

## Fault rectification on DALI emergency modules.

Liteplan DALI Emergency modules should usually show a green charge healthy indication, confirming that all is well. Green flashes will usually indicate a test in process, whilst any fault indication will show up as red.

If you think there is a fault then you should establish which module and fault you have. Our DALI modules are S/DLP or DLP for single point LED's and the NDA or DNA for a converted fitting.

There are 3 fault indications on the modules which are Battery/test failure (slow red flash), Lamp (double red flash or constant red) and Circuit failure (rapid red flash) faults.

The various indications are:

		DLP	MST	Model NDA	NES	DNA
<b>LED Indicates</b>						
Green Solid	Mains On No Fault	●	●	●	●	●
	48h Pre-Commissioning	Not Applicable	Not Applicable	Not Applicable	Not Applicable	● 2.0s On 0.2s Off
Green Flash	Function Test In Progress	● 0.1s On 0.1s Off	● 0.2s On 2.0s Off	● 0.2s On 2.0s Off	● 0.1s On 1.0s Off	● 0.2s On 2.0s Off
	Duration Test In Progress	● 1s On 1s Off	● 0.2s On 2.0s Off	● 0.2s On 2.0s Off	● 0.1s On 1.0s Off	● 0.2s On 2.0s Off
	Duration Test Passed	● 4.0s On 1.0s Off for 7 Days	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Red Solid	Lamp Fault	●	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Battery Fault	● 1s On 1s Off	● 0.5s On 3.0s Off	● 0.5s On 3.5s Off	● 0.5s On 3.0s Off	● 0.5s On 3.5s Off
Red Flash	Lamp Fault	Not Applicable	● 2x 0.5s On 2.0s Off	● 2x 0.5s On 2.5s Off	● 2x 0.5s On 2.0s Off	● 2x 0.5s On 2.5s Off
	LED Driver Fault	● 0.1s On 0.1s Off	Not Applicable	Not Applicable	Not Applicable	Not Applicable
LED Off	Mains Failure Battery OK	○ Off	○ Off	○ Off	○ Off	○ Off
Red/Green Alternate	DALI Mode Identification	●	Not Applicable	●	Not Applicable	●

Any local fault indication should also be indicated back at the DALI Control panel, which may give further details of the situation.

## General fault finding

If an emergency luminaire is indicating a fault, then various simple checks should be made as follows

- Check unswitched 240V AC supply is present at the conversion module.
- Fail the unswitched supply and check that the module lights in emergency. Leave in emergency for at least 30s and then restore the unswitched supply, which should clear a lamp fault.
- If the Module does not light in emergency then you will need to measure the Voltage at the LED output terminals is present, (the Voltage will depend on the forward voltage of the LED's), If voltage is present and LEDs are not lit then check wiring/polarity.
- If there is no Voltage on the LED output (below 2V) then check the battery Voltage. For a 3 cell battery the Voltage should be above 3.5V. If below 3V the battery is probably flat and will need a 48hr charge before being rechecked.
- If both the output wiring and battery are ok but it is not working in emergency then turn the unswitched supply back on and disconnect the battery. Measure the battery voltage at the module terminals. if the voltage is 0V (with unswitched 240V supply present) the battery fuse has blown and the module will need replacing). If the battery voltage is present then check the connector, polarity etc.

## Fault Indication/rectification.

- If the unit is still showing a **battery fault** (single flashing red) after the basic checks have been done, then schedule a duration test from the DALI system. We recommend you ensure the unswitched supply is on permanently and the battery has had a full 24 hour (or longer) charge. Once the Duration test is successfully completed the charge indicator will change to solid green healthy. If you do not have the DALI system operational, you can get the module to trigger a battery test itself by disconnecting the battery and turning the unswitched supply off for 30 seconds and then reconnecting both the unswitched supply and the battery. Approximately 30-48hrs after this has been done the module will go into a three hour duration test which should clear the fault. The unswitched supply should not be failed during this period.
- If the unit is showing a **lamp fault** (double flashing red) then check whether the lamp lights in emergency. If there is voltage on the Led output terminals and the Led is not lit then check if either the polarity of the wires is wrong or there is a broken wire/connection to the LED's. Check the LEDs light under mains operation, and that the voltage is similar to the emergency output voltage If LEDs do not work in mains or emergency then they may have failed themselves.
- If the system is showing a **DALI Communications fault**, then: please check the Voltage at the DALI terminals on the emergency module (DA/DA). The Voltage must be within 9.5V-22.5V DC (nominal 16-18V DC) and if it is outside this range the DALI will not work. Additionally there should be less than 2V difference between the DALI voltage at the router and at the emergency module. If higher than this then the cable size may be insufficient. If there is mains voltage (240V) on the DALI line then this needs correcting and the emergency module will then require replacement.