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Introduction to the first amendment

The first amendment to BS 7671:2008 Requirements for Electrical Installations was issued on 1st July 2011 and is intended to come into effect on 1st Jan 2012. Installations designed after 31st Dec 2011 are to comply with BS 7671:2008 incorporating Amendment No 1, 2011.

A summary of the main changes is given below.

NOTE: This is not an exhaustive list.

Numbering system The 17th edition introduced a new IEC decimal point numbering system to make it easier to embody future changes and additions resulting from ongoing international standards work within IEC and CENELEC. In order to accommodate future IEC changes it has been decided to have a 100 numbering system for UK only regulations. This means for example, the former Regulation 422.3.14 is now Regulation 422.3.100 etc. This only applies to UK only regulations.

Part 2 Definitions have been expanded and modified. The system diagrams for TN-S, TN-C-S, TT have been moved to Part 3, while TN–C and IT have been deleted.

Part 3 Assessment of general characteristics, now includes the system diagrams for TN-S, TN-C-S and TT. In addition, diagrams have been included for single-phase 2-wire, single-phase 3-wire, two-phase 3-wire, three-phase 3-wire, three-phase 4-wire a.c. and 2- and 3-wire d.c.

Chapter 41 Table 41.5 has been simplified.

Chapters 42 and 43 Contain minor changes.

Chapter 44 Protection against voltage disturbances and electromagnetic disturbances, now includes modifications to Section 443. A number of important notes have been added to Section 443. The section makes reference to Section 534. The user is also made aware that work is currently in progress at IEC level on Section 443.

A new Section 444 has been added, which deals with measures against electromagnetic disturbances. Electromagnetic interference (EMI) may disturb or damage information technology equipment/systems as well as equipment with electronic components or circuits. Currents due to lightning, switching operations, short-circuits and other electromagnetic phenomena may cause overvoltages and electromagnetic interference. Section 444 provides basic requirements and recommendations to enable the avoidance and reduction of electromagnetic disturbances.

Chapter 51 Common rules, includes a number of changes. The requirements concerning the connection of cables to switchgear in relation to temperature rating have been modified. Orange as a means of identification of an electrical conduit has been deleted. The regulation concerning the warning notice for voltage has been modified.

Chapter 52 Regulation 522.6.100 includes an additional indent.

Regulation 522.6.101 now permits an exception for a cable forming part of a SELV or PELV circuit.

Chapter 53 Protection, isolation, switching, control and monitoring, now includes a new Section 534 which deals with the installation of surge protective devices (SPD). The requirements of Section 534 are for the selection and erection of SPDs for electrical installations of buildings in order to limit transient overvoltages of atmospheric origin transmitted via the supply distribution system and against switching overvoltages. The requirements are also intended to protect against transient overvoltages caused by direct lightning strikes or lightning strikes in the vicinity of buildings protected by a lightning protection system. The requirements do not take into account surge protective components, which may be incorporated in the appliances connected to the installation. (See also Appendix 16.)

Chapter 56 Safety services, incorporates editorial changes, updated standards, notes added, and requirements for switchgear and controlgear for use on a.c. and d.c. added.

Part 6 Inspection and testing. Mainly editorial changes to Chapter 61 and notes added. Changes have been made to Chapter 63 to take account of the change from periodic inspection report to condition report and other minor changes.

Part 7 Special installations or locations. There are minor changes throughout Part 7, mainly in connection with PME supplies.

Section 717 Mobile or transportable units, includes a new Regulation 717.313 giving requirements for supplies.

The following new sections are now included in Part 7:

Section 710 Medical locations

Section 710 applies to electrical installations in medical locations, so as to ensure safety of patients and medical staff. These requirements, in the main, refer to hospitals, private clinics, medical and dental practices, healthcare centres and dedicated medical rooms in the workplace. This section also applies to electrical installations in locations designed for medical research. The requirements of this section do not apply to medical electrical equipment.

Section 729 Operating and maintenance gangways

Section 729 applies to restricted areas for authorised persons. These are areas such as switchrooms with switchgear and controlgear assemblies with a need for operating and maintenance gangways. The scope of Section 729 applies to basic protection and other aspects in restricted access areas with switchgear and controlgear assemblies, and gives requirements for operating and maintenance gangways such as the width of gangways and access areas for operational access, emergency access, emergency evacuation and for transport of equipment.

The following main changes have been made within the appendices:

Appendix 3 Time/current characteristics of overcurrent protective devices and RCDs, includes minor changes.

Appendix 4 Current-carrying capacity and voltage drop for cables, now includes rating factors for triple harmonic currents in four-core and five-core cables with four cores carrying current, and the voltage drop requirements from Appendix 12. In addition, changes to the tables on rating factors and correction factors and notes with tables.

Appendix 5 Classification of external influences, changes to the tables on utilisation category.

Appendix 6 Model forms for certification and reporting, now includes a new electrical installation condition report that replaces the periodic inspection report. The new condition report includes a new inspection schedule. Also the form has been redesigned. Within the observations section the four codes, 1 (requires urgent attention), 2 (requires improvement), 3 (requires further investigation), 4 (does not comply with BS 7671:2008 amended to …) have been replaced by three codes: C1 - Danger present, C2 - Potentially dangerous, C3 - Improvement recommended.

Appendix 11 Effect of harmonic currents on balanced three-phase systems, has been deleted and the content moved to Appendix 4.

Appendix 12 Voltage drop in consumers' installations, has been deleted and the content moved to Appendix 4.

Appendix 16 Devices for protection against overvoltage, has been added.