SLOVENSKI STANDARD
oSIST prEN IEC 62847:2022

01-september-2022

Železniške naprave - Železniška vozila - Električni konektorji - Zahteve in preskusne metode

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

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

Ta slovenski standard je istoveten z: **prEN IEC 62847**

ICS:

31.220.10	Vtiči in vtičnice, konektorji	Plug-and-socket devices. Connectors
45.060.01	Železniška vozila na splošno	Railway rolling stock in general

oSIST prEN IEC 62847:2022 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN IEC 62847

June 2022

ICS 45.060

Will supersede EN 50467:2011

English Version

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).
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, Turkey and the United Kingdom.

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.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

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

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• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	dor + 36 months (to be confirmed or modified when voting)

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.

Publication	Year	Title	EN/HD	Year
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	-

Publication	Year	Title	EN/HD	Year
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

Publication	Year	Title	EN/HD	Year
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 mm2 up to 35 mm2 (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 mm2 up to 300 mm2 (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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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

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

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

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication 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

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.