ICS 29.060.01, 29.240.20 SLOVENSKÁ TECHNICKÁ NORMA August 2022

STN	**Vodiče na vonkajšie vedenie Vodiče z koncentricky zlanovaných kruhových drôtov z hliníka a zliatin hliníka**	**STN EN IEC 62641 34 7504**

Conductors for overhead lines - Aluminium and aluminium alloy wires for concentric lay stranded conductors

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. 07/22

Obsahuje: EN IEC 62641:2022, IEC 62641:2022

Oznámením tejto normy sa od 11.04.2025 ruší
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62641

May 2022

ICS 29.060.01; 29.240.20

Supersedes EN 62004:2009, EN 50183:2000, EN 60889:1997

English Version

Conductors for overhead lines - Aluminium and aluminium alloy wires for concentric lay stranded conductors (IEC 62641:2022)

Conducteurs pour lignes aériennes - Fils d'aluminium et en alliage d'aluminium pour conducteurs toronnés à couches concentriques
(IEC 62641:2022)

Leiter für Freileitungen - Drähte aus Aluminium und Aluminiumlegierung für Leiter aus konzentrisch verseilten Drähten
(IEC 62641:2022)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 62641:2022 E

European foreword

The text of document 7/713/FDIS, future edition 1 of IEC 62641, prepared by IEC/TC 7 "Overhead electrical conductors" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62641:2022.

The following dates are fixed:

•	latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop) 2023-04-11
•	latest date by which the national standards conflicting with the document have to be withdrawn	(dow) 2025-04-11

This document supersedes EN 62004:2009, EN 50183:2000 and EN 60889:1997 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 62641:2022 was approved by CENELEC as a European Standard without any modification.

IEC 62641

Edition 1.0 2022-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Conductors for overhead lines – Aluminium and aluminium alloy wires for concentric lay stranded conductors

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IEC 62641:2022-03(en-fr)

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CONDUCTORS FOR OVERHEAD LINES – ALUMINIUM AND ALUMINIUM ALLOY WIRES FOR CONCENTRIC LAY STRANDED CONDUCTORS

FOREWORD

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IEC 62641 has been prepared by IEC technical committee 7: Overhead electrical conductors. It is an International Standard.

This first edition cancels and replaces the second edition of IEC 60104 published in 1987, the first edition of IEC 60121 published in 1960, the first edition of IEC 60889 published in 1987, and the first edition of IEC 62004 published in 2007. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous editions of IEC 60104, IEC 60121, IEC 60889 and IEC 62004:

a) designations of aluminium alloys are modified;
b) aluminium alloys A4, AL4 and AL5 are added;
c) wire diameter ranges for indicating mechanical properties are modified and extended;
d) test methods are merged.

The text of this International Standard is based on the following documents:

Draft	Report on voting
7/713/FDIS	7/721/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

The purpose of this document is threefold.

First, it is to group together similar wire materials that share the same general characteristics and therefore the same test procedures and requirements. These wires are existing aluminium and aluminium alloy wires from IEC 60104, IEC 60121, IEC 60889 and IEC 62004 as well as from EN 50183.

Secondly, this format allows an easier standard maintenance, as multiple wire materials are covered by a single document instead of separate documents.

Thirdly, this document indicates the most used wire materials worldwide, based on the cooperation agreement between IEC and CENELEC, an IEC questionnaire in 2017 (7/672/Q, Annex A) and a CENELEC questionnaire (7X/SEC0056/CC). The standardized materials form a good basis which can be extended by others used in regions and countries.

CONDUCTORS FOR OVERHEAD LINES – ALUMINIUM AND ALUMINIUM ALLOY WIRES FOR CONCENTRIC LAY STRANDED CONDUCTORS

1 Scope

This document specifies the mechanical and electrical properties of round and formed wires for equivalent diameters up to the values according to Table 3 for aluminium and aluminium alloys and according to Table 4 for thermal resistant alloys. This document is applicable to aluminium and aluminium alloy wires for the manufacture of concentric lay overhead electrical stranded conductors with or without gap(s) for power transmission purposes.

The various materials and their designations are listed in Table 1. For calculation purposes, the values listed in Table 1 are used.

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.

IEC 60050 (all parts), *International Electrotechnical Vocabulary (IEV)* (available at www.electropedia.org)

IEC 60468, *Method of measurement of resistivity of metallic materials*

IEC TR 61597, *Overhead electrical conductors – Calculation methods for stranded bare conductors*

ISO 6892-1, *Metallic materials – Tensile testing – Part 1: Method of test at room temperature*

ISO 7801, *Metallic materials – Wires – Reverse bend test*

ISO 7802, *Metallic materials – Wires – Wrapping test*