



**Environmental Engineering (EE);  
Environmental conditions and environmental tests  
for telecommunications equipment;  
Part 1: Classification of environmental conditions;  
Sub-part 4: Stationary use at non-weatherprotected locations**

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# Contents

|                                                                                                                              |           |
|------------------------------------------------------------------------------------------------------------------------------|-----------|
| Intellectual Property Rights .....                                                                                           | 4         |
| Foreword.....                                                                                                                | 4         |
| Modal verbs terminology.....                                                                                                 | 5         |
| 1 Scope .....                                                                                                                | 6         |
| 2 References .....                                                                                                           | 6         |
| 2.1 Normative references .....                                                                                               | 6         |
| 2.2 Informative references .....                                                                                             | 6         |
| 3 Definition of terms, symbols and abbreviations.....                                                                        | 7         |
| 3.1 Terms.....                                                                                                               | 7         |
| 3.2 Symbols.....                                                                                                             | 7         |
| 3.3 Abbreviations .....                                                                                                      | 7         |
| 4 Environmental classes .....                                                                                                | 7         |
| 4.0 General .....                                                                                                            | 7         |
| 4.1 Class 4.10: sheltered non-weatherprotected locations in tropical, arid, temperate, and cold climatic classification..... | 8         |
| 4.1.0 Class 4.10 full temperature range .....                                                                                | 8         |
| 4.1.1 Class 4.10L: sheltered non-weatherprotected locations in cold climatic classification .....                            | 8         |
| 4.1.2 Class 4.10H: sheltered non-weatherprotected locations in tropical, arid, temperate climatic classification .....       | 9         |
| 4.2 Class 4.11: Open-air non-weatherprotected locations in the tropical climatic .....                                       | 10        |
| 4.3 Class 4.12: Open-air non-weatherprotected locations in the arid and temperate climatic classification.....               | 10        |
| 4.4 Class 4.13: Open-air non-weatherprotected locations in the cold and polar climatic classifications .....                 | 11        |
| 5 Environmental conditions.....                                                                                              | 12        |
| 5.1 Climatic conditions.....                                                                                                 | 12        |
| 5.2 Biological conditions.....                                                                                               | 13        |
| 5.3 Chemically active substances.....                                                                                        | 13        |
| 5.4 Mechanically active substances.....                                                                                      | 15        |
| 5.5 Mechanical conditions.....                                                                                               | 15        |
| 5.6 Earthquake conditions .....                                                                                              | 15        |
| <b>Annex A (informative): Bibliography.....</b>                                                                              | <b>18</b> |
| <b>Annex B (informative): Change history .....</b>                                                                           | <b>19</b> |
| History .....                                                                                                                | 20        |

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# Foreword

This draft European Standard (EN) has been produced by ETSI Technical Committee Environmental Engineering (EE), and is now submitted for the combined Public Enquiry and Vote phase of the ETSI.

The present document is part 1, sub-part 4 of a multi-part deliverable covering the classification of environmental conditions and environmental tests for telecommunications equipment, as identified below:

### Part 1: "Classification of environmental conditions": (see note 1)

- Sub-part 0: "Introduction";
- Sub-part 1: "Storage";
- Sub-part 2: "Transportation";
- Sub-part 3: "Stationary use at weatherprotected locations";
- Sub-part 4: "Stationary use at non-weatherprotected locations";**
- Sub-part 5: "Ground vehicle installations";
- Sub-part 6: "Ship environments";
- Sub-part 7: "Portable and non-stationary use";
- Sub-part 8: "Stationary use at underground locations";

Part 2: "Specification of environmental tests" (see note 2).

NOTE 1: Specifies different standardized environmental classes covering climatic and biological conditions, chemically and mechanically active substances and mechanical conditions during storage, transportation and in use. Sub-part 1-0 forms a general overview of part 1.

NOTE 2: Specifies the recommended test severities and test methods for the different environmental classes.

| Proposed national transposition dates                                                  |                                 |
|----------------------------------------------------------------------------------------|---------------------------------|
| Date of latest announcement of this EN (doa):                                          | 3 months after ETSI publication |
| Date of latest publication of new National Standard or endorsement of this EN (dop/e): | 6 months after doa              |
| Date of withdrawal of any conflicting National Standard (dow):                         | 6 months after doa              |

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## 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 purpose of the present document is to define a class 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 % of the operating time in a year.

The present document applies to equipment mounted for stationary use including periods of erection work, down time, maintenance and repair at non-weatherprotected locations defined in clause 5.

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## 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 referenced document (including any amendments) applies.

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The following referenced documents are necessary for the application of the present document.

- [1] [ETSI EN 300 019-1-3](#): "Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1: Classification of environmental conditions; Sub-part 3: Stationary use at weatherprotected locations".

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- |       |                                                                                                                                                                                                            |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [i.1] | Void.                                                                                                                                                                                                      |
| [i.2] | IEC 60721-3-4:2019: "Classification of environmental conditions - Part 3-4: Classification of groups of environmental parameters and their severities - Stationary use at non-weatherprotected locations". |
| [i.3] | Void.                                                                                                                                                                                                      |
| [i.4] | ISO 9223:2012: "Corrosion of metals and alloys — Corrosivity of atmospheres — Classification, determination and estimation".                                                                               |
| [i.5] | IEC 60721-2-6:2022: "Classification of environmental conditions - Part 2-6: Environmental conditions appearing in nature - Earthquake vibration and shock".                                                |
| [i.6] | IEC 60068-3-3:2019: "Environmental testing - Part 3-3: Supporting documentation and guidance - Seismic test methods for equipment".                                                                        |

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## 3 Definition of terms, symbols and abbreviations

### 3.1 Terms

For the purposes of the present document, the following terms apply:

**absolute humidity:** mass of water vapour in grammes which is associated with one cubic metre of dry air in an air/water vapour mixture

**non-weatherprotected location:** location at which the equipment is not protected from direct weather influences

**relative humidity:** ratio of the partial pressure of the water vapour in moist air at a given temperature, to the partial pressure of the water vapour in saturated air at the same temperature

**sheltered location:** location at which a product is covered by a structure to protect it from direct meteorological conditions, i.e. direct sunlight, heavy rain

**stationary use:** use of the equipment mounted firmly on the structure, or on mounting devices, or it is permanently placed at a certain site

NOTE: It is not intended for portable use - but short periods of handling during erection works, down time, maintenance and repair at the location are included.

### 3.2 Symbols

Void.

### 3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

|     |                          |
|-----|--------------------------|
| RS  | Response Spectrum        |
| UV  | UltraViolet              |
| ZPA | Zero Period Acceleration |

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## 4 Environmental classes

### 4.0 General

The classes shown in parentheses, e.g. (C3), may be selected for special applications.

These classes shall apply to a non-weatherprotected location.

These classes shall apply to locations:

- which are directly exposed to an open-air climate, including solar radiation, movement of the surrounding air, precipitation and water jets; splashing water;
- where mould growth, or attacks by animals but excluding termites, may occur;
- with normal levels of contaminants experienced in urban areas with industrial activities scattered over the whole area and/or with heavy traffic. It also applies to coastal areas;

NOTE 1: At locations in the immediate neighbourhood of industrial sources with chemical emissions either special precautions should be taken or a special chemical class should be chosen.