

INTERNATIONAL STANDARD

IEC 61892-2

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Mobile and fixed offshore units – Electrical installations –

Part 2: System design

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MOBILE AND FIXED OFFSHORE UNITS –
ELECTRICAL INSTALLATIONS –**
Part 2: System design

FOREWORD

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International Standard IEC 61892-2 has been prepared by IEC technical committee 18: Electrical installations of ships and of mobile and fixed offshore units.

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

FDIS	Report on voting
18/965/FDIS	18/995/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.

IEC 61892 consists of the following parts, under the general title: *Mobile and fixed offshore units – Electrical installations*:

Part 1: General requirements and conditions

Part 2: System design

Part 3: Equipment

Part 4: Cables¹⁾

Part 5: Mobile units

Part 6: Installation

Part 7: Hazardous areas

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- withdrawn;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.

¹⁾ Under consideration. Before IEC 61892-4 is published, reference is made to the IEC 60092-35X series.

INTRODUCTION

IEC 61892 forms a series of International Standards intended to enable safety in the design, selection, installation, maintenance and use of electrical equipment for the generation, storage, distribution and utilisation of electrical energy for all purposes in offshore units, which are being used for the purpose of exploration or exploitation of petroleum resources.

This part of IEC 61892 also incorporates and co-ordinates, as far as possible, existing rules and forms a code of interpretation, where applicable, of the requirements of the International Maritime Organisation, a guide for future regulations which may be prepared and a statement of practice for offshore unit owners, constructors and appropriate organisations.

This standard is based on equipment and practices, which are in current use, but it is not intended in any way to impede development of new or improved techniques.

The ultimate aim has been to produce a set of International standards exclusively for the offshore petroleum industry.

MOBILE AND FIXED OFFSHORE UNITS – ELECTRICAL INSTALLATIONS –

Part 2: System design

1 Scope

This part of IEC 61892 contains provisions for system design of electrical installations in mobile and fixed units used in the offshore petroleum industry for drilling, production, processing and for storage purposes, including pipeline, pumping or 'pigging' stations, compressor stations and exposed location single buoy moorings.

It applies to all installations, whether permanent, temporary, transportable or hand-held, to a.c. installations up to and including 35 000 V and d.c. installations up to and including 750 V.(a.c. and d.c. voltages are nominal values)

This standard does not apply either to fixed equipment used for medical purposes or to the electrical installations of tankers.

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 60038:2002, *IEC standard voltages*

IEC 60092-101:2002, *Electrical installations in ships – Part 101: Definitions and general requirements*

IEC 60092-504:2001, *Electrical installations in ships – Part 504: Special features – Control and instrumentation*

IEC 60447, *Basic and safety principles for man-machine interface, marking and identification – Actuating principles*

IEC 60533, *Electrical and electronic installations in ships – Electromagnetic compatibility*

IEC 60617-DB:2001²⁾ *Graphical symbols for diagrams – Architectural and topographical installation plans and diagrams*

IEC 60947-2:2003, *Low voltage switchgear and controlgear – Part 2: Circuit-breakers*

IEC 61000-2-4, *Electromagnetic compatibility (EMC) – Part 2-4: Environment – Compatibility levels in industrial plants for low-frequency conducted disturbances*

IEC 61508 (all parts), *Functional safety of electrical/electronic/programmable electronic safety-related systems*

²⁾ "DB" refers to the on-line IEC database.

IEC 61511, (all parts), *Functional safety – Safety instrumented systems for the process industry sector*

IEC 61892-1:2001, *Mobile and fixed offshore units – Electrical installations – Part 1: General requirements and conditions*

IEC 61892-3, *Mobile and fixed offshore units – Electrical installations – Part 3: Equipment*

IEC 61892-5:2000, *Mobile and fixed offshore units – Electrical installations – Part 5: Mobile units*

IEC 61892-7:1997, *Mobile and fixed offshore units – Electrical installations – Part 7: Hazardous areas*

IEC 62271-100, *High-voltage switchgear and controlgear – Part 100: High-voltage alternating-current circuit-breakers*

SOLAS, *International Convention for the Safety of Life at Sea*

IMO MODU Code:1990, *Code for the Construction and Equipment of Mobile Offshore Drilling Units,*