SLOVENSKI STANDARD
SIST EN 60669-1:1996/A2:1997

01-november-1997

Switches for household and similar fixed-electrical installations - Part 1: General requirements (IEC 669 1:1993/A:1994 + A2:1995, modified) - Amendment A2

Switches for household and similar fixed electrical installations -- Part 1: General requirements

Schalter für Haushalt und ähnliche ortsfeste elektrische Installationen -- Teil 1: Allgemeine Anforderungen

Interrupteurs pour installations électriques fixes domestiques et analogues -- Partie 1: Prescriptions générales

Ta slovenski standard je istoveten z: **EN 60669-1:1995/A2:1996**

ICS:

29.120.40 Stikala Switches

SIST EN 60669-1:1996/A2:1997 **en**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60669-1/A2

November 1996

ICS 29.120.40

Descriptors: Switches for household use Umax = 440 V r.m.s., requirements, classification, testing, properties, definitions, electrical safety requirements, materials testing

English version

Switches for household and similar fixed-electrical installations
Part 1: General requirements
(IEC 669-1:1993/A1:1994 + A2:1995, modified)

Interrupteurs pour installations électriques fixes domestiques et analogues
Partie 1: Prescriptions générales
(CEI 669-1:1993/A1:1994 + A2:1995, modifiée)

Schalter für Haushalt und ähnliche ortsfeste elektrische Installationen
Teil 1: Allgemeine Anforderungen
(IEC 669-1:1993/A1:1994 + A2:1995, modifiziert)

This amendment A2 modifies the European Standard EN 60669-1:1995; it was approved by CENELEC on 1996-07-02. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC
European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of amendments 1:1994 and 2:1995 to the International Standard IEC 669-1:1993, prepared by SC 23B, Plugs, socket-outlets and switches, of IEC TC 23, Electrical accessories, together with common modifications prepared by the Technical Committee CENELEC TC 23B, Switches for household and similar fixed electrical installations, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A2 to EN 60669-1:1995 on 1996-07-02.

This document gives the applicable clauses of the above amendments so that it can be read directly with EN 60669-1:1995. It does not include text for which the relevant common modifications included in EN 60669-1 remain valid.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1997-03-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2005-10-15

For products which have complied with EN 60669-1:1995 before 2005-10-15, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2010-10-15.

Text of EN 60669-1:1995/A2:1996

General notes on tests

5.4 ***Add*** *in the first paragraph:*

For the tests of 12.3.2 three additional specimens of switches are necessary.

5.5 ***Replace*** *the text of this subclause by the following:*

The specimens are submitted to all the relevant tests and the requirements are satisfied if all the tests are met.

If one specimen does not satisfy a test due to an assembly or a manufacturing fault, that test and any preceding one which may have influenced the results of the test shall be repeated and also the tests which follow shall be made in the required sequence on another full set of specimens, all of which shall comply with the requirements.

NOTE - The applicant may submit, together with a number of specimens specified in 5.4, the additional set of specimens which may be wanted should one specimen fail. The testing station will then, without further request, test additional specimens and will reject only if a further failure occurs. If the additional set of specimens is not submitted at the same time, the failure of one specimen will entail rejection.

7 Classification

7.1.2 ***Add*** *the following:*

- Switches of micro-gap construction;

- Switches without contact gap (semiconductor switching devices).

NOTE1
Switches of mini-gap construction have a distance between contacts in the open position between 3 mm and 1,2 mm.

NOTE2
Switches of micro-gap construction have a distance between contacts in the open position of less than 1,2 mm.

NOTE 3
Switches having a semiconductor switching device have no contact gap.

NOTE 4
Switches according to this standard are intended for functional purposes.

8 Marking

8.1 ***Add*** *after the sixth dashed text :*

- symbol for micro-gap construction, if applicable;

- symbol for semiconductor switching device, if applicable;

8.2 ***Add*** *the following between* "Mini-gap construction" *and* "splash-proof construction":

micro-gap construction .....µ

semiconductor switching device.....(under consideration).

NOTE - The symbol "0" shall only be used for switches of normal gap construction.

8.3 ***Replace*** *the first paragraph by the following:*

The following marking shall be placed on the main part of the switch:

- rated current, rated voltage and nature of supply;

- either the name, trade mark or identification mark, of the manufacturer or of the responsible vendor;

- length of insulation to be removed before the insertion of the conductor into the screwless terminal if any;

- if applicable, symbol for mini-gap construction, micro-gap construction or semiconductor switching device;

- the type reference.

NOTE - The type reference may be the series reference only.

8.5 ***Add*** *, on page 33, the following paragraph at the end of the subclause:*

Terminals provided for the connection of conductors not forming part of the main function of the switch shall be clearly identified unless their purpose is self evident, or indicated in a wiring diagram which shall be fixed to the accessory.

The identification of switch terminals may be achieved by:

- their marking with graphical symbols according to IEC 417 or colours and/or an alphanumeric system;

- their physical dimension or relative location.

Leads of neons or indicator lamps are not considered to be conductors for the purpose of this subclause.

12 Terminals

12.2.7 ***Replace*** *the last paragraph by:*

After the test, no wire of the conductor shall have escaped outside the clamping unit thus reducing creepage distances and clearances to values lower than those indicated in 23.

12.3.8 ***Add*** *after the note:*

Screwless terminals of switches shall be so designed that undue insertion of the conductor is prevented by a stop if further insertion is liable to reduce the creepage

distances and/or clearances required in table 19, or to influence the mechanism of the switch.

12.3.10 ***Add*** *after the penultimate paragraph*

Each conductor of screwless terminals is subjected for 15 min to a circular motion with 10 rev/min ± 2 rev/min using an apparatus, an example of which is shown in figure 3. The conductor is subjected to a pull having a value shown in table 5a.

16 Insulation resistance and electric strength

16.2 ***Replace*** *in table 13, item 3, by:*

3.	Between the terminals which are electrically connected together when the switch is in the "ON" position, the switch being in the "OFF" position: - normal/mini-gap construction	2	1 250	2 000
	- micro- gap construction	2	500***	1 250**

Add *at the foot of table 13:*

**For switches having a rated voltage up to and including 250V this value is reduced to:
- 750 V for the electric strength test after resistance to humidity;
- 500 V for the electric strength test after normal operation.

*** This value also applies for the electric strength test after normal operation.

NOTE - Tests for the verification of the off-position of semiconductor switching devices according to item 3 are under consideration.

23 Creepage distances, clearances and distances through sealing compounds

23.1 ***Replace*** *in table 19, item 6:*

"3***" by "3*****"

Add *at the the end of table 19:*

*****This value is not specified, when the contacts are open, for live parts of switches of micro-gap construction, which are moved during the separation of the contacts.

24 Resistance of insulating material to abnormal heat, to fire and to tracking

24.1.1 *Glow wire test*

Replace *a) by:*

a) for parts made of insulating material necessary to retain current-carrying parts and parts of the earthing circuit in position, by the test made at a temperature of

850 °C, with the exception of parts of insulating material needed to retain the earth terminal in position in a box which shall be tested at a temperature of 650 °C.

***Replace** the third paragraph by:*

Small parts, where each surface lies completely within a circle of 15 mm diameter, or where any part of the surface lies outside a 15 mm diameter circle and it is not possible to fit a circle of 8 mm diameter on any of the surfaces, are not subjected to the test of this subclause (see figure 26 for diagrammatic representation).

NOTE 1
When checking a surface, projections on the surfaces and holes which are not greater than 2 mm on their largest dimension are disregarded.

***Renumber** the existing notes 1 and 2 as 2 and 3 respectively.*

***Replace** clause 26 by:*

26 EMC requirements

26.1 Immunity

Switches within the scope of this standard are tolerant of electromagnetic disturbances and therefore no immunity tests are necessary.

26.2 Emission

Electromagnetic disturbances may only be generated during switching operations. Since this is not continuous no emission tests are necessary.

***Add** the following new figure:*

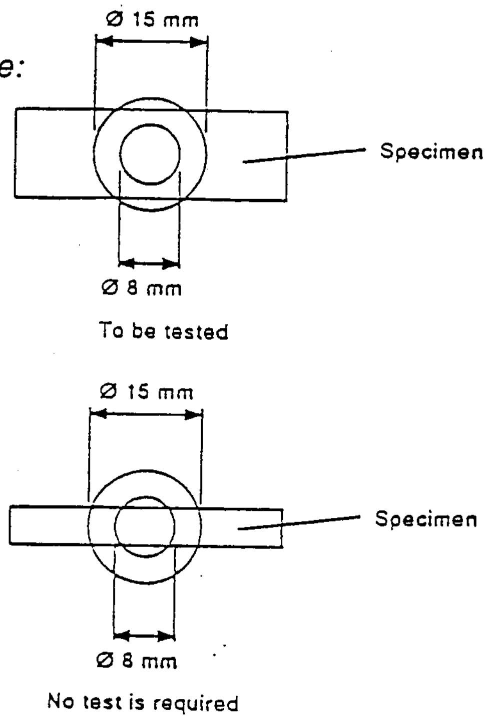

Figure 26 Diagrammatic representation of 24.1.1

Annex ZB (informative)

Special national conditions

***Add** the following:*

12.2.5 **DENMARK, FINLAND, NORWAY, SPAIN**

Add the following paragraph at the end of the subclause:

The test shall be repeated with rigid solid conductors in the case they exist in the relevant IEC standard, if the first test has been made with rigid stranded conductors. In the case rigid stranded conductors do not exist, the test may be made with rigid solid conductors only.

Additional annex:

Annex ZD (informative)

Publication 669-1 de la CEI (Deuxième édition - 1993) Interrupteurs pour installations électriques fixes domestiques et analogues Partie 1: Prescriptions générales	IEC Publication 669-1 (Second edition - 1993) Switches for household and similar fixed-electrical installations Part 1: General requirements

CORRIGENDUM

Page 16 3.13 Le texte français n'est pas concerné par la modification du texte anglais.	Page 17 3.13 Replace "Tapping screw" by "Screw".
3.14 Le texte français n'est pas concerné par la modification du texte anglais.	3.14 Replace "Tapping screw" by "Screw".
Page 20 5.4 Dernier alinéa remplacer "18.3" par "18.2"	Page 21 5.4 Last paragraph replace "18.3" by "18.2"
Page 34 Le texte français n'est pas concerné par la modification du texte anglais.	Page 35 Delete the last line, as it is repeated on page 37
Page 38 10.4 Remplacer dans la note "24" par "23".	Page 39 10.4 Replace in the note "24" by " 23".
Page 40 10.6 Troisième alinéa: remplacer "15.2" par "16.2".	Page 41 10.6 Third paragraph: replace "15.2" by "16.2".
Page 42 12.1 Remplacer dans le 3ième alinéa "l'article 15" par "15.1".	Page 43 12.1 Replace in the 3rd paragraph "clause 15" by "15.1".
Page 82 14.3 Remplacer dans le 2ième alinéa "de l'article 19" par "de l'article 19.1"	page 83 14.3 Replace in the 2nd paragraph "clause 19" by "19.1"

Page 102
18.2
Le texte français n'est pas concerné par la modification du texte anglais.

Page 103
18.2
Add in the first paragraph "and" after "voltage"

Page 104
19
Remplacer dans le 3ième alinéa "18.1" par "18".

Page 105
19
Replace in the 3rd paragraph "18.1" by "18"

Page 108
19.1
Note 1: remplacer "16.2" par "15.3"

Page 109
19.1
Note 1: replace "16.2" by "15.3"

Page 136
Tableau 19
Le texte français n'est pas concerné par la modification du texte anglais.

Page 137
Table 19
Point 6: replace "livve" by "live".