

SLOVENSKI STANDARD

SIST-V CLC Guide 25:2010

01-april-2010

Vodilo za uporabo standardov pri implementaciji direktive EMC za naprave

Guide on the use of standards for the implementation of the EMC Directive to apparatus

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ICS:

01.120	Standardizacija. Splošna pravila	Standardization. General rules
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CENELEC Guide 25

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EUROPEAN COMMITTEE
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Foreword

This CENELEC Guide has been prepared by CENELEC Technical Committee TC 210, EMC.

This third edition was approved by the CENELEC Technical Board on 2009-07-01; it supersedes CENELEC Guide 25:2005.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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INTRODUCTION

The EMC Directive, 2004/108/EC states that a presumption of conformity with the protection requirements (emission and immunity) related to EMC shall exist for all apparatus in conformity with those harmonised standards (ENS) that are identified as relevant by publication of their reference numbers in the Official Journal of the European Union (OJEU). The presumption of conformity is limited to the scope of the harmonised standard(s) applied and the relevant protection requirements covered by the harmonised standard(s).

This third edition of Guide 25 updates the guidance in the light of the application of Directive 2004/108/EC, and updates the references to the standards.

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1 General principles

Conformity with the harmonised standards listed in the Official Journal (OJEU) of the European Union (generic and product standards i.e. product-family or dedicated product standards) provides a presumption of conformity with the protection requirements of EMC Directive 2004/108/EC (covering emission and immunity). Harmonised standards are thus designed to satisfy the protection requirements of the EMC Directive.

The complete list of harmonised standards published in OJEU under the EMC-directive may be found on the following website of the European Commission:

http://ec.europa.eu/enterprise/electr_equipment/emc/stand.htm

Standards may be used to demonstrate compliance with all the protection requirements (this means, if applicable, low-frequency as well as high-frequency phenomena, emission as well as immunity) or may be used to cover them only in part. Where harmonised standards are not applied, or are not applied in full, the technical documentation required by Annex II of the Directive must include an electromagnetic compatibility assessment of the apparatus, on the basis of the relevant phenomena, for those aspects not covered by the parts of the harmonised standards applied (if any).

The simplest route to compliance is for a manufacturer to use standards that cover the whole of the EMC protection requirements of the Directive, in which case the manufacturer has to apply all the normative EMC requirements of those standards listed in the OJEU whose scopes are applicable to the individual product.

In the absence of appropriate product standards i.e. product-family or dedicated product standards in the OJEU list, the generic standards shall be applied to show compliance.

When showing compliance through standards it is often necessary to comply with more than one standard. This is because some EMC standards do not cover the whole EMC domain covered by the EMC Directive. They may concern only immunity (e.g. EN 61547) high-frequency emission (e.g. EN 55014-1, EN 55011, EN 55015, etc.) or low frequency emission phenomena (e.g. EN 61000-3-2, EN 61000-3-3).

When dedicated product standards are listed either for emission or immunity, the directly corresponding product family standards do not normally apply as well, except when referred to in the dedicated standards.

2 Application to typical equipment

With a view to helping manufacturers, the following non-exhaustive Table 1 shows, for some examples of typical equipment, those standards to apply to cover the protection requirements of the EMC Directive. All the standards on the horizontal line, corresponding to a category of equipment, must be applied to demonstrate presumption of conformity by application of harmonised standards.

This table reflects only the situation at the date of publication of this CENELEC Guide. It will be updated in subsequent editions of the Guide.

Note that this table is indicative only. The definitive list of standards that are applicable under the EMC Directive is published in the Official Journal of the European Union. The reference to the Commission website where the latest list may be viewed or downloaded as a .pdf file is given in Clause 1 of this Guide. Note that the .pdf file of the relevant OJEU pages is definitive, and the list on the web page is provided for information only, and has no legal validity.

3 Criteria for selecting standards

Selecting a particular product standard for application to a given product may sometimes give difficulties.

The following series of six basic principles will help in the selection of appropriate standards:

- 1) The scopes of the product-family or dedicated product standards govern their applicability to individual products. The scopes of the standards should therefore be considered carefully, with all their implications. In case of doubt (which may still arise with very broad scope definitions in product-family standards) a second principle (see item 2 following) may be useful.
- 2) It is the intended use and function of the equipment that determines the EMC standards to be applied. <https://standards.iteh.ai/catalog/standards/sist/b3904edd-b0a8-4285-9ef9-62e722a9adce/sist-v-clc-guide-25-2010>

EXAMPLE:

A washing machine, whatever communication or microprocessor modules are used in it, remains basically classified as household equipment for the application of standards and therefore EN 55014-1 and EN 55014-2 apply.

- 3) Particular interface modules in well-defined equipment (e.g. washing machines) may have to comply with additional requirements that are not included in the normally applicable product-family standard for the complete product. In this case, the interface module (separated or not from the complete apparatus) shall comply with additional requirements for the port corresponding to the interface module only.

NOTE It may be advisable to include at a later stage requirements for connection ports to public and/or private telecommunication lines in both generic and product (family) standards. This would make the problem easier by avoiding the need to resort to additional standards.

- 4) The scopes of EN 55011, EN 55013, EN 55014, EN 55015 and EN 55022, for radio-interference emission limitation, are in general mutually exclusive. This means that only one of them has to be selected for given **single function** equipment to comply with the protection requirements of the EMC Directive.

- 5) Despite these general principles, borderline problems may still occur that are difficult to solve. For multifunction apparatus, it may be necessary to comply with more than one standard for emission and/or immunity. See Annex D for further information.
- 6) EN 61000-3-2 and EN 61000-3-3 are published in the OJEU as product family standards, and apply in their own right to all products in the scope of these standards.

It is intended that generic and product (- family) standards should make reference to the basic standards without repeating their detailed contents. Basic standards do not contain requirements and therefore a declaration of conformity of products with the basic standards has no significance. Thus basic standards are not included in the list of harmonised standards published in the Official Journal of the European Union (OJEU). This OJEU list will indeed include only those standards permitting the direct presumption of conformity of products with Directive 2004/108/EC.

Alternative test and measurement methods, when introduced into a harmonised standard for the same purpose are considered, together with their associated limits, as equivalent regarding the provision of a presumption of conformity with the protection requirements.

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Table 1
(Non-exhaustive table)

Families of products	Standards covering the protection EMC requirements			
	Emission			Immunity
	Harmonics (see Note 1)	Voltage fluctuations (see Note 1)	Radio- interference	(All aspects)
Household appliances and portable tools (motor-driven such as vacuum cleaners, washing machines etc; heating and cooking appliances, etc.)	EN 61000-3-2 or EN 61000-3-12	EN 61000-3-3 or EN 61000-3-11	EN 55014-1 (2)	EN 55014-2
Lighting equipment	EN 61000-3-2 or EN 61000-3-12	EN 61000-3-3 or EN 61000-3-11	EN 55015 (8)	EN 61547
TV receivers and audio equipment	EN 61000-3-2 or EN 61000-3-12	EN 61000-3-3 or EN 61000-3-11	EN 55013	EN 55020
Professional audio, video and entertainment lighting control equipment	EN 55103-1 (refers to EN 61000-3-2)	EN 55103-1 (refers to EN 61000-3-3)	EN 55103-1	EN 55103-2
Information Technology (IT) equipment	EN 61000-3-2 or EN 61000-3-12	EN 61000-3-3 or EN 61000-3-11	EN 55022	EN 55024
Mains signalling equipment (7)	-	-	EN 50065-1	EN 50065-2-1 EN 50065-2-2 EN 50065-2-3
ISM equipment	EN 61000-3-2 or EN 61000-3-12	EN 61000-3-3 or EN 61000-3-11	EN 55011	EN 61000-6-2
Industrial equipment in general	- (3)	- (3)	EN 61000-6-4	EN 61000-6-2
Static watt-hour meters (Classes 1 and 2)	-	-	EN 61036	EN 61036
Static watt-hour meters (Classes 0,2 S and 0,5 S)	-	-	EN 60687	EN 60687
Electronic ripple control receivers	-	-	EN 61037	EN 61037
Time switches for tariff and load control	-	-	EN 61038	EN 61038
Marine navigational equipment	-	-	EN 60945	EN 60945
Automatic electrical controls for household and similar use (6)	EN 61000-3-2 or EN 61000-3-12	EN 61000-3-3 or EN 61000-3-11	EN 60730-1 and -x (4)	EN 60730-1 and -x (4)
Household electronic switches for fixed installations (6)	EN 60669-2-1 (refers to EN 61000-3-2)	EN 60669-2-1 (refers to EN 61000-3-3)	EN 60669-2-1	EN 60669-2-1
Induction watt-hour meters	-	-	-	EN 60521
Programmable controllers (industry)	-	-	EN 61000-6-4	EN 61131-2
Low-voltage switchgear and controlgear (6)	-	-	EN 60947-1 and -x (5)	EN 60947-1 and -x (5)
Alarm systems	EN 61000-3-2 or EN 61000-3-12	EN 61000-3-3 or EN 61000-3-11	EN 61000-6-3	EN 50130-4