



SLOVENSKI STANDARD

SIST EN 50082-1:1995

01-april-1995

Electromagnetic compatibility - Generic immunity standard - Part 1: Residential, commercial and light industry

Electromagnetic compatibility - Generic immunity standard -- Part 1: Residential, commercial and light industry

Elektromagnetische Verträglichkeit - Fachgrundnorm Störfestigkeit -- Teil 1: Wohnbereich, Geschäfts- und Gewerbebereiche sowie Kleinindustrie

Compatibilité électromagnétique - Norme générique immunité -- Partie 1: Résidentiel, commercial, industrie légère

[SIST EN 50082-1:1995](https://standards.iteh.ai/catalog/standards/sist/2da97a1a-585c-4947-b3fa-6c2ecfbd1bd7/sist-en-50082-1-1995)

[https://standards.iteh.ai/catalog/standards/sist/2da97a1a-585c-4947-b3fa-](https://standards.iteh.ai/catalog/standards/sist/2da97a1a-585c-4947-b3fa-6c2ecfbd1bd7/sist-en-50082-1-1995)

[6c2ecfbd1bd7/sist-en-50082-1-1995](https://standards.iteh.ai/catalog/standards/sist/2da97a1a-585c-4947-b3fa-6c2ecfbd1bd7/sist-en-50082-1-1995)

Ta slovenski standard je istoveten z: EN 50082-1:1992

ICS:

33.100.20 Imunost Immunity

SIST EN 50082-1:1995 en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 50082-1:1995](https://standards.iteh.ai/catalog/standards/sist/2da97a1a-585c-4947-b3fa-6c2ecfbd1bd7/sist-en-50082-1-1995)

<https://standards.iteh.ai/catalog/standards/sist/2da97a1a-585c-4947-b3fa-6c2ecfbd1bd7/sist-en-50082-1-1995>

EUROPEAN STANDARD
 NORME EUROPÉENNE
 EUROPÄISCHE NORM

EN 50082-1

January 1992

UDC 621.37.001.36

Descriptors: Radiodisturbances, electromagnetic compatibility, tests, equipment protection

English version

**Electromagnetic compatibility - Generic immunity standard
 Part 1: Residential, commercial and light industry**

Compatibilité électromagnétique
 Norme générique immunité
 Partie 1: Résidentiel, commercial,
 industrie légère

Elektromagnetische Verträglichkeit
 Fachgrundnorm Störfestigkeit
 Teil 1: Wohnbereich, Geschäfts- und
 Gewerbebereiche sowie Kleinindustrie

ITeH STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 50082-1:1995

<https://standards.iteh.ai/catalog/standards/sist/2da97a1a-585c-4947-b3fa->

This European Standard was approved by CENELEC on 10 December 1991. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 50082-1:1995

<https://standards.iteh.ai/catalog/standards/sist/2da97a1a-585c-4947-b3fa-6c2ecfbd1bd7/sist-en-50082-1-1995>

Foreword

The present European Standard was prepared by the CENELEC Technical Committee TC 110. It was submitted to the CENELEC members for Unique Acceptance in February 1991 and was approved by all members, **with the exception of Austria**, as EN 50082-1 on 10 December 1991.

The following dates were fixed:

- | | | |
|---|-------|------------|
| - latest date of publication
of an identical national standard | (dop) | 1992-06-01 |
| - latest date of withdrawal
of conflicting national standards | (dow) | 1992-12-31 |

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 50082-1:1995

<https://standards.iteh.ai/catalog/standards/sist/2da97a1a-585c-4947-b3fa-6c2ecfbd1bd7/sist-en-50082-1-1995>

GENERIC IMMUNITY STANDARD

1 Scope

This standard for immunity requirement applies to electrical and electronic apparatus intended for use in the residential, commercial and light-industrial environment, as described in clause 5, for which no dedicated product or product-family immunity standard exists. Apparatus designed to radiate electromagnetic energy for radio communications purposes is excluded from this standard.

Immunity requirements in the frequency range 0 Hz to 400 GHz are covered.

Where a relevant dedicated product or product-family EMC immunity standard exists, this shall take precedence over all aspects of this generic standard.

The immunity requirements have been selected so as to ensure an adequate level of immunity for apparatus at residential, commercial and light-industrial locations. The levels do not however cover extreme cases which may occur in any location but with an extremely low probability of occurrence.

Apparatus installed in the locations covered by this standard are considered to be directly connected to low-voltage public mains supplies or to a dedicated DC source which is intended to interface between the apparatus and the low-voltage public mains supply. Apparatus intended to be connected to an industrial power network or to special power supply sources are covered by another generic standard.

(standards.iteh.ai)

2 Normative references

SIST EN 50082-1:1995

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

IEC

<u>Publication</u>	<u>Title</u>	<u>EN/HD</u>
50(161)	International Electrotechnical Vocabulary Chapter 161: Electromagnetic compatibility	-
801	Electromagnetic compatibility for industrial-process measurement and control equipment	-
801-2:1984	Part 2: Electrostatic discharge requirements	HD 481.2 S1:1987
801-2:1991	Part 2: Electrostatic discharge requirements	-
801-3:1984	Part 3: Radiated electromagnetic field requirements	HD 481.3 S1:1987
801-4:1988	Part 4: Electrical fast transient/burst requirements	-

3 Objective

The objective of this standard is to define the immunity test requirements for apparatus defined in the scope in relation to continuous and transient, conducted and radiated disturbances including electrostatic discharges.

These test requirements represent essential electromagnetic compatibility immunity requirements.

Test requirements are specified for each port considered.

NOTE 1: This standard does not specify basic safety requirements for apparatus such as protection against electric shocks, unsafe operation, insulation coordination and related dielectric tests.

NOTE 2: In special cases situations will arise where the level of disturbances may exceed the levels specified in this standard e.g. where a hand-held transmitter is used in proximity to an apparatus. In these instances special mitigation measures may have to be employed.

4 Definitions

Definitions related to EMC and to relevant phenomena may be found in the EEC Directive, in chapter 161 of the IECV (IEC 50) and in IEC and CISPR Publications. The definitions stated in the Directive (89/336/EEC) take precedence.

The following particular definitions are used in this standard:

port: Particular interface of the specified apparatus with the external electromagnetic environment (see figure 1).

enclosure port: The physical boundary of the apparatus through which electromagnetic fields may radiate or impinge.

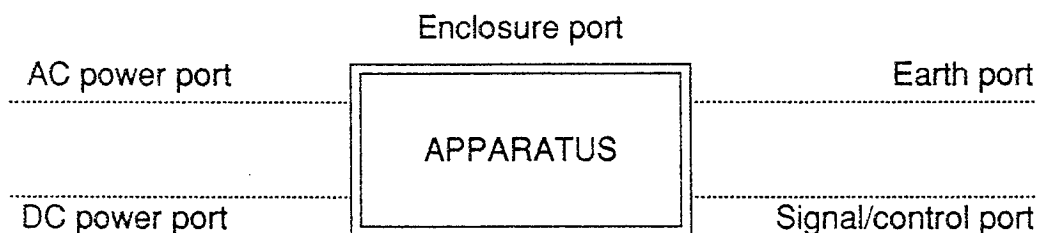


Figure 1: Examples of ports

5 Description of locations

The environments encompassed by this standard are residential, commercial and light-industrial locations, both indoor and outdoor. The following list, although not comprehensive, gives an indication of locations which are included:

- residential properties, e.g. houses, apartments, etc.
- retail outlets, e.g. shops, supermarkets, etc.
- business premises, e.g. offices, banks, etc.

- areas of public entertainment, e.g. cinemas, public bars, dance halls, etc.
- outdoor locations, e.g. petrol stations, car parks, amusement and sports centres, etc.
- light-industrial locations, e.g. workshops, laboratories, service centres, etc.

Locations which are characterized by being supplied directly at low voltage from the public mains are considered to be residential, commercial or light industrial.

6 Performance criteria

The variety and the diversity of the apparatus within the scope of this standard makes it difficult to define precise criteria for the evaluation of the immunity test results.

Apparatus shall not become dangerous or unsafe as a result of the application of the tests defined in this standard.

A functional description and a definition of performance criteria, during or as a consequence of the EMC testing, shall be provided by the manufacturer and noted in the test report, based on the following criteria:

Performance criterion A: The apparatus shall continue to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer then either of these may be derived from the product description and documentation and what the user may reasonably expect from the apparatus if used as intended.

SIST EN 50082-1:1995

Performance criterion B: The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer then either of these may be derived from the product description and documentation and what the user may reasonably expect from the apparatus if used as intended.

Performance criterion C: Temporary loss of function is allowed, provided the function is self recoverable or can be restored by the operation of the controls.

7 Conditions during testing

The tests shall be made in the most susceptible operating mode in the frequency band being investigated consistent with normal applications. The configuration of the test sample shall be varied to achieve maximum susceptibility.

If the apparatus is part of a system, or can be connected to auxiliary apparatus, then the apparatus shall be tested while connected to the minimum configuration of auxiliary apparatus necessary to exercise the ports in accordance with EN 55022.

The configuration and mode of operation during the tests shall be precisely noted in the test report.

If the apparatus has a large number of terminals, then a sufficient number shall be selected to simulate actual operating conditions and to ensure that all the different types of termination are covered.

The tests shall be carried out somewhere within the specified operating environmental range for the apparatus and at its rated supply voltage, unless otherwise indicated in the basic standard.

8 Product documentation

If the manufacturer is using his own specification for an acceptable level of EMC performance or degradation of EMC performance during or after the testing required by this standard, then this specification shall be made available upon request.

9 Applicability

Tests are applied to the relevant ports of the apparatus according to tables 1 to 4. Tests shall only be carried out where the relevant ports exist.

It may be determined from consideration of the electrical characteristics and usage of a particular apparatus that some of the tests are inappropriate and therefore unnecessary. In such a case it is required that the decision not to test be recorded in the test report.

10 Immunity test requirements

The immunity test requirements for apparatus covered by this standard are given on a port by port basis.

Tests shall be conducted in a well-defined and reproducible manner.

The tests shall be carried out as single tests in sequence. The sequence of testing is optional.

The description of the test, the test generator, the test methods, and the test set-up are given in basic standards which are referred to in tables 1 to 4 and the tables of annex A.

The contents of these basic standards are not repeated here, however modifications or additional information needed for the practical application of the tests are given in this standard.

NOTE: The term "basic standard" has been used for want of a more suitable term. The standards referenced (IEC 801 series) are stand-alone product-family standards. The reference to "basic standard" is intended to be limited to those parts of the standard that give the description of the test, the test methods and the test set-up.