SLOVENSKI STANDARD
SIST EN 50525-2-72:2011

01-september-2011

Električni kabli - Nizkonapetostni energetski kabli z nazivno napetostjo do vključno 450/750 V (U0/U) - 2-72. del: Kabli za splošno uporabo - Ploščati deljivi kabli (vrvice) s termoplastično PVC izolacijo

Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-72: Cables for general applications - Flat divisible cables (cords) with thermoplastic PVC insulation

Kabel und Leitungen - Starkstromleitungen mit Nennspannungen bis 450/750 V (U0/U) - Teil 2-72: Starkstromleitungen für allgemeine Anwendungen - Trennbare Zwillingsleitung mit thermoplastischer PVC-Isolierung

Câbles électriques - Câbles d'énergie basse tension de tension assignée au plus égale à 450/750 V (U0/U) - Partie 2-72: Câbles pour applications générales - Câbles méplats séparables, isolés en PVC thermoplastique

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ICS:

29.060.20 Kabli Cables

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EUROPEAN STANDARD

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EN 50525-2-72

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ICS 29.060.20

Supersedes HD 21.11 S1:1995 + A1:2001

English version

Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U_0/U) - Part 2-72: Cables for general applications - Flat divisible cables (cords) with thermoplastic PVC insulation

Câbles électriques -
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Kabel und Leitungen -
Starkstromleitungen mit Nennspannungen bis 450/750 V (U_0/U) -
Teil 2-72: Starkstromleitungen für allgemeine Anwendungen -
Trennbare Zwillingsleitung mit thermoplastischer PVC-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.

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.

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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 50525-2-72:2011 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 accepted by CENELEC as EN 50525-2-72 on 2011-01-17.

This document, which is one of a multipart series, supersedes HD 21.11 S1:1995 + A1:2001.

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

This European Standard applies to thermoplastic (PVC) insulated flat divisible flexible cables.

The cables are of rated voltage U_0/U 300/300 V.

The cables are intended for use indoors as internal wiring or direct supply connection to luminaires.

The maximum conductor operating temperature for the cables in this standard is 60 °C.

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

This EN 50525-2-72 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 50363-3	Insulating, sheathing and covering materials for low voltage energy cables − Part 3: PVC 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)

3 Terms and definitions

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

4 Flexible cables – H03VH7H-F

4.1 Construction

4.1.1 Conductor

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

4.1.2 Size of cable

The size of cable shall be two core, 0,5 mm^2.

4.1.3 Insulation

The inner layer of insulation shall be PVC compound, Type TI 2 to EN 50363-3 applied around each conductor.

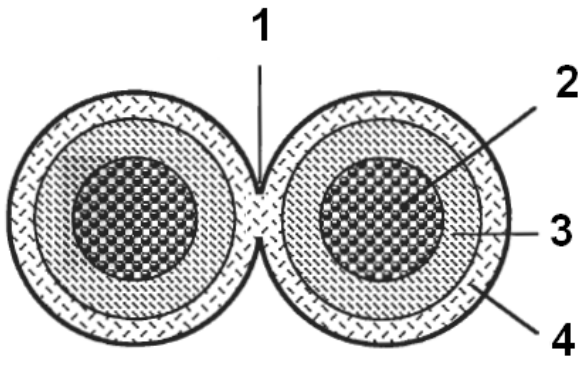
The cores shall be laid parallel.

The outer layer of insulation shall be PVC compound, Type TI 2 to EN 50363-3 applied around the cores.

The outer layer of insulation shall be a contrasting colour to that of the inner layer.

NOTE The outer layer may adhere to the cores.

The cable shall be "divisible" as shown in Figure 1.



Key

1 divisible insulation
2 conductor
3 insulation (inner layer)
4 insulation (outer layer)

Figure 1 — Cross-sectional diagram of cable

4.1.4 Marking

The cable shall be marked with the CENELEC code H03VH7H-F. The marking shall comply with Clause 6 of EN 50525-1.

4.2 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.

The insulation thickness shall comply with the specified values given in columns 2, 3 and 7 of Table B.1. The thickness of the outer layer shall be measured after division of the cores.

The dimensions of the cables shall be within the limits specified in columns 4 and 5 of Table B.1.

The insulation resistance shall be measured on a divided element of the cable with both layers of insulation in place.

In addition to the requirements in A.5 of EN 50525-1 for separation of cores, the inner layer shall not be visible at the conclusion of the test.

Annex A
(normative)

Tests for cables to EN 50525-2-72

Table A.1

1	2	3	4	5
Ref No.	Tests [a]	Category of test	Test method described in	
			EN	(Sub)clause
1	**Electrical tests** [b]			
1.1	Resistance of conductors	T, S	50395	5
1.2	Voltage test on completed cable at 2 000 V [c]	T, S	50395	6
1.3	Insulation resistance at 70 °C [d]	T	50395	8.1
1.4	Long term resistance of insulation to d.c. [d]	T	50395	9
1.5	Absence of faults in insulation	R	50395	10
2	**Constructional and dimensional tests**			
2.1	Checking of compliance with constructional provisions	T, S	50525-1	Inspection and manual tests
2.2	Measurement of thickness of insulation [e]	T, S	50396	4.1
2.4	Measurement of overall dimensions	T, S	50396	4.4
3	**Insulation material tests**	T	50363-3 [f]	-
4	**Impact test** at - 5 °C [g]	T	60811-1-4	8.5
5	**Mechanical strength of completed cable**			
5.1	Flexing test followed, after immersion in water, by a voltage test at 2 000 V on cores	T	50396 50395	6.2 7
5.2	Test of separation of cores	T	50396	6.8
6	**Test under fire conditions**	T	60332-1-2	-

[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] This test is carried out with 5 m of the 20 m length being separated.

[d] This test is carried out on an element of the cable after division.

[e] The minimum thickness of each layer of insulation is not measured, but the minimum thickness of the dual-layer shall comply with the specified value.

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

[g] This test is carried out with both layers of insulation treated as one.