

Product standard to demonstrate the compliance of stand alone broadcast transmitters with the reference levels or the basic restrictions related to public human exposure to radio frequency electromagnetic fields (30 MHz - 40 GHz)

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50421:2006 sisaldab Euroopa standardi EN 50421:2006 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 50421:2006 consists of the English text of the European standard EN 50421:2006.</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:</p> <p>This product standard applies to fixed stand alone broadcast transmitter operating in the frequency range 30 MHz to 40 GHz when put on the market. The term broadcast transmitter covers fixed stand alone broadcast transmitters intended for use with external antennas of the same or an other manufacturer.</p>	<p>Scope:</p> <p>This product standard applies to fixed stand alone broadcast transmitter operating in the frequency range 30 MHz to 40 GHz when put on the market. The term broadcast transmitter covers fixed stand alone broadcast transmitters intended for use with external antennas of the same or an other manufacturer.</p>
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ICS 13.280

Võtmesõnad:

**Product standard to demonstrate the compliance of stand alone
broadcast transmitters with the reference levels or
the basic restrictions related to public human exposure to
radio frequency electromagnetic fields (30 MHz - 40 GHz)**

Norme produit pour démontrer
la conformité des émetteurs de
radiodiffusion isolés par rapport aux
niveaux de référence ou aux restrictions
de base relatifs à l'exposition du public
aux champs électromagnétiques
(30 MHz - 40 GHz)

Produktnorm zum Nachweis der
Übereinstimmung von einzelnen
Rundfunksendern mit den Referenzwerten
oder den Basisgrenzwerten bezüglich der
Exposition der Allgemeinbevölkerung
gegenüber hochfrequenten
elektromagnetischen Feldern
(30 MHz bis 40 GHz)

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.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50421 on 2005-12-06.

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
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1 Scope

This product standard applies to fixed stand alone broadcast transmitter operating in the frequency range 30 MHz to 40 GHz when put on the market. The term broadcast transmitter covers fixed stand alone broadcast transmitters intended for use with external antennas of the same or an other manufacturer.

The object of this standard is to demonstrate the compliance of such equipment with the reference levels or the basic restrictions related to public exposure to radio frequency electromagnetic fields.

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.

EN 50420, *Basic standard for the calculation and measurement of human exposure to electromagnetic fields from stand alone broadcast transmitters (30 MHz – 40 GHz)*

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)

3 Physical quantities, units and constants

Physical quantities, units and constants are defined in EN 50420.

4 Definitions

For the purposes of this document, the following terms and definitions apply.

4.1

basic restriction

restrictions on exposure to time-varying electric, magnetic, and electromagnetic fields that are based directly on established health effects. In the frequency range from 30 MHz to 10 GHz, the physical quantity used is the specific absorption rate. Between 10 GHz and 40 GHz, the physical quantity is the power density

4.2

broadcasting service

radiocommunication service in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, television transmissions or other types of transmission

4.3

compliance distance

minimum distance from the antenna where a point of investigation is deemed to be compliant. The set of compliance distances therefore defines the boundary outside which the exposure levels do not exceed the basic restrictions irrespective of the time of exposure. The distances are measured related to the nearest point of the antenna in each investigation direction

4.4

conductivity (σ)

ratio of the conduction-current density in a medium to the electric field strength. Conductivity is expressed in units of siemens per metre (S/m)