

INTERNATIONAL STANDARD

IEC 60092-503

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Electrical installations in ships –

Part 503:

Special features –

AC supply systems with voltages in the range of above 1 kV up to and including 15 kV



Commission Electrotechnique Internationale
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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	8
3.1 AC voltages.....	8
3.2 Earthed neutral systems.....	9
3.3 Insulation	9
4 General requirements.....	9
4.1 Voltage and frequency.....	9
4.2 Warning notices	10
4.3 Access	10
4.4 Insulation level	10
4.5 Clearances and creepage distances	10
4.5.1 Clearance distance.....	10
4.5.2 Creepage distance	10
4.6 Earthing	11
4.7 Distribution systems	12
4.7.1 Divided system	12
4.7.2 Auxiliary circuits	12
4.7.3 Busbars of main switchboards	12
4.7.4 Generator circuits.....	13
4.7.5 Outgoing circuits	13
4.7.6 Power-transformer circuits.....	13
4.7.7 Shore-connection circuits and circuits to other units	13
4.7.8 Control and instrumentation circuits.....	13
4.8 Generator and transformer neutrals.....	13
4.8.1 Generator neutrals interconnected.....	13
4.8.2 Disconnection.....	14
4.9 Electrical protection.....	14
4.9.1 General	14
4.9.2 Generator protection.....	14
4.9.3 Motor protection	14
4.9.4 Power-transformer protection	14
4.9.5 Voltage-transformer protection	14
4.9.6 Overvoltage protection	14
4.9.7 Earth-fault monitoring	14
5 Equipment.....	15
5.1 AC generators and motors.....	15
5.1.1 Enclosures	15
5.1.2 Performance.....	15
5.1.3 De-excitation	16
5.1.4 Mechanical characteristics.....	16
5.2 Transformers.....	16
5.2.1 Enclosures and installations	16

5.2.2	Accumulation of moisture and condensation	16
5.2.3	Transient voltage conditions	17
5.2.4	Current inrush	17
5.3	Switchgear and controlgear assemblies (switchboards)	17
5.3.1	Design and construction	17
5.3.2	Passageways	18
5.4	Switchgear and controlgear and fuses	18
5.5	Cables.....	18
5.5.1	General	18
5.5.2	Installation.....	18
5.5.3	Conductors and terminations	18
5.5.4	Current rating	19
5.5.5	Testing	19
5.5.6	Socket-outlets	19

Table 1	– AC three-phase systems having a nominal voltage above 1 kV and up to and including 15 kV	9
Table 2	– Minimum clearance for equipment.....	10
Table 3	– Minimum creepage distances for main switchboards and generators	11
Table 4	– Minimum creepage distances for other equipment.....	11

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL INSTALLATIONS IN SHIPS –

Part 503: Special features – AC supply systems with voltages in the range of above 1 kV up to and including 15 kV

FOREWORD

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International Standard IEC 60092-503 has been prepared by IEC technical committee 18:
Electrical installations of ships and of mobile and offshore units

This second edition cancels and replaces the first edition published in 1975. This edition constitutes a technical revision.

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

- a) The scope is changed to an upper limit of the system voltage from 11 kV to 15 kV.
- b) General requirements regarding warning notices, access to installations, clearances and creepage distances of uninsulated conductors and earthing have been introduced.
- c) Technical review has generally been made to update the standard according to general requirements and referenced equipment standards.

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

FDIS	Report on voting
18/1053/FDIS	18/1059/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.

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

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

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

These standards form a code of practical interpretation and amplification of the requirements of the International Convention for the 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.

ELECTRICAL INSTALLATIONS IN SHIPS –

Part 503: Special features – AC supply systems with voltages in the range of above 1 kV up to and including 15 kV

1 Scope

This part of IEC 60092 is applicable to a.c. supply systems with voltages from 1 kV up to and including 15 kV. The requirements contained in other parts of IEC 60092 apply where appropriate, subject to the exceptions stated in the following clauses.

2 Normative references

The following referenced documents are indispensable for the application 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 60038:1983, *IEC standard voltages*

IEC 60071-1, *Insulation co-ordination – Part 1: Definitions, principles and rules*

IEC 60071-2, *Insulation co-ordination – Part 2: Application guide*

IEC 60076 (all parts), *Power transformers*

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

IEC 60092-202, *Electrical installations in ships – Part 202: System design – Protection*

IEC 60092-350, *Electrical installations in ships – Part 350: Shipboard power cables – General construction and test requirements*

IEC 60092-353, *Electrical installations in ships – Part 353: Single and multicore non-radial field power cables with extruded solid insulation for rated voltages 1 kV and 3 kV*

IEC 60092-354, *Electrical installations in ships – Part 354: Single- and three-core power cables with extruded solid insulation for rated voltages 6 kV, ($U_m = 7,2$ kV) up to 30 kV ($U_m = 36$ kV)*

IEC 60265-1, *High-voltage switches – Part 1: Switches for rated voltages above 1 kV and less than 52 kV*

IEC 60282-1:2005, *High-voltage fuses – Part 1: Current-limiting fuses*

IEC 60502 (all parts), *Power cables with extruded insulation and their accessories for rated voltages from 1 kV ($U_m = 1,2$ kV) up to 30 kV ($U_m = 36$ kV)*

IEC 60502-1, *Power cables with extruded insulation and their accessories for rated voltages from 1 kV ($U_m = 1,2$ kV) up to 30 kV ($U_m = 36$ kV) – Part 1: Cables for rated voltages of 1 kV ($U_m = 1,2$ kV) up to 3 kV ($U_m = 3,6$ kV)*

IEC 60502-2, *Power cables with extruded insulation and their accessories for rated voltages from 1 kV ($U_m = 1,2$ kV) up to 30 kV ($U_m = 36$ kV) – Part 2: Cables for rated voltages from 6 kV ($U_m = 7,2$ kV) up to 30 kV ($U_m = 36$ kV)*

IEC 60694:1996, *Common specifications for high-voltage switchgear and controlgear standards*

IEC 62271(all parts), *High-voltage switchgear and controlgear*

IEC 62271-200:2003, *High-voltage switchgear and controlgear – Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV*