



SLOVENSKI STANDARD

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Pomorska navigacijska in radiokomunikacijska oprema in sistemi - Integrirani navigacijski sistemi (INS) - 2. del: Modularna struktura za INS - Zahteve za delovanje in lastnosti, preskusne metode in zahtevani rezultat preskušanja

Maritime navigation and radiocommunication equipment and systems - Integrated navigation systems (INS) - Part 2: Modular structure for INS - Operational and performance requirements, methods of testing and required test results

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Navigacijska in krmilna
oprema

Navigation and control
equipment

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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

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-01-09

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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 |

| <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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Integrated navigation systems –
Part 2: Modular structure for INS – Operational and performance requirements,
methods of testing and required test results**

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CONTENTS

| | |
|--|----|
| FOREWORD..... | 7 |
| 1 Scope..... | 9 |
| 2 Normative references | 9 |
| 3 Terms, definitions and abbreviations | 10 |
| 3.1 Terms and definitions | 10 |
| 3.2 Abbreviations | 19 |
| 4 MSC resolutions | 19 |
| 4.1 General | 19 |
| 4.2 Purpose of integrated navigation systems | 20 |
| 4.3 Application | 21 |
| 5 Test requirements and results | 23 |
| 5.1 General | 23 |
| 5.2 Exceptions for tests previously performed | 23 |
| 5.3 Test site | 23 |
| 5.4 Methods of test..... | 24 |
| 6 Module A – Requirements for integration of navigational information | 24 |
| 6.1 Interfacing and data exchange..... | 24 |
| 6.1.1 Combination, processing and evaluation of data | 24 |
| 6.1.2 Availability, validity and integrity..... | 24 |
| 6.1.3 Failure of data exchange | 25 |
| 6.1.4 Interfaces in general..... | 25 |
| 6.1.5 Interface to alert management..... | 25 |
| 6.2 Accuracy | 25 |
| 6.2.1 Requirement..... | 25 |
| 6.2.2 Methods of test and required results | 25 |
| 6.3 Validity, plausibility, latency..... | 26 |
| 6.3.1 Validity | 26 |
| 6.3.2 Plausibility..... | 27 |
| 6.3.3 Latency | 27 |
| 6.4 Consistent common reference system (CCRS) | 28 |
| 6.4.1 Consistency of data | 28 |
| 6.4.2 Consistent common reference point (CCRP)..... | 28 |
| 6.4.3 Consistency of thresholds..... | 30 |
| 6.5 Integrity monitoring..... | 31 |
| 6.5.1 Requirement..... | 31 |
| 6.5.2 Methods of test and required results | 32 |
| 6.6 Marking of-data | 33 |
| 6.6.1 Requirement..... | 33 |
| 6.6.2 Methods of tests and required results | 33 |
| 6.7 Selection of sensors and sources | 33 |
| 6.7.1 Requirement..... | 33 |
| 6.7.2 Methods of test and required results | 34 |
| 7 Module B – Task related requirements for Integrated Navigation Systems | 34 |
| 7.1 Description | 34 |
| 7.2 Task and functional requirements for an INS | 35 |
| 7.2.1 General | 35 |

| | | |
|-------|--|----|
| 7.2.2 | Task “Route planning” | 35 |
| 7.2.3 | Task “Route monitoring” | 37 |
| 7.2.4 | Task “Collision Avoidance” | 40 |
| 7.2.5 | Task “Navigation Control Data” | 44 |
| 7.2.6 | Task “Alert management” | 46 |
| 7.2.7 | Task “Status and data display” | 46 |
| 7.3 | Functional requirements for INS task stations | 47 |
| 7.3.1 | Number of task stations | 47 |
| 7.3.2 | Track control | 49 |
| 7.3.3 | Automatic control functions | 49 |
| 7.4 | Functional requirements for displays of INS | 50 |
| 7.4.1 | General | 50 |
| 7.4.2 | Default display configurations and operational modes | 53 |
| 7.4.3 | Mode and status awareness | 54 |
| 7.4.4 | Information display | 55 |
| 7.5 | Human machine interface | 56 |
| 7.5.1 | General | 56 |
| 7.5.2 | System design | 57 |
| 7.5.3 | Display | 57 |
| 7.5.4 | Input | 57 |
| 7.6 | INS Back-up requirements and redundancies | 58 |
| 7.6.1 | General | 58 |
| 7.6.2 | Hardware redundancies (back-up) | 60 |
| 7.7 | System failures and fallback arrangement | 60 |
| 7.7.1 | General description | 60 |
| 7.7.2 | Restored operation | 60 |
| 7.7.3 | Failure or change of sensor for automatic control function | 61 |
| 7.7.4 | Failure of sensor | 61 |
| 7.7.5 | Storage of system related parameters | 62 |
| 7.7.6 | Safe response to malfunction | 62 |
| 7.7.7 | Alert management | 63 |
| 7.7.8 | Fallback for navigational information failure | 64 |
| 7.8 | Technical requirements | 65 |
| 7.8.1 | General | 65 |
| 7.8.2 | Hardware and/or processors | 66 |
| 7.8.3 | Power supply | 66 |
| 7.8.4 | Power interruptions and shutdown | 67 |
| 7.8.5 | Data communication interface and protocols | 68 |
| 7.8.6 | Installation | 68 |
| 8 | Module C – Alert management | 69 |
| 8.1 | Description | 69 |
| 8.1.1 | Purpose of alert management | 69 |
| 8.1.2 | Scope of alert management | 69 |
| 8.1.3 | Application of alert management | 69 |
| 8.2 | General requirements | 70 |
| 8.2.1 | Provisions | 70 |
| 8.2.2 | Number of alerts for one situation | 70 |
| 8.2.3 | Alerts to be handled by the alert management | 70 |
| 8.2.4 | Logical architecture of the alert management | 71 |

| | | |
|--------|--|-----|
| 8.2.5 | Alert management HMI | 71 |
| 8.2.6 | Audible announcements | 72 |
| 8.2.7 | Display at several locations | 72 |
| 8.3 | Priorities and categories | 72 |
| 8.3.1 | Priorities of alerts | 72 |
| 8.3.2 | Criteria for classification of alerts | 73 |
| 8.3.3 | Categories of alerts | 73 |
| 8.4 | State of alerts | 74 |
| 8.4.1 | General | 74 |
| 8.4.2 | Alarms | 76 |
| 8.4.3 | Warnings | 80 |
| 8.4.4 | Cautions | 84 |
| 8.4.5 | Alert escalation | 84 |
| 8.5 | Consistent presentation of alerts within the INS | 86 |
| 8.5.1 | Requirement | 86 |
| 8.5.2 | Methods of test and required results | 86 |
| 8.6 | Central alert management HMI | 88 |
| 8.6.1 | General requirements | 88 |
| 8.6.2 | Silencing of audible alerts | 91 |
| 8.6.3 | Category A and B alert history list | 91 |
| 8.7 | Acknowledgement location | 93 |
| 8.7.1 | Requirement | 93 |
| 8.7.2 | Methods of test and required results | 93 |
| 8.8 | Self-monitoring of alert management | 94 |
| 8.8.1 | Monitoring of system communication | 94 |
| 8.8.2 | Testing of alerts | 94 |
| 8.8.3 | Failures | 94 |
| 8.9 | Interface requirements for alert related communication | 95 |
| 8.9.1 | Communication concept | 95 |
| 8.9.2 | Alert priorities, states, etc. | 95 |
| 8.9.3 | Alert source identity | 97 |
| 8.9.4 | Acknowledge and silence | 98 |
| 8.9.5 | Fault tolerance of alert communication | 99 |
| 8.10 | Integration of systems in alert management | 99 |
| 8.10.1 | Overall alert management | 99 |
| 8.10.2 | Inclusion of other equipment | 100 |
| 8.10.3 | Connection of other equipment | 100 |
| 9 | Module D – Documentation requirements | 100 |
| 9.1 | Manuals | 100 |
| 9.1.1 | Requirement | 100 |
| 9.1.2 | Methods of tests and required results | 101 |
| 9.2 | Information regarding the system configuration | 101 |
| 9.2.1 | Requirement | 101 |
| 9.2.2 | Methods of tests and required results | 102 |
| 9.3 | Failure analysis | 102 |
| 9.3.1 | Requirement | 102 |
| 9.3.2 | Methods of test and required results | 102 |
| 9.4 | Onboard familiarization material | 102 |
| 9.4.1 | Requirement | 102 |

| | |
|--|-----|
| 9.4.2 Methods of test and required results | 102 |
| Annex A (informative) Modular structure for IMO performance standards | 104 |
| Annex B (informative) Guidance to equipment manufacturers for the provision of on-board familiarization material | 107 |
| Annex C (normative) Classification of alerts | 110 |
| Annex D (normative) Default display configurations | 112 |
| Annex E (informative) Data flow diagram/consistent common reference system (CCRS) | 114 |
| Annex F (normative) IEC 61162 interfaces | 116 |
| Annex G (informative) Guidance for testing | 120 |
| Annex H (normative) Verification of CCRP calculations | 122 |
| Annex I (normative) Sentence for integrity and plausibility | 124 |
| Annex J (normative) INS alert related communication | 125 |
| Annex K (normative) Sentences for advanced alert related communication | 138 |
| Annex L (normative) Alert communication with ALR and ACK | 143 |
| Annex M (normative) Icons for alert management | 146 |
| Bibliography | 148 |
| | |
| Figure E.1 – Data flow diagram/consistent common reference system (CCRS) | 115 |
| Figure F.1 – INS logical interfaces | 116 |
| Figure J.1 – Legacy sensor communication showing priority reduction | 128 |
| Figure J.2 – Legacy sensor communication in case priority reduction is not possible | 129 |
| Figure J.3 – Alerts' communication showing priority reduction | 131 |
| Figure J.4 – Alerts with communication in case priority reduction is not possible | 132 |
| Figure J.5 – Alert state diagram | 136 |
| Figure L.1 – State diagram | 143 |
| | |
| Table 1 – Applicable modules of performance standards of stand alone equipment | 22 |
| Table 2 – Applicable modules of other standards for INS to substitute for individual equipment | 22 |
| Table 3 – Marking of data | 33 |
| Table 4 – Announcement states and related conditions | 74 |
| Table 5 – Announcement state and presentation for Alarms | 75 |
| Table 6 – Announcement state and presentation for Warnings | 75 |
| Table 7 – Announcement state and presentation for Cautions | 76 |
| Table A.1 – Modular structure for radar performance standards | 104 |
| Table A.2 – Modular structure for track control performance standards | 106 |
| Table C.1 – Classification of INS alerts as specified in these performance standards | 110 |
| Table C.2 – Classification for INS for alerts specified in the individual equipment performance standards | 110 |
| Table D.1 – Task “Route monitoring” | 112 |
| Table D.2 – Task “Collision avoidance” | 112 |
| Table F.1 – IEC 61162-1 sentences transmitted by the INS | 117 |
| Table F.2 – IEC 61162-1 sentences received by the INS | 118 |

| | |
|---|-----|
| Table H.1 – Required results | 122 |
| Table H.2 – Required results | 123 |
| Table H.3 – Required results for dynamic scenario | 123 |
| Table H.4 – Required resolution for test..... | 123 |
| Table J.1 – Conversion from ALR to ALF | 126 |
| Table J.2 – Conversion from ACM to ACK..... | 127 |
| Table J.3 – Unique alert identifier at alert source | 134 |
| Table M.1 – Alert management icons – Basic..... | 146 |
| Table M.2 – Alert management icons – Additional qualifiers..... | 147 |

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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.

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.

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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

SIST EN 61924-2:2013

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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*