

A guide to Part M



Part M of the Building Regulations came into effect on 1st May 2004 under the Building (Amendment) Regulations 2003. The objective of Part M is to make it easier for people with a disability to use buildings, and the facilities in them, including electrical switches, outlets and controls. The implementation of the requirements of Part M will benefit not just disabled people but many more, especially the elderly, hard of hearing and visually impaired.

Approved Document M has been published to provide guidance and the provisions for satisfying the requirements of Part M.

It is estimated that 8.6 million people in the UK are classified as disabled. The introduction of Part M of the Building Regulations will assist many people in their day-to-day lives, both in the home, work place and public buildings.



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Part M and Approved Document M, an overview

Part M requirements apply if:

- *a non-domestic building or a dwelling is newly erected*
- *an existing non-domestic building is extended or undergoes a material alteration*
- *an existing building or part of an existing building undergoes a material change of use to a hotel or boarding house, institution, public building or shop*

Regardless of compliance with Building Regulations, there will also be obligations under the Disability Discrimination Act 1995 for service providers and employers to consider barriers created by physical features in a building, which may inhibit the access and use of a building and its facilities.

In the Secretary of States view, the requirements of Part M will be met by making reasonable provision to ensure that buildings are accessible and usable.

People, regardless of disability, age or gender, should be able to:

- gain access to buildings and to gain access within buildings and use their facilities, both as visitors and as people who live and work in them*
- use sanitary conveniences in the principle storey of a new dwelling*

REQUIREMENT
PART M ACCESS TO AND USE OF BUILDINGS
Access and Use

M1 Reasonable provision shall be made for people to

- a. gain access to, and
- b. use

the building and its facilities.

Access to Extensions to Buildings other than Dwellings

M2 Suitable independent access shall be provided to the extension where reasonably practicable.

Sanitary Conveniences in Extensions to Buildings other than Dwellings

M3 If sanitary conveniences are provided in any building that is to be extended, reasonable provision shall be made within the extension for sanitary conveniences.

Sanitary Conveniences in Dwellings

M4 1. Reasonable provision shall be made in the entrance storey for sanitary conveniences, or where the entrance storey contains no habitable rooms, reasonable provision shall be made in either the entrance storey or principle storey.

- 2. In this paragraph "entrance storey" means the storey which contains the principle entrance and "principle storey" means the storey nearest to the entrance storey which contains a habitable room, or if there are two such storeys equally near, either such storey.

Limits on application

The requirement M1 does not apply to:

- (a) *an extension of or material alteration of a dwelling*
- (b) *any part of a building which is used solely to enable the building or any service or fitting in the building to be inspected, repaired or maintained*

Requirement M2 does not apply where suitable access to the extension is provided through the building that is extended.

Requirement M3 does not apply where there is reasonable provision for sanitary conveniences elsewhere in the building, such that people occupied in, or otherwise having occasion to enter the extension can gain access to and use those sanitary conveniences.

With regard to electrical installations, M1 refers to access and use of a building, which includes the facilities with the building such as switches, outlets and controls.

Section 4 of Approved Document M refers to facilities in buildings other than dwellings. This section provides a set of objectives, which must be met. Those which are relevant to the installation of electrical devices are:

Facilities in Buildings other than Dwellings

Objectives:

- 4.1 *The aim is for all people to have access to, and the use of, all the facilities provided within buildings. They should also be able to participate in the proceedings at lecture/conference facilities and at entertainment or leisure and social venues, not only as spectators, but also as participants and/or staff.*
- 4.4 *A proportion of the sleeping accommodation in hotels, motels and student accommodation should be designed for independent use by wheelchair users. The remainder should include facilities that make them suitable for people who do not use a wheelchair, but may have mobility sensory, dexterity or learning difficulties.*

Approved Document M then goes on to identify Design Considerations and Provisions, which offer guidance when meeting the Objectives. Those which are relevant to the installation of electrical devices are:

Sleeping Accommodation

Design Considerations:

- 4.19 *Wheelchair-accessible bedrooms should be sufficiently spacious to enable a wheelchair user to transfer to one side of a bed, with or without assistance. Wheelchair users should be able to manoeuvre around and use the facilities in the room, and operate switches and controls.*

Provisions:

- 4.24 *Sleeping accommodation will satisfy Requirement M1 if:*

For wheelchair-accessible bedrooms

- (q) *an emergency assistance alarm (together with a reset button) is located in a wheelchair-accessible bedroom and activated by a pull cord, sited so that it can be operated both from the bed and from an adjacent floor area.*

Switches, Outlets and Controls

Design Considerations:

- 4.25 *The key factors that affect the use of switches, outlets and controls are ease of operation, visibility, height and freedom from obstruction. However, there will be exceptions to height requirements for some outlets, e.g. those set into the floor in open plan offices.*
- 4.26 *A consistent relationship with doorways and corners will further reinforce the ease with which people manipulate switches and controls.*
- 4.27 *All users should be able to locate a control, know which setting it is on, and use it without inadvertently changing its setting.*
- 4.28 *Controls that contrast visually with their surroundings are more convenient for visually impaired people, as are light switches that are activated by a large push pad. The colours red and green should not be used in combination as indicators of 'on' and 'off' for switches and controls. It may be useful to use text or a pictogram to clarify the purpose and status of multiple switches and controls.*
- 4.29 *It is also an advantage if individual switches on panels and on multiple socket outlets are well separated, or in the form of large touch plates, to avoid the inadvertent selection of an adjacent control by visually impaired people and people with limited dexterity.*

Provisions:

- 4.30 *Switched, outlets and controls will satisfy Requirement M1 if:*
- wall mounted socket outlets, telephone points and TV sockets are located between 400mm and 1000mm above the floor, with a preference for the lower end of the range.*
 - switches for permanently wired appliances are located between 400mm and 1200mm above the floor, unless needed at a higher level for particular appliances.*

- c. *all switches and controls that require precise hand movements are located between 750mm and 1200mm above the floor.*
- d. *simple push button controls that require limited dexterity, are not more than 1200mm above the floor.*
- e. *pull cords for emergency alarm systems are coloured red, located as close to a wall as possible, and have two red 50mm bangles, one set at 100mm and the other set between 800mm and 1000mm above the floor.*
- f. *controls that need close vision are located between 1200mm and 1400mm above the floor so that readings may be taken by a person sitting or standing (with thermostats at the top of the range).*
- g. *socket outlets are located consistently in relation to doorways and room corners, but in any case no nearer than 350mm from room corners.*
- h. *light switches for use by the general public have large push pads and align horizontally with door handles within the range 900mm to 1100mm, for ease of location when entering a room.*
- i. *where switches described in 4.30 (h) cannot be provided, lighting pull cords are set between 900mm and 1100mm above floor level, and fitted with a 50mm diameter bangle visually contrasting with its background and distinguishable visually from any emergency assistance pull cord.*
- j. *the operation of switches, outlets and controls does not require the simultaneous use of both hands, except where this mode of operation is necessary for safety reasons.*
- k. *switched socket outlets indicate whether they are 'on'.*
- l. *mains and circuit isolator switches clearly indicate that they are 'on' or 'off'.*
- m. *front plates contrast visually with their backgrounds.*

Section 8 of Approved Document M refers to Accessible Switches and Socket Outlets in the Dwelling.

Accessible Switches and Socket Outlets in the Dwelling

Objective

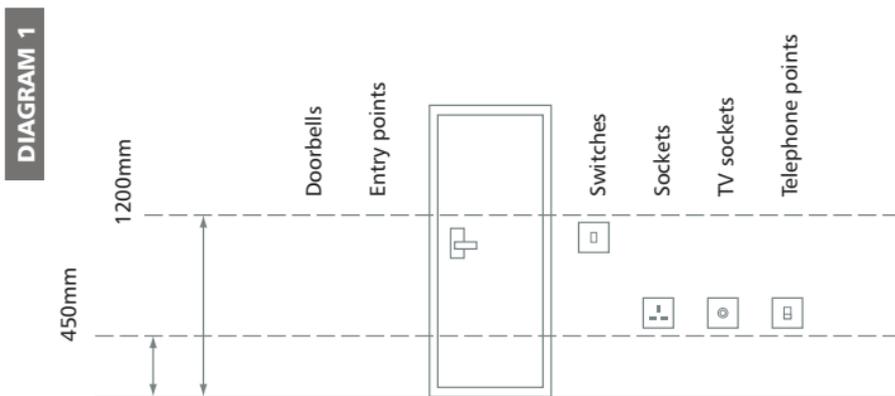
8.1 The aim is to assist those people whose reach is limited to use the dwelling more easily by locating wall-mounted switches and socket outlets at suitable heights.

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 Requirement M1 would be to provide switches and socket outlets for lighting and other equipment in habitable rooms at appropriate heights between 450mm and 1200mm from finished floor level (see diagram 1).



MK analysis

The introduction of Part M has brought to the forefront of electrical contractors and designers minds the Building Regulations and their requirements. All building work must comply with the regulations under the Building Regulations of 2000, as ammended for Part M by Statutory Instrument 2692 under the Building (Ammendment) Regulations 2003, the legislation covering England and Wales, but not Scotland and Northern Ireland. It was introduced by the Secretary of State for the Environment under powers given by Parliament under the Building Act of 1984. Section (1) (1a) of this act states that Building Regulations may be made for various purposes including health, safety, welfare and convenience of building users, the conservation of fuel and power, and the prevention of contamination of water supplies. As the Building Regulations are an Act of Parliament, failure to comply, be it the company or individual carrying out the work, or the person ordering the work, is a criminal offence and could lead to prosecution.

The Building Regulations are a set of minimum requirements, to aid the understanding of the requirements Approved Documents are published. The Approved Documents are not the Regulations, they are produced to provide guidance on common situations and address the provisions for satisfying the requirements. How the requirements in Part M should be applied may be subjective due to the large scope of the definitions within Approved Document M.

The previous edition of the Approved Document was titled "Access and Facilities for Disabled People", disabled has now been removed and Approved Document M is titled 'Access to and Use of Buildings'. This regulation applies to access and use for all building users, but primarily deals with those that are disadvantaged though disability. An understanding of the requirements will depend upon the individuals appreciation, definition and understanding of the term disabled, in previous editions of the Regulations the term "Disabled People" was

defined as people who have an impairment that limits their ability to walk or which requires them to use a wheelchair for mobility or people who have impaired hearing and sight. This definition has now been removed and many of the requirements also take into account people with limited dexterity.

MK Electric offer a wide range of products which will enable compliance with Part M. However, when it comes to specifying electrical accessories, the onus for following the regulations is on the specifier or contractor. Firstly, appropriate selection of products considered to meet the regulations must be made, secondly they must be installed and positioned to meet the requirements.

TABLE 2

M1 concerns access and use of buildings and states 'reasonable provision shall be made for people to gain access to and use the building and its facilities'.

M2 concerns access to extensions to buildings other than dwellings and states 'suitable independent access shall be provided to the extension where reasonably practicable', this requirement is not necessary where suitable access is already provided through the building.

M3 concerns sanitary conveniences in extensions to buildings other than dwellings, and states 'reasonable provision shall be made within the extension for sanitary conveniences', this requirement does not apply where there is reasonable provision for sanitary conveniences elsewhere in the building.

M4 concerns sanitary conveniences in dwellings and states 'reasonable provision shall be made in the entrance storey for sanitary conveniences. Where the entrance storey contains no habitable rooms, reasonable provisions for sanitary conveniences shall be made in either the entrance storey or the principal storey.



The introduction of Part M of the Building Regulations has addressed the need for buildings to be made accessible and usable for all.

People, regardless of disability, age or gender, should be able to gain access to buildings and use the facilities within them, whether living in them, working in them, or visiting them. All people should be able to use sanitary conveniences in the entrance storey, or principle storey of a dwelling.

Other Building Regulations cover various facets of both the electrical installation and the choice and type of systems and products installed. Anybody carrying out electrical installation work should be competent and knowledgeable enough that their work is compliant with all the relevant regulations.

How does Part M affect you?

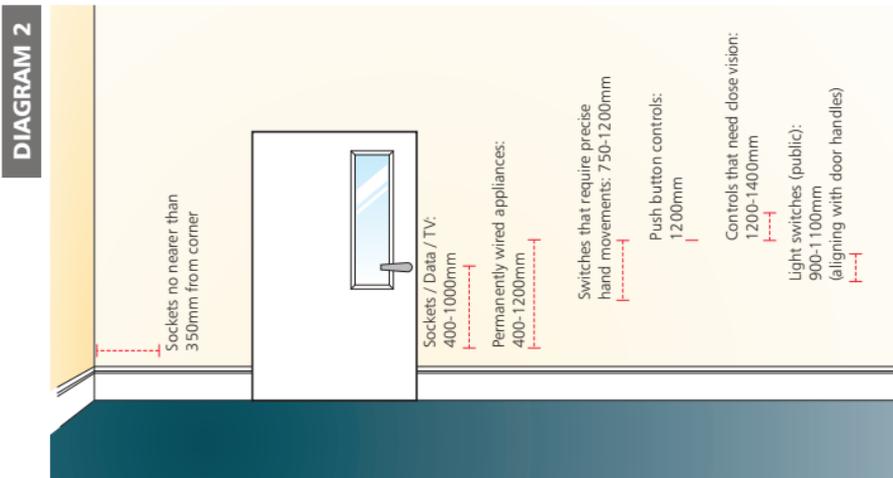
If you or your company carries out electrical installation work in England and Wales you will need to have knowledge of Part M and be competent enough to ensure your work complies with the requirements.

The requirements of Part M will need to be met in addition to any other Building Regulations. The responsibility of meeting these requirements lies with the specifier and, or, contractor. As previously mentioned, failure to comply, be it the company or individual carrying out the work, is a criminal offence and could lead to prosecution.

What should you do to ensure your work complies with Part M?

In total, 7 Design Considerations and 15 Provisions are given in Approved Document M (see pages 8-12 of this brochure), which refer to the specification of products and the installation of electrical devices.

The Provisions regarding the positioning of switches, outlets and controls are provided in Section 4.30 (a-m).



A consistent relationship between switches, outlets and controls, with doorways or corners will reinforce the ease with which people locate, use and manipulate wiring devices.

The mounting heights of switches, outlets and controls can also aid use. Positioning these wiring devices as advised in Provisions in section 4.30, will allow wheelchair users and those with limited dexterity or reach to locate, use and manipulate with more ease.

As well as mounting positions relating to height and location, key factors, which will affect the ease of use of switches, outlets and controls, are ease of operation, visibility and freedom from obstruction.

As well as positioning, visibility will aid location and use of a wiring device. Wiring devices which contrast with their surroundings are more convenient for the visually impaired.

In Section 4.30 Provision m states, "Switches, outlets and controls will satisfy Requirement M1 if frontplates contrast visually with their backgrounds".



'Contrast visually' is given as a difference in Light Reflectance Value between two surfaces. Approved Document M recommends a contrast of 30% Light Reflectance Value (LRV) between a frontplate and wall. White has an LRV of 100 and black 0. In practice these values are never absolute, and the LRVs should be ascertained by taking measurements by a spectrophotometer, these values should be supplied by the product manufacturer. However, LRVs can be approximated by reference to colour swatches as an alternative.

In section 4.28, the design consideration states that controls that contrast with their surroundings are more convenient, although not necessarily required, for the visually impaired. No definition of 'controls' is given in Approved Document M, however switches, outlets and controls are always referred to separately. The dictionary definition for 'control' is to regulate or operate, therefore 'control' could be considered to include switches for operating lighting and switches on socket outlets. This could be interpreted that the switch would need to contrast visually with the front plate.

The Disabled Living Foundation, an organisation that helps older and disabled people find equipment solutions that enable them to lead independent lives, has made several recommendations when it comes to installing wiring devices.



The Disabled Living Foundation recommends white switches on a dark background as being easier to distinguish for people with visual impairments. In some instances, it may be deemed necessary for the switch to contrast with the front plate, which in turn will need to contrast with the wall.

As an addition to the Logic Plus range, MK has developed switches and socket outlets with graphite frontplates for contrast to walls with an LRV of 40 or more. In addition, a range of grid frontplates are also available to offer a more flexible solution to installation needs.

MK Prestige Plus and Powerlink Plus Cable Management are available in both white and charcoal, and can be installed with wiring devices to provide the contrast required. In addition, other MK Cable Management systems can be installed with contrasting wiring devices selected from the Logic Plus or the MK Decorative Wiring Device ranges.



The design consideration 4.29 also requires individual switches on multiple socket outlets and panels to be 'well separated' to prevent inadvertent operation. However, no guidance is given as to the dimensions of the required separation. When installing twin socket outlets, those with outboard switches should be specified.



Provision (k) of Section 4.30 states that switched socket outlets should indicate whether they are 'on'. The Disabled Living Foundation recommend a neon indicator, although the effectiveness in daylight is questionable. All standard MK switched socket outlets have a red flash on the switch, which is visible when in the 'on' position, a selection of switched socket outlets are also available with neon indicators.



The MK Grid system provides wide separation of switches, and blank inserts can also be used to provide further separation.

The provision in Section 4.30 (h) of Approved Document M states that light switches for use by the general public should have large push pads. However, the dimensions of the push pad are not specified. The Disabled Living Foundation suggest that a large push pad light switch will enable a person with a physical disability or limited dexterity to operate the device with a fist or elbow.



Due to the lack of specific dimensions, we must assume products with wide rockers, which operate by pushing the top or bottom of the rocker, are likely to conform to the requirements. MK offer wide rocker switches in the Logic Plus range, as well as the decorative wiring device ranges.

Where wall mounted light switches cannot be provided, such as in sanitary accommodation, pull cords fitted with a 50mm bangle to aid grip are required. The bangle should be visually contrasting against their background and distinguishable visually from any emergency assistance pull cord. MK offer a white pull cord with graphite bangle which provides the required contrast against any wall surface with an LRV of 40 or more. The height of the pull cord should be set between 900mm and 1100mm above floor level.

An emergency assistance alarm may be required, particularly in sanitary accommodation, certain hotel bedrooms, or other accommodation. Approved Document M recommends the alarm be activated by a pull cord. The pull cord should be coloured red and fitted with two red bangles to aid location and grip. One bangle should be at a height of 100mm above the floor, whilst the other should be between 800mm and 1000mm above the floor, and be located as close to the wall as possible.

For emergency alarms that are used to call assistance there are three requirements which must be met:

- *Visual and audible indicators to confirm that an emergency call has been received.*
- *A reset control, reachable from a wheelchair and the WC, or from the wheelchair and the shower/changing seat.*
- *A signal that is distinguishable visually and audibly from a fire alarm.*

Frequently asked questions

Q What is the LRV of MK's Graphite range of Logic Plus wiring accessories?

A The LRV is 10, providing the required contrast when situated on a wall which has an LRV of 40 or more. Full details of the LRV values of relevant MK products can be provided by MK Technical Services (01268 563 720).

Q Does Part M apply to Scotland?

A No, Scotland has different Building Regulations to those in England and Wales. This advice can be found in the Technical Handbooks, section 0-6.

Q Can plateswitches with small rockers still be used?

A Yes, plateswitches with small rockers can be used in dwellings (houses or flats, but not student accommodation). The requirement for large push pads (Provision h) only applies to commercial buildings where the switches are for use by the general public.

Q Is Part M retrospective, do I need to revisit any previous jobs?

A No, however adjustments to a building may need to be made under the Disability Discrimination Act.

Other Resources

For more information visit:

- *The Office of the Deputy Prime Minister, at:*
www.odpm.gov.uk
- *National Inspection Council for Electrical Installation*
www.niceic.org.uk
- *The Disabled Living Foundation*
www.dlf.org.uk

For more information on Part M compliant MK products please refer to:

- *Part M Product Guide*
- *MK Catalogue*
- *MK Specification Guide*



MK ELECTRIC

The Arnold Centre Paycocke Road Basildon Essex SS14 3EA United Kingdom

Technical Helpline +44 (0)1268 563720

Fax +44 (0)1268 563064

Web www.mkelectric.co.uk

E-mail mk_technical@novar.com

Registered office: Honeywell House Arlington Business Park Bracknell Berkshire RG12 1EB Registered No. **189291**

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