SLOVENSKI STANDARD
SIST EN 50525-2-42:2011

01-september-2011

Električni kabli - Nizkonapetostni energetski kabli z nazivno napetostjo do vključno 450/750 V (U0/U) - 2-42. del: Kabli za splošno uporabo - Enožilni neoplaščeni kabli z zamreženo EVA izolacijo

Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-42: Cables for general applications - Single core non-sheathed cables with crosslinked EVA insulation

Kabel und Leitungen - Starkstromleitungen mit Nennspannungen bis 450/750 V (U0/U) - Teil 2-42: Starkstromleitungen für allgemeine Anwendungen - Ader- und Verdrahtungsleitungen mit vernetzter EVA-Isolierung

Câbles électriques - Câbles d'énergie basse tension de tension assignée au plus égale à 450/750 V (U0/U) - Partie 2-42: Câbles pour applications générales - Conducteurs isolés en matériau EVA réticulé

Ta slovenski standard je istoveten z: **EN 50525-2-42:2011**

ICS:

29.060.20 Kabli Cables

SIST EN 50525-2-42:2011 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50525-2-42

May 2011

ICS 29.060.20

Supersedes HD 22.7 S2:1995 + A1:1999 + A2:2004

English version

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Conducteurs isolés en matériau EVA réticulé

Kabel und Leitungen -
Starkstromleitungen mit Nennspannungen bis 450/750 V (U_0/U) -
Teil 2-42: Starkstromleitungen für allgemeine Anwendungen -
Ader- und Verdrahtungsleitungen mit vernetzter EVA-Isolierung

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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.

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CENELEC

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

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Ref. No. EN 50525-2-42:2011 E

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 50525-2-42 on 2011-01-17.

This document, which is one of a multipart series, supersedes HD 22.7 S2:1995 + A1:1999 + A2:2004.

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

Contents

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1 Scope

EN 50525-2-42 applies to crosslinked elastomeric insulated single core non-sheathed cables.

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

NOTE 1 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 use in fixed installations within high temperature zones.

The maximum conductor operating temperature for each of the cables in this standard is 110 °C.

NOTE 2 HD 516 contains extensive guidance on the safe use of cables in this standard.

This EN 50525-2-42 should be read in conjunction with EN 50525-1, which specifies general requirements.

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.

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 50363-1	Insulating, sheathing and covering materials for low voltage energy cables – Part 1: Cross-linked elastomeric 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 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 60811-1-4:1985 + A1:1993 + corr. May 1986)

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 (110 °C)

4.1 Cables for fixed wiring – H07G-U, H07G-R and H07G-K

4.1.1 Construction

4.1.1.1 Conductor

The conductor shall be class 1, class 2 or class 5 according to EN 60228.

A separator of suitable material shall be applied around each conductor if the conductors are plain.

NOTE If the conductors are tinned the use of a separator is optional.

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 240 mm^2;
- class 5 – 1,5 mm^2 to 240 mm^2.

4.1.1.3 Insulation

The insulation shall be a polyolefin cross-linked material of Type EI 3 to EN 50363-1 applied around the conductor.

4.1.1.4 Marking

The cable shall be marked with the CENELEC code H07G-U for cables with class 1 conductor, H07G-R for cables with class 2 conductor or H07G-K for cables with class 5 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.

4.2 Cables for internal wiring – H05G-U and H05G-K

4.2.1 Construction

4.2.1.1 Conductor

The conductor shall be class 1 or class 5, according to EN 60228.

4.2.1.2 Sizes of cable

The sizes of cable shall be:

- class 1 – 0,5 mm^2 to 1 mm^2;

– class 5 – 0,5 mm^2 to 1 mm^2.

4.2.1.3 Insulation

The insulation shall be a polyolefin cross-linked material of Type EI 3 to EN 50363-1 applied around the conductor.

4.2.1.4 Marking

The cable shall be marked with the CENELEC code H05G-U for cables with class 1 conductor, or H05G-K for cables with class 5 conductor. 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.

Annex A
(normative)

Tests for cables to EN 50525-2-42

Table A.1

1	2	3	4	5	6	7
Ref No.	**Tests** [a]	**Cate-gory of test**	**Test method described in**		**Applicability of test – Subclause**	
			EN	**Clause**	**4.1**	**4.2**
					H07G	**H05G**
1	**Electrical tests** [b]					
1.1	Resistance of conductors	T, S	50395	5	X	X
1.2.1	Voltage test at 2 500 V	T, S	50395	6	X	-
1.2.2	Voltage test at 2 000 V	T, S	50395	6	-	X
1.3	Insulation resistance at (110 ± 2) °C [c]	T	50395	8.2	X	X
1.4	Absence of faults in insulation	R	50395	10	X	X
2	**Constructional and dimensional tests**					
2.1	Checking of compliance with constructional provisions	T, S	50525-1	Inspection and manual tests	X	X
2.2	Measurement of thickness of insulation	T, S	50396	4.1	X	X
2.3	Measurement of overall diameter	T, S	50396	4.4	X	X
3	**Insulation material tests**	T	50363-1 [d]	-	X	X
4	**Impact test** at - 5 °C	T	60811-1-4	8.5	X	X

[a] The order given does not imply a sequence of testing.

[b] Particular test conditions and requirements are given in Table 1 of EN 50525-1.

[c] Test to be made in air; values based on a specified insulation resistance of 10^{10} Ω·cm.

[d] This EN includes all the test methods and requirements for the material. Material to be tested is taken from the finished cable.