

SLOVENSKI STANDARD
SIST EN IEC 60034-18-32:2022**01-julij-2022****Nadomešča:****SIST EN 60034-18-32:2011**

Električni rotacijski stroji - 18-32. del: Funkcionalno vrednotenje izolacijskih sistemov (tip II) - Električno vrednotenje postopkov kvalificiranja za predhodno oblikovana navitja (IEC 60034-18-32:2022)

Rotating electrical machines - Part 18-32: Functional evaluation of insulation systems (Type II) - Electrical endurance qualification procedures for form-wound windings (IEC 60034-18-32:2022)

Drehende elektrische Maschinen - Teil 18-32: Funktionelle Bewertung von Isoliersystemen - Prüfverfahren für Wicklungen mit vorgeformten Elementen - Bewertung der elektrischen Lebensdauer (IEC 60034-18-32:2022)

Machines électriques tournantes - Partie 18-32: Evaluation fonctionnelle des systèmes d'isolation - Procédures d'essai pour enroulements préformés - Evaluation par endurance électrique (IEC 60034-18-32:2022)

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EUROPEAN STANDARD

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Rotating electrical machines - Part 18-32: Functional evaluation
of insulation systems (Type II) - Electrical endurance
qualification procedures for form-wound windings
(IEC 60034-18-32:2022)

Machines électriques tournantes - Partie 18-32: Evaluation
fonctionnelle des systèmes d'isolation (Type II) -
Procédures de qualification de l'endurance électrique pour
enroulements préformés
(IEC 60034-18-32:2022)

Drehende elektrische Maschinen - Teil 18-32: Funktionelle
Bewertung von Isoliersystemen - Elektrische Lebensdauer
Qualifizierungsverfahren für Wicklungen mit vorgeformten
Elementen
(IEC 60034-18-32:2022)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 60034-18-32:2022 (E)**European foreword**

The text of document 2/2068/FDIS, future edition 2 of IEC 60034-18-32, prepared by IEC/TC 2 "Rotating machinery" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60034-18-32:2022.

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) 2022-12-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2025-03-01

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where 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 60034-1	-	Rotating electrical machines - Part 1: Rating and performance	EN 60034-1 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
IEC/TS 60034-18-33	2010	Rotating electrical machines - Part 18-33: Functional evaluation of insulation systems - Test procedures for form-wound windings - Multifactor evaluation by endurance under simultaneous thermal and electrical stresses	CLC/TS 60034-18-33	2011
IEC 60034-18-41	-	Rotating electrical machines - Part 18-41: Partial discharge free electrical insulation systems (Type I) used in rotating electrical machines fed from voltage converters - Qualification and quality control tests	EN 60034-18-41	-
IEC 60034-18-42	2017	Rotating electrical machines - Part 18-42: Partial discharge resistant electrical insulation systems (Type II) used in rotating electrical machines fed from voltage converters - Qualification tests	EN 60034-18-42	2017
+ A1	2020		+ A1	2020
IEC 60034-27-1	-	Rotating electrical machines - Part 27-1: Off-line partial discharge measurements on the winding insulation	EN IEC 60034-27-1	-

¹ Under preparation. Stage at the time of publication: FprEN 60034-1 and FprEN 60034-1/prAA.

EN IEC 60034-18-32:2022 (E)

IEC 60034-27-3	-	Rotating electrical machines - Part 27-3: Dielectric dissipation factor measurement on stator winding insulation of rotating electrical machines	EN 60034-27-3	-
IEC 60216-4-1	-	Electrical insulating materials - Thermal endurance properties - Part 4-1: Ageing ovens - Single-chamber ovens	EN 60216-4-1	-
IEC 62539	-	Guide for the statistical analysis of electrical insulation breakdown data	-	-

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



iTeh STANDARD

**Rotating electrical machines –
Part 18-32: Functional evaluation of insulation systems (Type II) –
Electrical endurance qualification procedures for form-wound windings**

**Machines électriques tournantes –
Partie 18-32: Evaluation fonctionnelle des systèmes d'isolation (Type II) –
Procédures de qualification de l'endurance électrique pour enroulements
préformés**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ROTATING ELECTRICAL MACHINES –

**Part 18-32: Functional evaluation of insulation systems (Type II) –
Electrical endurance qualification procedures for form-wound windings**

FOREWORD

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

This second edition cancels and replaces the first edition published in 2010. This edition constitutes a technical revision.

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

- a) Title modified.
- b) Simplification of clauses.
- c) Reduction in the number of test procedures.
- d) Inclusion of full bars and coils as test objects.
- e) A new clause dealing with failures and failure criteria.

The text of this International Standard is based on the following documents:

Draft	Report on voting
2/2068/FDIS	2/2075/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

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

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
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- amended.

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INTRODUCTION

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

This document deals exclusively with insulation systems for form-wound windings (Type II) and concentrates on electrical functional evaluation.

In IEC 60034-18-42, tests are described for qualification of Type II insulation systems in voltage-source converter operation. These insulation systems are generally used in rotating machines which have form-wound windings, mostly rated above 700 V r.m.s. The two standards IEC 60034-18-41 and IEC 60034-18-42 separate the systems into those which are not expected to experience partial discharge activity within specified conditions in their service lives (Type I), and those which are expected to experience and withstand partial discharge activity in any part of the insulation system throughout their service lives (Type II).

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