



# PUBLICLY AVAILABLE SPECIFICATION



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**Maritime navigation and radiocommunication equipment and systems –  
VHF data exchange system – Requirements and methods of testing for stations  
including ASM functionality**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – VHF DATA EXCHANGE SYSTEM – REQUIREMENTS AND METHODS OF TESTING FOR STATIONS INCLUDING ASM FUNCTIONALITY

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# MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – VHF DATA EXCHANGE SYSTEM – REQUIREMENTS AND METHODS OF TESTING FOR STATIONS INCLUDING ASM FUNCTIONALITY

## 1 Scope

This document specifies technical requirements, methods of test and required test results for equipment implementing ASM part of the VHF Data exchange system (VDES) as defined in ITU-R M.2092.

This document is intended to be the first step of development of standard(s) describing equipment that implement functions of VDES in any combination.

NOTE All text of this document whose wording is identical to applicable external references such as ITU Recommendations is printed in *italics*, and the reference and associated paragraph numbers are indicated in brackets.

NOTE The intention of text written in notation [Future: text] in this document is to include future placeholder for topics that are considered important even for the first implementations that may comply with this document.

Requirements set in this document provide means to mitigate adverse interference to Automatic Identification System (AIS).

## 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 60945:2002, *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 61162-1:2016, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 1 Single talker and multiple listeners*

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

IEC 61193-2:2007, *Quality assessment systems – Part 2: Selection and use of sampling plans for inspection of electronic components and packages*

IEC 61993-2:2018, *Maritime navigation and radiocommunication equipment and systems – Automatic identification systems (AIS) – Part 2: Class A shipborne equipment of the automatic identification system (AIS) – Operational and performance requirements, methods of test and required test results*

IEC 62320-1:2015, *Maritime navigation and radiocommunication equipment and systems – Automatic identification system (AIS) – Part 1: AIS Base Stations – Minimum operational and performance requirements, methods of testing and required test results*

ITU-R Recommendation M.1371-5:2014, *Technical characteristics for an automatic identification system using time division multiple access in the VHF maritime mobile frequency band*

ITU-R M.2092-0:2015, *Technical characteristics for a VHF data exchange system in the VHF maritime mobile band*

ITU-T O.151:1992, *Error performance measuring equipment operating at the primary rate and above*

IALA G1139 Edition 3, 2019, *The Technical Specification of VDES*