

# **Qualification Specification**

## **ELEC-001**

### **BPEC Level 3 Award in the Requirements for Electrical Installations BS7671:2018**

Qualification Number – 603/3430/7

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## 1. About BPEC

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BPEC Certification Ltd was initially established in 1997 to act as an accredited certification body to oversee competence assessment of individuals working in the gas industry. It has extended its coverage and now offers a range of assessment and certification services to meet the needs of operatives working across the Building Services sector.

In 2010 BPEC established a recognised Awarding Organisation, offering a suite of regulated qualifications. These have been developed with the input of industry and learning providers to meet the skills and needs of the Building Services Engineering sector.

The Company is committed to high levels of customer service and providing support to organisations who deliver our qualifications. We are also committed to offering qualifications, assessments and learning materials, which meet the needs of employers, learners and training providers on an ongoing basis.

BPEC Certification is a not for profit company and any surplus funds are gift aided to the BPEC Charity. The focus of the Charity is to raise the knowledge and skills of those who work in the UK plumbing and heating industry and support associated projects, grants and awards.

Should you wish to learn more about BPEC (including our charity work) please contact:

BPEC Certification Ltd  
1-2 Mallard Way  
Pride Park  
Derby  
DE24 8GX  
Tel: 01332 376000

Or visit our website at:

[www.bpec.org.uk](http://www.bpec.org.uk)

## 2. Introduction to the Qualification

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### 2.1. Qualification Overview

Qualification Title	BPEC Level 3 Award in the Requirements for Electrical Installations BS7671:2018				
Qualification Number (QN)	603/3430/7				
BPEC Qualification Code	ELEC-001				
Assessment Method/s	One Multiple Choice On-line Examination				
Entry Requirements	Learners must be 16-18, 19+ years				
GLH	35	TQT	40	Credits	4
Mandatory Units	1				
Optional Units	None				
Pathways	N/A				
Last Registration Date	TBC				
Last Certification Date	TBC				

### 2.2. Who this Qualification is for

This qualification is aimed at practicing electricians, including designers, installers and inspectors.

The knowledge gained would also be useful to all professionals involved within the Electrical Industry, for example, surveyors, building services engineers and consultants who would like to update their knowledge and understanding of the IET Wiring Regulations BS7671 (18<sup>th</sup> Edition).

Finally, any person (whom is aged 16-18, 19+ years) wishing to gain an understanding of the current version of the IET Wiring Regulations BS7671:2018 (18<sup>th</sup> Edition).

### 2.3. The Purpose of the Qualification

The IET Wiring Regulations (BS7671) are the epitome of electrical standards in the UK. It is necessary for all those working within an electrical-related field to ensure compliance with the current standards from a competence point of view.

This qualification ensures that learners gain knowledge and understanding of BS7671 (18<sup>th</sup> edition) in terms of the format, content and application of the Regulations.

The total content of IET Wiring Regulations BS7671:2018 (18<sup>th</sup> Edition) applying to the design, erection and verification of different types of electrical installations is covered.

## 2.4. Support and Accreditation

This qualification is supported by industry, educational establishments and is regulated by Ofqual.

## 2.5. Relationship to Other Qualifications

In terms of further learning, there are a number of qualifications that successful completion of this award will lead to, including:-

- Level 2 Certificate in Fundamental Inspection & Testing of Electrical Installations.
- Level 3 Award in Building Regulations for Electrical Installation Contractors in Dwellings
- Level 3 Award in Installing, Testing and Ensuring Compliance of Electrical Installations in Dwellings.
- Level 3 Award in Inspection & Testing of Electrical Installations (Initial Verification)
- Level 3 Award in Periodic Inspection and Testing of Electrical Installations
- Level 3 Award in the Combined Inspection & Testing of Electrical Installations
- Level 4 Award in the Design and Verification of Electrical Installations

## 2.6. Qualification Limitations

This qualification will not automatically qualify learners to work as a Domestic Installer or Electrician but may provide a platform for employment and/or further study.

This qualification provides a learner with one of the foundational blocks that are required to gain employment within industry.

### 3. Qualification Structure

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#### 3.1. Overview

This qualification consists of 1 mandatory unit and has a value of 4 credits.

#### 3.2. Mandatory Unit

Unit Code	Unit Type	Unit Title	Level	Credit Value	TQT	GLH
F/617/1506	K	Understand the requirements of electrical installations BS7671:2018	3	4	40	35

Key	Unit Type
K	Knowledge

#### 3.3. Optional Units

None

#### 3.4. Rule of Combination

The Learner must complete the mandatory unit.

## 4. Learners

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### 4.1. Qualifications which a Learner must have completed before taking the qualification

None applicable.

### 4.2. Knowledge, skills or understanding which the Learner is required to have before taking the qualification

#### a. Specific

There are no specific requirements in undertaking this qualification, however, a basic knowledge of electrical science would be beneficial.

#### b. General

The Centres should:

- i. Undertake an initial assessment of each Learner to ensure they have the minimum levels of numeracy and literacy to comply with the health and safety aspects of the qualification and the completion of the learning outcomes and assessments.
- ii. Establish if the Learner has any specific training needs.
- iii. Identify any support and guidance the Learner may require when working towards the qualification.

### 4.3. The units which a Learner must have completed before the qualification will be awarded and any optional routes

Learners will need to complete the one mandatory unit.

### 4.4. Any other requirements which a Learner must have satisfied before the Learner will be assessed or before the qualification will be awarded

None identified.

### 4.5. Qualification Achievement

The qualification will be awarded when the one mandatory unit has been achieved.

## 5. Delivery Requirements

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### 5.1. Centre Recognition

Centres wishing to deliver this qualification will need to gain Centre Recognition and Qualification Approval (see 5.2). For full details of the recognition process please contact:

BPEC Certification Ltd  
1-2 Mallard Way  
Pride Park  
Derby  
DE24 8GX  
Tel: 01332 376000  
aoadmin@bpec.org.uk

### 5.2. Qualification Approval

- a. Centres wishing to deliver this qualification who are already recognised (see 5.1) should complete and submit a Qualification Approval Form to BPEC Certification Ltd.
- b. Before submission, centres should ensure they can meet the delivery requirements.
- c. Centres who are approved to deliver this qualification and wish to extend delivery to satellite sites must seek approval for each additional site.

### 5.3. Physical Resources

- a. General - Centres must provide a safe environment for Learners and staff with appropriate policies and procedures in place which are adhered to.
- b. Teaching Provision – Centres must provide adequate facilities and equipment to allow the effective teaching of the qualification including any practical provision.
- c. Assessment/Exam Provision – Centres must provide facilities and equipment which allow assessments and/or exams to be conducted in accordance with assessment criteria/guidance and exam procedures.

### 5.4. Staff Conducting Tuition, Teaching or Instruction

- a. The delivery methods for this qualification is encouraged to specifically focus on the IET Wiring Regulations: Requirements for Electrical Installations BS7671:2018 (18<sup>th</sup> Edition).
- b. Candidates will require access to this publication both during delivery of the qualification and in the assessment. This publication is available via the IET website; [www.iet.org](http://www.iet.org).
- c. Staff must:
  - i. Have knowledge and understanding of the occupation covered by this qualification.



- ii. Have knowledge and understanding of the structure and content of this qualification.
  - iii. Hold electrical-related qualifications at the same or higher level than that of this qualification (Level 3) and must be technically qualified within the electrical industry.
  - iv. Have a number of years of verifiable industry experience (preferably more than 2 years)
- d. It is recommended that staff:
- i. Have 2 years verifiable experience in teaching/tuition/training **or**
  - ii. Are working towards an appropriate teaching qualification **or**
  - iii. Hold an appropriate teaching qualification.

## 5.5. Staff Conducting Assessments

Not Applicable for this knowledge-only based qualification. Although, centres are expected to maintain their own quality management (assurance) systems which means competent assessors must be a part of the team. Assessors are required to complete learner Results Submission Forms (LRSF) for each learner that has taken the online examination. See 6.3.

### a. Technical/Occupational Competency

- i. As per those laid out in section 5.4 Staff Conducting Tuition, Teaching or Instruction.

### b. Assessor Competency

The Assessor must hold:

- i. Level 3 Award in Assessing Vocationally Related Achievement **or**
- ii. Level 3 Award in Assessing Competence in the Work Environment **or**
- iii. Level 3 Certificate in Assessing Vocationally Related Achievement **or**
- iv. A1 or D32 /D33 with an Upgrade to A1 as a minimum\*

### c. Assessor CPD

- i. The occupational competence of Assessors must be updated on a regular basis through CPD and/or requalification if required.
- ii. Records of Assessor CPD should be maintained for verification by the External Verifier.

### d. Assessor/Candidate Assessor Approval

- i. Assessors/Candidate Assessors must be approved by BPEC Certification Ltd before undertaking any assessments.

e. Candidate Assessors

- i. Must be registered on a programme to attain their Assessor qualification and have a clear action plan for achieving the qualification within 18 months (Candidate Assessor approval may be withdrawn if the Assessor qualification has not been attained in this period).
- ii. Must be supervised and their assessment decisions countersigned by a qualified assessor who is approved by BPEC Certification Ltd.

## 5.6. Staff Conducting Internal Quality Assurance (IQA)

This is a knowledge-only based qualification, centres are expected to maintain their own quality management (assurance) systems which means competent IQAs must be a part of the team. IQA's are required to counter sign all Learner Results Submission Forms. See 6.3.

a. IQA Competence

The IQA must hold:

- i. Level 3 Certificate in Assessing Vocationally Related Achievement or A1 **or** D32 /D33 with an Upgrade to A1 as a minimum\* **and**
- ii. Level 4 Award in Internal Quality Assurance of Assessment Processes and Practice **or**
- iii. Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Processes and Practice **or**
- iv. V1 or D34 with an upgrade to V1 as a minimum\*

b. IQA CPD

- i. The occupational competence of IQA's must be updated through CPD and/or requalification if required on a regular basis.
- ii. Records of an IQA's CPD should be maintained for verification by the External Verifier.

c. IQA/Candidate IQA Approval

- i. IQA/Candidate IQA's must be approved by BPEC Certification Ltd before undertaking any IQA activity.

d. Candidate IQA's:

- i. Must meet the Technical/Occupational Competence at (a) above.
- ii. Must hold Level 3 Certificate in Assessing Vocationally Related Achievement or A1 or D32/33 with an upgrade to A1\*
- iii. Must be registered on a programme to attain their IQA qualification and have a clear action plan for achieving the qualification within 18 months (Candidate IQA approval may be withdrawn if the qualification has not been attained in this period).

- iv. Must be supervised and their decisions countersigned by a qualified IQA who is approved by BPEC Certification Ltd.

## 5.7. Equivalent Assessor/IQA

### a. Assessors

- i. The Teaching Qualification for Secondary Education (TQSE) or the Teaching Qualification for Further Education (TQFE) (which is recognised in Scotland) these awards are acceptable providing they are the versions that are recognised as equivalents to the A1 award plus appropriate CPD.
- ii. SQA Accredited Learning and Development Unit L&D 9D Assess workplace competence using direct methods.

### b. IQA

- i. SQA Accredited Learning and Development Unit L&D 11 “Internally monitor and maintain the quality of workplace assessment”.

## 5.8. Staff Conducting Knowledge Assessments (Invigilators)

This relates to staff that are conducting and controlling knowledge assessment sessions only – as per the requirements in this qualification. Centres should refer to BPEC’s AO exams procedure when administering knowledge assessments.

These must:

- a. Be experienced - Staff should be experienced in the supervision of assessments or be under the supervision of an experienced person.
- b. Be Knowledgeable - Staff should be knowledgeable of the assessment procedure.
- c. Be Independent - Staff conducting exams should not be related to any learner sitting the assessment exam nor be involved in teaching or quality assuring the subject.

\*Assessors/IQA’s holding D units must have evidence of Continuing Professional Development (CPD) to demonstrate compliance with the A/V units. Evidence of CPD will be sought by the External Verifier for all Assessors/IQA’s approved at the Centre.

## 6. Support Materials

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### 6.1. Qualification Specification

This Qualification Specification provides details of all units, Learning Outcomes, Learning Points and specific advice regarding the assessment process.

## **6.2. Learner Result Submission form**

- a. A Learner Result Submission Form (LRSF) is available for this qualification. This should be completed for each learner and submitted when certification is required.
- b. The LRSF should be signed by the Assessor and counter signed by the IQA.
- c. The number/s of attempt/s must be indicated on each form and all forms submitted where there has been more than one attempt.
- d. Centres are reminded that they should retain a copy of the Learner Result Submission Form in Centre for a period of 3 years.

## **6.3. Learner Knowledge Assessment Packs**

Not Applicable for this knowledge-only based qualification.

## **6.4. Learner Knowledge Assessment Pack Rationale**

Not Applicable for this knowledge-only based qualification.

# **7. Unit Details**

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The tables below detail the unit which comprises the qualification; outlining the title, UAN, GLH, aim, learning outcomes, learning points and range.

## 7.1. F/617/1506 –Understand the Requirements of Electrical Installations BS7671:2018

<b>Unit Title – Understand the Requirements of Electrical Installations BS7671:2018</b>
<b>UAN – F/617/1506</b>
<b>GLH - 35</b>
<b>AIM</b> The BPEC ELEC-001 qualification is intended to provide the learner with understanding and application of the IET Wiring Regulations (BS7671) Eighteenth Edition. It requires the completion of a theory-based assessment designed to enhance a learner’s knowledge of the Requirements for Electrical Installations.

<b>Learning Outcome</b>
The learner shall: <b>1. Determine the scope, object and fundamental principles of BS 7671</b>
<b>Assessment Criteria</b>
The learner is able to: <b>1.1.</b> Determine the scope of BS 7671 <b>1.2.</b> Determine the object of BS 7671 <b>1.3.</b> Determine the fundamental principles of BS 7671

<b>Learning Outcome</b>
The learner shall: <b>2. Understand the definitions used within BS 7671</b>
<b>Assessment Criteria</b>
The learner is able to: <b>2.1</b> Understand the definitions used within BS 7671 <b>2.2</b> Understand the definitions in relation to the regulations and appendices of BS 7671

<b>Learning Outcome</b>
The learner shall: <b>3. Recognise how to assess the general characteristics of electrical installations</b>
<b>Assessment Criteria</b>
The learner is able to: <b>3.1</b> Understand the requirements of assessing the general characteristics of electrical installations within the scope of BS 7671

<b>Learning Outcome</b>
The learner shall: <b>4. Understand requirements of protection for safety of electrical installations</b>
<b>Assessment Criteria</b>
The learner is able to:

- 4.1 Determine the requirements of protection for safety within the scope of BS 7671
- 4.2 Understand how the LO applies to electrical installations within the scope of BS 7671 to include **protection against electric shock**
- 4.3 Understand how the LO applies to electrical installations within the scope of BS 7671 to include **protection against thermal effects**
- 4.4 Understand how the LO applies to electrical installations within the scope of BS 7671 to include **protection against overcurrent**
- 4.5 Understand how the LO applies to electrical installations within the scope of BS 7671 to include **protection against voltage disturbances and electromagnetic disturbances.**
- 4.6 Understand how the LO applies to electrical installations within the scope of BS 7671 to include **devices for isolation and switching**

#### Learning Outcome

The learner shall:

- 5. **Understand the requirements for selection and erection of equipment for electrical installations**

#### Assessment Criteria

The learner is able to:

- 5.1 Determine the requirements for selecting and erecting equipment, within the scope of BS 7671, to include **common rules**
- 5.2 Understand how the LO applies to electrical installations within the scope of BS 7671 to include the **selection and erection of wiring systems**
- 5.3 Understand how the LO applies to electrical installations within the scope of BS 7671 including **protection, isolation, switching, control and monitoring**
- 5.4 Understand how the LO applies to electrical installations within the scope of BS 7671 including **earthing arrangements and protective conductors**
- 5.5 Understand how the LO applies to electrical installations within the scope of BS 7671 to include **other equipment**
- 5.6 Understand how the LO applies to electrical installations within the scope of BS 7671 including **safety services**

#### Learning Outcome

The learner shall:

- 6. **Understand the requirements for inspection and testing of electrical installations**

#### Assessment Criteria

The learner is able to:

- 6.1 Determine the requirements for inspection and testing
- 6.2 Understand how the LO applies to electrical installations

#### Learning Outcome

The learner shall:

- 7. **Understand the requirements of special installations / locations as identified in BS 7671**

#### Assessment Criteria

The learner is able to:

- 7.1** Determine the requirements for special installations / locations
- 7.2** Understand how these affect the general requirements of the regulations

#### **Learning Outcome**

The learner shall:

- 8. Interpret the information contained within the appendices of BS 7671**

#### **Assessment Criteria**

The learner is able to:

- 8.1** Determine the information in the appendices of BS 7671
- 8.2** Specify how the information contained in the appendices is used to support electrical installation activities.

## **BPEC Level 3 Award in the Requirements for Electrical Installations BS 7671:2018**

Number of questions: 60

Time allowed: 120 minutes

This is an open book exam allowing use of the current edition of:

IET Wiring Regulations: Requirements for Electrical Installations BS 7671:2018

Each test will cover the knowledge learning outcomes of the unit as follows:

Knowledge learning outcome:	Approximate coverage:	
	No. of Questions	Percentage
Determine the scope, object and fundamental principles of BS 7671	3	5%
Understand the definitions used within BS 7671	3	5%
Recognise how to assess the general characteristics of electrical installations	5	8%
Understand requirements of protection for safety of electrical installations	18	30%
Understand the requirements for selection and erection of equipment for electrical installations	14	24%
Understand the requirements for inspection and testing of electrical installations	4	7%
Understand the requirements of special installations / locations as identified in BS 7671	8	13%
Interpret the information contained within the appendices of BS 7671	5	8%
<b>TOTAL</b>	<b>60</b>	<b>100%</b>



## 8. Assessment Methods and Arrangements

This qualification will be assessed as identified below.

Assessment Component	Set By	Marked By	Quality Assurance	
			Internal	External
Multiple-Choice Examination	BPEC	BPEC	Examination invigilation and IQA monitoring	Moderation of exam results and EQA monitoring during visits

### 8.1. Arrangements for the Knowledge-Based Assessment

Learners must successfully complete **one multiple-choice online assessment**.

The exam contains **60 questions** and the time allowed is **120 mins**.

The assessment is of an **open book** type, whereby learners are permitted to **only** use the following publication during the assessment:-

IET Wiring Regulations: Requirements for Electrical Installations BS7671:2018.

The publication used in the examination CAN contain:-

1. Bookmarks – blank or numbered sticky notes, or other forms of tabs to indicate parts, chapters or sections. It is also permissible to fold corners of pages.
2. Highlighting – the use of highlighting text is permissible.
3. Any *Corrigendum (if applicable)*, issued by the IET as a supplement to the Wiring Regulations in July 2018.

The publication used in the examination MUST NOT contain:-

1. Any form of markings, such as accompanying notes or other writing.
2. Any other notes, diagrams etc. that would give a learner an unfair advantage in answering the assessment questions.
3. Sample questions, answers.

It is the responsibility of the centre to ensure that a copy of the publication (BS7671:2018) used by a learner is appropriate, as described above.

If an invigilator (or centre) are in any doubt as to whether or not a learner is unfairly advantaged, their copy of the publication **is not to be used** and should be replaced with an untampered (unmarked) version. Centres should hold untampered (unmarked) copies of the publication, for this reason.

Learners will also require the use of a non-programmable calculator.

## Pass Mark and Re-assessment

- The pass mark for the knowledge assessment is 60% (36 / 60)
- In the event of a learner being unsuccessful, the assessment can be re-attempted when the learner has received feedback and further training has been given where necessary.

## Additional Materials

Centres are also encouraged to provide the learners with a pen and paper for the assessment. **NOTE: At the end of the assessment, please ensure learners DO NOT take any paper away with them.**

## 9. Additional Assessor Competency Requirements

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No additional competency requirements have been identified.