

AS/NZS 61058.1.2:2021



Australian/New Zealand Standard™

Switches for appliances

Part 1.2: Requirements for electronic switches (IEC 61058-1-2:2016
(ED.1.0) MOD)



currently in preview, click buy full version

AS/NZS 61058.1.2:2021

This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee EL-004, Electrical Accessories. It was approved on behalf of the Council of Standards Australia on 20 May 2021 and by the New Zealand Standards Approval Board on 02 June 2021.

This Standard was published on 25 June 2021.

The following are represented on Committee EL-004:

- Australian Chamber of Commerce and Industry
- Australian Industry Group
- Better Regulation Division (Fair Trading, Safework NSW, TestSafe)
- Consumer Electronics Suppliers Association
- Consumers Federation of Australia
- Electrical Regulatory Authorities Council
- Engineers Australia
- International Accreditation New Zealand
- Joint Accreditation System of Australia & New Zealand
- New Zealand Manufacturers and Exporters Association
- Plastics Industry Pipe Association of Australia
- Plastics New Zealand
- WorkSafe New Zealand

This Standard was issued in draft form for comment as DR AS/NZS 61058.1.2:2021.

Keeping Standards up-to-date

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:

www.standards.org.au

www.standards.govt.nz

ISBN 978 1 76113 415 9

Australian/New Zealand Standard™

Switches for appliances

**Part 1.2: Requirements for electronic switches
(IEC 61058-1-2:2016 (ED.1.0) MOD)**

First published as AS/NZS 61058.1.2:2021



© IEC Geneva Switzerland 2021 — All rights reserved

© Standards Australia Limited/the Crown in right of New Zealand, administered by the New Zealand Standards Executive 2021

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of either the IEC or the publisher, unless otherwise permitted under the Copyright Act 1968 (Cth) or the Copyright Act 1994 (New Zealand). If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please see the contact details on the back cover or the contact us page of the website for further information.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-004, Electrical Accessories.

The objective of this document is to supplement or modify the corresponding clauses in AS/NZS 61058.1, so as to convert that publication into the standard *Requirements for electronic switches*.

This document applies to electronic switching devices in conjunction with the general requirements of AS/NZS 61058.1.

This document is an adoption with national modifications, and has been reproduced from, IEC 61058-1-2:2016, *Switches for appliances — Part 1-2: Requirements for electronic switches*.

The essential safety requirements in AS/NZS 3820 that may be applicable switches for appliances are covered by this Standard, taken in conjunction with any other relevant requirements affecting safety.

The modifications are additional requirements and are set out in [Appendix ZZ](#), which has been added at the end of the source text.

[Appendix ZZ](#) lists the variations to IEC 61058-1-2:2016 for the application of this document in Australia and New Zealand.

As this document has been reproduced from an International Standard, the following applies:

- (a) In the source text “this part of IEC 61058” should read “this document”.
- (b) A full point substitutes for a comma when referring to a technical marker.

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 appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

NOTES

Currently in preview, click buy full version

CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions	6
4 General requirements	6
5 General information on tests	6
6 Rating	8
7 Classification.....	8
8 Marking and documentation	8
9 Protection against electric shock.....	9
10 Provision for earthing.....	9
11 Terminals and terminations	9
12 Construction.....	9
13 Mechanism.....	9
14 Protection against ingress of solid foreign objects, ingress of water and humid conditions.....	9
15 Insulation resistance and dielectric strength.....	9
16 Heating	9
17 Endurance.....	9
17.1 General requirements.....	10
17.2 Electrical conditions	13
17.3 Thermal conditions.....	15
17.4 Actuating conditions	15
17.5 Type of test condition (TC).....	17
17.6 Evaluation of compliance	18
18 Mechanical strength.....	19
19 Screws, current-carrying parts and connections.....	19
20 Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies.....	19
21 Fire hazard.....	19
22 Resistance to rusting.....	19
23 Abnormal operation and fault conditions for switches.....	20
23.1 Switch construction	20
23.2 Test set-up.....	20
23.3 Abnormal testing.....	20
23.4 Compliance.....	21
23.5 Protection in case of failure of forced cooling.....	21
24 Components for switches.....	21
25 EMC requirements.....	21
Table 101 – Test specimens	7
Table 102 – Switch information and the loads placed in groups.....	8
Table 103 – Electrical endurance tests for electronic switches	11

Table 104 – Test loads for electrical endurance tests for a.c. circuits	14
Table 105 – Test loads for electrical endurance tests for d.c. circuits	15
Table 106 – Switch operating conditions.....	16

Currently in preview, click buy full version

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SWITCHES FOR APPLIANCES –

Part 1-2: Requirements for electronic switches

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). 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. 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 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 IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61058-1-2 has been prepared by subcommittee 23J: Switches for appliances, of IEC technical committee 23: Electrical accessories.

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

FDIS	Report on voting
23J/400/FDIS	23J/404/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.

A list of all parts in the IEC 61058 series, published under the general title *Switches for appliances*, can be found on the IEC website.

This part of IEC 61058 is to be used in conjunction with IEC 61058-1(2016).

This Part 1-2 supplements or modifies the corresponding clauses in IEC 61058-1, so as to convert that publication into the IEC standard: *Requirements for electronic switches*.

When a particular subclause of Part 1 is not mentioned in this Part 1-2, that subclause applies as far as reasonable. Where this standard states “addition”, “modification” or “replacement”, the relevant text of Part 1 is to be adapted accordingly.

In this standard:

- 1) the following print types are used:
 - requirements proper: in roman type;
 - *test specifications: in italic type*;
 - notes/explanatory matters: in small roman type.
- 2) subclauses, notes, figures and tables which are additional to those in Part 1 are numbered starting from 101. Annexes which are additional to those in Part 1 are lettered AA, BB, etc.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://www.stc.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 APPLIANCES –

Part 1-2: Requirements for electronic switches

1 Scope

This clause of part 1 is applicable.

Add the following at the end of Clause 1.

This part of IEC 61058 applies to electronic switching devices and shall be used in conjunction with the general requirements of IEC 61058-1.

NOTE Additional requirements for particular switches may be found in the relevant part 2 of IEC 61058.

2 Normative references

This clause of part 1 is applicable.

3 Terms and definitions

This clause of part 1 is applicable.

4 General requirements

This clause of part 1 is applicable.

5 General information on tests

This clause of part 1 is applicable with the following addition.

Add the following at the end of 5.3.

Table 101 provides information on:

- The minimum number of specimens needed for each test.
- The minimum number of total specimens, when applicable tests are added, needed for each evaluation.
- Additional specimens that may be required as a result of additional electrical rating, unique construction or damage /breakage during testing.