
Pomorska navigacijska in radiokomunikacijska oprema in sistemi - Naprave za določanje lokacije preživelih v morju (naprave za reševanje ljudi iz vode) - Minimalne zahteve, metode preskušanja in zahtevani rezultati preskusov (IEC 63269:2022)

Maritime navigation and radiocommunication equipment and systems - Maritime survivor locating devices (man overboard devices) - Minimum requirements, methods of testing and required test results (IEC 63269:2022)

Navigations- und Funkkommunikationsgeräte und -systeme für die Seeschifffahrt - Seenotrettungsgeräte zur Ortung von Überlebenden (Mann-über-Bord-Geräte) - Mindestanforderungen, Verfahren zur Prüfung und erforderliche Prüfergebnisse (IEC 63269:2022)

Matériels et systèmes de navigation et de radiocommunication maritimes - Dispositifs de localisation des survivants en mer (dispositifs en cas d'homme à la mer) - Exigences minimales, méthodes d'essai et résultats d'essai exigés (IEC 63269:2022)

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en

EUROPEAN STANDARD

EN IEC 63269

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Maritime navigation and radiocommunication equipment and systems - Maritime survivor locating devices (man overboard devices) - Minimum requirements, methods of testing and required test results
(IEC 63269:2022)

Matériels et systèmes de navigation et de radiocommunication maritimes - Dispositifs de localisation des survivants en mer (dispositifs en cas d'homme à la mer) - Exigences minimales, méthodes d'essai et résultats d'essai exigés
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Europäisches Komitee für Elektrotechnische Normung

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EN IEC 63269:2022 (E)**European foreword**

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- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2023-03-29
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2025-06-29

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The text of the International Standard IEC 63269:2022 was approved by CENELEC as a European Standard without any modification.

[SIST EN IEC 63269:2022](https://standards.iteh.ai/catalog/standards/sist/8960c8a5-5df6-4e16-bacd-d4b62c5b15bd/sist-en-iec-63269-2022)

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529	-
IEC 60945	-	Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results	EN 60945	-
IEC 61108-1	-	Maritime navigation and radiocommunication equipment and systems - Global navigation satellite systems (GNSS) - Part 1: Global positioning system (GPS) - Receiver equipment - Performance standards, methods of testing and required test results	EN 61108-1	-
IEC 61108-2	-	Maritime navigation and radiocommunication equipment and systems - Global navigation satellite systems (GNSS) - Part 2: Global navigation satellite system (GLONASS) - Receiver equipment - Performance standards, methods of testing and required test results	EN 61108-2	-
IEC 61108-3	-	Maritime navigation and radiocommunication equipment and systems - Global navigation satellite systems (GNSS) - Part 3: Galileo receiver equipment - Performance requirements, methods of testing and required test results	EN 61108-3	-
IEC 61108-5	-	Maritime navigation and radiocommunication equipment and systems - Global navigation satellite systems (GNSS) - Part 5: BeiDou navigation satellite system (BDS) - Receiver equipment - Performance requirements, methods of testing and required test results	EN IEC 61108-5	-

EN IEC 63269:2022 (E)

IMO Resolution- MSC.81(70)		Revised recommendation on testing of life-saving appliances	-
ITU-R M.1371	-	Technical characteristics for an automatic identification system using time division multiple access in the VHF maritime mobile band	-
ITU-R M.493-15	-	Digital selective-calling system for use in the maritime mobile service	-
ITU-T Recommendation O.153	-	Basic parameters for the measurement of error performance at bit rates below the primary rate	-
ST/SG/AC.10/11/Rev.7		Manual of Tests and Criteria, 7 th Revised Edition, as amended, United Nations	-

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NORME INTERNATIONALE



Maritime navigation and radiocommunication equipment and systems – Maritime survivor locating devices (man overboard devices) – Minimum requirements, methods of testing and required test results

Matériels et systèmes de navigation et de radiocommunication maritimes – Dispositifs de localisation des survivants en mer (dispositifs en cas d'homme à la mer) – Exigences minimales, méthodes d'essai et résultats d'essai exigés

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT
AND SYSTEMS – MARITIME SURVIVOR LOCATING DEVICES
(MAN OVERBOARD DEVICES) – MINIMUM REQUIREMENTS,
METHODS OF TESTING AND REQUIRED TEST RESULTS**

FOREWORD

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IEC 63269 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems. It is an International Standard.

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

Draft	Report on voting
80/1031/FDIS	80/1040/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under 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
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MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – MARITIME SURVIVOR LOCATING DEVICES (MAN OVERBOARD DEVICES) – MINIMUM REQUIREMENTS, METHODS OF TESTING AND REQUIRED TEST RESULTS

1 Scope

This document specifies the minimum requirements for aspects related to operation, construction, documentation, methods of testing and required test results for ITU-R M.2135 AMRD Group A man overboard (MOB) devices intended for alerting and locating purposes, as defined by IMO and in accordance with ITU-R M.493 Class-M. This document consists of three modules where the first module, Module A, covers general requirements and aspects. Further Module B covers AIS technologies and Module C covers DSC technologies that are required within MOB equipment.

This document incorporates the technical characteristics included in applicable ITU recommendations. Where applicable, it also takes into account the ITU Radio Regulations. This document takes into account other associated IEC International Standards and existing national standards, as applicable.

This document defines the requirements for coexistence of AIS and DSC technology incorporated within a single equipment. Only when the equipment complies with the three Modules can it be categorised as AMRD Group A equipment and be entitled to operate on channel AIS 1, channel AIS 2 and channel 70.

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

IEC 60945, *Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results*

IEC 61108-1, *Maritime navigation and radiocommunication equipment and systems – Global navigation satellite systems (GNSS) – Part 1: Global positioning system (GPS) – Receiver equipment – Performance standards, methods of testing and required test results*

IEC 61108-2, *Maritime navigation and radiocommunication equipment and systems – Global navigation satellite systems (GNSS) – Part 2: Global navigation satellite system (GLONASS) – Receiver equipment – Performance standards, methods of testing and required test results*

IEC 61108-3, *Maritime navigation and radiocommunication equipment and systems – Global navigation satellite systems (GNSS) – Part 3: Galileo receiver equipment – Performance requirements, methods of testing and required test results*

IEC 61108-5, *Maritime navigation and radiocommunication equipment and systems – Global navigation satellite systems (GNSS) – Part 5: BeiDou navigation satellite system (BDS) – Receiver equipment – Performance requirements, methods of testing and required test results*

IMO Resolution MSC.81(70), *Revised recommendation on testing of life-saving appliances*

ITU-R M.493-15, *Digital selective-calling system for use in the maritime mobile service*

ITU-R M.1371, *Technical characteristics for an automatic identification system using time division multiple access in the VHF maritime mobile band*

ITU-T Recommendation O.153, *Basic parameters for the measurement of error performance at bit rates below the primary rate*

Manual of Tests and Criteria, 7th Revised Edition (ST/SG/AC.10/11/Rev.7), as amended, United Nations

3 Terms, definitions and abbreviated terms

For the purposes of this document, the following terms, definitions and abbreviated terms 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 Terms and definitions

3.1.1

freshwater

water having a minimum of salts in solution as contrasted to ocean water which is high in salt concentration

3.1.2

activation

initial triggering of the MOB device

Note 1 to entry: The activation is when both parts of the two-step procedure are performed.

3.1.3

active mode

activated mode, when the equipment transmits in an emergency situation

3.1.4

armed

state enabling the equipment to be activated manually or automatically

3.1.5

buoyant lanyard

floating string suitable for attaching the MOB to the user's personal protective equipment

3.1.6

closed loop

individual transmission to own vessel

3.1.7

default

<value> selected by the equipment software in the absence of any operator input

Note 1 to entry: The term "default" can also apply to an action taken.

3.1.8**GNSS data**

UTC time, position COG and SOG from the GNSS

3.1.9**open loop**

transmitting to all ships (broadcast)

3.1.10**symbol**

<DSC sentence> 7 binary bits of a 10 bit DSC word that have the information content

3.2 Abbreviated terms

AIS	Automatic Identification System
BER	Bit Error Ratio
COG	Course Over Ground
CRC	Cyclic Redundancy Check
DSC	Digital Selective Calling
EIRP	Effective Isotropic Radiated Power
EPFS	Electronic Position Fixing System
EUT	Equipment Under Test
FSK	Frequency Shift Keying
GMSK	Gaussian Minimum Shift Keying
GNSS	Global Navigation Satellite System
ID	Identity
IMO	International Maritime Organization
ITU-R	International Telecommunication Union Radiocommunication sector
ITU-T	International Telecommunication Union Telecommunication sector
MMSI	Maritime Mobile Service Identity
MOB	Man OverBoard
NRZI	Non Return to Zero, Inverted
RAIM	Receiver Autonomous Integrity Monitoring
RF	Radio Frequency
SINAD	(Signal+Noise+Distortion) to (Noise+Distortion)
SOG	Speed Over Ground
SOTDMA	Self-Organized Time Division Multiple Access
UTC	Coordinated Universal Time
VDL	VHF Data Link
VHF	Very High Frequency
WGS 84	World Geodetic System 1984

4 Module A – Common requirements and related tests

4.1 Operational requirements

4.1.1 Activation

(See 4.10.2.1.1)

The MOB device shall be:

- a) capable of being easily activated by unskilled personnel;
- b) fitted with means to prevent inadvertent activation;
- c) capable of manual activation and deactivation.

4.1.2 Controls

(See 4.10.2.1.2)

To avoid inadvertent activation, the equipment shall be activated by the use of two simple, but independent mechanical actions, neither of which on its own shall activate the equipment. The second mechanical action may be replaced by an immersion sensor. Where the second action is replaced by an immersion sensor, then the first action shall ensure the equipment is armed for automatic activation when submerged.

After activation, it shall be simple to deactivate the equipment, and the means to deactivate the equipment shall be clearly marked. Means shall be provided to avoid inadvertent deactivation.

NOTE Means for preventing inadvertent deactivation can be for example prolonged push of deactivation button, pressing two buttons simultaneously or a procedure requiring two steps.

All controls necessary for the correct operation of the equipment shall be so designed that personnel wearing appropriately sized neoprene gloves having a thickness of minimum 5 mm can activate or deactivate the equipment.

The switch that operates any self-test function shall be so designed that it returns automatically when released. Activation of the self-test function shall reset automatically after completion of the test including any required transmission.

4.1.3 Indicators

(See 4.10.2.1.3)

The MOB device shall be equipped with a means which is either visual or audible, or both visual and audible, to indicate its operational status.

The equipment shall be provided with a visual and/or audible indication that equipment is activated and that signals are being emitted. The indicator should be sufficiently bright to be seen by the user in bright daylight.

NOTE Bright daylight in this context is considered to be clear sky with the indicator of the MOB device observed in direction away from the sun. Shadowing the indicator from the direct light from sun, for example by hand, is expected.

Any audible indicator should have a distinctive alarm tone with a minimum sound output of 85 dBA when measured 10 cm from the equipment.

The indicator(s) shall clearly distinguish between AIS and DSC transmissions and the following states.