

### **DALI/SELF-TEST LUMINAIRES ONLY**

The luminaire will adopt a self-test (automatic test) mode if it is not connected to a DALI bus, or the DALI communication is missing. On completion of the self-commissioning check, the self-test program starts with the first function and duration tests being carried out after randomly generated delay times which will occur as shown below.

Delay time to initial function test randomly generated value between 0 and 7 days  
Delay time to initial duration test randomly generated value between 4 and 52 weeks

Subsequent function and duration tests occur after the test interval settings as follows:

Function test interval 7 days  
Duration test interval 52 weeks

DALI/Self-test luminaires will respond to DALI commands from a suitable control unit, and these commands can be used to initiate function and duration tests at prescribed times. The status flags for the luminaire are set after a test, for reporting and logging of the results.

#### **DALI /Self-test luminaire local bi-colour LED indicator status**

<b>Green LED</b>	<b>Permanently on</b>	<b>System OK/mains operation mode</b>
	<b>Slow flash</b>	<b>Duration test/commissioning</b>
	<b>Fast flash</b>	<b>Function test</b>
<b>Red LED</b>	<b>Permanently on</b>	<b>LED luminaire fault</b>
	<b>Slow flash</b>	<b>Battery/test failure</b>
	<b>Fast flash</b>	<b>Battery charging failure</b>

Slow flash – a flash every 2 seconds, Fast flash – a flash every 0.5 second

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## **Installation Instructions**

### **FUSION**

**FFD/M3, FFD/M3/DALI,  
FFD/230, FED/M3,  
FED/M3/DALI & FED/230**

## **LED Emergency Luminaire**

Please retain these instructions for future reference

## INTRODUCTION

Fusion LED emergency luminaires are designed to be recessed into a ceiling and are for use both indoors. They are available in mains only or 3 hour maintained emergency operation, with the maintained version having Self-test and DALI options. The Fusion is also available with a 'hanging blade' exit sign legend panel.

## SPECIFICATION

Supply Voltage: 220 - 240VAC, 50Hz

Supply Current: <30mA

Nominal Power: 3W

Ambient temperature range: 0°C to 25°C

Environmental protection: IP65 (Flush mounted), IP20 (Exit Sign)

Photometric data see:

Battery: 3.6V subC Nickel Cadmium 1500mAh

Fusion LED luminaires use long life white LED's as a non-user replaceable light source, so the light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.



## INSTALLATION

The luminaire must be installed in accordance with current building and wiring regulations by a qualified person and suitable tests on the completed luminaire must be carried out to ensure compliance to relevant standards.

1. Undo the 2 screws and remove the diffuser, undo the screw on the gear tray and by using a small screwdriver un-hook the gear tray from the base where indicated by the arrows.
2. Create a cut-out in the ceiling of L380mm x W135mm, and pass the luminaire through the hole. Adjust the retaining arm screws until the luminaire is securely located.
3. Remove a suitable cable entry knock-out and fix the luminaire to the mounting surface using screws. Maintain IP rating with suitable fixings.
4. Bring the supply cables through the cable entry and connect to the terminal block as follows: Ls is for switched maintained supply if required, L, N & E are for the permanent mains supply or for the supply for the 230V central battery version (for DALI luminaires connect the DALI bus wires to the Da terminals). Note: if Ls is not connected the luminaire will operate in non-maintained mode.
5. Connect the battery lead, and fill in the commissioning date on the battery label.
6. Replace the gear tray ensure it 'clicks' back into place, and refit the gear tray screw.
7. Replace the diffuser and the screws.

## OPERATION

The luminaire should be connected to the mains supply for a minimum of 24 hours before operating in emergency as the batteries need to be fully charged before they will provide their full rated duration. (NOTE DALI/Self-test luminaires have a self-commissioning mode which charges the battery, does a full duration test and then re-charges the battery).

## TESTING

BS5266 requires that all emergency lighting installations should be regularly tested and the results recorded. An appropriate test schedule is detailed below which will cover the recommended minimum assessments:

Monthly - luminaires should be put into emergency lighting operation for a period not exceeding one quarter of the rated duration. Each luminaire should be inspected for satisfactory LED starting and stable operation. When the normal mains supply is re-instated the maintained luminaire battery charge indicator should be on.

Annually -the monthly test should be carried out, but the luminaire should be operated for its full rated duration.

## NOTE:

1. Ideally tests should be carried out at times where the building will not be re-occupied until the batteries have fully re-charged Alternative methods can be used for automatic testing luminaires (see over for details).
2. Failure to achieve rated duration after the corresponding recharge period indicates that the batteries have reached the end of their useful life and they should be replaced immediately.

## SAFETY INFORMATION

The Fusion luminaires feature double/reinforced insulation. Batteries have a typical life expectancy of four to five years. Old batteries should be handled by specialist waste disposal experts, and under no circumstances should they be pierced or incinerated.