



Commissioning

After installation of the luminaire and initial connection of the mains supply and battery supply to the EM converterLED ST the unit will commence charging the batteries for 20 hours (initial charge). The 20 hours recharge occurs also if a new battery is connected or the module exits the rest mode condition. The following automatic commissioning duration test is only performed when a battery is replaced and fully charged (after 20 hours).

Testing:

Commissioning test

A full commissioning test is carried out automatically after permanent connection of the supply for 5 days. The easy commissioning feature will set the initial test day and time to ensure random testing of units.

Functional test

Functional tests are carried out for 5 seconds on a weekly basis under the control of the Micro controller. Initiation and timing of these tests is set during the commissioning of the luminaire.

Duration test

A full duration test is carried out yearly to check the capacity of the batteries.

For a full description of commissioning and test features please refer to application notes.

Test switch

An optional test switch can be wired to each EM converterLED ST. This can be used to to:

- initiate a 5 seconds function test: press 200 ms < T < 1 s
- execute function test as long as switch pressed: press > 1 s
- reset selftest timer (adjust local timing): press > 10 s

Timer reset functionality

The timer for function and duration test can be set to a particular time of the day by either pressing the test switch for longer than 10 seconds or cycling the unswitched line supply 5 times within 1 minute. The timer adjustment will enable the test start time to be defined manually at time in day when the timer was reset. It will also disable the adaptive test algorithm thereby forcing the unit to perform the test at the same time rather than it being defined by the adaptive algorithm. This function will only work provided the interval time is greater than zero (automatic test mode enabled). The delay timer value set when the unit was commissioned will be reloaded in order to randomise the tests between adjacent units.

Rest mode

Rest mode can be initiated by applying a short pulse of between 9.5 VDC and 22.5 VDC in amplitude for a period of between 150 ms and 1.0 s. This should be applied to terminals marked Rest after the mains supply has been disconnected and whilst the module is in emergency operation. Terminals are not sensitive to polarity.

After a mains reset the EM converterLED ST exits the rest mode. The EM converterLED ST supports the re-light function.

Pulse/Mode	Standby	Emergency	Rest
150 – 1,000 ms	inhibit	Rest	–
1,001 – 2,000 ms	Cancel inhibit	–	re-light

Duration link selection

Duration	Link position
3hr	 Position A
2hr	 No Duration Link
1hr	 Position B

Module supplied with duration link in 3 hours position (position A).

The position of the link will only be read on first power up. If it is changed afterwards both the battery and mains supply must be disconnected for 10 seconds to enable the EM converterLED to read the new link position on reconnection of the battery and mains. It will lead to a false battery failure indication if the link is changed after installation without this reset.

Status indication

System status is indicated by a bi-colour LED.

LED indication	Status	Comment
Permanent green	System OK	AC mode
Fast flashing green (0,1 sec on – 0,1 sec off)	Function test underway	
Slow flashing green (1 sec on – 1 sec off)	Duration test underway	
Red LED on	Load failure	Open circuit / Short circuit / LED failure
Slow flashing red (1 sec on – 1 sec off)	Battery failure	Battery failed the duration test or function test / Battery is defect or deep discharged/ Incorrect battery voltage
Fast flashing red (0,1 sec on – 0,1 sec off)	Charging failure	Incorrect charging current
Double pulsing green	Inhibit mode	Switching into inhibit mode via controller
Green and red off	DC mode	Battery operation (emergency mode)