SVENSK STANDARD SS 424 14 45

Fastställd	Utgåva	Sida	Ansvarig kommitté
2020-12-16	3	1 (1+44)	SEK TK 20

Kraftkablar – Skarvar och avslutningar för kabel med märkspänning 3,6/6(7,2) kV - 28,8/36(42) kV – Allmänna fordringar vid provning

Power cables –
Test requirements for accessories for use on power cables of rated voltage from 3,6/6(7,2) kV up to 20,8/36(42) kV –
Part 1: Accessories for cables with extruded insulation

Som svensk standard för fordringar vid provning av kabeltillbehör för kraftkabel med märkspänning 3,6/6(7,2) kV - 20,8/36(42) kV gäller det av CENELEC utarbetade harmoniseringsdokumentet HD 629.1 S3.

Nationellt förord

Denna standard avser allmänna fordringar vid typprovning av tillbehör för kraftkablar som definieras i SS 424 14 16 och gäller för kablar med extruderad isolering. De provningsmetoder som tidigare fanns i HD 628 finns numera i SS-EN 61442.

För övergångsskarvar mellan kablar med pappersisolering och extruderad isolering hänvisas till HD 629.2.

Tidigare fastställd svensk standard SS 424 14 45, utgåva 2, 2006 och SS 424 14 45/T1, utgåva 1, 2009, gäller ej fr o m 2022-02-06.

ICS 29.060.20

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar 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.

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HARMONIZATION DOCUMENT

DOCUMENT D'HARMONISATION

HARMONISIERUNGSDOKUMENT

HD 629-1-S3

March 2019

ICS 29.060.20

Supersedes HD 629.1 S2:2006

English Version

Test requirements for accessories for use on power cables of rated voltage from 3,6/6(7,2) kV up to 20,8/36(42) kV - Part 1: Accessories for cables with extruded insulation

Prescriptions relatives aux essais des accessoires des câbles d'énergie pour des tensions assignées de 3,6/6(7,2) kV à 20,8/36(42) kV - Partie 1: Accessoires pour câbles à isolation extrudée

Prüfanforderungen für Kabelgarnituren für Starkstromkabel mit einer Nennspannung von 3,6/6(7,2) kV bis 20,8/36(42) kV - Teil 1: Garnituren für Kabel mit extrudierter Kunststoffisolierung

This Harmonization Document was approved by CENELEC on 2019-02-06. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this Harmonization Document at national level.

Up-to-date lists and bibliographical references concerning such national implementations may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This Harmonization Document exists in three official versions (English, French, German).

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. HD 629-1-S3:2019 E

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European foreword

This document (HD 629.1 S3:2019) has been prepared by CLC/TC 20, "Electric 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) 2020-02-06
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2022-02-06

This document supersedes HD 629.1 S2:2006 and its amendment A1:2008.

This Harmonization Document has been written as part of a series of standards to satisfy the Public Procurement Directive, and is complementary to HD 620, which covers extruded insulation power cables from 3,6/6(7,2) kV to 20,8/36(42) kV, inclusive.

This standard defines the requirements, which may be called up for joints, stop ends, separable connectors, indoor and outdoor terminations when used with extruded insulation power cables covered by HD 620. The equivalent requirements for paper-insulated power cables are given in HD 629.2.

The test methods for these accessories are given in EN 61442:2005.

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

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1 Scope

1.1 General

This document specifies performance requirements for type tests for cable accessories for use on extruded insulation power cables as specified in HD 620 or other relevant cable standards.

Once type test for an accessory is successfully completed, it is not necessary to repeat the test, unless changes are made in the materials, design or manufacturing process, which might affect the performance characteristics.

Possible extra thermo-mechanical forces due to high current loads from renewable sources of power generation are not covered by these tests (under consideration).

Accessories for special applications such as submarine cables, ship cables or hazardous situations (explosive environments, fire resistant cables or seismic conditions) are not included.

Test methods are included in EN 61442:2005.

NOTE 1: This European Standard does not invalidate existing approvals of products achieved on the basis of national standards and specifications and/or the demonstration of satisfactory service performance. However, products approved according to such national standards or specifications cannot directly claim approval to this European standard.

NOTE 2: It may be possible, subject to agreement between supplier and purchaser, and/or the relevant conformity assessment body, to demonstrate that conformity to the earlier standard can be used to claim conformity to this European Standard, provided an assessment is made of any additional type testing that may need to be carried out. Any such additional testing that is part of a sequence of testing cannot be done separately.

1.2 Type of accessories

The accessories covered by this standard are listed below:

a) indoor and outdoor terminations of all designs, including terminal boxes;

b) straight-joints, branch-joints, stop ends and loop joints of all designs, suitable for use underground, indoors or outdoors;

NOTE 1 Tests specific for UV and outdoor weather resistance are not included.

c) screened or unscreened plug-in type or bolted-type separable connectors, capable of interfacing with bushing profiles as specified in EN 50180 and EN 50181.

NOTE 2 Joints connecting extruded insulation cables (HD 620) to paper insulated cables (HD 621) are not included. The requirements for these accessories are dealt with in HD 629.2.

1.3 Rated voltage

The rated voltages U_0/U (U_m) of the accessories covered by this standard are 3,6/6(7,2) - 3,8/6,6(7,2) - 6/10(12) - 6,35/11(12) - 8,7/15(17,5) - 12/20(24) - 12,7/22(24) - 18/30(36) - 19/33(36) - 20,8/36(42) kV where:

U_0 is the rated power-frequency voltage between conductor and earth or metallic screen, for which the cable accessory is designed;

U is the rated power-frequency voltage between conductors for which the cable accessory is designed;

U_m is the maximum value of the 'highest system voltage' for which the cable accessory is designed.

1.4 Current

The continuous current rating of a termination or joint for extruded insulation power cables is in accordance with the appropriate cable specified in HD 620 or other relevant cable standards and is suitable for operation at the rated current and under short circuit fault conditions at the temperatures stated therein.

The current rating of a separable connector is governed by the current rating of the mating bushing (see EN 50180 and EN 50181).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 50180, *Bushings above 1 kV up to 52 kV and from 250 A to 3,15 kA for liquid filled transformers*

EN 50181, *Plug-in type bushings above 1 kV up to 52 kV and from 250 A to 2.5 kA for equipment other than liquid filled transformers*

EN 61238-1, *Compression and mechanical connectors for power cables for rated voltages up to 36 kV (U_m = 42 kV). Test methods and requirements*

EN 61442:2005, *Test methods for accessories for power cables with rated voltages from 6 kV (U_m = 7,2 kV) up to 36 kV (U_m = 42 kV)*

HD 620, *Distribution cables with extruded insulation for rated voltages from 3,6/6 (7,2) kV to 20,8/36 (42) kV*

IEC 60050-461, *International Electrotechnical Vocabulary - Chapter 461: Electric cables*