Level 3 Award in the Requirements for Electrical Installations BS 7671:2018 (2382-18)

March 2018 Version 1.0

FAQs

1 18th Edition IET Wiring Regulations 2018 FAQs

When will the 18th Edition of BS 7671 be published?

The publication date is on target for 1st July 2018.

The cover colour will be blue to replace the current yellow book.

What about my yellow copy of BS 7671:2008(2015); when does that expire?

Both the new 18th Edition (blue cover) and the old 17th Edition (yellow cover) will be current documents until January 2019. From January 2019 only the 18th Edition (blue cover) will be permitted when designing, erecting, and inspecting and testing electrical installations.

What will happen to 2382?

From 1st July 2018, we will launch a new complex - the 2382-18 for centres to register candidates against. This new qualification will be assessed by a 60 item multiple choice examination that is delivered onscreen via our e-volve system. The examination will have a 2-hour duration. This assessment will align fully to the new 18th Edition (Blue).

The current qualification 2382-15 will be open for registration until 31st December 2018. Certification for 2383-15 will close from 31st March 2019.

Will there be an assessment available to cover only the differences between the 17th and 18th edition?

No, an agreement was made between all Awarding Organisations and the JIB that all examinations based on BS 7671 should assess that candidates are able to demonstrate understanding of all parts, not just changes between editions.

In terms of course delivery, centres may wish to offer 'update' courses with a shorter duration that only teaches the differences between the 17th and 18th Editions. However, centres should take the necessary steps to ensure that candidates' knowledge is up to date and sound before accepting them onto a shortened course. Candidates who take a shortened course will still need to sit the same assessment as candidates who take the full course.

What's the impact on other electrical short courses?

2391

There will be no noticeable changes to 2391-50, 51 and 52. We will ensure that all questions are BS 7671 neutral, meaning that any exam taken between July 2018 and January 2019 will be in line with both the 17th Edition and the 18th Edition. This will continue until 1st January 2019, when the 17th Edition will expire and the 18th Edition will be the only permitted material. This also applies to any update to Guidance Note 3 and the IET On-site Guide. We are expecting that these updated publications will be available during July 2018.

2377

2377 will not undergo any changes at present and will remain aligned to the current IET Code of Practice for the In-service Inspection and Testing of Electrical Equipment.

Other qualifications that are affected by the changes and will be version neutral, between July 2018 and January 2019 include:

Open book - 2393, 2396, 2397, 2919

Closed book - 2392

What's the impact on the examinations within the apprenticeships (2357 and 5357) and full time qualifications (2365 and 8202)?

The following assessments won't be impacted by these changes:
2365 – 601, 602, 301, 309
2357 – 102
5357 – 001, 003, 005

The following assessments will be amended to be version neutral, meaning candidates will be able to answer questions with knowledge of either the 17th edition or the 18th edition between July 2018 and August 2019. From September 2019, these assessments will assess content based on the 18th edition only.
2365 – 203, 623, 624, 625
2357 – 305, 107
5357 – 004, 012, 014

New assessment numbers will replace the following assessments numbers:
5357 – 016 will be replaced by 018, from September 2019, 016 will be closed and all examinations will need to be booked under 018.
2357 – 006 will be replaced by 007, from September 2019, 006 will be closed and all examinations will need to be booked under 007.

For the 8202, all 2018 assessments, at both level 2 and 3, will assess against the 17th Edition standard. All assessments, at all levels, for the academic year 2018/19 onwards will assess against the 18th Edition standard.

What's the impact on all centre marked assessments?

From 1st July 2018, all centre marked assessments will contain dual marking schemes. Marking schemes will provide marking guidance as to what is a suitable response in relation to the 17th Edition or 18th Edition. This will give assessors the flexibility when marking to accept answers relevant to either the 17th or 18th edition. Centres will mark according to the version of BS 7671 being used by the candidate. These dual mark schemes will remain effective until August 2019.

What other publications are changing?

The IET are in the process of updating all Guidance Notes 1-8, The On-site Guide and The Electricians Guide to the Building Regulations. It is expected that all of these publications will be published by the end of July 2018.

In addition, the City & Guilds textbooks are expected to be updated and available from September 2018.

What are the main changes to BS 7671?

Below is an official list from IET of the main changes to BS 7671. It must be noted that there are further changes throughout the publication in addition to those below.

Part 1 Scope, object and fundamental principles

Regulation 133.1.3 (Selection of equipment) has been modified and now requires a statement on the Electrical Installation Certificate.

Part 2 Definitions

Definitions have been expanded and modified.

Chapter 41 Protection against electric shock

Section 411 contains a number of significant changes. Some of the main ones are mentioned below.

- Metallic pipes entering the building having an insulating section at their point of entry need not be connected to the protective equipotential bonding (Regulation 411.3.1.2).

- The maximum disconnection times stated in Table 41.1 now apply for final circuits up to 63 A with one or more socket-outlets and 32 A for final circuits supplying only fixed connected current-using equipment (Regulation 411.3.2.2).

- Regulation 411.3.3 has been revised and now applies to socket-outlets with a rated current not exceeding 32A. There is an exception to omit RCD protection where, other than a dwelling, a documented risk assessment determines that RCD protection is not necessary.

- A new Regulation 411.3.4 requires that, within domestic (household) premises, additional protection by an RCD with a rated residual operating current not exceeding 30 mA shall be provided for AC final circuits supplying luminaires.

- Regulation 411.4.3 has been modified to include that no switching or isolating device shall be inserted in a PEN conductor.

- Regulations 411.4.4 and 411.4.5 have been redrafted.

- The regulations concerning IT systems (411.6) have been reorganized. Regulations 411.6.3.1 and 411.6.3.2 have been deleted and 411.6.4 redrafted and a new Regulation 411.6.5 inserted.

- A new Regulation group (419) has been inserted where automatic disconnection according to Regulation 411.3.2 is not feasible, such as electronic equipment with limited short-circuit current.

Chapter 42 Protection against thermal effects

- A new Regulation 421.1.7 has been introduced recommending the installation of arc fault detection devices (AFDDs) to mitigate the risk of fire in AC final circuits of a fixed installation due to the effects of arc fault currents.

- Regulation 422.2.1 has been redrafted. References to conditions BD2, BD3 and BD4 have been deleted. A note has been added stating that cables need to satisfy the requirements of the CPR in respect of their reaction to fire and making reference to Appendix 2, item 17. Requirements have also been included for cables that are supplying safety circuits.

Chapter 44 Protection against voltage disturbances and electromagnetic disturbances

Section 443, which deals with protection against overvoltages of atmospheric origin or due to switching, has been redrafted.
The AQ criteria (conditions of external influence for lightning) for determining if protection against transient overvoltages is needed are no longer included in BS 7671. Instead, protection against transient overvoltages has to be provided where the consequence caused by overvoltage (see Regulation 443.4):

(a) results in serious injury to, or loss of, human life, or
(b) results in interruption of public services/or damage to and cultural heritage, or
(c) results in interruption of commercial or industrial activity, or
(d) affects a large number of co-located individuals.

For all other cases, a risk assessment has to be performed in order to determine if protection against transient overvoltage is required. There is an exception not to provide protection for single dwelling units in certain situations.

Chapter 46 Devices for isolation and switching

A new Chapter 46 has been introduced.
This deals with non-automatic local and remote isolation and switching measures for the prevention or removal of dangers associated with electrical installations or electrically powered equipment. Also, switching for the control of circuits or equipment. Where electrically powered equipment is within the scope of BS EN 60204, only the requirements of that standard apply.

Chapter 52 Selection and erection of wiring systems

- Regulation 521.11.201, which gives requirements for the methods of support of wiring systems in escape routes, has been replaced by a new Regulation 521.10.202. This is a significant change.
- Regulation 521.10.202 requires cables to be adequately supported against their premature collapse in the event of a fire. This applies throughout the installation and not just in escape routes.
- Regulation 522.8.10 concerning buried cables has been modified to include an exception for SELV cables.
- Regulation 527.1.3 has also been modified, and a note added stating that cables also need to satisfy the requirements of the CPR in respect of their reaction to fire.

Chapter 53 Protection, isolation, switching, control and monitoring

This chapter has been completely revised and deals with general requirements for protection, isolation, switching, control and monitoring, and with the requirements for selection and erection of the devices provided to fulfil such functions.

Section 534 Devices for protection against overvoltage

This section focuses mainly on the requirements for the selection and erection of SPDs for protection against transient overvoltages where required by Section 443, the BS EN 62305 series, or as otherwise stated.
Section 534 has been completely revised and the most significant technical change refers to the selection requirements for the voltage protection level.

Chapter 54 Earthing arrangements and protective conductors

- Two new regulations (542.2.3 and 542.2.8) have been introduced concerning earth electrodes.
- Two further new regulations (543.3.3.101 and 543.3.3.102) have been introduced. These give requirements for the insertion of a switching device in a protective conductor, the latter regulation relating to situations where an installation is supplied from more than one source of energy.

Chapter 55 Other equipment

- Regulation 550.1 introduces a new scope.
- New Regulation 559.10 refers to ground-recessed luminaires, the selection and erection of which shall take account of the guidance given in Table A.1 of BS EN 60598-2-13.

Part 6 Inspection and testing

- Part 6 has been completely restructured, including the regulation numbering to align with the CENELEC standard.
- Chapters 61, 62 and 63 have been deleted and the content of these chapters now forms two new Chapters 64 and 65.

Section 704 Construction and demolition site installations

This section contains a number of small changes, including requirements for external influences (Regulation 704.512.2), and a modification to Regulation 704.410.3.6 concerning the protective measure of electrical separation.

Section 708 Electrical installations in caravan/camping parks and similar locations

This section contains a number of changes including requirements for socket-outlets, RCD protection, and operational conditions and external influences.

Section 710 Medical locations

This section contains a number of small changes including:

- The removal of Table 710,
- Changes to Regulations 710.415.2.1 and 710.415.2.3 concerning equipotential bonding,
- A new Regulation 710.421.1.201 which states for all final circuits supplied by medical IT systems in medical locations of group 2, AFDD shall not be used.

Section 715 Extra-low voltage lighting installations

This section contains only minor changes including modifications to Regulation 715.524.201.

Section 721 Electrical installations in caravans and motor caravans

This section contains a number of changes including requirements for electrical separation, RCDs, proximity to non-electrical services and protective bonding conductors.

Section 722 Electric vehicle charging installations

- This section contains significant changes to Regulation 722.411.4.1 concerning the use of a PME supply.
- The exception concerning reasonably practicable has been deleted.
- Changes have also been made to requirements for external influences, RCDs, socket-outlets and connectors.

Section 730 Onshore units of electrical shore connections for inland navigation vessels

This is an entirely new section and applies to onshore installations dedicated to the supply of inland navigation vessels for commercial and administrative purposes, berthed in ports and berths.
Most, if not all, of the measures used to reduce the risks in marinas apply equally to electrical shore connections for inland navigation vessels. One of the major differences between supplies to vessels in a typical marina and electrical shore connections for inland navigation vessels is the size of the supply needed.

Section 753 Floor and ceiling heating systems

This section has been completely revised.

- The scope of Section 753 has been extended to apply to embedded electric heating systems for surface heating.
- The requirements also apply to electric heating systems for de-icing or frost prevention or similar applications, and cover both indoor and outdoor systems.
- Heating systems for industrial and commercial applications complying with IEC 60519, IEC 62395 and IEC 60079 are not covered.

Appendices

The following main changes have been made within the appendices:

Appendix 1 British Standards to which reference is made in the Regulations. Includes minor changes, and additions.

Appendix 3 Time/current characteristics of overcurrent protective devices and RCDs
The previous contents of Appendix 14 concerning earth fault loop impedance have been moved into Appendix 3.

Appendix 6 Model forms for certification and reporting
This appendix includes minor changes to the certificates, changes to the inspections (for new installation work only) for domestic and similar premises with up to 100 A supply, and examples of items requiring inspection for an electrical installation condition report.

Appendix 7 (informative) Harmonized cable core colours
This appendix includes only minor changes.

Appendix 8 Current-carrying capacity and voltage drop
This appendix includes changes regarding rating factors for current-carrying capacity.

Appendix 14 Determination of prospective fault current
The contents of Appendix 14 concerning earth fault loop impedance have been moved into Appendix 3. Appendix 14 now contains information on determination of prospective fault current.

Appendix 17 Energy efficiency
This is a new appendix that provides recommendations for the design and erection of electrical installations, including installations having local production and storage of energy for optimizing the overall efficient use of electricity.
The recommendations within the scope of this appendix apply for new electrical installations and modification of existing electrical installations. Much of this appendix will not apply to domestic and similar installations.
It is intended that this appendix is read in conjunction with BS IEC 60364-8-1, when published in 2018
Text in green is courtesy of IET news release 1st March 2018.