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BSI Standards Publication

Product standard for human exposure to electromagnetic fields from devices operating in the frequency range 0 Hz to 300 GHz, used in Electronic Article Surveillance (EAS), Radio Frequency Identification (RFID) and similar applications

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National foreword

This British Standard is the UK implementation of EN 50364:2018. It supersedes BS EN 50364:2010, which will be withdrawn on 9 October 2020.

The UK participation in its preparation was entrusted to Technical Committee GEL/106, Human exposure to low frequency and high frequency electromagnetic radiation.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Amendments/corrigenda issued since publication

Date	Text affected
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EUROPÄISCHE NORM

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Supersedes EN 50364:2010

English Version

Product standard for human exposure to electromagnetic fields
from devices operating in the frequency range 0 Hz to 300 GHz,
used in Electronic Article Surveillance (EAS), Radio Frequency
Identification (RFID) and similar applications

Norme de produit pour l'exposition du corps humain aux champs électromagnétiques émis par les dispositifs fonctionnant dans la gamme de fréquences de 0 Hz à 300 GHz, utilisés pour la surveillance électronique des objets (EAS), l'identification par radiofréquence (RFID) et les applications similaires

Produktnorm für die Exposition von Personen gegenüber elektromagnetischen Feldern von Geräten, die im Frequenzbereich von 0 Hz bis 300 GHz betrieben und in der elektronischen Artikelüberwachung (en: EAS), Hochfrequenz-Identifizierung (en: RFID) und ähnlichen Anwendungen verwendet werden

This European Standard was approved by CENELEC on 2017-10-09. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

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European foreword

This document (EN 50364:2018) has been prepared by the Technical Committee CENELEC/TC 106X "Electromagnetic fields in the human environment".

The following dates are 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) 2018-10-09
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2020-10-09

This document supersedes EN 50364:2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of the Radio Equipment Directive 2014/53/EU and the Low Voltage Directive 2014/35/EU.

For relationships with EU Directives, see informative Annexes ZZA and ZZB, which are integral parts of this document.

This European Standard is meant to be read in conjunction with prEN 62311:2017 "*Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz)*".

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This product standard applies to devices operating within the frequency range 0 Hz to 300 GHz, used in electronic article surveillance (EAS), radio frequency identification (RFID) and similar applications, in relation to exposure to electromagnetic fields

The object of this product standard is to provide a route for evaluation of such equipment against limits on human exposure to electric, magnetic and electromagnetic fields, and induced and contact current.

NOTE Other standards can apply to products covered by this document. In particular this document is not designed to evaluate the electromagnetic compatibility with other equipment; nor does it reflect any product safety requirements other than those specifically related to human exposure to electromagnetic fields.

2 Normative references

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

EN 62369-1:2009, *Evaluation of human exposure to electromagnetic fields from short range devices (SRDs) in various applications over the frequency range 0 GHz to 300 GHz - Part 1: Fields produced by devices used for electronic article surveillance, radio frequency identification and similar systems (IEC 62369-1:2008)*

prEN 62311:2017, *Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz) (IEC/CDV 62311:201X)*

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, L199, of 1999-7-30, p.59-70

Directive 2013/35/EU of 26 June 2013, on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (electromagnetic fields). Official Journal, L179, of 2013-6-29, p. 1–21

3 Terms and definitions

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

3.1

action level

level provided for practical exposure assessment purposes, derived from exposure limit values

Note 1 to entry: Respect of the action level will ensure respect of the relevant exposure limit value. If the action level is exceeded, it does not necessarily follow that the exposure limit value will be exceeded.

3.2

basic restriction

restriction on exposure of the general public to electric, magnetic and electromagnetic fields that is based directly on established health effects and biological considerations

3.3

exposure limit value

restriction on exposure of workers to electric, magnetic and electromagnetic fields that is based directly on established health effects and biological considerations