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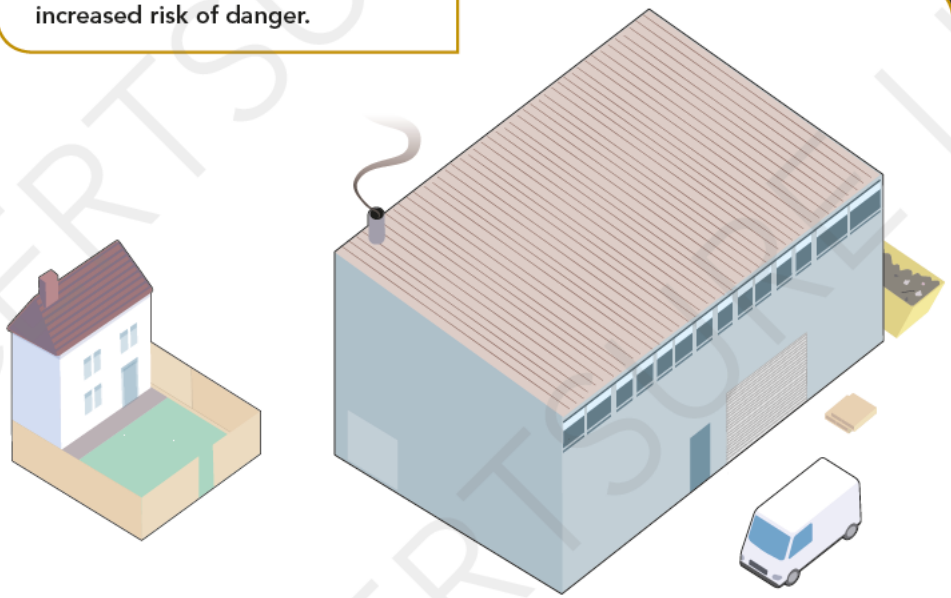
1 INSPECTION and TESTING SHOULD be CARRIED OUT by PERSONS COMPETENT in SUCH WORK

SNAG:

Where the person undertaking the inspection of an installation is not sufficiently experienced in he particular type of installation being inspected persons, including the inspector, may be exposed to an increased risk of danger.



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Solution

Generally, an electrician will have experience of carrying ou work in certain types of premises but not in others, likewise persons who undertake inspection and testing are also likely to be experienced in certain types of installations, but not in others. For example, a person having the necessary skills and experience to undertake the initial verification or periodic inspection on domestic premises may not necessarily have the skills or experience to undertake such work on other types of installations, such as commercial offices and factories. In view of this, *BS 7671* requires inspection and testing to be carried out by skilled persons competent in such work (Regulations 641.6 and 651.5 refer).

NICEIC and ELECSA consider that to be competent to undertake inspection and testing of an electrical nstallation, persons must as a minimum:

- have sufficient knowledge and experience of electrical installation matters to avoid injury t themselves and to others,
- be familiar with, and understand, the requirements of the current issue of *BS 7671*, including those relating to inspection, testing and reporting,
- be skilled in the safe application of the appropriate test instruments and procedures,
- have a sound knowledge of the particular type of installation to be inspected, and
- have sufficient information about the function and construction of the installation to allow them to proceed in safety.

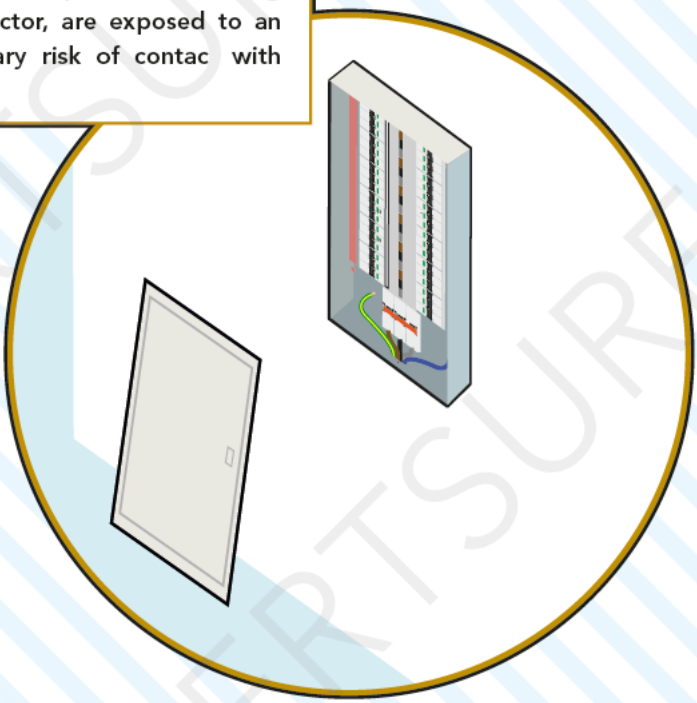
In particular, persons undertaking perio ic inspection testing and reporting need to have above-average knowledge and experience of electrical matters to enable them to accurately assess the cond tion of an existing installation, especially when they do not have access to the design information relating to that installation.

Irrespective of whether the circuit under test is, or is not, defective, periodic inspection and testing should not create danger to persons or livestock, or cause damage to property or equipment (Regulation 651.3).

2 SAFE WORKING PRACTICES

SNAG:

Where electrical equipment covers are removed for the purpose of inspection but the equipment is not isolated, persons, including the inspector, are exposed to an unnecessary risk of contac with live parts.



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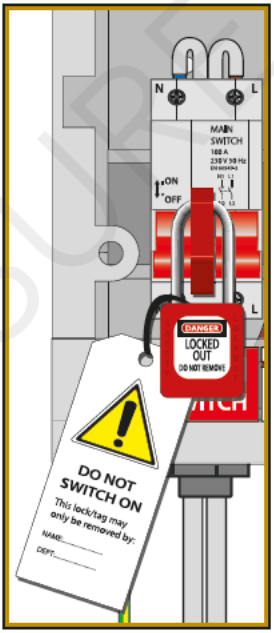
Solution

The inspection and testing of an electrical installation should always be carried out with strict adherence to safety procedures. For such reasons, inspection should precede testing and should normally be carried out with the installation or the relevant part of the installation disconnected from the supply (Regulation 642.1).

In particular, Regulation 14 of the *Electricity at Wo k Regulations* requires that:

> *'…no person shall be engaged in any work activity on or so near any live conductor (other than one suitably covered with insulating material so as to prevent danger) that danger may arise unless:*
>
> *a. it is unreasonable in all circumstances for it to be dead; and*
>
> *b. it is reasonable in all c rcumstances for him to be at work on or near it while it is live; and*
>
> *c. suitable precautions (including where necessary the provision of suitable protective equipment) are taken to prevent injury.'*

Where equ pment covers, such as distribution board or consumer unit covers, are removed for the purposes of live testing, accessible live equipment should never be left unattended.



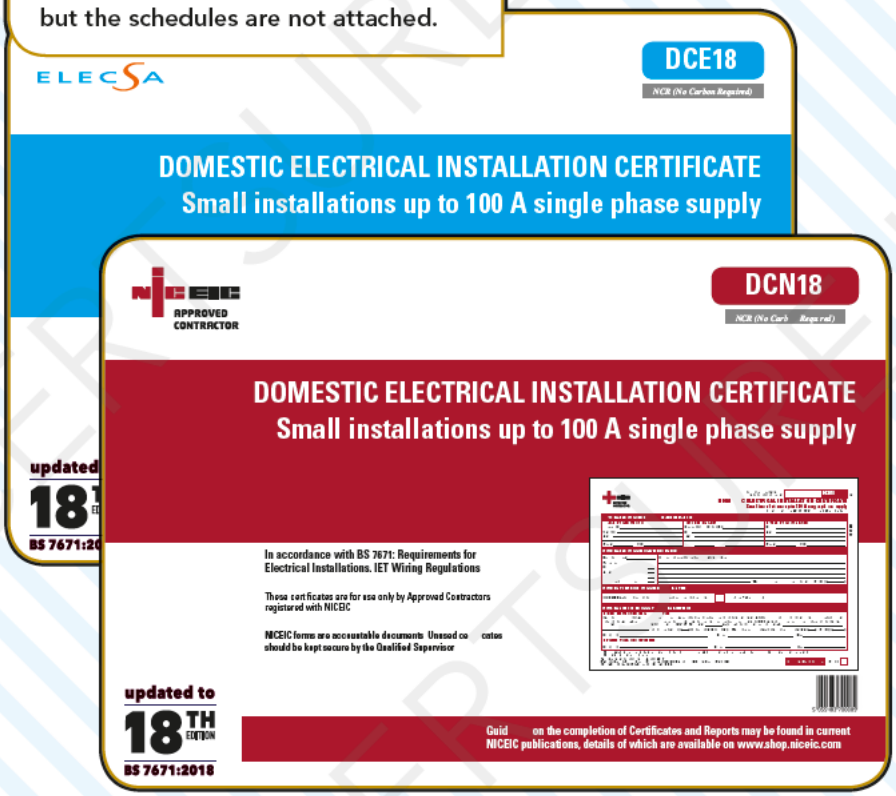
Where live testing is performed, particular care needs to be exercised to ensure that the testing is performed safely. Before a test is performed it should be confirmed that the test instrument and leads are suitable for the particular test and it is safe to perform the test.

Further guidance on safe isolation is available in the *Electrical Safety First, Best Pr ctice Guide 2*, which is accessible and free to download at: www.electricalsafetyfirst.org.uk

3 ISSUING an ELECTRICAL INSTALLATION CERTIFICATE

SNAG:

In some circumstances, an Ele trical Installation Certificate (EIC) is issued but the schedules are not attached.

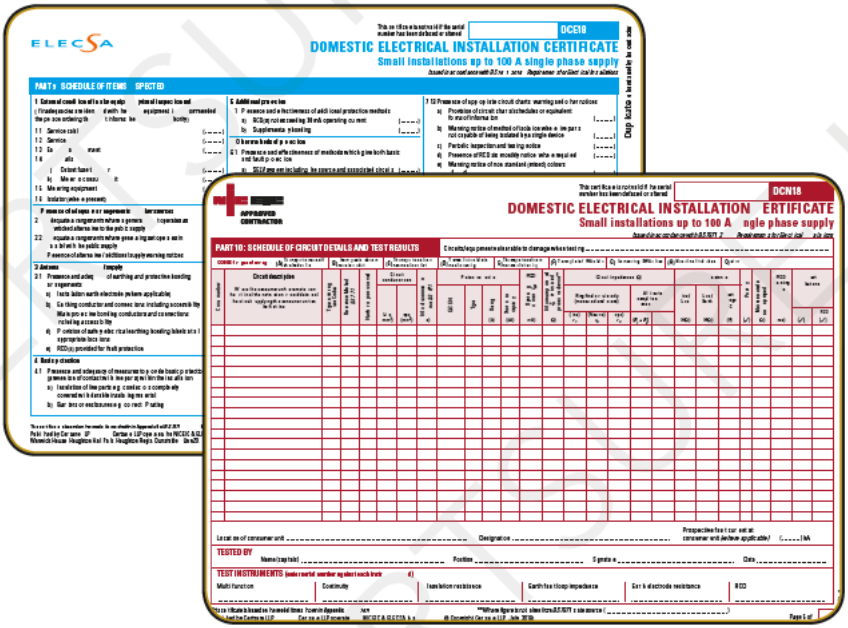


Solution

Regulation 644.1 requires that on completion of new installation work or an addition or alteration to an existing installation, including he replacement of a consumer unit, an Electrical Installation Certificate (EIC) or Domestic Electrical Installation Certificate (DEIC), based on the model forms given in Appendix 6 of *BS 7671*, is issued to the person ordering the work

As required by Regulation 644.3, along with the details of the electrical installation work undertaken the completed certificate should include correctly completed:

- schedule(s) of inspect ons, and
- schedule(s) of test result .



This requirement is identified to the person ordering the work in the 'Notes for Recipient' which form part of an NICEIC and ELECSA certificate. The Notes state that:

'...the Electrical Inst llation Certificate is **only** valid if accompanied by the 'Schedule of Items Inspected' and the 'Schedule of Circuit Details and Test Results.'

4 PRE-INSPECTION SURVEY

SNAG:

Where a pre-inspection survey is n t carried out prior to undertaking an Electrical Installation Condition Report (EICR), there is an increased risk of the inspection being obstructed or causing unnecessary disruption

Solution

The main reason a pre-inspection survey is recommended prior to carrying out an EICR is so that the extent of the inspection and testing and any limitations imposed can be discussed and agreed with the person ordering the work, before starting the inspection. Depending on the particular type of installation, there may be a range of factors that need to be cu ed and agreed, but the following will enerally a p y to all installations.

Electrical records/drawings: previous r ords lud g layout drawings and circuit charts provide the inspector with essen l information about the installation such as when it was originally comple d or last inspected. Having access to previous test results will, later on, enable the inspector to compare their test results with those previously obtained, to determine the rate of deteriorat on, if any, that may have occurred. Where no previous records exist, the installation should be investigated to determine whether the inspection can proceed safely (Regulation 651.1).

Accessibilty: arrangements for access to the premises and the rooms and locations included in the inspection, such as cellars garages and outbuildings, should be agreed. Where the inspector is unable to gain access to a location during the inspection and it is included as part of the agreed wo ks, the location should be recorded as an 'operational limitation on the Report.

Isolation of circuits: isolation of circuits s unavoidabl for the purposes of inspection and testing. However, agreeing a plan of works and providing advance notice to those likely to be affected by disconnection of supplies will help to minimise any disruption to the occupan s of the premises and those undertaking the inspection. For example based on the particular type of premises, it may be agreed that disconnection of circui s covering particular rooms or areas of a building are only carried ou after a specified time of the day.

Responsibility for the resetting of electronic clocks and timers in electrical equipment that are likely to be affected by disconnection of supplies should also be agreed.

Note: An appropriate level of 'Sampling' should also be agreed prior to the inspection, for guidance on Sampling refer to Snag 23.