

Basic standard to demonstrate the compliance of fixed equipment for radio transmission (110 MHz - 40 GHz) intended for use in wireless telecommunication networks with the basic restrictions or the reference levels related to general public exposure to radio frequency electromagnetic fields, when put into service

Basic standard to demonstrate the compliance of fixed equipment for radio transmission (110 MHz - 40 GHz) intended for use in wireless telecommunication networks with the basic

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50400:2006 sisaldab Euroopa standardi EN 50400:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 22.09.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50400:2006 consists of the English text of the European standard EN 50400:2006.</p> <p>This document is endorsed on 22.09.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This basic standard applies to Base Stations as defined in Clause 4, operating in the frequency range 110 MHz to 40 GHz.</p>	<p>Scope: This basic standard applies to Base Stations as defined in Clause 4, operating in the frequency range 110 MHz to 40 GHz.</p>
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Võtmesõnad:

**Basic standard to demonstrate the compliance of fixed equipment
for radio transmission (110 MHz - 40 GHz)
intended for use in wireless telecommunication networks
with the basic restrictions or the reference levels
related to general public exposure to radio frequency
electromagnetic fields, when put into service**

Norme de base pour démontrer la conformité des équipements fixes de transmission radio (110 MHz - 40 GHz), destinés à une utilisation dans les réseaux de communication sans fil, aux restrictions de base ou aux niveaux de référence relatives à l'exposition des personnes aux champs électromagnétiques de fréquence radio, lors de leur mise en service

Grundnorm zum Nachweis der Übereinstimmung von stationären Einrichtungen für Funkübertragungen (110 MHz bis 40 GHz), die zur Verwendung in schnurlosen Telekommunikationsnetzen vorgesehen sind, bei ihrer Inbetriebnahme mit den Basisgrenzwerten oder den Referenzwerten bezüglich der Exposition der Allgemeinbevölkerung gegenüber hochfrequenten elektromagnetischen Feldern

This European Standard was approved by CENELEC on 2005-12-06. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This European Standard was prepared by Technical Committee CENELEC TC 106X, Electromagnetic fields in the human environment.

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The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2007-01-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2009-01-01

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

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1 Scope

This basic standard applies to Base Stations as defined in Clause 4, operating in the frequency range 110 MHz to 40 GHz.

The objective of this basic standard is to specify, for such equipment and when it is put into service in its operational environment, the methods to assess the value of the Total Exposure Ratio or to establish whether the Total Exposure Ratio is less than or equal to one in relevant areas where the general public has access.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)
(Official Journal L 199 of 30 July 1999)

EN 50383, Basic standard for the calculation and measurement of electromagnetic field strength and SAR related to human exposure from radio base stations and fixed terminal stations for wireless telecommunication systems (110 MHz - 40 GHz)

EN ISO/IEC 17025:2000, General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025:1999)

ISO "Guide to the expression of uncertainty in measurement": Ed.1 1995

International Commission on Non-Ionizing Radiation Protection (1998), Guidelines for limiting exposure in time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz)
Health physics 74, 494-522

3 Physical quantities, units and constants

3.1 Quantities

The internationally accepted SI-units are used throughout the standard.

<u>Quantity</u>	<u>Symbol</u>	<u>Unit</u>	<u>Dimensions</u>
Electric field strength	E	volt per meter	V/m
Electric flux density	D	coulomb per square meter	C/m ²
Frequency	f	hertz	Hz
Magnetic field strength	H	ampere per meter	A/m
Magnetic flux density	B	tesla (Vs /m ²)	T
Mass density	ρ	kilogram per cubic meter	kg/m ³
Permeability	μ	Henry per meter	H/m
Permittivity	ϵ	farad per meter	F/m
Specific absorption rate	SAR	watt per kilogram	W/kg
Wavelength	λ	meter	m