



SLOVENSKI STANDARD

SIST HD 21.10 S2:2002

01-april-2002

Nadomešča:

SIST HD 21.10 S1:1998

**Kabli s polivinilkloridno izolacijo za naznačene napetosti do vključno 450/750 V -
10. del: Raztegljivi priključki**

Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part
10: Extensible leads

Polyvinylchlorid-isolierte Leitungen mit Nennspannungen bis 450/750 V - Teil 10:
Wendelleitungen

Conducteurs et câbles isolés au polychlorure de vinyle, de tension assignée au plus
égale à 450/750 V - Partie 10: Cordons extensibles

Ta slovenski standard je istoveten z: HD 21.10 S2:2001

ICS:

29.060.20 Kabli Cables

SIST HD 21.10 S2:2002 en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST HD 21.10 S2:2002

<https://standards.iteh.ai/catalog/standards/sist/10db473c-1efc-4a72-a9ec-25e805bcd8cd/sist-hd-21-10-s2-2002>

HARMONIZATION DOCUMENT

HD 21.10 S2

DOCUMENT D'HARMONISATION

HARMONISIERUNGSDOKUMENT

September 2001

ICS 29.060.20

Supersedes HD 21.10 S1:1993

English version

**Polyvinyl chloride insulated cables of rated voltages
up to and including 450/750 V
Part 10: Extensible leads**

Conducteurs et câbles au polychlorure de
vinyle, de tension assignée au plus égale
à 450/750 V

Partie 10: Cordons extensibles

Polyvinylchlorid-isolierte Leitungen mit
Nennspannungen bis 450/750 V
Teil 10: Wendelleitungen

iTeh STANDARD PREVIEW
(standards.iteh.ai)

This Harmonization Document was approved by CENELEC on 2001-07-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this Harmonization Document on a national level.

Up-to-date lists and bibliographical references concerning such national implementation may be obtained on application to the Central Secretariat 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

HD 21 was originally adopted by CENELEC on 9 July 1975.

Edition 2 of HD 21 was implemented on 1 January 1984 and at that time, contained five parts.

Since 1984, new parts have been published and original parts amended.

This new edition of HD 21.10 provides a full updating as part of the regular maintenance programme that covers all Parts of HD 21.

HD 21 now has the following parts:

- HD 21.1 S3 - General requirements
- HD 21.2 S3 - Test methods
- HD 21.3 S3 - Non-sheathed cables for fixed wiring
- HD 21.4 S2 - Sheathed cables for fixed wiring (reprint)
- HD 21.5 S3 - Flexible cables (cords)
- HD 21.6 - (Spare)
- HD 21.7 S2 - Single core non-sheathed cables for internal wiring for a conductor temperature of 90 °C.
- HD 21.8 S2 - Single core non-sheathed cables for decorative chains
- HD 21.9 S2 - Single core non-sheathed cables for installation at low temperatures
- HD 21.10 S2 - Extensible leads
- HD 21.11 S1 - Cables for luminaires
- HD 21.12 S1 - Heat-resistant flexible cables (cords)
- HD 21.13 S1 - Oil resistant PVC sheathed cables with two or more conductors

This Harmonization Document was prepared by the Technical Committee CENELEC TC 20, Electric cables.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as HD 21.10 S2 on 2001-07-01.

The following dates were fixed:

- latest date by which the existence of the HD has to be announced at national level (doa) 2002-02-01
- latest date by which the HD has to be implemented at national level by publication of a harmonized national standard or by endorsement (dop) 2002-08-01
- latest date by which the national standards conflicting with the HD have to be withdrawn (dow) 2003-08-01

Contents

	Page
Foreword	2
1 Scope	4
2 Light PVC insulated and sheathed extensible leads	4
2.1 Code designation	4
2.2 Rated voltage	4
2.3 Construction: pre-coiling	4
2.4 Construction: post-coiling	5
2.5 Tests	5
2.6 Guide to use (informative)	5
3 Ordinary PVC insulated and sheathed extensible leads	9
3.1 Code designation	9
3.2 Rated voltage	9
3.3 Construction: pre-coiling	9
3.4 Construction: post-coiling	9
3.5 Tests	10
3.6 Guide to use (informative)	10
Annex A (normative) Normative references	14

SIST HD 21.10 S2:2002

<https://standards.iteh.ai/catalog/standards/sist/10db473c-1efc-4a72-a9ec-25e805bcd8cd/sist-hd-21-10-s2-2002>

iTech STANDARD PREVIEW
(standards.iteh.ai)

1 Scope

This part (Part 10) of the HD details the particular specifications for polyvinyl chloride insulated extensible leads.

All cables shall comply with the appropriate requirements given in Part 1 and the individual types of cable shall each comply with the particular requirements of this part.

NOTE 1 The overall dimensions of the cables in this part of HD 21, for the pre-coiled state, have been calculated in accordance with EN 60719.

NOTE 2 In order that this revision of Part 10 of HD 21 does not introduce unnecessary changes to long-established clause numbers, the normative references (which would otherwise be inserted as clause 2) are given in annex A.

2 Light PVC insulated and sheathed extensible leads

2.1 Code designation

H03VVH8-F for extensible leads derived from circular cords

H03VVH2H8-F for extensible leads derived from flat cords

2.2 Rated voltage

300/300 V

2.3 Construction: pre-coiling

2.3.1 Conductor

[SIST HD 21.10 S2:2002](https://standards.iteh.ai/catalog/standards/sist/10db473c-1efc-4a72-a9ec-25e805bcd8cd/sist-hd-21-10-s2-2002)

Number of conductors: 2 or 3. <https://standards.iteh.ai/catalog/standards/sist/10db473c-1efc-4a72-a9ec-25e805bcd8cd/sist-hd-21-10-s2-2002>

The conductors shall be in accordance with the requirements of Class 5, given in HD 383.

2.3.2 Insulation

The insulation shall be polyvinyl chloride compound of Type TI 2 applied around each conductor.

The insulation resistance shall be not less than the values given in Part 10, Table 1, column 4.

2.3.3 Assembly of cores

Circular cords for H03VVH8-F: the cores shall be twisted together.

Flat cords for H03VVH2H8-F: the cores shall be laid parallel.

2.3.4 Sheath

The sheath shall be polyvinyl chloride compound of Type TM 2 applied around the cores.

The sheath may fill the spaces between the cores, thus forming a filling, but it shall not adhere to the cores. The assembly of cores may be surrounded by a separator which shall not adhere to the cores.

2.3.5 Overall dimensions

The mean overall diameter of circular cords and the mean overall dimensions of flat cords shall be within the limits given in Part 10, Table 1, columns 2 and 3.

2.4 Construction: post-coiling

2.4.1 Configuration

The cables shall be coiled in the form of a helical lead and caused substantially to maintain this form during use.

2.4.2 Dimensions

The thickness of insulation shall comply with the specified values given in Part 10, Table 1, column 5. The requirements of 5.2.3 of Part 1 shall apply.

The thickness of sheath shall comply with the specified values given in Part 10, Table 1, column 6. The requirements of 5.5.3 of Part 1 shall apply.

Slight deformation of the cords, created by the coil forming process, is acceptable provided that the thickness of the insulation and sheath meet the requirements.

2.4.3 Marking

The original marking, if any, on the pre-coiled cord may be affected by the coiling process but this is acceptable provided that traceability is not impaired. The inclusion of the common marking (<HAR>) as part of any original marking is not to be taken as evidence that the extensible lead complies with clause 2 of Part 10 of this HD.

The producer of the extensible lead, if different from the producer of the pre-coiled cord, must apply an additional mark, as indication of origin, as required by 3.1.2 of Part 1 of this HD.

2.5 Tests

Compliance with the requirements 2.3 and 2.4 of Part 10 shall be checked by inspection and by the tests given in Part 10, Tables 2 and 3.

2.6 Guide to use (informative)

See HD 516.

Table 1 – General data for Types H03VVH8-F and H03VVH2H8-F

1	2	3	4	5	6
Pre-coiling			Post-coiling		
Number and nominal cross sectional area of conductors	Mean overall dimensions		Minimum insulation resistance at 70 °C	Thickness of insulation	Thickness of sheath
	Lower limit	Upper limit		Specified value	Specified value
mm ²	mm	mm	MΩ·km	mm	mm
2 x 0,5	4,6 or 3,0 x 4,9	5,9 or 3,7 x 5,9	0,011	0,5	0,6
2 x 0,75	4,9 or 3,2 x 5,2	6,3 or 3,8 x 6,3	0,010	0,5	0,6
3 x 0,5	4,9	6,3	0,011	0,5	0,6
3 x 0,75	5,2	6,7	0,010	0,5	0,6

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST HD 21.10 S2:2002
<https://standards.iteh.ai/catalog/standards/sist/10db472e-11f6-4e72-a9ee-25e805bcd8cd/sist-hd-21-10-s2-2002>

Table 2 – Pre-coiling tests for Types H03VVH8-F and H03VVH2H8-F

1	2	3	4	5
Ref No.	Test	Category of test	Test method described in	
			HD/EN	Clause
1	Electrical tests			
1.1	Resistance of conductors	T, S	21.2	2.1
1.2	Voltage test on cores at 1 500 V	T	21.2	2.3
1.3	Insulation resistance at 70 °C	T, S	21.2	2.4
1.4	Long term resistance of insulation to d.c.	T	21.2	2.5
1.5	Absence of faults on insulation	R	21.2	2.6
2	Provisions covering constructional and dimensional characteristics			
2.1	Checking of compliance with constructional provisions	T, S	21.1	Inspection and manual tests
2.2	Measurement of overall dimensions			
2.2.1	Mean value	T, S	21.2	1.11
2.2.2	Ovality	T, S	21.2	1.11
3	Mechanical properties of insulation			
3.1	Tensile test before ageing	T	60811-1-1	9.1
3.2	Tensile test after ageing	T	60811-1-2	8.1.3.1
3.3	Loss of mass test	T	60811-3-2	8.1
4	Mechanical properties of sheath			
4.1	Tensile test before ageing	T	60811-1-1	9.2
4.2	Tensile test after ageing	T	60811-1-2	8.1.3.1
4.3	Loss of mass	T	60811-3-2	8.2
5	Pressure test at high temperature			
5.1	Insulation	T	60811-3-1	8.1
5.2	Sheath	T	60811-3-1	8.2
6	Tests at low temperature			
6.1	Bending test for insulation	T	60811-1-4	8.1
6.2	Bending test for sheath	T	60811-1-4	8.2
6.3	Impact test	T	60811-1-4	8.5
7	Heat shock test			
7.1	Insulation	T	60811-3-1	9.1
7.2	Sheath	T	60811-3-1	9.2