



**SLOVENSKI STANDARD**  
**oSIST prEN ISO 13297:2009**  
**01-november-2009**

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Small craft - Electrical systems - Alternating current installations (ISO/DIS 13297:2009)

Kleine Wasserfahrzeuge - Elektrische Systeme - Wechselstromanlagen (ISO/DIS 13297:2009)

Petits navires - Systèmes électriques - Installations de distribution de courant alternatif (ISO/DIS 13297:2009)

Ta slovenski standard je istoveten z: **prEN ISO 13297**

**ICS:**

47.020.60	Ò\ dã} æ]  ^ { æ]æããã	Electrical equipment of ships and of marine structures
47.080	[ ] ã	Small craft

**oSIST prEN ISO 13297:2009**

**en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN ISO 13297**

September 2009

ICS 47.080

Will supersede EN ISO 13297:2000

English Version

## Small craft - Electrical systems - Alternating current installations (ISO/DIS 13297:2009)

Petits navires - Systèmes électriques - Installations de  
distribution de courant alternatif (ISO/DIS 13297:2009)

Kleine Wasserfahrzeuge - Elektrische Systeme -  
Wechselstromanlagen (ISO/DIS 13297:2009)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/SS T01.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (prEN ISO 13297:2009) has been prepared by Technical Committee ISO/TC 188 "Small craft".

This document is currently submitted to the parallel Enquiry.

This document will supersede EN ISO 13297:2000.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

### Endorsement notice

The text of ISO/DIS 13297:2009 has been approved by CEN as a prEN ISO 13297:2009 without any modification.

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## DRAFT INTERNATIONAL STANDARD ISO/DIS 13297

ISO/TC 188

Secretariat: SIS

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# Small craft — Electrical systems — Alternating current installations

*Petits navires — Systèmes électriques — Installations de distribution de courant alternatif*

[Revision of second edition (ISO 13297:2000)]

ICS 47.080

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### ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

**In accordance with the provisions of Council Resolution 15/1993 this document is circulated in the English language only.**

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**ISO/DIS 13297****Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13297 was prepared by Technical Committee ISO/TC 188.

This third edition cancels and replaces the second edition (ISO 13297:2000) which has been technically revised.

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# Small craft — Electrical systems — Alternating current installations

## 1 Scope

This International Standard establishes the requirements for the design, construction and installation of low-voltage alternating current electrical systems which operate at nominal voltages less than 250 V single phase on small craft up to 24 m length of hull.

## 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.

ISO 8846, *Small craft — Electrical devices — Protection against ignition of surrounding flammable gases*

ISO 9094-1, *Small craft — Fire protection — Part 1: Craft with a hull length of up to and including 15 m*

ISO 9094-2, *Small craft — Fire protection — Part 2: Craft of more than 15 m and up to and including 24 m.*

ISO 10133: 2008, *Small craft — Electrical systems — Extra low voltage d.c. installation*

ISO 10240, *Small craft - Owner's manual*

IEC 60079-0, *Electrical apparatus for explosive gas atmospheres. Part 0: General requirements.*

IEC 60309-2, *Plugs, socket-outlets and couplers for industrial purposes - Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories*

IEC 60446, *Basic and safety principles for non-machine interface marking and identification — Identification of conductors by colours or numerals*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP code)*

IEC 60947-7-1, *Low-voltage switchgear and control gear - Part 7: Ancillary equipment; Section one: Terminal blocks for copper conductors*

## 3 Terms and definitions

For the purposes of this International Standard, the following definitions apply.

### 3.1

#### **Craft's ground**

#### **Craft's earth**

ground (earth) which is established by a conducting connection (intended or accidental) with the common ground/earth (potential of the earth's surface), including any conductive part of the wetted surface of the hull

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**3.2 residual (differential) current device), RCD ground fault circuit interrupter, GFCI**  
 electro-mechanical switching device or association of devices designed to make, carry and break currents under normal service conditions and to cause the opening of contacts when the residual current attains a given value under specified conditions

NOTE RCD/GFCI serve to reduce the risk of injury to people from electrical shock hazard.

**3.3 polarization transformer**  
 transformer which automatically orientates the neutral and live conductors in the system in the same polarity orientation as the polarized system of the craft

**3.4 isolation transformer**  
 transformer with protective separation between the input and output windings and the protective conductor

**3.5 neutral conductor**  
 conductor connected to the neutral point of a system and capable of contributing to the transmission of electrical energy

**3.6 protective earthing conductor protective grounding conductor**  
 conductor, not normally carrying current, used for some measure of protection against electric shock, for electrically connecting parts of electrical equipment to the craft's ground/earth and to the shore a.c. grounding conductor through the shore power cable

NOTE Parts concerned for electrically connection to the craft's ground/earth and to the shore a.c. grounding conductor are:

- a) exposed conductive parts of electrical equipment;
- b) extraneous conductive parts;
- c) main grounding (earthing) terminal;
- d) earth electrode(s);
- e) earth point of a source, or an artificial neutral.

**3.7 live conductor**  
 conductor or conductive part intended to be energized in normal use, including a neutral conductor

**3.8 ignition-protected**  
 equipment designed and constructed to comply with ISO 8846

NOTE Examples of devices are circuit breakers, fuses, switches, instruments and indicators

**3.9 overcurrent protection device**  
 device, such as a fuse or circuit breaker, designed to interrupt the circuit when the current flow exceeds a predetermined value for a predetermined time

**3.10 panel board (switchboard)**  
 assembly of devices, such as circuit breakers, fuses, switches, instruments and indicators, for the purpose of controlling and/or distributing electrical power