



Irish Standard  
I.S. EN 60034-18-32:2010

# Rotating electrical machines -- Part 18-32: Functional evaluation of insulation systems - Test procedures for form-wound windings - Evaluation by electrical endurance (IEC 60034-18-32:2010 (EQV))

## I.S. EN 60034-18-32:2010

*Incorporating amendments/corrigenda issued since publication:*

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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<b>NSAI</b> 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie  W <b>NSAI.ie</b>	<b>Sales:</b> T +353 1 857 6730 F +353 1 857 6729 W standards.ie
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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60034-18-32**

December 2010

ICS 29.160

Supersedes CLC/TR 60034-18-32:2004

English version

**Rotating electrical machines -  
Part 18-32: Functional evaluation of insulation systems -  
Test procedures for form-wound windings -  
Evaluation by electrical endurance  
(IEC 60034-18-32:2010)**

Machines électriques tournantes -  
Partie 18-32: Evaluation fonctionnelle des  
systèmes d'isolation -  
Procédures d'essai pour enroulements  
préformés -  
Evaluation par endurance électrique  
(CEI 60034-18-32:2010)

Drehende elektrische Maschinen -  
Teil 18-32: Funktionelle Bewertung von  
Isoliersystemen -  
Prüfverfahren für Wicklungen mit  
vorgeformten Elementen -  
Bewertung der elektrischen Lebensdauer  
(IEC 60034-18-32:2010)

This European Standard was approved by CENELEC on 2010-12-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

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

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 2/1580/CDV, future edition 1 of IEC 60034-18-32, prepared by IEC TC 2, Rotating machinery, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60034-18-32 on 2010-12-01.

This European Standard supersedes CLC/TR 60034-18-32:2004.

The main technical changes with regard to CLC/TR 60034-18-32:2004 are as follows:

- a) simplification of clauses;
- b) reduction in the number of test procedures;
- c) inclusion of full bars and coils as test objects;
- d) a new clause dealing with failures and failure criteria.

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) | 2011-09-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn   | (dow) | 2013-12-01 |

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 60034-18-32:2010 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/TS 60034-18-33 | NOTE | Harmonized as CLC/TS 60034-18-33 <sup>1)</sup> . |
| IEC/TS 60034-18-42 | NOTE | Harmonized as CLC/TS 60034-18-42 <sup>1)</sup> . |

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

## **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 60034-1 (mod)	-	Rotating electrical machines - Part 1: Rating and performance	EN 60034-1	-
IEC 60034-15	2009	Rotating electrical machines - Part 15: Impulse voltage withstand levels of form-wound stator coils for rotating a.c. machines	EN 60034-15	2009
IEC 60034-18-1	2010	Rotating electrical machines - Part 18-1: Functional evaluation of insulation systems - General guidelines	EN 60034-18-1	2010

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### **ROTATING ELECTRICAL MACHINES –**

#### **Part 18-32: Functional evaluation of insulation systems – Test procedures for form-wound windings – Evaluation by electrical endurance**

### FOREWORD

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International Standard IEC 60034-18-32 has been prepared by IEC technical committee 2: Rotating machinery.

This first edition cancels and replaces IEC/TS 60034-18-32, published in 1995 and constitutes a technical revision.

The main technical changes with regard to the previous technical specification are as follows.

- a) simplification of clauses;
- b) reduction in the number of test procedures;
- c) inclusion of full bars and coils as test objects;
- d) a new clause dealing with failures and failure criteria.



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

CDV	Report on voting
2/1580/CDV	2/1602/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

A list of all parts of the IEC 60034 series, published under the general title *Rotating electrical machines*, can be found on the IEC website.

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

The committee has decided that the contents of this amendment and the base 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

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

## INTRODUCTION

Part 1 of IEC 60034-18 presents general principles for the evaluation of insulation systems used in rotating electrical machines.

This standard deals exclusively with insulation systems for form-wound windings and concentrates on electrical functional evaluation.

This is a free preview. Purchase the entire publication at the link below:

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