
Rotating electrical machines - Part 9: Noise limits (IEC 60034-9:1997)

Rotating electrical machines -- Part 9: Noise limits

Drehende elektrische Maschinen -- Teil 9: Geräuschgrenzwerte

Machines électriques tournantes -- Partie 9: Limites de bruits

Ta slovenski standard je istoveten z: EN 60034-9:1997[SIST EN 60034-9:1999](https://standards.iteh.ai/catalog/standards/sist/97c54115-660f-40e4-81db-3e10fe5d9ef2/sist-en-60034-9-1999)<https://standards.iteh.ai/catalog/standards/sist/97c54115-660f-40e4-81db-3e10fe5d9ef2/sist-en-60034-9-1999>**ICS:**

17.140.20	Emisija hrupa naprav in opreme	Noise emitted by machines and equipment
29.160.01	Rotacijski stroji na splošno	Rotating machinery in general

SIST EN 60034-9:1999**en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60034-9:1999

<https://standards.iteh.ai/catalog/standards/sist/97c54115-660f-40e4-81db-3e10fe5d9ef2/sist-en-60034-9-1999>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60034-9

August 1997

ICS 17.140.20; 29.160.30

Supersedes EN 60034-9:1993 and its amendment

Descriptors: Electrical rotating machinery, machinery noise, noise limit, sound power density, sound power, maximum value

English version

**Rotating electrical machines
Part 9: Noise limits
(IEC 60034-9:1997)**

Machines électriques tournantes
Partie 9: Limites de bruit
(CEI 60034-9:1997)

Drehende elektrische Maschinen
Teil 9: Geräuschgrenzwerte
(IEC 60034-9:1997)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60034-9:1999

<https://standards.iteh.ai/catalog/standards/sist/97c54115-660f-40e4-81db-3e10fe5d9ef2/sist-en-60034-9-1999>

This European Standard was approved by CENELEC on 1997-07-01. 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, 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 2/979/FDIS, future edition 3 of IEC 60034-9, prepared by IEC TC 2, Rotating machinery, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60034-9 on 1997-07-01.

This European Standard supersedes EN 60034-9:1993 and its amendment A1:1995.

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) 1998-05-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1998-05-01

For products which have complied with EN 60034-9:1993 and its amendment A1:1995 before 1998-05-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2003-05-01.

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.

(standards.iteh.ai)

Endorsement notice

<https://standards.iteh.ai/catalog/standards/sist/97c54115-660f-40e4-81db-37d8f3d1ec/sist/60034-9-1997>

The text of the International Standard IEC 60034-9:1997 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	1996 ¹⁾	Rotating electrical machines Part 1: Rating and performance	-	-
IEC 60034-5	1991 ²⁾	Part 5: Classification of degrees of protection provided by enclosures of rotating electrical machines (IP code)	-	-
IEC 60034-6	1991	Part 6: Methods of cooling (IC Code)	EN 60034-6	1993
IEC 60034-17	1992	Part 17: Guide for the application of cage induction motors when fed from converters	-	-
ISO 3741	1988	Acoustics - Determination of sound power levels of noise sources - Precision methods for broad-band sources in reverberation rooms	EN 23741	1991
ISO 3743-1	1994	Acoustics - Determination of sound power levels of noise sources using sound pressure - Engineering methods for small, movable sources in reverberant fields Part 1: Comparison method for hard-walled test rooms	EN ISO 3743-1	1995
ISO 3743-2	1994	Part 2: Methods for special reverberation test rooms	EN ISO 3743-2	1996
ISO 3744	1994	Acoustics - Determination of sound power levels of noise sources using sound pressure - Engineering method in an essentially free field over a reflecting plane	EN ISO 3744	1995
ISO 3745	1977	Acoustics - Determination of sound power levels of noise sources - Precision methods for anechoic and semi-anechoic rooms	-	-

1) IEC 60034-1:1994, mod. is harmonized as EN 60034-1:1995.

2) IEC 60034-5:1981, mod. is harmonized as EN 60034-5:1986.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 3746	1995	Acoustics - Determination of sound power levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane	EN ISO 3746	1995
ISO 3747	1987	Acoustics - Determination of sound power levels of noise sources - Survey method using a reference sound source	-	-
ISO 9614-1	1993	Acoustics - Determination of sound power levels of noise sources using sound intensity - Part 1: Measurement at discrete points	EN ISO 9614-1	1995
ISO 9614-2	1996	Part 2: Measurement by scanning	EN ISO 9614-2	1996

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60034-9:1999

<https://standards.iteh.ai/catalog/standards/sist/97c54115-660f-40e4-81db-3e10fe5d9ef2/sist-en-60034-9-1999>

NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

60034-9

Troisième édition
Third edition
1997-08

Machines électriques tournantes –

Partie 9:
Limites de bruits

iTeh STANDARD PREVIEW
Rotating electrical machines –
(standards.iteh.ai)

Part 9:
Noise limits

<https://standards.iteh.ai/catalog/standards/sist/97c54115-660f-40e4-81db-3e10fe5d9ef2/sist-en-60034-9-1999>

© IEC 1997 Droits de reproduction réservés — Copyright - all rights reserved

Aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'éditeur.

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission
Telefax: +41 22 919 0300

3, rue de Varembé Geneva, Switzerland
e-mail: inmail@iec.ch IEC web site <http://www.iec.ch>



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

K

Pour prix, voir catalogue en vigueur
For price, see current catalogue

CONTENTS

	Page
FOREWORD	5
INTRODUCTION	7
 Clause	
1 Scope and object	9
2 Normative references	9
3 Terms and definitions	11
4 Test nomenclature	11
5 Test conditions	13
5.1 Machine mounting	13
5.2 Test operating conditions	13
6 Sound power level limits	15
7 Declaration and verification of noise emission values	19
 Tables	
1 Maximum A-weighted sound power level, L_{WA} in dB, at no-load (excluding motors according to table 2) (Method of cooling, IC code, see IEC 60034-6) (Degree of protection, IP code, see IEC 60034-5)	17
2 Maximum A-weighted sound power level, L_{WA} in dB at no-load (for single-speed three-phase cage induction motors IC01, IC11, IC21, IC411, IC511 and IC611)	19
3 Incremental expected increase, over no-load condition, in A-weighted sound power levels, ΔL_{WA} in dB, (for rated load condition for motors according to table 2) ...	19

iTeh STANDARD PREVIEW

(standards.iteh.ai)

SIST EN 60034-9:1999

Signed document available on the iTeh Standards website (www.iteh.ai)

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ROTATING ELECTRICAL MACHINES –

Part 9: Noise limits

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60034-9 has been prepared by IEC technical committee 2: Rotating machinery.

This third edition cancels and replaces the second edition, published in 1990, and amendment 1, published in 1995, and constitutes a technical revision.

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

FDIS	Report on voting
2/979/FDIS	2/985/RVD

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