

## **Erinõuded telekommunikatsioonivõrku ühendatavate seadmete ohutusele**

Particular safety requirements for equipment to be connected to telecommunication networks and/or a cable distribution system

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 41003:2009 sisaldab Euroopa standardi EN 41003:2008 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 19.01.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 20.11.2008.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 41003:2009 consists of the English text of the European standard EN 41003:2008.

This standard is ratified with the order of Estonian Centre for Standardisation dated 19.01.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 20.11.2008.

The standard is available from Estonian standardisation organisation.

ICS 33.040

**Võtmesõnad:** safety requirements, telecommunication equipment, telecommunication network, test

### Standardite reprodutseerimis- ja levitamisoigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:  
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

**Particular safety requirements for equipment  
to be connected to telecommunication networks  
and/or a cable distribution system**

Règles particulières de sécurité  
pour les matériels de sécurité  
destinés à être reliés aux réseaux  
de télécommunications et/ou aux  
systèmes de distribution par câbles

Besondere Sicherheitsanforderungen  
an Geräte zum Anschluss  
an Telekommunikationsnetze  
und/oder Kabelverteilungssysteme

This European Standard was approved by CENELEC on 2008-07-01. 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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 Technical Committee CENELEC TC 108X, Safety of electronic equipment within the fields of audio/video, information technology and communication technology.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 41003 on 2008-07-01.

This European Standard supersedes EN 41003:1998 + corrigendum September 2000.

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) 2009-07-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2011-07-01

The first edition of this European Standard was prepared by CENELEC TC 74X, in close cooperation with a number of international organizations, e.g. IEC, ECMA, CEPT, CCITT, ETSI. In 1993 TC 74X was disbanded and responsibility for this European Standard passed to the Technical Committee CENELEC TC 74, Safety and energy efficiency of information technology equipment. CENELEC TC 74 was disbanded by D112/112 in 2002 and merged with CENELEC TC 92 into new CENELEC TC 108, which was renumbered CENELEC TC 108X by 130 BT.

At that time, a standard was needed for uniform application by network operators in Europe when approving subscribers' equipment for attachment to their networks, and for purchasing purposes by network operators.

In February 1986 the CENELEC Technical Board formed a working group 'Telecom Safety' which became CENELEC TC 74X in early 1987. IEC TC 74 established WG7 to amend IEC 60950 for a similar purpose.

ENV 41003 was ratified by the CENELEC Technical Board in March 1988 and subsequently amended and converted into this EN 41003 which was ratified in September 1990. In June 1992 the CENELEC Technical Board approved the reprint of EN 41003, which was technically unchanged from EN 41003:1991 and refers to EN 60950:1992 wherever possible.

The edition of EN 41003:1996 was deemed necessary following the publication of EN 60950:1992/A3:1995 to reflect further convergence of the two standards.

The edition of EN 41003:1998 was deemed necessary following the publication of EN 60950:1992/A4:1997, to reflect further convergence of the two standards.

This edition of EN 41003 was deemed necessary following the publication of EN 60950-1:2006 Information technology equipment – Safety – Part 1: General requirements (IEC 60950-1:2005, modified), to reflect further convergence of the two standards.

---

## Contents

<b>Introduction</b> .....	<b>4</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Definitions</b> .....	<b>6</b>
<b>4 Safety requirements and compliance criteria</b> .....	<b>6</b>
4.1 Interconnection of equipment – General requirements.....	6
4.2 TNV circuits.....	6
4.3 Protection against contact with TNV circuits.....	7
4.4 Protection of telecommunication network and/or cable distribution network service persons, and users of other equipment connected to the network, from hazards in the equipment.....	7
4.5 Protection of equipment users from overvoltages on telecommunication networks and/or cable distribution systems.....	7
4.6 Protection of the telecommunication wiring system from overheating.....	7
<b>Annex A</b> (informative) <b>Relevant safety standards for the application of this European Standard</b> .8	
<b>Annex B</b> (informative) <b>Telecommunication network voltages and signals</b> .....	<b>9</b>
<b>Bibliography</b> .....	<b>11</b>
<b>Figure</b>	
Figure B.1 – Current limit curves .....	16

## Introduction

This European Standard is needed for products intended to be connected to a TELECOMMUNICATION NETWORK and/or a CABLE DISTRIBUTION SYSTEM not covered by the scope of EN 60950-1. It is to be used in conjunction with other product safety standards; examples of which are listed in Annex A.

Upper levels for TELECOMMUNICATION/CABLE DISTRIBUTION SYSTEM signals have been defined. They include also telephone ringing signals which have been defined taking into account voltages commonly used in the different networks. The electrical hazard criteria have been chosen to accord with the IEC/TS 60479 series.

Test levels used for the equipment take account of the possibility that overvoltages may occur on TELECOMMUNICATION AND CABLE DISTRIBUTION NETWORKS. Special consideration has been given to equipment parts expected to be held or touched during normal use, e.g. telephone handsets.

It is recognised that in high overvoltages risk areas, requirements of this European Standard may not be sufficient; additional protective devices, not covered by this European Standard, may be installed in the COMMUNICATION NETWORKS to better meet extreme conditions.

For the adoption of this European Standard, the relevant special national conditions and A-deviations apply that are listed in Annexes ZB and ZC of EN 60950-1.

## 1 Scope

This European Standard applies to equipment designed and intended to be connected as a terminal to a TELECOMMUNICATION NETWORK and/or a CABLE DISTRIBUTION SYSTEM termination. It does not apply to equipment covered by EN 60950-1 and EN 60065.

This European Standard specifies the safety requirements of the interface to the TELECOMMUNICATION NETWORK and/or the CABLE DISTRIBUTION SYSTEM only and it does not specify any other safety requirements.

It applies regardless of ownership or responsibility for installation or maintenance of the equipment, and regardless of the source of power.

This European Standard, in accordance with the 'principles of safety' given in the introduction of EN 60950-1, covers the requirements and compliance criteria under three headings.

- Protection of equipment USERS from hazards in the equipment. The USER is considered to be protected from hazards in the equipment if the equipment complies with a relevant safety standard, for example one of those listed in Annex A, but compliance with those standards is not part of this European Standard.
- Protection of SERVICE PERSONNEL working on a TELECOMMUNICATION NETWORK and/or a CABLE DISTRIBUTION SYSTEM and other USERS of a TELECOMMUNICATION NETWORK and/or a CABLE DISTRIBUTION SYSTEM, from hazardous conditions on a TELECOMMUNICATION NETWORK and/or a CABLE DISTRIBUTION SYSTEM resulting from the connection of the equipment.
- Protection of equipment USERS from voltages on a TELECOMMUNICATION NETWORK and/or a CABLE DISTRIBUTION SYSTEM.

Requirements additional to those specified in this European Standard may be necessary for

- equipment intended for operation while exposed, for example, to extremes of temperature, to excessive dust, moisture, or vibration, to flammable gases, to corrosive or explosive atmospheres,
- electromedical applications with physical connections to the patient.

The requirements for the following items are not covered by this European Standard:

- functional reliability of equipment;
- communication facilities with remote supply using hazardous voltage;
- protection of equipment, TELECOMMUNICATION NETWORKS and/or CABLE DISTRIBUTION SYSTEMS from damage.

## 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 60950-1	2006	Information technology equipment – Safety – Part 1: General requirements (IEC 60950-1:2005, mod)
------------	------	--

NOTE Lists of other related documents can be found in Annex A and in the Bibliography.