



SLOVENSKI STANDARD

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Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF radiotelephone equipment for general communications and associated equipment for Class D Digital Selective Calling (DSC); Part 3: Harmonized EN under article 3.3 (e) of the R&TTE Directive

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Candidate Harmonized European Standard (Telecommunications series)

**Electromagnetic compatibility
and Radio spectrum Matters (ERM);
VHF radiotelephone equipment for general communications
and associated equipment for Class "D"
Digital Selective Calling (DSC);
Part 3: Harmonized EN under article 3.3(e)
of the R&TTE Directive**

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Contents

Intellectual Property Rights	7
Foreword.....	7
Introduction	8
1 Scope	10
2 References	10
3 Definitions and abbreviations.....	11
3.1 Definitions	11
3.2 Abbreviations	11
4 Technical requirements specifications	12
4.1 Environmental profile.....	12
4.2 General, operational and technical requirements.....	12
4.2.1 General and operational requirements	12
4.2.1.1 Composition	12
4.2.1.2 Construction	12
4.2.1.3 Controls and indicators	12
4.2.1.4 Facilities for coding and decoding of DSC	13
4.2.1.4.1 Call functions	13
4.2.1.4.2 MANUAL calls	14
4.2.1.4.3 Distress calls	14
4.2.1.4.4 ALL SHIPS calls	14
4.2.1.4.5 Incoming calls	15
4.2.1.4.6 Other calls.....	15
4.2.1.5 DSC display	15
4.2.1.6 Handset and loudspeaker.....	15
4.2.1.7 Safety precautions	15
4.2.1.8 Labelling	16
4.2.1.9 Warm up.....	16
4.2.2 Technical requirements.....	16
4.2.2.1 Switching time	16
4.2.2.2 Class of emission and modulation characteristics	16
4.2.2.3 Facilities for DSC transmission and reception	16
4.2.2.3.1 General	16
4.2.2.3.2 Decoding	16
4.2.2.3.3 Automatic acknowledgement	17
4.2.2.3.4 Automatic re-transmission of distress calls	17
4.2.2.4 Ships identity - MMSI and Group MMSI	17
4.2.2.5 Entry of position information.....	17
4.2.2.6 Alarm circuits.....	17
4.2.2.6.1 Distress and urgency.....	17
4.2.2.6.2 Other categories	18
4.2.2.6.3 Acoustic alarms	18
4.2.2.6.4 Cancellation of alarms	18
4.2.2.7 Facilities for automatic identification.....	18
4.2.2.8 Multiple watch facilities.....	18
4.2.2.8.1 General	18
4.2.2.8.2 Scanning provisions.....	18
4.2.2.8.3 Scanning characteristics	19
4.3 Environmental requirements	19
4.3.1 Vibration test	19
4.3.1.1 Definition	19
4.3.1.2 Requirement	19
4.3.1.3 Conformance.....	19
4.3.2 Temperature tests.....	19

4.3.2.1	Definition	19
4.3.2.2	Dry heat	19
4.3.2.2.1	Definition	19
4.3.2.2.2	Requirement	19
4.3.2.2.3	Conformance	20
4.3.2.3	Damp heat	20
4.3.2.3.1	Definition	20
4.3.2.3.2	Requirement	20
4.3.2.3.3	Conformance	20
4.3.2.4	Low temperature	20
4.3.2.4.1	Definition	20
4.3.2.4.2	Requirement	20
4.3.2.4.3	Conformance	20
4.4	Conformance requirements	20
4.4.1	Sensitivity of the modulator, including microphone	20
4.4.1.1	Definition	20
4.4.1.2	Limit	20
4.4.1.3	Conformance	20
4.4.2	Audio frequency response	20
4.4.2.1	Definition	20
4.4.2.2	Limit	21
4.4.2.3	Conformance	21
4.4.3	Audio frequency harmonic distortion of the emission	21
4.4.3.1	Definition	21
4.4.3.2	Limit	21
4.4.3.3	Conformance	21
4.4.4	Residual modulation of the transmitter	22
4.4.4.1	Definition	22
4.4.4.2	Limit	22
4.4.4.3	Conformance	22
4.4.5	Testing of generated call sequences	22
4.4.5.1	Definition	22
4.4.5.2	Limit	22
4.4.5.3	Conformance	22
4.4.6	Harmonic distortion and rated audio-frequency output power	22
4.4.6.1	Definition	22
4.4.6.2	Limit	22
4.4.6.3	Conformance	23
4.4.7	Receiver audio frequency response	23
4.4.7.1	Definition	23
4.4.7.2	Limit	23
4.4.7.3	Conformance	23
4.4.8	Radio-telephone receiver Maximum Usable Sensitivity	24
4.4.8.1	Definition	24
4.4.8.2	Limits	24
4.4.8.3	Conformance	24
4.4.9	Radio-telephone receiver co-channel rejection	24
4.4.9.1	Definition	24
4.4.9.2	Limit	24
4.4.9.3	Conformance	24
4.4.10	Radio-telephone receiver adjacent channel selectivity	24
4.4.10.1	Definition	24
4.4.10.2	Limits	24
4.4.10.3	Conformance	24
4.4.11	Radio-telephone receiver spurious response rejection	25
4.4.11.1	Definition	25
4.4.11.2	Limit	25
4.4.11.3	Conformance	25
4.4.12	Radio-telephone receiver intermodulation response	25
4.4.12.1	Definition	25
4.4.12.2	Limit	25
4.4.12.3	Conformance	25

4.4.13	Radio-telephone receiver blocking or desensitization	25
4.4.13.1	Definition	25
4.4.13.2	Limit	25
4.4.13.3	Conformance	25
4.4.14	Receiver residual noise level	25
4.4.14.1	Definition	25
4.4.14.2	Limit	26
4.4.14.3	Conformance	26
4.4.15	Squelch operation	26
4.4.15.1	Definition	26
4.4.15.2	Limit	26
4.4.15.3	Conformance	26
4.4.16	Squelch hysteresis	26
4.4.16.1	Definition	26
4.4.16.2	Limit	26
4.4.16.3	Conformance	26
4.4.17	Dynamic range	26
4.4.17.1	Definition	26
4.4.17.2	Limit	26
4.4.17.3	Conformance	27
4.4.18	Verification of correct decoding of various types of DSC calls	27
4.4.18.1	Definition	27
4.4.18.2	Limit	27
4.4.18.3	Conformance	27
5	Testing for compliance with technical requirements	27
5.1	Test conditions, power supply and ambient temperatures	27
5.1.1	Arrangements for test signals applied to the receiver input	27
5.1.2	Squelch	27
5.1.3	Normal test modulation	27
5.1.4	Artificial antenna	28
5.1.5	Arrangements for test signals applied to the transmitter input	28
5.1.6	Test channels	28
5.1.7	Generation and examination of the digital selective call signal	28
5.1.8	Standard test signals for DSC	28
5.1.9	Determination of the symbol error ratio in the output of the receiving part	28
5.1.10	Test conditions, power sources, and ambient temperatures	28
5.1.10.1	Normal and extreme test conditions	28
5.1.10.2	Test power source	29
5.1.11	Normal test conditions	29
5.1.11.1	Normal temperature and humidity	29
5.1.11.2	Normal power sources	29
5.1.11.2.1	Battery power source	29
5.1.11.2.2	Other power sources	29
5.1.12	Extreme test conditions	29
5.1.12.1	Extreme temperatures	29
5.1.12.2	Extreme values of test power sources	29
5.1.12.2.1	Battery power source	29
5.1.12.2.2	Other power sources	29
5.1.13	Procedure for tests at extreme temperatures	30
5.2	Interpretation of the measurement results	30
5.3	Essential radio test suites	30
5.3.1	Environmental tests	30
5.3.1.1	Introduction	30
5.3.1.2	Procedure	30
5.3.1.3	Performance check	31
5.3.1.4	Vibration test	31
5.3.1.5	Temperature tests	32
5.3.1.5.1	Dry heat	32
5.3.1.5.2	Damp heat	32
5.3.1.5.3	Low temperature	32
5.3.2	Conformance tests	32

5.3.2.1	Sensitivity of the modulator, including microphone	32
5.3.2.2	Audio frequency response	32
5.3.2.3	Audio frequency harmonic distortion of the emission	33
5.3.2.3.1	Methodology	33
5.3.2.3.2	Normal test conditions	33
5.3.2.3.3	Extreme test conditions	33
5.3.2.4	Residual modulation of the transmitter	33
5.3.2.5	Testing of generated call sequences	33
5.4	Other test suites	33
5.4.1	General	33
5.4.2	Harmonic distortion and rated audio-frequency output power	34
5.4.3	Receiver audio frequency response	34
5.4.4	Radio-telephone receiver maximum usable sensitivity	34
5.4.5	Radio-telephone receiver co-channel rejection	34
5.4.6	Radio-telephone receiver adjacent channel selectivity	35
5.4.7	Radio-telephone receiver spurious response rejection	35
5.4.8	Radio-telephone receiver intermodulation response	35
5.4.9	Radio-telephone receiver blocking or desensitization	36
5.4.10	Receiver residual noise level	36
5.4.11	Squelch operation	36
5.4.12	Squelch hysteresis	37
5.4.13	Dynamic range	37
5.4.14	Verification of correct decoding of various types of DSC calls	37
Annex A (normative):	The EN Requirements Table (EN-RT)	38
Annex B (normative):	DSC Calls	40
Annex C (informative):	The EN title in the official languages	41
Annex D (informative):	Bibliography	42
History	SIST EN 301 025-3 V1.2.1:2005 https://standards.iteh.ai/catalog/standards/sist/7ae3dcca-773e-4917-9e5f-4886a8375f93/sist-en-301-025-3-v1-2-1-2005	43

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Foreword

This Candidate 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 laying down a procedure for the provision of information in the field of technical standards and regulations and following the Commission Decision 2000/638/EC of 22 September 2000.

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 [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").

The present document is part 3 of a multi-part deliverable covering the Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF radiotelephone equipment for general communications and associated equipment for Class "D" Digital Selective Calling (DSC), as identified below:

Part 1: "Technical characteristics and methods of measurement";

Part 2: "Harmonized EN under article 3.2 of the R&TTE Directive";

Part 3: "Harmonized EN under article 3.3 (e) of the R&TTE Directive".

National transposition dates

Date of adoption of this EN:	10 September 2004
Date of latest announcement of this EN (doa):	31 December 2004
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 June 2005
Date of withdrawal of any conflicting National Standard (dow):	30 June 2006

Introduction

The present document is part of a set of standards designed to fit in a modular structure to cover all radio and telecommunications terminal equipment under the R&TTE Directive [1]. Each standard is a module in the structure. The modular structure is shown in figure 1.

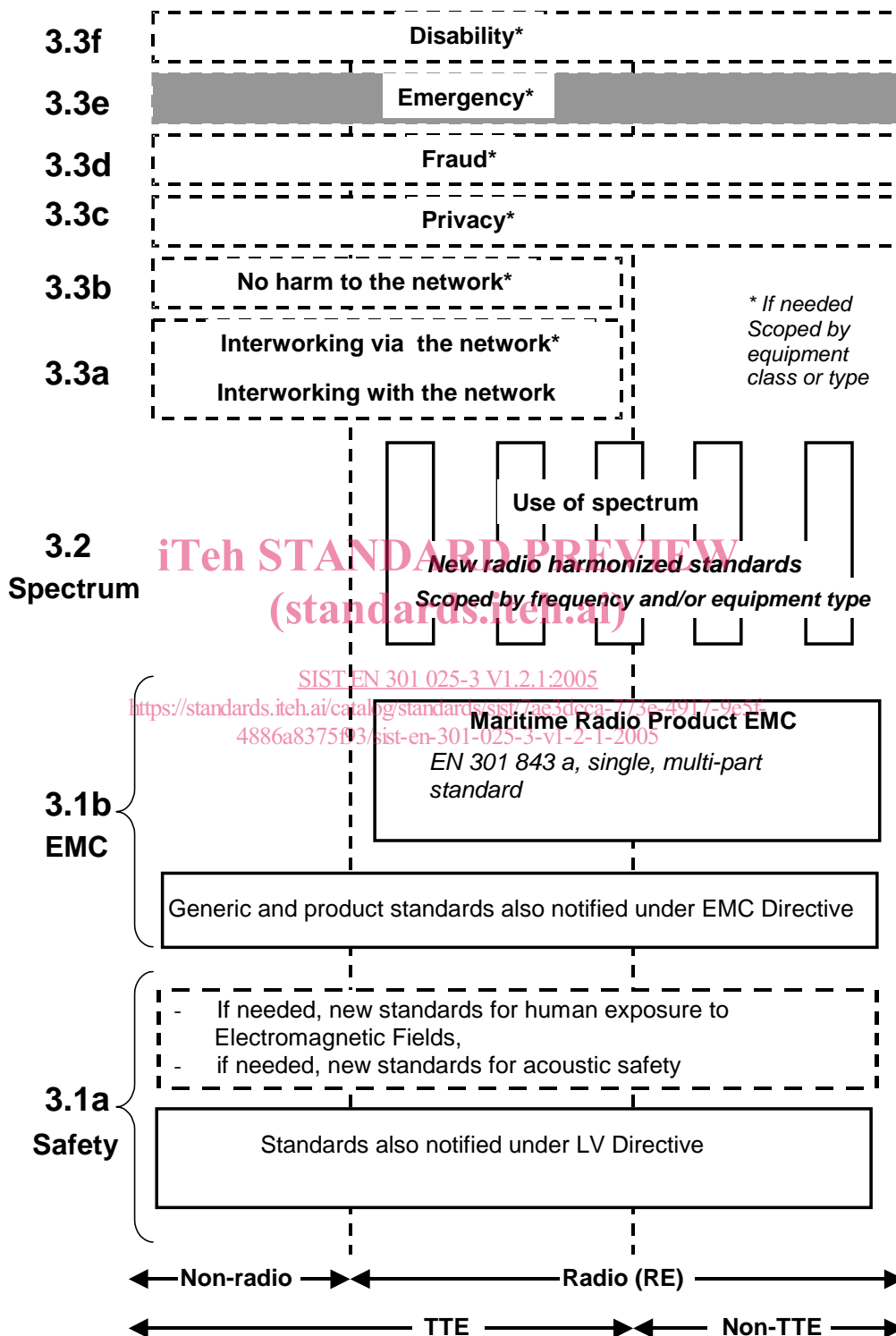


Figure 1: Modular structure for the various standards used under the R&TTE Directive

The left hand edge of the figure 1 shows the different clauses of article 3 of the R&TTE Directive [1].

For article 3.3 various horizontal boxes are shown. Dotted lines indicate that at the time of publication of the present document essential requirements in these areas have to be adopted by the Commission. If such essential requirements are adopted, and as far and as long as they are applicable, they will justify individual standards whose scope is likely to be specified by function or interface type.

The vertical boxes show the standards under article 3.2 for the use of the radio spectrum by radio equipment. The scopes of these standards are specified either by frequency (normally in the case where frequency bands are harmonized) or by radio equipment type.

For article 3.1b the diagram shows EN 301 843, the multi-part product EMC standard for maritime radio, and the existing collection of generic and product standards currently used under the EMC Directive [2].

For article 3.1a the diagram shows the existing safety standards currently used under the LV Directive [3] and new standards covering human exposure to electromagnetic fields. New standards covering acoustic safety may also be required.

The bottom of the figure shows the relationship of the standards to radio equipment and telecommunications terminal equipment. A particular equipment may be radio equipment, telecommunications terminal equipment or both. A radio spectrum standard will apply if it is radio equipment. An article 3.3 standard will apply as well only if the relevant essential requirement under the R&TTE Directive [1] is adopted by the Commission and if the equipment in question is covered by the scope of the corresponding standard. Thus, depending on the nature of the equipment, the essential requirements under the R&TTE Directive [1] may be covered in a set of standards.

The modularity principle has been taken because:

- it minimizes the number of standards needed. Because equipment may, in fact, have multiple interfaces and functions it is not practicable to produce a single standard for each possible combination of functions that may occur in an equipment;
- it provides scope for standards to be added:
 - under article 3.2 when new frequency bands are agreed; or
 - under article 3.3 should the Commission take the necessary decisions
 without requiring alteration of standards that are already published;
- it clarifies, simplifies and promotes the usage of Harmonized Standards as the relevant means of conformity assessment.

1 Scope

The present document applies to VHF radiotelephone equipment for general communications and associated equipment for class "D" Digital Selective Calling (DSC).

This radio equipment operates within all or any part of the frequency band 156 MHz to 174 MHz allocated to the Maritime Mobile Service and utilizes class of emission G3E, and G2B.

The present document is intended to cover the provisions of Directive 1999/5/EC [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 European Standards (ENs) that specify technical requirements in respect of essential requirements under other parts of article 3 of the R&TTE Directive [1] will apply to equipment within the scope of the present document.

NOTE: A list of such ENs is included on the web site <http://www.newapproach.org/>.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- 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.
- For a non-specific reference, the latest version applies.

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

- [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).
- [2] Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (EMC Directive).
- [3] Council Directive 73/23/EEC of 19 February 1973 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (LV Directive).
- [4] ITU Radio Regulations, Appendix 18 (2001): "Table of transmitting frequencies in the VHF maritime mobile band".
- [5] 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".
- [6] ITU-R Recommendation M.493-10 (2000): "Digital selective-calling system for use in the maritime mobile service".
- [7] CENELEC EN 61162-1 (2000): "Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 1: Single talker and multiple listeners".
- [8] ITU-R Recommendation M.825-3 (1998): "Characteristics of a transponder system using digital selective calling techniques for use with vessel traffic services and ship-to-ship identification".
- [9] ETSI TR 100 028 (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

- [10] ITU-R Recommendation M.821-1 (1997): "Optional expansion of the digital selective-calling system for use in the maritime mobile service".
- [11] ITU-T Recommendation O.41 (1994): "Psophometer for use on telephone-type circuits".

3 Definitions and abbreviations

3.1 Definitions

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

environmental profile: range of environmental conditions under which equipment within the scope of the EN 301 025-3 is required to comply with the provisions of EN 301 025-3

class D: class D equipment is intended to provide minimum facilities for VHF DSC distress, urgency and safety as well as routine calling and reception, not necessarily in full accordance with IMO GMDSS carriage requirements for VHF installations (ITU-R Recommendation M.493-10 [6])

G3E: phase-modulation (frequency modulation with a pre-emphasis of 6 dB/octave) for speech

G2B: phase-modulation with digital information, with a sub-carrier for DSC operation

modulation index: ratio between the frequency deviation and the frequency of the modulation signal

3.2 Abbreviations

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

ac	alternating current
dc	direct current
DSC	Digital Selective Calling
EMC	Electro-Magnetic Compatibility
e.m.f.	electromotive force
EUT	Equipment Under Test
FM	Frequency Modulation
GGA	Global positioning system fixed data
GLL	Geographic position Latitude/Longitude
GNS	Global Navigation System
GPS	Global Positioning System
IMO	International Maritime Organization
ISO	International Organization for Standardization
LV	Low Voltage
MMS	Maritime Mobile Service
MMSI	Maritime Mobile Service Identity
R&TTE	Radio and Telecommunications Terminal Equipment
RF	Radio Frequency
RMC	Recommended Minimum specific GPS/transit data
r.m.s.	root mean square
SINAD	Signal + Noise + Distortion to Noise + Distortion
VHF	Very High Frequency