
**Small craft — Electrical devices —
Lightning-protection systems**

*Petits navires — Dispositifs électriques — Dispositifs de protection
contre la foudre*



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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.

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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 10134 was prepared by Technical Committee ISO/TC 188, *Small craft*.

This second edition cancels and replaces the first edition (ISO 10134:1993), which has been technically revised.

Small craft — Electrical devices — Lightning-protection systems

1 Scope

This International Standard establishes guidelines for the design, construction and installation of lightning-protection systems fitted on small craft of hull length up to 24 m.

NOTE The probability of a lightning strike varies with geographic location and time of year, but when the conditions that create an electrical discharge between clouds and the earth exist, there is nothing that can be done to prevent the lightning discharge. Craft can be struck in open water or when tied to the dock. The presence of a lightning-protection system on a craft cannot provide complete protection from equipment damage or personal injury and such protection is not implied in this International Standard.

2 Terms and definitions

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

2.1

air gap

interruption of a conductive path by a small air space not exceeding 2 mm in order to prevent the passage of low-voltage current without interrupting the flow of lightning current

2.2

air terminal

uppermost part of the lightning-protection system, intended to dissipate the charge or start the lightning ground process

2.3

lightning ground plate

lightning ground strip

means to conduct the electrical current from a boat's conductive elements to the water in which the boat floats

2.4

lightning-protective mast

conductive structure or means for electrical connection of an air terminal to the lightning ground plate

2.5

side flash

an arc-over discharge that occurs from the lightning-protection system to any metal object

2.6

lightning bonding conductor

conductor intended to be used for potential equalization between metal bodies and the lightning-protection system

2.7

lightning grounding conductor

conductor installed to connect the air terminal or the lightning-protective mast to the lightning ground plate