



BSI Standards Publication

Specifications for particular types of winding wires

Part 0-1: General requirements - Enamelled round copper wire

National foreword

This British Standard is the UK implementation of EN 60317-0-1:2014+A1:2019. It is identical to IEC 60317-0-1:2013, incorporating amendment 1:2019. It supersedes BS EN 60317-0-1:2014, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment 1 is indicated by **A1** **A1**.

The UK participation in its preparation was entrusted to Technical Committee L/-/99, Miscellaneous Standards - Electrical.

A list of organizations represented on this committee can be obtained on request to its secretary.

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© The British Standards Institution 2019
Published by BSI Standards Limited 2019

ISBN 978 0 539 00308 6

ICS 29.060.10

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2014.

Amendments/corrigenda issued since publication

Date	Text affected
30 November 2019	Implementation of IEC amendment 1:2019 with CENELEC endorsement A1:2019

English Version

**Specifications for particular types of winding wires - Part 0-1:
General requirements - Enamelled round copper wire
(IEC 60317-0-1:2013)**

Spécifications pour types particuliers de fils de bobinage -
Partie 0-1: Exigences générales - Fil de section circulaire
en cuivre émaillé
(IEC 60317-0-1:2013)

Technische Lieferbedingungen für bestimmte Typen von
Wickeldrähten - Teil 0-1: Allgemeine Anforderungen -
Runddrähte aus Kupfer, lackisoliert
(IEC 60317-0-1:2013)

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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

European foreword

The text of document 55/1409/FDIS, future edition 4 of IEC 60317-0-1, prepared by IEC/TC 55 "Winding wires" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60317-0-1:2014.

The following dates are fixed:

- latest date by which the document has to be (dop) 2014-08-11
implemented at national level by
publication of an identical national
standard or by endorsement
- latest date by which the national (dow) 2016-11-11
standards conflicting with the
document have to be withdrawn

This document supersedes EN 60317-0-1:2008.

EN 60317-0-1:2014 includes the following significant technical changes with respect to EN 60317-0-1:2008:

- revision to the definition of nominal conductor dimension;
- new subclause containing general notes on winding wire, formerly a part of the scope;
- revision to elongation requirements in Table 4;
- revisions to Clause 13, Breakdown voltage, to include new requirements for intermediate wire diameters;
- revision to continuity of insulation requirements in Table 13;
- revision to the introduction of Annex A;
- revision to B.2 of Annex B;
- revision to Table C.1 of Annex C.

This standard is to be read in conjunction with the EN 60851 series. The clause numbers used in this part of EN 60317 are identical with the respective test numbers of the EN 60851 series.

In case of inconsistencies between EN 60851 and this part of EN 60317, the latter prevails.

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

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The text of the International Standard IEC 60317-0-1:2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60264 Series	NOTE	Harmonized as EN 60264 Series (not modified).
IEC 60317 Series	NOTE	Harmonized as EN 60317 Series (not modified).

Foreword to amendment A1

The text of document 55/1782/FDIS, future IEC 60317-0-1/A1, prepared by IEC/TC 55 "Winding wires" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60317-0-1:2014/A1:2019.

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) 2020-06-24
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-09-24

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Endorsement notice

The text of the International Standard IEC 60317-0-1:2013/A1:2019 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)**Normative references to international publications
with their corresponding European publications**

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 1190-1	-	Copper and copper alloys; Code of designation; Part 1 : Designation of materials	-	-
ASTM B49-17	-	Standard Specification for Copper Rod for Electrical Purposes	-	-
-	-	Copper and copper alloys - Copper drawing stock (wire rod)	EN 1977	2013

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 0-1: General requirements – Enamelled round copper wire

FOREWORD

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International Standard IEC 60317-0-1 has been prepared by IEC technical committee 55: Winding wires.

This fourth edition cancels and replaces the third edition published in 2008. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- revision to the definition of nominal conductor dimension;
- new subclause containing general notes on winding wire, formerly a part of the scope;
- revision to elongation requirements in Table 4;
- revisions to Clause 13, Breakdown voltage, to include new requirements for intermediate wire diameters;

- revision to continuity of insulation requirements in Table 13;
- revision to the introduction of Annex A;
- revision to B.2 of Annex B;
- revision to Table C.1 of Annex C.

This standard is to be read in conjunction with the IEC 60851 series. The clause numbers used in this part of IEC 60317 are identical with the respective test numbers of the IEC 60851 series.

In case of inconsistencies between IEC 60851 and this part of IEC 60317, the latter prevails.

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

FDIS	Report on voting
55/1409/FDIS	55/1430/RVD

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.

A list of all parts in the IEC 60317 series, published under the general title *Specifications for particular types of winding wires*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability 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.

INTRODUCTION

This part of IEC 60317 is one of a series which deals with insulated wires used for windings in electrical equipment. The series has three groups describing:

- 1) Winding wires – Test methods (IEC 60851);
- 2) Specifications for particular types of winding wires (IEC 60317);
- 3) Packaging of winding wires (IEC 60264).

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 0-1: General requirements – Enamelled round copper wire

1 Scope

This part of IEC 60317 specifies general requirements of enamelled round copper winding wires with or without bonding layer.

The range of nominal conductor diameters is given in the relevant specification sheet.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60172, *Test procedure for the determination of the temperature index of enamelled winding wires*

IEC 60851 (all parts), *Winding wires – Test methods*

ISO 3, *Preferred numbers – Series of preferred numbers*

ISO 1190-1, *Copper and copper alloys – Code of designation – Part 1: Designation of materials*

ASTM B49-17, *Standard Specification for Copper Rod for Electrical Purposes*

EN 1977:2013, *Copper and copper alloys – Copper drawing stock (wire rod)* ^{A1}

3 Terms, definitions, general notes and appearance

For the purposes of this document, the following terms and definitions apply.

3.1 Terms and definitions

3.1.1

bonding layer

material which is deposited on an enamelled wire and which has the specific function of bonding wires together

3.1.2

class

thermal performance of a wire expressed by the temperature index and the heat shock temperature