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Coastal Surveillance, Vessel Traffic Services and Harbour Radars (CS/VTS/HR); Harmonised Standard for access to radio spectrum

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

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Foreword

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

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.6] to provide one voluntary means of conforming to the essential requirements of Directive 2014/53/EU on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC [i.1].

Once the present document is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of the present document given in table A.1 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

National transposition dates	
Date of adoption of this EN:	18 November 2020
Date of latest announcement of this EN (doa):	28 February 2021
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 August 2021
Date of withdrawal of any conflicting National Standard (dow):	31 August 2022

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**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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1 Scope

The present document specifies technical characteristics and methods of measurements for X-band radar sensors intended for Coastal Surveillance (CS), Vessel Traffic Services (VTS) and harbour surveillance with the following characteristics:

- Operating in the following frequency range:
 - 8 500 MHz to 10 000 MHz utilizing modulated or unmodulated pulses.
- Transmitter Peak Envelope Power up to 100 kW.
- The transmitter output (from power amplifier) towards the antenna uses a hollow metallic rectangular waveguide of type WR90/WG16/R100 according to IEC 60153-2 [i.3] with a minimum length of 92 cm (20 times the wavelength of the waveguide cut-off frequency).
- The antenna is rotating, waveguide-based and passive.
- At the transceiver output an RF-circulator is used.

NOTE: The relationship between the present document and essential requirements of article 3.2 of Directive 2014/53/EU [i.1] is given in annex A.

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 referenced document (including any amendments) applies.

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

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| [1] | ECC Recommendation (02)05 (2012): "Unwanted emissions". |
| [2] | ERC Recommendation 74-01 (2019): "Unwanted emissions in the spurious domain". |
| [3] | Recommendation ITU-R M.1177-4 (04/2011): "Techniques for measurement of unwanted emissions of radar systems". |

2.2 Informative references

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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] Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.
- [i.2] Merrill I. Skolnik: "Radar Handbook", 2nd Edition, McGraw Hill publications.
- [i.3] IEC 60153-2:2016: "Hollow metallic waveguides. Part 2: Relevant specifications for ordinary rectangular waveguides".
- [i.4] ETSI EG 203 336: "Guide for the selection of technical parameters for the production of Harmonised Standards covering article 3.1(b) and article 3.2 of Directive 2014/53/EU".
- [i.5] Recommendation ITU-R SM.1541-6 (08/2015): "Unwanted emissions in the out-of-band domain".
- [i.6] Commission Implementing Decision C(2015) 5376 final of 4.8.2015 on a standardisation request to the European Committee for Electrotechnical Standardisation and to the European Telecommunications Standards Institute as regards radio equipment in support of Directive 2014/53/EU of the European Parliament and of the Council.
- [i.7] ITU Radio Regulations (2016).

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