

Low-voltage switchgear and controlgear assemblies —

Part 13: Specification for particular requirements of consumer units

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Committees responsible for this British Standard

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- ASTA Certification Services
- Association of British Mining Equipment Companies
- Association of Supervisory and Executive Engineers
- British Gas plc
- Building Employers' Confederation
- Department of Trade and Industry (Consumer Safety Unit, C A Division)
- ERA Technology Ltd.
- Electrical Contractors' Association
- Electrical Installation Equipment Manufacturers' Association (BEAMA Ltd.)
- Electricity Supply Industry in England and Wales
- Engineering Equipment and Materials Users' Association
- GAMBICA (BEAMA Ltd.)
- Health and Safety Executive
- National Inspection Council for Electrical Installation Contracting
- Transmission and Distribution Association (BEAMA Ltd.)

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Foreword

This Part of BS 5486 has been prepared under the direction of the Power Electrical Engineering Standards Policy Committee. It supersedes BS 5486-13:1979, which is withdrawn.

This Part has been revised to align it with BS 5486-1:1986. The opportunity has been taken to modify the requirements for short-circuit testing.

The clause and subclause numbering from clause 2 onwards of this Part of BS 5486 follows that of BS 5486-1:1986. Many subclauses refer to the equivalent subclause in BS 5486-1 as either applicable or not applicable; where no reference is made to Part 1, the subclause replaces the equivalent subclause in that Part.

Reference should be made to the note contained in the foreword to BS 5486-1, regarding requirements described as “under consideration”.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 16, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope and general requirements

1.1 Scope

This Part of BS 5486 specifies particular requirements for consumer units such as are installed in consumers' premises, for the control and distribution of electrical energy from a single phase earthed neutral system having a declared voltage not exceeding 250 V a.c. at a nominal frequency of 50 Hz and supplied through a type II fuse complying with BS 1361:1971 rated at not more than 100 A and with outgoing ways not exceeding 50 A rating.

NOTE 1 All references to Part 1 relate to BS 5486-1:1986; see foreword.

NOTE 2 The titles of the publications referred to in this standard are listed on the inside back cover.

1.2 General requirements

ASSEMBLIES known as consumer units shall comply with all the requirements of Part 1 of this standard unless otherwise indicated hereinafter and shall also comply with the supplementary requirements contained in this Part.

Individual components, such as circuit-breakers, fuses, switches and wiring accessories, shall comply with the relevant British Standards and in this respect are not covered by this standard.

2 Definitions

2.1 General definitions

The definitions given in this subclause in Part 1 apply, together with the following.

2.2.101

consumer unit

an ASSEMBLY for the control and distribution of electrical energy, principally in domestic consumers' premises, incorporating manual means of double pole isolation on the incoming circuit(s) and an assembly of one or more of the following on the outgoing circuits:

- a) fuses;
- b) miniature circuit-breakers;
- c) protective devices (residual current or fault voltage operated).

NOTE Consumer units are also known as consumer control units and consumers' electricity control units.

2.2 Definitions concerning constructional units of ASSEMBLIES

The definitions given in this subclause in Part 1 apply.

2.3 Definitions concerning the external design of ASSEMBLIES

The definitions given in this subclause in Part 1 apply as appropriate.

2.4 Definitions concerning the structural parts of ASSEMBLIES

The definitions given in this subclause in Part 1 apply as appropriate.

2.5 Definitions concerning the conditions of installation of ASSEMBLIES

The definitions given in this subclause in Part 1 apply as appropriate.

2.6 Definitions concerning protective measures with regard to electric shock

The definitions given in this subclause in Part 1 apply.

2.7 Gangways within ASSEMBLIES

The definitions given in this subclause in Part 1 do not apply to consumer units.

2.8 Definitions relating to electronic functions

The definitions given in this subclause in Part 1 apply.

3 Classification of ASSEMBLIES

The provisions of this clause in Part 1 shall apply.

4 Electrical characteristics of ASSEMBLIES

4.1 Rated voltages

The provisions of this subclause in Part 1 shall apply.

4.2 Rated current

The rated current of a circuit of a consumer unit is stated by the manufacturer, taking into consideration the ratings of the components of the electrical equipment in the circuit within the assembly, their disposition and application. This current shall be carried without the temperature rise of its several parts exceeding the limits specified in 7.3 of Part 1 when tested according to 8.2.1.

NOTE Due to the complex factors determining the rated currents, no standard values can be given.

If the consumer unit has only one incoming circuit, the rated current of this incoming circuit determines the rated current of the consumer unit. The rated current of the incoming circuit(s) shall not exceed 100 A.

4.3 Rated short-time withstand current (of a circuit of an ASSEMBLY)

The provisions of this subclause in Part 1 are not applicable.

4.4 Rated peak withstand current (of a circuit of an ASSEMBLY)

The provisions of this subclause in Part 1 are not applicable.

4.5 Rated prospective short-circuit withstand current (of a circuit of an ASSEMBLY)

The provisions of this subclause in Part 1 are not applicable.

4.6 Rated conditional short-circuit current (of a circuit of an ASSEMBLY)

The provisions of this subclause in Part 1 are not applicable.

4.7 Rated fused short-circuit current (of a circuit of an ASSEMBLY)

The provisions of this subclause in Part 1 are not applicable.

4.8 Rated diversity factor

A rated diversity factor as defined in Part 1 and expressed in Table I of Part 1 does not apply to consumer units, owing to the flexibility of selection of outgoing protective devices (see 8.2.1.3).

Consumer units are rated and tested at the rated current of the isolating means for the incoming circuit (see 4.2).

4.9 Rated frequency

The rated frequency of the ASSEMBLY is the value of frequency which designates it and to which the operating conditions are referred. For ASSEMBLIES in this Part the rated frequency shall be 50 Hz.

5 Information to be given regarding the ASSEMBLY

The following information shall be given by the manufacturer either on the nameplate or in some other way.

5.1 Nameplates

Each ASSEMBLY shall be provided with one or more plates, marked in a durable manner and located in a place such that they are visible and legible when the ASSEMBLY is installed.

Information specified under a), b) and c) shall be given on the nameplate. The rated current, r), shall be given either on the nameplate or on the means of isolation; in either case it shall be clearly visible after installation. A warning notice shall be provided and be clearly visible after installation stating that the rated current must not be exceeded.

Information from d) to q) may, where applicable, be given on the nameplates, in the relevant documents, the circuit diagrams or in the manufacturer's list or catalogues:

a) the manufacturer's name or trademark;

NOTE The final assembler of the ASSEMBLY is deemed to be its manufacturer (see note 2 to 2.1.1.1 of Part 1).

b) type designation or identification number making it possible to get relevant information from the manufacturer;

c) the number and date of this Part of BS 5486, i.e. BS 5486-13:1989¹⁾;

d) rated frequency, i.e. 50 Hz;

e) rated operational voltages (see 4.1.1 of Part 1);

f) rated insulation voltage (see 4.1.2 of Part 1);

g) rated voltages of auxiliary circuits (if applicable);

h) limits of operation (see clause 4);

i) rated current of each circuit (if applicable; see 4.2);

k) short-circuit withstand strength (see 7.5.2);

l) degree of protection (see 7.2.1 of Part 1);

m) measures for the protection of persons (see 7.4);

n) service conditions for indoor use, outdoor use or special use, if different from the usual service conditions as given in 6.1 of Part 1;

o) type of system earthing for which the ASSEMBLY is designed;

p) dimensions (see Figure C3 of Part 1), given preferably in the order of height, width (or length), depth;

q) mass;

r) rated current of consumer unit (see 4.2).

5.2 Markings

Means shall be provided for the identification of the circuit connected to each outgoing fuseway, outgoing circuit-breaker way or outgoing protective device way.

Where the means of identification is detachable, the relationship between the identification and the appropriate outgoing way shall be readily ascertainable.

Where items of equipment in the consumer unit are designated, the designations used shall be identical with those in the wiring diagrams, which may be supplied with the consumer unit.

¹⁾ Marking BS 5486-13:1984 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of such a claim is therefore solely the responsibility of the person making the claim. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.