

# The Importance of Checking Earthing & Bonding

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Earthing and bonding is a critical element in providing safety to the majority of electrical installations in the UK. Its main function is to reduce to a minimum the risks of fire and shock hazard.

It therefore forms the foundations of most electrical systems, ensuring safety to any part of the system, whether new or existing and no matter how small. As statutory requirements now enforce electrical safety to be provided in all types of buildings, it is essential that your ELECSA Approved Contractor checks for adequacy of such systems before undertaking any alterations or additional work.

In doing so, your ELECSA Approved Contractor is not looking for additional work, but merely ensuring that statutory obligations are being met – obligations that ultimately protect you – the end user.

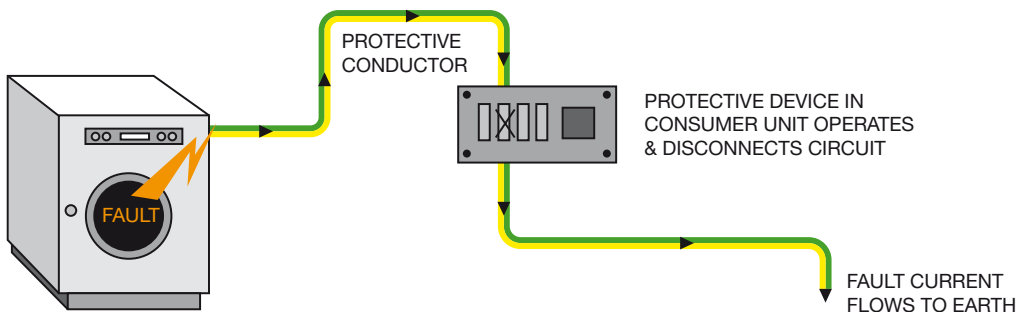
Changes in the use and complexity of electrical installations, together with updated regulations, as well as deterioration of any existing electrical system over time, can often result in existing earthing and bonding provisions being unsatisfactory to provide today's required levels of safety. It is usually a simple task for your ELECSA Approved Contractor to check these vital issues before starting any new work, and advise you if any improvements are necessary.

## The Purpose of Earthing

As a conductor of electricity, metal parts in a building may become live, should an electrical fault develop. If such a fault condition is allowed to persist, any person who may come into contact with the metal parts may receive an electric shock.

By ensuring that metal parts are adequately earthed, a reliable circuit route is provided. This will allow an easy path for currents to flow through, which should allow a fuse or circuit breaker to detect the fault current, and automatically disconnect the supply, thus removing the danger.

In the example below, if the washing machine develops a fault and when adequate earthing is provided, a fault current is able to flow safely to earth, causing the fuse or circuit breaker to operate quickly, thereby removing the shock risk to anybody who may come into contact with the machine.



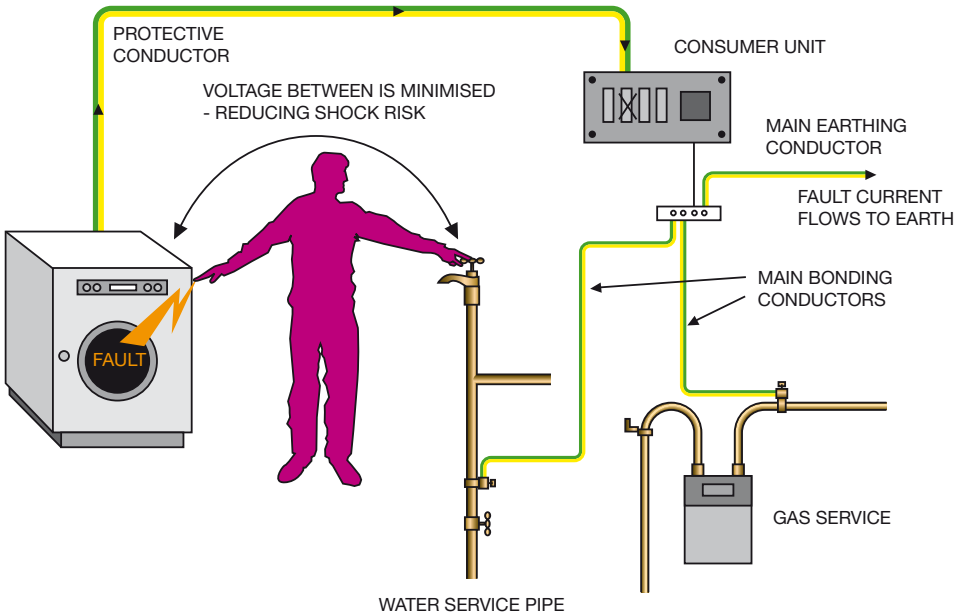
# What Does Bonding Do?

Bonding is commonly provided in the UK to minimise the risk of electric shock to anybody that may be in simultaneous contact with several conductive (metal) parts at the time of an electrical fault anywhere in the installation. Such bonding is usually achieved by connecting conductive parts and systems together, thereby minimising the risk of any voltages between them.

Bonding is usually provided at main services such as water and gas, where they enter buildings, and in some instances additionally in areas such as shower and bathroom facilities.

Your ELECSA Approved Contractor must check these issues carefully as part of any job, and will advise you if any additional work is needed in order to provide the required levels of safety.

## Illustration showing main bonding:



## About ELECSA

ELECSA provides inspection, assessment and certification services to contractors working with the electrical installations in private dwellings. ELECSA is owned by the Electrical Contractors' Association, a trade association that has represented the electrical industry for over 100 years.

ELECSA is a government authorised scheme that allows electrical contractors to self-certify that their work complies to the Building Regulations, in particular Part P – which is concerned with standards of electrical safety.

This means that your contractor will notify ELECSA once the work has been completed and who will then issue you with a Building Compliance Certificate. You will almost certainly need this certificate at a later date so please keep it in a safe place.

If you would like more information about Part P or ELECSA, please go to our website [www.elesca.co.uk](http://www.elesca.co.uk)

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