Maritime navigation and radiocommunication equipment and systems - Shipborne voyage data recorder (VDR) - Part 1: Performance requirements, methods of testing and required test results (IEC 61996-1:2013)

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NATIONAL FOREWORD

See Eesti standard EVS-EN 61996-1:2013 sisaldab Euroopa standardi EN 61996-1:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 61996-1:2013 consists of the English text of the European standard EN 61996-1:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 26.07.2013.	Date of Availability of the European standard is 26.07.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 47.020.70

EUROPEAN STANDARD

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Maritime navigation and radiocommunication equipment and systems - Shipborne voyage data recorder (VDR) - Part 1: Performance requirements, methods of testing and required test results

(IEC 61996-1:2013)

Matériels et systèmes de navigation et de radiocommunication maritimes - Enregistreurs des données du voyage (VDR) de bord - Partie 1: Exigences de fonctionnement, méthodes d'essai et résultats d'essai exigés
(CEI 61996-1:2013)

Navigations- und Funkkommunikationsgeräte und -systeme für die Seeschifffahrt - Fahrtdatenaufzeichnungsgeräte (VDR) auf Seeschiffen - Teil 1: Fahrtdatenaufzeichnungsgerät (VDR) - Leistungsanforderungen, Prüfverfahren und geforderte Prüfergebnisse
(IEC 61996-1:2013)

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 61996-1:2013 E

Foreword

The text of document 80/690/FDIS, future edition 2 of IEC 61996-1, prepared by IEC/TC 80 "Maritime navigation and radiocommunication equipment and systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61996-1:2013.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2014-03-27
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-06-27

This document supersedes EN 61996-1:2008.

EN 61996-1:2013 includes the following significant technical changes with respect to EN 61996-1:2008:

a) The description of the protective capsule in 4.3.4 has been changed in line with the requirements of the new IMO performance standards given in Resolution MSC.333(90) which now require a final recording medium comprising three parts; fixed, float-free and long-term.

b) A new requirement for a performance test has been added in 4.3.6.

c) Further data items to be recorded have been added to 4.6 for ECDIS, AIS, rolling motion and electronic logbooks.

d) Clause 5 contains new technical requirements for configuration data, operational performance test and bridge alert management system. In addition, further technical requirements have been added to 5.6 for bridge audio and to 5.8 for radar and ECDIS images.

e) References to “alarm” requirements in the previous edition have been substituted by references to “cautions” in line with current IMO recommendations. The test methods in Clause 6 have been updated to reflect the new requirements.

f) New Annexes E, F and G concerning protocols for interfacing images using a Local Area Network have been added.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61996-1:2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60268-5	NOTE	Harmonised as EN 60268-5.
IEC 61162-1	NOTE	Harmonised as EN 61162-1.
IEC 61924-2	NOTE	Harmonised as EN 61924-2.
IEC 62065	NOTE	Harmonised as EN 62065.
IEC 62288	NOTE	Harmonised as EN 62288.
ISO 8728	NOTE	Harmonised as EN ISO 8728.
ISO 11674	NOTE	Harmonised as EN ISO 11674.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60068-2-27	2008	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	2009
IEC 60268-16	-	Sound system equipment - Part 16: Objective rating of speech intelligibility by speech transmission index	EN 60268-16	-
IEC 60945	-	Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results	EN 60945	-
IEC 61097-2	-	Global maritime distress and safety system (GMDSS) - Part 2: COSPAS-SARSAT EPIRB - Satellite emergency position indicating beacon operating on 406 MHz - Operational and performance requirements, methods of testing and required test results	-	-
IEC 61097-7	1996	Global maritime distress and safety system (GMDSS) - Part 7: Shipborne VHF radiotelephone transmitter and receiver - Operational and performance requirements, methods of testing and required test results	-	-
IEC 61162	Series	Maritime navigation and radiocommunication equipment and systems - Digital interfaces	EN 61162	Series
IEC 61162-450	2011	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 450: Multiple talkers and multiple listeners - Ethernet interconnection	EN 61162-450	2011
IEC 61174	-	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	EN 61174	-
IEC 61260 + A1	1995 2001	Electroacoustics - Octave-band and fractional-octave-band filters	EN 61260 + A1	1995 2001
IEC 61672-1	2002	Electroacoustics - Sound level meters - Part 1: Specifications	EN 61672-1	2003
IEC 62388	2007	Maritime navigation and radio-communication equipment and systems - Shipborne radar - Performance requirements, methods of testing and required test results	EN 62388	2008

Publication	Year	Title	EN/HD	Year
IMO A.658(16)	-	Use and fitting of retro-reflective materials on life-saving appliances	-	-
IMO A.662(16)	-	Performance standards for float-free release and activation arrangements for emergency radio equipment	-	-
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.810(19)	-	Performance standards for float-free satellite emergency position-indicating radio beacons (EPIRBs) operating on 406 MHz	-	-
IMO A.1021(26)	-	Code on alerts and indicators	-	-
IMO MSC.333(90)	2012	Performance standards for shipborne Voyage Data Recorders (VDRs)	-	-
EUROCAE ED-112	2003	Minimum operational performance specification (MOPS) for crash protected airborne recorder systems	-	-
VESA	2007	Video electronics standards association – VESA and industry standards and guidelines for computer display monitor timing (DMT)	-	-
SAE AS8045A	2011	Engineering Society for advancing mobility land sea air and space – Minimum performance standard for underwater locating devices – Acoustic, self-powered	-	-

CONTENTS

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – SHIPBORNE VOYAGE DATA RECORDER (VDR) –

Part 1: Performance requirements, methods of testing and required test results

1 Scope

This part of IEC 61996 specifies the minimum performance requirements, technical characteristics, methods of testing and required test results, for shipborne voyage data recorder (VDR) installations as required by Chapter V of the International Convention for Safety of Life at Sea (SOLAS), as amended. It takes account of IMO resolution A.694(17) and is associated with IEC 60945. When a requirement in this standard is different from IEC 60945, the requirement in this standard takes precedence.

This standard incorporates the applicable parts of the performance standards included in IMO Resolution MSC.333(90).

NOTE All text of this standard, whose wording is identical to that of IMO Resolution MSC.333(90), is printed in *italics,* and the Resolution and associated performance standard paragraph numbers are indicated in brackets.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60068-2-27:2008, *Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock*

IEC 60268-16, *Sound system equipment – Part 16: Objective rating of speech intelligibility by speech transmission* index

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

IEC 61097-2, *Global maritime distress and safety system (GMDSS) – Part 2: COSPAS-SARSAT EPIRB – Satellite emergency position indicating radio beacon operating on 406 MHz – Operational and performance requirements, methods of testing and required test results*

IEC 61097-7:1996, *Global maritime distress and safety system (GMDSS) – Part 7: Shipborne VHF radiotelephone transmitter and receiver – Operational and performance requirements, methods of testing and required test results*

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

IEC 61162-450:2011, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 450: Multiple talkers and multiple listeners – Ethernet interconnection*

IEC 61174, *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 61260:1995, *Electroacoustics – Octave-band and fractional-octave-band filters*
Amendment 1:2001

IEC 61672-1:2002, *Electroacoustics – Sound level meters – Part 1: Specifications*

IEC 62388:2007, *Maritime navigation and radiocommunication equipment and systems – Shipborne radar – Performance requirements, methods of testing and required test results*

IMO A.658(16), *Use and fitting of retro-reflective materials on life-saving appliances*

IMO A.662(16), *Performance standards for float-free release and activation arrangements for emergency radio equipment*

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.810(19), *Performance standards for float-free satellite emergency position-indicating radio beacons (EPIRBs) operating on 406 MHz*

IMO A.1021(26), *Code on alerts and indicators*

IMO MSC.333(90):2012, *Performance standards for shipborne Voyage Data Recorders (VDRs)*

EUROCAE ED-112:2003, *Minimum operational performance specification (MOPS) for crash protected airborne recorder systems*

VESA:2007, *Video electronics standards association – VESA and industry standards and guidelines for computer display monitor timing (DMT), Version 1.0, Revision 0.11*

SAE AS8045A:2011, *Engineering Society for advancing mobility land sea air and space – Minimum performance standard for underwater locating devices – Acoustic, self-powered*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

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

3.1.1
alert
announcement of abnormal situations and conditions requiring attention. Alerts are divided in four priorities: emergency alarms, alarms, warnings and cautions.

Note 1 to entry: See (A.1021(26)/3).