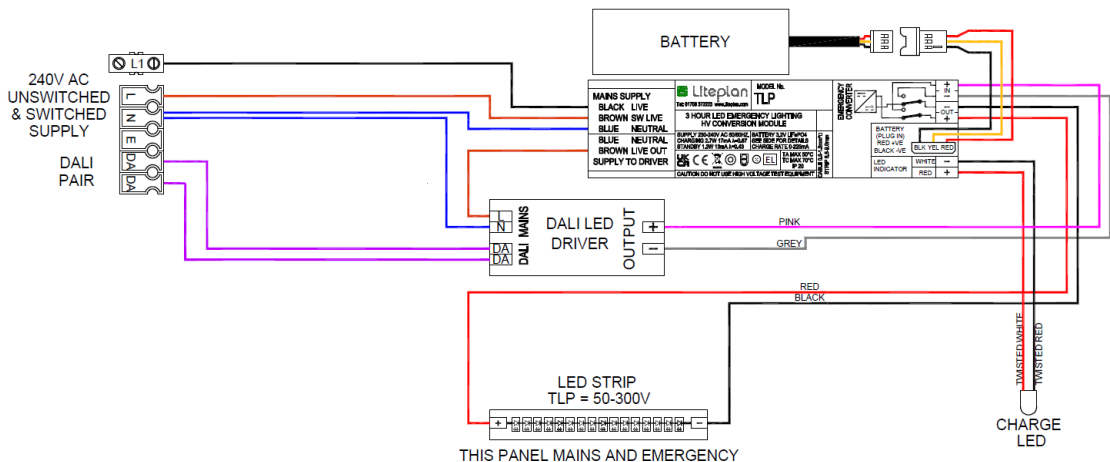


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TLP/1S High Voltage  
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Typical  
Conversion  
Wiring Diagram



Testing/Commisioning:

- Ensure the load is connected.
- Connect the battery.
- Switch on the Unswitched Supply - Check the Charge LED illuminates.
- Switch on the Maintained Supply - Check the LED illuminates as normal.
- Switch off the Maintained Supply.
- Switch off the Unswitched Supply - Check the Charge LED extinguishes and the load LED illuminates at a reduced output.
- Enter the commissioning date on the Battery Pack. Switch on the Unswitched Supply
- If the battery case temperature falls below 0°C or goes above 55°C the charger will cut-off and the charge LED will go out.

Luminaire Ref/Location			In Case of difficulty, contact the Installation Engineers:-							
			Tel:							
Full Recharge Time 24 Hours			Duration 3 Hours				Lamp Type - LED			
ROUTINE TEST RECORD										
	Year 1		Year 2		Year 3		Year 4		Year 5	
Monthly Test	Signed	Date	Signed	Date	Signed	Date	Signed	Date	Signed	Date
Functional										
Functional										
Functional										
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Functional										
Three Hour										