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Flat flexible cables

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/24

Obsahuje: EN 50214:2024

Oznámením tejto normy sa od 27.05.2027 ruší
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50214

June 2024

ICS 29.035.20; 29.060.20

Supersedes EN 50214:2006; EN 50214:2006/corrigendum Dec. 2007

English Version

Flat flexible cables

Câbles souples méplats

Flache flexible Leitung

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

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Ref. No. EN 50214:2024 E

Contents

Page

European foreword

This document (EN 50214:2024) has been prepared by CLC/TC 20 “Electric cables”.

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2025-05-27
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2027-05-27

This document supersedes EN 50214:2006 and all of its amendments and corrigenda (if any).

EN 50214:2024 includes the following significant technical changes with respect to EN 50214:2006:

— Halogen-free insulated and sheathed flat cables are included.

— The cable may consist of power cores, control cores or communication units or combination of them.

— Clause 5 describes only flat sheathed flexible cables for lifts, assembled in single layer.

— Clause 6 describes only flat sheathed flexible cables for lifts, assembled in bundles and units

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZZ, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national committee. A complete listing of these bodies can be found on the CENELEC website.

1 Scope

This document covers the construction, requirements and particular test methods for flat, flexible PVC or halogen-free insulated and sheathed cables, of rated voltage U_o/U 300/500 V and above 1 mm^2, U_o/U 450/750 V for use in passenger and goods lifts (elevators), and U_o/U 450/750 V for general purposes and for special applications such as hoists and travelling cranes.

NOTE 1 This revision is in accordance with an agreement with CEN TC 10 to specify in the same standard a) flexible cables for lifts as required by EN 81 series, and b) flexible cable for applications such as hoists and travelling cranes, previously found in HD 359. In accordance with this agreement, only those cables in Clauses 5 and 6 are suitable for use with EN 81 series.

NOTE 2 The limits for the overall diameter of the cables have been calculated in accordance with EN 60719.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 50334:2001, *Marking by inscription for the identification of cores of electric cables*

EN 50363-3:2005,[1] *Insulating, sheathing and covering materials for low voltage energy cables - Part 3: PVC insulating compounds*

EN 50363-4-1:2005, *Insulating, sheathing and covering materials for low voltage energy cables - Part 4-1: PVC sheathing compounds*

EN 50363-5:2005,[2] *Insulating, sheathing and covering materials for low voltage energy cables - Part 5: Halogen-free, cross-linked insulating compounds*

EN 50363-7:2005, *Insulating, sheathing and covering materials for low voltage energy cables - Part 7: Halogen-free, thermoplastic insulating compounds*

EN 50363-8:2005,[3] *Insulating, sheathing and covering materials for low voltage energy cables - Part 8: Halogen-free, thermoplastic sheathing compounds*

EN 50395:2005,[4] *Electrical test methods for low voltage energy cables*

EN 50396:2005,[5] *Non electrical test methods for low voltage energy cables*

EN 50525-1:2011,[6] *Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 1: General requirements*

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[1] As impacted by EN 50363-3:2005/A1:2011.

[2] As impacted by EN 50363-5:2005/A1:2011.

[3] As impacted by EN 50363-8:2005/A1:2011.

[4] As impacted by EN 50395:2005/A1:2011.

[5] As impacted by EN 50396:2005/A1:2011.

[6] As impacted by EN 50525-1:2011/A1:2022.

EN 50565-1:2014, *Electric cables - Guide to use for cables with a rated voltage not exceeding 450/750 V (U0/U) - Part 1: General guidance*

EN 60228:2005,[7] *Conductors of insulated cables*

EN 60332-1-2:2004,[8] *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*

EN IEC 60332-3-24:2018, *Tests on electric and optical fibre cables under fire conditions - Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category C*

EN IEC 60754-3:2019, *Test on gases evolved during combustion of materials from cables - Part 3: Measurement of low level of halogen content by ion chromatography*

EN 60811-409:2012, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 409: Miscellaneous tests - Loss of mass test for thermoplastic insulations and sheaths*

EN 60811-501:2012,[9] *Electric and optical fibre cables - Test methods for non-metallic materials - Part 501: Mechanical tests - Tests for determining the mechanical properties of insulating and sheathing compounds*

EN 60811-502:2012, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 502: Mechanical tests - Shrinkage test for insulations*

EN 60811-504:2012, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 504: Mechanical tests - Bending tests at low temperature for insulation and sheaths*

EN 60811-505:2012, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 505: Mechanical tests - Elongation at low temperature for insulations and sheaths*

EN 60811-506:2012, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 506: Mechanical tests - Impact test at low temperature for insulations and sheaths*

EN 60811-507:2012, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 507: Mechanical tests - Hot set test for cross-linked materials*

EN 60811-509:2012, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 509: Mechanical tests - Test for resistance of insulations and sheaths to cracking (heat shock test)*

EN 61034-2:2005,[10] *Measurement of smoke density of cables burning under defined conditions - Part 2: Test procedure and requirements*

HD 308 S2:2001, *Identification of cores in cables and flexible cords*

HD 60364-5-52:2011,[11] *Low-voltage electrical installations — Part 5-52. Selection and erection of electrical equipment — Wiring systems (IEC 60364-5-52:2009, modified)*

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[7] As impacted by EN 60228:2005/corrigendum May 2005.

[8] As impacted by EN 60332-1-2:2004/A1:2015, EN 60332-1-2:2004/A11:2016 and EN 60332-1-2:2004/A12:2020.

[9] As impacted by EN 60811-501:2012/A1:2018.

[10] As impacted by EN 61034-2:2005/A1:2013 and EN 61034-2:2005/A2:2020.

[11] As impacted by HD 60364-5-52:2011/A11:2017.

IEC 60227-6:2001, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V — Part 6: Lift cables and cables for flexible connections*

IEC 61156-6:2020, *Multicore and symmetrical pair/quad cables for digital communications — Part 6: Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz — Work area wiring — Sectional specification*

ISO 11898-1:2015, *Road vehicles — Controller area network (CAN) — Part 1: Data link layer and physical signalling*