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Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 1: Single talker and multiple listeners

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This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/24

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EN IEC 61162-1

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English Version

Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 1: Single talker and multiple listeners (IEC 61162-1:2024)

Matériels et systèmes de navigation et de radiocommunication maritimes - Interfaces numériques - Partie 1: Émetteur unique et récepteurs multiples (IEC 61162-1:2024)

Navigations- und Funkkommunikationsgeräte und -systeme für die Seeschifffahrt - Digitale Schnittstellen - Teil 1: Ein Datensender und mehrere Datenempfänger (IEC 61162-1:2024)

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The text of document 80/1093/FDIS, future edition 6 of IEC 61162-1, prepared by IEC/TC 80 "Maritime navigation and radiocommunication equipment and systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61162-1:2024.

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IEC 61023	NOTE Approved as EN 61023
IEC 61108-1	NOTE Approved as EN 61108-1
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IEC 61108-4	NOTE Approved as EN 61108-4
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IEC 62923-1	NOTE Approved as EN IEC 62923-1

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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60945	-	Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results	EN 60945	-
ISO/IEC 8859-1	1998	Information technology - 8-bit single-byte coded graphic character sets - Part 1: Latin alphabet No.1	-	-
ITU-T Recommendation X.27/V.11	1996	Electrical characteristics for balanced double-current interchange circuits operating at data signalling rates up to 10 Mbit/s	-	-

IEC 61162-1

Edition 6.0 2024-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Maritime navigation and radiocommunication equipment and systems – Digital interfaces –
Part 1: Single talker and multiple listeners

Matériels et systèmes de navigation et de radiocommunication maritimes – Interfaces numériques –
Partie 1: Émetteur unique et récepteurs multiples

IEC 61162-1:2024-04(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – DIGITAL INTERFACES –

Part 1: Single talker and multiple listeners

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IEC 61162-1 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems. It is an International Standard.

This sixth edition cancels and replaces the fifth edition published in 2016. This edition constitutes a technical revision.

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

a) alternative hardware is given in 5.1 which may now be as specified in this document or as specified in IEC 61162-2;
b) the data transmission rate given in Clause 6 is now configurable. The default remains as 4 800 (bits/s) but higher rates may be provided;

c) new identifiers have been added to Table 4;

d) new sentences AGL, EPM, GDC, NLS, SEL, SLM, SMV and VBC have been added;

e) revisions have been made to ABK, ABM, ACN, ALC, ALF, ARC, BBM, DDC, DTM, EPV, FIR, GBS, GFA, GLL, GNS, GRS, GSA, GST, GSV, HRM, NRX, POS, RLM, ROR, RSA, TLB, TTD, VSD and XDR;

f) the previous Annex A, Glossary, has been deleted as being of historical interest.

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

Draft	Report on voting
80/1093/FDIS	80/1097/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/publications.

A list of all parts in the IEC 61162 series, published under the general title *Maritime navigation and radiocommunication equipment and systems – Digital interfaces*, 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

IMPORTANT – The "colour inside" logo on the cover page of this document 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.

INTRODUCTION

The IEC 61162 series consists of 5 parts which specify digital interfaces for application in marine navigation, radiocommunication and system integration, as follows:

IEC 61162-1: Single talker and multiple listeners;

IEC 61162-2: Single talker and multiple listeners, high speed transmission;

IEC 61162-3: Serial data instrument network;

IEC 61162-450: Multiple talkers and multiple listeners – Ethernet interconnection;

IEC 61162-460: Multiple talkers and multiple listeners – Ethernet interconnection – Safety and security

IEC technical committee 80 interface standards are developed with input from manufacturers, private and government organisations and equipment operators. The information is intended to meet the needs of users at the time of publication, but users should recognise that as applications and technology change, interface standards should change as well. Users of this document are advised to immediately inform the IEC of any perceived inadequacies therein.

The first edition of IEC 61162-1 was published in 1995. The second edition published in 2000 removed some sentences which were no longer in use, added some new sentences and included details of the ship equipment defined in IMO resolutions together with appropriate sentences for communication between them. This information was subsequently removed from the third edition when it became the practice to specify the sentence formatters in the individual standards for equipment.

The third edition published in 2007 introduced a re-arrangement of the text and new sentences particularly to support the automatic identification system and the voyage data recorder. The third edition also introduced a further type of start of sentence delimiter. The conventional delimiter "$" was retained for the conventional sentences which are now called "parametric sentences". The new delimiter "!" identifies sentences that conform to special purpose encapsulation.

The fourth edition removed some sentences which were not in use, added some new sentences for new applications and made some corrections and additions. In particular, the sentences of relevance to satellite navigation receivers were expanded to facilitate the description of new satellite systems.

The fifth edition also removed some sentences which were no longer in use, added some new sentences for new applications and made some corrections and additions.

This sixth edition adds some new sentences for new applications and makes some corrections and additions.

This edition has been aligned where appropriate and possible with NMEA 0183 version 4.10.

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – DIGITAL INTERFACES –

Part 1: Single talker and multiple listeners

1 Scope

This part of IEC 61162 contains the requirements for data communication between maritime electronic instruments, navigation and radiocommunication equipment when interconnected via an appropriate system.

This document is intended to support one-way serial data transmission from a single talker to one or more listeners. These data are in printable ASCII form and can include information such as position, speed, depth, frequency allocation, etc. Typical messages can be from about 11 to a maximum of 79 characters in length and generally require transmission no more rapidly than one message per second.

The electrical definitions in this document are not intended to accommodate high-bandwidth applications such as radar or video imagery, or intensive database or file transfer applications. Since there is no provision for guaranteed delivery of messages and only limited error checking capability, it is important this document is used with caution in all safety applications.

For applications where a faster transmission rate is necessary, IEC 61162-2 applies.

For applications to shore based equipment of the automatic identification system (AIS) the IEC 62320 series applies.

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

ISO/IEC 8859-1:1998, *Information technology - 8-bit single-byte coded graphic character sets - Part 1: Latin alphabet No. 1*

ITU-T Recommendation X.27/V.11:1996, *Electrical characteristics for balanced double-current interchange circuits operating at data signalling rates up to 10 Mbit/s*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN