

## BS7671:2008 IEE Wiring Regulations 17<sup>th</sup> Edition

On January 1st 2008, the 17<sup>th</sup> edition of the wiring regulations was published, for implementation from 1<sup>st</sup> July 2008. On January 1<sup>st</sup> 2015 the third amendment of the 17<sup>th</sup> edition was published for implementation from 1<sup>st</sup> July 2015. To assist Temporary Site Installation designers and installers, we detail below the significant changes brought about by the 17<sup>th</sup> edition and the third amendment.

**Section 704** relates to Construction and Demolition Site Installations, taking over from section 604 of the 16<sup>th</sup> edition. The change in the numbering system is due to alignment with IEC 60364, the international standard for electrical installations in buildings, along with the Cenelec European harmonized equivalent prHD 60364.

Section 704 is now much shorter than in the 16<sup>th</sup> edition, with the following key changes:-

- Section 604-02-02 has been removed. This detailed the nominal voltages that should not be exceeded for different applications. However, Note 1 to Regulation 704.410.3.10 includes a strong preference for the use of 110V RLV to supply: portable hand lamps for general use; portable hand tools and local lighting up to 2kW. Note 2 to Regulation 704.410.3.10 expresses a strong preference for the use of SELV supplies for confined or damp locations.
- The 0.2 second disconnection time has been removed for non-fixed mains parts of the site and the 5 second disconnection time previously permitted for RLV circuits has also been removed. Instead, the general body of the regulations should be used for guidance, which states that the maximum disconnection times for final circuits not exceeding 32A shall be 0.4 seconds (TN) and 0.2 seconds (TT) at a maximum 230V nominal to earth. In a TT system where disconnection is achieved by an overcurrent protective device and equipotential bonding is in accordance with 411.3.1.2, the maximum disconnection time can be increased to 0.4 seconds. For circuits in excess of 32A a 5 second disconnection is permitted for TN systems and 1 second permitted for a TT system. For RLV circuits the maximum disconnection time is 5 seconds. Regulations 411.3.2.2, 411.3.2.3, 411.3.2.4 and 411.8.3 refer.
- The 25V touch voltage requirement for construction sites has been removed and now rises to 50V.
- The direct reference for equipment to be built to BS4363 has been removed, although there is still a reference to the code of practice BS7375, which in turn refers to BS4363 for the RLV equipment. In essence, the requirements of this standard are still there. Mains equipment is required to comply with BS EN 61439-4.
- There is no reference to IP ratings. However, both BS 4363 and BS EN 61439-4 make reference to IP44 and so the actual requirements remain unchanged.
- A circuit supplying sockets up to and including 32A should be protected by a 30mA RCD unless they are protected by RLV, electrical separation, SELV or PELV (Regulation 704.410.3.10). All circuits supplying socket outlets with a rating above 32A should be protected by an RCD not exceeding 500mA (Regulation 704.411.3.2.1).
- Section 604-11-03 has been removed, which required that a means of emergency switching was provided on the supply to all equipment. Instead, regulation 537.4.2.5 in the general body of the 17<sup>th</sup> edition requires that a means of emergency switching "...shall be readily accessible at places where danger might occur...". In effect, provision of switches in each item of distribution equipment would be the only way to comply with this on a construction site, so there is no tangible change. In addition, clause 8.5.101 of BS EN 61439-4 (the equipment standard for Assemblies for Construction Sites) specifies the actuator of main switches should be easily accessible.
- In the 16<sup>th</sup> Edition, clauses 473-03-05 and 524-02-02 together permitted the use of a half rated neutral conductor without specific overcurrent protection, provided that an assessment could be made as to the likely current that would flow in the conductor under normal conditions. This arrangement is no longer allowed under the 17<sup>th</sup> Edition. Neutral conductors (in equipment or cabling) either need to be fully rated or they can be half rated provided that half rated neutral overcurrent protection is incorporated within the supply protection.

Also of interest to Temporary Site Installers and Designers is that from 1<sup>st</sup> January 2016 BS EN 61439-4 became the equipment standard for Assemblies for Construction Sites. The standard range of Blakley Mains Distribution Assemblies has been updated in accordance with the new standard.

## THE POWER PROFESSIONALS

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South • 1 Thomas Road, Optima Park, Crayford, Kent DA1 4GA Tel: 0845 074 0084 Fax: 0845 074 0085  
North • Unit 55, Monckton Road Ind Estate, Wakefield WF2 7AL Tel: 0845 074 0086 Fax: 0845 074 0087

[www.blakley.co.uk](http://www.blakley.co.uk) • [sales@blakley.co.uk](mailto:sales@blakley.co.uk)

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