# SLOVENSKI STANDARD
# SIST EN IEC 60947-9-2:2025

**01-september-2025**

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**Nizkonapetostne stikalne in krmilne naprave - 9-2. del: Aktivni sistemi za blažitev učinkov okvarnega obloka - Naprave za odkrivanje in ublažitev lokov, ki temeljijo na optičnem sistemu (IEC 60947-9-2:2021)**

Low-voltage switchgear and controlgear - Part 9-2: Active arc-fault mitigation systems - Optical-based internal arc-detection and mitigation devices (IEC 60947-9-2:2021)

Niederspannungsschaltgeräte - Aktive Systeme zur Abschwächung von Störlichtbögen - Teil 9-2: Optische Geräte zur Erfassung und Abschwächung innerer Lichtbögen (IEC 60947-9-2:2021)

Appareillage à basse tension - Partie 9-2: Systèmes actifs de limitation des défauts d'arc - Dispositifs optiques de détection et de limitation d'arcs internes (IEC 60947-9-2:2021)



**Ta slovenski standard je istoveten z:** **EN IEC 60947-9-2:2025**

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**ICS:**

| | | |
|---|---|---|
| 29.120.40 | Stikala | Switches |
| 29.130.20 | Nizkonapetostne stikalne in krmilne naprave | Low voltage switchgear and controlgear |

**SIST EN IEC 60947-9-2:2025** **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN IEC 60947-9-2

July 2025

ICS 29.120.40; 29.130.20

English Version

# Low-voltage switchgear and controlgear - Part 9-2: Active arc-fault mitigation systems - Optical-based internal arc-detection and mitigation devices (IEC 60947-9-2:2021)

Appareillage à basse tension - Partie 9-2: Systèmes actifs de limitation des défauts d'arc - Dispositifs optiques de détection et de limitation d'arcs internes (IEC 60947-9-2:2021)

Niederspannungsschaltgeräte - Aktive Systeme zur Abschwächung von Störlichtbögen - Teil 9-2: Optische Geräte zur Erfassung und Abschwächung innerer Lichtbögen (IEC 60947-9-2:2021)

This European Standard was approved by CENELEC on 2021-05-31. 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye 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 60947-9-2:2025 E

# European foreword

The text of document 121A/406/FDIS, future edition 1 of IEC 60947-9-2, prepared by SC 121A "Low-voltage switchgear and controlgear" of IEC/TC 121 "Switchgear and controlgear and their assemblies for low voltage" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60947-9-2:2025.

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) 2026-07-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-07-31

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.

This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZZ, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.



## Endorsement notice



The text of the International Standard IEC 60947-9-2:2021 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 standard indicated:

| | | |
|---|---|---|
| IEC 60079 (series) | NOTE | Approved as EN IEC 60079 (series) |
| IEC 60269 (series) | NOTE | Approved as EN 60269 (series) |
| IEC 60664-1:2020 | NOTE | Approved as EN IEC 60664-1:2020 (not modified) |
| IEC 60947-3 | NOTE | Approved as EN IEC 60947-3 |
| IEC 61439 (series) | NOTE | Approved as EN IEC 61439 (series) |
| IEC 61439-1:2020 | NOTE | Approved as EN IEC 61439-1:2021 (not modified) |
| IEC 61439-2:2020 | NOTE | Approved as EN IEC 61439-2:2021 (not modified) |
| IEC 62474 | NOTE | Approved as EN IEC 62474 |
| IEC 62606 | NOTE | Approved as EN 62606 |
| IEC/TR 63201 | NOTE | Approved as CLC IEC/TR 63201 |

# 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.cencenelec.eu.

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| IEC 60068-2-6 | 2007 | Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal) | EN 60068-2-6 | 2008 |
| IEC 60068-2-27 | 2008 | Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock | EN 60068-2-27 | 2009 |
| 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 60255-27 | 2013 | Measuring relays and protection equipment - Part 27: Product safety requirements | EN 60255-27 | 2014 |
| IEC 60695-2-10 | - | Fire hazard testing - Part 2-10: Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure | EN IEC 60695-2-10 | 2021 |
| IEC 60695-2-11 | 2014 | Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products (GWEPT) | EN IEC 60695-2-11 | 2021 |
| IEC 60695-2-12 | - | Fire hazard testing - Part 2-12: Glowing/hot-wire based test methods - Glow-wire flammability index (GWFI) test method for materials | EN IEC 60695-2-12 | 2021 |
| IEC 60715 | 2017 | Dimensions of low-voltage switchgear and controlgear - Standardized mounting on rails for mechanical support of switchgear, controlgear and accessories | EN 60715 | 2017 |
| IEC 60947-1 | 2020 | Low-voltage switchgear and controlgear - Part 1: General rules | EN IEC 60947-1 | 2021 |
| IEC 60947-2 | 2016 | Low-voltage switchgear and controlgear - Part 2: Circuit-breakers | EN 60947-2 | 2017 |
| + A1 | 2019 | | + A1 | 2020 |

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| IEC 60947-9-1 | 2019 | Low-voltage switchgear and controlgear - Part 9-1: Active arc-fault mitigation systems - Arc quenching devices | EN IEC 60947-9-1 | 2019 |
| IEC 60990 | 2016 | Methods of measurement of touch current and protective conductor current | EN 60990 | 2016 |
| IEC 61482-1-2 | 2014 | Live working - Protective clothing against the thermal hazards of an electric arc - Part 1-2: Test methods - Method 2: Determination of arc protection class of material and clothing by using a constrained and directed arc (box test) | EN 61482-1-2 | 2014 |
| IEC 61557-2 | - | Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. - Equipment for testing, measuring or monitoring of protective measures - Part 2: Insulation resistance | EN IEC 61557-2 | 2021 |
| CISPR 11 (mod) | 2015 | Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement | EN 55011 | 2016 |
| + A1 | 2016 | | + A1 | 2017 |
| | | | + A11 | 2020 |
| CISPR 32 | 2015 | Electromagnetic compatibility of multimedia equipment - Emission requirements | EN 55032 | 2015 |
| | | | + AC | 2016 |
| | | | + A11 | 2020 |
| ISO 3864-1 | 2011 | Graphical symbols - Safety colours and safety signs – Part 1: Design principles for safety signs and safety markings | - | - |
| ISO 3864-2 | 2016 | Graphical symbols - Safety colours and safety signs – Part 2: Design principles for product safety labels | - | - |

# Annex ZZ
(informative)

# Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European standard has been prepared under a Commission's standardisation request relating to harmonised standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

**Table ZZ.1 — Correspondence between this European standard and the Annex I of Directive 2014/35/EU [2014 OJ L96]**

| Safety objectives of Directive 2014/35/EU | Clause(s) / sub-clause(s) of this EN | Remarks/note |
|---|---|---|
| 1 a) | 4, 6.1, 6.2, 6.3 | |
| 1 b) | 4, 6.1, 6.3, 9.3.3, 9.3.4, A.5, B.5, E.2.7 | |
| 1 c) | 4, 6, B.5 | see 2 a) to 2 d) and 3 a) to 3 c) in this table |
| 2 a) | 4, 5, 6, 7, 8.1, 8.2, 9.2, 9.3, 9.4 | |
| 2 b) | 4, 6, 8.1, 8.2, 9.3 | |
| 2 c) | 4, 5, 8.1, 9 | |
| 2 d) | 4, 5, 8.1, 9.1, 9.3, 9.4 | |
| 3 a) | 4, 6.3, 7, 8.1, 9 | |
| 3 b) | 4, 6, 8.3, 9.1, 9.3, 9.4 | |
| 3 c) | 4, 5, 9.3 | |



**WARNING 1 —** Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2 —** Other Union legislation may be applicable to the product(s) falling within the scope of this standard.