

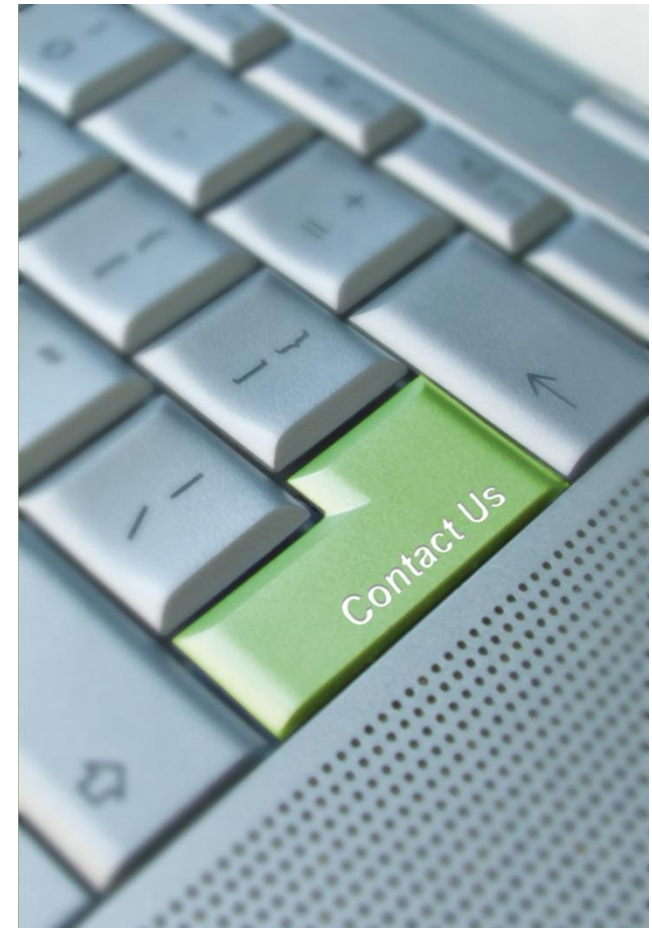
- Safe-Electric was born from an Established Electrical Contracting company, offering expert Knowledge and a wealth of experience and insight to the building services industry on a nationwide scale.
- Safe-Electric cuts to the chase, promising a realistic analysis and most importantly a solution. This has meant that Safe-Electric has been successful in attracting high profile clients, and repeat business.
- Why not follow us, we aim to keep you updated and informed about the latest Safe-Electric news via our Twitter feed and on Facebook.

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## Portable Appliance Testing (PAT)

### Your Responsibility

The Electricity at Work Act (1989) places legal responsibility on employers, employees and self-employed persons to comply with the provisions of the regulations and take reasonably practicable steps to ensure that no danger results from the use of such equipment.

Therefore portable appliance testing is an important part of any Health & Safety Policy.

### Your Next Move

As a responsible person you should contact Safe-Electric as the next step in ensuring your compliance.

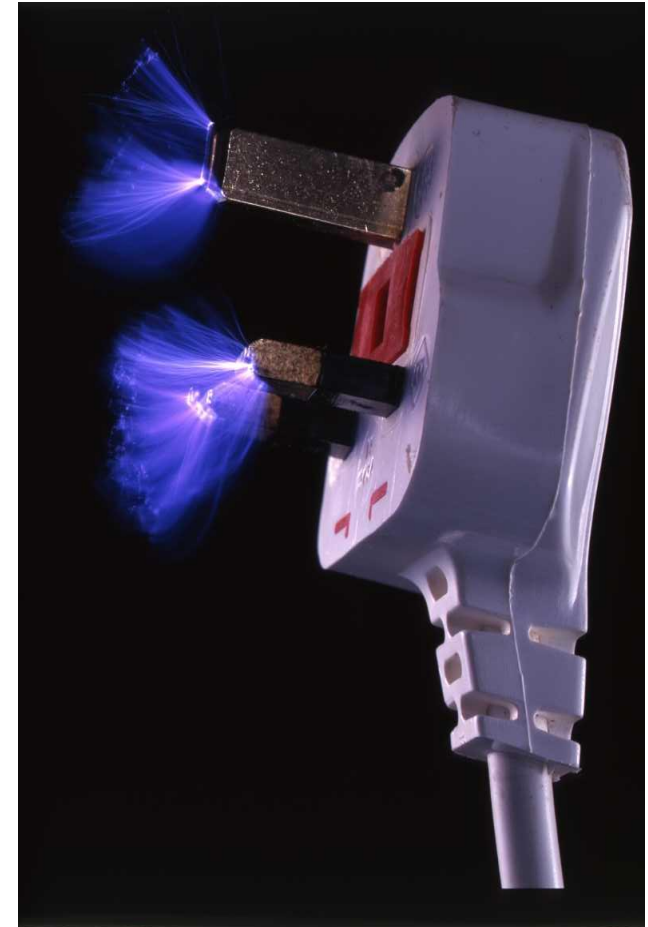
### Why Safe-Electric?

Our testers are trained to the City and Guilds (2377) standard in Portable Appliance Testing and are enhanced DBS checked. This gives our clients peace of mind.

### Our quote to you includes;

- An inclusive rate regardless of whether it is for out of hours work, at night or the weekend
- All travel expenses
- Uniquely numbered easily identifiable labels on all appliances
- Replacement fuses where necessary.
- Certificate of Compliance and report issued and e-mailed to you as a pdf
- Timely reminders for re-tests at a frequency to suit you. The level of inspection and testing required is dependant upon the risk of the appliance becoming faulty, the type of appliance, the nature of its use and the environment in which it is used. The Institution of Electrical Engineers (IEE) Code of Practice provides the basis for our recommendation.

As part of our quality assurance we invite our clients to complete a customer comment form and we are so confident of our service that we would be glad to share this feedback with you.



## Fixed wire / Periodic Inspection & Testing (PIT) now known as (EICR)

### Your Responsibility

The Electricity at Work Act (1989) states that all electrical systems and equipment used in the working environment should be in a safe condition. The Health & Safety Executive recommend that in order to comply with the regulations an inspection and testing programme should be undertaken at all places of work. In addition to these legislative requirements many other organisations such as insurance companies place an obligation on their clients to carry out Periodic inspection and Testing.

### What Relevant Legislation Applies?

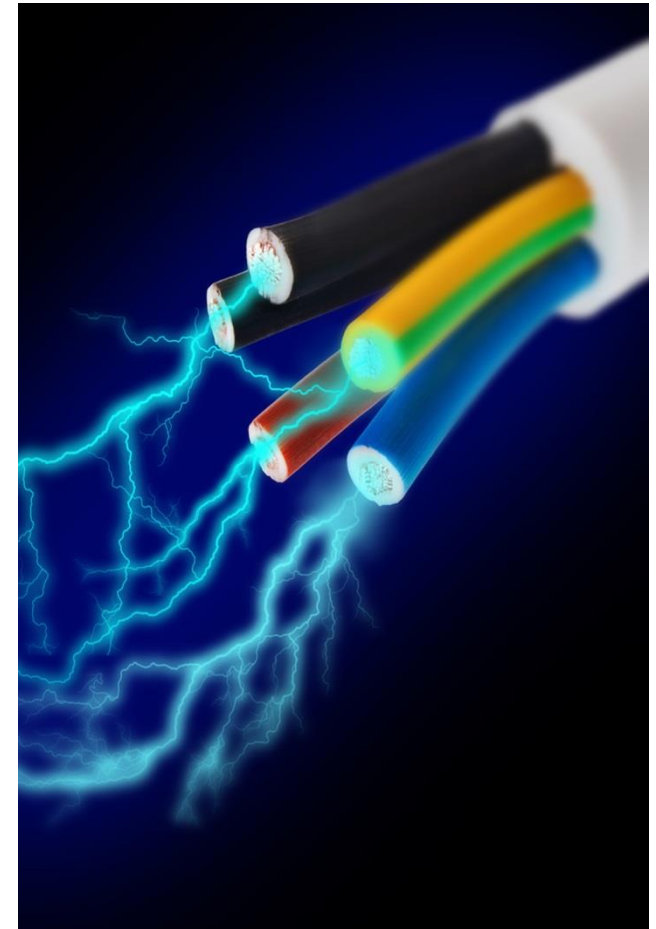
- The legislation of specific relevance to electrical maintenance and fixed installation testing;
- The Health & Safety at Work Act (1974)
- The Management of Health & Safety at Work Regulations (1999)
- The Electricity at Work Regulations (1989 )
- The Workplace (Health, Safety and Welfare) Regulations (1992)

### What Is Periodic inspection and Testing?

Fixed Installation Testing involves the testing of electrical services and systems that conduct electricity around a building. It covers all of the hard wiring in a building and includes items such as main panels, distribution boards, lighting, socket outlets, air conditioning and other fixed plant. This involves performing a sequence of rigorous visual inspections and electrical tests on all systems in the building.

### Benefits To You

- Testing of your systems to BS7671:2008, the IEE wiring regulations 17th edition
- Details of your installation
- Extent and limitations of the inspection
- Supply characteristics and particulars of the installation
- Schedule of items inspected and tested
- Schedules of circuit details and test results
- Summary of the inspection and test
- Observations and recommendations for actions to be taken, coded by priority



## Thermal Imaging

### Why Do It?

Electrical circuits and components often fail because of fatigue, defective components, contamination, loose connections, maybe even poor workmanship. Failing components have one feature in common, they will always experience a rise in temperature or create a 'hot spot' prior to failure.

Using infrared thermal imaging cameras will allow us to quickly identify problems before components fail.

### What Is Involved?

Our engineer using an infra red camera will take images of your electrical panels. This can be done by simply removing the cover or barrier of the electrical distribution equipment, and normally does not require it to be isolated.

Electrical components with faults will generate heat; the camera will detect excessive heat in relation to the ambient temperature which will alert the engineer to a potential problem. The engineer will be trained to recognise whether the heat is sufficient to warrant further investigation, where upon you will be notified.

### Your Report Will Include...

- Installation details and characteristics
- Schedule of items tested and inspected
- A thermal image and standard digital image of piece of equipment surveyed
- Recommendations for any further investigation required along with an explanation.



## Emergency Light Testing (ELT)

### What Is Emergency Lighting For?

Emergency lighting is energised during an emergency situation when the main power supply fails. The loss of mains electricity could be the result of a fire or a power cut and the normal lighting supplies fail. This may lead to sudden darkness and a possible danger to the occupants, either through physical danger or panic. Emergency lighting operates automatically and should give illumination of a sufficiently high level to enable persons of all ages to evacuate the premises safely.

### Emergency Lighting Testing And Maintenance

The Fire Precautions (Workplace) Regulations 1997 require that appropriate testing is performed to maintain compliance of the system. The system should include adequate facilities for testing and recording the system condition.

A 'full discharge test' should be carried out annually. This process entails activating the emergency lights and leaving them on until the batteries are fully discharged.

At least once a year a suitably qualified service engineer should check the entire emergency lighting system, including discharge for the full specified duration of your units. Maintained emergency units should last for 3 hours, and non-maintained units for 2 hours.

The testing schedule is in accordance with BS EN 50172:2004 / BS5266-8:2004, 7.2.3 and BS 5266-8:2004, 7.2.4.



## Power & Harmonic Analysis

### What are Harmonics?...

As more electronic devices are used, harmonics potentially becomes a problem.

When harmonic frequencies are prevalent, electrical power panels and transformers become mechanically resonant, caused by magnetic fields. The power panel or transformer vibrates and emits a buzzing sound.

Among the electrical devices that seem to cause harmonics are Personal Computers, Dimmers, Laser Printers, Electronic Ballast, Stereos, Radios, TVs, Fax Machines, and any other equipment powered by switched-mode power supply (SMPS) equipment

### What Problems Does This Create?

- Overheating of the neutral wires which can result in a potential fire hazard
- Overheating of transformers which shortens the life of a transformer and will eventually destroy it
- Poor power factor conditions that result in monthly utility penalty fees for major users
- Nuisance tripping of circuit breakers, overvoltage problems, flickering lights, computer malfunctions etc.

### The Answer?

We conduct a power analysis survey and testing usually over a week, maybe longer. We evaluate the voltage fluctuation, current flow, power-factor, power consumption levels and harmonics testing. Each of these allow us to create an accurate assessment and report on the health of power supplies in your building.



There is a legal requirement to have a fire alarm system tested and inspected.

### Weekly testing by the user.


A different manual call point should be used at the time of every weekly test, so that all manual call points in the building are tested in rotation over a prolonged period.

This should be notified and recorded within the fire log book dictating which one on which date and by whom it was tested, and whether or not it activated. (In the case of non-activation, the service company needs to be informed and this needs to be rectified immediately).

### Six month visits

The recommended period between successive inspection and servicing visits should not exceed six months. If this recommendation is not implemented, it should be considered that the system is no longer compliant with this part of BS 5839.

This means that a full fire alarm inspection and activation of all call points, smoke detectors, heat detectors, sound level checks should be carried out every six months as required by: - BS 5839-1:2013 45.3 recommendations for a periodic inspection and test of a fire alarm system.

 Safe-Electric (Nationwide) Ltd; have carried out thousands of fire alarm inspections over the years, contact us and arrange for our engineers to visit and inspect and certify your premises, it's better to know if there is a problem than find out when it's too late.

Call us today on 01487 - 813 - 600



Our Accreditations



N.I.C.E.I.C Approved Contractor



ISO 14001 Registered



N.I.C.E.I.C Registered



Constructionline



Registered Competent Person



SSIP Accredited



ISO 9001 Registered



British Safety Council Member



Just some of the Clients that we have carried out testing and installation work for: -

