

**Kaablid ja juhtmed. Madalpingelised tugevoolujuhtmed
nimipingega kuni 450/750 V (U₀/U). Osa 2-21:
Üldtarbejuhtmed. Võrkelaastomeerisolatsiooniga
paindjuhtmed**

Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U₀/U) - Part 2-21: Cables for general applications - Flexible cables with crosslinked elastomeric insulation

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English version

**Electric cables -
Low voltage energy cables of rated voltages up to and including 450/750 V
(U_0/U) -
Part 2-21: Cables for general applications -
Flexible cables with crosslinked elastomeric insulation**

Câbles électriques -
Câbles d'énergie basse tension de tension
assignée au plus égale à 450/750 V
(U_0/U) -
Partie 2-21: Câbles pour applications
générales -
Câbles souples isolés en matériau
élastomère réticulé

Kabel und Leitungen -
Starkstromleitungen mit Nennspannungen
bis 450/750 V (U_0/U) -
Teil 2-21: Starkstromleitungen für
allgemeine Anwendungen -
Flexible Leitungen mit vernetzter
Elastomer-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 accepted by CENELEC as EN 50525-2-21 on 2011-01-17.

This document, which is one of a multipart series, supersedes HD 22.4 S4:2004, HD 22 10 S2:2007, HD 22.11 S2:2007, HD 22.12 S2:2007, HD 22.16 S2:2007.

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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with the EN have to be withdrawn (dow) 2014-01-17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

EN 50525-2-21 applies to flexible cables, insulated with crosslinked elastomeric compound, and sheathed with either crosslinked elastomeric compound or thermoplastic polyurethane (TPU).

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

The cables are intended for a variety of applications where appliances or equipment, including heavy industrial equipment, require a flexible connection to the power supply.

The maximum conductor operating temperatures for the cables in this standard are 60 °C (R types), 90 °C (B types) and 110 °C (G types).

The following particular cable types are included:

- General purpose cables (RR and RN types);
- Water-resistant cables (RN8 types);
- General purpose cables (BR and BN4 types);
- TPU sheathed cables (BQ types);
- Heat resistant cables (GG types).

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

This EN 50525-2-21 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 50363-1	Insulating, sheathing and covering materials for low voltage energy cables - Part 1: Cross-linked elastomeric insulating compounds
EN 50363-2-1	Insulating, sheathing and covering materials for low voltage energy cables - Part 2-1: Cross-linked elastomeric sheathing compounds
EN 50363-10-2	Insulating, sheathing and covering materials for low voltage energy cables - Part 10-2: Miscellaneous sheathing compounds - Thermoplastic polyurethane
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 60811-1-1	Insulating and sheathing materials of electric and optical cables - Common test methods - Part 1-1: General application - Measurement of thickness and overall dimensions - Tests for determining the mechanical properties (IEC 60811-1-1)
EN 60811-1-2	Insulating and sheathing materials of electric and optical cables - Common test methods - Part 1-2: General application - Thermal ageing methods (IEC 60811-1-2)
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 General purpose cables

4.1 Ordinary duty cables – H05RR-F

4.1.1 Construction

4.1.1.1 Conductor

The conductor shall be class 5, according to EN 60228.

4.1.1.2 Sizes of cable

The sizes of cable shall be:

- 2 and 5 core – 0,75 mm² to 4 mm²;
- 3 and 4 core – 0,75 mm² to 6 mm².

4.1.1.3 Insulation

The insulation shall be a cross-linked elastomeric compound, Type EI 4 to EN 50363-1, applied around each conductor.

4.1.1.4 Assembly

The cores shall be twisted together.

NOTE 1 A centre filler may be used.

NOTE 2 A tape may be applied around the core assembly before application of the sheath.

4.1.1.5 Sheath

The sheath shall be a cross-linked elastomeric compound of Type EM 3 to EN 50363-2-1.