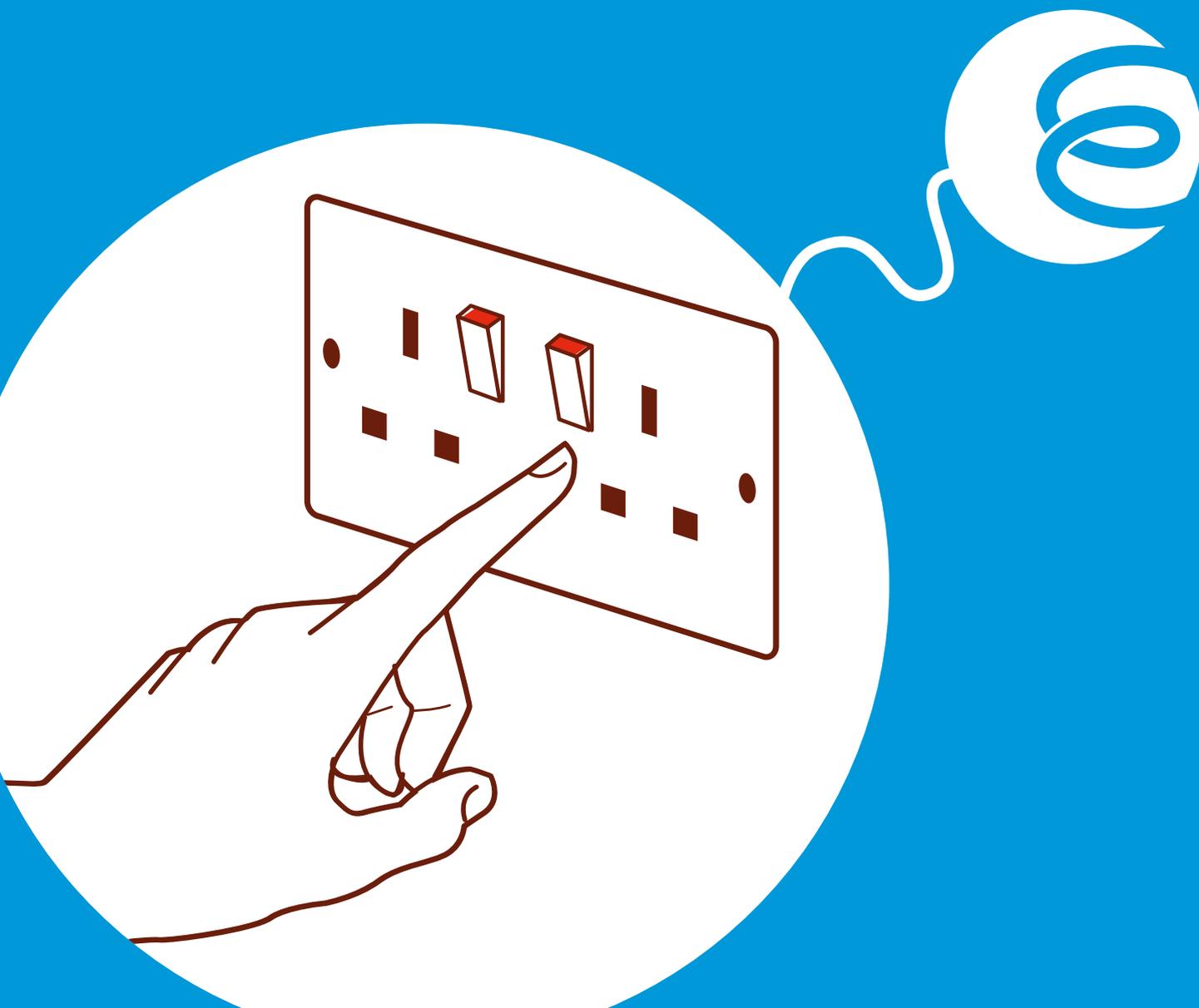


Guidance on:

*Minimum
provision of
electrical
Socket-outlets
in the home*



Contributors

Electrical Safety First is indebted to the following organisations for their contribution and/or support to the development and revision of this Guide:



BEAMA

www.beama.org.uk



EAL

www.eal.org.uk



ECA

www.eca.uk



Certsure

www.certsure.com



**Institution of Engineering
and Technology**

www.theiet.org



NAPIT

www.napit.org.uk



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www.select.org.uk



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Guidance on:

Minimum provision of electrical Socket-outlets in the home

Introduction

This guidance looks at the provision of low voltage (230 V) AC socket-outlets to BS 1363-2 only.

The increased use of home electronics and entertainment systems has led to the situation where, not only are homeowners using extension leads for their TV and associated media but also for many other locations in their homes. An increased number of socket-outlets is always preferred by homeowners and clients; surveys have shown that 50% of new homeowners require additional socket-outlets installing within twelve months of purchase of a new dwelling.

This aim of this guidance is to help alleviate this problem.

Fig 1 below illustrates the significant increase in consumer equipment, which has driven the need for an increased number of socket-outlets.

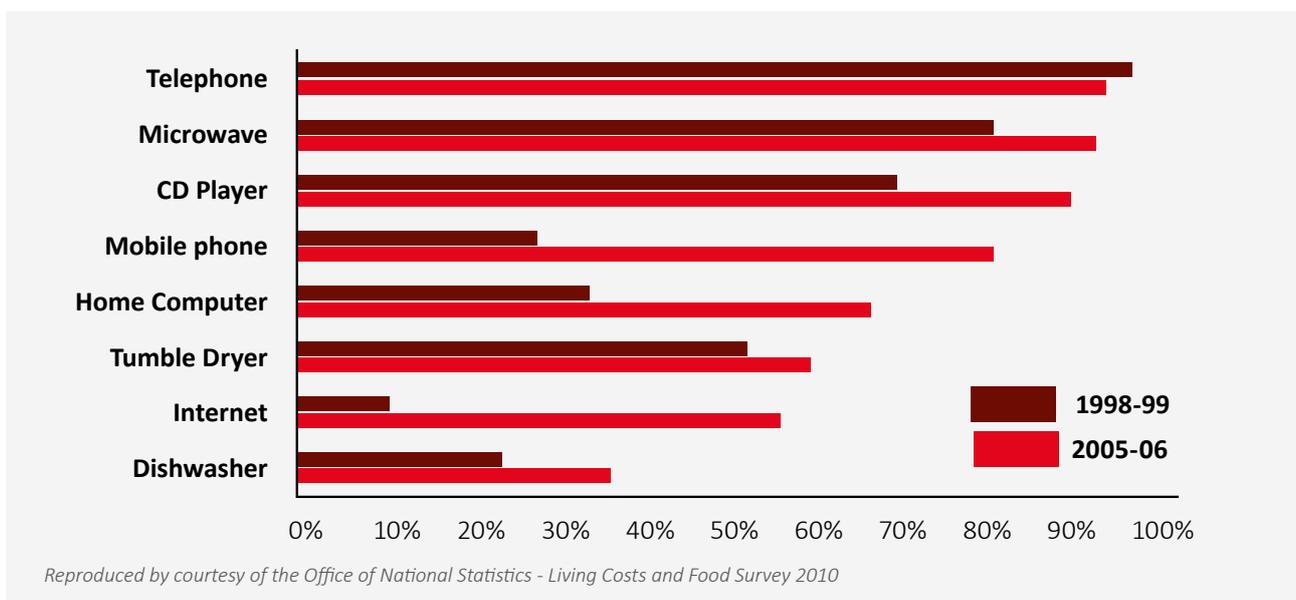


Fig 1. Percentage of UK households with selected consumer durables

Safety

Not having sufficient socket-outlets may lead to risks such as:

- DIY extensions to circuits undertaken safely if the work is carried out by unskilled persons
- DIY extension to equipment flexes
- Cascading (daisy chaining) of extension leads
- Stacking of adaptor plugs

All of the above will create potential hazards, such as risk of tripping over leads, electric shock or injury and damage to property through fire.

Legal Requirements: Building Regulations

Electrical installation work carried out in the United Kingdom is subject to BS 7671 IET Wiring Regulations.

Regulation 553.1.7 of BS 7671 states:

“Where mobile equipment is likely to be used, provision shall be made so that the equipment can be fed from an adjacent and conveniently accessible socket-outlet, taking account of the length of flexible cable normally fitted to portable appliances and luminaires”.

Additionally, for dwellings in England and Wales, the Building Regulations require that:

“Reasonable provision shall be made in the design and installation of electrical installations in order to protect persons operating, maintaining or altering installations from fire or injury”.

Electrical installation work carried out in dwellings in Scotland is subject to the Scottish Building Standard which requires that:

“Every building must be designed and constructed in such a way that electric lighting points and socket-outlets are provided to ensure the health, safety and convenience of occupants and visitors”.

Scottish Building Standards Domestic Technical Handbook gives only minimum recommendations; the numbers in Table 1 below will enable compliance with these recommendations whilst providing improved flexibility and safety.



Adequate Provision of Socket-Outlets

Socket-outlets should be suitably distributed around the room, due account being taken of furniture, electrical equipment and future change of use.

Table 1 - Minimum number of twin socket-outlets to be provided in homes

Location type	Smaller rooms (Up to 12m ²)	Medium rooms (12-25 m ²)	Larger rooms (More than 25 m ²)
Main living area	4	6	8
Dining area	3	4	5
Single bedroom	2	3	4
Double bedroom	3	4	5
Bedsitting room	4	5	6
Study	4	5	6
Utility room/area	3	4	5
Kitchen area	6	8	10
Garages	2	3	4
Conservatory	3	4	5
Hallways and landings	1	2	3
Loft	1	2	3
Locations containing a bath or shower		See Note	
Electric vehicle charging		See Note	

Notes:

1. With certain exceptions, all socket-outlets are required to be protected by a 30mA RCD in accordance with BS 7671 (IET Wiring Regulations).
2. KITCHEN - If a socket-outlet is provided in the cooker control unit, this should not be included in the 6 recommended in the table above. Appliances built into kitchen furniture (integrated appliances) should be connected to a socket-outlet or switch fused connection unit that is accessible when the appliance is in place and in normal use. Alternatively, when an appliance is supplied from a socket-outlet or a connection unit, these should be controlled by an accessible double pole switch or switched fused connection unit. It is recommended that wall mounted socket-outlets above a work surface are spaced at not more than 1 metre intervals along the surface.
3. HOME ENTERTAINMENT - In addition to the number of socket-outlets shown in the table it is recommended that at least two further double socket-outlets are installed in home entertainment areas.
4. LOCATIONS CONTAINING A BATH OR SHOWER - Socket-outlets other than SELV socket-outlets and shaver supply units complying with BS EN 61558-2-5 are prohibited within a distance of 3 m horizontally from the boundary of zone 1 e.g. 230V socket-outlets in a bathroom must be installed a minimum 3 m from the edge of the bath, BS 7671 (IET Wiring Regulations) refers.
5. ELECTRIC VEHICLE CHARGING – Electric vehicle charging should be from a single socket-outlet via a dedicated circuit provided for the connection to electric vehicles. This dedicated circuit must conform to the relevant requirements in BS 7671 section 722 "Electric Vehicle Charging Installations", which includes the specification of socket-outlets and connectors for the charging point.
6. In open plan spaces, all applicable allowances from above for each area should be taken into consideration

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