

## Insulation resistance testing of electrical circuits supplying myenergi products

**This note applies to all myenergi products that are directly connected to the mains electricity supply.**

When a new electrical circuit is installed there is a requirement to carry out a test of the insulation resistance on the new installation (sometimes referred to as a “Megger Test” after the manufacturer of a popular brand of insulation test equipment).

For a low voltage installation, the test involves applying 500V DC between each pair of conductors in turn, i.e. between live conductors (between line-neutral and, in a three phase system, between each pair of line conductors) and between the live conductors and earth.

For the line-neutral / line-line tests the 500V test voltage would be applied across any loads that are still connected to the system. ***This will lead to an incorrect insulation reading and may also damage any sensitive electronics in the load.***

**It is therefore important that any loads are removed or disconnected before the insulation test is carried out.**

***If it is not possible to isolate the myenergi device before carrying out the insulation resistance check on the associated circuit then the insulation resistance check must only be carried out on the combined line-neutral conductor and earth.***

In this case, before the insulation resistance test is carried out, all live conductors (line and neutral) must be connected together.

**Zappi includes a measurement circuit which confirms the presence of the Circuit Protective Earth before the output to the EV is made live. If the zappi is not isolated from the cable being tested when the Insulation Resistance test is carried out, then the test will give a result of approximately **300kΩ****

For more information on the specific requirements for electrical testing please refer to the local standards or electrical trade organisation.

This video <https://www.youtube.com/watch?v=Ek1u2RjQffU> provides a useful overview of the insulation resistance test and how it is carried out, ensuring that the test is carried out between the combined live conductors to earth.