

# Installation & Wiring Instructions

## D2N/2 High Output DALI-2 Self-Test Conversion Kit



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

### Description:

The Liteplan D2N/2 DALI-2 self-test emergency lighting modules are designed to convert a wide range of LED types with one main version. The D2N/2 is the popular choice for converting most standard LED luminaires and arrays between 10 and 55 Volts.

The modules are designed to 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.

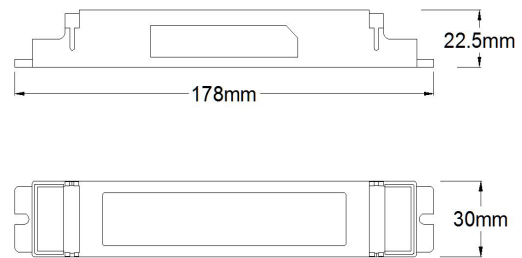
The module automatically adjusts the output LED current to provide the best match between the battery and the load, providing maximum illumination whilst ensuring full battery duration and are compatible with a wide range of lighting.

The 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) *	4.0W 21mA - $\lambda = 0.79$
Power Rating (charged) *	1.4W 12mA - $\lambda = 0.48$
Duration	3 hours
Ambient Temperature	0°C to 35°C
Max Module Tc	70°C
Battery Temp. Parameters	0°C to 55°C
Terminal Blocks	0.5-1.5mm <sup>2</sup> Push Fit
Battery Fuse	Internal
Battery Discharge Current	900mA Nominal
Discharge Voltage Limit	5V
Ingress Protection	IP20
Battery Pack	6.4V 3.8Ah LiFePO <sub>4</sub>
Charge Current	225mA Nominal
Recharge Period	24 Hours
Module Size (L x W x H)	178mm x 30mm x 22.5mm
Module Fixing Centers	172mm
Module Weight	0.1Kg
Battery Weight	0.202Kg
Battery Dimensions	158mm x 28mm diameter
Insulation between Supply & Battery	Double Reinforced

\* After its initial charge, the D2N/2 will spend 90% of its operational life in standby mode



Fixing Centres 172mm

### D2N/2

Prated - 5W  
I<sub>r</sub>ated - 400mA - 91mA  
Voltage Range 10 - 55 Volts  
Open Circuit Voltage (U-OUT) = 60 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. Fit the module & battery pack into the existing luminaire ensuring that they will operate within their temperature ratings.
2. If the module & battery pack do not fit integrally, then a remote conversion can be used. Ensure that the interconnecting loom is kept as short as possible.
3. Wire the module & battery into the luminaire as per wiring diagram on Pg2.
4. Ensure that the Permanent Live & Switched Live feeds are connected correctly.
5. Ensure that the DALI pair is connected to the DALI-2 operating system
6. Arrange the wiring to avoid running the 240 Volt cables next to the modules output to the LED to obtain the best EMC results.
7. Requirements for 'F' markings must be observed.
8. Identify clearly the NEW Un-switched supply.
9. Ensure the LED Charge Indicator is clearly visible.
10. If fitted within a metal enclosure, connect earth terminal to metal gear tray for improved EMC.
11. This module is not intended for use in luminaires for high-risk task area lighting.
12. This module is protected against battery polarity reversal.

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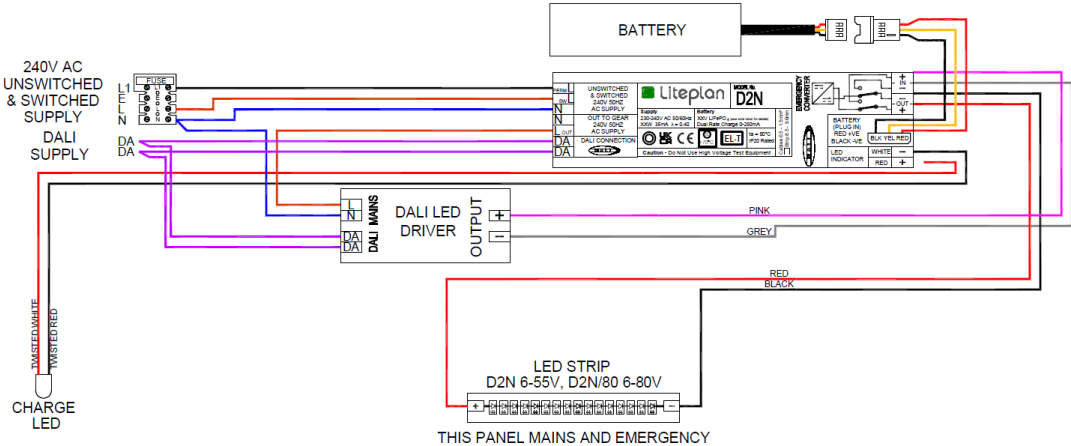


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Typical  
Conversion  
Wiring Diagram



LED Fault indication		
Green Solid	Battery Charging, no fault	On
Green Blink	Pre-Commissioning	2.0s on, 0.2s off
Green Flash	Function Test running	0.2x on, 2.0s off
Green Flash	Duration test running	0.2s on, 2.0s off
Red Blink	Battery Temperature fault	0.2s on, 3.8s off
Red Flash x1	Battery fault	0.5s on, 3.5s off
Red Flash x2	Lamp fault	2x 0.5s on, 2.5s off
No Indication	Fault	-
Red/Green Flash	Duration test timeout (after 7 days)	2.0s green, 0.2s red

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										
Functional										
Functional										
Functional										
Functional										
Functional										
Functional										
Functional										
Three Hour										