

---

**Elektromagnetna združljivost in zadeve v zvezi z radijskim spektrom (ERM) - Pomorski mobilni oddajniki in sprejemniki za uporabo v radiofrekvenčnih pasovih MF in HF - 2. del: Harmonizirani EN, ki zajema bistvene zahteve člena 3.3(e) direktive R&TTE - Oprema z vgrajeno ali pripadajočo opremo za digitalni selektivni klic (DSC) razreda E**

Electromagnetic compatibility and Radio spectrum Matters (ERM) - Maritime mobile transmitters and receivers for use in the MF and HF bands - Part 3: Harmonized EN covering essential requirements under article 3.3(e) of the R&TTE Directive - Equipment with integrated or associated equipment for Class E Digital Selective Calling (DSC)

[SIST EN 300 373-3 V1.2.1:2010](https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-ca1541e0037c/sist-en-300-373-3-v1-2-1-2010)

<https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-ca1541e0037c/sist-en-300-373-3-v1-2-1-2010>

**Ta slovenski standard je istoveten z: EN 300 373-3 Version 1.2.1**

---

**ICS:**

33.060.20	Sprejemna in oddajna oprema	Receiving and transmitting equipment
33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general
47.020.70	Navigacijska in krmilna oprema	Navigation and control equipment

**SIST EN 300 373-3 V1.2.1:2010** en

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 300 373-3 V1.2.1:2010

<https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-ca1541e0037c/sist-en-300-373-3-v1-2-1-2010>

# ETSI EN 300 373-3 V1.2.1 (2009-12)

---

*Harmonized European Standard (Telecommunications series)*

**Electromagnetic compatibility  
and Radio spectrum Matters (ERM);  
Maritime mobile transmitters and receivers  
for use in the MF and HF bands;  
Part 3: Harmonized EN covering essential requirements  
under article 3.3(e) of the R&TTE Directive;  
Equipment with integrated or associated equipment for  
Class E Digital Selective Calling (DSC)**

---

**iTeh STANDARD PREVIEW  
(standards.iteh.ai)**

[SIST EN 300 373-3 V1.2.1:2010](https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-ca1541e0037c/sist-en-300-373-3-v1-2-1-2010)

<https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-ca1541e0037c/sist-en-300-373-3-v1-2-1-2010>



## Reference

---

REN/ERM-TG26-081-3

## Keywords

---

maritime, mobile, radio, regulation, selcall,  
telephony

**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 - NAF 742 C  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° 7803/88

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 300 373-3 V1.2.1:2010

[https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-  
ca1541e0037c/sist-en-300-373-v1-2-1-2010](https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-ca1541e0037c/sist-en-300-373-v1-2-1-2010)

**Important notice**

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

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

<http://portal.etsi.org/tb/status/status.asp>

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

[http://portal.etsi.org/chaicor/ETSI\\_support.asp](http://portal.etsi.org/chaicor/ETSI_support.asp)

---

**Copyright Notification**

No part may be reproduced except as authorized by written permission.  
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2009.  
All rights reserved.

**DECT™**, **PLUGTESTS™**, **UMTS™**, **TIPHON™**, the TIPHON logo and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.

**3GPP™** is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

**LTE™** is a Trade Mark of ETSI currently being registered

for the benefit of its Members and of the 3GPP Organizational Partners.

**GSM®** and the GSM logo are Trade Marks registered and owned by the GSM Association.

# Contents

Intellectual Property Rights .....	7
Foreword.....	7
1 Scope .....	8
2 References .....	8
2.1 Normative references .....	8
2.2 Informative references.....	9
3 Definitions, symbols and abbreviations .....	9
3.1 Definitions .....	9
3.2 Symbols.....	10
3.3 Abbreviations .....	10
4 Technical requirements specifications .....	11
4.1 Environmental profile.....	11
4.2 General, operational and technical requirements.....	11
4.2.1 General.....	11
4.2.2 General requirements .....	11
4.2.2.1 Composition .....	11
4.2.2.1.1 Audio frequencies interfaces .....	11
4.2.2.1.2 DSC Interface .....	11
4.2.2.1.3 Digital input panels.....	12
4.2.2.2 Construction .....	12
4.2.2.3 Controls and indicators .....	12
4.2.2.3.1 General .....	12
4.2.2.3.2 Illumination .....	12
4.2.2.4 Labelling .....	13
4.2.2.4.1 General .....	13
4.2.2.4.2 Distress frequencies .....	13
4.2.2.5 Protection against mishandling .....	13
4.2.3 Operational requirements.....	13
4.2.3.1 Frequency bands .....	13
4.2.3.1.1 MF band .....	13
4.2.3.1.2 HF bands.....	13
4.2.3.2 Classes of emission .....	14
4.2.4 Warming up period .....	14
4.2.4.1 Time .....	14
4.2.4.2 Heaters .....	14
4.2.4.3 Heating circuits .....	14
4.2.4.4 Delay.....	14
4.2.5 Technical requirements.....	14
4.2.5.1 Distress controls.....	14
4.2.5.2 Telephony transmit control .....	14
4.2.5.3 Misuse .....	14
4.2.5.4 Control panel priority.....	15
4.2.5.5 Manual gain control and Automatic Gain Control (AGC).....	15
4.2.5.6 Output indication.....	15
4.2.5.7 DSC operation.....	15
4.3 Environmental requirements .....	15
4.3.1 Vibration test .....	15
4.3.1.1 Definition .....	15
4.3.1.2 Requirement .....	15
4.3.1.3 Conformance.....	15
4.3.2 Temperature tests.....	15
4.3.2.1 Definition .....	15
4.3.2.2 Dry heat.....	15
4.3.2.2.1 Definition.....	15
4.3.2.2.2 Requirement .....	16

4.3.2.2.3	Conformance .....	16
4.3.2.3	Damp heat .....	16
4.3.2.3.1	Definition.....	16
4.3.2.3.2	Requirement .....	16
4.3.2.3.3	Conformance .....	16
4.3.2.4	Low temperature cycle.....	16
4.3.2.4.1	Definition.....	16
4.3.2.4.2	Requirement .....	16
4.3.2.4.3	Conformance .....	16
4.3.3	Corrosion test.....	16
4.3.3.1	Definition .....	16
4.3.3.2	Requirement .....	17
4.3.3.3	Conformance .....	17
4.3.4	Rain test .....	17
4.3.4.1	Definition .....	17
4.3.4.2	Requirement .....	17
4.3.4.3	Conformance.....	17
4.4	Conformance requirements .....	17
4.4.1	Unwanted frequency modulation.....	17
4.4.1.1	Definition .....	17
4.4.1.2	Limit.....	17
4.4.1.3	Conformance.....	17
4.4.2	Sensitivity of the microphone and the 600 $\Omega$ line inputs for SSB telephony.....	17
4.4.2.1	Definition .....	17
4.4.2.2	Limits .....	18
4.4.2.3	Conformance .....	18
4.4.3	Automatic level control and/or limiter for SSB telephony .....	18
4.4.3.1	Definition .....	18
4.4.3.2	Limits .....	18
4.4.3.3	Conformance.....	18
4.4.4	Audio frequency response of SSB telephony .....	18
4.4.4.1	Definition .....	18
4.4.4.2	Limits .....	19
4.4.4.3	Conformance.....	19
4.4.5	Residual hum and noise power for telephony.....	19
4.4.5.1	Definition .....	19
4.4.5.2	Limits .....	19
4.4.5.3	Conformance.....	19
4.4.6	Residual frequency modulation on DSC.....	20
4.4.6.1	Definition .....	20
4.4.6.2	Limits .....	20
4.4.6.3	Conformance.....	20
4.4.7	Continuous operation on telephony .....	20
4.4.7.1	Definition .....	20
4.4.7.2	Limits .....	20
4.4.7.3	Conformance.....	20
4.4.8	Protection of transmitter .....	20
4.4.8.1	Definition .....	20
4.4.8.2	Limits .....	20
4.4.8.3	Conformance.....	20
4.4.9	Receiver frequency error .....	20
4.4.9.1	Definition .....	20
4.4.9.2	Limits .....	21
4.4.9.3	Conformance.....	21
4.4.10	Unwanted frequency modulation.....	21
4.4.10.1	Definition .....	21
4.4.10.2	Limits .....	21
4.4.10.3	Conformance.....	21
4.4.11	Pass band .....	21
4.4.11.1	Definition .....	21
4.4.11.2	Limits .....	21
4.4.11.3	Conformance.....	21

4.4.12	Reciprocal mixing.....	21
4.4.12.1	Definition .....	21
4.4.12.2	Limits .....	21
4.4.12.3	Conformance.....	21
4.4.13	Harmonic content in output .....	22
4.4.13.1	Definition .....	22
4.4.13.2	Limits .....	22
4.4.13.3	Conformance.....	22
4.4.14	Audio frequency intermodulation.....	22
4.4.14.1	Definition .....	22
4.4.14.2	Limits .....	22
4.4.14.3	Conformance.....	22
4.4.15	Internally generated spurious signals.....	22
4.4.15.1	Definition .....	22
4.4.15.2	Limit.....	22
4.4.15.3	Conformance.....	22
4.4.16	AGC efficiency .....	22
4.4.16.1	Definition .....	22
4.4.16.2	Limits .....	23
4.4.16.3	Conformance.....	23
4.4.17	AGC time constants (attack and recovery time) .....	23
4.4.17.1	Definitions.....	23
4.4.17.2	Limits .....	23
4.4.17.3	Conformance.....	23
4.4.18	Protection of input circuits.....	23
4.4.18.1	Definition .....	23
4.4.18.2	Limits .....	23
4.4.18.3	Conformance.....	23
5	Testing for compliance with technical requirements.....	24
5.1	Test conditions, power supply and ambient temperatures.....	24
5.1.1	General.....	24
5.1.2	Test power source.....	24
5.1.3	Normal test conditions.....	24
5.1.3.1	Normal temperature and humidity .....	24
5.1.3.2	Normal test power source.....	24
5.1.3.2.1	Mains voltage and frequency.....	24
5.1.3.2.2	Secondary battery power sources .....	24
5.1.3.2.3	Other power sources .....	24
5.1.4	Extreme test conditions.....	25
5.1.4.1	Extreme temperature tests .....	25
5.1.4.2	Extreme values of test power source.....	25
5.1.4.2.1	Mains voltage and mains frequency .....	25
5.1.4.2.2	Secondary battery power sources .....	25
5.1.4.2.3	Other power sources .....	25
5.1.5	Artificial antennas.....	25
5.1.5.1	Transmitters .....	25
5.1.5.2	Receivers.....	25
5.1.6	Standard test signals.....	26
5.1.6.1	Test signals applied to the receiver input .....	26
5.1.6.1.1	Sources .....	26
5.1.6.1.2	Levels .....	26
5.1.6.2	Normal test signals.....	26
5.1.6.2.1	Class of emission J3E.....	26
5.1.6.2.2	Class of emission F1B .....	26
5.1.6.3	Choice of testing frequencies .....	26
5.1.7	Warming up period .....	26
5.1.7.1	Time .....	26
5.1.7.2	Heaters .....	26
5.2	Interpretation of the measurement results .....	27
5.3	Essential radio test suites.....	27
5.3.1	Environmental tests.....	27

iTech STANDARD PREVIEW  
(standards.itech.ai)

5.3.1.1	Introduction .....	27
5.3.1.2	Procedure .....	27
5.3.1.3	Performance check .....	28
5.3.1.4	Vibration test.....	28
5.3.1.5	Temperature tests .....	29
5.3.1.5.1	Dry heat .....	29
5.3.1.5.2	Damp heat.....	29
5.3.1.5.3	Low temperature cycle .....	30
5.3.1.6	Corrosion test .....	30
5.3.1.6.1	General .....	30
5.3.1.6.2	Method of measurement .....	30
5.3.1.7	Rain test .....	31
5.3.1.7.1	General .....	31
5.3.1.7.2	Method of measurement .....	31
5.3.2	Conformance tests .....	31
5.3.2.1	Unwanted frequency modulation .....	31
5.3.2.2	Sensitivity of the microphone and the 600 $\Omega$ line inputs for SSB telephony .....	32
5.3.2.3	Automatic level control and/or limiter for SSB telephony .....	32
5.3.2.4	Audio frequency response of SSB telephony .....	32
5.3.2.5	Residual hum and noise power for telephony .....	33
5.3.2.6	Residual frequency modulation on DSC .....	33
5.3.2.7	Continuous operation on telephony.....	33
5.3.2.8	Protection of transmitter.....	33
5.4	Other test specifications .....	34
5.4.1	General.....	34
5.4.2	Receiver frequency error .....	34
5.4.3	Unwanted frequency modulation .....	34
5.4.4	Pass band .....	34
5.4.4.1	Class of emission J3E.....	34
5.4.5	Reciprocal mixing.....	35
5.4.6	Harmonic content in output .....	35
5.4.7	Audio frequency intermodulation .....	35
5.4.8	Internally generated spurious signals.....	35
5.4.9	AGC efficiency .....	36
5.4.9.1	Settings.....	36
5.4.9.2	Increase in Signal-to-Noise Ratio (SNR) .....	36
5.4.10	AGC time constants (attack and recovery time) .....	36
5.4.11	Protection of input circuits.....	36
<b>Annex A (normative):</b>	<b>HS Requirements and conformance Test specifications Table (HS-RTT).....</b>	<b>37</b>
<b>Annex B (informative):</b>	<b>The EN title in the official languages .....</b>	<b>40</b>
<b>Annex C (informative):</b>	<b>Bibliography .....</b>	<b>41</b>
History .....		42



## Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://webapp.etsi.org/IPR/home.asp>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

## Foreword

This Harmonized European Standard (Telecommunications series) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC (as amended) [i.2] laying down a procedure for the provision of information in the field of technical standards and regulations and following the Commission Decision 2004/71/EC [i.5] of 4 September 2003.

The present document is intended to become a Harmonized Standard, the reference of which will be published in the Official Journal of the European Communities referencing the Directive 1999/5/EC [i.1] of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity ("the R&TTE Directive").

Technical specifications relevant to Directive 1999/5/EC [i.1] are given in annex A.

The present document is part 3 of a multi-part deliverable covering Maritime mobile transmitters and receivers for use in the MF and HF bands, as identified below:

- Part 1: "Technical characteristics and methods of measurement";
- Part 2: "Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive";
- Part 3: "Harmonized EN covering essential requirements under article 3.3(e) of the R&TTE Directive; Equipment with integrated or associated equipment for Class E Digital Selective Calling (DSC)".**

### National transposition dates

Date of adoption of this EN:	9 December 2009
Date of latest announcement of this EN (doa):	31 March 2010
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 September 2010
Date of withdrawal of any conflicting National Standard (dow):	30 September 2011

---

# 1 Scope

The present document applies to radio transmitters and receivers, for use on vessels operating in either the Medium Frequency (MF) 1 606,5 kHz to 4 000 kHz bands only, or in the Medium and High Frequency (MF/HF) 1 606,5 kHz to 27,5 MHz bands allocated in the International Telecommunications Union (ITU) Radio Regulations [1], to the Maritime Mobile Service (MMS).

The present document refers to equipment for one or more of the following:

- Single SideBand (SSB) modulation for telephony transmission and reception (J3E);
- Frequency Shift Keying (FSK) or SSB modulation of a keyed sub-carrier to transmit and receive Digital Selective Calling (DSC) signals.

The present document refers to radio equipment, which is either fitted with an integrated DSC controller or fitted with a dedicated interface for a DSC controller.

The present document is intended to cover the provisions of Directive 1999/5/EC [i.1] (R&TTE Directive) article 3.3 e), which states that radio equipment within the scope of the present document shall be so constructed that: "it supports certain features ensuring access to emergency services".

In addition to the present document, other ENs that specify technical requirements in respect of essential requirements under other parts of article 3 of the R&TTE Directive [i.1] will apply to equipment within the scope of the present document.

---

## 2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
  - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
  - for informative references.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

### 2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

- [1] ITU Radio Regulations (2008).
- [2] ETSI EN 300 373-2 (V1.1.2): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Maritime mobile transmitters and receivers for use in the MF and HF bands; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive".
- [3] ISO 3791 (1976): "Office machines and data processing equipment - Keyboard layouts for numeric applications".

- [4] ETSI EN 300 338-4 (V1.1.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Technical characteristics and methods of measurement for equipment for generation, transmission and reception of Digital Selective Calling (DSC) in the maritime MF, MF/HF and/or VHF mobile service; Part 4: Class E DSC".

## 2.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area. For non-specific references, the latest version of the referenced document (including any amendments) applies.

- [i.1] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (R&TTE Directive).
- [i.2] Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations.
- [i.3] ITU-T Recommendation E.161 (2001): "Arrangement of digits, letters and symbols on telephones and other devices that can be used for gaining access to a telephone network".
- [i.4] ETSI TR 100 028: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".
- [i.5] Commission Decision 2004/71/EC of 4 September 2003 on essential requirements relating to marine radio communication equipment which is intended to be used on non-SOLAS vessels and to participate in the Global Maritime Distress and Safety System (GMDSS).
- [i.6] CENELEC EN 60945 (2002): "Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results".

SIST EN 300 373-3 V1.2.1:2010

## 3 Definitions, symbols and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in the R&TTE Directive [i.1] and the following apply:

**assigned frequency:** centre of the frequency band assigned to a station

**carrier frequency:** frequency to which the transmitter or receiver is tuned

**environmental profile:** range of environmental conditions under which equipment complies with the provisions of the present document

**rated output power:** (of the receiver) rated output power of the receiver is the output power of the receiver as declared by the manufacturer that complies with both the minimum audio power and maximum total harmonic distortion at the same time

**standard output power:** (of the receiver) is defined as:

- a) 1 mW for earphone reception;
- b) 500 mW for loudspeaker reception;
- c) 0 dBm into 600  $\Omega$  for the audio line outputs;

measured across a resistor equal to the nominal value of the load impedance as declared by the manufacturer

## 3.2 Symbols

For the purposes of the present document, the symbols given in the ITU Radio Regulations [1] and the following apply:

dB	decibel
dBm	dBmilliwatt
dB $\mu$ V	dBmicrovolt
F1B	frequency modulation, single channel containing quantized or digital information without the use of a modulating sub-carrier, telegraphy for automatic reception
g	gram
h	hour
Hz	hertz
J2B	SSB, suppressed carrier, single channel containing quantized or digital information with the use of a modulating sub-carrier, telegraphy for automatic reception
J3E	SSB, suppressed carrier, single channel containing analogue information, telephony
k	kilo
kHz	kilohertz
kPa	kilopascal
l	litre
m	meter
MHz	megahertz
min	minute
mm	millimeter
ms	millisecond
mW	milliwatt
NaCl	sodium chloride
$\Omega$	ohm
pF	picofarad
s	second
V	volt
W	watt

iTech STANDARD PREVIEW  
(standards.iteh.ai)

[SIST EN 300 373-3 V1.2.1:2010](https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-ca1541e0037c/sist-en-300-373-3-v1-2-1-2010)

[https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-](https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-ca1541e0037c/sist-en-300-373-3-v1-2-1-2010)

[ca1541e0037c/sist-en-300-373-3-v1-2-1-2010](https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-ca1541e0037c/sist-en-300-373-3-v1-2-1-2010)

## 3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

AGC	Automatic Gain Control
DC	Direct Current
DSC	Digital Selective Calling
EMC	ElectroMagnetic Compatibility
emf	electromotive force
EUT	Equipment Under Test
FSK	Frequency Shift Keying
ISO	International Standards Organization
ITU	International Telecommunications Union
MF	Medium Frequency
MF/HF	Medium and High Frequency
MMS	Maritime Mobile Service
PEP	Peak Envelope Power
R&TTE	Radio and Telecommunications Terminal Equipment
RF	Radio Frequency
RMS	Root Mean Square
SINAD	Signal plus Noise plus Distortion to Noise plus Distortion
SNR	Signal-to-Noise Ratio
SSB	Single Side Band

## 4 Technical requirements specifications

### 4.1 Environmental profile

The technical requirements of the present document apply under the environmental profile for operation of the equipment, which shall be determined by the environmental class of the equipment. The equipment shall comply with all the technical requirements of the present document at all times when operating within the boundary limits of the required operational environmental profile.

### 4.2 General, operational and technical requirements

#### 4.2.1 General

There are no essential test suites for the requirements in clause 4.2. The availability of the specified controls shall be verified by visual inspection.

#### 4.2.2 General requirements

##### 4.2.2.1 Composition

The equipment shall contain either:

- a dedicated watchkeeping receiver for the DSC decoder;
- a DSC encoder; and
- a DSC decoder.

Or:

- a dedicated DSC controller interface.

STANDARD PREVIEW  
(standards.iteh.ai)

[SIST EN 300 373-3 V1.2.1:2010](https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-ca1541e0037c/sist-en-300-373-3-v1-2-1-2010)

<https://standards.iteh.ai/catalog/standards/sist/14359909-6f7d-4bd1-93f8-ca1541e0037c/sist-en-300-373-3-v1-2-1-2010>

##### 4.2.2.1.1 Audio frequencies interfaces

The following inputs and outputs applicable to the type of equipment shall be provided:

- a) transmitters:
  - SSB Telephony:
    - 600  $\Omega$  earth free audio input;
    - microphone input;
- b) receivers:
  - SSB Telephony:
    - 600  $\Omega$  earth free audio output;
    - earphone output;
    - speaker output.

##### 4.2.2.1.2 DSC Interface

If the equipment does not have an integrated DSC controller then, the equipment shall have a dedicated interface for an external DSC controller compliant with EN 300 338-4 [4].