SLOVENSKI STANDARD
SIST EN 61020-1:2019

01-julij-2019

Elektromehanska stikala za električno in elektronsko opremo - 1. del: Rodovna specifikacija (IEC 61020-1:2019)

Electromechanical switches for use in electrical and electronic equipment - Part 1: Generic specification (IEC 61020-1:2019)

Elektromechanische Schalter zur Verwendung in Geräten der Elektrotechnik und Elektronik – Teil 1: Fachgrundspezifikation (IEC 61020-1:2019)

Interrupteurs électromécaniques pour équipements électriques et électroniques - Partie 1: Spécification générique (IEC 61020-1:2019)

Ta slovenski standard je istoveten z: EN IEC 61020-1:2019

ICS:

31.220.20	Stikala	Switches

SIST EN 61020-1:2019 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61020-1

March 2019

ICS 31.220.20

Supersedes EN 61020-1:2009

English Version

Electromechanical switches for use in electrical and electronic equipment - Part 1: Generic specification (IEC 61020-1:2019)

Interrupteurs électromécaniques pour équipements électriques et électroniques - Partie 1: Spécification générique (IEC 61020-1:2019)

Elektromechanische Schalter zur Verwendung in Geräten der Elektrotechnik und Elektronik - Teil 1: Fachgrundspezifikation (IEC 61020-1:2019)

This European Standard was approved by CENELEC on 2019-02-20. 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, Serbia, 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: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 61020-1:2019 E

European foreword

The text of document 23J/443/CDV, future edition 3 of IEC 61020-1, 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 IEC 61020-1:2019.

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) 2019-11-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-02-20

This document supersedes EN 61020-1:2009.

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

Endorsement notice

The text of the International Standard IEC 61020-1:2019 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60062:2016	NOTE	Harmonized as EN 60062:2016 (not modified)
IEC 60065	NOTE	Harmonized as EN 60065
IEC 60068-3-13	NOTE	Harmonized as EN 60068-3-13
IEC 60512 (series)	NOTE	Harmonized as EN IEC 60512 (series)
IEC 60664-1	NOTE	Harmonized as EN 60664-1
IEC 60695-11-10	NOTE	Harmonized as EN 60695-11-10
IEC 61190-1-3	NOTE	Harmonized as EN IEC 61190-1-3
ISO/IEC 17050-1	NOTE	Harmonized as EN ISO/IEC 17050-1
ISO/IEC 17050-2	NOTE	Harmonized as EN ISO/IEC 17050-2
ISO 129-1	NOTE	Harmonized as EN ISO 129-1[1]
ISO 286-1	NOTE	Harmonized as EN ISO 286-1
ISO 1101	NOTE	Harmonized as EN ISO 1101
ISO 9001	NOTE	Harmonized as EN ISO 9001

[1] Under preparation. Stage at the time of publication: prEN ISO 129-1:2018.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where 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.

Publication	Year	Title	EN/HD	Year
IEC 60027	series	Letter symbols to be used in electrical technology	EN IEC 60027	series
IEC 60050-581	-	International Electrotechnical Vocabulary - Part 581: Electromechanical components for electronic equipment	-	-
IEC 60068-1	2013	Environmental testing - Part 1: General and guidance	EN 60068-1	2014
IEC 60068-2-1	-	Environmental testing - Part 2-1: Tests - Test A: Cold	EN 60068-2-1	-
IEC 60068-2-2	-	Environmental testing - Part 2-2: Tests - Test B: Dry heat	EN 60068-2-2	-
IEC 60068-2-6	-	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	-
IEC 60068-2-10	-	Environmental testing - Part 2-10: Tests - Test J and guidance: Mould growth	EN 60068-2-10	-
IEC 60068-2-11	-	Basic environmental testing procedures - Part 2-11: Tests - Test Ka: Salt mist	EN 60068-2-11	-
IEC 60068-2-13	-	Basic environmental testing procedures - Part 2-13: Tests - Test M: Low air pressure	EN 60068-2-13	-
IEC 60068-2-14	-	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	EN 60068-2-14	-
IEC 60068-2-17	-	Basic environmental testing procedures - Part 2-17: Tests - Test Q: Sealing	EN 60068-2-17	-
IEC 60068-2-20	2008	Environmental testing - Part 2-20: Tests - Test T: Test methods for solderability and resistance to soldering heat of devices with leads	EN 60068-2-20	2008
IEC 60068-2-21	-	Environmental testing - Part 2-21: Tests - Test U: Robustness of terminations and integral mounting devices	EN 60068-2-21	-
IEC 60068-2-27	-	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	-

IEC 60068-2-30	2005	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)	EN 60068-2-30	2005
IEC 60068-2-38	2009	Environmental testing - Part 2-38: Tests - Test Z/AD: Composite temperature/humidity cyclic test	EN 60068-2-38	2009
IEC 60068-2-42	-	Environmental testing - Part 2-42: Tests - Test Kc: Sulphur dioxide test for contacts and connections	EN 60068-2-42	-
IEC 60068-2-43	-	Environmental testing - Part 2-43: Tests - Test Kd: Hydrogen sulphide test for contacts and connections	EN 60068-2-43	-
IEC 60068-2-45	-	Basic environmental testing procedures - Part 2-45: Tests - Test XA and guidance: Immersion in cleaning solvents	EN 60068-2-45	-
IEC 60068-2-46	-	Basic environmental testing procedures - Part 2-46: Tests - Guidance to test Kd: Hydrogen sulphide test for contacts and connections	HD 323.2.46 S1	-
IEC 60068-2-49	-	Basic environmental testing procedures - Part 2-49: Tests - Guidance to test Kc: Sulphur dioxide test for contacts and connections	-	-
IEC 60068-2-58	2015	Environmental testing - Part 2-58: Tests - Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)	EN 60068-2-58	2015
+ A1	2017		+ A1	2018
IEC 60068-2-61	1991	Environmental testing - Part 2-61: Test methods - Test Z/ABDM: Climatic sequence	EN 60068-2-61	1993
IEC 60068-2-68	1994	Environmental testing - Part 2-68: Tests - Test L: Dust and sand	EN 60068-2-68	1996
IEC 60068-2-77	-	Environmental testing - Part 2-77: Tests - Test 77: Body strength and impact shock	EN 60068-2-77	-
IEC 60068-2-78	-	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	-
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	-	-
IEC 60617	-	Graphical symbols for diagrams (available at: http://std.iec.ch/iec60617)	-	-
IEC 60721-3-3	-	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 3: Stationary use at weather protected locations	EN 60721-3-3	-
IEC 61058-1	2016	Switches for appliances - Part 1: General requirements	EN IEC 61058-1	2018
IEC 61058-1-1	2016	Switches for appliances - Part 1-1: Requirements for mechanical switches	EN 61058-1-1	2016
ISO 80000-1	-	Quantities and units - Part 1: General	-	-

IEC 61020-1

Edition 3.0 2019-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electromechanical switches for use in electrical and electronic equipment – Part 1: Generic specification

Interrupteurs électromécaniques pour équipements électriques et électroniques – Partie 1: Spécification générique

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 31.220.20

ISBN 978-2-8322-6388-4

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

ELECTROMECHANICAL SWITCHES FOR USE IN ELECTRICAL AND ELECTRONIC EQUIPMENT –

Part 1: Generic specification

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 61020-1 has been prepared by subcommittee 23J: Switches for appliances, of IEC technical committee 23: Electrical accessories.

This third edition cancels and replaces the second edition published in 2009.

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

a) In accordance with the ISO/IEC Directives, Part 2:2016, Clause 2 General has been replaced by two new clauses: Clause 2 Normative references and Clause 3 Terms, definitions, units and symbols.

   2.4 Preferred values and 2.5 Marking have been moved to Clauses 5 and 6. In addition, 6.2 Markings on packaging has been added.

b) Clause 3 Quality assurance procedures and Annex A have been deleted.

c) 4.3.6.3 Returning force has been added.

d) 4.3.6.4 Travel (movement of the actuator) has been added.

e) 4.12 Environmental testing:

4.12.1.3 and 4.12.1.5 have been renumbered 4.12.2 and 4.12.3, respectively. 4.12.1.4 and 4.12.1.7 have been integrated in 4.12.5. 4.12.10 Salt mist has been added.

f) Following publication of IEC 61058-1-1:2016, some cross-references to IEC 61058-1 have been updated.

g) The following items have been updated with respect to the second edition.

   – Tables and figures:

     Tables 1 and 3 have been deleted, Table 4 has been renumbered to Table 10. New Tables 2, 3, 4, 5, 6, 7, 8 and 9 have been added.

     Figure 1 has been renumbered to Figure 3, Figure 2 renumbered to Figure 4, Figure 3 renumbered to Figure 9 and Figure 4 renumbered to Figure 12. Added new Figures 1, 2, 5, 6, 7, 8, 10 and 11 have been added.

   – Specific words and common names have been unified.

The text of this International Standard is based on the following documents:

CDV	Report on voting
23J/443/CDV	23J/448/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61020 series, published under the general title *Electromechanical switches for use in electrical and electronic equipment*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.