



NSAI
Standards

Irish Standard
I.S. EN 62376:2011

Maritime navigation and
radiocommunication equipment and
systems - Electronic chart system (ECS)
- Operational and performance
requirements, methods of testing and
required test results (IEC 62376:2010
(EQV))

I.S. EN 62376:2011

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 62376

February 2011

ICS 47.020.70

English version

**Maritime navigation and radiocommunication equipment and systems -
Electronic chart system (ECS) -
Operational and performance requirements, methods of testing and
required test results
(IEC 62376:2010)**

Matériels et systèmes de navigation et de
radiocommunication maritimes -
Système constitué par les cartes
électroniques (ECS) -
Exigences d'exploitation et de
fonctionnement, méthodes d'essai et
résultats d'essai exigés
(CEI 62376:2010)

Navigations- und
Funkkommunikationsgeräte und -systeme
für die Seeschifffahrt -
Elektronisches Kartensystem (ECS) -
Betriebs- und Leistungsanforderungen,
Prüfverfahren und geforderte
Prüfergebnisse
(IEC 62376:2010)

This European Standard was approved by CENELEC on 2011-01-02. 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 three official versions (English, French, 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, Croatia, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

I.S. EN 62376:2011

EN 62376:2011

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Foreword

The text of document 80/598/FDIS, future edition 1 of IEC 62376, 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 62376 on 2011-01-02.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) 2011-10-02
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2014-01-02

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62376:2010 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 (not modified).
IEC 61162-2	NOTE	Harmonized as EN 61162-2.
IEC 61993-2:2002	NOTE	Harmonized as EN 61993-2:2002 (not modified).
IEC 62252:2004	NOTE	Harmonized as EN 62252:2004 (not modified).
IEC 62287-1:2006	NOTE	Harmonized as EN 62287-1:2006 (not modified).
ISO 9241-12:1998	NOTE	Harmonized as EN ISO 9241-12:1998 (not modified).

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 61162-1	-	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 1: Single talker and multiple listeners	EN 61162-1	-
IEC 61162-3	-	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 3: Serial data instrument network	EN 61162-3	-
IEC 61174	2008	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	2008
IEC 62288	2008	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	2008
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 Annex A	2008	IHO Presentation Library for ECDIS	-	-
IHO S-60	2003	User's Handbook on Datum Transformations involving WGS 84	-	-
IHO S-61	1999	Product specification for raster navigational charts (RNC)	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MARITIME NAVIGATION AND RADIOCOMMUNICATION
EQUIPMENT AND SYSTEMS –****Electronic chart system (ECS) –
Operational and performance requirements,
methods of testing and required test results**

FOREWORD

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IEC 62376 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems.

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

FDIS	Report on voting
80/598/FDIS	80/604/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.

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The committee has decided that the contents of this publication will remain unchanged until the stability 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.

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS –

Electronic chart system (ECS) – Operational and performance requirements, methods of testing and required test results

1 Scope

This International Standard specifies the minimum operational and performance requirements and methods of testing for ECS. ECSs are designed or adapted for use as navigation information systems on vessels not required to comply with Chapter V of the International Convention for the Safety of Life at Sea (SOLAS).

Different types of vessels, for example, a non-SOLAS passenger vessel, a small fishing vessel or a recreational vessel, which operate in different environments, need to be equipped with navigational systems providing functionality to meet their needs. If the full functionality of ECDIS according to IEC 61174 is considered to be unnecessary, ECS may be suitable for a navigation information system for these vessels. Governments may consider requiring the carriage of ECS for these vessels under local arrangements.

In order to provide a standard that can be used to apply different levels of navigational functionality, three classes of ECS are defined.

- Class “A” ECS are designed or adapted for use as a primary navigation information system.
- Class “B” ECS are designed or adapted for use as a navigation information system where less navigational functionality is required than Class “A”.
- Class “C” ECS are designed or adapted for use as a navigation information system with minimal functionality intended to plot and monitor a vessel’s position.

Within this International Standard, the beginning of each paragraph indicates the applicability to ECS Class(es). Paragraphs marked “(A B C)” apply to all Classes; paragraphs marked “(A B)” or “(B C)” apply only to those specific combinations of Classes; and paragraphs marked “(A)”, “(B)” or “(C)” apply only to those individual Classes.

For a Class “A” and Class “B” ECS, adequate back-up arrangements may be required to ensure safe navigation in the event of an ECS failure. For a Class “A” ECS, an additional Class “A” ECS may be used as the back-up. Alternatively, Class “B” ECS are intended to meet the minimum requirements for adequate back-up arrangements for Class “A” ECS. For a Class “B” ECS, an additional Class “B” ECS may be used as the back-up. Class “C” ECS are not intended to meet the minimum requirements for adequate back-up arrangements for Class “A” or Class “B” ECS.

Guidance for testing ECS is given in Annex A.

2 Normative references

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