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## **EMC-standard for radioudstyr og -tjenester – Del 54: Særlige betingelser for faste jordbaserede aeronautiske og meteorologiske radarer – Harmoniseret Standard for EMC**

ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 54: Specific conditions for fixed ground based aeronautical and meteorological radars; Harmonised Standard for electromagnetic compatibility

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**ElectroMagnetic Compatibility (EMC)  
standard for radio equipment and services;  
Part 54: Specific conditions for fixed ground based  
aeronautical and meteorological radars;  
Harmonised Standard for electromagnetic compatibility**

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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.2] 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.

The present document is part 54 of a multi-part deliverable. Full details of the entire series can be found in part 1 [1].

National transposition dates	
Date of adoption of this EN:	29 September 2022
Date of latest announcement of this EN (doa):	31 December 2022
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 June 2023
Date of withdrawal of any conflicting National Standard (dow):	30 June 2024

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## 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 measurement in respect of ElectroMagnetic Compatibility (EMC) for the following radar systems:

- Fixed and ground based monostatic aeronautical Primary Surveillance Radar (PSR) and Surface Movement Radar (SMR)
- Fixed and ground based monostatic meteorological radar system, for example weather radar systems or wind profiler

with the following characteristics:

- operating in at least one of the frequency ranges as shown in table 1;
- operated only by AC power.

The above mentioned radio equipment is intended to be used at a fixed location (permanent or temporarily) and is equipped with rotating passive antennas.

A radar system consists of one or more enclosures that contain at least the following radar functionalities: transmitter, receiver, signal processing. Other parts which are not part of the radar functionality e.g. local UPS, air conditioning equipment, dehumidifying equipment, communication network equipment, etc., are not in the scope of the present document, unless these parts are implemented inside the radar system enclosure(s).

**Table 1: Frequency range of fixed ground based aeronautical and meteorological radar systems**

Operating frequency ranges
1 215 MHz to 1 400 MHz
2 700 MHz to 3 100 MHz
5 250 MHz to 5 850 MHz
8 500 MHz to 10 500 MHz

Technical specifications related to the antenna port of the radio equipment are not included in the present document. Such technical specifications are found in the relevant product standards under article 3.2 of Directive 2014/53/EU [i.1].

Emission requirements in the present document are specified for frequencies above 9 kHz.

The environmental classification and the emission and immunity requirements used in the present document are as stated in ETSI EN 301 489-1 [1], except for any special conditions included in the present document.

NOTE: The relationship between the present document and essential requirements of article 3.1(b) of Directive 2014/53/EU [i.1] is given in annex A.

## 2 References

### 2.1 Normative references

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- [1] ETSI EN 301 489-1 (V2.2.3) (11-2019): "Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility".

## 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] 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.3] ITU Radio Regulations (2020).
- [i.4] EN 55032:2015: "Electromagnetic compatibility of multimedia equipment - Emission Requirements", (produced by CENELEC).
- [i.5] Recommendation ITU-R SM.1541-6 (08/2015): "Unwanted emissions in the out-of-band domain".
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