



**NSAI**  
Standards

Irish Standard  
I.S. EN 50664:2017

Generic standard to demonstrate the compliance of equipment used by workers with limits on exposure to electromagnetic fields (0 Hz - 300 GHz), when put into service or in situ

## I.S. EN 50664:2017

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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## National Foreword

I.S. EN 50664:2017 is the adopted Irish version of the European Document EN 50664:2017, Generic standard to demonstrate the compliance of equipment used by workers with limits on exposure to electromagnetic fields (0 Hz - 300 GHz), when put into service or in situ

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

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EUROPEAN STANDARD

**EN 50664**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2017

ICS 13.280

English Version

**Generic standard to demonstrate the compliance of equipment  
used by workers with limits on exposure to electromagnetic  
fields (0 Hz - 300 GHz), when put into service or in situ**

Norme de produit pour démontrer la conformité des équipements, destinés à être utilisés uniquement par des travailleurs, aux limites d'exposition des personnes aux champs électromagnétiques (0 Hz - 300 GHz), au moment de la mise en service ou sur site

Fachgrundnorm für den Nachweis der Übereinstimmung von Geräten, die zur ausschließlichen Nutzung durch Arbeitnehmer vorgesehen sind, bei ihrer Inbetriebnahme oder am Aufstellungsort mit Grenzwerten für die Exposition von Personen gegenüber elektromagnetischen Feldern (0 Hz bis 300 GHz)

This European Standard was approved by CENELEC on 2017-09-11. 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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## **European foreword**

This document (EN 50664:2017) 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 (dop) 2018-09-11  
at national level by publication of an identical  
national standard or by endorsement
- latest date by which the national standards conflicting (dow) 2020-09-11  
with the EN have to be withdrawn

This European Standard has to be read in conjunction with EN 62311:2008 “*Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz)*”.

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 (M/536) and the Low Voltage Directive 2014/35/EU (M/511).

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

## EN 50664:2017 (E)

## 1 Scope

The object of this generic standard is to provide a route for evaluation of equipment used by workers against limits on human exposure to electric, magnetic and electromagnetic fields, and induced and contact current when it is put into service in its operational environment, and also for *in situ* or post-market evaluation of such equipment.

The frequency range covered is 0 Hz to 300 GHz.

This standard applies to equipment for which no dedicated harmonized putting-into-service or *in situ* product standard regarding worker exposure to electromagnetic fields exists. If such a standard does exist then it should be used. At the time of writing there is one applicable standard, for base station equipment, and this should be used for putting-into service or *in situ* assessment of such equipment with respect to worker exposure to electromagnetic fields:

EN 50401:2017. Product standard to demonstrate the compliance of base station equipment with radiofrequency electromagnetic field exposure limits (110 MHz - 100 GHz), when put into service

The current list of standards harmonized under each Directive should be consulted at the time of use of this standard.

NOTE Other standards can apply to equipment 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 are referred to in the text in such a way that some or all of their content constitutes requirements 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 50499:2008, *Procedure for the assessment of the exposure of workers to electromagnetic fields*

EN 62311:2008, *Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz) (IEC 62311:2007)*

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 levels**

levels provided for practical exposure assessment purposes. They are derived from exposure limit values. 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

#### **exposure limit values**

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

### 3.3

#### **worker**

person exposed to electromagnetic fields under the conditions defined in Directive 2013/35/EU



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