

Railway applications - Traction transformers and
inductors on board rolling Stock

EESTI STANDARDI EESSÕNA

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English Version

**Railway applications - Traction transformers and inductors on
board rolling Stock
(IEC 60310:2016)**

Applications ferroviaires - Transformateurs de traction et
bobines d'inductance à bord du matériel roulant
(IEC 60310:2016)

Bahnanwendungen - Transformatoren und Drosselspulen
auf Bahnfahrzeugen
(IEC 60310:2016)

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European Committee for Electrotechnical Standardization
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Europäisches Komitee für Elektrotechnische Normung

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European foreword

The text of document 9/2080/FDIS, future edition 4 of IEC 60310, prepared by IEC/TC 9 "Electrical equipment and systems for railways" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60310:2016.

The following dates are fixed:

- latest date by which the document has to be (dop) 2016-12-02
implemented at national level by
publication of an identical national
standard or by endorsement
- latest date by which the national (dow) 2019-03-02
standards conflicting with the
document have to be withdrawn

This document supersedes EN 60310:2004.

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60216-1	NOTE	Harmonized as EN 60216-1.
IEC 60216-5	NOTE	Harmonized as EN 60216-5.
IEC 60505	NOTE	Harmonized as EN 60505.
IEC 61287-1	NOTE	Harmonized as EN 61287-1.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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 60050-811	-	International electrotechnical vocabulary (IEV) - Chapter 811: Electric traction	-	-
IEC 60060-1	-	High-voltage test techniques - Part 1: General definitions and test requirements	EN 60060-1	-
IEC 60060-2	-	High-voltage test techniques - Part 2: Measuring systems	EN 60060-2	-
IEC 60076-1	2011	Power transformers - Part 1: General	EN 60076-1	2011
IEC 60076-2	-	Power transformers - Part 2: Temperature rise for liquid-immersed transformers	EN 60076-2	-
IEC 60076-3	-	Power transformers - Part 3: Insulation levels, dielectric tests and external clearances in air	EN 60076-3	-
IEC 60076-4	-	Power transformers - Part 4: Guide to the lightning impulse and switching impulse testing - Power transformers and reactors	EN 60076-4	-
IEC 60076-5	-	Power transformers - Part 5: Ability to withstand short circuit	EN 60076-5	-
IEC 60076-6	2007	Power transformers - Part 6: Reactors	EN 60076-6	2008
IEC 60076-7	-	Power transformers - Part 7: Loading guide for oil-immersed power transformers	-	-
IEC 60076-10	-	Power transformers - Part 10: Determination of sound levels	EN 60076-10	-
IEC 60076-11	-	Power transformers - Part 11: Dry-type transformers	EN 60076-11	-
IEC 60076-12	2008	Power transformers - Part 12: Loading guide for dry-type power transformers	-	-
IEC 60076-14	-	Power transformers - Part 14: Liquid-immersed power transformers using high-temperature insulation materials	EN 60076-14	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60076-18	-	Power transformers - Part 18: Measurement of frequency response	EN 60076-18	-
IEC 60077-1	-	Railway applications - Electric equipment for rolling stock - Part 1: General service conditions and general rules	EN 60077-1	-
IEC 60085	-	Electrical insulation - Thermal evaluation and designation	EN 60085	-
IEC 60270	-	High-voltage test techniques - Partial discharge measurements	EN 60270	-
IEC 60296	-	Fluids for electrotechnical applications - Unused mineral insulating oils for transformers and switchgear	EN 60296	-
IEC 60836	-	Specifications for unused silicone insulating liquids for electrotechnical purposes	EN 60836	-
IEC 60850	-	Railway applications - Supply voltages of traction systems	-	-
IEC 61039	-	Classification of insulating liquids	EN 61039	-
IEC 61099	-	Insulating liquids - Specifications for unused synthetic organic esters for electrical purposes	EN 61099	-
IEC 61373	2010	Railway applications - Rolling stock equipment - Shock and vibration tests	EN 61373	2010
IEC 61378-1	2011	Convertor transformers - Part 1: Transformers for industrial applications	EN 61378-1	2011
IEC 62497-1	-	Railway applications - Insulation coordination - Part 1: Basic requirements - Clearances and creepage distances for all electrical and electronic equipment	-	-
IEC 62498-1	-	Railway applications - Environmental conditions for equipment - Part 1: Equipment on board rolling stock	-	-
ISO 3746	-	Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane	EN ISO 3746	-
ISO 9614-1	-	Acoustics - Determination of sound power levels of noise sources using sound intensity - Part 1: Measurement at discrete points	EN ISO 9614-1	-
ISO 9614-2	-	Acoustics - Determination of sound power levels of noise sources using sound intensity - Part-2: Measurement by scanning	EN ISO 9614-2	-

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