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REDLINE VERSION

Snabbkopplingar för permanent anslutning i den fasta installationen

Installation couplers intended for permanent connection in fixed installations

En så kallad ”Redline version” (RLV) innehåller både standarden som fastställts som SEK-publikation och en ändringsmarkerad IEC-standard. Alla tillägg och borttagningar sedan den tidigare utgåvan av IEC-standardens är markerade med färg. Med en RLV sparar du mycket tid när du ska identifiera och bedöma aktuella ändringar i standarden. SEK Svensk Elstandard kan bara ge ut RLV i de fall den finns tillgänglig från IEC.



IEC 61535

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REDLINE VERSION

INTERNATIONAL STANDARD



Installation couplers intended for permanent connection in fixed installations

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INSTALLATION COUPLERS INTENDED FOR PERMANENT
CONNECTION IN FIXED INSTALLATIONS

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.
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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 61535:2019. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 61535 has been prepared by IEC technical committee 23: Electrical accessories. It is an International Standard.

This third edition cancels and replaces the second edition published in 2019. This edition constitutes a technical revision.

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

- a) inclusion of a definition for "live part" based on IEC 61140;
- b) additional optional cross medial documentation, e.g. marking with QR-Code;
- c) corrections on the consistent use of the expressions "earth", "earthing contact", "earthing circuit" and "protective earth(ing)" throughout the document;
- d) addition of missing compliance provisions to 13.3;
- e) update of Figure D.1 of Annex D;
- f) inclusion of new Annex F for cold climate requirements.

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

Draft	Report on voting
23/1062/FDIS	23/1066/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 International Standard is English.

In this standard, the following print types are used:

- requirements proper: in roman type;
- *test specifications: in italic type;*
- explanatory matter: in smaller roman type.

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. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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 in the data related to the specific document. At this date, the document will be

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

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

AC and DC installation couplers according to this document may be used, for example, in prefabricated buildings, commercial showrooms, installation cavities, such as suspended floors and ceilings, in partition walls and in any similar applications, or cable tray systems, cable ladder systems, cable ducting systems and cable trunking systems or in furniture complying with IEC 60364-7-713.

This document may be used as a guide for installation couplers with additional contacts for voltages other than mains voltages.

Particular requirements for installation couplers, for example, for use at higher or lower ambient temperatures, with higher mechanical durability (e.g. metal housings), with higher fire resistance and for use in control circuits (e.g. SELV), are under consideration.

National rules can have requirements concerning the accessibility of installation couplers.

National rules can specify who is allowed to carry out the connection and disconnection of installation couplers.

National rules can have requirements concerning installation couplers with metal conduits.

INSTALLATION COUPLERS INTENDED FOR PERMANENT CONNECTION IN FIXED INSTALLATIONS

1 Scope

This document applies to two-wire, up to five-wire installation couplers, ~~including earth~~ with or without earthing contact, if provided, with a rated voltage up to and including 500 V AC or 500 V DC and a rated connecting capacity up to and including 10 mm² and a rated current not exceeding 32 A for permanent connection in electrical installations. Installation couplers with additional contacts for voltages other than mains voltages are outside the scope of this document.

An installation coupler consists of an installation female connector and an installation male connector for permanent connection not intended to be engaged or disengaged under load nor to be engaged or disengaged other than during first installation or during reconfiguration or maintenance of the wiring system in which installation couplers have been installed. This means that installation couplers are intended for infrequent use only.

Installation couplers are not suitable for use in place of socket-outlet systems. Installation couplers are not suitable for use in place of devices for connecting luminaires (DCLs) according to IEC 61995 (all parts) or in place of luminaire supporting couplers (LSCs).

Installation couplers complying with this document are suitable for use at ambient temperatures not normally exceeding +40 °C, but their average over a period of 24 h does not exceed +35 °C, with a lower limit of the ambient air temperature of –5 °C, either for indoor or outdoor use.

NOTE 1 Additional tests for use in cold climates are ~~under consideration~~ shown in Annex F, which is normative in following countries: FI. Necessary information can be given in the manufacturer's installation instructions.

NOTE 2 For other temperatures, necessary information can be given in the manufacturer's installation instructions.

In locations where special conditions prevail, as in ships, vehicles and the like and in hazardous locations, for example where explosions are liable to occur, special constructions can be required.

NOTE 3 Installation couplers are intended to be installed by instructed or skilled persons.

NOTE 4 As a guide to using installation coupler systems, see Annex D.

2 Normative references

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.

IEC 60068-2-31:2008, *Environmental testing – Part 2-31: Tests – Test Ec: Rough handling shocks, primarily for equipment-type specimens*

IEC 60112, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*
IEC 60529:1989/AMD1:1999
IEC 60529:1989/AMD2:2013

| IEC 60664-1:~~2007~~2020, *Insulation coordination for equipment within low-voltage supply systems – Part 1: Principles, requirements and tests*

IEC 60695-2-11, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end products (GWEPT)*

IEC 60998-2-3, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-3: Particular requirements for connecting devices as separate entities with insulation-piercing clamping units*

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 mm² up to 35 mm² (included)*

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*

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Snabbkopplingar för permanent anslutning i den fasta installationen

Installation couplers intended for permanent connection in fixed installations

Som svensk standard gäller europastandarden EN IEC 61535:2024. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61535:2024.

Nationellt förord

Europastandarden EN IEC 61535:2024

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61535, Third edition, 2023 - Installation couplers intended for permanent connection in fixed installations**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN IEC 61535, utg 2:2020 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2027-06-12.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidra till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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English Version

Installation couplers intended for permanent connection in fixed
installations
(IEC 61535:2023)

Coupleurs d'installation pour connexions permanentes dans
les installations fixes
(IEC 61535:2023)

Installationssteckverbinder für dauernde Verbindung in
festen Installationen
(IEC 61535:2023)

This European Standard was approved by CENELEC on 2024-06-12. 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

European foreword

The text of document 23/1062/FDIS, future edition 3 of IEC 61535, prepared by IEC/TC 23 "Electrical accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61535:2024.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2025-03-12 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2027-06-12 document have to be withdrawn

This document supersedes EN IEC 61535:2019 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 61535:2023 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 60309 (series)	NOTE	Approved as EN IEC 60309 (series)
IEC 60320 (series)	NOTE	Approved as EN 60320 (series)
IEC 60364 (series)	NOTE	Approved as HD 60364 (series)
IEC 60364-4-41:2005	NOTE	Approved as HD 60364-4-41:2017 + A11:2017
IEC 60364-5-52:2009	NOTE	Approved as HD 60364-5-52:2011 + A11:2017
IEC 61995 (series)	NOTE	Approved as EN 61995 (series)

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 60068-2-31	2008	Environmental testing – Part 2-31: Tests - Test Ec: Rough handling shocks, primarily for equipment-type specimens	EN 60068-2-31	2008
IEC 60112	2020	Method for determining the comparative and proof tracking indices of solid insulating materials under moist conditions	EN IEC 60112	2020
IEC 60529	– ¹⁾	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
			+ A1	2000
			+ A2	2013
IEC 60664-1	2020	Insulation co-ordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests	EN IEC 60664-1	2020
IEC 60695-2-11	– ¹⁾	Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products	EN 60695-2-11	2021
IEC 60998-2-3	– ¹⁾	Connecting devices for low-voltage circuits for household and similar purposes – Part 2-3: Particular requirements for connecting devices as separate entities with insulation-piercing clamping units	EN 60998-2-3	2004
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 61032	1997	Protection of persons and equipment by enclosures – Probes for verification	EN 61032	1998

¹⁾ Undated reference.

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Installation couplers intended for permanent connection in fixed installations

Coupleurs d'installation pour connexions permanentes dans les installations fixes

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INSTALLATION COUPLERS INTENDED FOR PERMANENT
CONNECTION IN FIXED INSTALLATIONS****FOREWORD**

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This third edition cancels and replaces the second edition published in 2019. This edition constitutes a technical revision.

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

- a) inclusion of a definition for "live part" based on IEC 61140;
- b) additional optional cross medial documentation, e.g. marking with QR-Code;
- c) corrections on the consistent use of the expressions "earth", "earthing contact", "earthing circuit" and "protective earth(ing)" throughout the document;
- d) addition of missing compliance provisions to 13.3;
- e) update of Figure D.1 of Annex D;
- f) inclusion of new Annex F for cold climate requirements.

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

Draft	Report on voting
23/1062/FDIS	23/1066/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 International Standard is English.

In this standard, the following print types are used:

- requirements proper: in roman type;
- *test specifications: in italic type;*
- explanatory matter: in smaller roman type.

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. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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 in the data related to the specific document. At this date, the document will be

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

INTRODUCTION

AC and DC installation couplers according to this document may be used, for example, in prefabricated buildings, commercial showrooms, installation cavities, such as suspended floors and ceilings, in partition walls and in any similar applications, or cable tray systems, cable ladder systems, cable ducting systems and cable trunking systems or in furniture complying with IEC 60364-7-713.

This document may be used as a guide for installation couplers with additional contacts for voltages other than mains voltages.

Particular requirements for installation couplers, for example, for use at higher or lower ambient temperatures, with higher mechanical durability (e.g. metal housings), with higher fire resistance and for use in control circuits (e.g. SELV), are under consideration.

National rules can have requirements concerning the accessibility of installation couplers.

National rules can specify who is allowed to carry out the connection and disconnection of installation couplers.

National rules can have requirements concerning installation couplers with metal conduits.

INSTALLATION COUPLERS INTENDED FOR PERMANENT CONNECTION IN FIXED INSTALLATIONS

1 Scope

This document applies to two-wire, up to five-wire installation couplers, with or without earthing contact, if provided, with a rated voltage up to and including 500 V AC or 500 V DC and a rated connecting capacity up to and including 10 mm² and a rated current not exceeding 32 A for permanent connection in electrical installations. Installation couplers with additional contacts for voltages other than mains voltages are outside the scope of this document.

An installation coupler consists of an installation female connector and an installation male connector for permanent connection not intended to be engaged or disengaged under load nor to be engaged or disengaged other than during first installation or during reconfiguration or maintenance of the wiring system in which installation couplers have been installed. This means that installation couplers are intended for infrequent use only.

Installation couplers are not suitable for use in place of socket-outlet systems. Installation couplers are not suitable for use in place of devices for connecting luminaires (DCLs) according to IEC 61995 (all parts) or in place of luminaire supporting couplers (LSCs).

Installation couplers complying with this document are suitable for use at ambient temperatures not normally exceeding +40 °C, but their average over a period of 24 h does not exceed +35 °C, with a lower limit of the ambient air temperature of –5 °C, either for indoor or outdoor use.

NOTE 1 Additional tests for use in cold climates are shown in Annex F, which is normative in following countries: FI. Necessary information can be given in the manufacturer's installation instructions.

NOTE 2 For other temperatures, necessary information can be given in the manufacturer's installation instructions.

In locations where special conditions prevail, as in ships, vehicles and the like and in hazardous locations, for example where explosions are liable to occur, special constructions can be required.

NOTE 3 Installation couplers are intended to be installed by instructed or skilled persons.

NOTE 4 As a guide to using installation coupler systems, see Annex D.

2 Normative references

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.

IEC 60068-2-31:2008, *Environmental testing – Part 2-31: Tests – Test Ec: Rough handling shocks, primarily for equipment-type specimens*

IEC 60112, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*
IEC 60529:1989/AMD1:1999
IEC 60529:1989/AMD2:2013

IEC 60664-1:2020, *Insulation coordination for equipment within low-voltage supply systems – Part 1: Principles, requirements and tests*

IEC 60695-2-11, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end products (GWEPT)*

IEC 60998-2-3, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-3: Particular requirements for connecting devices as separate entities with insulation-piercing clamping units*

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 mm² up to 35 mm² (included)*

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*