

Svenska Elektriska Kommissionen, SEK

Fastställt	Utgåva	Sida	Ingår i
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Roterande elektriska maskiner – Del 5: Kapslingsklasser för elektriska maskiner (IP-beteckning)

*Rotating electrical machines –
Part 5: Degrees of protection provided by the integral design of rotating
electrical machines (IP code) –
Classification*

Som svensk standard gäller europastandarden EN 60034-5:2001. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60034-5:2001.

Nationellt förord

Europastandarden EN 60034-5:2001

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60034-5, Fourth edition, 2000 - Rotating electrical machines -
Part 5: Degrees of protection provided by the integral
design of rotating electrical machines (IP code) -
Classification**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare utgiven svensk standard SS-EN 60034-5, utgåva 1, 1992 gäller ej fr o m 2003-12-01.

EUROPEAN STANDARD

EN 60034-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2001

ICS 29.160

Supersedes EN 60034-5:1986

English version

Rotating electrical machines
Part 5: Degrees of protection provided by the integral design
of rotating electrical machines (IP code) -
Classification
(IEC 60034-5:2000)

Machines électriques tournantes
Partie 5: Degrés de protection procurés
par la conception intégrale des machines
électriques tournantes (code IP) -
Classification
(CEI 60034-5:2000)

Drehende elektrische Maschinen
Teil 5: Schutzarten aufgrund der
Gesamtkonstruktion von drehenden
elektrischen Maschinen (IP-Code) -
Einteilung
(IEC 60034-5:2000)

This European Standard was approved by CENELEC on 2000-12-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 2/1098/FDIS, future edition 4 of IEC 60034-5, prepared by IEC TC 2, Rotating machinery, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60034-5 on 2000-12-01.

This European Standard supersedes EN 60034-5:1986.

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) 2001-09-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2003-12-01

Annexes designated "normative" are part of the body of the standard.

In this standard, annex ZA is normative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60034-5:2000 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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)	¹⁾	Rotating electrical machines Part 1: Rating and performance	EN 60034-1 + corr. February	1998 ²⁾ 2000
IEC 60034-6	¹⁾	Part 6: Methods of cooling (IC Code)	EN 60034-6	1993 ²⁾

¹⁾ undated reference.

²⁾ valid edition at date of issue.

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ROTATING ELECTRICAL MACHINES –

Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP code) – Classification

1 Scope and object

This International Standard applies to the classification of degrees of protection provided by enclosures for rotating electrical machines. It defines the requirements for protective enclosures that are in all other respects suitable for their intended use and which, from the point of view of materials and workmanship, ensure that the properties dealt with in this standard are maintained under normal conditions of use.

This standard does not specify:

- degrees of protection against mechanical damage of the machine, or conditions such as moisture (produced for example by condensation), corrosive vapours, fungus or vermin;
- types of protection of machines for use in an explosive atmosphere;
- the requirements for barriers external to the enclosure which have to be provided solely for the safety of personnel.

In certain applications (such as agricultural or domestic appliances), more extensive precautions against accidental or deliberate contact may be specified.

This standard gives definitions for standard degrees of protection provided by enclosures applicable to rotating electrical machines as regards the:

- a) protection of persons against contacts with or approach to live parts and against contact with moving parts (other than smooth rotating shafts and the like) inside the enclosure and protection of the machine against ingress of solid foreign objects;
- b) protection of machines against the harmful effects due to ingress of water.

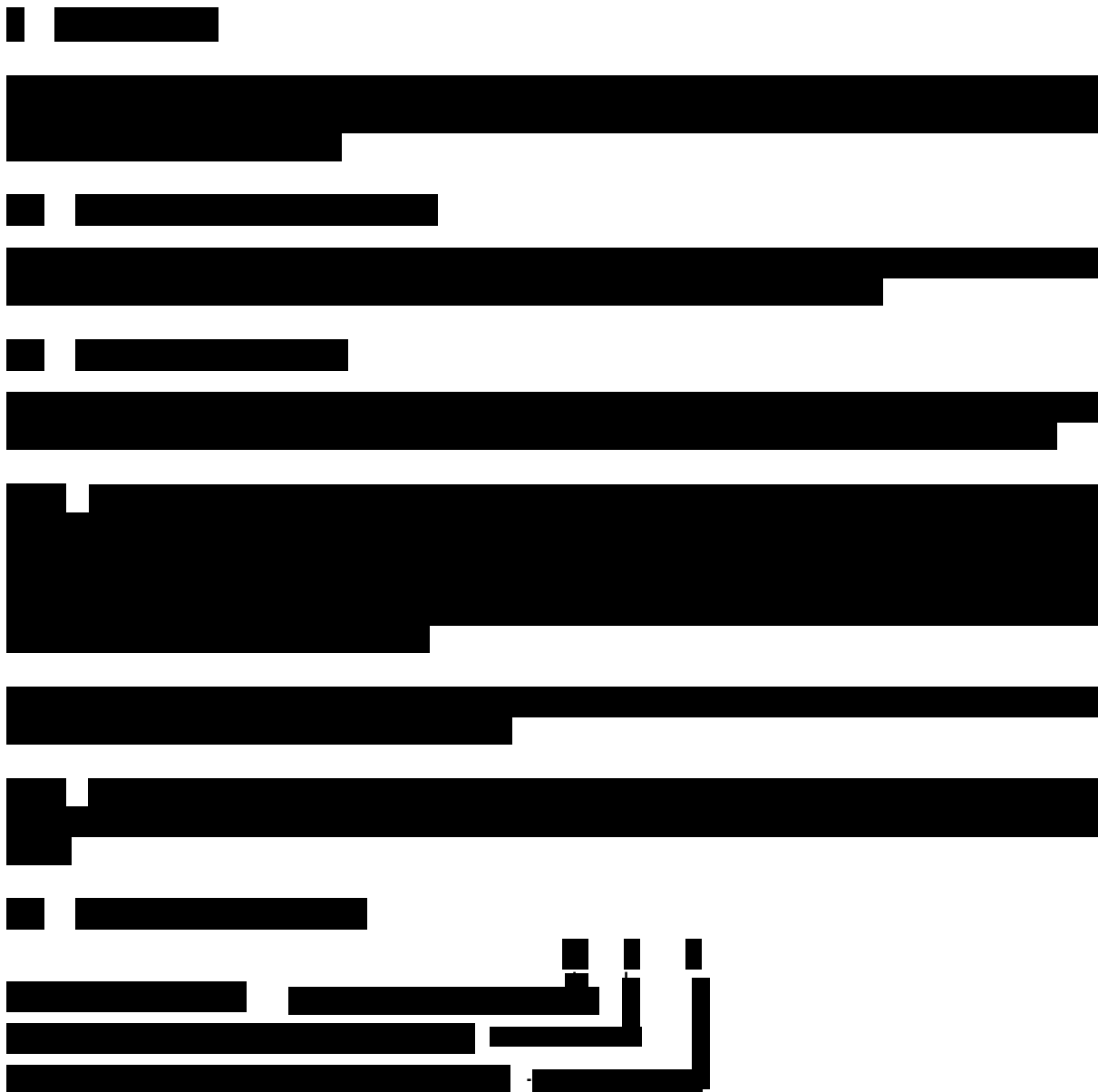
It gives designations for these protective degrees and tests to be performed to check that the machines meet the requirements of this standard.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60034. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 60034 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60034-1, *Rotating electrical machines – Part 1: Rating and performance**

IEC 60034-6, *Rotating electrical machines – Part 6: Methods of cooling (IC code)*



* A consolidated edition 10.2 (1999) was issued comprising IEC 60034-1 (1996) and its amendments 1 (1997) and 2 (1999).