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

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

Niederspannungsschaltgeräte - Teil 4-2: Schütze und Motorstarter - Halbleiter-Motor-Steuergeräte und -Starter für Wechselspannungen (IEC 60947-4-2:2020)

Appareillage à basse tension - Partie 4-2: Contacteurs et démarreurs de moteurs - Gradateurs et démarreurs à semiconducteurs de moteurs à courant alternatif (IEC 60947-4-2:2020)

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

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)

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

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

The text of document 121A/353/FDIS, future edition 4 of IEC 60947-4-2, 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 60947-4-2:2023.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2023-10-11 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2026-01-11 document have to be withdrawn

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The text of the International Standard IEC 60947-4-2:2020 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 60034-30-1	NOTE Approved as EN 60034-30-1
IEC 60068-2-2:2007	NOTE Approved as EN 60068-2-2:2007 (not modified)
IEC 60079 (series)	NOTE Approved as EN IEC 60079-7 (series)
IEC 60085:2007	NOTE Approved as EN 60085:2008 (not modified)
IEC 60269-1:2006	NOTE Approved as EN 60269-1:2007 (not modified)
IEC 60364-1	NOTE Approved as HD 60364-1
IEC 60664 (series)	NOTE Approved as EN 60664 (series)
IEC 60947-2	NOTE Approved as EN 60947-2
IEC 60947-3	NOTE Approved as EN IEC 60947-3
IEC 60947-4-1	NOTE Approved as EN IEC 60947-4-1
IEC 60947-4-3	NOTE Approved as EN 60947-4-3

IEC 60990:2016	NOTE Approved as EN 60990:2016 (not modified)
IEC 61000-4 (series)	NOTE Approved as EN 61000-4 (series)
IEC 61032	NOTE Approved as EN 61032
IEC 61800 (series)	NOTE Approved as EN 61800 (series)
IEC 62443 (series)	NOTE Approved as EN IEC 62443 (series)
IEC 62477-1:2012	NOTE Approved as EN 62477-1:2012 (not modified) +A11:2014
IEC 62683-1	NOTE Approved as EN 62683-1
IEC/TR 63201	NOTE Approved as CLC IEC/TR 63201

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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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60034-1	2017	Rotating electrical machines - Part 1: Rating and performance	-	-
IEC 60445	-	Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors	EN IEC 60445	-
IEC 60715	-	Dimensions of low-voltage switchgear and controlgear - Standardized mounting on rails for mechanical support of switchgear, controlgear and accessories	EN 60715	-
IEC 60730-1	-	Automatic electrical controls - Part 1: General requirements	-	-
IEC 60947-1	2020	Low-voltage switchgear and controlgear - Part 1: General rules	EN IEC 60947-1	2021
IEC 61000-3-2	-	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current $16 \leq A$ per phase)	EN IEC 61000-3-2	-
IEC 61000-3-3	-	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection	EN 61000-3-3	-
IEC 61000-3-11	-	Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection	EN IEC 61000-3-11	-

IEC 61000-3-12	-	Electromagnetic compatibility (EMC) - Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤ 75 A per phase	EN 61000-3-12	-
IEC 61140	2016	Protection against electric shock - Common aspects for installation and equipment	EN 61140	2016
CISPR 11	2015	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	EN 55011	2016
+ A1	2016		+ A1	2017
-	-		+ A11	2020
ISO 2859-1	1999	Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection	-	-

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Edition 4.0 2020-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**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**

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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**

FOREWORD

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International Standard IEC 60947-4-2 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 fourth edition cancels and replaces the third edition published in 2011. This edition constitutes a technical revision.

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

- scope exclusions;
- editorial correction of notes and hanging paragraphs;
- reference to IEC 62683-1;