



**NSAI**  
Standards

Irish Standard  
I.S. EN 61174:2015

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

## I.S. EN 61174:2015

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN 61174:2015 is the adopted Irish version of the European Document EN 61174:2015, 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

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**EUROPEAN STANDARD**

**EN 61174**

**NORME EUROPÉENNE**

**EUROPÄISCHE NORM**

November 2015

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Supersedes EN 61174:2008

English Version

**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 61174:2015)**

Matériels et systèmes de navigation et de  
radiocommunication maritimes - Systèmes de visualisation  
des cartes électroniques et d'information (ECDIS) -  
Exigences d'exploitation et de fonctionnement, méthodes  
d'essai et résultats d'essai exigés  
(IEC 61174:2015)

Navigations- und Funkkommunikationsgeräte und -systeme  
für die Seeschifffahrt - Elektronisches Kartendarstellungs-  
und Informationssystem (ECDIS) - Betriebs- und  
Leistungsanforderungen, Prüfverfahren und geforderte  
Prüfergebnisse  
(IEC 61174:2015)

This European Standard was approved by CENELEC on 2015-09-23. 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.

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

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## European foreword

The text of document 80/761/FDIS, future edition 4 of IEC 61174, 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 61174:2015.

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) 2016-06-23
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-09-23

This document supersedes EN 61174:2008.

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The text of the International Standard IEC 61174:2015 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 61162 series	NOTE Harmonized in EN 61162 series
IEC 61162-2:1998	NOTE Harmonized as EN 61162-2:1998 (not modified).
IEC 61162-3	NOTE Harmonized as EN 61162-3.
IEC 61162-460	NOTE Harmonized as EN 61162-460.
IEC 61966-4:2000	NOTE Harmonized as EN 61966-4:2000 (not modified).
IEC 62616:2010	NOTE Harmonized as EN 62616:2010 (not modified).
ISO 9001	NOTE Harmonized as EN ISO 9001.
ISO 9241-12	NOTE Harmonized as EN ISO 9241-12.

## Annex ZA

(normative)

### Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60945	-	Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results	EN 60945	-
IEC 61162-1	-	Maritime navigation and radiocommunication equipment and systems - Digital interfaces -- Part 1: Single talker and multiple listeners	EN 61162-1	-
IEC 61162-450	2011	Maritime navigation and radiocommunication equipment and systems - Digital interfaces -- Part 450: Multiple talkers and multiple listeners - Ethernet interconnection	EN 61162-450	2011
IEC 61924-2	2012	Maritime navigation and radiocommunication equipment and systems - Integrated navigation systems -- Part 2: Modular structure for INS - Operational and performance requirements, methods of testing and required test results	EN 61924-2	2013
IEC 61996-1	2013	Maritime navigation and radiocommunication equipment and systems - Shipborne voyage data recorder (VDR) -- Part 1: Performance requirements, methods of testing and required test results	EN 61996-1	2013

EN 61174:2015

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62288	2014	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	2014
IEC 62388	2013	Maritime navigation and radiocommunication equipment and systems - Shipborne radar - Performance requirements, methods of testing and required test results	EN 62388	2013
ISO 8601	-	Data elements and interchange formats - Information interchange - Representation of dates and times	-	-
IHO M-3	2007	Resolutions of the IHO, Chapter A, Section-3, Technical Resolution 3.11	-	-
IHO S-52 Annex A	2014	IHO Presentation Library for ECDIS	-	-
IHO S-52 appendix 1	2012	Guidance on updating the electronic navigational chart	-	-
IHO S-52	2014	Specifications for Chart Content and Display Aspects of ECDIS	-	-
IHO S-57 appendix B.1	-	ENC product specification	-	-
IHO S-57	-	Transfer standard for digital hydrographic data	-	-
IHO S-61	1999	Product specification for raster navigational charts (RNC)	-	-
IHO S-63	-	IHO data protection scheme	-	-
IHO S-64	-	Test data sets for ECDIS	-	-
IMO 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 MSC.191(79)	2004	Performance standards for the presentation of navigation-related information on shipborne navigational displays	-	-
IMO MSC.232(82)	2006	Adoption of the revised performance standards for electronic chart display and information systems (ECDIS)	-	-
IMO MSC.252(83)	-	Performance standards for integrated navigation systems (INS)	-	-
IMO MSC/Circular 982	2000	Guidelines on ergonomic criteria for bridge equipment and layout	-	-
IMO SN.1/Circular 266	2007	Maintenance of electronic chart display and information system (ECDIS) software	-	-
IMO SOLAS		Convention for safety of life at sea (SOLAS)	-	-





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# **INTERNATIONAL STANDARD**



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**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**



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**IEC 61174**

Edition 4.0 2015-08

# INTERNATIONAL STANDARD



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**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**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### **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**

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International Standard IEC 61174 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems.

This fourth edition of IEC 61174 cancels and replaces the third edition published in 2008, of which it constitutes a technical revision.

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

- updated references are provided to IHO publications and test methods are updated to IHO test data sets;
- requirements have been added for display of radar and AIS information;

- new interface requirements have been added for BNWAS, VDR, BAM, MSI, INS and route transfer;
- a requirement for an anchor watch has been added;
- additional test methods are specified for operation of ECDIS beyond the normal range between 85 degrees South latitude and 85 degrees North latitude.

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

FDIS	Report on voting
80/761/FDIS	80/767/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.

**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 –

### Electronic chart display and information system (ECDIS) – Operational and performance requirements, methods of testing and required test results

#### 1 Scope

This International Standard specifies the performance requirements, methods of testing and required test results of equipment conforming to performance standards not inferior to those adopted by the IMO in resolution MSC.232(82).

This standard is based upon the performance standards of IMO resolution MSC.232(82), and is also associated with IMO resolution A.694(17) and IEC 60945. Reference is made, where appropriate, to IMO resolution MSC.232(82), and all subclauses whose wording is identical to that in the resolution are printed in *italics*.

In association with the above IMO resolution MSC.232(82), are the International Hydrographic Organization (IHO) publications<sup>1</sup>. IHO S-32, IHO S-52, IHO S-57, IHO S-61, IHO S-63 and IHO S-64. This standard has included extracts from the above publications where they are applicable to this equipment. Where reference is made, all subclauses whose wording is identical to that in the publications, are printed in *italics*.

*(232/A2.1) These performance standards should apply to all ECDIS equipment carried on all ships as follows:*

- *dedicated standalone workstation.*
- *a multifunction workstation as part of an INS.*

*(232/A2.2) These performance standards apply to ECDIS mode of operation, ECDIS in RCDS mode of operation as specified in Annex G and ECDIS backup arrangements as specified in Annex F.*

*(232/A2.3) Requirements for structure and format of the chart data, encryption of chart data as well as the presentation of chart data are within the scope of relevant IHO standards, including those listed in the normative references.*

The requirements of this standard are not intended to prevent the use of new techniques in equipment and systems, provided the facilities offered are not inferior to those stated.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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*

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<sup>1</sup> IHO publications are available from <http://www.iho.int>, together with any supplementary information.



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