SLOVENSKI STANDARD
SIST HD 21.9 S2:1998/A1:2000

01-september-2000

Kabli s polivinilkloridno izolacijo za naznačene napetosti do vključno 450/750 V - 9. del: Enožilni neoplaščeni kabli za polaganje pri nizkih temperaturah

Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 9: Single core non-sheathed cable for installation at low temperatures

Polyvinylchlorid-isolierte Leitungen mit Nennspannungen bis 450/750 V - Teil 9: Einadrige Leitungen ohne Mantel zur Verlegung bei tiefen Temperaturen

Conducteurs et câbles isolés au polychlorure de vinyle, de tension assignée au plus égale à 450/750 V - Partie 9: Conducteurs pour installations fixes à basse température

Ta slovenski standard je istoveten z: **HD 21.9 S2:1995/A1:1999**

ICS:

29.060.20 Kabli Cables

SIST HD 21.9 S2:1998/A1:2000 **en**

HARMONIZATION DOCUMENT

DOCUMENT D'HARMONISATION

HARMONISIERUNGSDOKUMENT

HD 21.9 S2/A1

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ICS 29.060.20
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English version

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Part 9: Single core non-sheathed cable for installation at low temperatures

Conducteurs et câbles isolés au polychlorure de vinyle, de tension assignée au plus égale à 450/750 V
Partie 9: Conducteurs pour installations fixes à basse température

Polyvinylchlorid-isolierte Leitungen mit Nennspannungen bis 450/750 V
Teil 9: Einadrige Leitungen ohne Mantel zur Verlegung bei tiefen Temperaturen

This amendment A1 modifies the Harmonization Document HD 21.9 S2:1995; it was approved by CENELEC on 1999-08-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this amendment 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 amendment 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

Ref. No. HD 21.9 S2:1995/A1:1999 E

Foreword

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

This amendment has been prepared within the regular maintenance programme which covers all parts of HD 21.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A1 to HD 21.9 S2:1995 on 1999-08-01.

The following dates were fixed:

- latest date by which the existence of the amendment has to be announced at national level (doa) 2000-02-01
- latest date by which the amendment has to be implemented at national level by publication of a harmonized national standard or by endorsement (dop) 2000-08-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2001-08-01

Sub-clauses 2.5 and 3.5

Amend the first line of each sub-clause to read:

"In addition to the general requirement of Part 1, sub-clause 3.1.1, a ....."

Add an additional sentence to each sub-clause to read:

"The additional marking "V3" shall be continuous, in accordance with Part 1, sub-clause 3.2"

Tables I, II, III and IV

Delete the existing Tables I, II, III and IV and replace as attached.

Table I

General data for Types H07V3-U and H07V3-R

1	2	3	4	5	6
Nominal cross-sectional area of conductors (mm²)	Class of conductor (HD 383)	Thickness of insulation Specified value (mm)	Mean overall diameter		Minimum insulation resistance at 70°C (MΩ.km)
			Lower limit (mm)	Upper limit (mm)	
1,5	1	0,7	2,6	3,2	0,011
1,5	2	0,7	2,7	3,3	0,010
2,5	1	0,8	3,2	3,9	0,010
2,5	2	0,8	3,3	4,0	0,0099
4	1	0,8	3,6	4,4	0,0087
4	2	0,8	3,8	4,6	0,0082
6	1	0,8	4,1	5,0	0,0074
6	2	0,8	4,3	5,2	0,0070
10	1	1,0	5,3	6,4	0,0072
10	2	1,0	5,6	6,7	0,0067
16	2	1,0	6,4	7,8	0,0056
25	2	1,2	8,1	9,7	0,0053
35	2	1,2	9,0	10,9	0,0046
50	2	1,4	10,6	12,8	0,0046
70	2	1,4	12,1	14,6	0,0040
95	2	1,6	14,1	17,1	0,0039
120	2	1,6	15,6	18,8	0,0035
150	2	1,8	17,3	20,9	0,0035
185	2	2,0	19,3	23,3	0,0035
240	2	2,2	22,0	26,6	0,0034
300	2	2,4	24,5	29,6	0,0033
400	2	2,6	27,5	33,2	0,0031

Table II

Tests for Types H07V3-U and H07V3-R

1	2	3	4	5
Ref. No.	Tests	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 at 2500V	T, S	21.2	2.2
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 thickness of insulation	T, S	21.2	1.9
2.3	Measurement of overall diameter	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.	Pressure test at high temperature	T	60811-3-1	8.1
5.	Tests at low temperature			
5.1	Bending test on insulation (1)	T	60811-1-4	8.1
5.2	Elongation test for insulation (2)	T	60811-1-4	8.3
5.3	Impact test for insulation	T	60811-1-4	8.5
6.	Heat shock test	T	60811-3-1	9.1
7.	Test under fire conditions	T	50265-2-1	-
(1)	Only applicable to cores having mean overall diameters up to and including 12,5mm			
(2)	Only applicable if the mean overall diameter of the core exceeds 12,5mm			

Table III

General data for Type H07V3-K

1	2	3	4	5
Nominal cross-sectional area of conductors (mm²)	Thickness of insulation Specified value (mm)	Mean overall diameter		Minimum insulation resistance at 70°C (MΩ.km)
		Lower limit (mm)	Upper limit (mm)	
1,5	0,7	2,8	3,4	0,010
2,5	0,8	3,4	4,1	0,0095
4	0,8	3,9	4,8	0,0078
6	0,8	4,4	5,3	0,0068
10	1,0	5,7	6,8	0,0065
16	1,0	6,7	8,1	0,0053
25	1,2	8,4	10,2	0,0050
35	1,2	9,7	11,7	0,0043
50	1,4	11,5	13,9	0,0042
70	1,4	13,2	16,0	0,0036
95	1,6	15,1	18,2	0,0036
120	1,6	16,7	20,2	0,0032
150	1,8	18,6	22,5	0,0032
185	2,0	20,6	24,9	0,0032
240	2,2	23,5	28,4	0,0031