

AS/NZS 60669.1:2020



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# Switches for household and similar fixed electrical installations

Part 1: General requirements (IEC 60669-1:2017 (ED. 4.0)/COR1: 2020, MOD)



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AS/NZS 60669.1:2020

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- Consumer Electronics Suppliers' Association (Australia)
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- Electrical Regulatory Authorities Council (Australia)
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Australian/New Zealand Standard™

# Switches for household and similar fixed electrical installations

**Part 1: General requirements (IEC 60669-1:2017  
(ED. 4.0)/COR1:2020, MOD)**

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## Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-004, Electrical Accessories, to supersede AS/NZS 60669.1:2013.

AS/NZS 60669.1:2013 will also remain current for 24 months after the date of publication of this Standard and after this time it will be superseded by AS/NZS 60669.1:2020. Regulatory authorities that reference this Standard in regulation may apply these requirements at a different time. Users of this Standard should consult with these authorities to confirm their requirements.

The objective of this Standard is to specify general requirements for manually operated general purpose functional switches, for alternating current (AC) only with a rated voltage not exceeding 440 V with a rated current not exceeding 63 A, intended for household and similar fixed electrical installations, either indoors or outdoors.

Switches covered by this document are, where applicable, intended for the control in normal use of all of the following loads:

- (a) A circuit for a tungsten filament lamp load.
- (b) A circuit for an externally ballasted lamp load (for example, LED, CFL, fluorescent lamp load).
- (c) A circuit for a self-ballasted lamp load (for example, LEDi or CFLi).
- (d) A circuit for a substantially resistive load with a power factor not less than 0.95.

This Standard also applies to—

- (i) boxes for switches, with the exception of mounting boxes for flush-type switches;
- (ii) switches incorporating pilot lights;
- (iii) electromagnetic remote control switches (particular requirements are given in IEC 60669-2-2);
- (iv) switches incorporating a time-delay device (particular requirements are given in IEC 60669-2-3);
- (v) combinations of switches and other functions (with the exception of switches combined with fuses);
- (vi) electronic switches (particular requirements are given in IEC 60669-2-1);
- (vii) switches having facilities for the outlet and retention of flexible cables (see Annex A);
- (viii) isolating switches (particular requirements are given in IEC 60669-2-4);
- (ix) switches and related accessories for use in home and building electronic systems (particular requirements are given in IEC 60669-2-5); and
- (x) firemen's switches (particular requirements are given in IEC 60669-2-6).

This Standard will run in parallel with AS 3133, *Approval and test specification — Air-break switches*.

The essential safety requirements in AS/NZS 3820, *Essential safety requirements for electrical equipment* that could be applicable to switches are covered by this Standard, taken in conjunction with any other relevant requirements affecting safety.

This Standard is an adoption with national modifications and has been reproduced from, IEC 60669-1:2017, *Switches for household and similar fixed-electrical installations — Part 1: General requirements* and its Corrigendum 1 (2020) which has been added at the end of the source text. The modifications are additional requirements and are set out in [Appendix ZZ](#), which has been added after Corrigendum 1.

[Appendix ZZ](#) lists the variations to IEC 60669-1:2017, for the application of this Standard in Australia and New Zealand.

This document is structured as follows:

- (A) Preface.
- (B) IEC 60669-1 (unedited from the contents page to the final clause of the source document).
- (C) [Appendix ZZ](#) — Australian variations to the source document.

The variations listed in [Appendix ZZ](#) cover the following:

- (1) M rating test for all switches marked as suitable for controlling motors.
- (2) Requirements for the fitting of field-installed insulation when required to comply with the requirements for IP protection, insulation resistance and high voltage.
- (3) Testing to determining non-detachable parts.
- (4) Testing requirements for rotary switches.
- (5) IP2X requirement and the access to screws that are 84 mm apart.

As this Standard is reproduced from an International Standard, the following applies:

- (aa) In the source text “this part of IEC 60669” should read “this Australian/New Zealand Standard”.
- (bb) A full point substitutes for a comma when referring to a decimal marker.
- (cc) Test specifications are indicated with italic type.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the annex or appendix to which they apply. A “normative” annex or appendix is an integral part of a Standard, whereas an “informative” annex or appendix is only for information and guidance.

NOTES

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SWITCHES FOR HOUSEHOLD AND SIMILAR  
FIXED ELECTRICAL INSTALLATIONS –****Part 1: General requirements**

## 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:

This fourth edition cancels and replaces the third edition published in 1998, Amendment 1:1999 and Amendment 2:2006. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) change of the scope for motor load switches;
- b) deletion of some dated normative references;
- c) changes to the definitions;
- d) in Clause 5 the number of specimens to be used for the tests are clearly given in Table 1 (Corresponding Annex A of IEC 60669-1:1998 was therefore deleted);

- e) in Clause 5 it was clarified on which switches the tests of Clause 19 shall be carried out;
- f) requirements concerning 13 A switches have been included;
- g) mandatory indication that a terminal is suitable for rigid conductor only;
- h) requirements and test conditions for flexible conductors have been included in Clause 12;
- i) requirements for pilot light units have been included;
- j) new test for self-ballasted lamp loads in 19.3;
- k) Table 20 has been completely redrawn to cover normal, mini and micro-gap switches and renumbered Table 21;
- l) new informative Annex B including changes planned for the future in order to align IEC 60669-1 with the requirements of IEC 60998 (all parts), IEC 60999 (all parts) and IEC 60228;
- m) new informative Annex C about the circuit development for 19.3;
- n) new informative Annex D including additional requirements for insulation-piercing terminals;
- o) new informative Annex E including additional requirements and tests for switches intended to be used at a temperature lower than  $-5\text{ }^{\circ}\text{C}$ .

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

FDIS	Report on voting
23B/1235/FDIS	23B/1241/RVD

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.

In this standard, the following print types are used:

- *compliance statements: in italic type*

A list of all parts in the IEC 60669 series, published under the general title *Switches for household and similar fixed electrical installations*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.

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# 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 functional switches, for alternating current (AC) only with a rated voltage not exceeding 440 V with 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.

NOTE 1 The rated current is limited to 16 A for switches provided with insulation piercing terminals (IPT's) according to Annex D.

Switches covered by this document are, where applicable, intended for the control in normal use of all of the following loads:

- a circuit for a tungsten filament lamp load;
- a circuit for an externally ballasted lamp load (for example LED, CFL, fluorescent lamp load);
- a circuit for a self ballasted lamp load (for example LEDi or CFLi);
- a circuit for a substantially resistive load with a power factor not less than 0,95;
- a single phase circuit for motor load with a rated current not exceeding 3 A at 250 V (750 VA) and 4,5 A at 120 V (540 VA) and a power factor not less than 0,6. This applies to both switches rated not less than 10 A that have not undergone additional tests and to momentary switches rated not less than 6 A that have not undergone additional tests.

NOTE 2 In the following country the suitability of a switch intended to control the inrush current of a motor shall be tested: AU.

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

NOTE 3 General requirements for boxes for flush-type switches are given in IEC 60670-1.

It also applies to switches such as

- switches incorporating pilot lights;
- electromagnetic remote control switches (particular requirements are given in IEC 60669-2-2);
- switches incorporating a time-delay device (particular requirements are given in IEC 60669-2-3);
- combinations of switches and other functions (with the exception of switches combined with fuses);
- electronic switches (particular requirements are given in IEC 60669-2-1);
- switches having facilities for the outlet and retention of flexible cables (see Annex A);
- isolating switches (particular requirements are given in IEC 60669-2-4);
- switches and related accessories for use in home and building electronic systems (particular requirements are given in IEC 60669-2-5);
- firemen's switches (particular requirements are given in IEC 60669-2-6).