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SLOVENSKÁ TECHNICKÁ NORMA

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STN	**Elektromagnetická kompatibilita a záležitosti rádiového spektra (ERM). Zariadenia na rádiofrekvenčnú identifikáciu pracujúce v pásme od 865 MHz do 868 MHz s úrovňami výkonu do 2 W a v pásme 915 MHz do 921 MHz s úrovňami výkonu do 4 W. Časť 1: Technické požiadavky a meracie metódy.**	**STN EN 302 208-1 V2.1.1** 87 2208

Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W and in the band 915 MHz to 921 MHz with power levels up to 4 W; Part 1: Technical requirements and methods of measurement

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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Contents

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Foreword

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

The present document is part 1 of a multi-part deliverable covering Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W and in the band 915 MHz to 921 MHz with power levels up to 4 W e.r.p., as identified below:

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

Part 2: "Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive".

National transposition dates	
Date of adoption of this EN:	16 February 2015
Date of latest announcement of this EN (doa):	31 May 2015
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 November 2015
Date of withdrawal of any conflicting National Standard (dow):	30 November 2015

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**may not**", "**need**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

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Introduction

The present document includes improvements to the previous version of the standard that take advantage of technical developments within the RFID industry. In addition it includes provisions for RFID to operate in a new band at 915 MHz to 921 MHz at power levels up to 4 W e.r.p.

Annex A provides normative specifications concerning radiated measurements.

Annex B provides normative specifications for the mitigation technique for sharing spectrum with ER-GSM.

1 Scope

The present document covers the minimum characteristics considered necessary in order to make the best use of the available frequencies. It does not necessarily include all the characteristics that may be required by a user, nor does it necessarily represent the optimum performance achievable.

Radio frequency identification products covered within the present document are considered by definition short-range devices. Power limits up to a maximum. of 2 W e.r.p. are specified for this equipment in the frequency band 865 MHz to 868 MHz and up to a maximum of 4 W e.r.p. in the frequency band 915 MHz to 921 MHz.

The present document applies to RFID interrogators and tags operating together as a system. For each specified band, four high power channels are made available for use by interrogators. The tags respond with a modulated signal preferably in the adjacent low power channels. Interrogators may be used with either integral or external antennas.

ElectroMagnetic Compatibility (EMC) requirements are covered by ETSI EN 301 489-1 [i.1] and ETSI EN 301 489-3 [i.2].

The types of equipment covered by the present document are as follows:

- fixed interrogators;
- portable interrogators;
- batteryless tags;
- battery assisted tags;
- battery powered tags.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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.

The following referenced documents are necessary for the application of the present document.

[1] ETSI TR 100 028 (V1.4.1) (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

[2] ETSI TR 102 273 (V1.2.1) (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement on Radiated Methods of Measurement (using test site) and evaluation of the corresponding measurement uncertainties".

[3] ANSI C63.5-2006: "American National Standard for Calibration of Antennas Used for Radiated Emission Measurements in Electromagnetic Interference".

[4] ETSI TS 144 018 (V11.5.0) (2013-07): "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol (3GPP TS 44.018 version 11.5.0 Release 11)".

[5] Technical Report FTZ No 512 TB 9: "Construction of a Stripline".

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ETSI EN 301 489-1: "Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements".

[i.2] ETSI EN 301 489-3: "Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz".

[i.3] 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.4] IEC 60489-3 Appendix J Second edition (1988): "Methods of measurement for radio equipment used in the mobile services. Part 3: Receivers for A3E or F3E emissions" (pages 156 to 164).

[i.5] Void.

[i.6] ETSI TS 102 902 (V1.2.2): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Methods, parameters and test procedures for cognitive interference mitigation towards ER-GSM for use by UHF RFID using Detect-And-Avoid (DAA) or other similar techniques".

[i.7] EIRENE System Requirements Specification Version 15.1.