

SINGAPORE STANDARD

SS 227 : Part 2:1 : 2000

IEC 60669-2-1 : 2000

(ICS 29.120.40)

SPECIFICATION FOR

Switches for household and similar fixed electrical installations

***Part 2:1 : Particular requirements for
electronic switches***

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National Foreword

This Singapore Standard was prepared by the Technical Committee on Electrical Accessories under the direction of the Electrical and Electronic Product Standards Committee.

It is identical to the Third Edition of International Standard IEC 60669-2-1 : 1996-11, including IEC 60669-2-1 Amendment 1 : 1997-06 and IEC 60669-2-1 Amendment 2 : 1999-11 published by the International Electrotechnical Commission. The text of this standard is reproduced from edition 3.2 of IEC 60669-2-1 : 2000-04 which is the consolidated version of IEC 60669-2-1 based on the Third edition (1996) and its Amendment 1 : 1997 and Amendment 2 : 1999.

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

This standard is to be used in conjunction with SS 227 : Part 1. It lists the changes necessary to convert that standard into a standard on particular requirements for electronic switches.

Editorial amendment is as follows:

Clause

26 - *Replace* IEC 61002-2-2, with IEC 61000-2-2

Attention is drawn to the following:

1. The IEC 60065 : 1985 referred to shall be replaced by Singapore Standard SS 143 : 1988 - Safety requirements for mains operated electronic and related apparatus for household and similar general use.
2. The comma has been used throughout as a decimal marker in IEC 60669-2-1, whereas in Singapore standards it is a practice to use a full-point on the baseline as the decimal marker.

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

Subclauses, figures or tables which are additional to those in part 1 are numbered starting from 101.

Annex AA is for information only.

NOTE

1. *Singapore Standards are subject to periodic review to keep abreast of technological changes and new technical developments. The revisions of Singapore Standards are announced through the issue of either amendment slips or revised editions.*
2. *Compliance with a Singapore Standard does not exempt users from legal obligations.*

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED ELECTRICAL INSTALLATIONS –

Part 2-1: Particular requirements – Electronic switches

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.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60669-2-1 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 1994, amendment 1 (1994) and amendment 2 (1995). It constitutes a technical revision.

This consolidated version of IEC 60669-2-1 is based on the third edition (1996) [documents 23B/476/FDIS and 23B/499/RVD], its amendment 1 (1997) [documents 23B/515/FDIS and 23B/523/RVD] and its amendment 2 (1999) [documents 23B/589/FDIS and 23B/599/RVD].

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.

This section of IEC 60669-2 shall be used in conjunction with IEC 60669-1. It lists the changes necessary to convert that standard into an IEC standard.

In this publication:

1) The following print types are used:

requirements proper: in roman type.

test specifications: in italic type.

notes: in smaller roman type.

2) Subclauses, figures or tables which are additional to those in part 1 are numbered starting from 101.

Annex AA is for information only.

Specification for switches for household and similar fixed electrical installations – Part 2:1 : Particular requirements for electronic switches

1 Scope

This clause of part 1 is replaced by the following:

This standard applies to electronic switches and to associated electronic extension units for household and similar fixed electrical installations either indoors or outdoors.

It applies to electronic switches for the operation of lamp circuits and the control of the brightness of lamps (dimmers) as well as the control of the speed of motors (e.g. those used in ventilating fans) and for other purposes (e.g. heating installations), with a working voltage not exceeding 250 V a.c. and a rated current up to and including 16 A.

The operation and control as mentioned above are performed intentionally by a person via an actuating member, a sensing surface or a sensing unit, by means of touch, proximity, turn, optical, acoustic, thermal or any other influence.

NOTE 1 This standard is not intended to cover devices falling within the scope of IEC 60730.

Examples of designs of electronic switches and functions are shown in annex AA.

NOTE 2 Electronic switches without a mechanical switch in the main circuit do not provide a "full off-state". Therefore, the circuit on the load side should be considered to be live.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60699. 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 60065:1985, *Safety requirements for mains operated electronic and related apparatus for household and similar general use*
Amendment 2 (1989), Amendment 3 (1992)

IEC 60085:1984, *Thermal evaluation and classification of electrical insulation*

IEC 60127, *Miniature fuses*