



Information for Employers, Training Providers and AM2 Candidates



Introduction

This booklet gives information on the AM2 Assessment of Occupational Competence.

The AM2 is the electrotechnical industry standard assessment for occupational competence.

The target population of the AM2 is:

- Individuals undertaking an electrotechnical apprenticeship programme of which the AM2 assessment is a mandatory requirement.
- Individuals who must provide evidence that they have met the assessment requirements of:
 - NVQ Level 3: Electrical Installation Buildings and Structures
 - NVQ Level 3: Electrical MaintenanceOr their approved additions/revisions/replacements.
- Individuals who must undergo an 'Initial Assessment' of their current levels of competence.

National Electrotechnical Training (NET) is an industry charity and is the owner of AM2 and licenses independent assessment centres throughout the United Kingdom. For details of all current licensed AM2 centres please visit the website: www.netservices.org.uk

What is the AM2 Assessment of Occupational Competence?

The AM2 Electrotechnical Assessment of Occupational Competence is designed for individuals who wish to practise either as an electrician or as a maintenance electrician. It demonstrates that they have the level of competence expected by the industry in the following key occupational areas:

- Risk assessments and health and safety safe isolation.
- The interpretation of specifications, drawings and diagrams.
- Planning and preparing to install, terminate and connect identified wiring systems.
- Installing, terminating and connecting identified wiring systems.
- Inspection, testing and certification.
- Fault diagnosis and correction of electrical faults.
- The understanding and application of industry recognised procedures, working practices and the requirements of statutory and non-statutory regulations.

Candidates will be expected to install, terminate, connect, inspect, test, commission and diagnose faults in accordance with the installation specification and the relevant statutory and non-statutory regulations on the following:

- A three-phase distribution board and sub-circuit
- A three-phase Direct-on-Line Motor circuit
- Single-phase lighting and power circuits
- A central heating/sustainable energy system
- A safety services circuit and device
- A data-cabling system

The assessment is in four sections:

Section A and A1 – Risk Assessment and Safe Isolation; Composite Installation

Section B – Inspection and Testing of the completed composite installation

Section C – Fault Diagnosis and Correction

Section D – Assessment of Applied Knowledge

Section A1: Risk Assessment and Safe Isolation (1 Hour)

Section A: Composite Installation (8.5 Hours)

This section has areas where candidates will need to demonstrate occupational competence in accordance with statutory and non-statutory regulations and approved industry working practices.

The areas are:

- 1 Risk assessment and safe-isolation.
- 2 Interpretation of specifications and technical data.
- 3 Selection of protective devices.
- 4 Install Protective Equipotential Bonding.
- 5 Installing and terminating pvc singles cable.
- 6 Installing and terminating pvc/pvc multi-core & cpc cable.
- 7 Installing and terminating SY multi-flex cable.
- 8 Installing and terminating heat-resistant flex.
- 9 Installing and terminating XLPE SWA.
- 10 Installing and terminating data-cable.
- 11 Installing and terminating FP200 type cable.

Section B: Inspection and Testing (3.5 hours)

To demonstrate occupational competence candidates will be expected to:

- Undertake an assessment of risk and work according to best practise as required by Health and Safety legislation.
- Ensure the installation is correctly isolated before commencing the inspection and test activity.
- Carry out a visual inspection of the installation in accordance with BS 7671 and IEE Guidance Note 3.
- Complete the following tests on the installation in accordance with BS 7671 and IEE Guidance Note 3:
 - Continuity of protective conductors
 - Continuity of ring final circuit conductors
 - Insulation resistance
 - Polarity
 - Earth fault-loop impedance (EFLI)
 - Prospective fault current (PFC)
 - Functional testing
- Candidates will be required to verify that the test results obtained conform to the values required by BS 7671 and IEE Guidance Note 3.
- Complete an electrical installation certificate, schedule of inspections and schedule of test results using the model forms as illustrated in Appendix 6 of BS 7671.

Section C: Fault Diagnosis (2.5 hours)

To demonstrate occupational competence candidates will be expected to:

- Undertake an assessment of risk.
- Correctly identify and use tools, equipment and test instruments that are fit for purpose.
- Carry out checks and preparations that must be completed prior to undertaking fault diagnosis.
- Carry out safe isolation in the correct sequence.
- Identify faults from 'fault symptom' information.
- State and record how the identified faults can be rectified.

Candidates will be expected to follow practices and procedures that take into account voltage sensitive equipment.

Section D: Assessment of Applied Knowledge (1 hour)

Candidates will be assessed on their application of knowledge associated with the work undertaken within the Assessment of Occupational Competence:

- Hand tool use and care
- Health and Safety
- BS 7671: Requirements for Electrical Installations
- Building Regulations
- Installation techniques
- Motor control and overload protection
- Control Systems – sustainable energy system
- Overload and Short-circuit protection
- Inspection, Testing and Fault Finding

The assessment will last for one hour and be in the form of a computerised multiple choice test. Candidates will be expected to answer 30 questions and achieve a pass mark of 70%, thus requiring candidates to achieve 21 correct answers.

Prior to taking the AM2 Assessment of Occupational Competence candidates will be expected to have carried out a self-assessment exercise to ascertain whether or not they are ready to take the assessment.

This document is in the form of a checklist related to the areas of competence against which they are to be assessed. This will help them to determine if they are confident they possess the knowledge and/or experience to achieve the required standard.

The self-assessment checklist is available to download from the Candidate area of the NET website.

Once completed candidates are expected to; arrange a meeting with their employer and/or training provider to review their self-assessment checklist; and if there are areas of concern to produce an action plan to help them achieve the required standard.

It is the responsibility of the candidate and all parties concerned with their development to ensure that those undertaking the AM2 Assessment of Occupational Competence are fully prepared.

Some candidates may require additional training prior to undertaking the AM2 assessment. Information regarding the NET approved training providers for the AM2 Assessment of Occupational Competence can be found on the NET website.

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