



**SLOVENSKI STANDARD**  
**SIST EN 61534-1:2011/A2:2021**

**01-september-2021**

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**Sistemi napajalnih razvodnic - 1. del: Splošne zahteve - Dopolnilo A2 (IEC 61534-1:2011/A2:2020)**

Powertrack systems - Part 1: General requirements (IEC 61534-1:2011/A2:2020)

Stromschiensysteme - Teil 1: Allgemeine Anforderungen (IEC 61534-1:2011/A2:2020)

Systèmes de conducteurs préfabriqués - Partie 1: Exigences générales (IEC 61534-1:2011/A2:2020)

**STANDARD PREVIEW**  
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**Ta slovenski standard je istoveten z: EN 61534-1:2011/A2:2021**

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**ICS:**

|           |                 |                    |
|-----------|-----------------|--------------------|
| 29.060.10 | Žice            | Wires              |
| 29.120.20 | Spojni elementi | Connecting devices |

**SIST EN 61534-1:2011/A2:2021**                      **en**

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EUROPEAN STANDARD

EN 61534-1:2011/A2

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2021

ICS 29.060.10; 29.120.10

English Version

## Powertrack systems - Part 1: General requirements (IEC 61534-1:2011/A2:2020)

Systèmes de conducteurs préfabriqués - Partie 1:  
Exigences générales  
(IEC 61534-1:2011/A2:2020)

Stromschienensysteme - Teil 1: Allgemeine Anforderungen  
(IEC 61534-1:2011/A2:2020)

This amendment A2 modifies the European Standard EN 61534-1:2011; it was approved by CENELEC on 2020-08-07. 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.

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.



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

**EN 61534-1:2011/A2:2021 (E)****European foreword**

The text of document 23A/903/FDIS, future IEC 61534-1/A2, prepared by SC 23A "Cable management systems" of IEC/TC 23 "Electrical accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61534-1:2011/A2:2021.

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) 2022-04-29
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-04-29

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 mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s), see informative Annex ZZ, included in EN 61534-1:2011/A11:2021.

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.

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**Endorsement notice**

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The text of the International Standard IEC 61534-1:2011/A2:2020 was approved by CENELEC as a European Standard without any modification.



IEC 61534-1

Edition 2.0 2020-07

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

AMENDMENT 2  
AMENDEMENT 2

Powertrack systems – **STANDARD PREVIEW**  
Part 1: General requirements  
(standards.iteh.ai)

Systèmes de conducteurs préfabriqués –  
Partie 1: Exigences générales  
<https://standards.iteh.ai/catalog/standards/sist/273232af-4e50-4b14-b95e-94ee9d80c62a/sist-en-61534-1-2011-a2-2021>

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

ICS 29.060.10; 29.120.10

ISBN 978-2-8322-8556-5

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## FOREWORD

This amendment has been prepared by subcommittee 23A: Cable management systems, of IEC technical committee 23: Electrical accessories.

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

| FDIS         | Report on voting |
|--------------|------------------|
| 23A/903/FDIS | 23A/908/RVD      |

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

The committee has decided that the contents of this amendment and the base 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.

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## 2 Normative references

*Replace:*

IEC 60068-2-52, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)*

IEC 60068-2-75, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60112:2003, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60127-1:2006, *Miniature fuses – Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links*

IEC 60269-1:2006, *Low-voltage fuses – Part 1: General requirements*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*<sup>2</sup>

[footnote text] <sup>2</sup> There exists a consolidated edition 2.1 (2001) that includes IEC 60529 (1989) and its Amendment 1 (1999).

IEC 60695-2-11:2000, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test methods for end-products*

IEC 60695-10-2:2003, *Fire hazard testing – Part 10-2: Abnormal heat – Ball pressure test*

IEC 61534-1:2011/AMD2:2020

– 3 –

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IEC 60695-11-2:2003, *Fire hazard testing – Part 11-2: Test flames – 1 kW nominal pre-mixed flame – Apparatus, confirmatory test arrangement and guidance*

IEC 60884-1:2002, *Plugs and socket outlets for household and similar purposes – Part 1: General requirements*  
Amendment 1 (2006)<sup>3</sup>

[footnote text]<sup>3</sup> There exists a consolidated edition 3.1 (2006) that includes IEC 60884-1 (2002) and its Amendment 1 (2006).

ISO 2081:2008, *Metallic and other inorganic coatings – Electroplated coatings of zinc with supplementary treatments on iron or steel*

with the following:

IEC 60068-2-52:2017, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)*

IEC 60068-2-75:2014, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60112:2003, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*  
IEC 60112:2003/AMD1:2009

IEC 60127-1:2006, *Miniature fuses – Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links*

IEC 60127-1:2006/AMD1:2011

IEC 60127-1:2006/AMD2:2015

IEC 60269-1:2006, *Low-voltage fuses – Part 1: General requirements*

IEC 60269-1:2006/AMD1:2009

IEC 60269-1:2006/AMD2:2014

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60529:1989/AMD1:1999

IEC 60529:1989/AMD2:2013<sup>2</sup>

[footnote text]<sup>2</sup> A consolidated version of this publication exists, comprising IEC 60529:1989, IEC 60529:1989/AMD1:1999 and IEC 60529:1989/AMD2:2013.

IEC 60695-2-11:2014, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products (GWEPT)*

IEC 60695-10-2:2014, *Fire hazard testing – Part 10-2: Abnormal heat – Ball pressure test method*

IEC 60695-11-2:2017, *Fire hazard testing – Part 11-2: Test flames – 1 kW nominal pre-mixed flame – Apparatus, confirmatory test arrangement and guidance*

IEC 60884-1:2002, *Plugs and socket-outlets for household and similar purposes – Part 1: General requirements*

IEC 60884-1:2002/AMD1:2006

IEC 60884-1:2002/AMD2:2013<sup>3</sup>

[footnote text]<sup>3</sup> A consolidated version of this publication exists, comprising IEC 60884-1:2002, IEC 60884-1:2002/AMD1:2006 and IEC 60884-1:2002/AMD2:2013.

ISO 2081:2018, *Metallic and other inorganic coatings – Electroplated coatings of zinc with supplementary treatments on iron or steel*

Add the following reference:

ISO 4628-3:2016, *Paints and varnishes – Evaluation of degradation of coatings – Designation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 3: Assessment of degree of rusting*

### 3 Terms and definitions

Delete the following term entry:

#### 3.21 routine test

### 4 General requirements

4.1 Replace the existing text with the following new text:

PT systems shall be so designed and constructed that in normal use their performance is reliable and without unreasonable hazard to the user, domestic animals or the surroundings.

4.3 Replace the existing text with the following new text:

Accessories associated with or incorporated in a system component shall comply with their own IEC International Standard or, when an IEC International Standard is unavailable, with their own relevant national standard.

[SIST EN 61534-1:2011/A2:2021](https://standards.iteh.ai/catalog/standards/sist/273232af-4e50-4b14-b95e-4ee9d80c62a/sist-en-61534-1-2011-a2-2021)

[https://standards.iteh.ai/catalog/standards/sist/273232af-4e50-4b14-b95e-](https://standards.iteh.ai/catalog/standards/sist/273232af-4e50-4b14-b95e-4ee9d80c62a/sist-en-61534-1-2011-a2-2021)

5 General notes on tests

5.3 Replace "14.1(10/11.1/11.3/15.3)<sup>b</sup>" in the second row beneath the column title "Clause number" with:

14.2(10/11.1/11.3/15.3)<sup>b</sup>

as follows:

| Number of samples | Clause number                        |   |   |                      |    |
|-------------------|--------------------------------------|---|---|----------------------|----|
|                   | 3                                    | 8 | 9 | 10 (15) <sup>b</sup> | 11 |
| 1 <sup>a</sup>    | 14.2(10/11.1/11.3/15.3) <sup>b</sup> |   |   |                      |    |

### 8 Marking and documentation

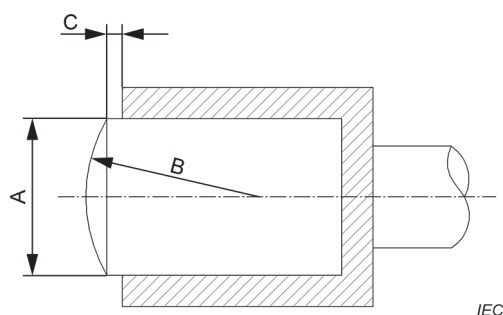
8.8 Replace all existing paragraphs with the following new paragraphs, and add new Figure 8:

The marking according to 8.2, 8.3 and 8.4 shall not be placed on easily removable parts such as screws or washers.

Laser marking directly on the product and marking made by moulding, pressing or engraving are not subjected to this test.



Compliance is checked by the tests in 8.9 and 8.10 and by inspection, using normal or corrected vision, without additional magnification and by rubbing the label using the equipment shown in Figure 8. New samples shall be used for 8.9 and 8.10.



#### Key

|   |                                      |                  |
|---|--------------------------------------|------------------|
| A | Diameter of the piston               | $(20 \pm 1)$ mm  |
| B | Radius of the piston head            | $(20 \pm 1)$ mm  |
| C | Gap between piston head and cylinder | $(2 + 1/- 0)$ mm |

**Figure 8 – Piston for durability of marking test**

The test piston head shall be made of an elastic material which is inert against the test liquids and has a Shore-A hardness of  $47 \pm 5$  (for example synthetic rubber). The piston shall be wrapped with cotton comprising cotton wool covered by a piece of cotton medical gauze.

When it is not possible to carry out the test on the specimens due to the shape/size of the product, a suitable piece of the product having the same characteristics can be submitted to the test.

<https://standards.iteh.ai/catalog/standards/sist/273232af-4e50-4b14-b95e-94ee9d80c62a/sist-en-61534-1-2011-a2-2021>

The test shall be carried out on one sample. If the sample does not satisfy the test, the test shall be repeated on two new samples, both of which shall comply with the requirements.

*Add the following two new subclauses:*

#### 8.9 Durability of marking

The sample shall be rubbed by applying a compression force of  $(5 \pm 1)$  N at a rate of one cycle per second for 15 s (a cycle comprising a forward and backward movement along the length of the marking) by means of the test piston shown in Figure 8.

Rubbing shall commence immediately after soaking the piece of cotton with water. For markings longer than 20 mm, rubbing can be limited to a part of the marking, over a path of at least 20 mm length.

The sample surface shall then be dried, and the test repeated on the same sample using new cotton soaked in n-hexane 95 % solvent.

When using this liquid, precautions as stated in the relevant material safety datasheet provided by the chemical supplier shall be taken to safeguard the person performing the test.

NOTE n-hexane 95 % (Chemical Abstracts Service Registry Number, CAS RN, 110-54-3) is available from a variety of chemical suppliers as a high pressure liquid chromatography (HPLC) solvent.

After the test, the marking shall be legible.

### 8.10 Durability of label adhesion

Under consideration.

## 9 Construction

*Add the following new subclause:*

### 9.9 Requirements for PT system with more than one circuit

When a PT system with tap-off facilities is intended to supply several circuits in the same powertrack, the system shall be designed and constructed to prevent tap-off units from being connected to the wrong circuit.

Compliance is checked by inspection.

## 20 Fire hazard

### 20.2 Flame spread

*Replace the third paragraph with the following new paragraph:*

The test is made on a single straight length of powertrack as supplied by the manufacturer together with at least one tap-off outlet and any associated covers. The overall length of the sample shall be  $(675 \pm 10)$  mm.

*Replace the seventh paragraph with the following new paragraph:*

<https://standards.iteh.ai/catalog/standards/sist/273232af-4e50-4b14-b95e-04e938f62a/iec-61534-1:2011/a2:2021>

The flame shall be applied to the front face of the tap-off outlet as shown in Figure 3. The sample is exposed to the flame for  $(60 \pm 2)$  s.

**Figure 3:** *Replace existing Figure 3 and its Key with the following new Figure 3 and Key and move the new Figure 3 and Key to the end of this Subclause 20.2 as follows:*