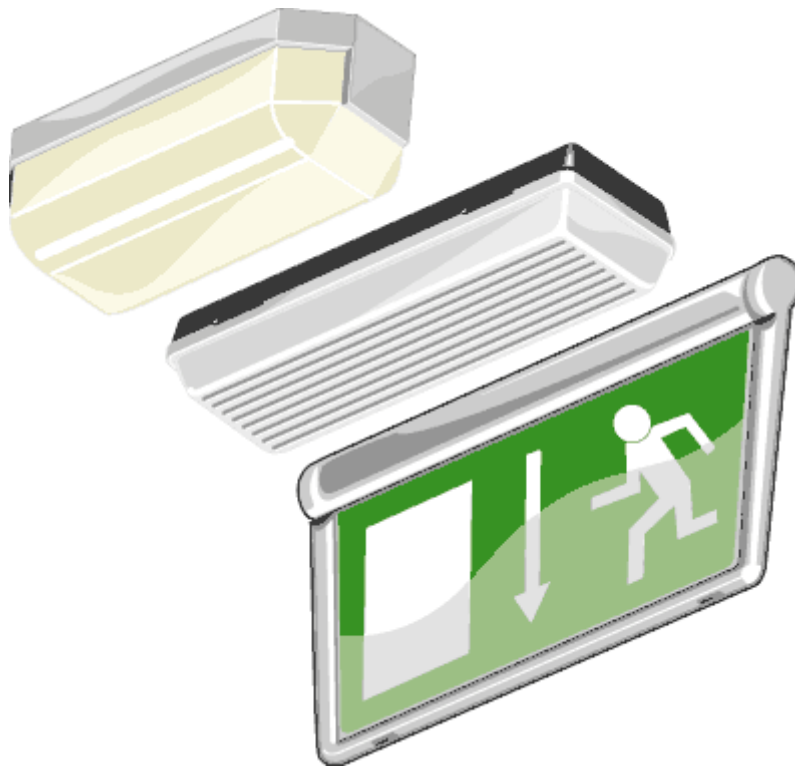


EMERGENCY LIGHTING TESTING



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Emergency Lighting

The purpose of emergency lighting is to provide a backup lighting system that will operate in the event of an electrical failure.

When the electricity supply is operating normally within a building an Emergency Light consumes a small amount of energy to charge a battery pack concealed within the light.

When the electricity supply in a building fails, the Emergency Light uses the battery to illuminate a lamp.

When the emergency light HAS power it is turned OFF. When the light LOSES power, it turns ON!

There are two main categories of emergency lighting unit, Maintained and Non Maintained.

Maintained

The emergency light units only illuminate in the event of a mains failure.

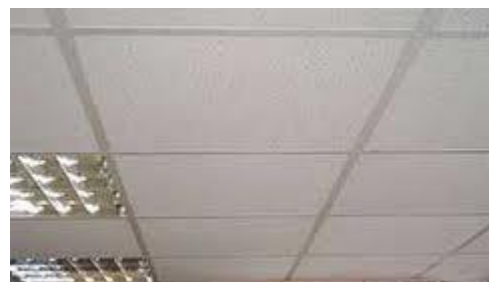
Examples of a Maintained Light Fitting



Emergency Exit Light
(Always On)



Bulkhead Fitting
(Generally Switched)



Lay In Modular Fittings
(Generally Switched)

Non Maintained

Non Maintained fittings are lights which are permanently held off and will come on during an electrical failure. A Maintained fitting has a single electrical feed which is used to charge the battery.

Examples of a Non Maintained Light Fitting



Space Saver
(Bulkhead)



High Bay
(Twin Spot)

Sustained

The emergency light units are fitted with two lamps or two sets of lamps. One of which operates on mains 240V AC supply, the other which operates from the battery supply in the event of mains failure. It is basically a non-maintained system with the addition of mains lamps which should be illuminated whenever the premises are occupied.

Examples Of A Sustained Fitting



This fitting has two lamps. One which runs on the mains, the second which comes on when the main power fails.

Charge Indicator

In order to confirm that the emergency light is charging (has power connected) a charge indicator is generally provided.

The charge indicator is generally an LED (Red or Green) and can easily be seen through the casing of a bulk head type light.

For a maintained fitting it may be difficult to see the charge indicator, especially if the light is bright.

Where the light fitting is installed to a suspended ceiling, the LED can often be found by looking into the light fitting, preferably with the light switched off.

A further purpose of the charge indicator is to verify that you have switched the power back on to charge the light.

With a maintained fitting which is always on, it would be impossible to tell if the unit was charging (and because the light is on, one may assume it is charging).

Test Point And Key

The electrical feed to the light is generally fed through a switch, just like a light switch at home. The switch is special and needs a key to operate it. Normally the switch is ON and so the emergency operation of the light is OFF.

Where a switch is provided to operate the light (for example an office) the switch can be used to turn the lights on and off normally.



This is an MK “Secret Key Switch” and the operating key. These modules are the most common used for emergency lighting.



Example of a “Grid Control”

Note that the switch has no “ON” or “OFF”.

It is easy to forget if you turned the switch on or off.

Use the Charge Indicator to verify that the switch is back on!

Duration

Each emergency light is designed to operate for a set period of time. Commonly these times are:-

- M3 – Maintained System, emergency duration 3 hours.
- NM2 – Non-maintained System, emergency duration 2 hours.
- S1 – Sustained System, emergency duration 1 hour.

At least once a year the system should be tested by an engineer for the full duration of the fitting. Any fittings which fail or remain dull should be repaired.

Running Man & Legend

“Fire Exit” has now been replaced by the Euro “Running Man” Legend.



These are the four acceptable ways of displaying the legend.

Testing

Daily:

Visually check that all maintained lamps are operating.

Check that all system healthy indicators on central battery systems are illuminated.

Check that any faults on the system are rectified and are then noted in the log book.

Monthly:

Check all luminaires and other emergency lighting equipment is in good condition and all lamps and fitting diffusers are clean, undamaged and the lamps are not blackened.

Briefly test all emergency lighting by simulating a failure of the normal mains supply.

Use the secret key to simulate a failure of the mains supply.

The test should not exceed a quarter of the equipment rated duration.

A brief operation of the switch to verify the lamp turns on / off is sufficient.

Check all fittings work correctly.

Upon restoring the mains supply check all mains healthy (charge) lamps are operating.

Quarterly Engineer:

Carry out testing as in the monthly test routine but test the fittings for one third of their rated duration.

Annually Engineer: A full system test should be conducted by a competent service engineer including a full rated duration test of the system.

LOG

It is important to keep a log (record) of the tests that are carried out.

A sample log is attached to the rear of this document which you can photocopy as necessary.

DATE	TESTED BY	ACTIONS PERFORMED AND NOTES	LOG SHEET No IF USED
1/1/2010	A.N.Other	Check all charge indicators and maintained lights.	None
8/1/2010	M.Nobody	Check operation of all lights. Found reception unit not working. Called engineer to rectify.	8/1/2010
10/1/2010	Mr E.N.Ginger	Replaced battery to reception light.	

The log forms a permanent record of the tests and remedial works carried out.

LOG SHEET

The log sheet forms a permanent record of the monthly testing.

The log sheet is attached at the rear of this document and has been completed for site.

Please feel free to photocopy and use the Log Sheet.

When you test the system monthly, record the details on a LOG SHEET.

LOG SHEET EMERGENCY LIGHTING

8/1/2010

Date

Unit Reference Number	Type Maint Or Non Maint	Lamp Test If Maint	Visible Power Indicator	Test Unit Power Fail	Is Correct Running Man?	Pass or Fail	Notes
Reception	N	--	✓	✓	✓	Pass	
Office 1	M	✓	✓	✓	--	Pass	
Office 2	M	✓	✓	✓	--	Pass	
Office 3	M	✓	✓	✓	--	Pass	
Office 4	M	✓	✓	✓	--	Pass	

Record any issues and report to the engineer.

ALWAYS check that the charge indicator is IMMUNATED following the test.