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Vtiči in vtičnice za gospodinjstva in podobne namene - 2-4. del: Posebne zahteve za vtiče in vtičnice za SELV (varnostna mala napetost)

Plugs and socket-outlets for household and similar purposes - Part 2-4: Particular requirements for plugs and socket-outlets for SELV

Prises de courant pour usages domestiques et analogues - Partie 2-4: Règles particulières pour prises de courant pour TBTS

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**Plugs and socket-outlets for household and similar purposes –
Part 2-4: Particular requirements for plugs and socket-outlets for SELV**

**Prises de courant pour usages domestiques et analogues –
Partie 2-4: Règles particulières pour prises de courant pour TBTS**

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PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES –

Part 2-4: Particular requirements for plugs and socket-outlets for SELV

FOREWORD

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International Standard IEC 60884-2-4 has been prepared by subcommittee 23B: Plugs, socket-outlets and switches, of IEC technical committee 23: Electrical accessories.

This third edition cancels and replaces the second edition published in 1999. It constitutes a technical revision. The main changes from the previous edition are as follows:

Clause 7 – Classification:

– deletion of classification according to the degree of protection against harmful ingress of water;

– inapplicability of 7.1.3 of Part 1 concerning classification according to the provision for earthing:

– inapplicability of 7.2.2 of Part 1 concerning classification according to the existence of shutters.

Clause 8 – Marking:

– modification of the symbol for degree of protection to IPXX (Subclause 8.2).

Clause 9 – Checking of dimensions:

– addition of compliance paragraph in 9.1.

Clause 13 – Construction of fixed socket-outlets:

– applicability of 13.14 of Part 1;
– addition of requirement about multiple socket-outlets (Subclause 13.101).

Clause 14 – Construction of plugs and portable socket-outlets:

– modification of compliance paragraph of 14.23;
– addition of requirement about minimum nominal cross-sectional area of cables for cord extension sets (Subclause 14.101).

Clause 16 – Resistance to ageing, protection provided by the enclosures, and resistance to humidity:

– applicability of the whole Clause of Part 1.

Clause 21 – Normal operation:

– addition of maximum specified dimensions, including tolerance, of the test plug.

Figures:

– new figures for gauges for the verification of maximum and minimum withdrawal force.

Annexes:

– deletion of informative Annex AA and inclusion of the relevant information in normative Annex B.

The text of this standard is based on the following documents:

CDV	Report on voting
23B/836/CDV	23B/858/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This Part 2-4 is intended to be used in conjunction with IEC 60884-1 and IEC 60906-3. It was established on the basis of the third edition of IEC 60884-1 (2002) and of its Amendment 1 (2006).

This Part 2-4 supplements or modifies the corresponding clauses in IEC 60884-1, so as to convert that publication into the IEC standard: Particular requirements for plugs and socket-outlets for SELV.

When a particular subclause of Part 1 is mentioned in this Part 2-4, that subclause applies as far as reasonable. Where this standard states “addition”, “modification” or “replacement”, the relevant text of Part 1 is to be adapted accordingly.

In this standard the following print types are used:

– requirements proper: in roman type;

– *test specification: in italic type;*

– explanatory notes: in small roman type.

Subclauses or figures which are additional to those in Part 1 are numbered starting from 101; supplementary annexes are entitled AA, BB, etc.

When clauses of Part 1 are declared as applicable, they apply only where they contain requirements concerning plugs and socket-outlets for SELV.

A list of all parts of the IEC 60884 series, under the general title: *Plugs and socket-outlets for household and similar purposes*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES –

Part 2-4: Particular requirements for plugs and socket-outlets for SELV

1 Scope

Replacement:

This Part 2-4 of IEC 60884 applies to plugs, fixed or portable socket-outlets, and to socket-outlets for appliances from 6 V up to and including 48 V d.c. or a.c. (50/60 Hz) SELV with rated current of 16 A, intended for household and similar purposes, either indoors or outdoors.

NOTE 1 The extension of this standard to higher frequencies is under consideration.

This standard does not cover requirements for flush mounting boxes; it covers only those requirements for surface-type mounting boxes which are necessary for the tests on the socket-outlet.

This standard also applies to plugs and socket-outlets incorporated in cord extension sets or integrated in or incorporated in appliances or intended to be fixed to them.

NOTE 2 A socket-outlet integrated in an appliance or equipment is a socket-outlet which is formed by the housing of the appliance or equipment.

A socket-outlet incorporated in an appliance or equipment is a separate socket-outlet built in or fixed to an appliance or equipment.

In addition, socket-outlets for appliances or equipment must comply with IEC 60884-2-2.

This standard does not apply to

– plugs, socket-outlets and couplers for industrial purposes;
– appliance couplers;
– fixed socket-outlets combined with fuses, automatic switches, etc.

Plugs and fixed or portable socket-outlets complying with this standard are suitable for use at ambient temperatures not normally exceeding 25 °C, but occasionally reaching 35 °C.

NOTE 3 Socket-outlets complying with this standard are only suitable for incorporation in equipment in such a way and in such a place that it is unlikely that the surrounding temperature exceeds 35 °C.

In locations where special conditions prevail, such as in ships, vehicles and the like, and in hazardous locations, for example where explosions are liable to occur, special constructions may be required.

2 Normative references

This clause of Part 1 is applicable except as follows:

Addition:

IEC 60884-2-2, *Plugs and socket-outlets for household and similar purposes – Part 2: Particular requirements for socket-outlets for appliances*

IEC 60906-3:1994, *IEC system of plugs and socket-outlets for household and similar purposes – Part 3: SELV plugs and socket-outlets, 16 A 6 V, 12 V, 24 V, 48 V, a.c. and d.c.*

ISO 1302:2002, *Geometrical Product Specifications (GPS) – Indication of surface texture in technical product documentation*

3 Definitions

This clause of Part 1 is applicable, except as follows:

Addition:

3.101
SELV
voltage which does not exceed 50 V a.c. r.m.s. or 120 V d.c. (ripple free) between conductors, or between any conductor and earth, in a circuit which is isolated from the supply mains by means such as a safety isolating transformer or converter with separate windings

NOTE The rated voltages of the systems considered by this standard do not exceed 48 V a.c. and 48 V d.c.

4 General requirements

This clause of Part 1 is applicable.

5 General remarks on tests

This clause of Part 1 is applicable, except as follows:

5.4 *Addition after the first paragraph:*

When a manufacturer's design is used for d.c., as well as for a.c., three additional specimens are required for the tests of Clauses 19, 20 and 21.

When a manufacturer's design is used for two or more voltages, three additional specimens are required for each additional voltage.

All relevant tests are carried out with the specimens having the highest rated voltage(s).

In addition, compliance with the dimensions of standard sheets 1 to 6 of IEC 60906-3 is checked on one specimen of each type.

NOTE A table showing the specimens required for the tests is given in Annex B.

6 Ratings

This clause of Part 1 is applicable, except as follows:

6.1 *Replacement:*

Accessories shall be of the type and have voltage and current rating as shown in Table 1.

Table 1 – Ratings

Type	Rated voltage V		Rated current A
2P (rewirable or non-rewirable)	AC	6[a], 12, 24, 48	16
	DC	6[a], 12, 24, 48	
[a] Non-preferred values.			

6.2 This subclause of Part 1 is not applicable.

7 Classification

This clause of Part 1 is applicable, except as follows:

7.1.3 This subclause is not applicable.

7.2.1 This subclause is not applicable.

7.2.2 This subclause is not applicable.

7.2.5 This subclause is not applicable.

7.3 *Replacement:*

Plugs are classified according to the class of equipment to which they are intended to be connected:

– plugs for equipment of class III.

NOTE For the description of the classes of equipment, see IEC 61140.

8 Marking

This clause of Part 1 is applicable except as follows:

8.1 *Addition:*

In addition, the terminals of d.c. accessories shall be marked with symbols.

8.2 *Replacement*:

When symbols are used, they shall be as follows:

Amperes ..... A

Volts V

Alternating current..... ~

Direct current ..... ⎓

Positive pole ..... +

Negative pole..... –