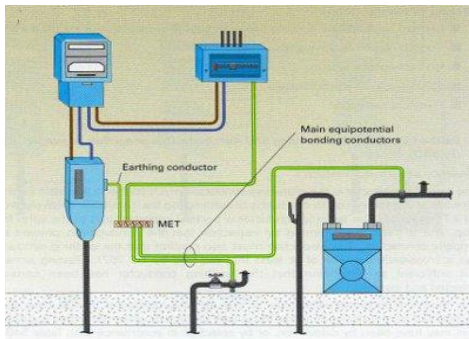


Client Help Sheet

01480 400597

Explaining Earthing and Bonding



“A qualified Part P electrician will always ensure earthing and bonding work is carried out on your electrical installation ”

Earthing System in the home

Earthing and bonding is a less 'glamorous' aspect of the work an electrician carries out in your home.

It is a highly essential safety element in your home. Earthing is carried out to ensure the electrical installation in your home is protected against electric shock risks by ensuring metal surfaces, such as the metal cases of cookers, washing machines, fridge freezers etc do not become live if a fault develops with the electrical installation or the appliance. Instead, the electrical current will flow down the earth connection thereby minimising the risk of electric shock.

A qualified Part P electrician will always ensure the correct means of earthing is present on your electrical installation, however this very important work is often overlooked by an unqualified person.

What is Bonding?

Bonding is a connection of metallic parts with a protective bonding conductor. As an example, a protective bonding conductor is simply a connection between a cooker and a water pipe and tap. Without the bonding conductor, a faulty oven could become live, you could touch the oven and then touch the tap. You would then become the path to earth which means you would receive a potentially fatal electric shock.

“Remember that in order for an electrical installation to be deemed safe, satisfactory earthing AND bonding must be carried out”

Why do we bond to gas and water?

OK so now the importance of earthing and bonding is known, why does an electrician also bond to gas and water?

This next part is key 😊

The electrical installation must be an **equipotential zone**. You can see in the picture on the first page having a green/yellow wire linking the services together. Having 2x or more different earth potentials in your home is an electrical shock risk. We bond the Gas and Water services if they are made of conductive material and enter your home through the general mass of earth.

If the incoming service pipe is made of **PLASTIC**, it may not require a Main Protective Bonding Conductor, but confirm this with a registered electrician.

It is also a very important electrical regulation and your electrical installation cannot be certified without it. **ANY ADDITIONS OR ALTERATIONS TO AN EXISTING ELECTRICAL INSTALLATION CANNOT BE CARRIED OUT BY LAW IF THE INSTALLATION DOES NOT INCORPORATE ADAQUATE EARTHING AND BONDING.**

This is because the automatic disconnection of the supply in the event of a fault relies on this to be in place in order to be effective. Installing additional electrical equipment without this in place makes the installation even more dangerous than it previously was.

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*Dom Robinson is a qualified electrician with over 10 years experience in the electrical industry. Dom owns and runs D.L.R Electrical, who specializes in **domestic electrical** installations. Having qualified in 2013, he holds a range of testing and installation qualifications*

D.L.R Electrical is based in Cambridge and serves Cambridge and the surrounding areas. Please visit our Web Page at www.dlrelectrical.com for more information



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