INTERNATIONAL STANDARD

IEC 60669-1

Edition 3.2
2007-01

Edition 3:1998 consolidated with amendments 1:1999 and 2:2006

Switches for household and similar fixed-electrical installations –

Part 1: General requirements

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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International Standard IEC 60669-1 has been prepared by subcommittee 23B: Plugs, socket-outlets and switches, of IEC technical committee 23: Electrical accessories.

This consolidated version of IEC 60669-1 consists of the third edition (1998) [documents 23B/535/FDIS and 23B/539/RVD], its amendment 1 (1999) [documents 23B/580/FDIS and 23B/590/RVD] and its amendment 2 (2006) [documents 23B/828/FDIS and 23B/845/RVD].

The technical content is therefore identical to the base edition and its amendments and has been prepared for user convenience.

It bears the edition number 3.2.

A vertical line in the margin shows where the base publication has been modified by amendments 1 and 2.

Annexes A and B form an integral part of this standard.

In this standard the following print types are used:

– requirements proper: in roman type;

– *test specifications: in italic type*;

– explanatory matter: in smaller roman type.

The committee has decided that the contents of the base publication and its amendments 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- withdrawn,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.

SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED-ELECTRICAL INSTALLATIONS –

Part 1: General requirements

1 Scope

This part of IEC 60669 applies to manually operated general purpose switches, for a.c. only with a rated voltage not exceeding 440 V and a rated current not exceeding 63 A, intended for household and similar fixed electrical installations, either indoors or outdoors.

For switches provided with screwless terminals the rated current is limited to 16 A.

Switches covered by this standard are intended for the control in normal use of:

– a circuit for a tungsten filament lamp load; or
– a circuit for a fluorescent lamp load (including electronic ballast); or
– a circuit for a substantially resistive load with a power factor not less than 0,95; or
– a monophase circuit for motor load with a rated current up to 10 A and a power factor not less than 0,6; or
– a combination of these.

NOTE 1 An extension of the scope to switches for rated voltages higher than 440 V is under consideration.

NOTE 2 An increase of the rated current of 10 A for motor load is under consideration.

NOTE 3 For the time being, switches with a rated current more than 10 A are considered as a 10 A current for motor load switch.

The standard also applies to boxes for switches, with the exception of mounting boxes for flush type switches.

NOTE 4 General requirements for boxes for flush-type switches are given in IEC 60670.

It also applies to switches such as:

– switches incorporating pilot lights;
– electromagnetic remote control switches (particular requirements are given in the relevant part 2);
– switches incorporating a time-delay device (particular requirements are given in the relevant part 2);
– combinations of switches and other functions (with the exception of switches combined with fuses);
– electronic switches (particular requirements are given in the relevant part 2);
– switches having facilities for the outlet and retention of flexible cables (see annex B);
– isolating switches (particular requirements are given in the relevant Part 2).

NOTE 5 The minimum length of the flexible cable used with these switches may be governed by National Wiring Rules.

Switches complying with this standard are suitable for use at ambient temperatures not normally exceeding 25 °C, but occasionally reaching 35 °C.

NOTE 6 Switches complying with this standard are suitable only for incorporation in equipment in such a way and in such a place that it is unlikely that the surrounding ambient 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

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-442:1998, *International Electrotechnical Vocabulary – Part 442: Electrical accessories*

IEC 60112: 1979, *Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions*

IEC 60212: 1971, *Standard conditions for use prior to and during the testing of solid electrical insulation materials*

IEC 60227-1: 1993, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 1: General requirements*

IEC 60227-3: 1993, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 3: Non-sheathed cables for fixed wiring*

IEC 60227-4: 1992, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 4: Sheathed cables for fixed wiring*

IEC 60227-5 1979, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 5: Flexible cables (cords)*
Amendment 1 (1987)

IEC 60245-1: 1994, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 1: General requirements*

IEC 60245-4: 1994, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 4: Cords and flexible cables*

IEC 60364-4-46: 1981, *Electrical installations of buildings – Part 4: Protection for safety – Chapter 46: Isolation and switching*

IEC 60417: 1973, *Graphical symbols for use on equipment. Index, survey and compilation of the single sheets*

IEC 60529: 1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60670: 1989, *General requirements for enclosures for accessories for household and similar fixed-electrical installations*

IEC 60695-2-1: 1991, *Fire hazard testing – Part 2: Test methods – Section 1: Glow-wire test and guidance*

IEC 60998: *Connecting devices for low voltage circuits for household and similar purposes*

IEC 60998-1: 1990, *Connecting devices for low voltage circuits for household and similar purposes – Part 1: General requirements*

IEC 60998-2-1: 1990, *Connecting devices for low voltage circuits for household and similar purposes – Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units*

IEC 60998-2-2: 1991, *Connecting devices for low voltage circuits for household and similar purposes – Part 2-2: Particular requirements for connecting devices as separate entities with screwless-type clamping units*

IEC 60999-1: 1990, *Connecting devices – Safety requirements for screw type and screwless-type clamping units for electrical copper conductors – Part 1: General requirements and particular requirements for conductors from 0,5 mm^2 up to 35 mm^2 (included)*

ISO 1456: 1988, *Metallic coatings – Electrodeposited coatings of nickel plus chromium and of copper plus nickel plus chromium*

ISO 2039-2: 1987, *Plastics – Determination of hardness – Part 2: Rockwell hardness*

ISO 2081: 1986, *Metallic coatings – Electroplated coatings of zinc on iron or steel*

ISO 2093: 1986, *Electroplated coatings of tin – Specification and test methods*