

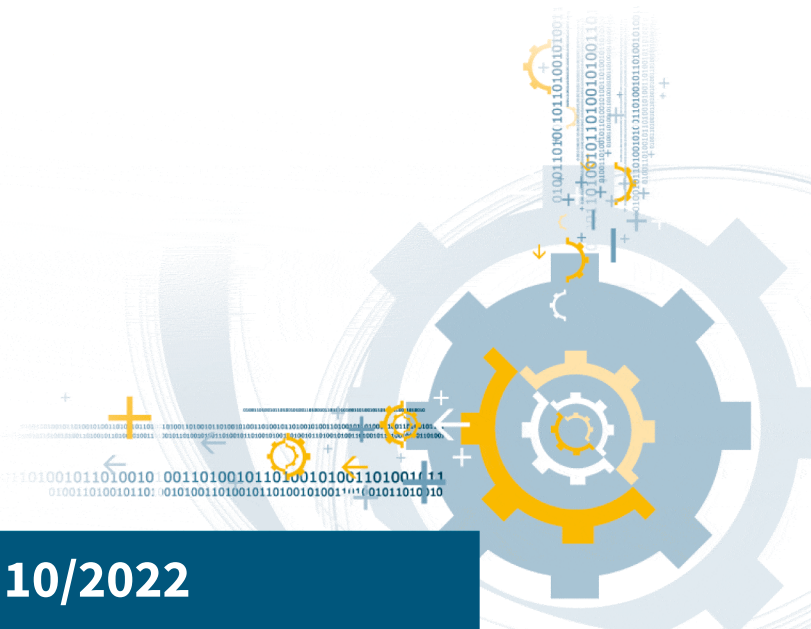


Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN 303 132 V2.1.1 (2022-10)

**Maritime VHF survivor locating devices
employing Digital Selective Calling
(DSC Class M); Harmonised Standard
for access to radio spectrum and for**

10/2022



National Foreword

This European Standard EN 303 132 V2.1.1 (2022-10) was adopted as Luxembourgish Standard ILNAS-EN 303 132 V2.1.1 (2022-10).

Every interested party, which is member of an organization based in Luxembourg, can participate for FREE in the development of Luxembourgish (ILNAS), European (CEN, CENELEC) and International (ISO, IEC) standards:

- Participate in the design of standards
- Foresee future developments
- Participate in technical committee meetings

<https://portail-qualite.public.lu/fr/normes-normalisation/participer-normalisation.html>

THIS PUBLICATION IS COPYRIGHT PROTECTED

Nothing from this publication may be reproduced or utilized in any form or by any mean - electronic, mechanical, photocopying or any other data carries without prior permission!

ETSI EN 303 132 V2.1.1 (2022-10)



**Maritime VHF survivor locating devices employing Digital
Selective Calling (DSC Class M);
Harmonised Standard for access to radio spectrum and
for features for emergency services**

Reference

REN/ERM-TGMAR-605

Keywords

harmonised standard, maritime, radio, SAR, testing

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

Important notice

The present document can be downloaded from:

<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format at www.etsi.org/deliver.

Users of the present document should be aware that the document may be subject to revision or change of status.

Information on the current status of this and other ETSI documents is available at

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommitteeSupportStaff.aspx>

If you find a security vulnerability in the present document, please report it through our

Coordinated Vulnerability Disclosure Program:

<https://www.etsi.org/standards/coordinated-vulnerability-disclosure>

Notice of disclaimer & limitation of liability

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.

In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2022.

All rights reserved.

Contents

Intellectual Property Rights	8
Foreword.....	8
Modal verbs terminology.....	9
1 Scope	10
2 References	10
2.1 Normative references	10
2.2 Informative references.....	11
3 Definition of terms, symbols and abbreviations.....	11
3.1 Terms.....	11
3.2 Symbols.....	12
3.3 Abbreviations	13
4 Requirements that can be visually inspected.....	13
4.0 Compliance	13
4.1 Construction.....	13
4.1.1 General.....	13
4.1.2 Categories of equipment	14
4.2 Controls	14
4.3 Indicators	14
4.3.1 General.....	14
4.3.2 Visual indicators	14
4.3.2.1 Alarm indicators.....	14
4.3.2.2 Test indicators.....	15
4.4 Self ID	15
4.5 Labelling.....	15
5 Technical information	15
5.1 Alerting and locating functions	15
5.2 Technical annexes	16
6 General conditions of measurement	16
6.1 Conformity testing.....	16
6.2 Unique identifier (self ID).....	16
6.3 Artificial Antenna	16
6.3.1 For equipment with an integral antenna.....	16
6.3.2 For testing the RF transmitter output	16
6.3.3 For testing the DSC RF receiver input.....	16
6.4 Normal DSC TX Test Modulation	17
6.4.1 Continuous B / Y state	17
6.4.2 Alternating B-Y sequence.....	17
6.4.3 Random B-Y sequence	17
6.4.4 Unmodulated carrier	17
6.5 AIS TX Test Modulation.....	17
6.5.1 Standard test signal number 1	17
6.5.2 Standard test signal number 2	17
6.5.3 Standard test signal number 3	17
6.5.4 Unmodulated carrier	17
6.6 AIS Reference timing signal	17
6.7 Standard test signals for DSC receiver testing	18
6.8 Test conditions power sources and ambient temperatures.....	18
6.8.1 Normal and extreme test conditions.....	18
6.8.2 Test power sources.....	18
6.9 Normal test conditions	18
6.9.1 Normal temperature and humidity	18
6.9.2 Normal test voltage.....	18
6.10 Extreme test conditions	18
6.10.1 Extreme temperatures	18

6.10.2	Extreme test voltages.....	19
6.10.2.1	Upper extreme test voltage.....	19
6.10.2.2	Lower extreme test voltage	19
6.11	Reference Bandwidths for emission measurements	19
7	Environmental tests	19
7.1	Introduction	19
7.2	Procedure.....	19
7.3	Performance check	20
7.4	Drop test	20
7.4.1	Definition	20
7.4.2	Test conditions.....	20
7.4.3	Method of measurement	20
7.4.4	Required results	20
7.5	Temperature tests	21
7.5.1	Definition	21
7.5.2	Dry heat test.....	21
7.5.2.1	Method of measurement.....	21
7.5.2.2	Requirements	21
7.5.3	Damp heat test	21
7.5.3.1	Method of measurement.....	21
7.5.3.2	Required results.....	21
7.5.4	Low temperature test	22
7.5.4.1	Method of measurement.....	22
7.5.4.2	Required results.....	22
7.5.5	Low temperature battery endurance test	22
7.5.5.1	Method of measurement.....	22
7.5.5.2	Required results.....	22
7.6	Vibration test	22
7.6.1	Definition	22
7.6.2	Method of measurement	22
7.6.3	Required results	23
7.7	Saltwater spray test.....	23
7.7.1	Definition	23
7.7.2	Method of measurement	23
7.7.2.1	The spraying apparatus	23
7.7.2.2	Preparation of EUT	24
7.7.2.3	Test cycles.....	24
7.7.2.4	Conclusion of testing.....	24
7.7.3	Required results	24
7.8	Thermal shock test.....	24
7.8.1	Definition	24
7.8.2	Method of measurement	24
7.8.3	Required results	25
7.9	Buoyancy test	25
7.9.1	Definition	25
7.9.2	Method of measurement	25
7.9.3	Required results and limit.....	25
7.10	Protection of the transmitter	25
7.10.1	Definition	25
7.10.2	Method of measurement	25
7.10.3	Required results	25
8	Tests on the DSC transmitter	26
8.1	DSC Frequency error	26
8.1.1	Definition	26
8.1.2	Method of measurement	26
8.1.3	Limit	26
8.2	DSC Conducted power variation	26
8.2.1	Purpose.....	26
8.2.2	Definition	26
8.2.3	Method of measurement	26
8.2.4	Limit	26