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INTERNATIONAL STANDARD

COMMENTED VERSION

**Rotating electrical machines -
Part 8: Terminal markings and direction of rotation**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Rotating electrical machines -
Part 8: Terminal markings and direction of rotation**

FOREWORD

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This commented version (CMV) of the official standard IEC 60034-8:2026 edition 4.0 allows the user to identify the changes made to the previous IEC 60034-8:2007+AMD1:2014 CSV edition 3.1. Furthermore, comments from IEC TC 2 experts are provided to explain the reasons of the most relevant changes, or to clarify any part of the content.

A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text. Experts' comments are identified by a blue-background number. Mouse over a number to display a pop-up note with the comment.

This publication contains the CMV and the official standard. The full list of comments is available at the end of the CMV.

IEC 60034-8 has been prepared by IEC technical committee 2: Rotating machinery. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2007 and Amendment 1:2014. This edition constitutes a technical revision.

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

- a) The inclusion of turbine-type synchronous machines in the scope.

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

Draft	Report on voting
2/2291/FDIS	2/2309/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 the parts of the IEC 60034 series, 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/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,
- withdrawn, or
- revised.

The content of the corrigendum 1 (2026-07) has been included in this copy.

INTRODUCTION

The revision of this part of IEC 60034 provides worldwide uniformity in the electrical connections for rotating electrical machines and applies the recommendations of the basic safety publication IEC 60445 in specifying marking requirements.

These standardized connections will then enable the safe interchange of electric machines with their control and protective devices using standardized terminal markings.

NOTE Electrical connections of the machines are not the unique feature to be checked for safe interchange.

1 Scope

This part of IEC 60034 applies to AC and DC machines and specifies

- a) rules for the identification of winding connection points;
- b) marking of winding terminals;
- c) direction of rotation;
- d) relationship between terminal markings and direction of rotation;
- e) terminal marking of auxiliary devices;
- f) connection diagrams of machines for common applications.

~~Turbine-type synchronous machines are excluded from this standard.~~ 1

2 Normative references

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.

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

IEC 60034-3, *Rotating electrical machines - Part 3: Specific requirements for synchronous generators driven by steam turbines or combustion gas turbines and for synchronous compensators* 2

IEC 60034-33, *Rotating electrical machines - Part 33: Synchronous hydrogenerators including motor-generators - Specific requirements* 2

IEC 60417-1, *Graphical symbols for use on equipment - Part 1: Overview and application*

IEC 60445, *Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors*

Bibliography

IEC 60050-411:1996, *International Electrotechnical Vocabulary - Chapter 411: Rotating machines*

IEC 60617, *Graphical symbols for diagrams*, available at <http://std.iec.ch/iec60617>

List of comments

- 1 The primary purpose of this revision is to include terminal markings for synchronous machines, which were previously excluded due to conflicts related to direction of rotation. There is now a desire within the synchronous machine committee to include additional terminal markings, such as those for accessories. This new edition addresses that need.
 - 2 Since synchronous machines are being added, it is necessary to include references to the existing synchronous machine standards.
 - 3 This has been deleted because it is well understood and is not used elsewhere in the standard.
 - 4 This is one of the modifications required to introduce synchronous motors into the standard. Synchronous machines often have a different direction of rotation with a standard infeed connection compared to other machines.
 - 5 There is a legacy of different symbols that have been used for synchronous machines, and this would not present an issue if mutually agreed upon.
 - 6 In many cases, the direction of rotation of synchronous machines is dictated by the driven equipment.
 - 7 This clarifies that, for machines other than synchronous machines, the direction of rotation is fixed and an arrow is therefore required.
 - 8 This reference was mistakenly excluded in the previous edition.
 - 9 It has always been understood that other agreed-upon symbols may be used, but this statement clarifies that understanding.
 - 10 Similar to the discussion above regarding main terminal markings, agreed-upon terminal markings for accessories are also permitted.
 - 11 There were multiple areas throughout the standard where figures were not referenced. According to IEC rules, this had to be corrected.
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