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## Miljöklassificering – Del 3-5: Grupper av miljöfaktorer och deras strängheter – Markfordonsmiljö

*Classification of environmental conditions –  
Part 3: Classification of groups of environmental parameters and their severities –  
Section 5: Ground vehicle installations*

Som svensk standard gäller europastandarden EN 60721-3-5:1997. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60721-3-5:1997.

### Nationellt förord

Europastandarden EN 60721-3-5:1997<sup>\*)</sup>

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60721-3-5, Second edition, 1997 - Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 5: Ground vehicle installations**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60721, utgåva 3, 1997 och SS-EN 60721 T1, utgåva 1, 1998, gäller ej fr o m 2001-12-19.

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<sup>\*)</sup> EN 60721-3-5:1997 ikraftsattes 2001-12-19 som SS-EN 60721-3-5 genom offentliggörande, d v s utan utgivning av något svenskt dokument.

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EUROPEAN STANDARD

EN 60721-3-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 1997

ICS 19.040

Supersedes EN 60721-3-5:1993 and its amendment

Descriptors: Electronic components, electrical equipment, electronical equipment, electrotechnical components, climatic conditions, environment, choice, ground vehicles

English version

**Classification of environmental conditions**  
**Part 3: Classification of groups of environmental**  
**parameters and their severities**  
**Section 5: Ground vehicle installations**  
**(IEC 60721-3-5:1997)**

Classification des conditions  
d'environnement  
Partie 3: Classification des groupements  
des agents d'environnement et de leurs  
sévérités  
Section 5: Installations des véhicules  
terrestres  
(CEI 60721-3-5:1997)

Klassifizierung von Umweltbedingungen  
Teil 3: Klassen von  
Umwelteinflußgrößen und deren  
Grenzwerte  
Hauptabschnitt 5: Einsatz an und in  
Landfahrzeugen  
(IEC 60721-3-5:1997)

This European Standard 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 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

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Ref. No. EN 60721-3-5:1997 E

SEK Svensk Elstandard

### Foreword

The text of document 75/281/FDIS, future edition 2 of IEC 60721-3-5, prepared by IEC TC 76 "Optical radiation safety and laser equipment", was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60721-3-5 on 1996-12-09.

This European Standard supersedes EN 60721-3-5:1993 and its amendment A2:1994.

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) 1997-12-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 1997-12-01

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 and B are informative.

Annex ZA has been added by CENELEC.

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### Endorsement notice

The text of the International Standard IEC 60721-3-5:1997 was approved by CENELEC as a European Standard without any modification.

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**Annex ZA (normative)**

**Normative references to international publications  
with their corresponding 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 (including amendments).

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 721-1	1990	Classification of environmental conditions Part 1: Environmental parameters and their severities		
+ A1	1992		EN 60721-1	1995
A2	1995		A2	1995
IEC 721-2-1	1982	Part 2: Environmental conditions appearing in nature - Temperature and humidity		
+ A1	1987		HD 478.2.1 S1	1989
IEC 721-3-0	1984	Part 3: Classification of groups of environmental parameters and their severities -- Introduction		
+ A1	1987		EN 60721-3-0	1993
IEC 60721-3-1	1997	Section 1: Storage	EN 60721-3-1	1997
IEC 60721-3-2	1997	Section 2: Transportation	EN 60721-3-2	1997

## CONTENTS

	Pages
Clause	
1 Scope and object.....	7
2 Normative references .....	7
3 Definitions .....	9
4 General .....	9
5 Classification of groups of environmental parameters and their severities.....	11
Tables	
1 Classification of climatic conditions.....	13
1A Classification of special climatic conditions .....	15
2 Classification of biological conditions .....	15
3 Classification of chemically active substances.....	17
4 Classification of mechanically active substances.....	17
5 Classification of contaminating fluids .....	17
6 Classification of mechanical conditions .....	19
Figure 1 .....	21
Annexes	
A Survey of conditions affecting the choice of environmental parameters and their severities.....	23
B Explanation of the environmental conditions in tropical areas as specified in classes 5K5 and 5K6 .....	53

**CLASSIFICATION OF ENVIRONMENTAL CONDITIONS –**  
**Part 3: Classification of groups of environmental parameters**  
**and their severities –**  
**Section 5: Ground vehicle installations**

## **1 Scope and object**

This standard classifies the environmental conditions to which a product not forming part of the vehicle is subjected when installed in a ground vehicle. Such products are for example radios, communication systems, fare meters, flow meters for liquids transported by the vehicle, for example milk, petroleum products, etc. Vehicles where products may be permanently or temporarily installed include

- *road vehicles*: passenger cars, commercial vehicles, special vehicles, towing vehicles, trailers, mopeds, motor cycles, etc.;
- *rail vehicles*: trains, trams, cranes, etc.;
- *overland vehicles*: four wheel drive cars, tractors, snow scooters, etc.;
- *handling and storage vehicles*: fork-lift trucks (manual and robot), luggage transporters, etc.;
- *self-propelled machinery*: diggers, harvesters, etc.

Although this standard is not designed for products forming part of the vehicles, the environmental condition classification may also be used for some exchangeable parts, installed in a similar way and in the same locations of the vehicle as products which do not form part of the vehicle. Only severe conditions which may be harmful to products are included.

Conditions of storage and transportation are given in IEC 721-3-1 and IEC 721-3-2.

The object of this standard is to classify the environmental parameters and their severities to which a product will be exposed under its conditions of use when installed in ground vehicles.

A limited number of classes of environmental conditions are given, covering a broad field of application. The user of this standard should select the lowest class necessary covering each of the conditions of the intended use. Some guidance for this is given in annex A.

## **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)  
Amendment 2 (1995)

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

IEC 721-3-1: 1997, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 1: Storage*

IEC 721-3-2: 1997, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 2: Transportation*