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Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/15

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English Version

Tap-changers - Part 1: Performance requirements and test methods (IEC 60214-1:2014)

Changeurs de prises - Partie 1: Prescriptions de performances et méthodes d'essai
(CEI 60214-1:2014)

Stufenschalter - Teil 1: Leistungsanforderungen und Prüfverfahren
(IEC 60214-1:2014)

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

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Foreword

The text of document 14/746/CDV, future edition 2 of IEC 60214-1, prepared by IEC/TC 14 "Power transformers" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60214-1:2014.

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) 2015-03-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-06-26

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

IEC 60076-1:2011	NOTE	Harmonized in EN 60076-1:2011.
IEC 60076-11	NOTE	Harmonized as EN 60076-11.
IEC 60376	NOTE	Harmonized as EN 60376.
IEC 60599	NOTE	Harmonized as EN 60599.

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 series</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year series</u>
IEC 60050		International Electrotechnical Vocabulary -- Electrical and electronic measurements and measuring		
IEC 60060-1	-	High-voltage test techniques -- Part 1: EN 60060-1 General definitions and test requirements		-
IEC 60076-3	2013	Power transformers -- Part 3: Insulation levels, dielectric tests and external clearances in air	EN 60076-3	2013
IEC 60076-7	2005	Power transformers -- Part 7: Loading- guide for oil-immersed power transformers		-
IEC 60076-21	2011		-	-
IEC 60137	2008	Insulated bushings for alternating voltages above 1 000 V	EN 60137	2008
IEC 60214-2	2004	Tap changers -- Part 2: Application guide	-	-
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 60529	-	Degrees of protection provided by- enclosures (IP Code)		-



IEC 60214-1

Edition 2.0 2014-05

INTERNATIONAL STANDARD



Tap-changers – Part 1: Performance requirements and test methods





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Edition 2.0 2014-05

INTERNATIONAL STANDARD



Tap-changers – Part 1: Performance requirements and test methods

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

TAP-CHANGERS –

Part 1: Performance requirements and test methods

FOREWORD

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International Standard IEC 60214-1 has been prepared by IEC technical committee 14: Power transformers.

This second edition cancels and replaces the first edition published in 2003. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- incorporation of requirements on vacuum type on-load tap-changers,
- incorporation of requirements on gas insulated tap-changers,
- changes in the type tests to fit with the service conditions,
- reference to the newest edition of IEC 60076-3:2013.

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

CDV	Report on voting
14/746/CDV	14/767A/RVC

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.

A list of all parts in the IEC 60214 series, published under the general title *Tap-changers*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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TAP-CHANGERS –

Part 1: Performance requirements and test methods

1 Scope

This part of IEC 60214 applies to on-load tap-changers of both resistor and reactor types, de-energized tap-changers, and their motor-drive mechanisms.

It applies mainly to tap-changers immersed in mineral insulating oil according to IEC 60296 but may also be used for tap-changers with air or gas insulation or immersed in other insulating liquids insofar as conditions are applicable.

It applies mainly to tap-changers with arcing contacts but may also be used for arcing-free on-load tap-changers (such as electronic switching) insofar as conditions are applicable.

This part of IEC 60214 applies to power and distribution transformers of all types and also to reactors.

It does not apply to transformers and reactors mounted on railway rolling stock.

2 Normative references

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.

IEC 60050 (all parts), *International Electrotechnical Vocabulary* (available at <http://www.electropedia.org>)

IEC 60050-421, *International Electrotechnical Vocabulary – Chapter 421: Power transformers and reactors*

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

IEC 60076-3:2013, *Power transformers – Part 3: Insulation levels, dielectric tests and external clearances in air*

IEC 60076-7:2005, *Power transformers – Part 7: Loading guide for oil-immersed power transformers*

IEC 60076-21:2011, *Power transformers – Part 21: Standard requirements, terminology, and test code for step-voltage regulators*

IEC 60137:2008, *Insulated bushings for alternating voltages above 1 000 V*

IEC 60214-2:2004, *Tap-changers – Part 2: Application guide*

IEC 60270, *High-voltage test techniques – Partial discharge measurements*

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IEC 60296, *Fluids for electrotechnical applications – Unused mineral insulating oils for transformers and switchgear*

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