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Maritime navigation and radiocommunication equipment and systems – Radar for craft not in compliance with IMO SOLAS Chapter V – Performance requirements, methods of test and required test results

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – RADAR FOR CRAFT NOT IN COMPLIANCE WITH IMO SOLAS CHAPTER V – PERFORMANCE REQUIREMENTS, METHODS OF TEST AND REQUIRED TEST RESULTS

FOREWORD

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International Standard IEC 62252 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems.

This standard is based on the standards for radar and radar plotting used on SOLAS vessels, IEC 60872 series, IEC 60936 series and IEC 60945.

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

FDIS	Report on voting
80/393/FDIS	80/397/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- withdrawn;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.

INTRODUCTION

This IEC radar standard is produced specifically for radar not fully compliant with the IMO Performance Standard for radar/radar plotting and applies to the following:

- radar (class A) intended for commercial craft under 150 gross tonnage, where no SOLAS radar carriage requirement currently exists, where the antenna beamwidth is not more than 4,0° and the display minimum effective diameter is limited to not less than 150 mm.
- radar (class B) intended for recreational craft or other maritime use and where the antenna beamwidth is not more than 5,5° and the display minimum effective diameter is limited to not less than 85 mm.
- radar (class C) intended for small recreational craft where the antenna beamwidth is not more than 7,5° and the display minimum effective diameter is limited to not less than 75 mm.

The requirements for commercial craft radar are covered in the main body of this specification. The requirements, where different, for radar (class B and C) are shown in parenthesis where applicable.

NOTE 1 The IMO performance standard for radar/radar plotting is in Resolution MSC.64(67) which is implemented in the IEC 60872 series and the IEC 60936 series of standards.

NOTE 2 For the purposes of this IEC standard, the words 'craft' and 'ship' are interchangeable and have the same meaning.

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – RADAR FOR CRAFT NOT IN COMPLIANCE WITH IMO SOLAS CHAPTER V – PERFORMANCE REQUIREMENTS, METHODS OF TEST AND REQUIRED TEST RESULTS

1 Scope

This International Standard specifies the minimum performance requirements for testing and required test results for conformance of radar not fully compliant with the IMO Performance Standard for radar/radar plotting (RP) (MSC.64(67)). In addition, it takes into account IEC 60945. When a requirement of this standard is different from that of IEC 60945 the requirement in this standard shall take precedence.

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 60068-2-52:1996, *Environmental testing – Part 2: Test Kb: Salt mist, cyclic (sodium chloride solution)*
Corrigendum 1 (1996)

IEC 60071-2:1996, *Insulation co-ordination – Part 2: Application guide*

IEC 60092-101, *Electrical installations in ships – Part 101: Definitions and general requirements*

IEC 60417:1998, *Graphical symbols for use on equipment – Part 1: Overview and application*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60533:1999, *Electrical and electronic installations in ships – Electromagnetic compatibility*

IEC 60872-2:1999, *Maritime navigation and radiocommunication equipment and systems – Radar plotting – Part 2: Automatic tracking aids (ATA) – Methods of testing and required test results*

IEC 60872-3:1999, *Maritime navigation and radiocommunication equipment and systems – Radar plotting – Part 3: Electronic plotting aid (EPA)*

IEC 60936-1:1999, *Maritime navigation and radiocommunication equipment and systems – Radar – Part 1: Shipborne radar – Methods of testing and required test results*

IEC 60936-2:2000, *Maritime navigation and radiocommunication equipment and systems – Radar – Part 2: Shipborne radar for high-speed craft (HSC) – Methods of testing and required test results*

IEC 60936-3:2000, *Maritime navigation and radiocommunication equipment and systems – Radar – Part 3: Shipborne radar with chart facilities – Methods of testing and required test results*

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

IEC 61000-4-8:1993*, Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 8: Power frequency magnetic field immunity test* – Basic EMC publication

IEC 61108 (all parts), *Maritime navigation and radiocommunication equipment and systems – GNSS/DGNSS*

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

IEC 61672, *Electroacoustics - Sound level meters*

IEC/PAS 60936-5, *Guidelines for the use and display of AIS information on Radar*

ISO 694:2000, *Ships and marine technology – Positioning of magnetic compasses in ships*

ISO 3791:1976*, Office machines and data processing equipment – Keyboard layouts for numeric applications*

ITU Radio Regulations 2001

ITU-R Recommendation M.1177-3, *Techniques for measurement of unwanted emissions of radar systems*

ITU-R Recommendation M.1313, *Technical characteristics of maritime radionavigation radars*

ITU-R Recommendation SM.328, *Spectra and bandwidth of emissions*

ITU-R Recommendation SM.329, *Unwanted emissions in the spurious domain*

ITU-R Recommendation SM.1539, *Variation of the boundary between the out-of-band and spurious domains required for the application of Recommendations ITU-R SM.1541 and ITU–R SM.329*

ITU-R Recommendation SM.1540, *Unwanted emissions in the out-of-band domain falling into adjacent allocated bands*

ITU-R Recommendation SM.1541, *Unwanted emissions in the out-of-band domain*

ITU-T Recommendation E.161, *Arrangement of digits, letters and symbols on telephones and other devices that can be used for gaining access to a telephone network*

IHO S.52, *Specifications for chart content and display aspects of ECDIS*