

# INTERNATIONAL STANDARD

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**Electrical installations in ships -  
Part 301: Equipment - Generators and motors**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**Electrical installations in ships -  
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**FOREWORD**

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IEC 60092-301 has been prepared by IEC technical committee 18: Electrical installations of ships and of mobile and fixed offshore units. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 1980, Amendment 1:1994 and Amendment 2:1995. This edition constitutes a technical revision.

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

- a) services conditions were added;
- b) IEC 60034-1:2022, has been considered.

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

Draft	Report on voting
18/1980/FDIS	18/1987/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.

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/publications](http://www.iec.ch/publications).

A list of all parts in the IEC 60092 series, published under the general title *Electrical installations in ships*, can be found on the IEC website.

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](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

## INTRODUCTION

The IEC 60092 series forms a series of International Standards for electrical installations in sea-going ships, incorporating good practice and co-ordinating as far as possible existing rules.

These Standards form a code of practical interpretation and amplification of the requirements of the International Convention on Safety of Life at Sea, a guide for future regulations which may be prepared and a statement of practice for use by shipowners, shipbuilders and appropriate organizations.

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## 1 Scope

This part of IEC 60092 is applicable to all rotating electrical machines rated at 750 W or more for use in ships. It also applies to excitation machines and includes relevant requirements for prime mover driving generators.

## 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 (all parts), *Rotating electrical machines*

IEC 60034-1:2022, *Rotating electrical machines - Part 1: Rating and performance*

IEC 60092-101:2018, *Electrical installations in ships - Part 101: Definitions and general requirements*

IEC 60092-201:2019, *Electrical installations in ships - Part 201: System design - General*

IEC 60092-501, *Electrical installations in ships - Part 501: Special features - Electric propulsion plant*

IEC 60092-503, *Electrical installations in ships - Part 503: Special features - AC supply systems with voltages in the range of above 1 kV up to and including 36 kV*

ISO 21940-11, *Mechanical vibration - Rotor balancing - Part 11: Procedures and tolerances for rotors with rigid behaviour*

ISO 8528-5:2022, *Reciprocating internal combustion engine driven alternating current generating set*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60092-101 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

### 3.1

#### **prime mover driving generator**

#### **prime mover**

device that converts energy into useful mechanical energy to drive a generator