IEC 61892-6

Edition 3.0 2013-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Mobile and fixed offshore units – Electrical installations – Part 6: Installation

Unités mobiles et fixes en mer – Installations électriques – Partie 6: Installation

IEC 61892-6:2013

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE
CODE PRIX X

ICS 29.260.99, 47.020.60

ISBN 978-2-8322-1288-2

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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MOBILE AND FIXED OFFSHORE UNITS – ELECTRICAL INSTALLATIONS –

Part 6: Installation

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61892-6 has been prepared by IEC technical committee 18: Electrical installations of ships and of mobile and fixed offshore units.

This third edition cancels and replaces the second edition published in 2007. This edition constitutes a technical revision.

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

a) Table 1, size of earth continuity conductors has been replaced with the table in IEC 61892-4.
b) The requirements for installation of batteries has been rewritten in order to distinguish better between batteries of the vented type and VRLA/sealed type.
c) An informative annex regarding cable termination has been added.

d) The applicability for DC installations has been increased from 750 V to 1 500 V, in accordance with Part 1 of the series.

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

FDIS	Report on voting
18/1351/FDIS	18/1360/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 61892 series, under the general title *Mobile and fixed offshore units – Electrical installations*, can be found on the IEC website.

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

INTRODUCTION

The IEC 61892 series of International Standards is intended to ensure safety in the design, selection, installation, maintenance and use of electrical equipment for the generation, storage, distribution and utilization of electrical energy for all purposes in offshore units which are used for the exploration or exploitation of petroleum resources.

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

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 6: Installation

1 Scope

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

It applies to all installations, whether permanent, temporary, transportable or hand-held, to AC installations up to and including 35 000 V and DC installations up to and including 1 500 V (AC and DC voltages are nominal values).

This standard does not apply to electrical installations in rooms used for medical purposes, or in tankers.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60092-350:2008, *Electrical installations in ships – Part 350: General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications*

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

IEC 60623, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Vented nickel-cadmium prismatic rechargeable single cells*

IEC 60825 (all parts), *Safety of laser products*

IEC 60896-11, *Stationary lead-acid batteries – Part 11: Vented types – General requirements and methods of tests*

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

IEC 61892-2:2012, *Mobile and fixed offshore units – Electrical installations – Part 2: System design*

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

IEC 61892-4:2007, *Mobile and fixed offshore units – Electrical installations – Part 4: Cables*

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

ISO 8468, *Ships and marine technology – Ship's bridge layout and associated equipment – Requirements and guidelines*

SOLAS 1974 *International Convention for the Safety of Life at Sea, Consolidated edition 2009*

IMO, MODU code, *Code for the construction and equipment of mobile offshore drilling units*

IMO, *Code on Alerts and Indicators, 2009*

3 Terms and definitions

For the purposes of this document the terms and definitions given in IEC 61892-1 as well as the following apply.

3.1
battery compartment
compartment comprising dedicated rooms, dedicated lockers and dedicated boxes for installation of batteries

3.2
equipotential bonding
provision of electric connections between conductive parts, intended to achieve equipotentiallity

[SOURCE: IEC 60050-195:1998, 195.01.10]

3.3
cable tray system
cable ladder system
assembly of cable supports consisting of cable tray lengths or cable ladder lengths and other system components

[SOURCE: IEC 61537:2006, 3.1]

3.4
surface heating
trace heating
heat generated in the surface layer of a body to be heated by electrical means in order to raise or maintain its temperature

3.5
exposed conductive part
conductive part which can readily be touched and which is not normally alive, but which may become alive under fault conditions

Note 1 to entry: Typical exposed conductive parts are walls of enclosures, operating handles, etc.

[SOURCE: IEC 60050-441:1984, 441.11.10]

3.6
extraneous-conductive-part
conductive part not forming a part of the electrical installation and liable to introduce an electric potential, generally the potential of a local earth

[SOURCE: IEC 60050-195:1998, 195.06.11]