IEC 61097-9

Edition 2.0 2025-06

INTERNATIONAL STANDARD

**Global maritime distress and safety system (GMDSS) –
Part 9: Shipborne transmitters and receivers for use in the MF and HF bands suitable for telephony, digital selective calling (DSC) and reception of maritime safety information and search and rescue related information – Operational and performance requirements, test methods and required test results**

ICS 33.060.20; 47.020.70

ISBN 978-2-8327-0466-0

IEC 61097-9:2025-06(en)

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GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS) –

Part 9: Shipborne transmitters and receivers for use in the MF and HF bands suitable for telephony, digital selective calling (DSC) and reception of maritime safety information and search and rescue related information – Operational and performance requirements, test methods and required test results

FOREWORD

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IEC 61097-9 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems. It is an International Standard.

This second edition cancels and replaces the first edition published in 1997. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) the text has been updated to incorporate the provisions of the new IMO performance standards given in Resolution MSC.512(105) and new ITU-R recommendations given in M.493-16. These provisions in particular add new requirements for reception of maritime safety information and for the automatic connection system;
b) the provisions for digital selective calling which were previously in IEC 61097-3 have been incorporated;
c) the provisions for watch keeping receivers which were previously in IEC 61097-8 have been incorporated;
d) new requirements have been added for software maintenance in 4.10 in support of IMO recommendations;
e) new Annex A, Annex B and Annex C have been added for digital selective calling;
f) new Annex D and Annex G have been added for bridge alert management;
g) new Annex E and Annex I have been added for maritime safety information;
h) a new Annex F has been added for the automatic connection system;
i) a new Annex H has been added for equipment manuals;
j) a new Annex J has been added for remote control operation;
k) previous Annex A, Annex B and Annex C have been deleted as they are no longer relevant.

The text of this International Standard is based on the following documents:

Draft	Report on voting
80/1152/FDIS	80/1158/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 61097 series, published under the general title *Global maritime distress and safety system (GMDSS)*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS) –

Part 9: Shipborne transmitters and receivers for use in the MF and HF bands suitable for telephony, digital selective calling (DSC) and reception of maritime safety information and search and rescue related information – Operational and performance requirements, test methods and required test results

1 Scope

This part of IEC 61097 specifies the minimum operational and performance requirements and test methods with required test results for transmitters and receivers capable of voice communication and digital selective calling for the GMDSS operating in either the medium frequency band only or in medium and high frequency bands allocated in the ITU Radio Regulations to the Maritime Mobile Service, as required by Chapter IV of SOLAS 1974 as amended. It is based on IMO resolution MSC.512(105) and takes account of Recommendation ITU-R M.493 for digital selective calling including the automatic connection system.

This document also takes account of the general requirements given in IMO resolution A.694(17) and is associated with IEC 60945. When a requirement in this document is different from that in IEC 60945, the requirement of this document shall take precedence. It further takes account, as appropriate, of requirements for the presentation of navigation-related information on shipborne navigational displays given in IMO resolution MSC.191(79) as amended and is associated with IEC 62288, and the requirements of IMO resolution MSC.302(87) for Bridge Alert Management and is also associated with IEC 62923-1 and IEC 62923-2.

This document also specifies the reception of maritime safety information and search and rescue related information by HF based on IMO resolution MSC.508(105).

NOTE 1 The necessity of HF NBDP (HF-MSI) as part of MF/HF radio facility is determined by the national administration by which the MF/HF radio facility is certified in accordance with this document.

NOTE 2 All text of this document the wording of which is identical to that in IMO Resolutions and to that in the relevant ITU-R Recommendations is printed in *italics* and is prefixed by references in brackets.

NOTE 3 This document introduces requirements, tests and their required results in the context of digital selective calling (DSC) as defined by ITU-R recommendations such as ITU-R M.493, and in the context of bridge alert management (BAM) as defined by IMO MSC.302(87) and IEC 62923-1. Certain terms, such as "alert", "warning" and "priority" can have different meanings depending on the context in which the term is used. The meaning of specific terms used in this document is as defined in the context of DSC unless specifically expressed otherwise. For example: the expression "BAM alert" is used to indicate that the term "alert" is used in the context of BAM in that instance. Annex D provides further specifications on mapping of signals between the context of DSC and the context of BAM.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results*

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

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

IEC 62288, *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*

IEC 62923-1, *Maritime navigation and radiocommunication equipment and systems – Bridge alert management – Part 1: Operational and performance requirements, methods of testing and required test results*

ITU *Radio Regulations*

Recommendation ITU-R M.493-16:2023, *Digital selective-calling system for use in the maritime mobile service*

Recommendation ITU-R M.540-2:1990, *Operational and technical characteristics for an automated direct-printing telegraph system for promulgation of navigational and meteorological warnings and urgent information to ships*

Recommendation ITU-R M.541-11:2023, *Operational procedures for the use of digital selective calling equipment in the maritime mobile service*

Recommendation ITU-R M.625-4:2012, *Direct-printing telegraph equipment employing automatic identification in the maritime mobile service*

Recommendation ITU-R M.688, *Technical characteristics for a high frequency direct-printing telegraph system for promulgation of high seas and NAVTEX-type maritime safety information*