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IEC 62420

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# INTERNATIONAL STANDARD

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**Concentric lay stranded overhead electrical conductors containing one or more gap(s)**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

PRICE CODE

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## CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references .....	6
3 Terms and definitions .....	6
4 Designation system .....	8
5 Requirements for stranded conductors .....	8
5.1 Material.....	8
5.2 Conductor sizes .....	8
5.3 Surface .....	8
5.4 Stranding .....	8
5.4.1 General .....	8
5.4.2 Lay ratio for core wires .....	8
5.4.3 Lay ratio for aluminium layer(s) .....	9
5.4.4 Joints .....	9
5.4.5 Linear mass.....	9
5.4.6 Conductor strength .....	10
6 Tests.....	10
6.1 Classification of tests .....	10
6.2 Type Tests .....	10
6.2.1 Length of sample required .....	10
6.2.2 Joints in aluminium wires.....	10
6.2.3 Annular gap(s).....	10
6.2.4 Stress-strain curves.....	11
6.2.5 Breaking strength of conductor .....	11
6.2.6 Creep curves.....	11
6.3 Sample tests .....	11
6.3.1 Cross-sectional area.....	12
6.3.2 Overall diameter .....	12
6.3.3 Linear mass.....	12
6.3.4 Surface condition.....	12
6.3.5 Lay ratio and direction of lay.....	12
6.3.6 Breaking strength of wires after stranding (if requested) .....	13
6.3.7 Wire canting on the outside layer (if requested) .....	13
7 Inspection.....	13
7.1 Test location .....	13
7.2 Acceptance or rejection .....	13
8 Packaging and marking .....	14
8.1 Packaging .....	14
8.2 Marking and tare .....	14
8.3 Random lengths .....	14
Annex A (normative) Information to be supplied by purchaser .....	18
Annex B (normative) Stress-strain test method .....	19
Annex C (normative) Nominal mass of grease for stranded conductors .....	22

Annex D (informative) Alternate method of measuring the gap(s) within the conductor.....	25
Annex E (informative) Recommended conductor sizes and tables of conductor properties .....	26
Figure 1 – Examples of conductors containing one or more gaps .....	16
Figure 2 – Method of measuring wire canting .....	17
Figure C.1 – Illustration for calculation of mass of grease in round wire layer (s) .....	22
Figure C.2 – Illustration of calculation of mass of grease for core layer(s).....	23
Figure C.3 – Illustration of calculation of grease for annular gap(s).....	24
Table 1 – Metal combinations permitted.....	15
Table 2 – Number of joints permitted in aluminium wires.....	16
Table 3 – Standard increments <sup>a</sup> due to stranding .....	16
Table E.1 – Properties of some A1G/S1A conductors with gaps.....	27

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

# CONCENTRIC LAY STRANDED OVERHEAD ELECTRICAL CONDUCTORS CONTAINING ONE OR MORE GAP(S)

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International Standard IEC 62420 has been prepared by IEC technical committee 7: Overhead electrical conductors.

The text of this standard is based on the following documents:

FDIS	Report on voting
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Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

A bilingual version of this publication may be issued at a later date.

## CONCENTRIC LAY STRANDED OVERHEAD ELECTRICAL CONDUCTORS CONTAINING ONE OR MORE GAP(S)

### 1 Scope

This International Standard specifies the electrical and mechanical characteristics of concentric lay stranded overhead electrical conductors, containing one or more self-supporting aluminium or aluminium alloy layer(s) as depicted in Figure 1, made of combinations of any of the following metal wires:

- a) hard-drawn aluminium as per IEC 60889, designated A1;
- b) aluminium alloy type A or B as per IEC 60104, designated A2 or A3;
- c) thermal resistant aluminium alloy type as per IEC 62004, designated AT1, AT2, AT3 or AT4;
- d) regular strength steel as per IEC 60888, designated S1A or S1B;
- e) high strength steel as per IEC 60888, designated S2A or S2B;
- f) extra-high strength steel as per IEC 60888, designated S3A;
- g) aluminium-clad steel as per IEC 61232, designated 20SA, 27SA, 30SA or 40SA.

NOTE This standard covers the construction of self-damping conductors, as well as gap-type conductors. Although both types of conductors share a common design feature and the presence of one or more gaps between layers, they are intended for different purposes. Self-damping conductors (SDC) may have more than one gap to provide increased self-damping, whereas gap-type conductors are so designed as to allow the aluminium layers to slide freely over the core during installation, and therefore usually do not require more than one gap.

The various metal combinations permitted by this standard shall be in accordance with Table 1.

### 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.

IEC 60104:1987, *Aluminium-magnesium-silicon alloy wire for overhead line conductors*

IEC 60888:1987, *Zinc-coated steel wires for stranded conductors*

IEC 60889:1987, *Hard-drawn aluminium wire for overhead line conductors*

IEC 61232:1993, *Aluminium-clad steel wires for electrical purposes*

IEC 61395:1998, *Creep test procedures for stranded conductors*

IEC 62004:2007, *Thermal resistant aluminium alloy wire for overhead line conductors*