IEE WIRING REGULATIONS

REGULATIONS FOR ELECTRICAL INSTALLATIONS

Fifteenth Edition 1981

THE INSTITUTION OF ELECTRICAL ENGINEERS

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Preface

This edition was issued on 30th March 1981. It is intended to supersede the Fourteenth Edition on 1 January 1983, but until that date both editions are intended to have equal validity.

It is arranged according to the new plan for Publication 364 – 'Electrical installations of buildings' of the International Electrotechnical Commission (IEC), so far as concerns the general arrangement of the main parts, chapters, and sections but the clause numbering does not correspond to that of the international publication.

The IEC plan has also been adopted for the purposes of the corresponding work of the European Committee for Electrotechnical Standardization (CENELEC) for the harmonization of the national wiring regulations of the member countries of the European Economic Community and the European Free Trade Association.

The IEE Wiring Regulations Committee, acting on behalf of, and through, the British Electrotechnical Committee, provide the British contribution to the work for IEC Publication 364 and the corresponding CENELEC work.

In this edition, so far as is practicable, account has been taken of the technical substance of the parts of IEC Publication 364 so far published*, and of the corresponding agreements reached in CENELEC. In particular, this edition takes account of the following CENELEC Harmonization Documents which have been accepted by the British Electrotechnical Committee on the advice of the Wiring Regulations Committee:

H.D. 193	–	Voltage Bands
H.D. 308	–	Identification and use of cores of flexible cables
H.D. 384.1	–	Electrical installations of buildings – Scope
H.D. 384.4.41	–	Electrical installations of buildings – Protection against electric shock
H.D. 384.4.43	–	Electrical installations of buildings – Protection against overcurrent
H.D. 384.4.473	–	Electrical installations of buildings – Application of measures for protection against overcurrent.

As the IEC and CENELEC work is at a relatively early stage, certain parts of this edition are essentially a rearrangement and factual updating of the content of the previous (14th, as amended to April 1976) edition, where no corresponding international results are yet available.

The Regulations will be amended from time to time to take account of further progress of the international work and other developments, the arrangement of parts, chapters, and sections being intended to facilitate this. The publication of a further edition will be considered when IEC Publication 364 and the corresponding CENELEC work are nearer completion.

The opportunity has also been taken to revise certain regulations for greater clarity or to take account of technical developments.

Considerable reference is made throughout these Regulations to publications of the British Standards Institution, both specifications and codes of practice. Appendix 1 lists these publications and gives their full titles whereas throughout these Regulations they are referred to only by their numbers.

Where reference is made to a British Standard in these Regulations, and the British Standard concerned takes account of a CENELEC Harmonization Document, it is understood that the reference is to be read as relating also to any foreign standard similarly based on that Harmonization Document, provided it is verified that any differences between the two standards would not result in a lesser degree of safety than that achieved by compliance with the British Standard.

A similar understanding is applicable to national standards based on IEC standards but as national deviations are not required to be listed in such standards, special care should be exercised in assessing any national differences.

*Details may be obtained from the Secretary of the Institution.

Notes on the plan of the 15th edition

This edition is based on the plan agreed internationally for the arrangement of safety rules for electrical installations.

In the numbering system used, the first digit signifies a Part, the second digit a Chapter, the third digit a Section, and the subsequent digits the regulation number. For example, the Section number 413 is made up as follows:

PART 4 – PROTECTION FOR SAFETY

Chapter 41 (first chapter of Part 4) – Protection against electric shock
Section 413 (third section of Chapter 41) – Protection against indirect contact.

Part 1 sets out fundamental requirements for safety that are applicable to all installations.

Part 2 defines the sense in which certain terms are used throughout the Regulations.

The subjects of the subsequent parts are as indicated below:

Part No.	Subject
3	Identification of the characteristics of the installation that will need to be taken into account in choosing and applying the requirements of the subsequent Parts. These characteristics may vary from one part of an installation to another, and should be assessed for each location to be served by the installation.
4	Description of the basic measures that are available, for the protection of persons, livestock, and property against the hazards that may arise from the use of electricity. Chapters 41 to 46 each deal with a particular hazard. Chapter 47 deals in more detail with, and qualifies, the practical application of the basic protective measures, and is divided into Sections whose numbering corresponds to the numbering of the preceding chapters; thus Section 471 needs to be read in conjunction with Chapter 41, Section 473 with Chapter 43, and so on.
5	Precautions to be taken in the selection and erection of the equipment of the installation. Chapter 51 relates to equipment generally and Chapters 52 to 55 to particular types of equipment.
6	Inspection and testing.

The sequence of the plan should be followed in considering the application of any particular requirement of these Regulations. The general index provides a ready reference to particular regulations by subject, but in applying any one regulation the requirements of related regulations should be borne in mind. Cross-references are provided, and the index is arranged, to facilitate this.

Contents

Editions

The following editions have been published

FIRST EDITION	entitled 'Rules and Regulations for the Prevention of Fire Risks arising from Electric Lighting'. Issued in 1882.
SECOND EDITION	Issued in 1888.
THIRD EDITION	entitled 'General Rules recommended for Wiring for the Supply of Electrical Energy'. Issued in 1897.
FOURTH EDITION	Issued in 1903.
FIFTH EDITION	entitled 'Wiring Rules'. Issued in 1907.
SIXTH EDITION	Issued in 1911.
SEVENTH EDITION	Issued in 1916.
EIGHTH EDITION	entitled 'Regulations for the Electrical Equipment of Buildings'. Issued in 1924.
NINTH EDITION	Issued in 1927.
TENTH EDITION	Issued in 1934.
ELEVENTH EDITION	Issued in 1939.
ELEVENTH EDITION (REVISED)	Issued in 1943.
ELEVENTH EDITION (REVISED 1943)	Reprinted with minor Amendments, 1945.
	Supplement issued, 1946.
	Revised Section 8 issued, 1948.
TWELFTH EDITION	Issued in 1950.
	Supplement issued, 1954.
THIRTEENTH EDITION	Issued in 1955.
	Reprinted 1958, 1961, 1962 and 1964.
FOURTEENTH EDITION	Issued in 1966.
	Reprinted incorporating Amendments, 1968.
	Reprinted incorporating Amendments, 1969.
	Supplement on use in metric terms issued, 1969.
	Amendments issued, 1970.
	Reprinted in metric units incorporating Amendments, 1970.
	Reprinted 1972.
	Reprinted 1973.
	Amendments issued, 1974.
	Reprinted incorporating Amendments, 1974.
	Amendments issued, 1976.
	Reprinted incorporating Amendments, 1976.
FIFTEENTH EDITION	entitled 'Regulations for Electrical Installations'. Issued in 1981.

PART 1
Scope, object and fundamental requirements for safety

CONTENTS

PART 1

Scope, object and fundamental requirements for safety

CHAPTER 11

SCOPE

General

11–1 These Regulations relate principally to the design, selection, erection, inspection and testing of electrical installations, whether permanent or temporary, in and about buildings generally.

They also relate to electrical installations of:

(i) agricultural and horticultural premises,
(ii) construction sites,
(iii) caravans and their sites.

It is recognised that these Regulations are commonly used for other purposes and it is not intended to discourage their application to other types of installation for which they may be mainly suitable; in that case, however, these Regulations may need to be modified or supplemented.

NOTE – For further information concerning construction sites, see CP1017.

Voltage ranges

11–2 Installations utilising the following nominal voltage ranges are dealt with:

(i) Extra-low voltage – Normally not exceeding 50V a.c. or 120V d.c. whether between conductors or to Earth.

(ii) low voltage – Normally exceeding extra-low voltage but not exceeding 1000V a.c. or 1500V d.c. between conductors or 600V a.c. or 900V d.c. between any conductor and Earth.

Regulations are also included for certain installations operating at voltages exceeding low voltage, for discharge lighting and electrode boilers.

Exclusions from scope

11–3 These Regulations do not apply to:

(i) systems for distribution of energy to the public, or to power generation and transmission for such systems.

NOTE – In Great Britain, such systems are subject to the Electricity Supply Regulations, 1937. In Northern Ireland, corresponding regulations by the Secretary of State for Northern Ireland apply. Outside the United Kingdom, reference should be made to any corresponding requirements.

(ii) those aspects of installations in potentially explosive atmospheres relating to methods of dealing with the explosion hazard which are specified in BS 5345 and CP 1003, or in premises where the fire risks are of an unusual character so as to require special measures.

(iii) those parts of telecommunications (e.g. radio, telephone, bell, call and sound distribution and data transmission), fire alarm, intruder alarm and emergency lighting circuits and equipment that are fed from a safety source complying with Regulation 411–3. Requirements for the segregation of other circuits from such circuits are, however, included.

NOTE – For fire alarm systems see BS 5839 and for emergency lighting of premises see BS 5266.

(iv) electric traction equipment.

(v) electrical equipment of motor vehicles, except those to which the requirements of these Regulations concerning caravans are applicable.

(vi) electrical equipment on board ships.

NOTE – See the 'Regulations and Recommendations for the Electrical and Electronic Equipment of Ships'.*

*IEE Publications Department.

(vii) electrical equipment on offshore installations.

NOTE – IEE Regulations for offshore installations are in course of preparation.

(viii) electrical equipment of aircraft.

NOTE – See the British Civil Airworthiness Requirements.+

(ix) installations at mines and quarries.

(x) radio interference suppression equipment, except so far as it affects safety of the electrical installation.

(xi) lightning protection of buildings.

NOTE – For guidance on protection of buildings against lightning see CP 326.

Equipment

11–4 These Regulations apply to items of electrical equipment only so far as selection and application of the equipment in the installations are concerned. These Regulations do not deal with requirements for the construction of prefabricated assemblies of electrical equipment, where these assemblies comply with appropriate specifications.

Temporary prefabricated installations

11–5 For prefabricated installations for temporary use and frequent erection, only those Regulations concerning design and selection apply.

NOTE – For fairgrounds see the Home Office Guide to Safety at Fairs.†

+Civil Aviation Authority
†H.M. Stationery Office.

CHAPTER 12

OBJECT AND EFFECTS

General

12–1 These Regulations are designed to provide safety, especially from fire, shock and burns.

12–2 These Regulations are intended to be cited in their entirety if referred to in any contract. They are not intended to take the place of a detailed specification or to instruct untrained persons or to provide for every circumstance. Installations of a difficult or special character will require the advice of a suitably qualified electrical engineer.

Relationship with Statutory Regulations

12–3 Compliance with Chapter 13 of these Regulations will, in general, satisfy the requirements of the statutory regulations listed in Appendix 2, where the latter specifically apply to the provisions for electrical installations in buildings.

Parts 3 to 6 of these Regulations set out in greater detail methods and practices which are regarded as meeting the requirements of Chapter 13. Any departure from those Parts needs to be the subject of special consideration and shall be noted in the completion certificate specified in Part 6.

Use of established materials, equipment and methods

12–4 Only established materials, equipment and methods are considered, but it is not intended to discourage invention or to exclude other materials, equipment and methods affording an equivalent degree of safety which may be developed in the future.

New materials, inventions and designs

12–5 Where the use of a material, invention or design leads to departures from these Regulations, the resulting degree of safety of the installation shall be not less than that obtained by compliance with these Regulations.

Such departures shall be the subject of a written specification of a competent body, or competent person or persons, and the installation shall not be described as complying with these Regulations.

Assessment of New Techniques (ANT) Scheme

12–6 Where a new technique not envisaged in these Regulations is to be offered for general use, and there is a need for a more formalised assessment that the technique is capable of affording a degree of safety not less than that achieved by compliance with Parts 3 to 6 of these Regulations, such cases are suitable for consideration under the Assessment of New Techniques (ANT) Scheme operated by the Wiring Regulations Committee. An installation incorporating the subject of an ANTS certificate shall not be described as complying with these Regulations.

NOTE – Details of the ANT Scheme and a list of current ANTS Certificates may be obtained from the Secretary of the Institution.

Installations in premises subject to licensing

12–7 For installations in premises over which a licensing or other authority exercises a statutory control, the requirements of that authority shall be ascertained.

NOTE – For further information on statutory regulations see Appendix 2.

Status of notes to the Regulations

12–8 Notes to these Regulations do not form part of the Regulations but may indicate ways in which the requirements can be met.

Date of validity

12–9 This edition supersedes the Fourteenth Edition on 1 January 1983. Until that date both editions are intended to have equal validity.

CHAPTER 13

FUNDAMENTAL REQUIREMENTS FOR SAFETY

Workmanship and materials

13–1 Good workmanship and proper materials shall be used.

General

13–2 All equipment shall be constructed, installed and protected, and shall be capable of being maintained, inspected and tested, so as to prevent danger so far as is reasonably practicable.

13–3 All equipment shall be suitable for the maximum power demanded by the current-using equipment when it is functioning in its intended manner.

13–4 All electrical conductors shall be of sufficient size and current-carrying capacity for the purposes for which they are intended.

13–5 All conductors shall either–

(i) be so insulated, and where necessary further effectively protected, or

(ii) be so placed and safeguarded,

as to prevent danger, so far as is reasonably practicable.

13–6 Every electrical joint and connection shall be of proper construction as regards conductance, insulation, and mechanical strength and protection.

Overcurrent protective devices

13–7 Where necessary to prevent danger, every installation and every circuit thereof shall be protected against overcurrent by devices which–

(i) will operate automatically at values of current which are suitably related to the safe current ratings of the circuit, and

(ii) are of adequate breaking capacity and, where appropriate, making capacity, and

(iii) are suitably located and are constructed so as to prevent danger from overheating, arcing or the scattering of hot particles when they come into operation and to permit ready restoration of the supply without danger.

NOTE – Where the supply undertaking provides switchgear or fusegear at the origin of the installation it may not be necessary to duplicate the means of overcurrent protection for that part of the installation between its origin and the main distribution point of the installation where the next step for overcurrent protection is provided.

Precautions against earth leakage and earth fault currents

13–8 Where metalwork of electrical equipment, other than current-carrying conductors, may become charged with electricity in such a manner as to cause danger if the insulation of a conductor should become defective or if a fault should occur in any equipment–

(i) the metalwork shall be earthed in such a manner as will cause discharge of electrical energy without danger, or

(ii) other equally effective precautions shall be taken to prevent danger.

13–9 Every circuit shall be arranged so as to prevent the persistence of dangerous earth leakage currents.

NOTE – In Great Britain see also Regulation 26 of the Electricity Supply Regulations 1937.

13–10 Where metalwork is earthed in accordance with Regulation 13-8(i) the circuits concerned shall be protected against the persistence of dangerous earth fault currents by–

(i) the overcurrent protective devices required by Regulation 13-7, or

(ii) a residual current or voltage operated device or equally effective device.

The method described in item (ii) above shall be used whenever the prospective earth fault current is insufficient to cause prompt operation of the overcurrent protective devices.

13–11 Where necessary to prevent danger, where metalwork of electrical equipment is earthed for compliance with Regulation 13-8(i) and is accessible simultaneously with substantial exposed metal parts of other services, the latter parts shall be effectively connected to the main earthing terminal of the installation.

Position of protective devices and switches

13–12 No fuse, or circuit breaker other than a linked circuit breaker, shall be inserted in an earthed neutral conductor, and any linked circuit breaker inserted in an earthed neutral conductor shall be arranged to break also all the related phase conductors.

13–13 Every single-pole switch shall be inserted in the phase conductor only, and any switch connected in an earthed neutral conductor shall be a linked switch and shall be arranged to break also all the related phase conductors.

NOTE – With regard to Regulations 13–12 and 13–13, for a supply given in accordance with the Electricity Supply Regulations, 1937, it may be assumed that the connection with Earth of the neutral of the supply is permanent. Outside Great Britain, confirmation should be sought from the supply undertaking that the supply conforms to requirements corresponding to those of the Electricity Supply Regulations, 1937, in this respect.

Isolation and switching

13–14 Effective means, suitably placed for ready operation, shall be provided so that all voltage may be cut

off from every installation, from every circuit thereof and from all equipment, as may be necessary to prevent or remove danger.

NOTE – Where the supply undertaking provides switchgear or fusegear at the origin of the installation it may not be necessary to duplicate the means of isolation for that part of the installation between its origin and the main distribution point of the installation where the next step for isolation is provided.

13–15 For every electric motor an efficient means of disconnection shall be provided which shall be readily accessible, easily operated and so placed as to prevent danger.

Accessibility of equipment

13–16 Every piece of equipment which requires operation or attention by a person in normal use shall be so installed that adequate and safe means of access and working space are afforded for such operation or attention.

Precautions in adverse conditions

13–17 All equipment likely to be exposed to weather, corrosive atmospheres, or other adverse conditions, shall be so constructed or protected as may be necessary to prevent danger arising from such exposure.

13–18 All equipment in surroundings susceptible to risk of fire or explosion shall be so constructed or protected, and such other special precautions shall be taken, as may be necessary to prevent danger.

NOTE– See Appendix 2 for relevant statutory regulations, see also BS 5345 and CP 1003.

Additions and alterations to an installation

13–19 No additions or alterations, temporary or permanent, shall be made to an existing installation, unless it has been ascertained that the ratings and the condition of any existing equipment (including that of the supply undertaking) which will have to carry any additional load is adequate for the altered circumstances and that the earthing arrangements are also adequate.

Inspection and testing

13–20 On completion of an installation or an extension or alteration of an installation, appropriate tests and inspection shall be made, to verify so far as reasonably practicable that the requirements of Regulations 13-1 to 13-19 have been met.

PART 2

Definitions

NOTE – The following definitions indicate the sense in which the terms defined are used in these Regulations. Some of these definitions are aligned with those given in BS 4727 – 'Glossary of electrotechnical, power, telecommunication, electronics, lighting and colour terms'. Other terms not defined herein are used in the sense defined in BS 4727.

Accessory. A device, other than current-using equipment, associated with such equipment or with the wiring of an installation.

Ambient temperature. The temperature of the air or other medium where the equipment is to be used.

Appliance. An item of current-using equipment other than a luminaire or an independent motor.

Arm's reach. A zone of accessibility to touch, extending from any point on a surface where persons usually stand or move about, to the limits which a person can reach with his hand in any direction without assistance.

Barrier. A part providing a defined degree of protection against contact with live parts, from any usual direction of access.

Basic insulation. Insulation applied to live parts to provide basic protection against electric shock.

NOTE – Basic insulation does not necessarily include insulation used exclusively for functional purposes.

Bonding conductor. A protective conductor providing equipotential bonding.

Bunched. Cables are said to be bunched when two or more are contained within a single conduit, duct, ducting, or trunking or, if not enclosed, are not separated from each other.

Cable coupler. A means enabling the connection, at will, of two flexible cables. It consists of a connector and a plug.

Cable ducting. A manufactured enclosure of metal or insulating material, other than conduit or cable trunking, intended for the protection of cables which are drawn-in after erection of the ducting, but which is not specifically intended to form part of a building structure.

Caravan. Any structure designed or adapted for human habitation which is capable of being moved from one place to another (whether by being towed or being transported on a motor vehicle or trailer) and any other motor vehicle so designed or adapted but not including–

(a) any railway rolling stock which is for the time being on rails forming part of a railway system, or

(b) any tent.

NOTE – For multi-unit structures see the amendment to the definition for caravans in the Caravan Sites Act 1968.*

Caravan site. Land on which a caravan is stationed for the purposes of human habitation and land which is used in conjunction with land on which a caravan is so stationed.

Cartridge fuse link. A device comprising a fuse element or several fuse elements connected in parallel enclosed in a cartridge usually filled with an arc-extinguishing medium and connected to terminations. The fuse link is the part of a fuse which requires replacing after the fuse has operated.

Circuit. An assembly of electrical equipment supplied from the same origin and protected against overcurrent by the same protective device(s). For the purposes of Chapter 52 of these Regulations, certain types of circuit are categorised as follows:

Category 1 circuit – A circuit (other than a fire alarm or emergency lighting circuit) operating at low voltage and supplied directly from a mains supply system.

Category 2 circuit – With the exception of fire alarm and emergency lighting circuits, any circuit for telecommunication (e.g. radio, telephone, sound distribution, intruder alarm, bell and call, and

*H.M. Stationery Office

data transmission circuits) which is supplied from a safety source complying with Regulation 411-3.

Category 3 circuit – A fire alarm circuit or an emergency lighting circuit.

Circuit breaker. A mechanical switching device capable of making, carrying and breaking currents under normal circuit conditions and also of making, carrying for a specified time, and breaking currents under specified abnormal circuit conditions such as those of short circuit.

NOTE – A circuit breaker is usually intended to operate infrequently, although some types are suitable for frequent operation.

Circuit protective conductor. A protective conductor connecting exposed conductive parts of equipment to the main earthing terminal.

Class I equipment. Equipment in which protection against electric shock does not rely on basic insulation only, but which includes means for the connection of exposed conductive parts to a protective conductor in the fixed wiring of the installation.

NOTE – For information on classification of equipment with regard to means provided for protection against electric shock see BS 2754.

Class II equipment. Equipment in which protection against electric shock does not rely on basic insulation only, but in which additional safety precautions such as supplementary insulation are provided, there being no provision for the connection of exposed metalwork of the equipment to a protective conductor, and no reliance upon precautions to be taken in the fixed wiring of the installation.

NOTE – For information on classification of equipment with regard to the means provided for protection against electric shock see BS 2754.

Confined conductive location. A location having surfaces which are mainly composed of extraneous conductive parts and which are of such dimensions that movement is restricted to such an extent that contact with surfaces is difficult to avoid (e.g. in a boiler).

Connector. The part of a cable coupler or of an appliance coupler which is provided with female contacts and is intended to be attached to the flexible cable connected to the supply.

Current-carrying capacity of a conductor. The maximum current which can be carried by a conductor under specified conditions without its steady state temperature exceeding a specified value.

Current-using equipment. Equipment which converts electrical energy into another form of energy, such as light, heat, or motive power.

Danger. Danger to health or danger to life or limb from shock, burn, or injury from mechanical movement to persons (and livestock where present), or from fire, attendant upon the use of electrical energy.

Design current (of a circuit). The magnitude of the current intended to be carried by the circuit in normal service.

Direct contact. Contact of persons or livestock with live parts which may result in electric shock.

Double insulation. Insulation comprising both basic insulation and supplementary insulation.

Duct. A closed passage way formed underground or in a structure and intended to receive one or more cables which may be drawn in.

Ducting. *(See Cable ducting).*

Earth. The conductive mass of the Earth, whose electric potential at any point is conventionally taken as zero.

Earth electrode. A conductor or group of conductors in intimate contact with, and providing an electrical connection to, Earth.

Earth electrode resistance. The resistance of an earth electrode to Earth.

Earth fault loop impedance. The impedance of the earth fault current loop (phase to earth loop) starting and ending at the point of earth fault.

NOTE – See Appendix 15 for a description of the constituent parts of an earth fault current loop.

Earth leakage current. A current which flows to Earth, or to extraneous conductive parts, in a circuit which is electrically sound.

NOTE – This current may have a capacitive component including that resulting from the deliberate use of capacitors.

Earthed concentric wiring. A wiring system in which one or more insulated conductors are completely surrounded throughout their length by a conductor, for example a sheath, which acts as a PEN conductor.

Earthing conductor. A protective conductor connecting a main earthing terminal of an installation to an earth electrode or to other means of earthing.

Electric shock. A dangerous pathophysiological effect resulting from the passing of an electric current through a human body or an animal.

Electrical equipment. (abbr: *Equipment*). Any item for such purposes as generation, conversion, transmission, distribution or utilisation of electrical energy, such as machines, transformers, apparatus, measuring instruments, protective devices, wiring materials, accessories, and appliances.

Electrical installation. (abbr: *Installation*). An assembly of associated electrical equipment to fulfil a specific purpose and having certain co-ordinated characteristics.

Electrically independent earth electrodes. Earth electrodes located at such a distance from one another that the maximum current likely to flow through one of them does not significantly affect the potential of the other(s).

Electrode boiler (or electrode water heater). Equipment for the electrical heating of water or electrolyte by the passage of an electric current between electrodes immersed in the water or electrolyte.

Emergency switching. Rapid cutting off of electrical energy to remove any hazard to persons, livestock, or property which may occur unexpectedly.

Enclosure. A part providing an appropriate degree of protection of equipment against certain external influences and a defined degree of protection against contact with live parts from any direction.

Equipment. (abbr: *see Electrical equipment*).

Equipotential bonding. Electrical connection putting various exposed conductive parts and extraneous conductive parts at a substantially equal potential.

Exposed conductive part. A conductive part of equipment which can be touched and which is not a live part but which may become live under fault conditions.

External influence. Any influence external to an electrical installation which affects the design and safe operation of that installation.

Extraneous conductive part. A conductive part liable to transmit a potential including earth potential and not forming part of the electrical installation.

Factory–built assembly (of LV switchgear and control gear). An assembly built and assembled under the responsibility of the manufacturer, and conforming to an established type or system, without deviations likely to significantly influence the performance, from the typical assembly verified to be in accordance with the relevant British Standard.

NOTE – For various reasons, e.g. transport or production, certain steps of assembly may be made in a place outside the factory of the manufacturer of the factory-built assembly. Such assemblies are considered as factory-built provided the assembly is performed in accordance with the manufacturer's instructions, in such a manner that compliance with the relevant British Standard is assured, including submission to applicable routine tests.

Final circuit. A circuit connected directly to current-using equipment, or to a socket outlet or socket outlets or other outlet points for the connection of such equipment.

Fixed equipment. Equipment fastened to a support or otherwise secured in a specific location.