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**Železniške naprave - Vozna sredstva - Zaščitni ukrepi proti nevarnostim električne napetosti - Dopnilo A1**

Railway applications - Rolling stock - Protective provisions relating to electrical hazards

Bahnanwendungen - Fahrzeuge - Schutzmaßnahmen in Bezug auf elektrische Gefahren

Applications ferroviaires - Matériel roulant - Mesures de protection vis-à-vis des dangers d'origine électrique

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**Ta slovenski standard je istoveten z: EN 50153:2014/A1:2017**

SIST EN 50153:2014/A1:2017  
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**ICS:**

13.260	Varstvo pred električnim udarom. Delo pod napetostjo	Protection against electric shock. Live working
45.060.01	Železniška vozila na splošno	Railway rolling stock in general

**SIST EN 50153:2014/A1:2017**

**en**

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EUROPEAN STANDARD

**EN 50153:2014/A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2017

ICS 45.060.01

English Version

## Railway applications - Rolling stock - Protective provisions relating to electrical hazards

Applications ferroviaires - Matériel roulant - Mesures de  
protection vis-à-vis des dangers d'origine électrique

Bahnanwendungen - Fahrzeuge - Schutzmaßnahmen in  
Bezug auf elektrische Gefahren

This amendment A1 modifies the European Standard EN 50153:2014; it was approved by CENELEC on 2017-05-29. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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.

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

This document (EN 50153:2014/A1:2017) has been prepared by CLC/SC 9XB "Electrical, electronic and electromechanical material on board rolling stock, including associated software", from CLC/TC 9X "Electrical and electronic applications for railways".

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.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-05-29
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2020-05-29

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZZ, which is an integral part of this document.

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**EN 50153:2014/A1:2017 (E)****1 Modifications to Clause 3, Terms, definitions and abbreviations**

Add the following new definition 3.1.2.10 after 3.1.2.9:

"

**3.1.2.10****extra-low voltage****ELV**

voltage not exceeding the relevant voltage limit of band I specified in this standard"

Renumber the following definitions.

In 3.2, Abbreviations, add after "DC Direct Current" the following new abbreviation:

"ELV Extra Low Voltage"

**2 Modification to 5.4, Protection by the use of band I**

Delete the existing text and replace it with the following:

"

**5.4 Protection by the use of band I (ELV)****5.4.1 Requirements for circuits of band I (SELV and PELV)**

- the sources for SELV and PELV shall meet the requirements of 414.3, sources for SELV and PELV, of HD 60364-4-41:2007; <https://standards.iteh.ai/catalog/standards/sist/cc934e4b-3f9a-4900-9155-cda5afd424d6/sist-en-50153-2014-a1-2017>
- the circuit shall meet the requirements of 414.4, requirements for SELV and PELV circuits, of HD 60364-4-41:2007;
- the circuit shall meet the requirements of Clause 8 of this European Standard.

**5.4.2 Additional requirements for SELV**

A SELV circuit shall not be connected to the protective bonding circuit (vehicle body). For SELV circuits at a voltage in band I no further protective provision is required provided that the circuit meets the requirements of 5.4.1.

**5.4.3 Additional requirements for PELV**

One pole of the PELV circuit or one pole of the source of the supply of that PELV circuit shall be connected to the protective bonding circuit. No further protective provision is required provided that the nominal voltage does not exceed 6 V AC or 15 V DC and the circuit meets the requirements of 5.4.1.

If the voltage exceeds 6 V AC or 15 V DC and ordinary persons have access, protection in accordance with 411.7.2 of HD 60364-4-41:2007 is required."

**3 Modification to 6.4.4, Impedance**

Replace twice

"EN 50122-1:2011, Clause 6"

with

“EN 50122-1:2011, Clause 9”.

#### 4 Addition of a new Annex ZZ

Add the following new Annex ZZ:

“

### **Annex ZZ** (informative)

## **Relationship between this European Standard and the Essential Requirements of EU Directive 2008/57/EC**

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers all relevant essential requirements as given in Annex III of the EC Directive 2008/57/EC (also named as New Approach Directive 2008/57/EC Rail Systems: Interoperability).

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the clauses of this standard given in Table ZZ.1 for “Locomotives and Passenger Rolling Stock” confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

<https://standards.iteh.ai/catalog/standards/sist/cc934e4b-3f9a-4900-9155-cda5afd424d6/sist-en-50153-2014-a1-2017>

## EN 50153:2014/A1:2017 (E)

Table ZZ.1 — Correspondence between this European Standard, the TSI “Locomotives and Passenger Rolling Stock” (REGULATION (EU) No 1302/2014 of 18 November 2014) and Directive 2008/57/EC

Clauses of this European Standard	Chapter / § / points / of of LOC&PAS TSI	Essential Requirements (ER) of Directive 2008/57/EC	Comments
<p>Clauses of the standard that are in direct relationship to the requirement expressed in the clause of the TSI: the whole standard is applicable.</p>	<p>4.2.8.2.10 Electrical protection of the train 4.2.8.4. Protection against electrical hazards <i>(direct reference)</i> 6.2.3.5. Conformity assessment for safety requirements</p>	<p>1. General Requirements 1.1 Safety 1.5 Technical compatibility 2. Requirements specific to each sub-subsystem 2.4 Rolling stock 2.4.1 Safety 2.4.3. Technical compatibility</p>	<p>Annex A includes specific cases for France and Great Britain, due to special national conditions.</p>

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**WARNING:** Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard."