

EUROPEAN STANDARD

EN 61058-1-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2016

ICS 29.120.40

English Version

**Switches for appliances -
Part 1-2: Requirements for electronic switches
(IEC 61058-1-2:2016)**

Interrupteurs pour appareils -
Partie 1-2: Exigences relatives aux interrupteurs électroniques
(IEC 61058-1-2:2016)

Geräteschalter -
Teil 1-2: Anforderungen an elektronische Schalter
(IEC 61058-1-2:2016)

This European Standard was approved by CENELEC on 2016-06-29. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

The text of document 23J/400/FDIS, future edition 1 of IEC 61058-1-2, prepared by SC 23J "Switches for appliances", of IEC/TC 23 "Electrical accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61058-1-2:2016.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2017-03-29
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-06-29

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61058-1-2:2016 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

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

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Annex ZA of Part 1 is applicable.



IEC 61058-1-2

Edition 1.0 2016-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Switches for appliances –
Part 1-2: Requirements for electronic switches**

**Interrupteurs pour appareils –
Partie 1-2: Exigences relatives aux interrupteurs électroniques**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 29.120.40

ISBN 978-2-8322-3397-9

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

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

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.