

SLOVENSKI STANDARD

SIST EN 55103-1:2010/A1:2013

01-februar-2013

Elektromagnetna združljivost - Standard za družino izdelkov za regulacijo avdio, video, avdiovizualnih in osvetlitvenih zabaviščnih naprav za profesionalno uporabo - 1. del: Oddajanje - Dopnilo A1

Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Part 1: Emissions

Elektromagnetische Verträglichkeit - Produktfamilienorm für Audio-, Video- und audiovisuelle Einrichtungen sowie für Studio-Lichtsteuereinrichtungen für professionellen Einsatz - Teil 1: Störaussendungen

Compatibilité électromagnétique - Norme de famille de produits pour les appareils à usage professionnel audio, vidéo, audiovisuels et de commande de lumière pour spectacles - Partie 1: Emissions

Ta slovenski standard je istoveten z: EN 55103-1:2009/A1:2012

ICS:

33.100.10	Emisija	Emission
33.160.01	Avdio, video in avdiovizualni sistemi na splošno	Audio, video and audiovisual systems in general

SIST EN 55103-1:2010/A1:2013 **en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 55103-1/A1

November 2012

ICS 33.100.10

English version

**Electromagnetic compatibility -
Product family standard for audio, video, audio-visual and entertainment
lighting control apparatus for professional use -
Part 1: Emissions**

Compatibilité électromagnétique -
Norme de famille de produits pour les
appareils à usage professionnel audio,
vidéo, audiovisuels et de commande de
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und audiovisuelle Einrichtungen sowie für
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This amendment A1 modifies the European Standard EN 55103-1:2009; it was approved by CENELEC on 2012-11-05. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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.

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

This document (EN 55103-1:2009/A1:2012) has been prepared by CLC/TC 210 "Electromagnetic Compatibility (EMC)".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-11-05
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2015-11-05

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1 Modification to Clause 5

Add at the end of Clause 5:

No requirements are set for d.c. power ports, in accordance with EN 55022. If emissions at such ports are required to be controlled, the generic standard EN 61000-6-3 should be applied.

2 Modifications to Clause 8

Replace Table 1 with:

Table 1 – Emission (1 of 2)

Port	Phenomenon	Frequency range	Limits, environments E1 to E3	Limits, environments E4 and E5	Applicable standard	Notes
Enclosure	1 Radiated electromagnetic field at 10 m	30 MHz to 230 MHz	30 dB ($\mu\text{V}/\text{m}$) quasi-peak	40 dB ($\mu\text{V}/\text{m}$) quasi-peak	EN 55022	1
		230 MHz to 1 GHz	37 dB ($\mu\text{V}/\text{m}$) quasi-peak	47 dB ($\mu\text{V}/\text{m}$) quasi-peak		
	1a Radiated electromagnetic field at 3 m	1 GHz to 3 GHz	70 dB ($\mu\text{V}/\text{m}$) peak	76 dB ($\mu\text{V}/\text{m}$) peak		
			50 dB ($\mu\text{V}/\text{m}$) average	56 dB ($\mu\text{V}/\text{m}$) average		
	3 GHz to 6 GHz	74 dB ($\mu\text{V}/\text{m}$) peak	80 dB ($\mu\text{V}/\text{m}$) peak			
		54 dB ($\mu\text{V}/\text{m}$) average	60 dB ($\mu\text{V}/\text{m}$) average			
2 Magnetic field, at 100 mm	50 Hz to 500 Hz	4 A/m to 0,4 A/m	E4 as E1: E5 no limits, no test	Annex A	2 & 3	
	500 Hz to 50 kHz	0,4 A/m				
3 Magnetic field, at 1 m	50 Hz to 5 kHz	1 A/m to 0,01 A/m	E4 as E1: E5 no limits, no test	Annex A	2 & 4	
	5 kHz to 50 kHz	0,01 A/m				
AC mains ports	4 Harmonic currents	See applicable standard	See applicable standard	See applicable standard	EN 61000-3-2 or EN 61000-3-12	5
	5 Voltage changes (and inrush current, see Annex B)	See applicable standard	See applicable standard	See applicable standard	EN 61000-3-3 or EN 61000-3-11 and Annex B	5 & 6
	7 Discontinuous conducted radio-frequency emissions	0,15 MHz to 30 MHz	See applicable standard	See applicable standard	EN 55014-1	8
AC mains ports	6 Conducted radio-frequency emissions	0,15 MHz to 0,5 MHz	66 dB (μV) to 56 dB (μV) quasi-peak 56 dB (μV) to 46 dB (μV) average	79 dB (μV) quasi-peak 66 dB (μV) average	EN 55022	7
		0,5 MHz to 5 MHz	56 dB (μV) quasi-peak 46 dB (μV) average	73 dB (μV) quasi-peak		
		5 MHz to 30 MHz	60 dB (μV) quasi-peak 50 dB (μV) average	60 dB (μV) average		

Table 1 – Emission (2 of 2)

Port	Phenomenon	Frequency range	Limits, environments E1 to E3	Limits, environments E4 and E5	Applicable standard	Notes
Tele-communications and network ports	8 Conducted radio-frequency emissions	0,15 MHz to 0,5 MHz	40 dB (µA) to 30 dB (µA) quasi-peak 30 dB (µA) to 20 dB (µA) average	53 dB (µA) to 43 dB (µA) quasi-peak 40 dB (µA) to 30 dB (µA) average	EN 55022	7 & 9
		0,5 MHz to 30 MHz	30 dB (µA) quasi-peak 20 dB (µA) average	43 dB (µA) quasi-peak 30 dB (µA) average		
Antenna ports of broadcast receivers	9 Conducted radio-frequency	See applicable standard	See applicable standard	See applicable standard	EN 55013	10

NOTE 1 Applicable only to apparatus containing processing devices such as microprocessors operating at frequencies greater than 9 kHz.

NOTE 2 The limit decreases linearly with the logarithm of frequency.

NOTE 3 Applicable only to apparatus intended for rack mounting. Not applicable to apparatus intended for use only in environment E5.

NOTE 4 Applicable only to apparatus, NOT intended for rack mounting. Not applicable to apparatus intended for use only in environment E5.

NOTE 5 Applicable only to apparatus within the scopes of the applicable standards. Phenomena 4 and 5 apply to mains input ports only.

NOTE 6 EN 61000-3-3 specifies limits for d_{max} rather than inrush current. However, the values of inrush current itself are important for supply system design. See 7.1.

NOTE 7 The limits decrease linearly with the logarithm of frequency.

NOTE 8 Applicable only to discontinuous emissions exceeding the limits for phenomenon 6.

NOTE 9 Current probe measurement with the line terminated to the reference plane with 150 Ω.

NOTE 10 For wireless microphones, see also EN 301 489-9.

Add after Table 1 in Clause 8:

Conditional testing procedure:

The highest internal source of an EUT is defined as the highest frequency generated or used within the EUT or on which the EUT operates or tunes.

If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz.

If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.

If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz.

If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 6 GHz, whichever is less.

3 Modification to Annex B

Replace B.3 c) by the following, to correct an error in the formula:

- c) The final test result, I_{\max} , shall be calculated from d_{\max} as follows:

$$I_{\max} = d_{\max} U_n / 100Z$$

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