SLOVENSKI STANDARD
kSIST FprEN IEC 60215:201X/oprAA:2019

01-september-2019

Varnostne zahteve za radijsko oddajniško opremo - Splošne zahteve in terminologija - Dopolnilo AA

Safety requirements for radio transmitting equipment - General requirements and terminology

Sicherheitsbestimmungen für Funksender - Allgemeine Anforderungen und Terminologie

Exigences de sécurité relatives aux matériels d'émission radioélectrique - Exigences générales et terminologie

Ta slovenski standard je istoveten z: **FprEN IEC 60215:201X/prAA**

ICS:

33.060.20	Sprejemna in oddajna oprema	Receiving and transmitting equipment

kSIST FprEN IEC 60215:201X/oprAA:2019 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
FprEN IEC 60215

prAA

June 2019

ICS

English Version

Safety requirements for radio transmitting equipment - General requirements and terminology

Exigences de sécurité relatives aux matériels d'émission radioélectrique - Exigences générales et terminologie

Sicherheitsbestimmungen für Funksender - Allgemeine Anforderungen und Terminologie

This draft European Standard is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2019-09-06.

It has been drawn up by CLC/SR 103.

If this draft becomes a European Standard, 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.

This draft European Standard 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, Turkey 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.

CENELEC

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

Contents

Page

European foreword

This document (FprEN IEC 60215:201X/prAA:2019) has been prepared by CLC/SR 103 “Transmitting equipment for radiocommunication”.

This document is currently submitted to the Enquiry.

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)

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 EU Directive(s).

For the relationship with EU Directive(s) see informative Annexes ZZA and ZZB, which are an integral part of FprEN IEC 60215:201X.

1 Modification to Clause 2, “Normative references”

Replace all of the references in Clause 2 with the following:

IEC 60065:2014, *Audio, video and similar electronic apparatus - Safety requirements*

IEC 60068-2-1:2007, *Environmental testing - Part 2-1: Tests - Test A: Cold*

IEC 60112:2003+A1:2009, Method for the determination of the proof and the comparative tracking indices of solid insulating materials

IEC 60244-6:1976, *Methods of measurement for radio transmitters. Part 6: Cabinet radiation at frequencies between 130 kHz and 1 GHz*

IEC 60417:2002, *Graphical symbols for use on equipment*

IEC 60529:1989+*A1:1999+A2:2013*, Degrees of protection provided by enclosures (IP Code)

IEC 60695-1-10:2016, *Fire hazard testing - Part 1-10: Guidance for assessing the fire hazard of electrotechnical products - General guidelines*

IEC 60695-1-11:2014, *Fire hazard testing - Part 1-11: Guidance for assessing the fire hazard of electrotechnical products - Fire hazard assessment*

IEC 60825-1:2014, *Safety of laser products - Part 1: Equipment classification and requirements*

IEC 60825-12:2004, *Safety of laser products - Part 12: Safety of free space optical communication systems used for transmission of information*

IEC 61000-2-2:2002+AMD1:2017+AMD2:2018, *Consolidated version, Electromagnetic compatibility (EMC) - Environment - Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems*

IEC 62232:2017, *Determination of RF field strength, power density and SAR in the vicinity of radiocommunication base stations for the purpose of evaluating human exposure*

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

ISO 1999:2013, *Acoustics – Estimation of noise-induced hearing loss*

EN 50384:2002, *Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields (110 MHz - 40 GHz) – Occupational*

EN 50385:*2017*, *Product standard to demonstrate the compliance of base station equipment with radiofrequency electromagnetic field exposure limits (110 MHz - 100 GHz), when placed on the market*

ISO 7000:2014, *Graphical symbols for use on equipment – Registered symbols*

2 Modifications to Clause 3, “Terms and definitions and symbols”

In 3.1.12, replace the term definition with the following:

“equipment with BASIC INSULATION as provision for basic protection, and supplementary insulation as provision for fault protection, or in which basic and fault protection are provided by REINFORCED INSULATION”

In 3.2.3, replace the term definition with the following:

“IP codes (International Protection Marking, also known as Ingress Protection Marking) are used to indicate the degree of protection against the intrusion of solid particles or water; the first digit of the code indicates the protection against solid particles and the second digit the protection against ingress of water; where no protection is specified for solid particles, this digit is replaced with the letter X.”

3 Modifications to Clause 4, “Principle of safety”

In 4.1, replace the second paragraph with the following:

“Designers shall take into account not only normal operating conditions of the equipment but also fault conditions, reasonable foreseeable misuse and external influences such as temperature, altitude, pollution, moisture and overvoltage on the mains supply. Dimensioning of insulation spacing should take account of possible reductions by manufacturing tolerances, or where deformation could occur due to handling, shock ageing and vibration likely to be encountered during manufacture, transport and normal use.”

In the fifth paragraph of 4.2, delete the following:

“The tests are neither mandatory nor limiting and may be modified by agreement between manufacturer and purchaser.”

4 Modifications to Clause 5, “Operating conditions”

In the first paragraph of 5.2, replace

“a) The temperature and humidity conditions shall be compliant with the material specification as well as within conditions agreed between manufacturer and purchaser.”

with:

“a) The temperature and humidity conditions shall be compliant with the material specification and shall be within the following environmental conditions:

— temperature: +5 °C to +45 °C;

— relative humidity: 45 % to 75 %, without condensation;

— air pressure: 86 kPa to 106 kPa (860 mbar to 1 060 mbar).“

In the first paragraph of 5.2, replace:

“c) Where no specific environmental condition exists, the atmospheric conditions shall be within the following range:

— temperature: +5 °C to +45 °C;

— relative humidity: 45 % to 75 %, without condensation;

— air pressure: 86 kPa to 106 kPa (860 mbar to 1 060 mbar).“

with:

95 “c) For differing conditions extra precautions shall be taken.”

96 *In the first paragraph of 5.2, replace:*

97 “e) For AC equipment, the waveform of the supply voltage shall be substantially sinusoidal.”

98 *with:*

99 “e) For AC equipment, the waveform of the supply voltage shall be substantially sinusoidal as defined in
100 IEC 61000-2-2:2002+AMD1:2017+AMD2:2018, Clause 4.3.”

101 *In 5.3, replace:*

102 “a) short circuits across CREEPAGE DISTANCES, if they are less than the values given in Annex A, unless
103 the insulation materials are resistant to tracking and non-flammable (for details see 7.6)”;

104 *with:*

105 “a) short circuits across CREEPAGE DISTANCES”;

106 *In 5.3, replace:*

107 “b) short circuits across CLEARANCES, if they are less than the values given in Annex A.”;

108 *with:*

109 “b) short circuits across CLEARANCES”;

110 *In 5.3, replace:*

111 “c) a potentially dangerous failure of any component as determined from inspecting the equipment and
112 studying the circuit diagram, unless the component is known to comply with an IEC test recommendation
113 appropriate to the conditions of use in the equipment”;

114 *with:*

115 “c) a potentially dangerous failure of any component as determined from inspecting the equipment and
116 studying the circuit diagram”;

117 *In 5.4, delete the last paragraph:*

118 “Partial deviated test conditions might be mutually agreed between purchaser and supplier.”

119 5 Modifications to Clause 6, “Components and construction”

120 *In 6.2.1, delete the last two paragraphs:*

121 “Components which are known to comply with an IEC test recommendation appropriate to the conditions of
122 use in the equipment need not be tested.

123 When this is not so, the components may be tested either in the equipment or externally under conditions
124 equivalent to those applying in the equipment. The number of components to be tested shall be agreed
125 between manufacturer and purchaser.”

126 *In 6.2.5, delete the last paragraph:*

127 Tests shall be agreed between manufacturer and purchaser.

128 *In the last paragraph of 6.2.6,* replace ”IEC 60825-12,” *with* ”IEC 60825-12:2004, Clause 4.”

129 *In the first paragraph of 6.3.1, delete the second item and renumber the paragraphs:*

130 “b) No hazardous substances according to the “Restriction of hazardous substances” (RoHS) Directive
131 2011/65/EU shall be used, except where the directive allows exemption.”

132 *In the first paragraph of 6.3.1, eighth item h), replace* “ISO 1999,”*with* “ISO 1999:2013, Clause 7”.

133 *In 6.3.2, replace*:

134 “Tests to check the resistance to humidity shall be agreed between manufacturer and purchaser and shall be
135 made after the equipment has been subjected to the appropriate damp heat test given in IEC 60068-2-1.”

with:

"Tests to check the resistance to humidity shall be made after the equipment has been subjected to the appropriate damp heat test given in IEC 60068-2-1:2007, Clause 5."

In 6.3.3, replace

"If the transmitter is specified as protected against the ingress of water (see IP codes in 0), it shall remain safe when tested under the conditions agreed between manufacturer and purchaser. The test shall be made after the equipment has been subjected to the appropriate sealing test given in IEC 60068-2-1."

with:

"If the transmitter is specified as protected against the ingress of water (see IP codes in 3.2.3), it shall remain safe when tested after the equipment has been subjected to the appropriate sealing test given in IEC 60068-2-1:2007, Clause 5."

In 6.4, delete the last paragraph:

"Service instructions and safety related instructions shall be provided in the language agreed between manufacturer and customer."

6 Modifications to Clause 7, "Protection against harmful electric shock, and radio-frequency skin burns"

In 7.1, replace the second paragraph:

"Further information on the effects of a current passing through the human body is given in E.2."

with:

"Further information on the effects of a current passing through the human body is given in C.2."

In 7.2, replace the title:

"7.2.1 Safety earth terminal"

with:

"7.2.1 Protective earth terminal".

In 7.2, replace all occurrences of: "safety" *with:* "protective"

In the first paragraph of 7.3.2, replace: "should" *with:* "shall"

Delete the first paragraph of 7.6:

"Where CREEPAGE DISTANCE is smaller than the values specified in Annex A, the insulating material shall be non-tracking and non-flammable."

In the new first paragraph of 7.6, replace:

"For material other than ceramic, the comparative tracking index shall be determined by the test method given in IEC 60112. The insulating material will be considered to be non-tracking if the comparative tracking index is equal to or greater than 175. Flammability shall be checked by the appropriate test given in IEC 60695-1-10 and IEC 60695-1-11."

with:

"For material other than ceramic, the comparative tracking index shall be determined by the test method given in IEC 60112:2003+A1:2009, Clause 11. The insulating material will be considered to be non-tracking if the comparative tracking index is equal to or greater than 175. Flammability shall be checked by the appropriate test given in IEC 60695-1-10:2016, Clause 6 and IEC 60695-1-11:2014, Clause 6."

7 Modifications to Clause 8, "High temperature, fire and miscellaneous hazards"

In the first paragraph, last item of 8.2.2, replace: