INTERNATIONAL STANDARD

ISO 10133

Third edition
2012-12-15

Small craft — Electrical systems — Extra-low-voltage d.c. installations

Petits navires — Systèmes électriques — Installations à très basse tension à courant continu

Reference number
ISO 10133:2012(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

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 10133 was prepared by Technical Committee ISO/TC 188, *Small craft*.

This third edition cancels and replaces the second edition (ISO 10133:2000), which has been technically revised.

Small craft — Electrical systems — Extra-low-voltage d.c. installations

1 Scope

This International Standard establishes the requirements for the design, construction and installation of extra-low-voltage direct current (d.c.) electrical systems which operate at nominal potentials of 50 V d.c. or less on small craft of hull length up to 24 m. Conductors that are part of an outboard engine assembly and that do not extend beyond the outboard engine manufacturer's supplied cowling are not included.

Additional information to be included in the owner's manual is listed in Annex B.

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 10239, *Small craft — Liquefied petroleum gas (LPG) systems*

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

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

3 Terms and definitions

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

3.1
equipotential bonding conductor
normally non-current-carrying conductor used to put various exposed conductive parts of electrical devices and extraneous conductive parts at a substantially equal potential

3.2
engine negative terminal
terminal on the engine, starter or solenoid to which the negative battery cable is connected

3.3
main grounding
earthing point
main point or bus that provides connection to the common ground for the d.c. negative conductor, for a.c. protective grounding conductors and neutral, where relevant, and where necessary functional grounding

NOTE It may include any conductive part of the wetted surface of the hull in permanent contact with the water, depending on the overall system design.

3.4
ignition-protected equipment
equipment designed and constructed to give protection against ignition of surrounding flammable gases

NOTE See ISO 8846.