



# SLOVENSKI STANDARD

## SIST EN 60335-2-34:2013

01-september-2013

### Nadomešča:

SIST EN 60335-2-34:2003

SIST EN 60335-2-34:2003/A1:2005

SIST EN 60335-2-34:2003/A11:2004

SIST EN 60335-2-34:2003/A2:2009

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**Gospodinjski in podobni električni aparati - Varnost - 2-34. del: Posebne zahteve za motorne kompresorje (IEC 60335-2-34:2012)**

Household and similar electrical appliances - Safety - Part 2-34: Particular requirements for motor-compressors

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Appareils électrodomestiques et analogues - Sécurité - Partie 2-34: Règles particulières pour les motocompresseurs

**Ta slovenski standard je istoveten z: EN 60335-2-34:2013**

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### **ICS:**

23.140

Kompresorji in pnevmatični stroji

Compressors and pneumatic machines

**SIST EN 60335-2-34:2013**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60335-2-34**

June 2013

ICS 97.040.30

Supersedes EN 60335-2-34:2002 + A1:2005 + A2:2009 + A11:2004

English version

**Household and similar electrical appliances -  
Safety -  
Part 2-34: Particular requirements for motor-compressors  
(IEC 60335-2-34:2012)**

Appareils électrodomestiques  
et analogues - Sécurité -  
Partie 2-34: Exigences particulières pour  
les motocompresseurs  
(CEI 60335-2-34:2012)

Sicherheit elektrischer Geräte für den  
Hausgebrauch und ähnliche Zwecke -  
Teil 2-34: Besondere Anforderungen  
für Motorverdichter  
(IEC 60335-2-34:2012)

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This European Standard was approved by CENELEC on 2012-06-27. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre 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

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

## Foreword

The text of document 61C/508/FDIS, future edition 5 of IEC 60335-2-34, prepared by SC 61C "Safety of refrigeration appliances for household and commercial use" of IEC/TC 61 "Safety of household and similar electrical appliances" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60335-2-34:2013.

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) 2013-12-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-06-27

This document supersedes EN 60335-2-34:2002 + A1:2005 + A2:2009 + A11:2004.

EN 60335-2-34:2013 includes the following significant technical changes with respect to EN 60335-2-34:2002 + A1:2005 + A2:2009 + A11:2004:

- some notes have been deleted or converted to normative text (1, 6.103, 19.14, 22.7, Figure 101);
- manufacturer must declare the type of motor protection used (5.102, 6.104);
- tests to fault-test **motor-compressors** incorporating **electronic circuits** introduced (19.11.2, AA.5);
- application of the EMP tests clarified (19.11.4);
- testing of contactors and relays associated with **motor-compressors** introduced (19.14);
- Tables 101 and 102 updated and corrected;
- running overload test conditions extended (AA.1, AA.2, AA.3, AA.4, AA.5).

This standard is to be read in conjunction with EN 60335-1:2012 and its amendments.

NOTE 1 When "Part 1" is mentioned in this standard, it refers to EN 60335-1.

This Part 2 supplements or modifies the corresponding clauses in EN 60335-1, so as to convert that publication into the European Standard: *Safety requirements for electrical motor-compressors..*

When a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text of Part 1 is to be adapted accordingly.

NOTE 2 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.

NOTE 3 The following print types are used:

- requirements: in roman type;
- test specifications: in italic type;
- notes: in small roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

### Endorsement notice

The text of the International Standard IEC 60335-2-34:2012 was approved by CENELEC as a European Standard without any modification.

The Bibliography of EN 60335-1:2012 is applicable with the addition of the following notes for the standards indicated:

IEC 60335-2-11	NOTE	Harmonised as EN 60335-2-11.
IEC 60335-2-24	NOTE	Harmonised as EN 60335-2-24.
IEC 60335-2-40	NOTE	Harmonised as EN 60335-2-40.
IEC 60335-2-75	NOTE	Harmonised as EN 60335-2-75.
IEC 60335-2-89	NOTE	Harmonised as EN 60335-2-89.

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IEC 60335-2-34

Edition 5.0 2012-05

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

Household and similar electrical appliances – Safety –  
Part 2-34: Particular requirements for motor-compressors

Appareils électrodomestiques et analogues – Sécurité –  
Partie 2-34: Exigences particulières pour les motocompresseurs

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

PRICE CODE  
CODE PRIX

W

ICS 97.040.30

ISBN 978-2-83220-085-8

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –  
SAFETY –

## Part 2-34: Particular requirements for motor-compressors

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

This part of International Standard IEC 60335 has been prepared by subcommittee 61C: Safety of refrigeration appliances for household and commercial use, of IEC technical committee 61: Safety of household and similar electrical appliances.

This fifth edition cancels and replaces the fourth edition published in 2002 including its Amendment 1 (2004) and its amendment 2 (2008). It constitutes a technical revision.

The principal changes in this edition as compared with the fourth edition of IEC 60335-2-34 are as follows (minor changes are not listed):

- some notes have been deleted or converted to normative text (1, 6.103, 19.14, 22.7, Figure 101);
- manufacturer must declare the type of motor protection used (5.102, 6.104);
- tests to fault-test **motor-compressors** incorporating **electronic circuits** introduced (19.11.2, AA.5);

- application of the EMP tests clarified (19.11.4);
- testing of contactors and relays associated with **motor-compressors** introduced (19.14);
- tables 101 and 102 updated and corrected;
- running overload test conditions extended (AA.1, AA.2, AA.3, AA.4, AA.5).

The text of this part of IEC 60335 is based on the following documents:

FDIS	Report on voting
61C/508/FDIS	61C/517/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.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the fifth edition (2010) of that standard.

NOTE 1 When "Part 1" is mentioned in this standard, it refers to IEC 60335-1.

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Safety requirements for electrical motor-compressors.

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- *test specifications: in italic type;*
- notes: in smaller roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

A list of all parts of the IEC 60335 series, under the general title *Household and similar electrical appliances – Safety*, can be found on the IEC website.

The committee has decided that the contents of this 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.

NOTE 4 The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication.

The following differences exist in the countries indicated below.

- 7.1: The locked-rotor current marking is required for some motor-compressors (USA).
- 22.7: Different test pressures are used (Japan, USA).

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## INTRODUCTION

It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

This standard recognizes the internationally accepted level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of appliances when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice and takes into account the way in which electromagnetic phenomena can affect the safe operation of appliances.

This standard takes into account the requirements of IEC 60364 as far as possible so that there is compatibility with the wiring rules when the appliance is connected to the supply mains. However, national wiring rules may differ.

If an appliance within the scope of this standard also incorporates functions that are covered by another part 2 of IEC 60335, the relevant part 2 is applied to each function separately, as far as is reasonable. If applicable, the influence of one function on the other is taken into account.

When a part 2 standard does not include additional requirements to cover hazards dealt with in Part 1, Part 1 applies.

NOTE 1 This means that the technical committees responsible for the part 2 standards have determined that it is not necessary to specify particular requirements for the appliance in question over and above the general requirements.

This standard is a product family standard dealing with the safety of appliances and takes precedence over horizontal and generic standards covering the same subject.

NOTE 2 Horizontal and generic standards covering a hazard are not applicable since they have been taken into consideration when developing the general and particular requirements for the IEC 60335 series of standards. For example, in the case of temperature requirements for surfaces on many appliances, generic standards, such as ISO 13732-1 for hot surfaces, are not applicable in addition to Part 1 or part 2 standards.

An appliance that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

An appliance employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be considered to comply with the standard.

For **motor-compressors**, testing in accordance with this standard is an option and cannot be required as a precondition for testing the complete appliance, for example by reference in Clause 24 of a part 2 of IEC 60335. However, testing of the appliance should be reduced if an incorporated **motor-compressor** including its protection system or control system, if any, complies with this standard.

If testing of the **motor-compressor** includes testing in accordance with Annex AA, temperatures of the **motor-compressor** windings, **housing** and other parts related to the **motor-compressor**, such as terminals, internal wiring and insulating materials, are not measured when the complete appliance in which the **motor-compressor** is used is tested.

These requirements apply to sealed (hermetic and semi-hermetic type) **motor-compressors** with their associated starting, cooling capacity control and protection systems, tested separately under the most severe conditions of the refrigerating system operation which, within reasonable limits, could occur in the applications for which they are used.