



SLOVENSKI STANDARD SIST EN 62288:2008

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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 (IEC 62288:2008)

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Navigations- und Funkkommunikationsgeräte und -systeme für die Seeschifffahrt - Darstellung von navigationsbezogenen Informationen auf Navigationsanzeigen für Schiffe - Allgemeine Anforderungen, Prüfverfahren und geforderte Prüfergebnisse (IEC 62288:2008)

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Équipements et systèmes de navigation et de radiocommunications maritimes - Présentation des informations relatives à la navigation - Exigences générales, méthodes d'essai et résultats d'essai exigibles (CEI 62288:2008)

Ta slovenski standard je istoveten z: EN 62288:2008

ICS:

47.020.70	Navigacijska in krmilna oprema	Navigation and control equipment
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SIST EN 62288:2008

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 62288

September 2008

ICS 47.020.70

English version

**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
(IEC 62288:2008)**

Équipements et systèmes de navigation
et de radiocommunications maritimes -
Présentation des informations
relatives à la navigation -
Exigences générales, méthodes d'essai
et résultats d'essai exigibles
(CEI 62288:2008)

Navigations-
und Funkkommunikationsgeräte
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Darstellung von navigationsbezogenen
Informationen auf Navigationsanzeigen
für Schiffe -
Allgemeine Anforderungen, Prüfverfahren
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This European Standard was approved by CENELEC on 2008-08-01. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in two official versions (English and German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 80/527/FDIS, future edition 1 of IEC 62288, prepared by IEC TC 80, Maritime navigation and radiocommunication equipment and systems, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62288 on 2008-08-01.

This standard supports the performance standards for the presentation of navigation-related information on shipborne navigational displays, adopted by the IMO in resolution MSC.191(79) in December 2004.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2009-05-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-08-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62288:2008 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:

- | | |
|-------------|--|
| ISO 9241-8 | NOTE Harmonized as EN ISO 9241-8:1997 (not modified). |
| ISO 9241-12 | NOTE Harmonized as EN ISO 9241-12:1998 (not modified). |

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<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 61162	Series	Maritime navigation and radiocommunication equipment and systems - Digital interfaces	EN 61162	Series
IEC 61174	- ¹⁾	Maritime navigation and radiocommunication equipment and systems - Electronic chart display and information system (ECDIS) - Operational and performance requirements, methods of testing and required test results	EN 61174	2001 ²⁾
IEC 61966-4	2000	Multimedia systems and equipment - Colour measurement and management - Part 4: Equipment using liquid crystal display panels	EN 61966-4	2000
IEC 62065	2002	Maritime navigation and radiocommunication equipment and systems - Track control systems - Operational and performance requirements, methods of testing and required test results	EN 62065	2002
IEC 62388	2007	Maritime navigation and radio-communication equipment and systems - Shipborne radar - Performance requirements, methods of testing and required test results	EN 62388	2008
IHO S-52	1996	Specifications for chart content and display aspects of ECDIS	-	-
IHO S-52 Appendix 1	1996	Guidance on updating the electronic navigational chart	-	-
IHO S-52 Appendix 2	2004	Colour and symbol specifications for ECDIS	-	-
IMO Resolution A.694 (17)	1991	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.191(79)	2004	Performance standards for the presentation of navigation-related information on shipborne navigational displays	-	-

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IMO Resolution MSC.192(72)	2004	Revised performance standards for radar equipment	-	-
IMO Resolution MSC.232(82)	2006	Revised performance standards for electronic chart display and information systems (ECDIS)	-	-
IMO SN/Circ.243	2004	Guidelines for the presentation of navigation related symbols, terms and abbreviations	-	-
ISO 13406-2	2001	Ergonomic requirements for work with visual displays based on flat panels - Part 2: Ergonomic requirements for flat panel displays	EN ISO 13406-2	2001
ISO 80416-4	2005	Basic principles for graphical symbols for use on equipment - Part 4: Guidelines for the adaptation of graphical symbols for use on screens and displays (icons)	-	-
VESA-2001-6	2001	Flat Panel Display Measurements (FPDM)	-	-

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INTERNATIONAL STANDARD

**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**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**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**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62288 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems.

This standard supports the performance standards for the presentation of navigation-related information on shipborne navigational displays, adopted by the IMO in resolution MSC.191(79) in December 2004.

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

FDIS	Report on voting
80/527/FDIS	80/540/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 publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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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

1 Scope

This International Standard specifies the general requirements, methods of testing, and required test results, for the presentation of navigation-related information on shipborne navigational displays in support of IMO resolution MSC.191(79).

(MSC191/1) IMO resolution MSC.191(79) *harmonizes the requirements for the presentation of navigation-related information on the bridge of a ship to ensure that all navigational displays adopt a consistent human machine interface philosophy and implementation.*

(MSC191/1) IMO resolution MSC.191(79) *supplements and, in the case of a conflict, takes priority over, the presentation requirements of the individual performance standards adopted by the IMO for relevant navigational systems and equipment and covers the presentation of navigation-related information by equipment for which Performance Standards have not been adopted by the IMO.*

This standard also addresses the guidelines for the presentation of navigation-related symbols, terms and abbreviations in Safety of Navigation circular SN/Circ.243 together with some requirements published in resolution MSC.192(79) on radar; resolution MSC.232(82) on ECDIS; and ergonomic criteria published in circular MSC/Circ.982.

The symbols from SN/Circ.243 are reproduced and expanded upon in Annex A. The terms and abbreviations from SN/Circ.243 are reproduced and expanded upon in Annex B. Additional guidance on display and dialogue design from MSC/Circ.982 is listed by reference in Annex C.

Some requirements set forth in MSC.191(79) duplicate requirements set forth in other IMO documents (for example, Resolutions A.694(17), MSC.192(79), MSC.232(82), etc.) or in the IEC standards further specifying the methods of test and required test results for those requirements (for example, IEC 60945, IEC 61174, IEC 62388, etc.). Where a requirement in this standard duplicates a requirement in another standard, the method(s) of test for that requirement may refer to the other standard.

NOTE Manufactures may offer relevant test data from compliance tests to other standards such as IEC 60945, IEC 61174, IEC 62388, etc. as evidence of compliance with appropriate tests of this standard.

This standard is organized so that each group of requirements is immediately followed by a clause identifying the method(s) of test. The methods of test are derived from ISO 9241-12 on the presentation of information on visual displays. Guidance on testing is provided in Annex D.

NOTE All text in this standard whose wording is identical to text contained in an IMO document is printed in *italics*. Reference to the document is noted at the beginning of the paragraph. The notation contains a prefix referring to the document and a suffix with the paragraph number from the document (for example, (MSC191/1); (SN243/1), etc.).

1.1 Purpose

(MSC191/2) This standard *specifies the presentation of navigational information on the bridge of a ship, including the consistent use of navigational terms, abbreviations, colours and symbols, as well as other presentation characteristics.*

(MSC191/2) This standard *also addresses the presentation of information related to specific navigational tasks by recognising user selected presentations in addition to presentations required by the relevant individual performance standards adopted by the IMO.*

1.2 Application

(MSC191/3) This standard *is applicable to any display equipment associated with the navigational systems and equipment for which individual performance standards have been adopted by the IMO.* It addresses the stand-alone displays for radar and ECDIS, the multifunction displays used in IBS and INS and composite presentations that integrate information derived from two or more systems. This standard *also addresses display equipment associated with navigational systems and equipment for which individual performance standards have not been adopted by the IMO.*

NOTE Some IEC standards may individually include display requirements in conformity with IMO resolution MSC.191(79).

(MSC191/3) *The general principles and the physical characteristics specified in Clauses 4 and 7, respectively, of this standard are applicable to all displays on the bridge of a ship.*

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2 Normative references (standards.iteh.ai)

The following referenced documents are indispensable for the application 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 tests of testing and required test results*

IEC 61162, (all parts) *Maritime navigation and radiocommunication equipment and systems - Digital interfaces*

IEC 61174, *Maritime navigation and radiocommunication equipment and systems – Electronic chart display and information system (ECDIS) – Operational and performance requirements, methods of testing and required test results*

IEC 61966-4:2000, *Multimedia systems and equipment – Colour measurement and management – Part 4: Equipment using liquid crystal display panels*

IEC 62065:2002, *Maritime navigation and radiocommunication equipment and systems – Track control systems – Operational and performance requirements, methods of testing and required test results*

IEC 62388:2007, *Maritime navigation and radiocommunication equipment and systems – Shipborne radar – Performance requirements, methods of testing and required test results*

IHO S-52:1996, *Specifications for chart content and display aspects of ECDIS*

IHO S-52 Appendix 1:1996, *Guidance on updating the electronic navigational chart*

IHO S-52 Appendix 2:2004, *Colour and symbol specifications for ECDIS*