SLOVENSKI STANDARD
SIST EN 50525-3-41:2011

01-september-2011

Električni kabli - Nizkonapetostni energetski kabli z nazivno napetostjo do vključno 450/750 V (U0/U) - 3-41. del: Kabli s posebnimi ognjevarnimi lastnostmi - Enožilni neoplaščeni kabli z zamreženo izolacijo brez halogenov in z nizko emisijo dima

Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 3-41: Cables with special fire performance - Single core non-sheathed cables with halogen-free crosslinked insulation, and low emission of smoke

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Kabel und Leitungen - Starkstromleitungen mit Nennspannungen bis 450/750 V (U0/U) - Teil 3-41: Leitungen mit verbessertem Verhalten im Brandfall - Halogenfreie, raucharme Ader- und Verdrahtungsleitungen mit vernetzter Isolierung

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Câbles électriques - Câbles d'énergie basse tension de tension assignée au plus égale à 450/750 V (U0/U) - Partie 3-41: Câbles à performances spéciales au feu - Conducteurs isolés en matériau élastomère réticulé sans halogène, à faible dégagement de fumée

Ta slovenski standard je istoveten z: **EN 50525-3-41:2011**

ICS:

29.060.20 Kabli Cables

SIST EN 50525-3-41:2011 **en**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50525-3-41

May 2011

ICS 29.060.20

Supersedes HD 22.9 S3:2007

English version

Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U_0/U) - Part 3-41: Cables with special fire performance - Single core non-sheathed cables with halogen-free crosslinked insulation, and low emission of smoke

Câbles électriques -
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Conducteurs isolés en matériau élastomère réticulé sans halogène, à faible dégagement de fumée

Kabel und Leitungen -
Starkstromleitungen mit Nennspannungen bis 450/750 V (U_0/U) -
Teil 3-41: Starkstromleitungen mit verbessertem Verhalten im Brandfall -
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CENELEC
European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 20, Electric cables.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50525-3-41 on 2011-01-17.

This document, which is one of a multipart series, supersedes HD 22.9 S3:2007.

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

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)	2012-01-17
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2014-01-17

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1 Scope

EN 50525-3-41 applies to non-sheathed single core cables insulated with halogen-free crosslinked compound and having low emission of smoke and corrosive gases when exposed to fire.

NOTE 1 Low emission of smoke is checked in accordance with EN 61034-2. Low emission of corrosive gases is checked as part of the check for absence of halogens (see Annex B of EN 50525-1).

The cables are of rated voltages U_0/U up to and including 450/750 V.

NOTE 2 Cables rated 450/750 V may be used at 600/1 000 V when this cable is used in fixed installations with mechanical protection, within switchgear and control gear - see HD 516.

The cables are intended for fixed wiring applications.

The maximum conductor operating temperature for each of the cables in this standard is 90 °C.

NOTE 3 HD 516 contains extensive guidance on the safe use of cables in this standard.

This EN 50525-3-41 should be read in conjunction with EN 50525-1, which specifies general requirements.

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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.

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NOTE One or more references to the standards below are in respect of a specific sub-division of that standard, for instance a clause, a table, a class or a type. Cross-references to these standards are undated and, at all times, the latest version applies.

EN 50363-5	Insulating, sheathing and covering materials for low voltage energy cables - Part 5: Halogen-free, cross-linked insulating compounds
EN 50395	Electrical test methods for low voltage energy cables
EN 50396	Non electrical test methods for low voltage energy cables
EN 50525-1	Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U_0/U) - Part 1: General requirements
EN 60228	Conductors of insulated cables (IEC 60228)
EN 60332-1-2	Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame (IEC 60332-1-2)
EN 60811-1-4	Insulating and sheathing materials of electric and optical cables - Common test methods - Part 1-4: General application - Tests at low temperature (IEC 60811-1-4)
EN 61034-2	Measurement of smoke density of cables burning under defined conditions - Part 2: Test procedure and requirements (IEC 61034-2)

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3 Terms and definitions

For the purposes of this document the terms and definitions given in Clause 3 of EN 50525-1 apply.

4 Heat resistant cables (90 °C)

4.1 Cables for fixed wiring – H07Z-U and H07Z-R

4.1.1 Construction

4.1.1.1 Conductor

The conductor shall be class 1 or class 2, according to EN 60228.

4.1.1.2 Sizes of cable

The sizes of cable shall be:

- class 1 – 1,5 mm^2 to 10 mm^2;

- class 2 – 1,5 mm^2 to 630 mm^2.

4.1.1.3 Insulation

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The insulation shall be a polyolefin cross-linked material of Type EI 5 to EN 50363-5 applied around the conductor.

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4.1.1.4 Marking

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The cable shall be marked with the CENELEC code H07Z-U for cables with class 1 conductor, or H07Z-R for cables with class 2 conductor. The marking shall comply with Clause 6 of EN 50525-1.

4.1.2 Requirements

Each cable shall comply with the appropriate requirements given in EN 50525-1, and the particular requirements of this Part.

Testing shall be in accordance with Annex A, and the relevant tests indicated in column 6.

The dimensions of the cables shall conform to Table B.1 for the relevant size.

When tested in accordance with the method and procedure given in EN 61034-2, all sizes of cable shall exceed 60 % light transmittance throughout the test.

4.2 Cables for fixed wiring – H07Z-K

4.2.1 Construction

4.2.1.1 Conductor

The conductor shall be class 5, according to EN 60228.

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4.2.1.2 Sizes of cable

The sizes of cable shall be 1,5 mm^2 to 240 mm^2.

4.2.1.3 Insulation

The insulation shall be a polyolefin cross-linked material of Type EI 5 to EN 50363-5 applied around the conductor.

4.2.1.4 Marking

The cable shall be marked with the CENELEC code H07Z-K. The marking shall comply with Clause 6 of EN 50525-1.

4.2.2 Requirements

Each cable shall comply with the appropriate requirements given in EN 50525-1, and the particular requirements of this Part.

Testing shall be in accordance with Annex A, and the relevant tests indicated in column 7.

The dimensions of the cables shall conform to Table B.2 for the relevant size.

When tested in accordance with the method and procedure given in EN 61034-2, all sizes of cable shall exceed 60 % light transmittance throughout the test.

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4.3 Cables for internal wiring – H05Z-U

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4.3.1 Construction

4.3.1.1 Conductor

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The conductor shall be class 1, according to EN 60228.

4.3.1.2 Sizes of cable

The sizes of cable shall be 0,5 mm^2 to 1 mm^2.

4.3.1.3 Insulation

The insulation shall be a polyolefin cross-linked material of Type EI 5 to EN 50363-5 applied around the conductor.

4.3.1.4 Marking

The cable shall be marked with the CENELEC code H05Z-U. The marking shall comply with Clause 6 of EN 50525-1.

4.3.2 Requirements

Each cable shall comply with the appropriate requirements given in EN 50525-1, and the particular requirements of this Part.

Testing shall be in accordance with Annex A, and the relevant tests indicated in column 8.

The dimensions of the cables shall conform to Table B.3 for the relevant size.

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When tested in accordance with the method and procedure given in EN 61034-2, all sizes of cable shall exceed 60 % light transmittance throughout the test.

4.4 Cables for internal wiring – H05Z-K

4.4.1 Construction

4.4.1.1 Conductor

The conductor shall be class 5, according to EN 60228.

4.4.1.2 Sizes of cable

The sizes of cable shall be 0,5 mm^2 to 1 mm^2.

4.4.1.3 Insulation

The insulation shall be a polyolefin cross-linked material of Type EI 5 to EN 50363-5 applied around the conductor.

4.4.1.4 Marking

The cable shall be marked with the CENELEC code H05Z-K. The marking shall comply with Clause 6 of EN 50525-1.

4.4.2 Requirements

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Each cable shall comply with the appropriate requirements given in EN 50525-1, and the particular requirements of this Part.

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Testing shall be in accordance with Annex A, and the relevant tests indicated in column 9.

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The dimensions of the cables shall conform to Table B.4 for the relevant size.

When tested in accordance with the method and procedure given in EN 61034-2, all sizes of cable shall exceed 60 % light transmittance throughout the test.