

BS 7671:2008 REQUIREMENTS FOR ELECTRICAL INSTALLATIONS. IEE WIRING REGULATIONS SEVENTEENTH EDITION

This leaflet is intended to provide, for Specifiers, Installers and Designers of electrical installations, a brief overview of the changes to BS 7671 : 2001, Requirements for Electrical Installations, that will appear in the 17th Edition of the Wiring Regulations. It should not be used as an authoritative guide to BS 7671: 2008.

These Regulations are scheduled to be published January 1st 2008 and come into effect in July 2008.

INTRODUCTION

BS 7671 : 2001 is the National Standard for all electrical installation work undertaken in the United Kingdom. It is also adopted by a number of other Countries in the World.

The first edition of BS7671 was published in 1992 when the British Standards Institution (BSI) adopted the IEE Wiring Regulations, 16th Edition and made it a National Standard.

The British Electrotechnical Committee (BEC) is part of the British Standard Institution (BSI) and is the UK member of the International Electrotechnical Commission (IEC) and the European Committee for Electrotechnical Standardisation (CENELEC).

The purpose of IEC and CENELEC is to create commonality of Electrical Installation Standards throughout the World and Europe respectively. The standards thus created are known as Harmonised Documents (HDs). BS 7671 is the UK collection of HDs incorporated in a single publication with many other regulations that accommodate specific situations and practices applicable in the UK. A number of countries adopt BS 7671 as their national standard and others base their national standard on BS 7671.

BS 7671 has been amended six times since the first publication in 1992 as HDs have been revised or new HDs published. The 17th Edition is the result of a complete review of the 16th Edition and adopts all HDs that are published to date.

CHANGES

Preface. A new informative note in the preface advises that publication of the 2008 edition of BS7671

does not automatically mean that installations complying with previous editions are unsafe for continued use or need to be upgraded.

Numbering. The Regulation numbers are changed so as to be in line with IEC Numbers. This enables users to readily relate UK regulations with European HDs and IEC regulations.

Fundamental Principles. Requirements are added for protection for persons and livestock against injury, and property against damage caused by voltage disturbances and electromagnetic influences.

PROTECTION AGAINST ELECTRIC SHOCK - CHAPTER 41.

- The chapter has been rewritten. Many regulations are worded differently but the requirements are not significantly changed.
- The terms Direct Contact and Indirect Contact are no longer used. They are replaced with Basic Protection and Fault Protection. 'Basic protection' is protection against touching live parts. 'Fault protection' is protection against receiving a shock from conductive parts that have become live due to a breakdown of insulation or damage to equipment.
- Socket outlets rated not exceeding 20 A and intended for general use by ordinary persons must be protected with 30 mA RCDs. This means that general purpose sockets in domestic and similar properties must have RCD protection.
- External sockets rated not exceeding 32 A must also have 30 mA RCD protection.

SELECTION AND ERECTION OF WIRING SYSTEMS - CHAPTER 52

- An important new regulation that particularly affects domestic and similar installations, requires cables that are buried less than 50mm into a wall or partition and are not enclosed in earthed metallic covering or have mechanical protection capable of resisting nails, screws or drills, to be protected by a 30 mA RCD as well as being installed in the 'safe zones' created by the position of accessories etc. as previously permitted.
- Similarly cables that are installed in metal framed walls require 30 mA RCD protection if not otherwise protected by earthed metallic covering..
- The above requirements do not apply to installations that are under the control of skilled or instructed persons, such as office buildings, large retail outlets and industrial premises.

OTHER EQUIPMENT CHAPTER 55

GENERATOR SETS 55 - SECTION 551.2

- This section contains requirements that are applicable to low voltage Electricity Generating Sets including SSEGs such as: wind turbines, solar powered generators, *(PV systems) water turbines and combined heat and power boilers, for use in domestic

and commercial installations. The use of this equipment is expected to escalate in the next few years which means that an understanding of this section will become important. * See also Section 712 PV systems.

LUMINAIRES AND LIGHTING - SECTION 559

- This is a new section applicable to all general lighting installations as appropriate to particular locations and structures.
- Includes requirements for fixed outdoor lighting including highway power supplies and street furniture previously in Part 6, and extra low voltage (less than 50 volts a.c. and 120 volts d.c.) lighting systems.
- Applies to both individual luminaires and multi-luminaire track lighting and similar systems.
- Special considerations for protection against fire

SPECIAL LOCATIONS - PART 7

Part 7 addresses the particular risks that occur in various special locations. There are several new sections in Part 7. Many of the existing sections have been modified in line with the European HDs.

MODIFIED SECTIONS

All of the following Sections have been modified to accommodate the regulations contained in the European HDs.

701 - Locations containing a Bath or a Shower

Particularly the changes from the 16th Edition are substantial:

- Zones 0, 1 & 2 as defined in the 16th Edition are retained. Zone 3 is being removed. New regulations require all circuits supplying equipment in the bathrooms to be protected by 30 mA RCDs.
- All cables buried in walls surrounding bathrooms regardless of the points they are serving have to be protected by 30 mA RCDs.
- Supplementary Bonding between metallic service and waste pipes and the earth connections of equipment is no longer required providing the main bonding of services within the property is in place and the metallic pipework can be proved by testing to be continuous. This means that the need for green and yellow cables in bathrooms is unlikely to be necessary.
- SELV (separated extra low voltage) socket outlets and shaver socket outlets are permitted outside Zone 1. 230 V socket outlets are permitted provided they are more than 3 metres from Zone 1.

702 - Swimming Pools

703 - Rooms and Cabins containing Sauna Heaters

704 - Construction Sites

705 - Agricultural and Horticultural Premises

706 - Conductive Locations with Restricted Movement

707 - Previously 607 in the 16th Edition is not used. The particular requirements are embodied in the General Earthing Requirements of Chapter 54.

708 - Caravan and Camping Parks

Formerly Caravans, Motor Caravans and Caravan Parks in the 16th Edition.

The Section is now divided into Section 708 and Section 721 - Caravans and Motor Caravans.

Of particular note, each pitch socket outlet is to have separate 30 mA RCD protection.

NEW SECTIONS

- 709 - Marinas and similar locations
- 711 - Exhibitions, Shows and Stands
- 712 - Solar Photovoltaic (PV) Power Supply Systems
- 717 - Mobile or Transportable Units
- 721 - Caravans and Motor Caravans
- 740 - Temporary Electrical Installations for Structures, Amusement Devices and Booths at Fairgrounds, Amusement Parks and Circuses

ECA MEMBERSHIP

ECA is preparing training courses for contractors and electricians as part of the continued professional development programme of courses. City & Guilds of London Institute are developing updated assessment courses for the industry. Member contractors will be required to demonstrate competence to design and install electrical installations in accordance with the new regulations during future membership competence assessments.

FURTHER INFORMATION

Contact: Electrical Contractors' Association

Tel: 020 7313 4800 or visit the website

www.eca.co.uk