

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Mobile and fixed offshore units – Electrical installations –
Part 1: General requirements and conditions**

**Unités mobiles et fixes en mer – Installations électriques –
Partie 1: Exigences générales et conditions**



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Plus de 60 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions.....	8
4 General requirements and conditions.....	11
4.1 General.....	11
4.2 Acceptance of substitutes or alternatives.....	12
4.3 Additions and alterations.....	12
4.4 Environmental conditions.....	12
4.4.1 General.....	12
4.4.2 Design parameters.....	12
4.5 Materials.....	13
4.6 Power supply system characteristics.....	14
4.6.1 General.....	14
4.6.2 AC distribution systems.....	14
4.6.3 DC distribution systems.....	16
4.7 Manual disconnection.....	17
4.8 Electrical apparatus for explosive gas atmospheres.....	17
4.9 Clearance and creepage distances.....	17
4.10 Insulation.....	17
4.11 Maintenance and inspection.....	17
4.12 Cable entries.....	18
4.13 Precautions against vibration and mechanical shock.....	18
4.14 Location of electrical equipment in units.....	18
4.15 Mechanical protection.....	18
4.16 Protection from heat, water, steam and oil.....	18
4.17 Protection against electrical shock.....	19
4.18 Enclosures.....	19
4.19 Environmental impact.....	19
Annex A (informative) Degree of protection.....	20
A.1 Definitions of numerals in the IP code.....	20
Annex B (informative) Cold climate precautions.....	22
Annex C (informative) Specification of surface treatment and protective painting system.....	23
C.1 Objectives.....	23
C.2 General and specification.....	23
C.2.1 General.....	23
C.2.2 Atmospheric corrosivity categories for protective painting systems.....	23
C.2.3 Durability performance of a protective painting system.....	24
Annex D (informative) DC distribution systems.....	26
D.1 DC distribution systems.....	26
Bibliography.....	27
Figure D.1 – Typical configuration of DC distribution system.....	26

Table 1 – Operational design parameters – Ambient temperature 13

Table 2 – Design parameters – Relative humidity 13

Table 3 – Voltage characteristics 15

Table 4 – Frequency characteristics 16

Table 5 – Tolerances for DC system 16

Table 6 – Fast transients 17

Table A.1 – Degrees of protection against foreign objects indicated by the first characteristic numeral 20

Table A.2 – Degrees of protection against water indicated by the second characteristic numeral 21

Table C.1 – Description of typical atmospheric environments related to the estimation of corrosivity categories 24

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MOBILE AND FIXED OFFSHORE UNITS –
ELECTRICAL INSTALLATIONS –****Part 1: General requirements and conditions**

FOREWORD

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International Standard IEC 61892-1 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 2010. This edition constitutes a technical revision.

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

- a) The general requirement to harmonic distortion has been changed from IEC 61000-2-4 Class 2 to Class 1.
- b) The voltage tolerance for a DC system has been changed from $\pm 10\%$ to $+10\%$, -15% .
- c) Annex C (informative) regarding specification of surface treatment and protective painting system has been added.

The text of this standard based on the following documents:

CDV	Report on voting
18/1385/CDV	18/1449/RVC

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 can be found, under the general title *Mobile and fixed offshore units – Electrical installations*, 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 website 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
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INTRODUCTION

The IEC 61892 series of International Standards is intended to enable 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 purpose of exploration or exploitation of petroleum resources.

This part of the IEC 61892 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 Organization, 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.

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MOBILE AND FIXED OFFSHORE UNITS – ELECTRICAL INSTALLATIONS –

Part 1: General requirements and conditions

1 Scope

This part of IEC 61892 contains provisions for electrical installations 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 storage purposes.

This International Standard 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 either to fixed equipment for medical purposes or to the electrical installations of tankers.

NOTE For medical rooms, IEC 60364-7-710 provides more information.

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 60034 (all parts), *Rotating electrical machines*

IEC 60034-1:2010, *Rotating electrical machines – Part 1: Rating and performance*

IEC 60079 (all parts), *Explosive atmospheres*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 61000-2-4:2002, *Electromagnetic compatibility (EMC) – Part 2-4: Environment – Compatibility levels in industrial plants for low-frequency conducted disturbances*

IEC 61140, *Protection against electric shock – Common aspects for installation and equipment*

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

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

IEC 61892-6, *Mobile and fixed offshore units – Electrical installations – Part 6: Installation*

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

International Convention for the Safety of Life at Sea (SOLAS):1974, Consolidated edition 2009

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

3 Terms and definitions

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

NOTE The terms and definitions included in this part are those having general application in the IEC 61892 series. Terms and definitions applying to particular apparatus or equipment are included in the other parts of IEC 61892.

3.1

appropriate authority

governmental body and/or classification society with whose rules a unit is required to comply

3.2

equipment

single apparatus or set of devices or apparatuses, or the set of main devices of an installation, or all devices necessary to perform a specific task

EXAMPLE Power transformer, measuring equipment.

[SOURCE IEC 60050-151:2001, 151-11-25, modified — The words “the equipment of a substation” has been removed from the example.]

3.3

apparatus

device or assembly of devices which can be used as an independent unit for specific functions

[SOURCE IEC 60050-151:2001, 151-11-22, modified — The note has been deleted.]

3.4

rooms with a controlled atmosphere

rooms where the temperature and humidity can be controlled within specified limits

3.5

degree of protection of enclosure

IP

numerical classification according to IEC 60529 preceded by the symbol IP applied to the enclosure of electrical apparatus to provide:

- protection of persons against contact with, or approach to, live parts and against contact with moving parts (other than smooth rotating shafts and the like) inside the enclosure,
- protection of the electrical apparatus against ingress of solid foreign objects, and
- where indicated by the classification, protection of the electrical apparatus against harmful ingress of water

Note 1 to entry: Explanation of the numerals used for classification of degree of protection is given in Tables A.1 and A.2.

[SOURCE IEC 60050-426:2008, 426-04-02, modified — Note 1 to entry has been added.]

3.6

distribution board

assembly containing different types of switchgear and controlgear associated with one or more outgoing electric circuits fed from one or more incoming electric circuits, together with terminals for the neutral and protective conductors, if required