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INTERNATIONAL STANDARD

IEC 60214-2

First edition
2004-10

Tap-changers – Part 2: Application guide



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

TAP-CHANGERS –

Part 2: Application guide

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60214-2 has been prepared by IEC technical committee 14: Power transformers.

This standard cancels and replaces IEC 60542 (1976) and its amendment 1 (1988). This first edition constitutes a technical revision of that standard.

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

FDIS	Report on voting
14/490/FDIS	14/492/RVD

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.

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IEC 60214 consists of the following parts, under the general title *Tap-changers*:

Part 1: Performance requirements and test methods

Part 2: Application guide

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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INTRODUCTION

The recommendations in this application guide represent advice to the tap-changer manufacturer and purchaser.

It is stressed that the responsibility for the correct application of the fully assembled tap-changers in connection with the transformer lies with the manufacturer of the transformer.

TAP-CHANGERS –

Part 2: Application guide

1 Scope

This part of IEC 60214 is intended to assist in the selection of tap-changers designed in accordance with IEC 60214-1 for use in conjunction with the tapped windings of transformers or reactors. It is also intended to assist in understanding the various types of tap-changers and their associated equipment available. The application guide covers on-load tap-changers (resistor and reactor types) and off-circuit tap-changers.

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 60076-1:1993, *Power transformers – Part 1: General*
Amendment 1(1999)¹

IEC 60076-3:2000, *Power transformers – Part 3: Insulation levels, dielectric tests and external clearances in air*

IEC 60076-5:2000, *Power transformers – Part 5: Ability to withstand short circuit*

IEC 60076-11:2004, *Power transformers – Dry-type transformers*

IEC 60214-1:2003, *Tap-changers – Part 1: Performance requirements and test methods*

IEC 60296:2003, *Fluids for electrotechnical applications – Unused mineral insulating oils for transformers and switchgear*

IEC 60354:1991, *Loading guide for oil-immersed power transformers*

IEC 60599:1999, *Mineral oil-impregnated electrical equipment in service – Guide to the interpretation of dissolved and free gases analysis*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60214-1 apply.

4 Symbols and abbreviations

DGA Dissolved gas analysis
HVDC High-voltage direct current
PST Phase-shifting transformer

¹ There exists a consolidated edition 2.1 (2000) that includes edition 2.0 and its amendment.