
Osnovni standard za merjenje in izračunavanje izpostavljenosti ljudi električnim, magnetnim in elektromagnetnim poljem (0 Hz–300 GHz)

Basic standard on measurement and calculation procedures for human exposure to electric, magnetic and electromagnetic fields (0 Hz - 300 GHz)

Grundnorm zu Mess- und Berechnungsverfahren der Exposition von Personen in elektrischen, magnetischen und elektromagnetischen Feldern (0 Hz bis 300 GHz)

Norme de base pour les procédures de mesures et de calculs pour l'exposition des personnes aux champs électriques, magnétiques et électromagnétiques (0 Hz - 300 GHz)

Ta slovenski standard je istoveten z: EN 50413:2019/prA1

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ICS:

13.280	Varstvo pred sevanjem	Radiation protection
17.220.20	Merjenje električnih in magnetnih veličin	Measurement of electrical and magnetic quantities
33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general

SIST EN 50413:2021/oprA1:2024 en

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
EN 50413:2019

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ICS 17.200.20; 33.100.01

English Version

**Basic standard on measurement and calculation procedures for
human exposure to electric, magnetic and electromagnetic fields
(0 Hz - 300 GHz)**

Norme de base pour les procédures de mesures et de
calculs pour l'exposition des personnes aux champs
électriques, magnétiques et électromagnétiques (0 Hz - 300
GHz)

Grundnorm zu Mess- und Berechnungsverfahren der
Exposition von Personen in elektrischen, magnetischen und
elektromagnetischen Feldern (0 Hz bis 300 GHz)

This draft amendment prA1, if approved, will modify the European Standard EN 50413:2019; it is submitted to CENELEC members for enquiry.

Deadline for CENELEC: 2024-11-29.

It has been drawn up by CLC/TC 106X.

If this draft becomes an amendment, CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

This draft amendment was established by CENELEC in three official versions (English, French, German).

A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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5 European foreword

6 This document [EN 50413:2019/prA1:2024] has been prepared by CLC/TC 106X " Electromagnetic fields in
7 the human environment " .

8 This document is currently submitted to the Enquiry.

9 The following dates are proposed:

- latest date by which the existence of this document has to be announced at national level (doa) dor + 6 months
- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) dor + 12 months
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) dor + 36 months (to be confirmed or modified when voting)

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1 Modification of subclause 5.2.2.5 “Assessment Methods”

Add a new paragraph after the second paragraph:

“
Signal modulation and duty cycle of the field source can affect the process of measurement or calculation for the purpose of EMF exposure assessment and verification of compliance with the relevant exposure restrictions. To this end, the possible presence of signal modulation should be taken into consideration when carrying out measurements or calculations to determine whether or not relevant limits are met.

For maximum modulated signals, Annex B provides information about the relationship between carrier power, mean power and peak power for most types of modulation in use.

2 Addition of new Annex B

Add the following new Annex B:

Annex B (informative)

Consideration of different types of radio transmission (modulation)

B.1 General

This annex discusses some aspects for the assessment of EM fields due to modulated signals of radio-transmitters.

B.2 Modulation

The presence of modulation should be taken into consideration when carrying out measurements or calculations to determine whether or not the relevant limits are met.

B.3 Classification of emissions

The Radio Regulations, drawn up by the International Telecommunication Union (ITU), classify the emissions from radio-transmitters according to the required bandwidths, and the basic and optional characteristics of the transmission [B1]. The complete classification consists of nine characters as follows:

- *Characters 1 – 4* describe the bandwidth, using three digits and one letter;
- *Characters 5 – 7* describe the basic characteristics, using two letters and one digit;
- *Characters 8 – 9* describe any optional characteristics, using two letters.

In the given context the three basic characteristics are relevant, i.e.:

- type of modulation of the main carrier *Character 5;*
- nature of the signal(s) which modulate(s) the main carrier *Character 6;*
- type of information to be transmitted *Character 7.*

Information about the transmitter power supplied to the antenna, the type of modulation, and the gain and directional characteristics of the antenna can be obtained from the transmission authority which is responsible for operating the equipment at a particular site. It is important to know whether the transmitter power is