SVENSK STANDARD SS-EN 50288-11-1

Fastställd	Utgåva	Sida	Ansvarig kommitté
2013-03-15	1	1 (1+17)	SEK TK 46

Kommunikationskablar – Flerelementskablar med ledare av metall – Del 11-1: Gruppspecifikation för oskärmade kablar för användning upp till 500 MHz – Kablar för spridningsnät och fast installation

Multi-element metallic cables used in analogue and digital communication and control – Part 11-1: Sectional specification for un-screened cables, characterised up to 500 MHz – Horizontal and building backbone cables

Som svensk standard gäller europastandarden EN 50288-11-1:2012. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50288-11-1:2012.

Nationellt förord

Standarden ska användas tillsammans med SS-EN 50288-1.

ICS 33.120.10

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: SEK, Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00. *Telefax*: 08 - 444 14 30
E-post: sek@elstandard.se. *Internet*: www.elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard
Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50288-11-1

December 2012

ICS 33.120.10

English version

Multi-element metallic cables used in analogue and digital communication and control - Part 11-1: Sectional specification for un-screened cables characterised up to 500 MHz - Horizontal and building backbone cables

Câbles métalliques à éléments multiples utilisés pour les transmissions et les commandes analogiques et numériques - Partie 11-1: Spécification intermédiaire pour câbles non-blindés, pour applications jusqu'à 500 MHz - Câbles horizontaux et verticaux de bâtiment

Mehradrige metallische Daten- und Kontrollkabel für analoge und digitale Übertragung - Teil 11-1: Rahmenspezifikation für ungeschirmte Kabel bis 500 MHz - Kabel für den Horizontal- und Steigbereich

This European Standard was approved by CENELEC on 2012-11-12. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 50288-11-1:2012 E

SEK Svensk Elstandard

Contents

Foreword

This document (EN 50288-11-1:2012) has been prepared by CLC/SC 46XC, "Multicore, multipair and quad data communication cables".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-11-12
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2015-11-12

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

The EN 50288 series is divided into the following parts:

– EN 50288-1, *Multi-element metallic cables used in analogue and digital communication and control — Part 1: Generic specification*;

– EN 50288-2-1, *Multi-element metallic cables used in analogue and digital communication and control — Part 2-1: Sectional specification for screened cables characterised up to 100 MHz — Horizontal and building backbone cables*;

– EN 50288-2-2, *Multi-element metallic cables used in analogue and digital communication and control — Part 2-2: Sectional specification for screened cables characterised up to 100 MHz — Work area and patch cord cables*;

– EN 50288-3-1, *Multi-element metallic cables used in analogue and digital communication and control — Part 3-1: Sectional specification for unscreened cables characterised up to 100 MHz — Horizontal and building backbone cables*;

– EN 50288-3-2, *Multi-element metallic cables used in analogue and digital communication and control — Part 3-2: Sectional specification for unscreened cables characterised up to 100 MHz — Work area and patch cord cables*;

– EN 50288-4-1, *Multi-element metallic cables used in analogue and digital communication and control — Part 4-1: Sectional specification for screened cables characterised up to 600 MHz — Horizontal and building backbone cables*;

– EN 50288-4-2, *Multi-element metallic cables used in analogue and digital communication and control — Part 4-2: Sectional specification for screened cables characterised up to 600 MHz — Work area and patch cord cables*;

– EN 50288-5-1, *Multi-element metallic cables used in analogue and digital communication and control — Part 5-1: Sectional specification for screened cables characterized up to 250 MHz — Horizontal and building backbone cables*;

– EN 50288-5-2, *Multi-element metallic cables used in analogue and digital communication and control — Part 5-2: Sectional specification for screened cables characterized up to 250 MHz — Work area and patch cord cables*;

- EN 50288-6-1, *Multi-element metallic cables used in analogue and digital communication and control — Part 6-1: Sectional specification for unscreened cables characterised up to 250 MHz — Horizontal and building backbone cables*;

- EN 50288-6-2, *Multi-element metallic cables used in analogue and digital communication and control — Part 6-2: Sectional specification for unscreened cables characterised up to 250 MHz — Work area and patch cord cables*;

- EN 50288-7, *Multi-element metallic cables used in analogue and digital communication and control — Part 7: Sectional specification for instrumentation and control cables*;

- EN 50288-8, *Multi-element metallic cables used in analogue and digital communication and control — Part 8: Specification for type 1 cables characterised up to 2 MHz*;

- EN 50288-9-1, *Multi-element metallic cables used in analogue and digital communications and control — Part 9-1: Sectional specification for screened cables characterized from 1 MHz up to 1 000 MHz — Horizontal and building backbone cables* (the present document);

- EN 50288-10-1, *Multi-element metallic cables used in analogue and digital communications and control — Part 10-1: Sectional specification for screened cables characterized from 1 MHz up to 500 MHz — Horizontal and building backbone cables*;

- EN 50288-11-1, *Multi-element metallic cables used in analogue and digital communication and control — Part 11-1: Sectional specification for un-screened cables characterised from 1 MHz up to 500 MHz — Horizontal and building backbone cables* (the present document).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

1 Scope

EN 50288-11-1 is a sectional specification for un-screened cables, characterised from 1 MHz up to 500 MHz, to be used in horizontal and building backbone wiring for Information Technology generic-cabling systems.

This sectional specification contains the electrical, mechanical, transmission and environmental performance characteristics and requirements of the cables when tested in accordance with the referenced test methods.

This sectional specification is to be read in conjunction with EN 50288-1, which contains the essential provisions for its application.

The cables covered in this sectional specification are intended to operate with voltages and currents normally encountered in communications systems. These cables are not intended to be used in conjunction with low impedance sources, for example the electrical power supplies of public utility mains.

2 Normative references

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

EN 50288-1 *Multi-element metallic cables used in analogue and digital communication and control — Part 1: Generic specification*

EN 50289-1-4 *Communication cables — Specifications for test methods — Part 1-4: Electrical test methods — Insulation resistance*

EN 50289-3-2 *Communication cables – Specifications for test methods — Part 3-2: Mechanical test methods — Tensile strength and elongation for conductor*

EN 50289-3-4 *Communication cables – Specifications for test methods — Part 3-4: Mechanical test methods — Tensile strength, elongation and shrinkage of insulation and sheath*

EN 50289-3-5 *Communication cables — Specifications for test methods — Part 3-5: Mechanical test methods — Crush resistance of the cable*

EN 50289-3-6 *Communication cables — Specifications for test methods — Part 3-6: Mechanical test methods — Impact resistance of the cable*

EN 50289-3-8 *Communication cables — Specifications for test methods — Part 3-8: Mechanical test methods — Abrasion resistance of cable sheath markings*

EN 50289-3-9:2001 *Communication cables — Specifications for test methods — Part 3-9: Mechanical test methods — Bending tests*

EN 50289-3-16 *Communication cables — Specifications for test methods — Part 3-16: Mechanical test methods — Cable tensile performance*

EN 50289-4-6 *Communication cables — Specifications for test methods — Part 4-6: Environmental test methods — Temperature cycling*

EN 50290-2 (all parts) *Communication cables — Part 2: Common design rules and construction*

EN 60708 *Low-frequency cables with polyolefin insulation and moisture barrier polyolefin sheath (IEC 60708)*

IEC 60189-2 *Low-frequency cables and wires with PVC insulation and PVC sheath — Part 2: Cables in pairs, triples, quads and quintuples for inside installations*