

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**



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**Mobile and fixed offshore units – Electrical installations –
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**Unités mobiles et fixes en mer – Installations électriques –
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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	8
3 Terms and definitions	9
4 General requirements	13
4.1 Labelling	13
4.2 Protection during equipment storage.....	13
4.3 Protection during installation period	13
5 Generators and motors – Installation	13
6 Transformers – Installation and location	13
7 Switchgear and controlgear assemblies.....	14
7.1 Location.....	14
7.2 Insulating flooring or insulating mats.....	15
7.3 Passageways in front of switchgear and controlgear assemblies.....	15
7.4 Space at the rear and passageways.....	15
8 Semiconductor converters	16
9 Secondary cells and batteries.....	16
9.1 General.....	16
9.2 Location.....	16
9.3 Electrical installation in battery compartments.....	17
9.4 Protection against corrosion.....	18
9.5 Fixing and supports	18
9.6 Protection against electric shock.....	18
9.7 Identification labels or marking.....	19
10 Uninterruptible power systems.....	19
11 Luminaires.....	19
11.1 Degree of protection and safety requirements.....	19
11.2 Emergency and escape lighting	20
11.3 Navigation aid and obstruction light system	20
12 Heating and cooking appliances	20
12.1 Guarding of combustible materials.....	20
12.2 Position of controlgear and switchgear.....	20
12.3 Mounting of space-heating appliances	20
13 Trace and surface heating	20
13.1 General.....	20
13.2 Trace heating cables.....	20
13.3 Marking.....	21
13.4 Protection	21
13.5 Requirements for installation in hazardous areas.....	21
13.6 Mechanical protection	21
13.7 Junction boxes.....	21
14 Cables and wiring	21
14.1 General.....	21

14.2	Installation	21
14.3	Cable runs	23
14.4	Bending radius	23
14.5	Cable cleating and strapping	24
14.6	Splices and branch circuits	25
14.7	Cable glands – Blanking and drain plugs	25
14.8	Cable termination	25
14.8.1	General	25
14.8.2	Earthing of braid armour and electrostatic screen of instrument and intrinsically safe cables	27
14.9	Cable transit systems	27
14.10	Cable ladders and trays	28
15	Equipment earthing and bonding	29
15.1	General	29
15.2	Earthing of exposed-conductive-parts	29
15.3	Equipotential bonding	31
15.4	Bonding connections	31
15.5	Connections to the unit structure	31
15.6	Protection against galvanic corrosion	32
15.7	Metal coverings of cables	32
15.8	Cable racks and cable trays	32
16	Lightning protection	33
16.1	Primary lightning protection system	33
16.2	Air terminals	33
16.3	Secondary lightning protection system	34
17	Communication	34
18	Test of completed installation	35
18.1	Inspections and tests	35
18.2	Insulation testing instruments	35
18.3	Insulation resistance	36
18.3.1	Wiring	36
18.3.2	Generators and motors	36
18.3.3	Switchboards, section boards and distribution boards	36
18.4	Generators	37
18.5	Switchgear	37
18.6	Lighting, heating and galley equipment	37
18.7	Communication systems	37
18.8	Emergency and safety systems	37
18.9	Earthing	38
18.10	Voltage drop	38
18.11	Requirements of international conventions and regulations	38
19	Documentation	38
19.1	General	38
19.2	Equipment	38
19.3	Testing	38
19.4	Maintenance	39
Annex A (informative)	Performance test	40
A.1	General	40

A.2	Motor	40
A.3	Statutory requirements	40
A.4	Interference	40
A.5	Batteries	40
A.6	Ventilation of battery installations	40
Annex B (informative) Examples of cable termination		41
Bibliography		45
Figure 1 – Recommended arrangement for installation of single-core cables – Flat configuration		22
Figure 2 – Recommended arrangement for installation of single-core cables – Trefoil configuration		22
Figure B.1 – Equipment with through gland		41
Figure B.2 – Equipment where earthing is required – with Ex d braid armour clamping gland		42
Figure B.3 – Equipment where no earthing is required – with Ex d braid armour clamping gland – Termination of instrument cable		43
Figure B.4 – Equipment where earthing is required – Ex d braid armour clamping gland – Termination of power cable		44
Figure B.5 – Detail of heat shrink isolation between outer braid armour and electrostatic screen		44
Table 1 – Location of batteries versus charging power		17
Table 2 – Bending radii for cables rated up to 1,8/3 kV		24
Table 3 – Bending radii for cables rated at 3,6/6,0(7,2) kV and up to and including 18/30 kV		24
Table 4 – Enclosure-gland type		25
Table 5 – Sizes of earth continuity conductors and equipment earthing connections		30
Table 6 – Test voltages		36

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MOBILE AND FIXED OFFSHORE UNITS –
ELECTRICAL INSTALLATIONS –****Part 6: Installation****FOREWORD**

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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 fourth edition cancels and replaces the third edition published in 2013. This edition constitutes a technical revision.

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

- a) requirements for protection during equipment storage have been added;
- b) the special requirements for distribution board enclosures in accommodation spaces have been deleted;
- c) requirements for installation of UPS have been updated;
- d) requirements regarding the installation of batteries have been modified;

- e) requirements for large single-core cables for three-phase AC have been updated;
- f) requirements in relation to cable transit systems have been added;
- g) the table on the sizes of earth continuity conductors and equipment earthing connections, set out in IEC 61892-4:2007, has been included;
- h) requirements as to the installation of controls and instrumentation have been modified; clauses relevant to design and equipment have been deleted.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
18/1654/FDIS	18/1663/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.

A list of all parts in the IEC 61892 series, published 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 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.

INTRODUCTION

IEC 61892 forms a series of International Standards for safety in the design, selection, installation, maintenance and use of electrical equipment for the generation, transmission, 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 IEC 61892 incorporates and coordinates, as far as possible, existing rules and forms a code of interpretation, where applicable, of the requirements of the International Maritime Organization (IMO), and constitutes a guide for future regulations which may be prepared and a statement of practice for offshore unit owners, designers, installers and appropriate organizations.

This document is based on solutions and methods which are in current use, but it is not intended to impede development of new or improved techniques.

In this revision, voltage limitations have been removed. However, voltage limitations may be given in the referenced equipment standards. The removal of voltage limitations is considered necessary due to interconnection of, and supply from shore to offshore units. In such cases, transmission voltages up to 132 kV AC and 150 kV DC are used and higher voltages are being planned.

The IEC 61892 series aims to constitute a set of International Standards for the offshore petroleum industry, but it is not intended to prevent their use beyond petroleum installations.

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MOBILE AND FIXED OFFSHORE UNITS – ELECTRICAL INSTALLATIONS –

Part 6: Installation

1 Scope

This part of IEC 61892 provides specific requirements for the installation of electrical equipment in mobile and fixed offshore units, including pipeline, pumping or "pigging" stations, compressor stations and single buoy moorings, used in the offshore petroleum industry for drilling, production, accommodation, processing, storage and offloading purposes.

It applies to all installations, whether permanent, temporary, transportable or hand-held, to AC installations and DC installations without any voltage level limitation. Referenced equipment standards may give voltage level limitations.

This document specifies requirements such as those concerning

- protection during equipment storage and in the installation period,
- installation of generators and motors,
- installation of transformers,
- installation of switchgear and controlgear assemblies,
- installation of semiconductor converters and UPS,
- installation of secondary cells and batteries,
- installation of luminaires,
- installation of heating and cooking appliances,
- installation of trace and surface heating,
- installation of cables and wiring, both low-voltage and high-voltage cables,
- requirements in relation to earthing and bonding,
- lightning protection;
- testing of completed installation, and
- documentation.

This document does not apply to

- fixed equipment for medical purposes,
- electrical installations of tankers, and
- control of ignition sources other than those created by electrical equipment.

NOTE 1 For medical rooms, IEC 60364-7-710 provides specific requirements. Requirements for tankers are given in IEC 60092-502.

NOTE 2 Guidance on protection of non-electrical equipment can be found in ISO 80079-36, ISO 80079-37 and IMO 2009 MODU Code, 6.7.

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 60092-350:2014, *Electrical installations in ships – Part 350: General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications*

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

IEC 60825-2, *Safety of laser products – Part 2: Safety of optical fibre communication systems (OFCS)*

IEC 60825-12, *Safety of laser products – Part 12: Safety of free space optical communication systems used for transmission of information*

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

IEC 61892-1:2019, *Mobile and fixed offshore units – Electrical installations – Part 1: General requirements and conditions*

IEC 61892-3:2019, *Mobile and fixed offshore units – Electrical installations – Part 3: Equipment*

IEC 61892-7:2019, *Mobile and fixed offshore units – Electrical installations – Part 7: Hazardous areas*

IEC 61914, *Cable cleats for electrical installations*

IEC 62305-3:2010, *Protection against lightning – Part 3: Physical damage to structures and life hazard*

IEC 62485-2:2010, *Safety requirements for secondary batteries and battery installations – Part 2: Stationary batteries*

IMO, 2009 MODU Code, *Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009, 2010 edition*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

braid armour

covering formed from braided metal wires used to protect a cable from external mechanical effects

[SOURCE: IEC 60092-350:2014, 3.3, modified – The notes to entry have been deleted.]