



Classification of the electromagnetic environment conditions for equipment in telecommunication networks

Reference

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Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

The present document should be used by the standardization committees to define the ElectroMagnetic Compatibility (EMC) requirements for the telecommunication equipment, depending by the locations where these are intended to be installed.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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1 Scope

The present document provides information on the electromagnetic environmental conditions encountered where telecommunications equipment is installed and is a compilation of data concerning electromagnetic environmental conditions.

In the present document only locations for equipment that are in the telecommunication network are considered.

Only some of the data is based on comprehensive environmental surveys. Such surveys are rarely reported in available literature. Consequently, estimated values are often used when the electromagnetic environmental conditions are stated. In order to characterize the electromagnetic environment, it is necessary to make certain assumptions on the installation practice. If these assumptions are not satisfied in a particular case, the environmental characteristic may not apply.

Each environment is characterized in two ways:

- by a short verbal description of its assumed attributes;
- by a quantitative statement of the characteristic severities of the crucial environmental phenomena.

It is only possible to specify the appropriate EMC requirements following the assessment of the severity of the electromagnetic environment. This in turn will be helpful in ensuring that the telecommunications network equipment has the sufficient intrinsic immunity to enable it to operate as intended in its environment.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI ETS 300 132-1 (1996): "Equipment Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 1: Operated by alternating current (ac) derived from direct current (dc) sources".
- [i.2] ETSI EN 300 132-2 (V2.4.6) (12-2011): "Environmental Engineering (EE); Power supply interface at the input to telecommunications and datacom (ICT) equipment; Part 2: Operated by - 48 V direct current (dc)".