ICS 49.090 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2014

STN	**Zdokonalený systém navádzania a riadenia pohybu na prevádzkových plochách (A-SMGCS). Časť 6: Harmonizovaná EN vzťahujúca sa na základné požiadavky podľa článku 3.2 smernice R&TTE pre využívané radarové snímače na prevádzkových plochách. Oddiel 1: Snímače v pásme X využívajúce impulzné signály a prenášajúce výkon do 100 kW.**	**STN EN 303 213-6-1 V1.2.1** 87 3213

Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 6: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive for deployed surface movement radar sensors; Sub-part 1: X-band sensors using pulsed signals and transmitting power up to 100 kW

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

Obsahuje: EN 303 213-6-1 V1.2.1:2013

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Foreword

This Harmonized European Standard (EN) 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 mandate M/405 issued from the European Commission under Directive 98/34/EC [i.9] as amended by Directive 98/48/EC [i.11].

The title and reference to the present document are intended to be included in the publication in the Official Journal of the European Union of titles and references of Harmonized Standard under the Directive 1999/5/EC [i.1].

See article 5.1 of Directive 1999/5/EC [i.1] for information on presumption of conformity and Harmonized Standards or parts thereof the references of which have been published in the Official Journal of the European Union.

The requirements relevant to Directive 1999/5/EC [i.1] are summarized in annex A.

The present document is part 6, sub-part 1 of a multi-part deliverable covering Advanced Surface Movement Guidance and Control System (A-SMGCS), as identified below:

Part 1: "Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for A-SMGCS Level 1 including external interfaces";

Part 2: "Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for A-SMGCS Level 2 including external interfaces";

Part 3: "Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for a deployed cooperative sensor including its interfaces";

Part 4: "Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 for a deployed non-cooperative sensor including its interfaces";

Part 5: "Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive for multilateration equipment";

Part 6: "Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive for deployed surface movement radar sensors":

Sub-part 1: "X-band sensors using pulsed signals and transmitting power up to 100 kW".

NOTE: SMR systems using FM-CW signals may be covered by future sub-parts of this multi-part deliverable.

National transposition dates	
Date of adoption of this EN:	6 November 2013
Date of latest announcement of this EN (doa):	28 February 2014
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 August 2014
Date of withdrawal of any conflicting National Standard (dow):	31 August 2015

Introduction

The present document is part of a set of standards developed by ETSI and is designed to fit in a modular structure to cover all radio and telecommunications terminal equipment within the scope of the R&TTE Directive [i.1]. The modular structure is shown in EG 201 399 [i.10].

The current version includes necessary changes due to updates in reference documents Recommendation ITU-R SM.1541-4 [i.8], ECC/Recommendation (02)05 [i.4] and ERC/Recommendation 74-01 [i.5] (essentially changes of Out-of-Band emission mask).

1 Scope

The present document applies to X-band radar sensors intended for the surveillance of airport surface movement traffic with the following characteristics:

- Utilizing modulated or unmodulated pulses.
- Transmitter Peak Envelope Power up to 100 kW.
- The transceiver-antenna connection is using a hollow metallic rectangular waveguide.
- The antenna is rotating, waveguide- based and passive.
- At the transceiver output an RF-circulator is used.

The present document covers only the essential requirements of article 3.2 of the R&TTE Directive [i.1].

NOTE 1: Since transceiver and antenna are hollow metallic rectangular waveguide based the frequency range for measurements that needs to be addressed covers 6,56 GHz to 26 GHz The lower limit of this frequency range is obtained as cut-off frequency of the combination of WR112/R84 taper section and a WR90/R100 Waveguide IEC 60153-2 [i.3]. The upper limit corresponds to the upper limit stated in ERC/Recommendation 74-01 [i.5].

NOTE 2: Since at the transceiver output an RF circulator is used, it is assumed that the transceiver characteristics remain independent from the antenna.

NOTE 3: According Article 5 of the ITU Radio Regulations [i.6] the band 9 000 MHz to 9 200 MHz is allocated to the Aeronautical Radionavigation Service on a primary basis and the band 9 300 MHz to 9 500 MHz is allocated to the Aeronautical Radionavigation Service on a secondary basis.

2 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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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 necessary for the application of the present document.

Not applicable.

2.2 Informative references

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] 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] Merrill I. Skolnik: "Radar Handbook", 2nd Edition, McGraw Hill publications.

[i.3] IEC 60153-2 (Edition 2.0, 1974): "Hollow metallic waveguides. Part 2: Relevant specifications for ordinary rectangular waveguides".

[i.4] ECC/Recommendation (02)05 (2012): "Unwanted emissions".

[i.5] ERC/Recommendation 74-01 (2011): "Unwanted emissions in the spurious domain".

[i.6] ITU Radio Regulations (2012).

[i.7] Recommendation ITU-R M.1177-4 (2011): "Techniques for measurement of unwanted emissions of radar systems".

[i.8] Recommendation ITU-R SM.1541-4 (2011): "Unwanted emissions in the out-of-band domain".

[i.9] Directive 98/34/EC of the European Parliament and of the Council laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on information society services.

[i.10] ETSI EG 201 399: "Electromagnetic compatibility and Radio spectrum Matters (ERM); A guide to the production of Harmonized Standards for application under the R&TTE Directive".

[i.11] Directive 98/48/EC of the European Parliament and of the Council of 20 July 1998 amending Directive 98/34/EC laying down a procedure for the provision of information in the field of technical standards and regulations.