INTERNATIONAL STANDARD

IEC

60669-1

Edition 3.1
2000-03


Switches for household and similar fixed-electrical installations –

Part 1: General requirements

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CONTENTS

FOREWORD .......................................................................................................................... 9

Clause
1  Scope ................................................................................................................................... 11
2  Normative references ........................................................................................................ 13
3  Definitions .......................................................................................................................... 15
4  General requirements ....................................................................................................... 21
5  General notes on tests ..................................................................................................... 21
6  Ratings ............................................................................................................................... 23
7  Classification .................................................................................................................... 25
8  Marking ............................................................................................................................... 29
9  Checking of dimensions ................................................................................................. 37
10 Protection against electric shock ..................................................................................... 37
11 Provision for earthing ..................................................................................................... 43
12 Terminals .......................................................................................................................... 43
13 Constructional requirements ........................................................................................... 67
14 Mechanism ....................................................................................................................... 79
15 Resistance to ageing, protection provided by enclosures of switches, and resistance to humidity ........................................................................................................ 81
16 Insulation resistance and electric strength ...................................................................... 87
17 Temperature rise .............................................................................................................. 95
18 Making and breaking capacity ....................................................................................... 99
19 Normal operation ........................................................................................................... 103
20 Mechanical strength ...................................................................................................... 111
21 Resistance to heat .......................................................................................................... 123
22 Screws, current carrying parts and connections ............................................................ 125
23 Creepage distances, clearances and distances through sealing compound ..................... 129
24 Resistance of insulating material to abnormal heat, to fire and to tracking .................. 133
25 Resistance to rusting ....................................................................................................... 137
26 EMC requirements ......................................................................................................... 137

Annex A (normative)  Survey of specimens needed for tests .................................................. 181
Annex B (normative)  Additional requirements for switches having facilities for the outlet and retention of flexible cables ................................................................. 183

Table 1 – Preferred combinations of numbers of poles and ratings ..................................... 29
Table 2 – Relationship between rated currents and connectable cross-sectional areas of copper conductors ................................................................. 45
### Table 3 – Tightening torque for the verification of the mechanical strength of screw-type terminals ........................................... 47
### Table 4 – Test values for flexion and pull out for copper conductors .................................................. 49
### Table 5 – Test values for pulling out test .................................................................................. 51
### Table 6 – Composition of conductors .................................................................................. 51
### Table 7 – Relationship between rated currents and connectable cross-sectional areas of copper conductors for screwless terminals .......................................................... 57
### Table 8 – Test current for the verification of electrical and thermal stresses in normal use of screwless terminals .......................................................... 61
### Table 9 – Cross-sectional areas of rigid copper conductors for deflection test of screwless terminals .................................................................................. 65
### Table 10 – Deflection test forces .......................................................................................... 65
### Table 11 – Forces to be applied to covers, cover-plates or actuating members whose fixing is not dependent on screws .................................................................................. 69
### Table 12 – External cable diameter limits for surface type switches .......................................................... 75
### Table 12a – Limits of external dimensions of flexible cables .................................................................................. 185
### Table 13 – Points of application of the test voltage for the verification of insulation resistance .................................................................................. 89
### Table 14 – Test voltage, points of application and minimum values of insulating resistance for the verification of dielectric strength .......................................................... 93
### Table 15 – Temperature-rise test currents and cross-sectional areas of copper conductors .................................................................................. 95
### Table 16 – Fractions of total number of operations .................................................................................. 101
### Table 17 – Number of operations for normal operation test .................................................................................. 103
### Table 18 – Height of fall for impact test .................................................................................. 115
### Table 19 – Torque for the verification of the mechanical strength of glands .................................................................................. 119
### Table 20 – Creepage distances, clearances and distances through insulating sealing compound .................................................................................. 131

### Figure 1 – Pillar terminals ................................................................................................... 139
### Figure 2 – Screw terminals and stud terminals ............................................................................. 143
### Figure 3 – Saddle terminals .................................................................................................. 145
### Figure 4 – Lug terminals ....................................................................................................... 147
### Figure 5 – Mantle terminals .................................................................................................. 149
### Figure 6 – Thread-forming screw .......................................................................................... 151
### Figure 7 – Thread-cutting screw .......................................................................................... 151
### Figure 8 – Classification according to connections ........................................................................ 153
### Figure 9 – Void ..................................................................................................................... 155
### Figure 10 – Test apparatus for checking damage to conductors .................................................. 157
### Figure 11a – Principle of the test apparatus for deflecting test on screwless terminal .................................................................................. 157
### Figure 11b – Example of test arrangement to measure the voltage drop during deflecting test on screwless terminal .................................................................................. 159
### Figure 12 – Apparatus for making and breaking capacity and normal operation tests ............... 161
Figure 13 – Circuit diagrams for making and breaking capacity and normal operation........ 163
Figure 14 – Circuit diagrams for testing switches for use on fluorescent lamp loads......... 163
Figure 15 – Impact test apparatus.................................................................................. 165
Figure 16 – Pendulum impact test apparatus (striking element)....................................... 165
Figure 17 – Mounting support for sample .................................................................... 167
Figure 18 – Mounting block for flush-type switches...................................................... 167
Figure 19 – Arrangement for test on cover-plates............................................................ 169
Figure 20 – Gauge (thickness: about 2 mm) for the verification of the outline of covers, cover-plates or actuating members................................................................. 169
Figure 21 – Example of application of the gauge of figure 20 on covers fixed without screws on a mounting surface or supporting surface....................................................... 171
Figure 22 – Examples of applications of the gauge of figure 20 in accordance with the requirements of 20.7................................................................. 173
Figure 23 – Gauge for verification of grooves, holes and reverse tapers.......................... 175
Figure 24 – Sketch showing the direction of application of the gauge of figure 23 ........ 175
Figure 25 – Ball-pressure apparatus ............................................................................ 177
Figure 26 – Diagrammatic representation (24.1.1)......................................................... 177
Figure 27 – Test wall in accordance with the requirements of 15.2.2 ............................ 179
INTERNATIONAL ELECTROTECHNICAL COMMISSION

SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED-ELECTRICAL INSTALLATIONS –

Part 1: General requirements

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

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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.


It bears the edition number 3.1.

A vertical line in the margin shows the texts amended by amendment 1.

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.
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.

The rated current is limited to 16 A maximum for switches provided with screwless terminals.

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

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

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

NOTE 3 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 4 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 normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60669. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 60669 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.


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


3 Definitions

For the purpose of this part of IEC 60669 the following definitions apply.

Where the terms “voltage” and “current” are used, they imply r.m.s. values unless otherwise specified.

3.1 switch device designed to make or break the current in one or more electric circuits

3.1.1 push-button switch control switch having one actuator intended to be operated by force exerted by a part of human body, usually the finger or the palm of the hand, having stored energy return, for instance a spring

3.1.2 momentary contact switch switching device which returns automatically to the initial state after operation

NOTE  Momentary contact switches are intended to operate bells, electromagnetic remote control switches or time-delay switches.

3.1.3 momentary push-button switch push-button switch which returns automatically to the initial state after operation

3.1.4 cord-operated switch switch the operating means of which is a cord which has to be pulled in order to change its contact state

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