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Powertrack systems - Part 1: General requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 61534-1:2011 sisaldab Euroopa standardi EN 61534-1:2011 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 29.07.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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English version

**Powertrack systems -
Part 1: General requirements
(IEC 61534-1:2011)**

Systèmes de conducteurs préfabriqués -
Partie 1: Exigences générales
(CEI 61534-1:2011)

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

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CENELEC

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

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Foreword

The text of document 23A/630/FDIS, future edition 2 of IEC 61534-1, prepared by SC 23A, Cable management systems, of IEC TC 23, Electrical accessories, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61534-1 on 2011-06-22.

This European Standard supersedes EN 61534-1:2003.

The main changes from EN 61534-1:2003 are as follows:

- updated normative references (Clause 2);
- changes to the number of samples to be tested (Subclause 5.3);
- inclusion of a short circuit test (New Clause 18);
- changes to external influences (Clause 21).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates were fixed:

- | | | |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2012-03-22 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2014-06-22 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61534-1:2011 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 standards indicated:

IEC 60364-4-44:2007	NOTE	Harmonized as HD 60364-4-444:2010 (modified).
IEC 60439-2:2000	NOTE	Harmonized as EN 60439-2:2000 (not modified).
IEC 60570:2003	NOTE	Harmonized as EN 60570:2003 (modified).
IEC 60664-1:2007	NOTE	Harmonized as EN 60664-1:2007 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60038 (mod)	2009	IEC standard voltages	EN 60038 ¹	2011
IEC 60060-1	2010	High-voltage test techniques - Part 1: General definitions and test requirements	EN 60060-1	2010
IEC 60068-2-52	-	Environmental testing - Part 2: Tests - Test Kb: Salt mist, cyclic (sodium chloride solution)	EN 60068-2-52	-
IEC 60068-2-75	-	Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	-
IEC 60112	2003	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	2003
IEC 60127-1	2006	Miniature fuses - Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links	EN 60127-1	2006
IEC 60269-1	2006	Low-voltage fuses - Part 1: General requirements	EN 60269-1	2007
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993
IEC 60695-2-11	2000	Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products	EN 60695-2-11	2001
IEC 60695-10-2	2003	Fire hazard testing - Part 10-2: Abnormal heat - Ball pressure test	EN 60695-10-2	2003
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	EN 60695-11-2	2003
IEC 60884-1 + A1	2002 2006	Plugs and socket-outlets for household and similar purposes - Part 1: General requirements	-	-
IEC 60998-1 (mod)	2002	Connecting devices for low-voltage circuits for household and similar purposes - Part 1: General requirements	EN 60998-1	2004

¹ At draft stage

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60998-2-3 (mod)	2002	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 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 61032	1997	Protection of persons and equipment by enclosures - Probes for verification	EN 61032	1998
IEC 61210 (mod)	2010	Connecting devices - Flat quick-connect terminations for electrical copper conductors - Safety requirements	EN 61210	2010
IEC 60417	Data-base	Graphical symbols for use on equipment	-	-
ISO 1456	2009	Metallic and other inorganic coatings - Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium	EN ISO 1456	2009
ISO 2081	2008	Metallic and other inorganic coatings - Electroplated coatings of zinc with supplementary treatments on iron or steel	EN ISO 2081	2008
ISO 2093	1986	Electroplated coatings of tin - Specification and test methods	-	-

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INTRODUCTION

Particular requirements for specific types of powertrack systems will be specified in the relevant parts 2 of IEC 61534.

For a specific type of powertrack system the requirements of Part 1 of the standard are to be considered, together with the particular requirements of the appropriate Part 2, which will supplement or modify some of the corresponding clauses in Part 1 to provide the complete requirements for that type of system.

Part 1 shall apply unless supplemented or modified by an appropriate Part 2.

POWERTRACK SYSTEMS –

Part 1: General requirements

1 Scope

1.1 This part of IEC 61534 specifies general requirements and tests for powertrack (PT) systems with a rated voltage not exceeding 277 V a.c. single phase, or 480 V a.c. two or three phase 50 Hz/60 Hz with a rated current not exceeding 63 A. These systems are used for distributing electricity in household, commercial and industrial premises.

1.2 Powertrack systems, according to this standard, are intended for use under the following conditions:

- an ambient temperature in the range -5°C to $+40^{\circ}\text{C}$, the average value over a 24 h period not exceeding 35°C ;
- a situation not subject to a source of heat likely to raise temperatures above the limits specified above;
- an altitude not exceeding 2000 m above sea level;
- an atmosphere not subject to excessive pollution by smoke, chemical fumes, prolonged periods of high humidity or other abnormal conditions.

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

This standard does not apply to

- cable trunking systems and cable ducting systems covered by IEC 61084 [8] ¹;
- busbar trunking systems covered by IEC 60439-2 [5];
- electrical supply track systems for luminaires covered by IEC 60570 [6].

2 Normative references

The following referenced documents are indispensable for the application 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 60038:2009, *IEC standard voltages*

IEC 60060-1:2010, *High-voltage test techniques – Part 1: General definitions and test requirements*

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*

¹ Figures in square brackets refer to the bibliography.

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 60417, *Graphical symbols for use on equipment*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP code)* ²

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

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

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

IEC 60998-1:2002, *Connecting devices for low-voltage circuits for household and similar purposes – Part 1: General requirements*

IEC 60998-2-3:2002, *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 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)*

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

IEC 61210:2010, *Connecting devices – Flat quick-connect terminations for electrical copper conductors – Safety requirements*

ISO 1456:2009, *Metallic and other inorganic coatings – Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium*

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

ISO 2093:1986, *Electroplated coatings of tin – Specification and test methods*

² There exists a consolidated edition 2.1 (2001) that includes IEC 60529 (1989) and its Amendment 1 (1999).

³ There exists a consolidated edition 3.1 (2006) that includes IEC 60884-1 (2002) and its Amendment 1 (2006).