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**Overview**

This standard is for a person carrying out the inspection and testing of the installed electrical wiring systems and equipment and/or accessories in “Dwellings” in accordance with the identified category of electrical installation work and its specification.

This standard is about Implementing the correct procedures for the inspection and testing of electrical installation work in “Dwellings”

## SUMEID04

# Inspect and Test Identified Electrical Wiring Systems and Equipment In Dwellings In Accordance with Building Regulations

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### Performance criteria

- You must be able to:*
- P1 confirm that the electrical wiring system, equipment and accessories to be inspected and tested are in accordance with the electrical installation work specification
  - P2 apply safe working practices including the identification of health and safety risks relating to the inspection and testing of electrical wiring systems and equipment and accessories
  - P3 confirm that safe isolation in accordance with industry approved methods as appropriate, has taken place before inspection and/or testing activities are undertaken
  - P4 check that connections are:
    - P4.1 fit for purpose
    - P4.2 mechanically and electrically sound
    - P4.3 comply with the IEE Wiring Regulations (BS7671)
    - P4.4 in accordance with the specification
    - P4.5 correct and clearly identified
  - P5 undertake, in accordance with the specification, inspection and testing of the connected electrical wiring system and equipment
  - P6 complete any necessary documentation related to the electrical installation work:
    - P6.1 legibly
    - P6.2 accurately
    - P6.3 within given timescales
    - P6.4 in accordance with organisational and regulatory requirements
  - P7 confirm that the work you have carried out meets the requirements of the specification and as appropriate the Building Regulations (England and Wales)

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### Knowledge and understanding

*You need to know and understand:*

#### Inspection and testing

- K1 the main types, their advantages and limitations of different electrical connections
- K2 the procedures for the connection of the circuits under inspection
- K3 how to interpret diagrams and drawings to facilitate the connection, inspection and testing of electrical wiring systems and equipment in “Dwellings”
- K4 the procedures for proving a connection is mechanically and electrically sound
- K5 methods of establishing that connections in circuits and protective conductors, including connections to terminals, are fit for the purpose for which they are being used
- K6 the requirements of joints and connections to be of a capacity and conductance to allow for the passage of fault currents and to prevent corrosion
- K7 the application, advantages and limitations of different electrical wiring systems, equipment and accessories in “Dwellings”
- K8 the advantages and limitations of different methods for the inspection and testing of electrical wiring systems, equipment and accessories in “Dwellings”
- K9 the advantages, disadvantages and limitations of instruments used to confirm that electrical connections are fit for purpose and mechanically sound
- K10 the importance of calibrating instruments at regular intervals
- K11 organisational procedures for confirming the completion of the inspection and test work and completion of necessary documentation

*You need to know and understand:*

#### With regard to Health and Safety you should know and understand

- K12 the importance of using personal protective equipment and safe appropriate tools for inspection and testing activities
- K13 safe isolation procedures before inspection and/or test work is undertaken
- K14 industry approved practices and instruments for confirming a supply is not present
- K15 the procedures for reporting any potentially dangerous situations or incidents to relevant people
- K16 your legal responsibilities for health and safety as required by the Health and Safety at Work Act and the Electricity At Work Regulations of appropriate to working in “Dwellings”

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*You need to know and understand:*

**With regard to Principles and theory you should know and understand as relevant:**

- K17 HSE Memorandum of guidance on The Electricity at Work Regulations (HSR 25);
- K18 Building Regulations (England and Wales)
- K19 British Standard 7671:2008;
- K20 IEE On-Site Guide to BS7671:2008 or equivalent.
- K21 Electricity Safety, Quality and Continuity Regulations 2002
- K22 the principles of electrical theory and installation practices which allow for the safe and efficient inspection and testing of electrical wiring systems and equipment in “Dwellings”

## Additional Information

### Glossary

These National Occupational Standards identify the level of competence that is required by individuals who have the responsibility on a day-to-day basis for the safety, technical standard and quality of “Full Scope” and/or “Defined Scope” electrical installation work in “Dwellings”

1. Electrical Installation Work in a “**Dwelling**” includes work in;
  - 1.1. Houses or flats
  - 1.2. “Dwellings” and business premises that have a common electrical supply – e.g. shops or public houses with a flat/living quarter as part of the main structure
  - 1.3. Common access areas in blocks of flats such as corridors and staircases
  - 1.4. Shared amenities of blocks of flats/bedsits such as laundries, kitchen or WC
2. These National Occupational Standards **DO NOT** apply to a “room (s) for residential purposes” which is used by one or more persons to live and sleep in, including rooms in hotels, hostels, boarding houses, halls of residence and residential homes.”
3. These National Occupational Standards **APPLY** to electrical installations that are intended to operate at low or extra-low voltage (BS7671) and are;
  - 3.1. in or attached to a “Dwelling”
  - 3.2. in the common parts of a building serving one or more “Dwellings”, but excluding power supplies to lifts
  - 3.3. in a building that receives its electricity from a source located within or shared with a dwelling
  - 3.4. in a garden or in or on land associated with a building where the electricity is from a source located within or shared with a “Dwelling”
4. Electrical Installation Work is the design, installation, inspection and testing of electrical systems and equipment in “Dwellings”, as a whole system or part thereof located on the consumers side of the electricity supply. Electrical systems and equipment includes;
  - 4.1. Equipment - apparatus/components, accessories switch-gear, distribution panels, consumer units, control systems, cables/cable carriers and luminaires that are fit purpose for an electrical installation in a “Dwelling”
  - 4.2. Wiring systems – An assembly made up of cable or busbars and parts which secure and, if necessary, enclose the cable or busbars, for example multi-core and single core cables with PVC, XLPE or LSF insulation and sheathing, M I cables with or without PVC/LSF sheathing and SWA cables with PVC, XLPE or LSF insulation and sheathing, conduit, trunking and tray
  - 4.3. Accessories - devices, other than current-using equipment, associated with such equipment or with the wiring of an installation
  - 4.4. Appliance - an item of current-using equipment other than a luminaire or an independent motor
5. The categories of Electrical Installation Work in “Dwellings” are;

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- 5.1. Full Scope (Level A) “Electrical Installation Work” includes the design, installation, inspection and testing of electrical installation work that is associated with dwellings and is intended to operate at a voltage that does not exceed low-voltage
  - 5.2. Defined Scope (Level B) “Electrical Installation Work” that is limited to the design, installation, inspection and testing of defined electrical installation work intended to operate at a voltage that does not exceed low-voltage that is associated with dwellings and is undertaken in connection with, or ancillary to some other work
6. Defined Scope Electrical Installation Work in “Dwellings” can be;
- 6.1. Plumbing
    - connection of an “Appliance” flex into a fused Spur Unit
    - additions to and extensions of certified fixed wiring systems
    - replacement of accessories and equipment – e.g. double-pole switch for a shower-unit to a pre-installed supply cable/outlet
  - 6.2. Gas installation work (Similar to plumbing)
  - 6.3. Installation of oil-fired combustion appliances;
  - 6.4. Installation of solid fuel burning combustion appliances;
  - 6.5. Installation or refurbishment of kitchens, bathrooms or bedrooms;
  - 6.6. Stair-lift installation work;
  - 6.7. Air conditioning installation work;
  - 6.8. Installation of domestic extractor fans;
  - 6.9. Installation of security systems;
  - 6.10. Installation of telecommunications systems;
  - 6.11. Installation of door or gate entry systems;
  - 6.12. CCTV systems;
  - 6.13. Property maintenance.
  - 6.14. Spa bath installations
  - 6.15. Swimming pool installations
7. A Competent Person is a person with sufficient technical knowledge and competence to undertake the identified “Electrical Installation Work” in “Dwellings” in terms of preventing danger, the risk of injury and be able to render “Electrical Installation Work” fit for purpose in terms of the identified scope of work
8. Qualified Supervisor - a competent person with specific responsibility on a day-to-day basis for the safety, technical standard and quality of “Full Scope” electrical installation work in “Dwellings”
9. Responsible Person - a person who is competent to do electrical work and has specific responsibility on a day-to-day basis for the safety, technical standard and quality of “Defined Scope” electrical installation work in “Dwellings”
10. **Principal Duty Holder** - can be a person who is appointed by the enterprise to have responsibility for the maintenance of the overall standard and safety of electrical installation work in “Dwellings”

## SUMEID04

# Inspect and Test Identified Electrical Wiring Systems and Equipment In Dwellings In Accordance with Building Regulations

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**Developed by** SummitSkills

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**Relevant occupations** Electrical Engineer; Electrical Fitter; Electrical Trades;

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**Suite** Ensuring the Compliance of Electrical Installation Work in Dwellings with the Building Regulations (England & Wales)

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**Key words** Electrical installation; Dwellings and Business Premises with a common electrical supply; Houses; Flats; Shops; Public houses; Wiring; Building Regulations; Inspectors; Test