

SLOVENSKI STANDARD
SIST EN 60721-3-7:2001
01-september-2001

Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 7: Portable and non-stationary use

Classification of environmental conditions -- Part 3: Classification of groups of environmental parameters and their severities -- Section 7: Portable and non-stationary use

iTeh STANDARD PREVIEW
Klassifizierung von Umweltbedingungen -- Teil 3: Klassen von Umwelteinflußgrößen und deren Grenzwerte -- Hauptabschnitt 7: Ortsveränderlicher Einsatz
(Standard istovetaj)

[SIST EN 60721-3-7:2001](https://standards.iteh.hr/catalog/standards/sist-60721-3-7-1995/29949)
Classification des conditions d'environnement -- Partie 3: Classification des groupements des agents d'environnement et de leurs sévérités -- Section 7: Utilisation en déplacement

Ta slovenski standard je istoveten z: EN 60721-3-7:1995

ICS:

19.040	Preskušanje v zvezi z okoljem	Environmental testing
--------	----------------------------------	-----------------------

SIST EN 60721-3-7:2001 **en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60721-3-7:2001](#)

<https://standards.iteh.ai/catalog/standards/sist/5b0cd696-9543-4756-bae9-251729a0253d/sist-en-60721-3-7-2001>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60721-3-7

February 1995

ICS 19.040

Supersedes EN 60721-3-7:1993 and its amendment

Descriptors: Environmental conditions, groups of environmental parameters, non-stationary locations

English version

Classification of environmental conditions
Part 3: Classification of groups of environmental parameters
and their severities
Section 7: Portable and non-stationary use
(IEC 721-3-7:1995)

Classification des conditions
d'environnement
Partie 3: Classification des groupements
des agents d'environnement et de leurs
sévérités
Section 7: Utilisation en déplacement
(CEI 721-3-7:1995)

Klassifizierung von Umweltbedingungen
Teil 3: Klassen von
Umwelteinflußgrößen und deren
Grenzwerte
Hauptabschnitt 7: Ortsveränderlicher
Einsatz
(IEC 721-3-7:1995)

SIST EN 60721-3-7:2001

<https://standards.iteh.ai/catalog/standard/icit/510cd696-8543-4756-bc00>
 This European Standard was approved by CENELEC on 1994-10-04. 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

Foreword

The text of document 75(CO)105 + 105A, future amendment to IEC 721-3-7, prepared by IEC TC 75, Classification of environmental conditions, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A3 to EN 60721-3-7:1993 on 1994-10-04.

The text of this document, together with that of IEC 721-3-7:1987 and its amendments 1:1991 and 2:1993, was published by IEC as the second edition of IEC 721-3-7 in January 1995. According to a decision of principle taken by the Technical Board of CENELEC, the approval of EN 60721-3-7:1993/A3 has been converted into the approval of a new EN 60721-3-7.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1996-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1996-01-01

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annex ZA is normative and annexes A, B, C and D are informative.

Annex ZA has been added by CENELEC.

STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60721-3-7:2001

Endorsement notice

<https://standards.iteh.ai/catalog/standards/sist/5b0cd696-9543-4756-bae9-251729a0253d/sist-en-60721-3-7-2001>

The text of the International Standard IEC 721-3-7:1995 was approved by CENELEC as a European Standard without any modification.

ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD
WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

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.

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

IEC Publication	Date	Title	EN/HD	Date
721-1 A1	1990 1992	Classification of environmental conditions - Part 1: Environmental parameters and their severities	HD 478.1 S2	1994
721-2-1 A1	1982 1987	Part 2: Environmental conditions appearing in nature Section 1: Temperature and humidity	HD 478.2.1 S1	1989
721-3-0 A1	1984 1987	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities Section 0: Introduction	EN 60721-3-0	1993
721-3-2 A1 A2	1985 1991 1993	Section 2: Transportation	EN 60721-3-2 A2	1993 1994
721-3-3	1994	Section 3: Stationary use at weatherprotected locations	EN 60721-3-3	1995
721-3-4	1995	Section 4: Stationary use at non-weatherprotected locations	EN 60721-3-4	1995

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60721-3-7:2001](#)

<https://standards.iteh.ai/catalog/standards/sist/5b0cd696-9543-4756-bae9-251729a0253d/sist-en-60721-3-7-2001>

NORME INTERNATIONALE INTERNATIONAL STANDARD

CEI
IEC
721-3-7

Deuxième édition
Second edition
1995-01

Classification des conditions d'environnement –

Partie 3:

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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Classification of environmental conditions –

<https://standards.iteh.ai/catalog/standards/sist/5b0cd696-9543-4756-bae9-251729a0253d/sist-en-60721-3-7-2001>

Part 3:

Classification of groups of environmental
parameters and their severities –

Section 7: Portable and non-stationary use

© CEI 1995 Droits de reproduction réservés — Copyright – all rights reserved

Aucune partie de cette publication ne peut être reproduite ni
utilisée sous quelque forme que ce soit et par aucun
procédé, électronique ou mécanique, y compris la photocopie et
les microfilms, sans l'accord écrit de l'éditeur.

No part of this publication may be reproduced or utilized in
any form or by any means, electronic or mechanical,
including photocopying and microfilm, without permission
in writing from the publisher.

Bureau Central de la Commission Electrotechnique Internationale 3, rue de Varembé Genève, Suisse



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

V

Pour prix, voir catalogue en vigueur
For price, see current catalogue

CONTENTS

	Page
FOREWORD	5
Clause	
1 Scope	9
2 Normative references	11
3 Definitions	11
4 General	13
5 Classification of groups of environmental parameters and their severities	13
6 Sets of environmental condition class combinations	19
Tables	21
Figure	29
Annexes	
A Survey of conditions affecting the choice of environmental parameters and their severities	31
B Interdependence of air temperature, relative humidity and absolute humidity	55
C Examples for practical application of the classification specified in this standard	59
D Summary of conditions covered by sets of class combinations	65

iTeh STANDARD PREVIEW
(standards.iteh.ai)

INTERNATIONAL ELECTROTECHNICAL COMMISSION

CLASSIFICATION OF ENVIRONMENTAL CONDITIONS -

Part 3: Classification of groups of environmental parameters
and their severities -

Section 7: Portable and non-stationary use

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

International Standard IEC 721-3-7 has been prepared by IEC technical committee 75: Classification of environmental conditions.

This second edition cancels and replaces the first edition published in 1987, amendment 1, published in June 1991, and amendment 2, published in July 1993, and constitutes a technical revision.

The text of this standard is based on the first edition, amendments 1 and 2 and the following documents:

DIS	Report on voting
75(CO)105	75(CO)113A

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

IEC 721 consists of the following parts, under the general title *Classification of environmental conditions*:

- Part 1: 1990, Environmental parameters and their severities
- Part 2, Environmental conditions appearing in nature
- Part 3, Classification of groups of environmental parameters and their severities

Annexes A, B, C et D are for information only.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 60721-3-7:2001](#)

<https://standards.iteh.ai/catalog/standards/sist/5b0cd696-9543-4756-bae9-251729a0253d/sist-en-60721-3-7-2001>

CLASSIFICATION OF ENVIRONMENTAL CONDITIONS -

Part 3: Classification of groups of environmental parameters and their severities - Section 7: Portable and non-stationary use

1 Scope

This standard classifies groups of environmental parameters and their severities to which products are subjected during portable and non-stationary use, including periods of transfer, down time, maintenance and repair.

The environmental conditions covered by these groups include:

- the environmental conditions at locations where the product may be placed or used temporarily;
- the change of environmental parameters due to change of location;
- the environmental conditions related to transfer of the product between different locations.

iTeh STANDARD PREVIEW
(<https://standards.iteh.ai>)

The environmental conditions classified do not take into account the use profile of the product, i.e. whether the product is used only during a temporary stationary state, during the state of transfer or arbitrarily.

SIST EN 60721-3-7:2001
<https://standards.iteh.ai/catalog/standards/sist/560cd696-9543-4756-bae9-129a023488ce-0071-0-7-2001>
The conditions of portable and non-stationary use to which products may be exposed include land-based and offshore, weatherprotected and non-weatherprotected locations. The conditions further include transfer which is a part of the portable and non-stationary use.

The environmental conditions specified in this standard are limited to those which may directly affect the performance of products. Only environmental conditions as such are considered. No special description of the effects of these conditions on the product is given.

Environmental conditions directly related to fire or explosion hazards and conditions related to ionizing radiation are excluded. Any other unforeseen incidents are also excluded. The possibility of their occurrence should be taken into account in special cases.

Microclimate within a product is not included.

Conditions of stationary use, use in vehicles, and ships, and conditions of storage and transportation are given in other sections of IEC 721-3.

A limited number of classes of environmental conditions is given, covering a broad field of application. The user of this standard should select the lowest classification necessary for covering the conditions of the intended use.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this section of IEC 721-3. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this section of IEC 721-3 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 721-1: 1990, *Classification of environmental conditions – Part 1: Environmental parameters and their severities*
Amendment 1 (1992)

IEC 721-2-1: 1982, *Classification of environmental conditions – Part 2: Environmental conditions appearing in nature – Section 1: Temperature and humidity*
Amendment 1 (1987)

IEC 721-3-0: 1984, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 0: Introduction*
Amendment 1 (1987)

IEC 721-3-2, 1985, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 2: Transportation*
Amendment 1 (1991), Amendment 2 (1993)

ITCH STANDARD PREVIEW

IEC 721-3-3: 1994, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 3: Stationary use at weatherprotected locations*

[SIST EN 60721-3-7:2001](http://techstd.itch.ai/stake/standards/sist/5b0cd696-9543-4756-ba90-251729a0253d/sist-3-3-7-2001)

IEC 721-3-4: 1995, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 4: Stationary use at non-weatherprotected locations*

3 Definitions

In addition to the definitions in clause 3 of IEC 721-1, the following definitions apply to this standard:

3.1 portable and non-stationary use: The product is frequently moved from place to place. During transfer there is no special packaging for the product. The total transfer time may amount to a significant portion of the product's lifetime. The product is not permanently mounted on any structure or placed at a fixed site. The product may be operated while being either in a stationary or in a transfer state.

3.2 weatherprotected location: A location at which the product is protected from weather influences:

- *totally weatherprotected location* (enclosed location): direct weather influences are totally excluded;
- *partially weatherprotected location* (sheltered location): direct weather influences are not completely excluded.

3.3 non-weatherprotected location: A location at which the product is not protected from direct weather influences.

4 General

For further general guidance, see IEC 721-3-0.

Products in portable and non-stationary use are sometimes transferred from one location to another without being switched on. During this transfer the environmental conditions bearing on the product may affect the product in a different way than during operation. If environmental conditions during operation are considered separately from those during transfer, another class, e.g. a lower one, may be selected for this part of the use.

The severities specified are those which will have a low probability of being exceeded. All specified values are maximum or limit values. These values may be reached, but do not occur permanently. Depending on the local situation there may be different frequencies of occurrence related to a certain period of time. Such frequencies of occurrence should be considered for any environmental parameter. They should additionally be specified if applicable. Information on duration and frequency of occurrence is given in IEC 721-3-0 as clause 6.

iTeh STANDARD PREVIEW

Attention is drawn to the fact that combinations of the environmental parameters given may increase the effect on a product. This applies especially to the presence of high relative humidity in addition to biological conditions, or to conditions of chemically or mechanically active substances. SIST EN 60721-3-7:2001

<https://standards.iteh.ai/catalog/standards/sist/5b0cd696-9543-4756-bae9->

The environmental conditions present at a location may be affected by other influences, e.g. heat dissipation sources, special process conditions, etc.

Measurements of the environmental conditions present at a location should be made at a representative point in the vicinity of the product.

It is recognized that extreme or special environmental conditions may exist. Specifications for products to operate under such special conditions are a matter of negotiation between supplier and user.

5 Classification of groups of environmental parameters and their severities

A number of classes for climatic conditions (K), special climatic conditions (Z), biological conditions (B), chemically active substances (C), mechanically active substances (S) and mechanical conditions (M) are specified in tables 1 to 6.

This classification allows a number of possible combinations of environmental conditions, which bear upon products wherever used. It represents the real situation in respect of worldwide conditions of use, due to local influences of open-air climate, construction of buildings, mounting, process conditions, etc. (See also clause 6.)