
Električni kabli - Nizkonapetostni energetska kabli z nazivno napetostjo do vključno 450/750 V (U0/U) - 2-31. del: Kabli za splošno uporabo - Enožilni neoplaščeni kabli s termoplastično PVC izolacijo

Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-31: Cables for general applications - Single core non-sheathed cables with thermoplastic PVC insulation

Kabel und Leitungen - Starkstromleitungen mit Nennspannungen bis 450/750 V (U0/U) - Teil 2-31: Starkstromleitungen für allgemeine Anwendungen - Ader- und Verdrahtungsleitungen mit thermoplastischer PVC-Isolierung

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Câbles électriques - Câbles d'énergie basse tension de tension assignée au plus égale à 450/750 V (U0/U) - Partie 2-31: Câbles pour applications générales - Conducteurs isolés en PVC thermoplastique

Ta slovenski standard je istoveten z: EN 50525-2-31:2011

ICS:

29.060.20 Kabli Cables

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50525-2-31

May 2011

ICS 29.060.20

Supersedes HD 21.3 S3:1995 + A1:1999 + A2:2008, HD 21.7 S2:1996 + A1:1999

English version

**Electric cables -
Low voltage energy cables of rated voltages up to and including 450/750 V
(U_0/U) -
Part 2-31: Cables for general applications -
Single core non-sheathed cables with thermoplastic PVC insulation**

Câbles électriques -
Câbles d'énergie basse tension de tension
assignée au plus égale à 450/750 V
(U_0/U) -
Partie 2-31: Câbles pour applications
générales -
Conducteurs isolés en PVC
thermoplastique

Kabel und Leitungen -
Starkstromleitungen mit Nennspannungen
bis 450/750 V (U_0/U) -
Teil 2-31: Starkstromleitungen für
allgemeine Anwendungen -
Ader- und Verdrahtungsleitungen mit
thermoplastischer PVC-Isolierung

SIST EN 50525-2-31:2011

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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 50525-2-31 on 2011-01-17.

This document, which is one of a multipart series, supersedes HD 21.3 S3:1995 + A1:1999 + A2:2008 and HD 21.7 S2:1996 + A1:1999.

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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Contents

	Page
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 General purpose cable	5
4.1 Cables for fixed wiring – H07V-U and H07V-R	5
4.2 Cables for fixed wiring – H07V-K.....	5
4.3 Cables for internal wiring – H05V-U and H05V-R	6
4.4 Cables for internal wiring – H05V-K	6
5 Heat resistant cables (90 °C)	7
5.1 Cables for fixed wiring – H07V2-U and H07V2-R.....	7
5.2 Cables for fixed wiring – H07V2-K.....	8
5.3 Cables for internal wiring – H05V2-U and H05V2-R	8
5.4 Cables for internal wiring – H05V2-K.....	9
Annex A (normative).....	10
Tests for cables to EN 50525-2-31	10
Annex B (normative).....	11
General data	11
Bibliography	14

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Tables

Table A.1.....	10
Table B.1 — Cables with rigid conductor (450/750 V).....	11
Table B.2 — Cables with flexible conductor (450/750 V).....	12
Table B.3 — Cables with rigid conductor (300/500 V).....	12
Table B.4 — Cables with flexible conductors (300/500 V).....	13

1 Scope

EN 50525-2-31 applies to non-sheathed single core cables insulated with thermoplastic (PVC) insulation.

The cables are of rated voltages U_0/U up to and including 450/750 V.

The cables are intended for fixed wiring applications.

NOTE 1 Cables rated 450/750 V may be used at 600/1 000 V when this cable is used in fixed installations with mechanical protection, within switchgear and control gear - see HD 516.

The maximum conductor operating temperatures for the cables in this standard are 70 °C (V types) and 90 °C (V2 types).

NOTE 2 HD 516 contains extensive guidance on the safe use of cables in this standard.

This EN 50525-2-31 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 60811-1-4:1985 + A1:1993 + corr. May 1986)

3 Terms and definitions

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

4 General purpose cable

4.1 Cables for fixed wiring – H07V-U and H07V-R

4.1.1 Construction

4.1.1.1 Conductor

The conductor shall be class 1 or class 2, according to EN 60228.

4.1.1.2 Sizes of cable

The sizes of cable shall be:

- class 1 – 1,5 mm² to 10 mm²;
- class 2 – 1,5 mm² to 1 000 mm².

4.1.1.3 Insulation

The insulation shall be polyvinyl chloride compound of Type TI 1 to EN 50363-3 applied around the conductor.

4.1.1.4 Marking

The cable shall be marked with the CENELEC code H07V-U for cables with class 1 conductor, or H07V-R for cables with class 2 conductor. The marking shall comply with Clause 6 of EN 50525-1.

4.1.2 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, and the relevant tests indicated in column 6.

The dimensions of the cables shall conform to Table B.1 for the relevant size.

4.2 Cables for fixed wiring – H07V-K

4.2.1 Construction

4.2.1.1 Conductor

The conductor shall be class 5 according to EN 60228.

4.2.1.2 Sizes of cable

The sizes of cable shall be 1,5 mm² to 240 mm².

4.2.1.3 Insulation

The insulation shall be polyvinyl chloride compound of Type TI 1 to EN 50363-3 applied around the conductor.

4.2.1.4 Marking

The cable shall be marked with the CENELEC code H07V-K. The marking shall comply with Clause 6 of EN 50525-1.

4.2.2 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, and the relevant tests indicated in column 7.

The dimensions of the cables shall conform to Table B.2 for the relevant size.

4.3 Cables for internal wiring – H05V-U and H05V-R

4.3.1 Construction

4.3.1.1 Conductor

The conductor shall be class 1 or class 2, according to EN 60228.

4.3.1.2 Sizes of cable

The sizes of cable shall be:

- class 1 – 0,5 mm² to 1 mm²;
- class 2 – 0,5 mm² to 1 mm².

4.3.1.3 Insulation

The insulation shall be polyvinyl chloride compound of Type TI 1 to EN 50363-3 applied around the conductor.

4.3.1.4 Marking

The cable shall be marked with the CENELEC code H05V-U for cables with class 1 conductor, or H05V-R for cables with class 2 conductor. The marking shall comply with Clause 6 of EN 50525-1.

4.3.2 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, and the relevant tests indicated in column 8.

The dimensions of the cables shall conform to Table B.3 for the relevant size.

4.4 Cables for internal wiring – H05V-K

4.4.1 Construction

4.4.1.1 Conductor

The conductor shall be class 5 according to EN 60228.

4.4.1.2 Sizes of cable

The sizes of cable shall be 0,5 mm² to 1 mm².

4.4.1.3 Insulation

The insulation shall be polyvinyl chloride compound of Type TI 1 to EN 50363-3 applied around the conductor.

4.4.1.4 Marking

The cable shall be marked with the CENELEC code H05V-K. The marking shall comply with Clause 6 of EN 50525-1.

4.4.2 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, and the relevant tests indicated in column 9.

The dimensions of the cables shall conform to Table B.4 for the relevant size.

5 Heat resistant cables (90 °C)

5.1 Cables for fixed wiring – H07V2-U and H07V2-R

5.1.1 Construction

5.1.1.1 Conductor

The conductor shall be class 1 or class 2, according to EN 60228.

5.1.1.2 Sizes of cable

The sizes of cable shall be:

- class 1 – 1,5 mm² to 10 mm²;
- class 2 – 1,5 mm² to 35 mm².

5.1.1.3 Insulation

The insulation shall be polyvinyl chloride compound of Type TI 3 to EN 50363-3 applied around the conductor.

5.1.1.4 Marking

The cable shall be marked with the CENELEC code H07V2-U for cables with class 1 conductor, or H07V2-R for cables with class 2 conductor. The marking shall comply with Clause 6 of EN 50525-1.

5.1.2 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, and the relevant tests indicated in column 10.