
Small craft — Lithium-ion batteries

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Small craft — Lithium-ion batteries

1 Scope

This document provides requirements and recommendations for the selection and installation of lithium-ion batteries for boats. It applies to lithium-ion batteries and to battery systems with a capacity greater than 600 Wh, installed on small craft for providing power for general electrical loads and/or to electric propulsion systems. It is primarily intended for manufacturers and battery installers.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

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

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

3.1

ampere interrupt capacity

AIC

maximum current a circuit breaker or fuse is rated to safely interrupt at a specific voltage

3.2

battery

collection of *cells* (3.7) wired in series (or series/parallel) and constituting a single physical unit

3.3

battery bank

set of *batteries* (3.2) electrically connected (parallel/series) to increase capacity and or voltage

3.4

battery capacity

C

capacity of the *battery* (3.2), expressed in ampere-hours (Ah) at a nominal voltage or in watt hours (Wh), from the manufacturer's specified fully charged to discharged voltage levels

Note 1 to entry: Ah capacity rating at a given discharge rate or time.

3.5

battery management system

BMS

system designed to protect a lithium-ion *battery* (3.2) from potentially damaging events, such as overcharging or overdischarging and high and low temperatures

3.6

battery system

battery (3.2) or batteries and all ancillary components