Resistibility requirements to overvoltages and overcurrentsdue to lightning for equipment having A PROVIDENCE OF CONTRACTOR OF THE STATE OF T telecommunication ports



#### **FESTI STANDARDI FESSÕNA**

#### **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 50468:2009 sisaldab Euroopa standardi EN 50468:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.06.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 22.04.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 50468:2009 consists of the English text of the European standard EN 50468:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.06.2009 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 22.04.2009.

The standard is available from Estonian standardisation organisation.

ICS 29.120.50, 91.120.40

Võtmesõnad:

#### Standardite reprodutseerimis- ja levitamisõigus 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; <a href="www.evs.ee">www.evs.ee</a>; Telefon: 605 5050; E-post: <a href="mailto:info@evs.ee">info@evs.ee</a></a>

#### Right to reproduce and distribute belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation: Aru str 10 Tallinn 10317 Estonia; <a href="www.evs.ee">www.evs.ee</a>; Phone: 605 5050; E-mail: <a href="mailto:info@evs.ee">info@evs.ee</a>

### **EUROPEAN STANDARD**

## **EN 50468**

# NORME EUROPÉENNE EUROPÄISCHE NORM

April 2009

ICS 29.120.50; 91.120.40

#### English version

# Resistibility requirements to overvoltages and overcurrents due to lightning for equipment having telecommunication ports

Exigences de tenue aux surtensions et aux surintensités dues à la foudre pour les matériels avec port de communication Anforderungen zur Zerstörfestigkeit von Einrichtungen mit Telekommunikationsanschluss gegen Überspannungen und -ströme infolge Blitzschlags

This European Standard was approved by CENELEC on 2009-02-01. 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: avenue Marnix 17, B - 1000 Brussels

#### **Foreword**

This European Standard was prepared by the Technical Committee CENELEC TC 81X, Lightning

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50468 on 2009-02-01.

The following dates were fixed:

latest date by which the EN has to be implemented Afan sement

ational standar, withdrawn

—— at national level by publication of an identical national standard or by endorsement

(dop) 2010-02-01

latest date by which the national standards conflicting with the EN have to be withdrawn

#### **Contents**

2					
3	Norn	native re	ferences	4	
	Term	ns, defin	itions and abbreviations	5	
4	Refe	Reference configuration5			
5	Resistibility requirements6				
6	Resistibility test requirements6				
	6.1	For po	rts connected to balanced copper cabling	7	
		6.1.1	Lightning test conditions for ports connected to external balanced		
		_	copper cabling		
	6.2		rts connected to external d.c or a.c dedicated power feeding cables	8	
		6.2.1	Lightning test conditions for ports connected to external d.c or a.c dedicated power feeding cables	8	
	6.3	For ma	ins power ports		
		6.3.1	Test conditions for mains power ports		
Anr	nex A	(informa	ative) ITU-T publications (K-recommendations) with relation to TE	10	
Bib	liogra	phy		11	
Fin	ures				
_					
			ment with telecommunication ports installed at customers premises		
Fig	ure 2	– TE co	nfigurations	9	
Fig	ure A	.1 – ITU	-T publications (K-recommendations) with relation to TE	10	
			.0		
				72	

#### 1 Scope

This European Standard specifies the minimum level of resistibility of equipment having telecommunication port(s) to overvoltages and overcurrents.

This European Standard covers telecommunication equipment installed at customer premises as shown in Figure 1.

Overvoltages or overcurrents covered by this European Standard are surges due to direct or indirect lightning on the telecommunication line plant.

Overvoltages or overcurrent not covered by this European Standard are

- short-term induction of alternating voltages from electric power systems (including electrified railway),
- earth potential rise due to power faults or load switching,
- direct contacts between telecommunication lines and low voltage power lines.

This European Standard is intended for use by network (public/private) operators and the equipment manufacturers.

This European Standard applies to equipment having telecommunication port(s) connected to external conductors, i.e. conductor located outside the customer's building.

The tests are type tests and, although they are applicable to a complete system, it is recognised that they may be applied to individual items of equipment during development and design 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.

CLC/TR 50450:2006, Resistibility requirements for equipment having (a) telecommunication port(s)

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

IEC 60050-701:1988, International Electrotechnical Vocabulary (IEV) – Chapter 701: Telecommunications, channels and networks

ITU-T Recommendation K.21, Resistibility of telecommunication equipment installed in customer premises to overvoltages and overcurrents

ITU-T Recommendation K.44, Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents – Basic Recommendation