
Elektromagnetna združljivost (EMC) - 3. del: Mejne vrednosti - 3. oddelek: Omejitev vrednosti kolebanja napetosti in flikerja v nizkonapetostnih napajalnih sistemih za opremo z označenim tokom do 16 A - Dopolnilo AA

Electromagnetic compatibility (EMC) - Part 3: Limits - Section 3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current \leq 16 A

Elektromagnetische Verträglichkeit (EMV) - Teil 3: Grenzwerte - Abschnitt 3: Begrenzung von Spannungsschwankungen und Flicker in Niederspannungs-Versorgungsnetzen für Geräte mit einem Bemessungsstrom \leq 16 A

<https://standards.iteh.ai/catalog/standards/sist/feb47309-f40f-408b-9ccc-e19b62d76aaf/sist-en-61000-3-3:2014/oprAA:2023>

Compatibilité électromagnétique (CEM) - Partie 3: Limites - Section 3: Limitation des fluctuations de tension et du papillotement dans les réseaux d'alimentation basse tension, pour les matériels ayant un courant assigné \leq 16 A

Ta slovenski standard je istoveten z: EN 61000-3-3:2013/prAA

ICS:

33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general
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SIST EN 61000-3-3:2014/oprAA:2023 en

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
EN 61000-3-3:2013

prAA

February 2023

ICS 33.100.10

English Version

**Electromagnetic compatibility (EMC) - Part 3: Limits - Section 3:
Limitation of voltage fluctuations and flicker in low-voltage supply
systems for equipment with rated current ≤ 16 A**

To be completed

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This draft amendment prAA, if approved, will modify the European Standard EN 61000-3-3:2013; it is submitted to CENELEC members for enquiry.

Deadline for CENELEC: 2023-05-05.

It has been drawn up by CLC/TC 210.

If this draft becomes an amendment, 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.

This draft amendment was established by CENELEC in three official versions (English, French, German).

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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.

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

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European foreword

This document (EN 61000-3-3:2013/prAA:2023) has been prepared by Technical Committee CLC/TC 210 "Electromagnetic Compatibility (EMC)", the secretariat of which is held by BSI.

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 Standardization Request given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).
(standards.iteh.ai)

For relationship with EU Directive(s) / Regulation(s), see informative Annexes ZZA and ZZB, which are an integral part of this document.

<https://standards.iteh.ai/catalog/standards/sist/feb47309-f40f-408b-9cec-e19b62d76aaf/sist-en-61000-3-3-2014-opraa-2023>

EN 61000-3-3:2013/prAA:2023 (E)**1 Replacement of Clause 1, “Scope”**

Replace the content of Clause 1 with the following:

“This part of IEC 61000 covers the limitation of voltage fluctuations and flicker impressed on the public low-voltage system.

It specifies limits of voltage changes which are produced by an equipment tested under specified conditions and gives guidance on methods of assessment.

This part of IEC 61000 is applicable to electrical and electronic equipment having a rated input current equal to or less than 16 A per phase, intended to be connected to public low-voltage distribution systems of between 220 V and 250 V line to neutral at 50 Hz, and not subject to conditional connection.

NOTE 1 The limits in this document relate to the voltage changes experienced by consumers connected at the interface between the public supply low-voltage network and the equipment user’s installation. Consequently, if the actual impedance of the supply at the supply terminals of equipment connected within the equipment user’s installation exceeds the test impedance, it is possible that supply disturbance exceeding the limits could occur.

NOTE 2 The limits in this document are based mainly on the subjective severity of flicker imposed on the light from 230 V 60 W coiled-coil filament lamps by fluctuations of the supply voltage.”

2 Modifications to Clause 2, “Normative references”

Delete the following reference:

IEC/TR 60725, *Consideration of reference impedances and public supply impedances for use in determining disturbance characteristics of electrical equipment having a rated current ≤ 75 A per phase*

Replace “IEC 60974-1:2017” with “IEC 60974-1:2017”.

Replace

IEC 61000-3-2, *Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*

with

IEC 61000-3-2:2018,² *Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*

Delete the following reference:

IEC 61000-3-11, *Electromagnetic compatibility (EMC) – Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection*

3 Modification to Clause 3, “Terms and definitions”

Replace the entire term entry 3.13 with the following:

“

3.13**conditional connection**

connection of equipment requiring the user’s supply at the interface point to have an impedance lower than the reference impedance Z_{ref}

“

¹ As amended by IEC 60974-1:2017/A1:2019.

² As amended by IEC 61000-3-2:2018/AMD1:2020.

4 Modification to Clause 5, “Limits”

Delete the last sentence of the 1st paragraph “Tests made to prove compliance with the limits are considered to be type tests.”

5 Modification to 6.1, “General”

Delete the following first two paragraphs:

“Tests need not be made on equipment which is unlikely to produce significant voltage fluctuations or flicker. Where it is considered necessary to conduct tests, the equipment shall comply with all limits in Clause 5 for the tests described in Annex A unless there are specific exclusions for a particular type of equipment.

It may be necessary to determine, by examination of the circuit diagram and specification of the equipment and by a short functional test, whether significant voltage fluctuations are likely to be produced.”

6 Modification to 6.2, “Measurement uncertainty”

Change the title of the clause from “Measurement uncertainty” to “Measurement accuracy”

In the second paragraph replace the word “uncertainty” in two places with “accuracy”.

Delete the third paragraph and the note.

7 Modification to 6.4, “Reference impedance”

Replace

“For equipment under test the reference impedance, Z_{ref} , according to IEC/TR 60725, is a conventional impedance used in the calculation and measurement of the directly measured parameters, and the Pst and Plt values.

The impedance values of the various elements are given in Figure 1.”

with

“For equipment under test the reference impedance, Z_{ref} , according to Figure 1, is a conventional impedance used in the calculation and measurement of the directly measured parameters, and the Pst and Plt values.”

8 Modification to 6.6, “General test conditions”

Replace the following first two paragraphs:

“The test conditions for the measurement of voltage fluctuations and flicker are given below. For equipment not mentioned in Annex A, controls or automatic programs shall be set to produce the most unfavourable sequence of voltage changes, using only those combinations of controls and programmes which are mentioned by the manufacturer in the instruction manual, or are otherwise likely to be used.

The equipment shall be tested in the condition in which it is supplied by the manufacturer. Preliminary operation of motor drives may be needed before the tests to ensure that results corresponding to those of normal use are obtained.”

with the following:

“The test conditions for the measurement of voltage fluctuations and flicker are given below. For equipment not mentioned in Annex A, controls or automatic programs shall be set to produce the most unfavourable sequence of voltage changes, using only those combinations of controls and programmes which are mentioned in the instruction manual, or are otherwise likely to be used.

The equipment shall be tested in the condition in which it is supplied to the user. Preliminary operation of motor drives may be needed before the tests to ensure that results corresponding to those of normal use are obtained.”

EN 61000-3-3:2013/prAA:2023 (E)

In Figure 1, delete Note 2 “NOTE 2 When the source impedance is not well defined, see 6.2.” and renumber Note 3 as Note 2.

9 Modification to A.1.4, “Grills”

Replace

“The grill shall be tested empty with the door closed, if not otherwise stated by the manufacturer. If a control is available it shall be set to the lowest, the medium and the highest setting for grilling operation, and the worst result recorded.”

with the following:

“The grill shall be tested empty with the door closed, if not otherwise stated for the EUT. If a control is available it shall be set to the lowest, the medium and the highest setting for grilling operation, and the worst result recorded.”

10 Modification to A.6, “Test conditions for copying machines, laser printers and similar appliances”

Replace

“The appliance shall be tested for P_{st} at the maximum rate of copying. The original to be copied/printed is white blank paper and the copy paper shall have a weight of 80 g/m² if not otherwise stated by the manufacturer.

Obtain the P_{it} value in the stand-by mode.”

with the following:

“The appliance shall be tested for P_{st} at the maximum rate of copying. The original to be copied/printed is white blank paper and the copy paper shall have a weight of 80 g/m² if not otherwise stated for the EUT.

Obtain the P_{it} value in the stand-by mode.”

<https://standards.iteh.ai/catalog/standards/sist/feb47309-f40f-408b-9ccc-e19b62d76aaf/sist-61000-3-3:2014/oprAA:2023>

11 Modification to A.14, “Test conditions for air conditioners, dehumidifiers, heat pumps, and commercial refrigerating equipment”

Replace the last paragraph

“ P_{st} and P_{it} shall be evaluated using the number of cycles per hour declared by the manufacturer.”

with the following:

“ P_{st} and P_{it} shall be evaluated using the number of cycles per hour when the product is used as intended.”

12 Modification to A.15.1, “General”

Replace the last paragraph

“The following test conditions shall be applicable to welding equipment designed according to IEC 60974-1. Test conditions for other types of equipment are under consideration.”

with the following:

“The following test conditions shall be applicable to welding equipment designed according to IEC 60974-1:2017¹.”

13 Modification to A.15.2.4, “ P_{st} evaluation process”

Replace the last paragraph

“The result shall comply with the limit in Clause 5. If the limit is exceeded, the equipment cannot be declared compliant with this part of IEC 61000 and the procedure according to IEC 61000-3-11 shall be applied.”

with the following:

“The result shall comply with the limit in Clause 5. If the limit is exceeded, the equipment cannot be declared compliant with this part of IEC 61000.”

14 Modification to A.15.3.2, “Evaluation of d_c ”

Replace the last paragraph

“The result shall comply with the limit in Clause 6. If the limit is exceeded, the equipment cannot be declared compliant with this part of IEC 61000 and the procedure according to IEC 61000-3-11 shall be applied.”

with the following:

“The result shall comply with the limit in Clause 5. If the limit is exceeded, the equipment cannot be declared compliant with this part of IEC 61000.”

15 Modification to A.16, “Coffee machines and tea machines”

Add the following paragraph between the last two paragraphs:

“ P_{it} shall not be evaluated.”

16 Modification to B.2, “Procedure”

Replace the note

“<https://standards.iteh.ai/catalog/standards/sist/feb47309-f40f-408b-9ccc-e19b62d76aaf/sist-en-61000-3-3-2014-opraa-2023>”

NOTE The method of cooling can be natural or forced, and the cooling period is specified by the equipment manufacturer if desired.”

with the following:

“

NOTE The method of cooling can be natural or forced.”

17 Modification to Bibliography

Add the following reference:

“IEC 61000-3-11, *Electromagnetic compatibility (EMC) – Part 3-11: Limits – Limitation of voltage change, voltage fluctuations and flicker in public low-voltage supply systems – Equipment with rated current $\leq 75A$ and subject to conditional connection*”

18 Replacement of Annex ZA

Replace Annex ZA with the following:

“

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60974-1	2017 ³	Arc welding equipment - Part 1: Welding - power sources	-	-
+ AMD1	2021			
IEC 61000-3-2	2018	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	EN IEC 61000-3-2	2019
+ AMD1	2020		+ A1	2021
IEC 61000-4-15	2010	Electromagnetic compatibility (EMC) - Part 4-15: Testing and measurement techniques - Flickermeter - Functional and design specifications	EN 61000-4-15	2011

“

19 Addition of Annexes ZZA and ZZB

Add the following Annexes ZZA and ZZB:

“

³ Dated as no European equivalent exists.