

**Raudteelased rakendused. Keskkonnatingimused  
seadmetele. Osa 3: Signalisatsiooni- ja  
telekommunikatsiooniseadmed**

Railway applications - Environmental conditions for  
equipment - Part 3: Equipment for signalling and  
telecommunications

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50125-3:2006 sisaldab Euroopa standardi EN 50125-3:2003+AC:2010 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 08.05.2003 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 31.01.2003.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50125-3:2006 consists of the English text of the European standard EN 50125-3:2003+AC:2010.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 08.05.2003 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 31.01.2003.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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Aru 10 Tallinn 10317 Eesti; [www.evs.ee](http://www.evs.ee); Telefon: 605 5050; E-post: [info@evs.ee](mailto:info@evs.ee)

English version

**Railway applications -  
Environmental conditions for equipment  
Part 3: Equipment for signalling and telecommunications**

Applications ferroviaires -  
Conditions d'environnement  
pour le matériel  
Partie 3: Equipement pour la signalisation  
et les télécommunications

Bahnanwendungen -  
Umweltbedingungen für Betriebsmittel  
Teil 3: Umweltbedingungen für Signal-  
und Telekommunikationseinrichtungen

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# 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

This European Standard was prepared by SC 9XA, Communication, signalling and processing systems, of Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50125-3 on 2002-12-01.

This European Standard was prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and supports the essential requirements of Directive 96/48/EC.

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) 2003-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-12-01

Annexes designated « normative » are part of the body of the standard.

Annexes designated « informative » are given for information only.

In this European Standard, Annexes A and S are normative and Annexes B and D are informative.

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## 1 Scope

This European Standard specifies the environmental conditions encountered within Europe. It can also be applied elsewhere by agreement between the supplier and the customer.

The scope of this European Standard covers the design and the use of equipment and any portable equipment for signalling and telecommunications systems (including test, measure, monitoring equipment, etc.).

The portable equipment must comply with the sections of this European Standard relevant to their use.

This European Standard does not specify the test requirements for equipment.

In particular the standard intends to define

- interface conditions between the equipment and its environment,
- parameters to be used by designers when calculating R.A.M.S. and life time with respect to environmental condition effects.

In this respect it gives general guidance in order to allow consistent assessments of contract documentation for European projects.

The defined environmental conditions are considered as normal in service.

Microclimates surrounding components may need special requirements to be defined by the product standard.

The effects of any signalling and telecommunications equipment (in either or failure mode of operation) on the overall signalling system safety are not within the scope of this European Standard. This European Standard does not provide the designer with information to enable him to determine the safety risk associated with environmental conditions. The safety of persons in the vicinity of (or working on) the signalling and telecommunications equipment is also out of the scope of this European Standard. The effects of vandalism on the equipment are not considered in this European Standard.

This European Standard applies to all signalling and telecommunications systems except those used for cranes, mining vehicles and cable cars. It does not define the specifications for train-borne signalling and telecommunications systems.

The train-borne signalling and telecommunications systems must comply with rolling stock environmental conditions specifications (EN 50125-1).

## 2 Normative references

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).

EN 50121-1	Railway applications – Electromagnetic compatibility – Part 1: General
EN 50121-2	Railway applications – Electromagnetic compatibility – Part 2: Emission of the whole railway system to the outside world
EN 50121-4	Railway applications – Electromagnetic compatibility – Part 4: Emission and immunity of the signalling and telecommunications apparatus

EN 50124-2		Railway applications – Insulation coordination – Part 2: Overvoltages and related protection
EN 50125-1	1999	Railway applications – Environmental conditions for equipment – Part 1: Equipment on board rolling stock
EN 60529	1991	Degrees of protection provided by enclosures (IP code) ( <i>IEC 60529:1989</i> )
EN 60721-3-3	1995	Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 3: Stationary use at weather protected locations ( <i>IEC 60721-3-3:1994</i> )
EN 60721-3-4	1995	Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 4: Stationary use at non-weather protected locations ( <i>IEC 60721-3-4:1995</i> )
HD 478.2.1 S1	1989	Classification of environmental conditions – Part 2: Environmental conditions appearing in nature – Temperature and humidity ( <i>IEC 60721-2-1:1982 + A1:1987</i> )
HD 478.2.3 S1	1990	Classification of environmental conditions – Part 2: Environmental conditions appearing in nature – Air pressure ( <i>IEC 60721-2-3:1987</i> )
ISO 4354		Wind actions on structures

### 3 Definitions

For the purposes of this standard, the following definitions apply:

#### 3.1

##### **environmental conditions**

range of physical, chemical, electrical and biological conditions external to the equipment to which it is subjected in service

#### 3.2

##### **equipment housing**

case, or other protective housing, provided by the manufacturer to mount his equipment and protect it from accidental damage, and occasionally from EMC or environmental effects. It may offer protection to personnel e.g. from electric shock.

Where the equipment housing provides the full required environmental protection, then it is treated as a cubicle to define the relevant environmental parameters.

The housing normally contains only the single suppliers' equipment, and is only a part of a signalling or telecommunications system

#### 3.3

##### **cubicle**

housing for apparatus which normally is used to co-locate various parts of the signalling or telecommunications system equipment, on occasion from different suppliers. It may contain various equipment housings installed within the cubicle and offers further environmental protection.

A cubicle is normally only used to install apparatus and is in general not sufficiently large to afford protection from weather to staff working on the apparatus.

No climatic or temperature control is provided on cubicles but ventilation or occasionally fan assisted ventilation is required.

Large housings which allow access to personnel but do not have the thermal properties of shelters, should be treated as cubicles