

## Unit 316

# Terminating and connecting conductors, cables and flexible cords in electrical systems (ELTP05)

**Level:** 3  
**Credit value:** 4  
**UAN:** H/602/2828

### Unit aim

This unit is designed to enable the learner to develop the skills required, and apply the associated knowledge, in order that they are able to demonstrate the competence required to terminate and connect conductors, cables and flexible cords in electrical systems in accordance with approved industry practices, statutory and non-statutory regulations:

- The Electricity at Work Regulations (1989)
- The current edition of BS7671 Wiring Regulations
- Health & Safety Act (1974)
- Building Regulations (2000)

### Learning outcomes

There are **three** learning outcomes to this unit. The learner will:

1. be able to confirm safety of system prior to completion of any termination and connection in accordance with statutory and non statutory regulations
2. be able to terminate and connect conductors, cables and flexible cords in electrical wiring systems and equipment
3. be able to confirm that terminations and connections are safe and free from defects in accordance with statutory and non statutory regulations.

### Guided learning hours

It is recommended that **8** hours should be allocated for this unit, although patterns of delivery are likely to vary.

### Details of the relationship between the unit and relevant national standards

Learners achieving the outcomes of this unit will have demonstrated that they are competent in accordance with the National Occupational Standards (NOS) for the Electrotechnical Industry ELT1, 7, 9, 23.

### Support of the unit by a sector or other appropriate body

This unit is endorsed by the SSC for Building Services Engineering, SummitSkills.

### Assessment

This unit will be assessed within the workplace.

## **Unit 316            Terminating and connecting conductors, cables and flexible cords in electrical systems (ELTP05)**

Outcome 1            Be able to confirm safety of system prior to completion of any termination and connection in accordance with statutory and non statutory regulations

### **Assessment Criteria**

The learner can:

1. carry out safe isolation safe isolation of electrical circuits and complete electrical installations in accordance with regulatory requirements
2. ensure the Health and Safety of themselves and others within the work location in terms of:
  - selection and use of tools
  - PPE
  - risk assessment
  - reporting of unsafe situations
  - adherence to relevant statutory and non-statutory regulations.
3. check the safety of electrical systems and equipment prior to the completion of termination and connections in terms of:
  - presence of supply
  - mechanical soundness.

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Outcome 2 Be able to terminate and connect conductors, cables and flexible cords in electrical wiring systems and equipment

### **Assessment Criteria**

The learner can:

1. terminate and connect **conductors, cables and flexible cords** in accordance with the installation specification, manufacturer instructions and IEE Wiring Regulations
2. connect to **electrical equipment and accessories**, in accordance with the installation specification, manufacturer instructions and IEE Wiring Regulations
3. terminate and connect conductors, cables and cords using the following techniques:
  - Screwing.
  - Crimping.
  - Soldering.
  - Non-screw compression.

### **Range**

#### **Conductors, cables and flexible cords:**

- Thermosetting insulated cables including flexes
- Single and multicore thermoplastic (PVC) and thermosetting insulated cables
- PVC/PVC flat profile cable
- MICC (with and without PVC sheath)
- SWA cables (PILC, XLPE, PVC)
- Armoured/braided flexible cables and cords
- Data cables
- Fibre optic cable
- Fire resistant cable

#### **Electrical equipment and accessories:**

- Socket-outlets
- Distribution-boards
- Consumer units
- Luminaires
- Electric motors and their control equipment
- Circuit Breakers
- Earthing terminals
- Control panels
- Data socket outlets
- Auxiliary equipment (eg heating system components)

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Outcome 3      Be able to confirm that terminations and connections are safe and free from defects in accordance with statutory and non statutory regulations

**Assessment Criteria**

The learner can:

1. ensure that terminations and connections are electrically and mechanically sound
2. complete the necessary identification of cables, conductors and flexible cords in accordance with regulatory requirements and organisational procedures
3. dispose of unwanted material and equipment in accordance with site procedures and statutory requirements.

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## Notes for guidance

### **Unit entry requirements**

Prior to undertaking this unit a learner must provide auditable evidence that they have the knowledge and understanding as detailed in the unit:

- Understanding the principles, practices and legislation for the termination and connection of conductors, cables and flexible cords in an electrotechnical system (2357-316/ELTK05).

### **Evidence requirements**

Learning Outcome 1:

- Authorised confirmation that the learner has had involvement and experience in safe-isolation procedures as relevant on two separate occasions.
- Auditable evidence must be provided that the learner has demonstrated that they have competently undertaken a risk assessment on two separate occasions.

Learning Outcomes 2 and 3 – Auditable evidence sourced from a real working environment must be provided to illustrate that the learner has demonstrated on two separate occasions they can terminate and connect all the identified conductors and cables in accordance with the assessment criteria for each of the learning outcomes.

All assessment activities must enable the learner to demonstrate that they understand and can apply the relevant requirements, as appropriate, of:

- the Electricity at Work Regulations (1989)
- the current edition of BS7671 Wiring Regulations
- Health & Safety Act (1974)
- Building Regulations (2000)
- Management of Health & Safety at Work Regulations
- Reporting of Injuries, Diseases & Dangerous Occurrences Regulations
- Provision & Use of Work Equipment Regulations
- Manual Handling Operations Regulations
- Personal Protective Equipment at Work Regulations
- Work at Height Regulations
- Control of Substances Hazardous to Health Regulations
- Control of Asbestos at Work Regulations

### **Occupational competence**

To demonstrate 'Occupational Competence' the learner will need to fulfil the requirements of the relevant competence-based qualification this unit is a part of, which includes the successful completion of the Electrotechnical Occupational Competence Unit (2357-399/ELT OC1).