Heights of switches sockets, energy efficient luminaires and the Building Regulations

The Building Regulations have requirements for electrical installations that are not found in BS 7671 : 2001 Electrical Installations in Buildings, (the Wiring Regulations 16th Edition). Electrical Contractors are very familiar with the requirements for:

- Drilling of joists (see page 52 of the On Site Guide).
- Smoke Alarms (see Section 7.4 of the On Site Guide).

However the requirements in the Building regulations for the heights of switches and sockets and for energy efficient lighting are not so well known.

Heights of switches and sockets

The requirements of Section 8 of Approved Document M2 are reproduced in Figure X.

Figure X - Heights of switches, sockets etc

M2 DWELLINGS

Section 8

ACCESSIBLE SWITCHES AND SOCKET OUTLETS IN THE DWELLING

Objective

8.1 The aim is to assist those people whose reach is limited, to use the dwelling more easily by locating wall-mounted switches and socket outlets at suitable heights.

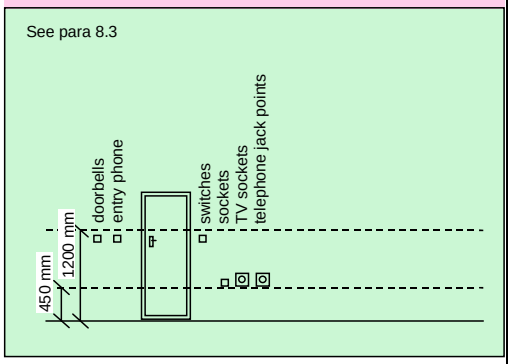
Design considerations

8.2 Switches and socket outlets for lighting and other equipment should be located so that they are easily reachable.

Provisions

8.3 A way of satisfying the requirements would be to provide switches and socket outlets for lighting and other equipment in habitable rooms at appropriate heights between 450 mm and 1200 mm from finished floor level (see Diagram 22).

Diagram 22 **Heights of switches, Sockets etc**



The Building Regulations are not applicable in Scotland where the Building Standards (Scotland) Regulations apply. The Scottish regulations do not have specific minimum heights for accessories; installations are required to generally comply with BS 7671.

The requirements in the Building Regulations for the heights of switches, sockets etc are not specifically worded. The intention of approved document M is that reasonable provision shall be made for disabled people to gain access and use a building. The document advises that disabled people means people who have:

- An impairment which limits their ability to walk or which requires them to use a wheelchair for mobility or
- Impaired hearing or sight

Everyone would support the objectives of these requirements. These are not requirements for dwellings in which disabled people live; they are requirements for all domestic properties to make them generally accessible and useable by the disabled.

It is understood that rooms in a property that may well be used by visiting disabled people i.e. entrance halls, lounges, wash rooms, dining rooms should take account of this. It is also understood that this is likely to be more difficult, perhaps unreasonable,

in locations such as kitchens, garages, upstairs rooms. Specific guidance is given for switches, sockets, etc. Not only should switches and sockets be located so that they are easily reached they should also be placed in locations where persons would expect them to be. This is helpful not only to people with impaired sight, but to everyone in the dark.

A band from 450mm to 1200mm is specified for the installation of switches and sockets. It is anticipated that switches will be at the top end of this band and TV sockets, telephone jack points, flex outlets would be at the bottom end.

Energy Efficient Lighting

Approved Document L requires reasonable provision to be made for the conservation of fuel and power including providing lighting systems with appropriate lamps and sufficient controls so that energy can be used efficiently. See Figure Y.

Figure Y - Requirements of Building Regulations L1

Requirement	Limits on application
Dwellings	
L1. Reasonable provision shall be made for the conservation of fuel and power in dwellings by -	
(a) limiting the heat loss:	
(i) through the fabric of the building;	
(ii) from hot water pipes and hot air ducts used for space heating;	
(iii) from hot water vessels;	
(b) providing space heating and hot water systems which are energy efficient	
(c) providing lighting control systems with the appropriate lamps and sufficient controls so that energy can be used efficiently;	The requirement for sufficient controls in L1(c) applies only to external lighting systems fixed to the building.
(d) providing sufficient information with the heating and hot water services so that building occupiers can operate and maintain the services in such a manner as to use no more energy than is reasonable in the circumstances.	

One way of demonstrating compliance with the requirements for lighting would be to provide a number of locations with facilities energy efficient light sources. That is with a luminous efficacy greater than 40 lumens per circuit–watt. Equipment that provides such efficiency includes – fluorescent tubes, compact fluorescent tubes as well as the range of discharge lamps that are more commonly used in commercial buildings. Tungsten halogens and standard filament lamps, bayonet or Edison screw are not of sufficient luminous efficiency. The guidance given in L4 is that a minimum number of rooms shall be provided with fluorescent luminaires (including compact fluorescent) and not bayonet lamp holders. A table is provided for determining the number of locations and this is reproduced below as Figure Z.

Figure Z - Method for determining the number of locations to be equipped as a reasonable provision for efficient lighting

Number of rooms created	Recommended minimum number of locations
1 - 3	1
4 - 6	2
7 - 9	3
10 - 12	4