

**Specifications for particular types of winding wires - Part
36: Solderable polyesterimide enamelled round copper
wire, class 180, with a bonding layer**

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English version

**Specifications for particular types of winding wires -
Part 36: Solderable polyesterimide enamelled round copper wire, class
180, with a bonding layer
(IEC 60317-36:2013)**

Spécifications pour types particuliers de
fils de bobinage -
Partie 36: Fil brasable de section circulaire
en cuivre émaillé avec polyesterimide,
classe 180, avec une couche adhérente
(CEI 60317-36:2013)

Technische Lieferbedingungen für
bestimmte Typen von Wickeldrähten -
Teil 36: Runddrähte aus Kupfer,
verzinnbar und verbackbar, lackisoliert mit
Polyesterimid, Klasse 180
(IEC 60317-36:2013)

This European Standard was approved by CENELEC on 2013-11-18. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 55/1417/FDIS, future edition 2 of IEC 60317-36 prepared by IEC/TC 55 "Winding wires" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60317-36:2014.

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) 2014-08-18
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-11-18

This document supersedes EN 60317-36:1994.

EN 60317-36:2014 includes the following significant technical changes with respect to EN 60317-36:1994:

- new 3.2.2 containing general notes on winding wire, formerly a part of the scope;
- revision to references to EN 60317-0-1:2014 to clarify that their application is normative;
- consolidation of 17.1 and 17.2 of the solderability requirements;
- new Clause 23, Pin hole test.

The numbering of clauses in this standard is not continuous from Clauses 20 and 30 in order to reserve space for possible future wire requirements prior to those for wire packaging.

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.

Endorsement notice

The text of the International Standard IEC 60317-36:2013 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).
IEC 60851 Series	NOTE	Harmonized as EN 60851 Series (not modified).

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60317-0-1	2013	Specifications for particular types of winding wires - Part 0-1: General requirements - Enamelled round copper wire	EN 60317-0-1	2014

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INTRODUCTION

This part of IEC 60317 is one of a series of standards 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).

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SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 36: Solderable polyesterimide enamelled round copper wire, class 180, with a bonding layer

1 Scope

This part of IEC 60317 specifies the requirements of solderable enamelled round copper winding wire of class 180 with a dual coating. The underlying coating is based on polyesterimide resin, which may be modified providing it retains the chemical identity of the original resin and meets all specified wire requirements. The superimposed coating is a bonding layer based on a thermoplastic resin.

NOTE A modified resin is a resin that has undergone a chemical change, or contains one or more additives to enhance certain performance or application characteristics.

The range of nominal conductor diameters covered by this part is:

- Grade 1B: 0,020 mm up to and including 1,600 mm;
- Grade 2B: 0,020 mm up to and including 1,600 mm.

The nominal conductor diameters are specified in Clause 4 of IEC 60317-0-1:2013.

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

3 Terms, definitions, general notes and appearance

3.1 Terms and definitions

Subclause 3.1 of IEC 60317-0-1:2013 applies.

3.2 General notes

3.2.1 Test methods

Subclause 3.2.1 of IEC 60317-0-1:2013 applies. In case of inconsistencies between IEC 60317-0-1:2013 and this part of IEC 60317, the latter shall prevail.

3.2.2 Winding wire

Class 180 is a thermal class that requires a minimum temperature index of 180 and a heat shock temperature of at least 200 °C.

The temperature in degrees Celsius corresponding to the temperature index is not necessarily that at which it is recommended that the wire be operated and this will depend on many factors, including the type of equipment involved.