

**17th** EDITION

Be like Sir Alan: look out for

Bill Allan on socket outlets and RCD protection in non-industrial locations



In his popular television show *The Apprentice* on BBC1, Sir Alan Sugar knows the importance of having the right skilled supervision in the workplace. So too should you when tackling non-domestic jobs where RCDs on socket-outlets may not be needed.

Regulation 411.3.3 of BS 7671:2008 (the 17th Edition) requires that a 30 mA RCD must be provided for socket-outlets not exceeding 20 A for use by ordinary persons and are intended for general use. Also for mobile equipment with a current rating not exceeding 32 A for use outdoors. Two exceptions are permitted:

- socket-outlets under the supervision of skilled or instructed persons such as may be in the case of certain commercial or industrial locations
- socket-outlets specifically labelled or suitably identified as being provided for the connection of a particular item of equipment.

This article will consider the first of these two exceptions – socket-outlets supervised by skilled or instructed persons.

Why omit RCD protection?

The use of 30 mA RCDs to protect “ordinary persons” when using socket-outlets provided for general use is a sensible safety measure. However, there are various operations carried out in commercial or industrial locations where the use of 30 mA RCDs to protect

socket-outlets – with the attendant possibility of loss of supply due to nuisance tripping – could have serious consequences for the company using the electrical installation.

Under such circumstances, the designer of the electrical installation may decide to omit 30 mA RCD protection from certain socket-outlets where they can be shown to be under the supervision of skilled or instructed persons. At this point, it may be helpful to review the definitions of skilled persons, instructed persons and ordinary persons. Turn to Don Holmes’ article on definitions, see Pages 14 and 15.

Legal requirements

The Workplace (Health, Safety and Welfare) Regulations 1992 contain the requirement that all electrical installations in places of work must be under the control of a “responsible person” (See HSE Publication, L24). Such a person may come within one of the definitions given in the regulations for skilled persons and instructed persons. This person need not necessarily be electrically skilled therefore but should be “adequately advised or supervised” by someone who is.

Many employers who use large electrical installations and other modern services employ facilities managers to oversee and co-ordinate such facilities. Facilities managers should have safety



or smart supervision

procedures in place which ensure that all socket-outlets which have been provided for general use by ordinary persons are adequately supervised. Such socket-outlets may be without additional protection by means of 30 mA RCDs if it is considered necessary for operational or other reasons. For example, socket-outlet circuits which supply computer suites or rows of chillers in supermarkets would be unlikely to be provided with additional protection by means of a 30 mA RCD.

Impact protection

Would such socket-outlets be labelled or otherwise identified as being provided for the connection of particular items of equipment? That would depend on whether the person charged with the responsibility of supervising the electrical installation considered it possible or likely that such socket-outlets may be used for another purpose. In which case, he or she may well decide to identify the purpose for which those particular socket-outlets had been provided, whether by labelling, colour coding or by some other means.

Some socket-outlets circuits may be provided with 30 mA RCD protection even though they are adequately supervised. Socket-outlets in washrooms, kitchens and in corridors where cleaners may plug in carpet cleaners, may well be provided with RCD protection for the safety of staff or members of the public.

The facilities manager will also be required to ensure that the requirements of Regulations 522.6 regarding the impact protection of cables within walls or partitions are complied with. Accordingly, a safety policy may be necessary to prevent persons, whether skilled persons or not, from drilling or fixing to certain walls.

A risk assessment will need to be carried out by the designer of electrical installations in such locations. Questions will have to be asked such as:

- Is it necessary for operational reasons for certain socket-outlets to be without 30 mA RCD protection?
- Will the electrical installation be under the supervision of a skilled or instructed person?
- And should certain socket-outlets have RCD protection, even though supervised, for the safety of staff or members of the public?

Additional protection

Where the designer is satisfied that the electrical installation will be under the supervision of skilled or instructed persons, he or she will be able to, after consultation with appropriate persons, omit RCD protection from certain socket-outlet circuits. Where the installation is not under the supervision of skilled or instructed persons or where the designer is not able to determine whether this will be the case, all socket-outlets will need to be provided with additional protection by means of 30 mA RCDs.

Sir Alan Sugar and fellow judges Margaret Mountford and Nick Hewer from the The Apprentice. Sir Alan recognises that supervision by the right skilled people in the workplace is necessary.

