

Elektripaigaldiste käit

Operation of electrical installations

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50110-1:2005 sisaldab Euroopa standardi EN 50110-1:2004 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 23.02.2005 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 30.11.2004.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50110-1:2005 consists of the English text of the European standard EN 50110-1:2004.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 23.02.2005 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 30.11.2004.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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EUROPEAN STANDARD

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NORME EUROPÉENNE

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English version

Operation of electrical installations

Exploitation des installations électriques

Betrieb von elektrischen Anlagen

This European Standard was approved by CENELEC on 2004-07-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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

This European Standard was prepared by the CENELEC BTF 62-3 "Operation of electrical installations".

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50110-1 on 2004-07-01.

This European Standard supersedes EN 50110-1:1996.

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) 2005-07-01
 - latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2007-07-01
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Introduction

There are many national laws, standards and internal rules dealing with the matters coming within the scope of this standard and these practices have been taken as a basis for this work.

The standard consists of two parts. The first part of EN 50110 contains minimum requirements valid for all CENELEC countries and some additional informative annexes dealing with safe working. The second part of EN 50110 consists of a set of normative annexes (one per country) which specify either the present safety requirements or give the national supplements to these minimum requirements.

This concept is still believed to be a decisive step to the gradual alignment in Europe of the safety levels associated with the operation of, work activity on, with, or near electrical installations. This document acknowledges the present different national requirements for safety. The intention is, over the course of time, to create a common level of safety.

Even the best rules and procedures are of no value unless all persons working on, with, or near electrical installations are thoroughly conversant with them and with all legal requirements and comply strictly with them.

EN 50110-1:1996 has been in use now for more than 7 years.

This new edition now integrates the feed-back from those countries which have used this standard.

In those countries with national regulations, all the provisions included in those regulations shall prevail over those indicated in this standard, as far as conflicting aspects are concerned.

1 Scope

This standard is applicable to all operation of and work activity on, with, or near electrical installations. These are electrical installations operating at voltage levels from and including extra-low voltage up to and including high voltage.

This latter term includes those levels referred to as medium and extra-high voltage.

These electrical installations are designed for the generation, transmission, conversion, distribution and use of electrical power. Some of these electrical installations are permanent and fixed, such as a distribution installation in a factory or office complex, others are temporary, such as on construction sites and others are mobile or capable of being moved either whilst energized or whilst not energized nor charged. Examples are electrically driven excavating machines in quarries or open-cast coal sites.

This standard sets out the requirements for the safe operation of and work activity on, with, or near these electrical installations. The requirements apply to all operational, working and maintenance procedures. They apply to all non-electrical work activities such as building work near to overhead lines or underground cables as well as electrical work activities, when there is a risk of electrical danger.

This standard does not apply to ordinary persons when using installations and equipment, provided that the installations and equipment comply with relevant standards and are designed and installed for use by ordinary persons.

This standard has not been developed specifically to apply to the electrical installations listed below.

However, if there are no other rules or procedures, the principles of this standard should be applied to them

- on any aircraft and hovercraft moving under its own power, (these are subject to International Aviation laws which take precedence over national laws in these situations);
- on any sea going ship moving under its own power, or under the direction of the master, (these are subject to International Marine laws which take precedence over national laws in these situations);
- electronic telecommunications and information systems;
- electronic instrumentation, control and automation systems;
- at coal or other mines;
- on off-shore installations subject to International Marine laws;
- on vehicles;
- on electric traction systems;
- on experimental electrical research work.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50191	2000	Erection and operation of electrical test equipment
EN 60529	1991	Degree of protection provided by enclosures (IP Code) (IEC 60529:1989)
EN 61472	2004	Live working - Minimum approach distances for a.c. systems in the voltage range 72,5 kV to 800 kV - A method of calculation (IEC 61472:2004)

HD 384	series	Electrical installations of buildings (IEC 60364 series, mod.)
HD 637 S1	1999	Power installations exceeding 1 kV a.c.
IEC 60050-151	2001	International Electrotechnical Vocabulary Chapter 151: Electrical and magnetic devices
IEC 60050-601	1985	International Electrotechnical Vocabulary Chapter 601: Generation, transmission and distribution of electricity – General
IEC 60050-604	1987	International Electrotechnical Vocabulary Chapter 604: Generation, transmission and distribution of electricity – Operation
IEC 60050-826	1982	International Electrotechnical Vocabulary Chapter 826: Electrical installations of buildings

3 Definitions

For the purposes of this standard, the following definitions apply. Refer to the International Electrotechnical Vocabulary for other terms not defined below.

3.1 General

3.1.1

electrical installation

includes all the electrical equipment which provides for the generation, transmission, conversion, distribution and use of electrical energy. It includes energy sources such as batteries, capacitors and all other sources of stored electrical energy

3.1.2

operation

all activities including work activities necessary to permit the electrical installation to function. These activities include such matters as switching, controlling, monitoring and maintenance as well as both electrical and non-electrical work

3.1.3

risk

combination of the probability and the degree of the possible injury or damage to health of a person exposed to a hazard or to hazards

3.1.4

electrical hazard

source of possible injury or damage to health in presence of electrical energy from an electrical installation

3.1.5

electrical danger

risk of injury from an electrical installation

3.1.6

injury (electrical)

death or personal injury from electric shock, electric burn, arcing, or from fire or explosion initiated by electrical energy caused by any operation of an electrical installation