



**SLOVENSKI STANDARD**  
**SIST EN IEC 60947-4-2:2023/A1:2025**

**01-februar-2025**

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**Nizkonapetostne stikalne in krmilne naprave - 4-2. del: Kontaktorji in motorski zaganjalniki - Polprevodniški krmilniki motorjev, zaganjalniki motorjev in mehki zaganjalniki na izmenični tok - Dopolnilo A1 (IEC 60947-4-2:2020/AMD1:2024)**

Low-voltage switchgear and controlgear - Part 4-2: Contactors and motor-starters - Semiconductor motor controllers, starters and soft-starters (IEC 60947-4-2:2020/AMD1:2024)

Niederspannungsschaltgeräte - Teil 4-2: Schütze und Motorstarter - Halbleiter-Motor-Steuergeräte, Starter und Sanftstarter (IEC 60947-4-2:2020/AMD1:2024)

Appareillage à basse tension - Partie 4-2: Contacteurs et démarreurs de moteurs - Gradateurs, démarreurs et démarreurs progressifs de moteurs à semiconducteurs (IEC 60947-4-2:2020/AMD1:2024)

**Ta slovenski standard je istoveten z: EN IEC 60947-4-2:2023/A1:2024**

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**ICS:**

29.130.20	Nizkonapetostne stikalne in krmilne naprave	Low voltage switchgear and controlgear
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**SIST EN IEC 60947-4-2:2023/A1:2025 en**



EUROPEAN STANDARD

EN IEC 60947-4-2:2023/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2024

ICS 29.130.20

English Version

Low-voltage switchgear and controlgear - Part 4-2: Contactors  
and motor-starters - Semiconductor motor controllers, starters  
and soft-starters  
(IEC 60947-4-2:2020/AMD1:2024)

Appareillage à basse tension - Partie 4-2 : Contacteurs et  
démarreurs de moteurs - Gradateurs, démarreurs et  
démarreurs progressifs à semiconducteurs de moteurs  
(IEC 60947-4-2:2020/AMD1:2024)

Niederspannungsschaltgeräte - Teil 4-2: Schütze und  
Motorstarter - Halbleiter-Motor-Steuergeräte, Starter und  
Sanftstarter  
(IEC 60947-4-2:2020/AMD1:2024)

This amendment A1 modifies the European Standard EN IEC 60947-4-2:2023; it was approved by CENELEC on 2024-12-10. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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

**EN IEC 60947-4-2:2023/A1:2024 (E)****European foreword**

The text of document 121A/615/FDIS, future edition 4 of IEC 60947-4-2/AMD1, 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 60947-4-2:2023/A1:2024.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2025-12-31 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2027-12-31 document have to be withdrawn

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.

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**

(<https://standards.iteh.ai>)

The text of the International Standard IEC 60947-4-2:2020/AMD1:2024 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

[SIST EN IEC 60947-4-2:2023/A1:2025](https://standards.iteh.ai/catalog/standards/sist/en-iec-60947-4-2-2023/a1-2025)  
 IEC/TR 63216 NOTE Approved as CLC IEC/TR 63216

## 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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60445	2021	Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors	EN IEC 60445	2021
IEC 63404	2024	Switchgear and controlgear and their assemblies for low voltage - Integration of radiocommunication device above 380 MHz into an equipment	-	-
IEC/TS 63058	-	Switchgear and controlgear and their assemblies for low voltage - Environmental aspects	-	-

<https://standards.iteh.ai/catalog/standards/sist/0b4887fa-589e-4368-b1f3-e8bb8b963ec6/sist-en-iec-60947-4-2-2023-a1-2025>





IEC 60947-4-2

Edition 4.0 2024-11

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

AMENDMENT 1  
AMENDEMENT 1

**Low-voltage switchgear and controlgear –  
Part 4-2: Contactors and motor-starters – Semiconductor motor controllers,  
starters and soft-starters**

**Appareillage à basse tension –  
Partie 4-2: Contacteurs et démarreurs de moteurs – Gradateurs, démarreurs et  
démarreurs progressifs à semiconducteurs de moteurs**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

ICS 29.130.20

ISBN 978-2-8322-9820-6

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

**Part 4-2: Contactors and motor-starters –  
Semiconductor motor controllers, starters and soft-starters****AMENDMENT 1**

## FOREWORD

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Amendment 1 to IEC 60947-4-2:2020 has been prepared by subcommittee 121A: Low-voltage switchgear and controlgear, of IEC technical committee 121: Switchgear and controlgear and their assemblies for low voltage.

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

- Requirement for starter intended to be used with high efficiency motors.
- Requirements and tests for abnormal conditions equivalent to Annex DVE of the UL version.
- Alignment to the EMC environments defined in IEC TR 63216 and more detailed emission limit requirements.



IEC 60947-4-2:2020/AMD1:2024

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- Reference to IEC TS 63058 for environmental information.
- Reference to IEC 63404 for the integration of radio communication.

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

Draft	Report on voting
121A/615/FDIS	121A/626/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications/](http://www.iec.ch/publications/).

A list of all parts in the IEC 60947 series, published under the general title *Low-voltage switchgear and controlgear*, 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 [webstore.iec.ch](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

(<https://standards.iteh.ai>)  
Document Preview

[SIST EN IEC 60947-4-2:2023/A1:2025](https://standards.iteh.ai/catalog/standards/sist/0b4887fa-589e-4368-b1f3-e8bb8b963ec6/sist-en-iec-60947-4-2-2023-a1-2025)

<https://standards.iteh.ai/catalog/standards/sist/0b4887fa-589e-4368-b1f3-e8bb8b963ec6/sist-en-iec-60947-4-2-2023-a1-2025>

## 1 Scope

*Delete footnote 1.*

## 2 Normative references

*Replace the existing reference:*

IEC 60445, *Basic and safety principles for man-machine interface, marking and identification – Identification of equipment terminals, conductor terminations and conductors*

*with*

IEC 60445:2021, *Basic and safety principles for man-machine interface, marking and identification – Identification of equipment terminals, conductor terminations and conductors*

*Add the following references to the list:*

IEC 63404:2024, *Switchgear and controlgear and their assemblies for low voltage – Integration of radiocommunication device above 380 MHz into an equipment*

IEC TS 63058, *Environmental aspects for low-voltage switchgear and controlgear and their assemblies*

#### **5.3.2.5 Maximum OFF-state current ( $I_{Lm}$ )**

*Replace the reference to "9.3.3.6.3" with "9.3.3.6.4".*

#### **5.3.5.4.1 Starting characteristics of squirrel cage and hermetic refrigeration motors**

*Replace the third paragraph with the following:*

Two directions of rotation are not covered by this document.

*Delete the fourth paragraph.*

#### **5.4.1 General**

*Replace the second paragraph with the following:*

For semiconductor motor controllers, starters and soft-starters, the utilization categories are given in Table 1.

#### **5.6 Auxiliary circuits**

*Delete the second sentence of the third paragraph.*

#### **5.7.5 Time-current characteristics of overload relays**

*Replace in the first paragraph:*

"(see 9.3.3.6.5, item c))"

*with*

"(see 9.3.3.6.6, item c))"