



SLOVENSKI STANDARD
oSIST prEN IEC 62847:2022
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Železniške naprave - Železniška vozila - Električni konektorji - Zahteve in preskusne metode

Railway applications - Rolling stock - Electrical connectors - Requirements and test methods

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Applications ferroviaires - Matériel roulant - Connecteurs électriques - Exigences et méthodes d'essai

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**Railway applications - Rolling stock - Electrical connectors -
Requirements and test methods
(IEC 62847:2016)**

Applications ferroviaires - Matériel roulant - Connecteurs
électriques - Exigences et méthodes d'essai
(IEC 62847:2016)

To be completed
(IEC 62847:2016)

This draft European Standard is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2022-09-16.

The text of this draft consists of the text of IEC 62847:2016.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CENELEC in three official versions (English, French, German).
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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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prEN IEC 62847:2022 (E)

European foreword

This document (prEN IEC 62847:2022) consists of the text of document IEC 62847:2016, prepared by IEC/TC 9 "Electrical equipment and systems for railways".

This document is currently submitted to the Enquiry.

The following dates are proposed:

- latest date by which the existence of this document (doa) dor + 6 months has to be announced at national level
- latest date by which this document has to be (dop) dor + 12 months implemented at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards (dow) dor + 36 months conflicting with this document have to be withdrawn (to be confirmed or modified when voting)

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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 60050-581 | - | International Electrotechnical Vocabulary - Part 581: Electromechanical components for electronic equipment | - | - |
| IEC 60060-1 | 2010 | High-voltage test techniques - Part 1: General definitions and test requirements | EN 60060-1 | 2010 |
| IEC 60068-1 | - | Environmental testing - Part 1: General and guidance | EN 60068-1 | - |
| IEC 60068-2-70 | 1995 | Environmental testing - Part 2-70: Tests - Test Xb: Abrasion of markings and letterings caused by rubbing of fingers and hands | EN 60068-2-70 | 1996 |
| IEC 60309-1 | 1999 | Plugs, socket-outlets and couplers for industrial purposes - Part 1: General requirements | EN 60309-1 | 1999 |
| IEC 60352-2 | 2006 | Solderless connections - Part 2: Crimped connections - General requirements, test methods and practical guidance | EN 60352-2 | 2006 |
| IEC 60352-3 | - | Solderless connections - Part 3: Accessible insulation displacement (ID) connections - General requirements, test methods and practical guidance | EN IEC 60352-3 | - |
| IEC 60352-4 | - | Solderless connections - Part 4: Non- accessible insulation displacement (ID) connections - General requirements, test methods and practical guidance | EN IEC 60352-4 | - |
| IEC 60352-5 | - | Solderless connections - Part 5: Press-in connections - General requirements, test methods and practical guidance | EN IEC 60352-5 | - |
| IEC 60352-6 | - | Solderless connections - Part 6: Insulation piercing connections - General requirements, test methods and practical guidance | EN 60352-6 | - |

FprEN IEC 60335-2-40:2020 (E)

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|--|----------------|-------------|
| IEC 60352-7 | - | Solderless connections - Part 7: Spring clamp connections - General requirements, test methods and practical guidance | EN IEC 60352-7 | - |
| IEC 60417 | - | Graphical symbols for use on equipment. Index, survey and compilation of the single sheets. | - | - |
| IEC 60512-1 | 2001 | Connectors for electronic equipment - Tests and measurements - Part 1: General | - | - |
| IEC 60512-1-1 | 2002 | Connectors for electronic equipment - Tests and measurements - Part 1-1: General examination - Test 1a: Visual examination | EN 60512-1-1 | 2002 |
| IEC 60512-4-1 | 2003 | Connectors for electronic equipment - Tests and measurements - Part 4-1: Voltage stress tests - Test 4a: Voltage proof | EN 60512-4-1 | 2003 |
| IEC 60512-5-1 | 2002 | Connectors for electronic equipment - Tests and measurements - Part 5-1: Current-carrying capacity tests - Test 5a: Temperature rise | EN 60512-5-1 | 2002 |
| IEC 60512-11-6 | 2002 | Connectors for electronic equipment - Tests and measurements - Part 11-6: Climatic tests - Test 11f: Corrosion, salt mist | EN 60512-11-6 | 2002 |
| IEC 60512-11-7 | 2003 | Connectors for electronic equipment - Tests and measurements - Part 11-7: Climatic tests - Test 11g: Flowing mixed gas corrosion test | EN 60512-11-7 | 2003 |
| IEC 60512-13-5 | - | Connectors for electronic equipment - Tests and measurements - Part 13-5: Mechanical operation tests - Test 13e: Polarizing and keying method | EN 60512-13-5 | - |
| IEC 60512-19-3 | 1997 | Electromechanical components for electronic equipment - Basic testing procedures and measuring methods - Part 19: Chemical resistance tests - Section 3: Test 19c - Fluid resistance | EN 60512-19-3 | 1997 |
| IEC 60512-23-3 | 2000 | Electromechanical components for electronic equipment - Basic testing procedures and measuring methods - Part 23-3: Test 23c: Shielding effectiveness of connectors and accessories | - | - |
| IEC 60512-23-4 | 2001 | Connectors for electronic equipment - Tests and measurements - Part 23-4: Screening and filtering tests - Test 23d: Transmission line reflections in the time domain | EN 60512-23-4 | 2001 |

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|--|-------------------|-------------|
| IEC 60529 | 1989 | Degrees of protection provided by enclosures (IP Code) | EN 60529 | 1991 |
| - | - | | + corrigendum May | 1993 |
| + A1 | 1999 | | + A1 | 2000 |
| + A2 | 2013 | | + A2 | 2013 |
| IEC 60664-1 | 2007 | Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests | EN 60664-1 | 2007 |
| 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 60999-2 | 2003 | Connecting devices - Electrical copper conductors - Safety requirements for screw-type and screwless-type clamping units - Part 2: Particular requirements for clamping units for conductors above 35 mm ² up to 300 mm ² (included) | EN 60999-2 | 2003 |
| IEC 61210 | - | Connecting devices - Flat quick-connect terminations for electrical copper conductors - Safety requirements | EN 61210 | - |
| IEC 61373 | 2010 | Railway applications - Rolling stock equipment - Shock and vibration tests | EN 61373 | 2010 |
| IEC 61984 | 2008 | Connectors - Safety requirements and tests | EN 61984 | 2009 |
| IEC 61991 | - | Railway applications - Rolling stock - Protective provisions against electrical hazards | - | - |
| IEC 62497-1 | 2010 | Railway applications - Insulation coordination - Part 1: Basic requirements - Clearances and creepage distances for all electrical and electronic equipment | - | - |
| ISO 1431-1 | 2012 | Rubber, vulcanized or thermoplastic - Resistance to ozone cracking - Part 1: Static and dynamic strain testing | - | - |
| ISO 4892-2 | 2013 | Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps | EN ISO 4892-2 | 2013 |



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CONTENTS

| | |
|---|----|
| FOREWORD..... | 5 |
| INTRODUCTION..... | 7 |
| 1 Scope..... | 8 |
| 2 Normative references..... | 8 |
| 3 Terms and definitions | 10 |
| 4 Technical information (electrical ratings) | 17 |
| 5 Classification..... | 17 |
| 5.1 General..... | 17 |
| 5.2 Severity of service conditions on different rolling stock technologies | 17 |
| 5.3 Intended use of rolling stock..... | 17 |
| 5.4 Location of connector on board rolling stock | 17 |
| 6 Requirements..... | 20 |
| 6.1 General..... | 20 |
| 6.2 Marking and identification..... | 20 |
| 6.2.1 Identification | 20 |
| 6.2.2 Marking | 20 |
| 6.2.3 Marking of position for contacts | 21 |
| 6.3 Provision against incorrect mating (non-intermateable) | 21 |
| 6.4 Protection against electric shock | 21 |
| 6.5 Provisions for earthing | 21 |
| 6.6 Terminations and connection methods..... | 21 |
| 6.7 Resistance to ageing..... | 22 |
| 6.8 General design..... | 22 |
| 6.8.1 Polarization..... | 22 |
| 6.8.2 Fixing of live parts..... | 23 |
| 6.8.3 Connection of conductors..... | 23 |
| 6.9 Design of a free connector | 23 |
| 6.10 Interlock..... | 23 |
| 6.11 IP degree of protection | 23 |
| 6.12 Dielectric strength | 23 |
| 6.13 Mechanical and electrical durability | 23 |
| 6.14 Cable strain relief..... | 24 |
| 6.15 Mechanical strength | 24 |
| 6.16 Vibration and shock..... | 24 |
| 6.17 Insulation coordination | 25 |
| 6.18 Temperature classes..... | 25 |
| 6.19 Temperature rise..... | 25 |
| 6.20 Protection against corrosion | 25 |
| 6.21 Electromagnetic compatibility (EMC) requirements..... | 26 |
| 6.22 Fire behaviour of materials and components..... | 26 |
| 6.23 Resistance to chemically active substances and to contaminating fluids | 26 |
| 6.24 Resistance to ozone..... | 26 |
| 6.25 Resistance to UV | 26 |
| 7 Tests..... | 27 |
| 7.1 Overview..... | 27 |

| | | |
|--|--|----|
| 7.1.1 | General | 27 |
| 7.1.2 | Preconditioning and preparation | 27 |
| 7.1.3 | Test conditions | 27 |
| 7.2 | Test schedule | 29 |
| 7.3 | Tests on raw materials | 36 |
| 7.4 | Visual examination | 36 |
| 7.5 | Durability of marking | 37 |
| 7.6 | Interlock..... | 37 |
| 7.7 | Protection against electric shock | 37 |
| 7.8 | Temperature rise..... | 37 |
| 7.9 | Mechanical operation | 38 |
| 7.10 | Vibration and shock..... | 38 |
| 7.11 | Measurement of clearances and creepage distances..... | 39 |
| 7.12 | Dielectric strength | 39 |
| 7.13 | Resistance between accessible metal parts and the protective earthing contact..... | 39 |
| 7.14 | Corrosion test | 40 |
| 7.15 | Ozone resistance (ISO 1431-1) | 40 |
| 7.16 | Resistance to UV (ISO 4892-2:2013) | 40 |
| 7.17 | Resistance to fluids (IEC 60512-19-3:1997)..... | 40 |
| Annex A (informative) Additional characteristics to be agreed by the manufacturer and the user | | 41 |
| A.1 | Additional information to be provided upon request of the user..... | 41 |
| A.1.1 | General | 41 |
| A.1.2 | Geometrical characteristics | 41 |
| A.1.3 | Electrical characteristics | 41 |
| A.1.4 | Environmental characteristics | 42 |
| A.1.5 | Mechanical characteristics | 42 |
| A.2 | Information for testing additional to that mentioned above | 42 |
| Annex B (normative) Severity of the service conditions in different rolling stock locations (mandatory) | | 43 |
| Annex C (informative) Severity of the service conditions in different rolling stock locations (optional) | | 44 |
| Bibliography | | 45 |
| Figure 1 – Typical examples of connections | | 11 |
| Figure 2 – Multipole connectors | | 12 |
| Figure 3 – Typical connector locations on board rolling stock..... | | 18 |
| Figure 4 – Test sample for temperature rise test..... | | 38 |
| Table 1 – Example of typical connector locations on board rolling stock | | 19 |
| Table 2 – Preferred number of operating cycles..... | | 24 |
| Table 3 – Preferred test temperatures | | 25 |
| Table 4 – Plan of specimens required for tests | | 27 |
| Table 5 – Mechanical test group A | | 29 |
| Table 6 – Service life test group B..... | | 30 |
| Table 7 – Thermal test group C..... | | 30 |

| | |
|---|----|
| Table 8 – Climatic test group D | 31 |
| Table 9 – Degree of protection test group E..... | 33 |
| Table 10 – Vibration and shock test group F..... | 34 |
| Table 11 – Resistance to fluids test group G..... | 35 |
| Table 12 – Shielding effectiveness test group H | 36 |
| Table 13 – Tests on raw materials..... | 36 |
| Table 14 – Test voltages..... | 39 |
| Table B.1 – Minimum severity of service conditions in different rolling stock locations | 43 |
| Table C.1 – Minimum severity of service conditions in different rolling stock locations | 44 |

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

RAILWAY APPLICATIONS – ROLLING STOCK – ELECTRICAL CONNECTORS – REQUIREMENTS AND TEST METHODS

FOREWORD

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International Standard IEC 62847 has been prepared by IEC technical committee 9: Electrical equipment and systems for railways.

EN 50467:2011 has served as a basis for the elaboration of this standard.

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

| | |
|-------------|------------------|
| FDIS | Report on voting |
| 9/2110/FDIS | 9/2139/RVD |

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
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INTRODUCTION

This International Standard provides performance requirements and tests for low-voltage electrical connectors intended to be installed on board rolling stock, either inside or outside. Safety requirements and tests for electrical connectors are already covered in general by IEC 61984:2008. The additional requirements and testing of specific characteristics demanded by rolling stock applications are set out in this International Standard. One goal of this International Standard is to avoid retesting of electrical connectors already in compliance with IEC 61984:2008 for those characteristics that have been assessed suitable also for use on board rolling stock.

Among the additional requirements for use on board rolling stock, those that can be verified by documentation of tests on the raw materials are distinguished from those to be assessed by tests on the component.

Due to the wide spectrum of existing and future specific rolling stock applications of electrical connectors, this International Standard does not select any particular geometric configuration of connectors, nor establish any particular values for electrical ratings such as voltage and current, or for any other characteristic. All such details should be selected and agreed between the parties involved (e.g. manufacturer and user) depending on the electrical, mechanical and environmental conditions expected in the intended use. Annexes A and C of this International Standard provide guidance.

Upon agreement between the parties involved, this International Standard may be used in conjunction with existing connector detail specifications for interchangeability purposes.

Specific standards based on this generic International Standard may be developed in the future to address particular connector requirements and designs, for instance, to fix dimensions for interchangeability and to set additional requirements for specific applications that, due to complexity and variety, are left here to agreement between parties involved.

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