

**SLOVENSKI STANDARD**  
**SIST EN 60034-15:2009****01-september-2009****BUXca Yý U****SIST EN 60034-15:1999**

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Rotating electrical machines - Part 15: Impulse voltage withstand levels of form-wound stator coils for rotating a.c. machines (IEC 60034-15:2009)

**iTeh STANDARD PREVIEW**

Drehende elektrische Maschinen - Teil 15: Stehstoß-Spannungspegel drehender Wechselstrommaschinen mit Formspulen im Ständer (CEI 60034-15:2009)

[SIST EN 60034-15:2009](#)

Machines électriques tournantes - Partie 15: Niveaux de tenue au choc électrique des bobines de stator préformées des machines tournantes à courant alternatif (IEC 60034-15:2009)

**Ta slovenski standard je istoveten z: EN 60034-15:2009**

**ICS:**

29.160.01      Rotacijski stroji na splošno      Rotating machinery in general

**SIST EN 60034-15:2009****en,fr**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60034-15**

June 2009

ICS 29.160

Supersedes EN 60034-15:1996

English version

**Rotating electrical machines -  
Part 15: Impulse voltage withstand levels  
of form-wound stator coils for rotating a.c. machines  
(IEC 60034-15:2009)**

Machines électriques tournantes -  
Partie 15: Niveaux de tenue  
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de stator préformées des machines  
tournantes à courant alternatif  
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Drehende elektrische Maschinen -  
Teil 15: Steh-Stoßspannungspegel  
von Formspulen im Ständer drehender  
Wechselstrommaschinen  
(IEC 60034-15:2009)

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This European Standard 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 Central Secretariat has the same status as the official versions.

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**CENELEC**

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

**Central Secretariat: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 2/1534/FDIS, future edition 3 of IEC 60034-15, prepared by IEC TC 2, Rotating machinery, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60034-15 on 2009-05-01.

This European Standard supersedes EN 60034-15:1996.

The principal technical changes are as follows:

- change of title to clarify that it is form-wound coils that are being tested rather than machines;
- removal of the limitation on voltage in the scope;
- additional definitions for consistency with EN 60060-1;
- reduction in tolerances for the risetime of the steep-fronted impulse voltage;
- guidance on test levels for coils to be used in converter driven machines;
- guidance on voltage levels for routine tests;
- additional figures to show testing details and oscillograms of normal and faulty coils.

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) 2010-02-01
  - latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-05-01
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## Endorsement notice

The text of the International Standard IEC 60034-15:2009 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 60034-1	NOTE	Harmonized as EN 60034-1:2004 (not modified).
IEC 60060-1	NOTE	Harmonized as EN 60060-1:200X <sup>1)</sup> (not modified).
IEC 60071-1	NOTE	Harmonized as EN 60071-1:2006 (not modified).

<sup>1)</sup> At draft stage.



IEC 60034-15

Edition 3.0 2009-03

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Rotating electrical machines –  
Part 15: Impulse voltage withstand levels of form-wound stator coils for rotating  
a.c. machines**

**Machines électriques tournantes –  
Partie 15: Niveaux de tenue au choc électrique des bobines de stator préformées  
des machines tournantes à courant alternatif**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

PRICE CODE  
CODE PRIX

M

ICS 29.160

ISBN 2-8318-1033-0

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## ROTATING ELECTRICAL MACHINES –

**Part 15: Impulse voltage withstand levels  
of form-wound stator coils for rotating a.c. machines**

## FOREWORD

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International Standard IEC 60034-15 has been prepared by IEC technical committee 2: Rotating machinery.

This third edition cancels and replaces the second edition published in 1995 and constitutes a technical revision. The principal technical changes are as follows.

- Change of title to clarify that it is form-wound coils that are being tested rather than machines.
- Removal of the limitation on voltage in the Scope.
- Additional definitions for consistency with IEC 60060-1.
- Reduction in tolerances for the risetime of the steep-fronted impulse voltage.
- Guidance on test levels for coils to be used in converter driven machines.
- Guidance on voltage levels for routine tests.
- Additional figures to show testing details and oscillograms of normal and faulty coils.

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

FDIS	Report on voting
2/1534/FDIS	2/1547/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.

NOTE A table of cross-references of all IEC TC 2 publications can be found on the IEC TC 2 dashboard on the IEC website.

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.

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## INTRODUCTION

IEC 60071-1 specifies general requirements for the phase to earth insulation of equipment in three phase a.c. systems and states that each apparatus committee is responsible for specifying the insulation levels and test procedures for its equipment, taking into consideration the recommendations of IEC 60071-1. The object of IEC 60034-15 is to specify requirements for rotating electrical machines. Experience has shown that the values given in this standard meet the insulation requirements for the essential stresses in service. An explanation of the principles adopted in preparing these requirements is given in Annex A. This standard is not intended for soft-start machines.

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