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Irish Standard  
I.S. EN 61924-2:2013

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 (IEC 61924-2:2012  
(EQV))

## I.S. EN 61924-2:2013

*Incorporating amendments/corrigenda issued since publication:*

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**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  
(IEC 61924-2:2012)**

Matériels et systèmes de navigation et de  
radiocommunication maritimes -  
Systèmes de navigation intégrés -  
Partie 2: Structure modulaire  
pour les INS -  
Exigences d'exploitation et de  
fonctionnement, méthodes et résultats  
d'essais exigés  
(CEI 61924-2:2012)

Navigations- und  
Funkkommunikationsgeräte und -systeme  
für die Seeschifffahrt -  
Integrierte Navigationssysteme -  
Teil 2: Modulare Struktur für INS -  
Betriebs- und Leistungsanforderungen,  
Prüfverfahren und geforderte  
Prüfergebnisse  
(IEC 61924-2:2012)

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

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

## Foreword

The text of document 80/677/FDIS, future edition 1 of IEC 61924-2, 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 61924-2:2013.

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) 2013-10-09
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-01-09

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## Endorsement notice

The text of the International Standard IEC 61924-2:2012 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 60812:2006	NOTE	Harmonized as EN 60812:2006 (not modified).
IEC 61924:2006	NOTE	Harmonized as EN 61924:2006 (not modified).
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 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 + corr. April	2002 2008	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 61162-1	2010	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 1: Single talker and multiple listeners	EN 61162-1	2011
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 61162-3	-	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 3: Serial data instrument network	EN 61162-3	-
IEC 61162-450	-	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 450: Multiple talkers and multiple listeners - Ethernet interconnection	EN 61162-450	-
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 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 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
IEC 62616 + corr. August	2010 2012	Maritime navigation and radiocommunication equipment and systems - Bridge navigational watch alarm system (BNWAS)	EN 62616	2010

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 11674	2006	Ships and marine technology - Heading control systems	-	-
IMO 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/ICAO	-	International Aeronautical and Maritime Search and Rescue Manual (IAMSAR Manual) Volume 3	-	-
IMO MSC/ Circular 982	-	Guidelines on ergonomic criteria for bridge equipment and layout	-	-
IMO MSC.191(79)	-	Performance standards for the presentation of navigation-related information on shipborne navigational displays	-	-
IMO MSC.232(82)	-	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.302(87)	-	Performance standards for Bridge Alert Management (BAM)	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**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**

FOREWORD

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International Standard IEC 61924-2 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
80/677/FDIS	80/684/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.

A list of all parts in the IEC 61924 series, published under the general title *Maritime navigation and radiocommunication equipment and systems – Integrated navigation systems*, can be found on the IEC website.

Text in *italics* signifies that the wording is identical to that of the referenced IMO resolution and/or the SOLAS convention.

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 standard may be issued at a later date.

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# 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

### 1 Scope

This part of IEC 61924 specifies the minimum requirements for the design, manufacture, integration, methods of testing and required test results for an integrated navigation system (INS) to comply with the International Maritime Organization (IMO) requirements of Resolution MSC.252(83). In addition, it takes account of IMO Resolution A.694(17) to which IEC 60945 is associated. When a requirement in this standard is different from IEC 60945, the requirement of this standard takes precedence.

NOTE 1 IEC 61924:2006 specifies the minimum requirements for the design, manufacture, integration, methods of testing and required test results for an integrated navigation system to comply with the earlier IMO requirements of Resolution MSC 86(70), Annex 3. Integrated navigation systems in accordance with IEC 61924:2006 are not suitable for installation after 1 January 2011.

NOTE 2 All text of this standard, whose wording is identical to that in IMO Resolution MSC.252(83) will be printed in *italics* and the Resolution and paragraph number indicated between brackets.

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

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

IEC 61162-1:2010, *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 61162-3, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 3: Serial data instrument network*

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

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*

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