



SLOVENSKI STANDARD

SIST ETS 300 019-1-7 E1:2006

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Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-7: Classification of environmental conditions; Portable and non-stationary use

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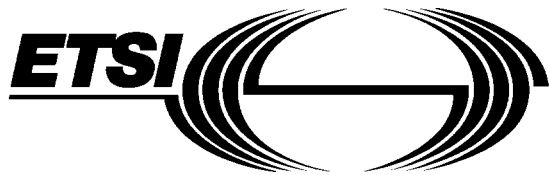
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33.050.01	Telekomunikacijska terminalska oprema na splošno	Telecommunication terminal equipment in general

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**Equipment Engineering (EE);
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Part 1-7: Classification of environmental conditions
Portable and non-stationary use**

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Contents

Foreword	5
1 Scope	7
2 Normative references	7
3 Definitions	7
4 Environmental classes	7
4.1 Class 7.1: Temperature controlled locations	8
4.2 Class 7.2: Partly temperature-controlled locations	9
4.3 Class 7.3: Partly weatherprotected and non-weatherprotected locations	11
4.4 Class 7.3 E: Partly weatherprotected and non-weatherprotected locations - extended ...	12
5 Environmental conditions	14
5.1 Climatic conditions	14
5.2 Biological conditions	15
5.3 Chemically active substances	16
5.4 Mechanically active substances	17
5.5 Mechanical conditions	17
History	19

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Foreword

This multi-part European Telecommunication Standard (ETS) has been produced by the Equipment Engineering (EE) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This standard is concerned with environmental conditions and environmental tests for telecommunications equipment and comprises two main parts, each with subdivisions:

- ETS 300 019-1: "Classification of environmental conditions".

This part of the standard, Part 1, specifies different standardised environmental classes covering climatic and biological conditions, chemically and mechanically active substances and mechanical conditions during storage, transportation and in use.

- ETS 300 019-2: "Specification of environmental tests".

This part of the standard will specify the test requirements for the different environmental classes.

Each part of the standard is divided into sub-parts. Sub-part 1-0 will form a general overview of Part 1. This sub-part, sub-part 1-7, deals with portable and non-stationary use.

This part of the standard, (Part 1), was submitted to Public Enquiry as prETS 300 019 Part B. The original Part A is to be published as ETSI Technical Report ETR 035 entitled: "Equipment Engineering (EE); Environmental engineering Guidance and terminology".

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1 Scope

The purpose of this sub-part of this standard is to define the classes of environmental conditions and their severities to which equipment may be exposed. Only severe conditions, which may be harmful to the equipment are included. The severities specified are those which will have a low probability of being exceeded; generally less than 1%.

This sub-part applies to equipment during portable and non-stationary use including periods of transfer, down time, maintenance and repair.

2 Normative references

- [1] ETR 035: "Equipment Engineering (EE); Environmental engineering Guidance and terminology".
- [2] IEC Publication 721-3-7: "Portable and non-stationary use".
- [3] IEC Publication 721-2-1: "Temperature and Humidity".
- [4] IEC Publication 68-2-27: "Test Ea: Shock".

3 Definitions

Portable and non-stationary use: the equipment may be moved frequently from place to place. The total transfer time may amount to a significant portion of the equipment's lifetime. The equipment is not permanently mounted on any structure or placed at a fixed site. The equipment may be operating while being either in a stationary or in a transfer state.

Weatherprotected location: a location at which the equipment is protected from direct weather influences.

Totally weatherprotected location (enclosed location) direct weather influences are totally excluded.

Partly weatherprotected: location (sheltered location) direct weather influences are not completely excluded.

Non-weatherprotected location: a location at which the equipment is not protected from direct weather influences.

4 Environmental classes

Two mechanical classes, 7M2 and 7M3, are used and cover all the environmental classes 7.1 to 7.3 E.

The relevant class is determined by consideration of the expected handling, means of transfer and complete use-profile of the equipment.

The special, severe, class 7M3 applies to use only in circumstances where the equipment is exposed to rough handling, severe shocks and vibration e.g. from the means of transfer or rotating machinery.

The severities shown in parentheses, e.g. (7C1), may be selected for special applications.

4.1 Class 7.1: Temperature controlled locations

This class is a combination of classes 7K1/7Z2/7Z4/7B1/7C2(7C1)/7S1/7M2 or 7M3 in IEC publication 721-3-7 [2].

This class applies to use at, and direct transfer between, permanently temperature-controlled and enclosed locations. Humidity is usually not controlled. The climatogram is shown in figure 1.

Heating, cooling or humidification is used, where necessary, to maintain the required conditions, especially where there is a large difference between the internal climate and that open-air climate. Heating or cooling may be switched off for periods but the occurrence of extremely high or low temperatures is prevented.

This class applies to use at, and transfer between, locations:

- where the equipment may be exposed to solar radiation and to heat radiation. It may also be exposed to movements of the surrounding air (e.g. due to draughts in buildings through open windows) and to condensed water. It is not subjected to precipitation, or water from sources other than rain or icing;
- without particular risk of biological attack. This includes protective measures, e.g. special product design, or installation in locations of such construction that mould growth and attacks by animals, etc. are not probable;
- with normal levels of contaminants experienced in urban areas, with industrial activities scattered over the whole area and/or with heavy traffic;
- without special precautions to minimise the presence of sand or dust, but which are not situated in proximity to sources of sand or dust.

The mechanical class shall be determined by reference to Clause 4, "Environmental classes".

The conditions of this class may be found in, and during transfer to, normal living or working areas, e.g.:

- living rooms;
- rooms for general use (theatres, restaurants, etc.);
- offices;
- shops;
- workshops;
- telecommunication centres;
- storage rooms for valuable and sensitive products.

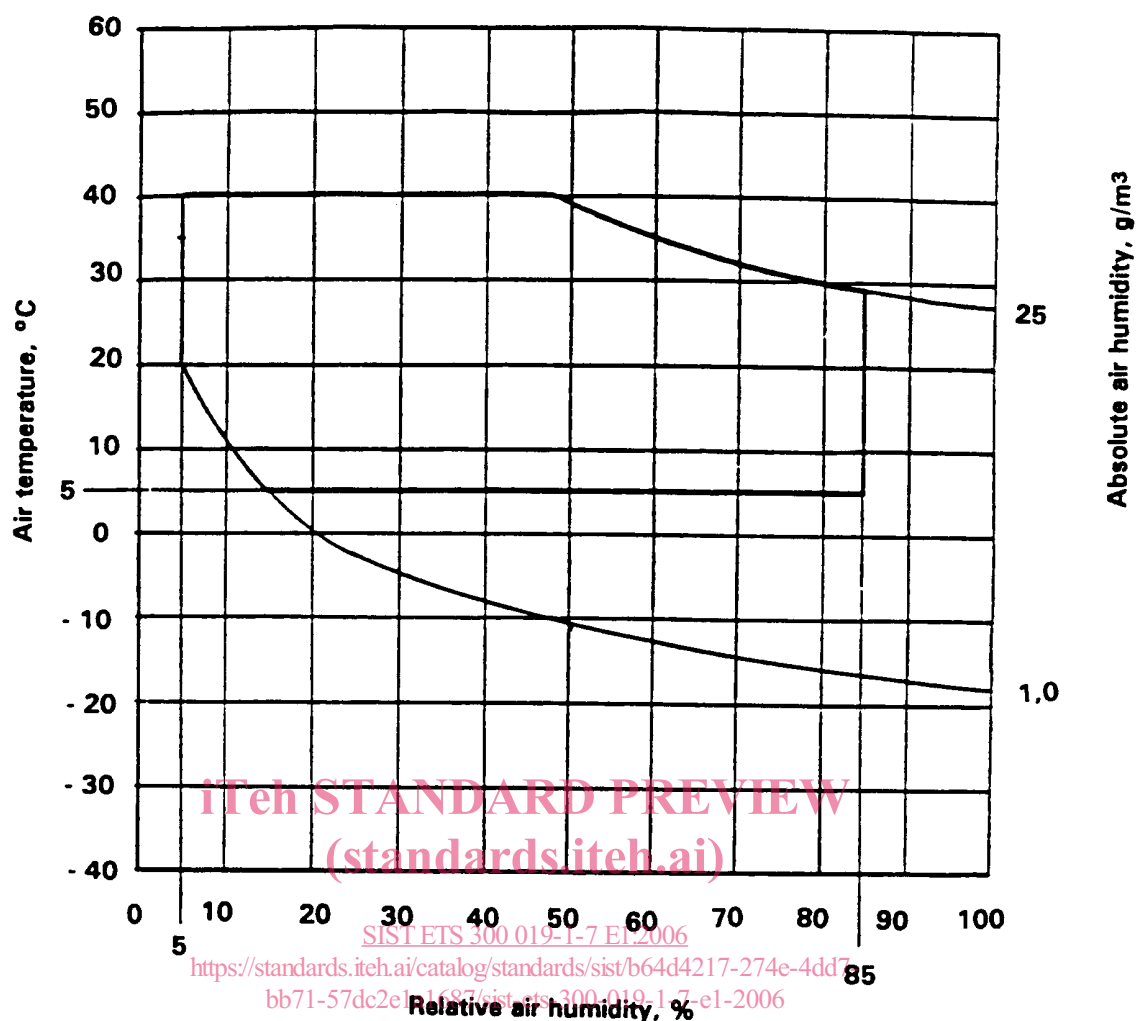


Figure 1: Climatogram for class 7.1: Temperature controlled-locations

4.2 Class 7.2: Partly temperature-controlled locations

This class is a combination of classes 7K2/7Z2/7Z4/7Z9/7B2/7C2(7C1)/7S2/7M2 or 7M3 in IEC publication 721-3-7 [2].

This class applies to use at, and direct transfer between, enclosed locations having neither temperature nor humidity control. The climatogram is shown in figure 2.

Heating may be used to raise low temperatures especially where there is a large difference between the conditions of this class and the open-air climate. Building construction is designed to avoid extremely high temperatures.