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For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



80/1150/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:

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80/1120/NP, 80/1129/RVN

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SECRETARIAT:

United Kingdom

SECRETARY:

Mr Kim Fisher

OF INTEREST TO THE FOLLOWING COMMITTEES:

HORIZONTAL FUNCTION(S):

ASPECTS CONCERNED:

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TITLE:

Maritime navigation and radiocommunication equipment and systems - Global navigation satellite systems (GNSS) - Part 8: Quasi-Zenith Satellite System (QZSS) receiver equipment - Performance requirements, methods of testing and required test results

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Maritime navigation and radiocommunication equipment and systems -
Global navigation satellite systems (GNSS) - Part 8: Quasi-Zenith Satellite
System (QZSS) receiver equipment - Performance requirements, methods
of testing and required test results –**

FOREWORD

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IEC 61108-8 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunications equipment and systems. It is an International Standard.

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

Draft	Report on voting
IEC 61108-8 ED 1	80/1129/RVN

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 [*change language if necessary*].

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/publications.

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.

INTRODUCTION

Standardization for satellite navigation, marine navigation, wireless communication equipment, and systems has been established, including GPS, GLONASS, Galileo, BDS, and IRSS/NavIC. However, Japan's QZSS is the only system that has not been standardized, which is hindering the expansion of its usage.

Further reading:

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

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

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

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

IMO resolution MSC.96(72), *Adoption of amendments to performance standards for devices to measure and indicate speed and distance*

IMO resolution MSC.112(73), *Performance standards for shipborne global positioning system (GPS) receiver equipment*

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[RTCA07], *Interim Minimum Operational Performance Specifications for Airborne Galileo Satellite Receiving Equipment*, GARMIS D4124 issue 1.0, October 2007 (To be replaced by the appropriate RTCA-DO-xxx document when available)

[QZSS] IS-QZSS-PNT-005, <https://qzss.go.jp/technical/download/ps-is-qzss.html>

[OSD01] <https://collaborate.iec.ch/#/pages/workspaces>

Maritime navigation and radiocommunication equipment and systems - Global navigation satellite systems (GNSS) - Part 8: Quasi-Zenith Satellite System (QZSS) receiver equipment - Performance requirements, methods of testing and required test results –

1 Scope

This part of IEC 61108 specifies the minimum performance requirements, methods of testing and required test results for QZSS shipborne receiver equipment, based on IMO resolution MSC.480(102), which uses the signals from the QZSS in order to determine position.

This document 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 IEC 60945, the requirement in this document takes precedence. This document also takes account, as appropriate, of requirements for the presentation of navigation-related information on shipborne navigational displays given in [IMO resolution MSC.191\(79\) \[1\]](#) and is associated with IEC 62288. This document further takes into account, as appropriate, requirements for bridge alert management given in [MSC.302\(87\) \[2\]](#) IMO resolution MSC.302(87) and is associated with IEC 62923-1.

This receiver standard applies to navigation in the ocean, coastal, harbour entrances, harbour approaches and restricted waters, as defined in IMO resolution A.915(22) and IMO resolution A.1046(27).

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 61108-7:2024, *Maritime navigation and radiocommunication equipment and systems - Global navigation satellite systems (GNSS) - Part 7: Satellite based augmentation system (SBAS) L1 - Receiver equipment - Performance standards, methods of testing and required test results*

IEC 61162-1:2024, *Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 1: Single talker and multiple listeners*

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*

IEC 62923-1:2018, *Maritime navigation and radiocommunication equipment and systems - Bridge alert management - Part 1: Operational and performance requirements, methods of testing and required test results*

IEC 62923-2:2018, *Maritime navigation and radiocommunication equipment and systems - Bridge alert management - Part 2: Alert and cluster identifiers and other additional features*

IMO resolution 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 resolution A.915(22), *Revised maritime policy and requirements for a future Global Navigation Satellite System (GNSS)*

IMO resolution A.1046(27), *Worldwide radionavigation system*

IMO resolution MSC.480(102), *Performance standards for shipborne Japanese Quasi-Zenith Satellite System (QZSS) receiver equipment*

3 Terms, definitions, and abbreviations

3.1 Terms and definitions

For the purposes of this document, the *following terms and definitions* apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1.1

Integrity

ability of the system to provide users with warnings within a specified time when the system should not be used for navigation

3.2 Abbreviations

BAM Bridge Alert Management

CAM Central Alert Management

COG Course Over Ground

CW Continuous Wave

DS Digital Signatures

EUT Equipment Under Test

FDE Fault Detection and Exclusion

GNSS Global Navigation Satellite System

GPS Global Positioning System

ITRF International Terrestrial Frame

HAL Horizontal Alert Limit

HDOP Horizontal Dilution Of Precision

HPL Horizontal Protection Limit

HMI Hazardous Misleading Information

MADOCA Multi-GNSS Advanced Demonstration tool for Orbit and Clock Analysis

MDE Marginally Detectable Error

MKD Minimum Keyboard and Display

NAV Navigation message

NB Narrow Band pdf Probability distribution function

PDOP Position Dilution Of Precision

PHMI Probability of hazardous misleading error

PVT Position, Velocity, Time

QMS QZSS Monitoring Stations

QZNMA QZSS Navigation Message Authentication

QZSS Quasi-Zenith Satellite System