

# TECHNICAL SPECIFICATION



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**Rotating electrical machines –  
Part 25: AC electrical machines used in power drive systems – Application guide**





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**Rotating electrical machines –  
Part 25: AC electrical machines used in power drive systems – Application guide**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## ROTATING ELECTRICAL MACHINES –

**Part 25: AC electrical machines used in power drive systems –  
Application guide**

## FOREWORD

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This fourth edition of IEC TS 60034-25 cancels and replaces the third edition, published in 2014.

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

- a) The definitions of a converter capable motor and a converter duty motor are added.
- b) Clause 18 modified to include the performance expectations of a converter capable motor.
- c) Clause 8 modified to update shaft currents section.
- d) Annex D added to define the derating requirements.

The text of this Technical Specification is based on the following documents:

|            |                  |
|------------|------------------|
| Draft      | Report on voting |
| 2/2067/DTS | 2/2097/RVDTS     |

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 Technical Specification is English.

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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

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## INTRODUCTION

The performance characteristics and operating data for converter-fed electrical machines are influenced by the complete drive system, comprising supply system, converter, cabling, electrical machine, mechanical shafting and control equipment. Each of these components exists in numerous technical variants. Any values quoted in this document are thus indicative only.

In view of the complex technical interrelations within the system and the variety of operating conditions, it is beyond the scope and object of this document to specify numerical or limiting values for all the quantities which are of importance for the design of the power drive system.

To an increasing extent, it is the practice that power drive systems consist of components produced by different manufacturers. The object of this document is to explain, as far as possible, the influence of these components on the design of the electrical machine and its performance characteristics.

This document deals with both AC electrical machines which are specifically designed for converter supply and converter-fed electrical machines within the scope of IEC 60034-12, which are designed originally for mains supply.