
Električni kabli - Nizkonapetostni energetski kabli z nazivno napetostjo do vključno 450/750 V (U0/U) - 2-71. del: Kabli za splošno uporabo - Ploščate opletene niti s termoplastično PVC izolacijo

Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-71: Cables for general applications - Flat tinsel cables (cords) with thermoplastic PVC insulation

Kabel und Leitungen - Starkstromleitungen mit Nennspannungen bis 450/750 V (U0/U) - Teil 2-71: Starkstromleitungen für allgemeine Anwendungen - Lahnlitzen-Leitungen mit thermoplastischer PVCIsolierung

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[Câbles électriques - Câbles d'énergie basse tension de tension assignée au plus égale à 450/750 V \(U0/U\) - Partie 2-71: Câbles pour applications générales - Câbles plats pour cordons à fil rosette, isolés en PVC thermoplastique](https://standards.iteh.ai/catalog/standards/sist/edc69736-39d6-4275-9aaa-)

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EUROPEAN STANDARD
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EN 50525-2-71

May 2011

ICS 29.060.20

Supersedes HD 21.5 S3:1994 (partially) + A1:1999 (partially) + A2:2001 (partially)

English version

**Electric cables -
Low voltage energy cables of rated voltages up to and including 450/750 V
(U_0/U) -
Part 2-71: Cables for general applications -
Flat tinsel 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) -
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allgemeine Anwendungen -
Lahnlitzen-Leitungen mit
thermoplastischer PVC-Isolierung

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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 50525-2-71 on 2011-01-17.

This document, which is one of a multipart series, supersedes Clause 2 of HD 21.5 S3:1994 + A1:1999 + A2:2001.

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 flexible flat tinsel flexible cables.

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

The cables are intended for the connection of small appliances to the fixed supply.

The maximum conductor operating temperature for the cable in this standard is 40 °C.

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

This EN 50525-2-71 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 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 – H03VH-Y

4.1 Construction

4.1.1 Conductor

Each flexible tinsel cable shall be constructed from two conductors.

Each conductor shall comprise a number of strands or groups of strands, twisted together, each strand being composed of one or more flattened wires of copper or copper alloy, helically wound on a thread of cotton, polyamide or similar material.

The two conductors shall be laid parallel.

4.1.2 Insulation

The two parallel conductors shall be covered with the insulation. The insulation shall be polyvinyl chloride compound of Type TI 2 to EN 50363-3.

The insulation shall be provided with a groove on both sides, between the conductors, to facilitate separation of the cores.

4.1.3 Marking

The cable shall be marked with the CENELEC code H03VH-Y. 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 dimensions of the cables shall be within the limits specified in columns 2 and 3 of Table B.1.

The conductor resistance shall not exceed the value given in column 5 of Table B.1.

The requirements for the mechanical test on completed cables shall be in accordance with Annex C.

Annex A (normative)

Tests for cables to EN 50525-2-71

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
1.2.1	Voltage test at 2 000 V	T, S	50395	5
1.3	Insulation resistance at 70 °C	T, S	50395	8.1
1.4	Long term resistance of insulation to d.c.	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	T, S	50396	4.1
2.3	Measurement of overall diameter	T, S	50396	4.4
3	Insulation material tests	T	50363-3	-
4	Mechanical strength of completed cable			
4.1	Bending test	T	50396	6.4
4.2	Snatch test	T	50396	6.7
5	Impact test at - 5 °C	T	60811-1-4	8.5
6	Test under fire conditions	T	60332-1-2	-
<p>^a All tests are applicable to these cables. The order given does not imply a sequence of testing.</p> <p>^b Particular test conditions and requirements are given in Table 1 of EN 50525-1.</p> <p>^c This EN includes all the test methods and requirements for the material. Material to be tested is taken from the finished cable.</p>				

Annex B
(normative)

General data

Table B.1 — General data for Type H03VH-Y

1	2	3	4	5
Thickness of insulation specified value mm	Mean overall dimensions		Minimum insulation resistance at 70 °C MΩ.km	Maximum conductor resistance at 20 °C Ω/km
	Lower limits mm	Upper limits mm		
0,8	2,2 × 4,4	3,5 × 7,0	0,019	270

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