

Qualification Manual

EAL Level 3 Award in the Initial Verification and Certification of Electrical Installations

Qualification Number: 600/4337/4

EAL Level 3 Award in the Periodic Inspection, Testing, and Certification of Electrical Installations

Qualification Number: 600/4338/6

EAL Level 3 Award in Electrical Installation Inspection, Testing, Certification, and Reporting Qualification Number: 603/2625/6



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1.0 About EAL

For over fifty years, EAL has been the specialist awarding organisation for engineering, manufacturing, building services and related sectors. Developed to the highest technical standards, our qualifications reflect ever-changing industry and regulatory needs. We support the providers of our qualifications with an unparalleled level of service to ensure that learners are well prepared to take the next step in their journeys, whether study, an apprenticeship or work.

Through industry partnerships with EAL centres and training providers, decades of experience supporting our core sectors, and our role as part of the Enginuity Group, we have built unrivalled knowledge and understanding of employer skills needs. As a result, EAL's skills solutions, including apprenticeship End-Point Assessment, External Quality Assurance and qualifications are respected and chosen by employers to deliver real lifelong career benefits for all our learners. That's why in the last ten years, 1.2 million people across the UK have taken EAL qualifications.

1.1 Equal Opportunities and Diversity

EAL expects its centres to enable learners to have equal access to training and assessment for qualifications in line with equalities legislation. Further details can be located in the EAL Equal Opportunities and Diversity Policy:

http://www.eal.org.uk/centre-support/centre-support/policies-and-important-documents

1.2 Customer Experience and Feedback

Customer Experience is a fundamental part of EAL's commitment to you. EAL aims to ensure that all customers receive a high-quality efficient service. We are always interested in feedback and if you have any comments or feedback on our qualifications, products or services, please contact the Customer Experience team:

EAL Customer Experience Tel: +44 (0)1923 652 400

Email: Customer.Experience@eal.org.uk



2.0 Introduction to the Qualification

What are these qualifications?

These awards between them cover the theory and practice involved with the initial verification and commissioning and periodic inspection, testing and condition reporting of both single and three phase electrical installations. The Level 3 Award in Electrical Installation Inspection, Testing, Certification and Reporting is a combined award and covers both initial verification and periodic inspection and testing.

The awards follow BS 7671 and the industry recognised IET Guidance Note 3 and the Best Practice Guides from Electrical Safety First.

The awards provide an opportunity for individuals to develop and/or enhance their knowledge and skills in the inspection and testing of single and three phase low voltage electrical installations.

Who are these qualifications for?

- Those who wish to further their career in the electrotechnical sector
- Electricians who wish to carry out inspection, testing and commissioning; and periodic inspection, testing and condition reporting
- Those who wish to obtain an industry recognised qualification.

What do these qualifications cover?

The application of knowledge involved with the inspection and testing of electrical installations. Each Award has one unit which covers the necessary learning outcomes for initial verification, and periodic inspection and testing of electrical installations. This includes learning outcomes about safe isolation, inspection, safe testing, pre-energised and energised tests, documentation, and the practical use of test equipment. The structure of each of the qualifications is listed in Section 3. The examinations for these qualifications are open book. The on-screen allows the use of Guidance Note 3 Inspection & Testing Published by The Institution of Engineering and Technology.

2.1 Qualification Support Materials

The following materials are available for the qualifications:

- Delivery pack, containing the qualification unit and all relevant tutor guidance relating to the delivery and assessment
- Learner assessment pack, containing the learner's instructions for the practical assessments

All materials can be accessed by EAL registered Centres from the EAL website, www.eal.org.uk



2.2 Achievement of the Qualifications

Each qualification is achieved when the unit assessments have been successfully completed. The centre will then be able to apply for the learner's certificate. Overall grading type: Pass /Fail.

2.3 Accreditation and Industry Support for these Qualifications

These qualifications:

- are regulated at level three
- are recognised by the sector and were developed in conjunction with the industry.

2.4 Progression Opportunities

The qualifications relate to various electrotechnical qualifications including:

- EAL electrical apprenticeship qualifications
- EAL qualifications in environmental technology systems
- EAL Level 3 Award in the In-Service Inspections and Testing of Electrical Equipment (PAT)
- EAL Level 4 Award in the Design and Verification of Electrical Installations.

Further information can be obtained from the EAL website, or alternatively, contact:

EAL Customer Experience Tel: +44 (0)1923 652 400

Email: Customer.Experience@eal.org.uk



3.0 Qualification Structure

3.1 Rule of Combination

EAL Level 3 Award in the Initial Verification and Certification of Electrical Installations

This qualification will be obtained by the learner once they have completed the single mandatory unit below. It has a Total Qualification Time (TQT) 46 hours (notional time required by the learner to complete the qualification).

Qualification Unit: Must be completed:

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QIT3/001	Principles, practices and legislation for the initial verification of electrical installations	3	5	36	D/503/5258

EAL Level 3 Award in the Periodic Inspection, Testing, and Certification of Electrical Installations

This qualification will be obtained by the learner once they have completed the single mandatory unit below. It has a TQT of 51 hours.

Qualification Unit: Must be completed:

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QCR3/001	Principles, practices and legislation for the periodic inspection, testing and condition reporting of electrical installations	3	5	37	T/503/7873

EAL Level 3 Award in Electrical Installation Inspection, Testing, Certification, and Reporting

This qualification will be obtained by the learner once they have completed the single mandatory unit below. It has a TQT of 50 hours.

Qualification Unit: Must be completed:

EAL Code	Unit Title	Level	GLH	Ofqual Code
ITC3/001	Electrical Installation Inspection, Testing, Certification and Reporting	3	45	M/616/7080



4.0 Centre and Qualification Approval

Centres wishing to run the qualifications will need to comply with the Qualification Manual and EAL's centre recognition criteria for these qualifications upon accreditation and launch. Centres must also put in place the appropriate physical and human resources and administration systems to effectively run the qualifications. Please refer to Section 5 for the requirements of centre staff involved in the delivery of the qualifications.

For existing EAL centres to put the qualification on your centre remit:

 To add these qualifications to your centre qualification remit, create and complete a qualification approval application form in Smarter Touch and submit to EAL

For non EAL centres to gain centre approval to run the qualification:

Please contact EAL Customer Experience, who will be delighted to hear from you:

EAL Customer Experience Tel: +44 (0)1923 652 400

Email: <u>Customer.Experience@eal.org.uk</u>



5.0 Profiles and Requirements

The staff involved in the delivery of these qualifications must meet the requirements in this section.

5.1 Staff Responsible for Registering and Certification of Learners

Centres are required to appoint a suitable member of staff who can take responsibility for registering learners onto qualifications, submitting entries for assessments to EAL, and taking receipt of external assessment procedures (if appropriate). They may also be responsible for applying to EAL for learner certificates. The role may be undertaken by the same person who undertakes quality assurance.

5.2 Teaching Staff

These personnel must have the necessary knowledge and understanding of the assessment criteria and learning outcomes they are delivering. They must also understand the structure and content of the qualification.

It is a recommendation that the teaching staff will:

- Have 2 years' experience in teaching/training or
- Are working towards an appropriate teaching/training qualification (e.g., Cert Ed or Learning & Development trainer units)

or

 Hold an appropriate teaching/training qualification (e.g., Cert Ed or Learning & Development trainer units)

5.3 Learners

There are no formal entry requirements for these qualifications; however, centres should ensure that the learners have the potential to achieve these qualifications. Learners must have the minimum levels of literacy and numeracy to complete the learning outcomes and assessments.

Centres should make learners with particular requirements aware of the content of the qualification and they should be given every opportunity to successfully complete the qualification. EAL will consider any reasonable suggestions for, and from, those with disabilities that would help them to achieve the learning outcomes without compromising the standards required.

Age Restrictions

Learners must be at least 16 years old.



5.4 Assessors

The Centre MUST provide EAL with the names of any individuals who will undertake internal assessment, so that these can be approved prior to them carrying out an assessment role.

Personnel carrying out assessment must have:

- Knowledge and understanding of the assessment criteria they are assessing
- Have knowledge and understanding of the qualifications structure and content
- Understanding of the assessment process

It is a recommendation that personnel carrying out assessment will:

Be working towards or have achieved an assessment qualification

5.5 Internal Quality Assurers

The quality assurance staff must have knowledge and understanding of the qualification's structure and content. They must also understand the assessment process and the role of quality assurance.

It is a recommendation that the quality assurance staff will:

- · Have experience in quality management/internal verification or
- Hold an appropriate qualification (e.g., V1)

5.6 Physical Resources

Safe working is a key issue and all practical activities conducted within the centre must be subject to up-to-date risk assessments. All learners must be properly supervised and wear the correct personal protective equipment. Arrangements for first aid and emergency action in case of accident must be in place.

For the practical assessment, the required resources are detailed within the associated documentation (available from EAL website).



6.0 Assessment

ALL the qualification assessments are OPEN BOOK. This includes the on-screen exams for each qualification. For the on-screen exams, the allowed publication is *Guidance Note 3 Inspection & Testing*, published by The Institution of Engineering and Technology. All assessments within the given qualification must be passed for it to be awarded. Practical assessment contributes to approximately half of the assessments within each qualification. The pass mark for all exams is notionally set at 60%. Grading for the assessments: Pass/Refer.

EAL Level 3 Award in the Initial Verification and Certification of Electrical Installations

1 on-screen (OPEN BOOK) exam with 55 questions: (four answer options and advanced question types). (Exam code QIT3001).

2 centre marked practical assessments consisting of:

Initial inspection, and commissioning of a three phase rig.

<u>EAL Level 3 Award In the Periodic Inspection, Testing and Certification of Electrical</u> Installations

2* on-screen exams (OPEN BOOK): (Please read important note below)

- QCRB3001 Bridging exam: Consisting of 35 questions
- QCR3001: Consisting of 35 questions: (four answer options and advanced question types). All classification coding of defects and departures must be in accordance with the Electrical Safety First's Best Practice Guide Number 4.

*Note: Learners who have already achieved:

- Level 3 Award in the Initial Verification and Certification of Electrical Installations
- **and** have a sufficient and current understanding of the learning outcomes within that unit, need only undertake the QCR3001 Exam (one on-screen exam). This is because those learners will have already been assessed on the common assessment criteria between the two units.

In the EAL unit (Q) CR 3/001 some assessment criteria are highlighted in blue. This identifies it as applicable to a learner who has already achieved the Level 3 Award in the Initial Verification and Certification of Electrical Installations. Therefore, delivery staff should teach those criteria in the context of the learning outcome for those learners, as this is what is assessed in the QCR3001 Exam (described above).

There are also two centre marked practical assessments consisting of:

- Periodic inspection,
- Periodic inspection and testing.



EAL Level 3 Award In Electrical Installation Inspection, Testing, Certification and Reporting

One on-screen (OPEN BOOK) exam with 60 questions: (four answer options and advanced question types). (Exam code ITC3/001).

There are also two centre marked practical assessments consisting of: Periodic inspection, and Periodic inspection and testing. (These are the same practical assessments utilised in the EAL Level 3 Award in the Periodic Inspection, Testing and Certification of Electrical Installations).



7.0 Quality Control of Assessments

There are two major activities in which EAL interacts with the Centre in relation to the External Quality Control of Assessment for this qualification and these are:

- Recognition: When a Centre decides to offer the qualification, the EAL External
 Quality Assurer (EQA) ensures that the Centre is suitably equipped and prepared for
 delivery and assessment
- **Engagement:** Throughout the ongoing delivery of the qualification EAL, through monitoring and other mechanisms will review the quality and consistency of assessment and internal quality assurance and recommend actions to address issues of concern.

Recognition

In granting approval, EAL, normally through its EQAs, will ensure that the prospective Centre:

- Meets any procedural requirements specified by EAL
- Has sufficient and appropriate physical and staff resources
- Meets relevant health and safety and/or equality and access requirements
- Has a robust plan for the delivery, assessment, and QA for the qualifications (including, where appropriate, scope for involving employers)

EAL may decide to visit the Centre to view the evidence provided.

Engagement

EAL, through EQA Engagement and other mechanisms will ensure that:

- A strategy is developed and deployed for the on-going monitoring of the centre this
 will be based on an active risk assessment of the Centre, and will include details of
 the learner, assessor and internal quality assurer's sampling strategy and the
 rationale behind this
- The Centre's internal quality assurance processes are effective in learner assessment
- Outcomes of internal assessment are verified, through sampling, to ensure standards are being maintained
- Sanctions are applied to a Centre where necessary and that corrective actions are taken by the Centre and monitored by the EQA
- Reviews of EAL's external auditing arrangements are undertaken.



Appendix 1: Unit Summaries

EAL Level 3 Award in the Initial Verification and Certification of Electrical Installations

EAL Code	Unit Title	Level	Credit	GLH	Ofqual Code
QCR3/001	Principles, practices and legislation for the periodic inspection, testing and condition reporting of electrical installations	3	5	37	T/503/7873

This unit aims to provide learners with the knowledge and understanding to undertake practical inspection and testing (initial verification) of multiphase electrical systems equipment.

The learner will:

- 1. Understand the requirements for completing the safe isolation of electric circuits and installations.
- 2. Understand the requirements for initial verification of electrical installations.
- 3. Understand the requirements for completing the inspection of electrical installations prior to their being placed into service.
- 4. Understand the requirements for the safe testing and commissioning of electrical installations.
- 5. Understand the requirements for testing before circuits are energised.
- 6. Understand the requirements for testing energised installations.
- 7. Understand the requirements for the completion of electrical installation certificates and associated documentation.
- 8. Be able to confirm safety of system and equipment prior to completion of inspection, testing and commissioning.
- 9. Be able to carry out inspection of electrical installations prior to them being placed into service
- 10. Be able to test electrical installations prior to them being placed into service.
- **11.** Be able to commission electrotechnical systems and equipment.

EAL Level 3 Award in the Periodic Inspection, Testing, and Certification of Electrical Installations

EAL Code	Unit Title	Level	GLH	Ofqual Code
ITC3/001	Electrical Installation Inspection, Testing, Certification and Reporting	3	45	M/616/7080

This unit aims to provide learners with the knowledge and understanding involved with periodic inspection and testing of electrical installations in accordance with statutory and non-statutory requirements.



The learner will:

- 1. Understand the requirements for completing the safe isolation of electrical circuits and installations.
- 2. Understand the requirements for inspecting, testing and recording the condition of electrical installations.
- 3. Understand the requirements for completing the periodic inspection of electrical installations.
- 4. Understand the differences between periodic inspection and initial verification.
- 5. Understand the requirements for the safe testing of electrical installations which have been placed in service.
- 6. Understand the requirements for testing before circuits are energised.
- 7. Understand the requirements for testing energised installations.
- 8. Understand and interpret test results.
- 9. Understand the requirements for the completion of electrical installation condition reports and associated documentation.
- 10. Be able to confirm safety of system and equipment prior to completion of inspection and testing.
- 11. Be able to carry out inspection of electrical installations.
- 12. Be able to test electrical installations in service.
- 13. Produce a condition report with recorded observations and classifications.

EAL Level 3 Award in Electrical Installation Inspection, Testing, Certification, and Reporting

EAL Code	Unit Title	Level	GLH	Ofqual Code
ITC3/001	Electrical Installation Inspection, Testing, Certification and Reporting	3	45	M/616/7080

This unit aims to provide learners with the knowledge and understanding involved with both initial and periodic inspection and testing of electrical installations in accordance with statutory and non-statutory requirements.

The learner will:

- 1. Understand the health and safety requirements which apply when inspecting, testing and commissioning electrical installations.
- 2. Understand the requirements for inspecting and testing electrical installations.
- 3. Understand the requirements for the safe inspection of electrical installations.
- 4. Understand the requirements for the safe testing of electrical installations.
- 5. Carry out the inspection and testing of an electrical installation.



Appendix 2: Centre Examination Specifications

Unit: QIT3/001 – Principles, practices and legislation for the initial verification of electrical installations.

Assessment Type: Multiple Choice

Number of Questions: 55 Time Allowed: 90 Minutes

The pass mark is notionally set at 60%.

This is an open book exam requiring reference to Guidance Note 3: Inspection and Testing, published by the Institute of Engineering and Technology. Candidates may also use a non-programmable calculator.

The examination will cover the learning outcomes of the unit as follows:

Outcome	Title	Approximate Coverage
1	Understand the requirements for completing the safe isolation of electrical circuits and installations	13%
2	Understand the requirements for initial verification of electrical installations	5%
3	Understand the requirements for completing the inspection of electrical installations prior to their being placed into service	14%
4	Understand the requirements for the safe testing and commissioning of electrical installations	13%
5	Understand the requirements for testing before circuits are energised	20%
6	Understand the requirements for testing energised installations	24%
7	Understand the requirements for the completion of electrical installation certificates and associated documentation	9%
10	Be able to test electrical installations prior to them being placed into service	2%



Unit: CR/001 – Principles, practices and legislation for the periodic inspection, testing and conditionreporting of electrical installations (**CR Bridging Exam**)

Assessment Type: Multiple Choice

Number of Questions: 35 Time Allowed: 60 Minutes

The pass mark is notionally set at 60%.

This is an open book exam requiring reference to Guidance Note 3: Inspection and Testing, published by the Institute of Engineering and Technology. Candidates may also use a non-programmable calculator.

The examination will cover the learning outcomes of the unit as follows:

1	Understand the requirements for completing the safe isolation of electrical circuits and installations	14%
3	Understand the requirements for periodic inspection of electrical installations	3%
5	Understand the requirements for the safe testing of electrical installations which have been placed in service	9%
6	Understand the requirements for testing before circuits are energised	37%
7	Understand the requirements for testing energised installations	31%
8	Understand and interpret test results	3%
12	Be able to test electrical installations in service	3%

NOTE: A pass in this exam component will allow the learner to progress to the second exam for this qualification (CR). This bridging exam is only applicable to those learners who do not hold a recognised Level 3 qualification in inspection and testing.



Unit: CR/001 – Principles, practices and legislation for the periodic inspection, testing and conditionreporting of electrical installations

Assessment Type: Multiple Choice

Number of Questions: 35 Time Allowed: 60 Minutes

The pass mark is notionally set at 60%.

This is an open book exam requiring reference to Guidance Note 3: Inspection and Testing, published by the Institute of Engineering and Technology. Candidates may also use a non-programmable calculator.

The examination will cover the learning outcomes of the unit as follows:

1	Understand the requirements for completing the safe isolation of electrical circuits and installations	3%
2	Understand the requirements for inspecting, testing, and recording the condition of electrical circuits and installations	11%
3	Understand the requirements for periodic inspection of electrical installations	6%
4	Understand the differences between periodic inspection and initial verification	38%
5	Understand the requirements for the safe testing of electrical installations that have been placed in service	3%
7	Understand the requirements for testing energised installations	14%
8	Understand and interpret test results	14%
9	Understand the requirements for the completion of electrical installation condition reports	11%



Unit: ITC3/001 - Electrical Installation Inspection, Testing, Certification, and Reporting

Assessment Type: Multiple Choice

Number of Questions: 60 Time Allowed: 120 Minutes

The pass mark is notionally set at 60%.

This is an open book exam requiring reference to Guidance Note 3: Inspection and Testing, published by the Institute of Engineering and Technology. Candidates may also use a non-programmable calculator.

The examination will cover the learning outcomes of the unit as follows:

1	Understand the health and safety requirements that apply when inspecting, testing, and commissioning an electrical installation	7%
2	Understand the requirements for inspecting and testing electrical installations	21%
3	Understand the requirements for the safe inspection of electrical installations	20%
4	Understand the requirements for the safe testing of electrical installations	52%



Appendix 3: Learner Registration and Certification

Learners must be registered with EAL on a code which relates to the qualification -this must be completed prior to assessment. Both learner registration and certification can be completed online at the EAL Website www.eal.org.uk. For paper-based registration and certification use the appropriate forms. These are located on the EAL Website, for guidance on registration and Certification please refer to the Registration and Certification User Guide.

To register the learner on the chosen qualification/pathway code:

Qualification Title	Code
EAL Level 3 Award In the Initial Verification and	600/4337/4
Certification of Electrical Installations	
EAL Level 3 Award In the Periodic Inspection,	600/4338/6
Testing, and Certification of Electrical Installations	
EAL Level 3 Award in Electrical Installation,	603/2625/6
Inspection, Testing, Certification, and Reporting	

Learners that progress from the EAL Level 3 Award In the Initial Verification and Certification of Electrical Installations to the EAL Level 3 Award In the Periodic Inspection, Testing and Certification of Electrical Installations will have the exam achievement details updated in the EAL registration system. They will only be required to do the CR exam and not the CR Bridging exam for the EAL Level 3 Award In the Periodic Inspection, Testing and Certification of Electrical Installations.

See Section 6 of this manual for an outline of the assessment methods.

For further information, please contact EAL Customer Experience:

EAL Customer Experience Tel: +44 (0)1923 652 400

Email: Customer.Experience@eal.org.uk

Note: Centres who already have successfully deliver the EAL Level 3 Award In the Periodic Inspection, Testing and Certification of Electrical Installations 600/4338/6, and have no issues will get automatic approval to run the EAL Level 3 Award in Electrical Installation Inspection, Testing, Certification and Reporting.



Published by:

EAL
Unit 2, The Orient Centre
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