



How to carry out Installation Testing?

The subject of this article 'Installation testing' is one half of the Inspection and Testing process. Inspection involves using your senses; sight, touch, hearing, etc. to inspect an electrical installation. Testing is the process of using a meter to take measurements. The aim of the inspection and testing process is to establish the safety and correct functioning of the electrical installation, without posing a danger to the inspector or other persons and without damaging the electrical installation under test.

Electrical testing generally falls into two categories, 'dead testing' and 'live testing'. Dead tests, as the name suggests, are tests carried out on installations, circuits or equipment that have been safely isolated from the electricity supply, following the correct safe isolation procedure. Some tests however, cannot be performed on a 'dead' installation and therefore some degree of 'live' testing is always necessary. Naturally 'live' testing introduces inherent hazards, so all precautions for safety must be taken to prevent danger or injury to the inspector and to others during testing.

To meet this basic and essential aim, the inspection and testing process for new installations usually follows the format detailed below: -

Electrical Supply Safely Disconnected

1. Safe Isolation
2. Inspection
3. Dead Testing

Electrical Supply Connected

4.Live Testing

5. Functional Testing

The aim of the above process is to gradually, step-by-step, prove the safety of the electrical installation in the safest way possible. Only when the installation successfully passes one stage within the process, is it then safe to proceed to the next step. It is essential that inspection and testing are carried out throughout the installation process and on completion. It is not possible to carry out full inspection and testing on a completed installation, as much of the installation may be hidden within the fabric of the building and we may not be able to carry out a full range of tests with all circuit loads connected.

There are two main types of inspection and testing referred to in the wiring regulations (BS 7671). The first is initial verification, the inspection and testing of new installations, alterations or additions. The second is periodic inspection, performed on existing installations.

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