

## SLOVENSKI STANDARD SIST HD 626 S1:1998/A2:2002

01-september-2002

### Nadzemni razvodni kabli za naznačeno napetost Uo/U(Um): 0,6/1 (1,2) kV

Overhead distribution cables of rated voltage Uo/U(Um): 0,6/1 (1,2) kV

Isolierte Freileitungsseile für oberirdische Verteilungsnetze mit Nennspannungen Uo/U (Um): 0,6/1 (1,2) kV

Câbles de distribution aérienne de tension assignée Uo/U(Um): 0,6/1 (1,2) kV (standards.iteh.ai)

Ta slovenski standard je istoveten z: HD 626 S1:1996/A2:2002

https://standards.iteh.ai/catalog/standards/sist/1791bf5a-b3dd-4aa8-8c6aec2bac0bc4e6/sist-hd-626-s1-1998-a2-2002

### ICS:

29.060.20 Kabli 29.240.20 Daljnovodi

Cables Power transmission and distribution lines

SIST HD 626 S1:1998/A2:2002

en

### HARMONIZATION DOCUMENT

# HD 626 S1/A2

### DOCUMENT D'HARMONISATION

HARMONISIERUNGSDOKUMENT

January 2002

ICS 29.060.20

English version

### Overhead distribution cables of rated voltage Uo/U(Um): 0,6/1 (1,2) kV

Câbles de distribution aérienne de tension assignée Uo/U(Um): 0,6/1 (1,2) kV Isolierte Freileitungsseile für oberirdische Verteilungsnetze mit Nennspannungen Uo/U(Um): 0,6/1 (1,2) kV

## iTeh STANDARD PREVIEW

This amendment A2 modifies the Harmonization, Document HD 626 S1:1996; it was approved by CENELEC on 2001-06-01. 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 two official versions (English, French).

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, 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

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#### Foreword

This amendment to Harmonization Document HD 626 S1:1996 has been prepared by WG 9 of CENELEC TC 20 "Electric Cables".

CENELEC TC 20 confirmed at its Stresa meeting (May 1999) that the amendment should go to the Unique Acceptance Procedure.

A list of additions and amendments to the particular sections of Parts 2, 4, 5 and 6 is given in this Part 0.

NOTE During the preparation of this amendment, IEC 502 (4th edition) has been replaced by IEC 60502-1 and -2 and HD 405.1 has been superseded by EN 50265.

In general, the updating of these references has <u>not</u> been included in this amendment unless a complete section has been introduced or replaced. Users should refer to these new editions for the most up-to-date information.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A2 to HD 626 S1:1996 on 2001-06-01.

The following dates were fixed:

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

### CONTENTS OF HD 626, HD 626/A1 AND HD 626/A2

PART 0	CONTENTS OF HD 626, HD 626/A1 AND HD 626/A2	A2	Withdrawn section and replaced by the new one
PART 1	GENERAL REQUIREMENTS	A1	Withdrawn section and replaced by the new one
PART 2	ADDITIONAL TEST METHODS	A2	Amended section

PART 3	PE INSULATED SELF SUPPORTING CABLES (bundle assembled cores)		
3 A	Bundle assembled cores for overhead distribution and service (Type 3A-1) - (Cables with aluminium conductors)	EW	
3 C	Bundle assembled cores for overhead distribution and service (Type 3C-1 and 3C-2) (Cables with aluminium (Type 3C-1) or with copper (Type 3C-2) phase conductors and aluminium neutral conductor)/sist-hd-626-s1-1998-a2-2002	- 4aa8-8c6a	l-
31	Bundle assembled cores for overhead service (Type 3 I-1) - (Cables with aluminium conductors)	-	
3 L	Bundle assembled cores for overhead distribution and service (Type 3L-1) - (Cables with aluminium conductors)	-	
PART 4	XLPE INSULATED SELF SUPPORTING CABLES (bundle assembled cores)		
4 B	Bundle assembled cores for overhead service (Types 4B-1 and 4B-2) - (Cables with aluminium conductors (Type 4B-1) or with copper conductors (Type 4B-2))	A2	Amended section
4 E	Bundle assembled cores for overhead service (Type 4E-1) - (Cables with aluminium conductors)	A2	Amended section
4 F	Bundle assembled cores for overhead distribution and service (Type 4F-1) - (Cables with aluminium conductors)	A1	Amended section
4 G	Bundle assembled cores for overhead distribution (Type 4G-1) - (Cables with aluminium conductors)	-	
4 J	Bundle assembled cores for overhead service (Types 4J-1 and 4J-2) - (Cables with aluminium conductors (Type 4J-1) or with copper conductors (Type 4J-2))	A2	Withdrawn section and replaced by the new one

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Bundle assembled cores for overhead service

(Type 4K-1) - (Cables with aluminium conductors)

4 K

4 M	Bundle assembled cores for overhead distribution and service (Type 4M-1) - (Cables with aluminium conductors)	A2	Amended section
4 N	Bundle assembled cores for overhead distribution (Type 4N-1) - ( <i>Cables with aluminium conductors</i> )	A2	Withdrawn section and replaced by the new one
PART 5	PE INSULATED CABLES WITH MESSENGER (bundle assembled cores)		
5 D	Bundle assembled cores for overhead distribution and service (Type 5D-1) - ( <i>Cables with aluminium phase</i> <i>conductors and uninsulated aluminium alloy neutral</i> <i>conductor</i> )	A2	Withdrawn section and replaced by the new one
51	Bundle assembled cores for overhead service (Type 5I-1) - (Cables with aluminium phase conductors and stranded steel messenger alloy neutral conductor)	-	
PART 6	XLPE INSULATED CABLES WITH MESSENGER (bundle assembled cores) ANDARD PREVI	EW	
6 B	Bundle assembled cores for overhead distribution (Type 6B-1) - (Cables with aluminium phase conductors and aluminium alloy neutral conductor)	A2	Amended section
6 D	Bundle assembled cores for overhead distribution and service (Type 6D-1) c2b (Cables with aluminium phase) conductors and aluminium alloy neutral conductor)	4a <b>£2</b> 8c6a	-Withdrawn section and replaced by the new one
6 E	Bundle assembled cores for overhead distribution (Type 6E-1) - (Cables with aluminium phase conductors and aluminium alloy neutral conductor)	A2	Amended section
6 J	Bundle assembled cores for overhead distribution (Type 6J-1) - (Cables with aluminium phase conductors and aluminium alloy neutral conductor)	A2	Withdrawn section and replaced by the new one
6 K	Bundle assembled cores for overhead distribution (Type 6K-1) - (Cables with aluminium phase conductors and aluminium alloy neutral conductor)	-	
6 N	Bundle assembled cores for overhead distribution (Type 6N-1) - ( <i>Cables with aluminium phase conductors</i> <i>and aluminium alloy neutral conductor</i> )	A2	Amended section

# PART 7 XLPE INSULATED AND SHEATHED SELF SUPPORTING CABLES (bundle assembled cores)

7 H Bundle assembled cores for overhead distribution and service (type 7H), Self supporting XLPE insulated cables -(Cables with tinned copper phase conductors and tinned copper neutral conductor)

### PART 8 XLPE INSULATED AND PVC SHEATHED CABLES WITH MESSENGER (bundle assembled cores)

8 H Bundle assembled cores for overhead distribution and service (type 8H), Neutral conductor messenger XLPE insulated cables - (*Cables with aluminium phase* conductors and aluminium alloy neutral conductor)

### PART 9 SINGLE CORE CABLES

- 9 F Single cores for overhead distribution and service A1 New section (Type 9F-1) - (XLPE insulated core with aluminium conductors) **iTeh STANDARD PREVIEW**
- 9 G Single cores for overhead distribution and service A1 New section (Type 9G-1) (*XLPE insulated core with aluminium conductors*)
- 9 I Single cores for overhead distribution and service A1 New section (Type 9I-1) (*PE insulated core with aluminium conductors*)
- 9N Single cores for overhead distribution (Type 9N-1 and A1 New section Type 9N-2) - (EPR insulated and PCP sheath cables with aluminium conductors Type 9N-1 or with copper conductors Type 9N-2)

#### PART 10 SERVICE CABLES WITH CONCENTRIC NEUTRAL CONDUCTOR

10 N Single core and three cores service cables with concentric A1 New section neutral conductor (Type 10N) -(*Cables with tinned copper phase conductors and tinned copper concentric neutral conductor*)

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### CONTENTS OF HD 626/A1

PART 0 (new)

### **PART 1 GENERAL REQUIREMENTS** (complete part with new pages 3, 8, 9, 16, 17)

# PART 4 XLPE INSULATED SELF SUPPORTING CABLES (bundle assembled cores)

4 F Bundle assembled cores for overhead distribution and A1 Amended pages 4 service (Type 4F-1) - (Cables with aluminium conductors). and 5 (amendment to pages 4-F and 5-F)

#### PART 9 SINGLE CORE CABLES (new)

- 9 F Single cores for overhead distribution and service A1 New section (Type 9F-1) - (XLPE insulated core with aluminium conductors) iTeh STANDARD PREVIEW
- 9 G Single cores for overhead distribution and service A1 New section (Type 9G-1) (XLPE (insulated core with caluminium conductors)
- 9 I Single cores for overhead distribution 9 and 2 service A1 New section (Type 9I-1) ttps://stpErdsinsulated coredarwith 1/1 aluminiumId-4aa8-8c6aconductors) ec2bac0bc4e6/sist-hd-626-s1-1998-a2-2002
- 9 N Single cores for overhead distribution (Type 9N-1 and A1 New section Type 9N-2) - (EPR insulated and PCP sheath cables with aluminium conductors Type 9N-1 or with copper conductors Type 9N-2)

### PART 10 SERVICE CABLES WITH CONCENTRIC NEUTRAL CONDUCTOR (new)

10 N Single core and three cores service cables with concentric A1 New section neutral conductor (Type 10N-1) - (Cables with tinned copper phase conductors and tinned copper concentric neutral conductor)

NOTE During the preparation of amendment 1 to HD 626, HD 505 (Sections 1.1 to 4.1 inclusive) has been replaced by EN 60811 (Sections 1-1 to 4-1 inclusive).

In general, the updating of these references has <u>not</u> been included in this amendment unless a complete section has been introduced or replaced but users should refer to EN 60811 for the most up-to-date information. The clause numbers for the test methods in EN 60811 are identical to those in HD 505.

### CONTENTS OF HD 626/A2

PART 0	CONTENTS OF HD 626 and HD 626/A1	A2	Withdrawn section and replaced by the new one
PART 2	ADDITIONAL TEST METHODS	A2	Amended section
PART 4	XLPE INSULATED SELF SUPPORTING CABLES (bundle assembled cores)		
4 B	Bundle assembled cores for overhead service (Types 4B-1 and 4B-2) - (Cables with aluminium conductors (Type 4B-1) or with copper conductors (Type 4B-2))	A2	Amended section
4 E	Bundle assembled cores for overhead service (Type 4E-1) - (Cables with aluminium conductors)	A2	Amended section
4 J	Bundle assembled cores for overhead service (Types 4J-1 and 4J-2) - (Cables with aluminium conductors (Type 4J-1) or with copper conductors (Type 4J-2))	E <sub>A2</sub>	Withdrawn section and replaced by the new one
4 M	Bundle assembled cores <u>for overhead distribution</u> and service (Type AMn1) rd (Cables with aluminium conductors) d-4	A2 4aa8-8c6a	Amended section
4 N	ec2bac0bc4e6/sist-hd-626-s1-1998-a2-2002 Bundle assembled cores for overhead distribution (Type 4N-1)	A2	Withdrawn section and replaced by the new one
PART 5	PE INSULATED CABLES WITH MESSENGER (bundle assembled cores)		
5 D	Bundle assembled cores for overhead distribution and service (Type 5D-1) - (Cables with aluminium phase conductors and uninsulated aluminium alloy neutral conductor)	A2	Withdrawn section and replaced by the new one
PART 6	XLPE INSULATED CABLES WITH MESSENGER (bundle assembled cores)		
6 B	Bundle assembled cores for overhead distribution (Type 6B-1) - (Cables with aluminium phase conductors and aluminium alloy neutral conductor)	A2	Amended section
6 D	Bundle assembled cores for overhead distribution and service (Type 6D-1) - (Cables with aluminium phase conductors and aluminium alloy neutral conductor)	A2	Withdrawn section and replaced by the new one
6 E	Bundle assembled cores for overhead distribution (Type 6E-1) - (Cables with aluminium phase conductors and aluminium alloy neutral conductor)	A2	Amended section

- 6 JBundle assembled cores for overhead distribution<br/>(Type 6J-1) (Cables with aluminium phase conductors<br/>and aluminium alloy neutral conductor)A2Withdrawn section and<br/>replaced by the new<br/>one
- 6 N Bundle assembled cores for overhead distribution A2 Amended section (Type 6N-1)

### HD 626 - BUNDLE ASSEMBLED CORES FOR OVERHEAD DISTRIBUTION AND SERVICE

### PART 2 - ADDITIONAL TEST METHODS

Replace the pages:

2-9, 2-13, 2-14, 2-15, 2-16, 2-19, 2-32, 2-34, 2-35 and 2-36

by the following A2 referred pages:

### 2-9, 2-13, 2-14, 2-15, 2-16, 2-19, 2-32, 2-32-a, 2-32-b, 2-32-c, 2-34, 2-35 and 2-36 (standards.iteh.ai)

### 4 Test procedure

- 1 Adjusting the clamp by a gradual application for about 30 s of the tensile stress F till 680 daN.
- 2 The tensile stress of 680 daN is maintained during 15 min.
- 3 Measure the eventual conductor length L, which could appear between the reference mark and the insulation.

5 Test results

After 15 minutes under load

- if  $L \le 1$  mm, the test is considered as satisfactory,
- if L > 1 mm, 2 new tests must be made.

The material is considered as satisfactory if the 2 complementary tests have a value result of  $L \le 1 \text{ mm}$ .

### 2.2.2 Testing of adherence of insulation on messenger conductor (Method 2)

The test shall be carried out on the messenger after pre-conditioning in air oven at 120°C for 1 hour according to clause 8 of EN 60811-1-2, followed by a natural cooling of at least 16 h at ambient temperature. The preconditioning at 120°C is optional but in case of doubt, this preconditioning shall be performed.

SIST HD 626 S1:1998/A2:2002Test procedurehttps://standards.iteh.ai/catalog/standards/sist/1791bf5a-b3dd-4aa8-8c6a-<br/>ec2bac0bc4e6/sist-hd-626-s1-1998-a2-2002

This test shall be carried out according to Figure 2.2.2.1.

The device shall still be capable of rotating, such rotation shall be made easier by a ball-bearing so as not to impair the slipping-out of the grips according to the lay of pitch.

Six test pieces shall be taken and shall be evenly distributed over a length of at least 10 m.

Both the size and shape of test pieces are defined in Figure 2.2.2.1.

The tensile rate shall be  $(2 \pm 1)$  cm/min and one shall measure the stress T<sub>g</sub> required initiating the sliding of the conductor in its sheath.

#### Results to be obtained

For all test-pieces, the minimum value of  $T_g$  shall be greater or equal to 18 daN or to the values given in the particular section.





### 2.2.5 Testing of adherence of insulation on messenger conductor (Method 5)

The test shall be carried out on the messenger after pre-conditioning in air oven at 120°C for 1 hour according to clause 8 of EN 60811-1-2, followed by a natural cooling of at least 16 h at ambient temperature. The preconditioning at 120°C is optional but in case of doubt this preconditioning shall be performed.

### **Test procedure**

This test shall be carried out according to the diagram shown in Figure 2.2.5.1.

The reference anchor is given in Figure 2.3.1.2.