



BSI Standards Publication

Low- voltage switchgear and controlgear

Part 5-1: Control circuit devices and switching elements —
Electromechanical control circuit devices

This is a preview of BS EN IEC 60947-5-1:2025. [Click here to purchase the full version from the ANSI store.](#)

National foreword

This British Standard is the UK implementation of EN IEC 60947-5-1:2025. It is identical to IEC 60947-5-1:2024. It supersedes BS EN 60947-5-1:2017, which will be withdrawn on 30 April 2028.

The UK participation in its preparation was entrusted to Technical Committee PEL/121/1, Low voltage switchgear and controlgear.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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For the Great Britain market (England, Scotland and Wales), if UK Government has designated this publication for conformity with UKCA marking (or similar) legislation, it may contain an additional National Annex. Where such a National Annex exists, it shows the correlation between this publication and the relevant UK legislation. If there is no National Annex of this kind, the relevant Annex ZA or ZZ in the body of the European text will indicate the relationship to UK regulation applicable in Great Britain. References to EU legislation may need to be read in accordance with the UK designation and the applicable UK law. Further information on designated standards can be found at www.bsigroup.com/standardsandregulation.

For the Northern Ireland market, UK law will continue to implement relevant EU law subject to periodic confirmation. Therefore Annex ZA/ZZ in the European text, and references to EU legislation, are still valid for this market.

UK Government is responsible for legislation. For information on legislation and policies relating to that legislation, consult the relevant pages of www.gov.uk.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Amendments/corrigenda issued since publication

Date

Text affected

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Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices
(IEC 60947-5-1:2024)

Appareillage à basse tension - Partie 5-1: Appareils et éléments de commutation pour circuits de commande - Appareils électromécaniques pour circuits de commande
(IEC 60947-5-1:2024)

Niederspannungsschaltgeräte - Teil 5-1: Steuergeräte und Schaltelemente - Elektromechanische Steuergeräte
(IEC 60947-5-1:2024)

This European Standard was approved by CENELEC on 2025-02-26. 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

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European foreword

The text of document 121A/585/FDIS, future edition 5 of IEC 60947-5-1, 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 60947-5-1:2025.

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) 2026-04-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-04-30

This document supersedes EN 60947-5-1:2017 and all of its amendments and corrigenda (if any).

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 60947-5-1:2024 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 60068-2-75:2014	NOTE	Approved as EN 60068-2-75:2014 (not modified)
IEC 60073:2002	NOTE	Approved as EN 60073:2002 (not modified)
IEC 60079 (series)	NOTE	Approved as EN IEC 60079-7 (series)
IEC 60255 (series)	NOTE	Approved as EN 60255 (series)
IEC 60947-5-3:2013	NOTE	Approved as EN 60947-5-3:2013 (not modified)
IEC 60947-5-4:2002	NOTE	Approved as EN 60947-5-4:2003 (not modified)
IEC 61000 (series)	NOTE	Approved as EN IEC 61000 (series)
IEC 61810 (series)	NOTE	Approved as EN 61810 (series)
IEC 61672-1:2013	NOTE	Approved as EN 61672-1:2013 (not modified)

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IEC 62246-1-1:2018	NOTE	Approved as EN IEC 62246-1-1:2018 (not modified)
IEC 62246-4:2023	NOTE	Approved as EN IEC 62246-4:2023 (not modified)
IEC 62443 (series)	NOTE	Approved as EN IEC 62443 (series)
IEC/TR 63201:2019	NOTE	Approved as CLC IEC/TR 63201:2020 (not modified)
ISO 7731:2003	NOTE	Approved as EN ISO 7731:2008 (not modified)

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(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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-6	2007	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	2008
IEC 60068-2-14	2023	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	EN IEC 60068-2-14	2023
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 60068-2-78	2012	Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state	EN 60068-2-78	2013
IEC 60695-2-10	2021	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
			+ AC	2024
IEC 60695-2-11	2021	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	2021	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 60730-1	2022	Automatic electrical controls - Part 1: General requirements	EN 60730-1	2016
			+ A1	2019
			+ A2	2022

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IEC 60947-1	2020	Low-voltage switchgear and controlgear - Part 1: General rules	EN IEC 60947-1	2021
			+ AC	2023
			+ AC	2024
IEC 60947-4-1	2018	Low-voltage switchgear and controlgear - Part 4-1: Contactors and motor-starters - Electromechanical contactors and motor-starters	EN IEC 60947-4-1	2019
			+ AC	2020
			+ AC	2021
IEC 60947-5-2	2019	Low-voltage switchgear and controlgear - Part 5-2: Control circuit devices and switching elements - Proximity switches	EN IEC 60947-5-2	2020
IEC 60947-5-5	1997	Low-voltage switchgear and controlgear -- Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function	EN 60947-5-5	1997
+ A1	2005		+ A1	2005
-	-		+ A11	2013
+ A2	2016		+ A2	2017
IEC 60999-1	1999	Connecting devices - Electrical copper conductors - Safety requirements for screw-type and screwless-type clamping units -- Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm ² up to 35 mm ² (included)	EN 60999-1	2000
IEC 61000-4-2	2008	Electromagnetic compatibility (EMC) -- Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	2009
IEC 61000-4-3	2020	Electromagnetic compatibility (EMC) -- Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN IEC 61000-4-3	2020
IEC 61000-4-4	2012	Electromagnetic compatibility (EMC) -- Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2012
IEC 61000-4-5	2014	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	2014
+ A1	2017		+ A1	2017
IEC 61000-4-6	2023	Electromagnetic compatibility (EMC) -- Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN IEC 61000-4-6	2023
IEC 61000-4-8	2009	Electromagnetic compatibility (EMC) -- Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	2010

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IEC 61000-4-11	2020	Electromagnetic compatibility (EMC) -- Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	EN IEC 61000-4-11	2020
			+ AC	2020
			+ AC	2022
IEC 61131-9	2022	Programmable controllers - Part 9: Single-drop digital communication interface for small sensors and actuators (SDCI)	EN IEC 61131-9	2022
IEC 61140	2016	Protection against electric shock - Common aspects for installation and equipment	EN 61140	2016
IEC 62262	2002	Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)	EN 62262	2002
			+ A1	2021
IEC 62471	2006	Photobiological safety of lamps and lamp systems	EN 62471	2008
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
+ A2	2019		+ A2	2021
CISPR 32	2015	Electromagnetic compatibility of multimedia equipment - Emission requirements	EN 55032	2015
			+ AC	2016
+ A1	2019		+ A1	2020
-	-		+ 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	-	-
ISO 14159	2002	Safety of machinery – Hygiene requirements for the design of machinery	EN ISO 14159	2008

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(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 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 / Notes
(1)(a)	6.1 d) to w), 6.2, 6.3, 8.1, Annex D, Annex F, Annex H, Annex J, Annex K, Annex L, Annex M, Annex N	
(1)(b)	6.1 d) to w), 6.3, 6.5, Clause 7, 8.1, 8.2, 9.1, 9.2, 9.3, Annex C, Annex D, Annex F, Annex J	
(1)(c)	6.1 d) to w), 6.2, 6.3, 6.5 <i>See also references given in (2)(a) to (2)(d) and (3)(a) to (3)(c) in this Table.</i>	
(2)(a)	6.1 d) to v), 6.3, 6.5, 8.1, 8.2, 9.2, 9.3, Annex D, Annex F	
(2)(b)	8.1, 8.2, 9.2, 9.3, Annex G, Annex H, Annex J	
(2)(c)	6.1 w), 6.3, 6.5, 8.1, 8.2, 9.1, 9.2, 9.3, Annex C, Annex D, Annex J, Annex N	
(2)(d)	6.1 i), j), 6.3, 6.5, Clause 7, 8.1, 8.2, 8.4, 9.2, 9.3, Annex D, Annex F, Annex J	
(3)(a)	6.1 g), m), 6.3, 6.5, Clause 7, 8.1, 8.2, 8.4, 9.1, 9.2, 9.3, Annex C, Annex D, Annex F, Annex G, Annex J	
(3)(b)	6.1 m), n), 6.3, 6.5, Clause 7, 8.1, 8.2, 8.3, 9.3, 9.4, Annex D, Annex F, Annex N, Annex K	

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Directive 2014/35/EU	of this EN	Remarks / Notes
(3)(c)	6.1 e), o), p), 6.3, 6.5, 8.1, 8.2, 9.2, 9.3, Annex D, Annex H, Annex J, Annex K, Annex N	

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.

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