

BS7671:2008 IEE Wiring Regulations 17th Edition

On January 1st 2008, the 17th edition of the wiring regulations was published, for implementation from 1st July 2008. To assist Temporary Site Installation designers and installers, we detail below the significant changes brought about by the new regulations for Construction and Demolition Site Installations.

Section 704 relates specifically to Construction and Demolition Site Installations, taking over from section 604 of the previous 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 much shorter than the previous version, 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. This gives 5 seconds for RLV systems and 0.4 seconds for mains final circuits (0.2 seconds for TT systems). Other mains circuits remain at 5 seconds for TN-S supplies and 1 second for TT supplies. 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 still required to comply with BS EN 60439-4.
- There is no reference to IP ratings. However, both BS 4363 and BS EN 60439-4 make reference to IP44 and so the actual requirements remain unchanged.
- Mains voltage sockets on construction sites rated above 32A should be protected by RCDs with a rating not exceeding 500mA (Regulation 704.411.3.2.1). Mains voltage sockets rated at 32A or less should still be protected by an RCD of 30mA sensitivity (Regulation 704.410.3.10).
- 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 regulations 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 here.
- Regulation 704.537.2.2 indicates that the main switch of a distribution assembly can be located in a lockable enclosure. This appears to conflict with point 7.2.101 of BS EN 60439-4 (the equipment standard for Assemblies for Construction Sites) which specifies the actuator of main switches should be easily accessible. In view of this development, we have amended the standard design of our main doors to incorporate a removable hasp and staple padlock arrangement. The installer can evaluate individual site conditions and decide whether or not to make main doors padlockable.
- In the 16th 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 17th 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.

Although not specific to Construction Site Installations, we believe that it is worth highlighting that the 17th Edition refers to Direct Contact Protection as Basic Protection and Indirect Contact Protection as Fault Protection. We recommend extra care is taken in the use of these new terms, to avoid misunderstanding.

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