INTERNATIONAL STANDARD

IEC 61924

First edition
2006-05

Maritime navigation and radiocommunication equipment and systems – Integrated navigation systems – Operational and performance requirements, methods of testing and required test results

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE XA

For price, see current catalogue

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – INTEGRATED NAVIGATION SYSTEMS – OPERATIONAL AND PERFORMANCE 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.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61924 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
80/433/FDIS	80/440/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 standard may be issued at a later date.

INTRODUCTION

International Standard IEC 61924 has been developed by IEC Technical Committee 80 to clarify the IMO Resolution MSC 86(70) Annex 3 Recommendation on Performance Standards for an Integrated Navigation System (INS). This standard provides adequate requirements, methods of tests and required test results to facilitate type approval.

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – INTEGRATED NAVIGATION SYSTEMS – OPERATIONAL AND PERFORMANCE REQUIREMENTS, METHODS OF TESTING AND REQUIRED TEST RESULTS

1 Scope

This International Standard 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 86(70) Annex 3. (See Annex A).

This standard aims to resolve conflicts that may occur from the differences in the requirements of the relevant IMO Performance Standards for individual navigational aids when forming part of the INS.

All text of this standard, whose meaning is identical to that in IMO Resolution MSC 86(70) Annex 3 will be printed in *italics* and the Resolution and paragraph number indicated between brackets.

This standard is applicable to an INS, that is any *combination of navigational aids that provides functions beyond the general intent defined in the respective performance standards adopted by the Organization for individual equipment* (MSC 86(70) Annex 3, 2.1).

2 Normative references

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 testing and required test results*

IEC 61162-1, *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 61174:2001, *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 61209:1997, *Maritime navigation and radiocommunication equipment and systems – Integrated bridge systems (IBS) – Operational and performance requirements, methods of testing and required test results*

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

IMO A.224(VII) as amended by MSC.74(69) Annex 4, *Performance standards for echo-sounding equipment*

IMO A.424 (XI), *Performance standards for gyro-compasses*

IMO A.529 (XIII), *Accuracy standards for navigation*

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 A.815(19), *World-wide radionavigation system*

IMO A.821(19), *Performance standards for gyro-compasses for high speed craft*

IMO A.823(19), *Performance standards for automatic radar plotting aids*

IMO A.824(19), *Performance standards for devices to indicate speed and distance*

IMO A.830(19), *Code on alarms and indicators*

IMO A.893(21), *Guidelines for voyage planning*

IMO 1974, *International Convention for the Safety of Life at Sea (SOLAS), as amended*

IMO MSC.64 (67) Annex 1, *Recommendation on performance standards for integrated bridge systems (IBS)*

IMO MSC.64 (67) Annex 4, *Recommendation on performance standards for radar equipment*

IMO MSC 86(70) Annex 3, *Performance standards for an integrated navigation system (INS)*

ISO 11674: 2000, *Ships and marine technology – Heading control systems*