

**SLOVENSKI
STANDARD**

**SIST EN 60721-3-
4:2001/A1:2002**

prva izdaja

maj 2002

Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 4: Stationary use at non-weatherprotected locations

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ICS 19.040

Referenčna številka

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English version

Classification of environmental conditions
Part 3: Classification of groups of environmental
parameters and their severities
Section 4: Stationary use at non-weatherprotected locations
(IEC 721-3-4:1995/A1:1996)

Classification des conditions
d'environnement

Partie 3: Classification des groupements
des agents d'environnement et de leurs
sévérités

Section 4: Utilisation à poste fixe,
non protégé contre les intempéries
(CEI 721-3-4:1995/A1:1996)

Klassifizierung von Umweltbedingungen

Teil 3: Klassen von
Umwelteinflußgrößen und deren
Grenzwerte

Hauptabschnitt 4: Ortsfester Einsatz,
nicht wettergeschützt
(IEC 721-3-4:1995/A1:1996)

This amendment A1 modifies the European Standard EN 60721-3-4:1995; it was approved by CENELEC on 1996-12-09. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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

Foreword

The text of document 75/280/FDIS, future amendment 1 to IEC 721-3-4:1995, prepared by IEC TC 75, Classification of environmental conditions, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60721-3-4:1995 on 1996-12-09.

The following dates were fixed:

- latest date by which the amendment has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 1997-09-01
- latest date by which the national standards conflicting
with the amendment have to be withdrawn (dow) 1997-09-01

Endorsement notice

The text of amendment 1:1996 to the International Standard IEC 721-3-4:1995 was approved by CENELEC as an amendment to the European Standard without any modification.

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

721-3-4

1995

AMENDEMENT 1
AMENDMENT 1

1996-11

Amendement 1

Classification des conditions d'environnement –

Partie 3:

Classification des groupements des agents
d'environnement et de leurs sévérités –

Section 4: Utilisation à poste fixe non protégé
contre les intempéries

<https://standards.iteh.ai/catalog/standards/sist/7137011d-9f7d-4b36-a217-c0454d506ac9/sist-en-60721-3-4-2001-a1-2002>

Amendment 1

Classification of environmental conditions –

Part 3:

Classification of groups of environmental
parameters and their severities

Section 4: Stationary use at non-weatherprotected
locations

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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PRICE CODE

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FOREWORD

This amendment has been prepared by IEC technical committee 75: Classification of environmental conditions.

The text of this amendment is based on the following documents:

FDIS	Report on voting
75/280/FDIS	75/290/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

Page 13

5.1 Climatic conditions

Add, after the first paragraph, the following new paragraph:

Climatic conditions in tropical areas as specified in classes 4K5 and 4K6 are explained in annex E.

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Table 1 – Classification of climatic conditions

Add columns 4K5 and 4K6 as follows (columns "Environmental parameter" and "Unit" are repeated for information only):

Environmental parameter	Unit	Class	
		4K5 ⁶⁾	4K6 ⁶⁾
a) Low air temperature	°C	+5	-20
b) High air temperature	°C	+40	+55
c) Low relative humidity ¹⁾	%	30	4
d) High relative humidity ¹⁾	%	100	100
e) Low absolute humidity ¹⁾	g/m ³	6	0,9
f) High absolute humidity ¹⁾	g/m ³	36	27
g) Rain intensity	mm/min	15	15
h) Rate of change of temperature ²⁾	°C/min	0,5	0,5
i) Low air pressure ³⁾	kPa	70	70
j) High air pressure	kPa	106	106
k) Solar radiation	W/m ²	1120	1120
l) Heat radiation	None	5)	5)
m) Movement of surrounding air	m/s	50	50
n) Condensation	None	Yes	Yes
o) Precipitation (rain, snow, hail, etc.)	None	Yes	Yes
p) Low rain temperature ⁴⁾	°C	+5	+5
q) Water from sources other than rain	None	5)	5)
r) Ice and frost formation	None	No	Yes

Add note 6:

6) Further information on classes 4K5 (tropical damp) and 4K6 (tropical dry) is given in annex E.

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A.2.1 K Climatic conditions

The new classes 4K5 and 4K6 will be inserted in the table in a future revision.

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A.3.1 K Climatic conditions

Add, on page 39, the following descriptions of new classes, after the description of class 4K4L:

- 4K5 Class 4K5 represents the conditions covered by the Warm Damp and Warm Damp Equable types of Open-Air Climate (tropical damp type of climate, in areas with tropical rainforests).
- 4K6 Class 4K6 represents the conditions covered by the Warm Dry, Mild Warm Dry and Extremely Warm Dry types of Open-Air Climate (tropical dry type of climate, in areas near the tropics such as deserts).

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Add the following new annex E

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Annex E
(informative)

SIST EN 60721-3-4:2001/A1:2002

Explanation of the environmental conditions in tropical areas as specified in classes 4K5 and 4K6

E.1 General

The tropics are the areas within the Northern and Southern tropics (between 23° 27' south and 23° 27' north).

In tropical areas the following types of Open-Air Climate, as specified in IEC 721-2-1, apply:

- Warm Dry (WDr)
- Mild Warm Dry (MWDr)
- Extremely Warm Dry (EWDr)
- Warm Damp (WDa)
- Warm Damp Equable (WDaE)

The tropics are the zones of the earth in which during daytime, high temperatures, frequently combined with high precipitation, prevail. In these areas seasonal changes are scarcely pronounced.

The tropical climate extends from Warm Damp climatic conditions in tropical rainforests at the equator to the Warm Dry climate in the deserts near the tropics. Consequently, two types of tropical climate should be distinguished:

- *tropical dry* as a combination of the Warm Dry, Mild Warm Dry and Extremely Warm Dry types of climate, and
- *tropical damp* as a combination of the Warm Damp and Warm Damp Equable types of climate.

There are also regions where the climate, owing to the particular altitude, deviates considerably from the usual conditions of these latitudes, for example solar radiation and air pressure or ice and snow on mountain summits. In many areas in the tropics, environmental conditions are identified by uniform conditions and in other regions by very extreme climatic conditions:

Balanced conditions:

- minimum daily temperature fluctuations of less than 1 °C and annual temperature fluctuations of maximum 6 °C;
- balanced duration of daylight periods between 10,5 h and 13,5 h;
- uniform intensity of solar radiation;
- balanced conditions for an abundant fauna.

Extreme conditions:

- precipitation: rainfall the whole year round near the equator, heavy rainfall during certain periods of the year near the tropics;
- tropical cyclones in sea areas: wind velocities of 30 m/s with peaks attaining more than 60 m/s, for example in typhoons in the Western Pacific and in hurricanes in the Caribbean Sea;
- unfavourable soil conditions: erosion of humus and minerals in areas with heavy rainfalls;
- rapid drying of soil in the desert as a result of high temperatures and strong winds;
- lush vegetation in tropical rainforests, less dense vegetation in mountain forests;
- grass areas of savannahs and steppes, absence of vegetation in the desert.

E.2 Climatograms

Climatograms for the two classes describing climatic conditions in tropical areas are given in figure E.1. They are based on the mean value of annual extreme values of air temperature and humidity for the types of climate specified in E.1 above.