

# INTERNATIONAL STANDARD

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**Electrical installations in ships –  
Part 302-2: Low voltage switchgear and controlgear assemblies – Marine power**





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67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.



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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL INSTALLATIONS IN SHIPS –****Part 302-2: Low voltage switchgear and  
controlgear assemblies – Marine power**

## FOREWORD

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International Standard IEC 60092-302-2 has been prepared by IEC technical committee 18: Electrical installations of ships and of mobile and fixed offshore units.

This first edition cancels and replaces the fourth edition of IEC 60092-302 published in 1997. This edition constitutes a technical revision.

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

- a) this document has been renumbered to fall in line with IEC 61439 (all parts);
- b) this document has been restructured to fall in line with IEC 61439 (all parts);
- c) the creepage distances have been modified;
- d) the references to non type tested assemblies (NTTA) have been removed;
- e) non-applicable tables have been removed;

- f) the applicability of IEC 61439 (all parts) annexes have been identified.
- g) specific requirements that were detailed in IEC 60092-302:1997, covered under 7.6.101 have partly been moved to 60092-201.

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

| FDIS         | Report on voting |
|--------------|------------------|
| 18/1656/FDIS | 18/1668/RVD      |

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

This International Standard is to be used in conjunction with IEC 61439-1:2011 and IEC 61439-2:2011.

This document supplements or modifies the corresponding clauses in IEC 61439-1:2011 and IEC 61439-2:2011. Where this document states "addition", "deletion" or "replacement", the relevant text of IEC 61439-1:2011 and IEC 61439-2:2011 is adapted accordingly.

Clauses and subclauses which are additional to those of IEC 61439-1:2011 and IEC 61439-2:2011 are numbered starting from 201. Additional annexes are numbered starting from AAA.

In this document, terms written in small capitals are defined in Clause 3.

Where the abbreviated term PSC-assembly is used in applicable clauses of IEC 61439-2:2011, this refer to MPSC-assembly.

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 "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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

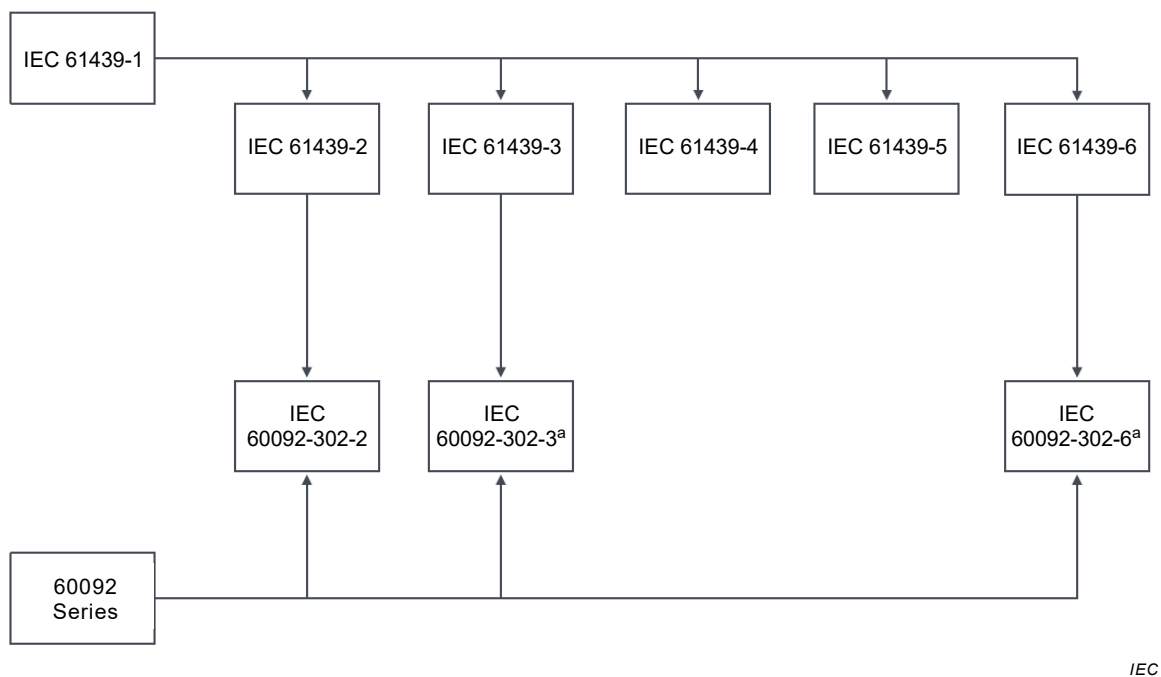
## INTRODUCTION

This part of 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 ship owners, shipbuilders and appropriate organizations.

IEC 61439 (all parts) identifies the requirements for land based low voltage switchgear and controlgear assemblies. IEC 60092-302 (all parts) has been developed in-line with Figure 201, which shows the future intention to develop appropriate marine standards for final distribution boards to be operated by ordinary persons; and busbar trunking systems.

IEC 60092 (all parts) remains the lead standard series for electrical installations in ships, and the applicable standards are applied accordingly. Wherever there are differences between IEC 61439 (all parts) and IEC 60092 (all parts), IEC 60092 (all parts) takes precedence.



### Key

<sup>a</sup> Under consideration.

NOTE At the time of publication, IEC 60092-302-3 and IEC 60092-302-6 are not developed. The figure shows that these standards are potential future projects to align with the IEC 61439 series.

**Figure 201 – Relationship of standards**

## ELECTRICAL INSTALLATIONS IN SHIPS –

### Part 302-2: Low voltage switchgear and controlgear assemblies – Marine power

#### 1 Scope

This part of IEC 60092 defines the specific requirements of low voltage marine power switchgear and controlgear assemblies (MPSC-assemblies) as follows:

- stationary assemblies with enclosure for which the rated voltage does not exceed 1 000 V AC or 1500 V DC;
- assemblies intended for use in conjunction with the power generation, distribution and conversion of electric energy, and for the control of electric energy consuming equipment.

This document applies to all assemblies whether they are designed, manufactured and verified on a one-off basis or fully standardised and manufactured in quantity.

The manufacture and/or assembly can be carried out other than by the original manufacturer.

This document does not apply to individual devices and self-contained components, such as motor starters, fuse switches, electronic equipment, which comply with the relevant product standards.

NOTE Individual devices and components include those that are covered by the IEC 60947 series.

#### 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 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 60533, *Electrical and electronic installations in ships – Electromagnetic compatibility (EMC) – Ships with a metallic hull*

IEC 61439-1:2011, *Low-voltage switchgear and controlgear assemblies – Part 1: General rules*

IEC 61439-2:2011, *Low-voltage switchgear and controlgear assemblies – Part 2: Power switchgear and controlgear assemblies*

#### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.