



BSI Standards Publication

Maritime navigation and radiocommunication equipment and systems – Automatic Identification Systems (AIS)

Part 2: Class A shipborne equipment of the automatic identification system (AIS) – Operational and performance requirements, methods of test and required test results (IEC 61993-2:2018)

National foreword

This British Standard is the UK implementation of EN IEC 61993-2:2018. It is identical to IEC 61993-2:2018. It supersedes BS EN 61993-2:2013, which will be withdrawn on 23 August 2021.

The UK participation in its preparation was entrusted to Technical Committee EPL/80, Maritime navigation and radiocommunication equipment and systems.

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**Maritime navigation and radiocommunication equipment and systems - Automatic Identification Systems (AIS) - Part 2: Class A shipborne equipment of the automatic identification system (AIS) - Operational and performance requirements, methods of test and required test results
(IEC 61993-2:2018)**

Matériels et systèmes de navigation et de radiocommunication maritimes - Systèmes d'identification automatique (AIS) Partie 2: Équipements AIS de type Classe A embarqués - Exigences d'exploitation et de fonctionnement, méthodes d'essai et résultats d'essai exigés
(IEC 61993-2:2018)

Navigations- und Funkkommunikationsgeräte und -systeme für die Seeschifffahrt - Automatische Identifikationssysteme (AIS) - Teil 2: Geräte der Klasse A des universellen automatischen Identifikationssystems (AIS) für Schiffe - Betriebs- und Leistungsanforderungen, Prüfverfahren und geforderte Prüfergebnisse
(IEC 61993-2:2018)

This European Standard was approved by CENELEC on 2018-08-23. CENELEC 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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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

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The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-05-23
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-08-23

This document supersedes EN 61993-2:2013.

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The text of the International Standard IEC 61993-2:2018 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61097-14	NOTE	Harmonized as EN 61097-14
IEC 61108-1	NOTE	Harmonized as EN 61108-1
IEC 61108-2	NOTE	Harmonized as EN 61108-2
IEC 61162-3	NOTE	Harmonized as EN 61162-3
IEC 61924-2	NOTE	Harmonized as EN 61924-2
IEC 62287-1	NOTE	Harmonized as EN 62287-1
IEC 62320-1	NOTE	Harmonized as EN 62320-1
IEC 62320-2	NOTE	Harmonized as EN 62320-2

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 60945	2002	Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results	EN 60945	2002
IEC 61108	series	Maritime navigation and radiocommunication equipment and systems - Global navigation satellite systems (GNSS)	EN 61108	series
IEC 61162-1	2016	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 1: Single talker and multiple listeners	EN 61162-1	2016
IEC 61162-2	-	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 2: Single talker and multiple listeners, high-speed transmission	EN 61162-2	-
IEC 61162-450	2018	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 450: Multiple talkers and multiple listeners - Ethernet interconnection	EN IEC 61162-450	2018
IEC 61162-460	-	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 460: Multiple talkers and multiple listeners - Ethernet interconnection - Safety and security	EN IEC 61162-460	-
IEC 62288	-	Maritime navigation and radiocommunication equipment and systems - Presentation of navigation-related information on shipborne navigational displays - General requirements, methods of testing and required test results	EN 62288	-
IEC 62388	-	Maritime navigation and radiocommunication equipment and systems - Shipborne radar - Performance requirements, methods of testing and required test results	EN 62388	-

EN IEC 61993-2:2018 (E)

IEC 62923-1	-	Maritime navigation and radiocommunication equipment and systems - Bridge alert management - Part 1: Operational and performance requirements, methods of testing and required test results	-	-
IEC 62923-2	-	Maritime navigation and radiocommunication equipment and systems - Bridge alert management - Part 2: Alert and cluster identifiers and other additional features	EN 62923-2 ¹	-
ITU-R Recommendation M.1084-5	2012	Interim solutions for improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service	-	-
ITU-R Recommendation M.1371-5	2014	Technical characteristics for an automatic identification system using time-division multiple access in the VHF maritime mobile band	-	-
ITU-R Recommendation M.493-14	-	Digital selective-calling system for use in the maritime mobile service	-	-
ITU-R Recommendation M.541-10	-	Operational procedures for the use of digital selectivecalling equipment in the maritime mobile service	-	-
ITU-R Recommendation M.825-3	-	Characteristics of a transponder system using digital selective calling techniques for use with vessel traffic services and ship-to-ship identification	-	-
ITU-T Recommendation O.153	-	Basic parameters for the measurement of error performance at bit rates below the primary rate	-	-
IMO Resolution-A.694 (17)		General requirements for shipborne radio equipment forming part of the Global Maritime Distress and Safety System (GMDSS) and for electronic navigational aids		
IMO Resolution- MSC.302(87)		Performance standards for Bridge Alert Management		
IMO Resolution- MSC.43(64)		Guidelines and Criteria for Ship Reporting Systems (as amended by MSC.111(73))		
IMO Resolution- MSC.74(69)		Performance standards for an Universal shipborne automatic identification systems (AIS)		

¹ Under preparation. Stage at the time of publication: FprEN 62923-2:2018.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT
AND SYSTEMS – AUTOMATIC IDENTIFICATION SYSTEMS (AIS) –****Part 2: Class A shipborne equipment of the automatic
identification system (AIS) – Operational and performance
requirements, methods of test and required test results**

FOREWORD

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International Standard IEC 61993-2 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems.

This third edition cancels and replaces the second edition published in 2012. This edition constitutes a technical revision.

This edition includes the following technical changes with respect to the previous edition:

- a) it incorporates the technical characteristics included in Recommendation ITU-R M.1371-5:2014;
- b) it introduces the concept of locating device groups in order to include EPIRB AIS and MOB AIS in addition to AIS SART;
- c) it adds security features for configuration input by introducing a new sentence SSA;

- d) it adds optional implementation of IEC 61162-450/460 interfaces;
- e) it adds requirements for bridge alert management (BAM);
- f) it introduces extended dimension values used by towing vessels;
- g) it adds a software update requirement.

The text of this document is based on the following documents:

FDIS	Report on voting
80/888/FDIS	80/890/RVD

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61993 series, published under the general title *Maritime navigation and radiocommunication equipment and systems – Automatic identification systems (AIS)*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://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
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – AUTOMATIC IDENTIFICATION SYSTEMS (AIS) –

Part 2: Class A shipborne equipment of the automatic identification system (AIS) – Operational and performance requirements, methods of test and required test results

1 Scope

This part of IEC 61993 specifies the minimum operational and performance requirements, methods of testing and required test results conforming to performance standards adopted by IMO in Resolution MSC.74(69):1998, Annex 3. This document incorporates the applicable technical characteristics of Class A shipborne equipment included in Recommendation ITU-R M.1371 and takes into account the ITU Radio Regulations, where applicable. In addition, it takes account of IMO Resolution A.694(17) to which IEC 60945 is associated. When a requirement in this document is different from IEC 60945, the requirement of this document takes precedence.

This document also specifies the minimum requirements both for the means to input and display data and for the interfaces to other equipment suitable to be used as means of input and display data.

NOTE All text of this document that is identical to that in IMO resolution MSC.74(69):1998, Annex 3, or to that in ITU-R Recommendation M.1371 is printed in *italics*, and references to the resolution (abbreviated to "A3") or the recommendation (abbreviated to "M.1371") and paragraph numbers are indicated in parentheses, for instance (A3/3.3) or (M.1371-5/A2-3.3) respectively.

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 60945:2002, *Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results*

IEC 61108 (all parts), *Maritime navigation and radiocommunication equipment and systems – Global navigation satellite systems (GNSS)*

IEC 61162-1:2016, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 1: Single talker and multiple listeners*

IEC 61162-2, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 2: Single talker and multiple listeners, high-speed transmission*

IEC 61162-450:2018, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 450: Multiple talkers and multiple listeners – Ethernet interconnection*

IEC 61162-460, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 460: Multiple talkers and multiple listeners – Ethernet interconnection – Safety and security*