

BS EN 60317-61:2012



BSI Standards Publication

Specifications for particular types of winding wires

Part 61: Polyester glass fibre wound, minimum class 180, resin or varnish impregnated, bare or enamelled rectangular copper wire, temperature index 180 (IEC 60317-61:2012)

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National foreword

This British Standard is the UK implementation of EN 60317-61:2012. It is identical to IEC 60317-61:2012.

The UK participation in its preparation was entrusted to Technical Committee GEL/55, Winding wires.

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

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60317-61

September 2012

ICS 29.060.10

English version

**Specifications for particular types of winding wires -
Part 61: Polyester glass fibre wound, minimum class 180,
resin or varnish impregnated, bare or enamelled rectangular copper wire,
temperature index 180
(IEC 60317-61:2012)**

Spécifications pour types particuliers
de fils de bobinage -
Partie 61: Fil de section rectangulaire
en cuivre nu ou émaillé, guipé de fibres
de verre avec polyester de classe
d'au moins 180, imprégnées de vernis
ou de résine, d'indice de température 180
(CEI 60317-61:2012)

Technische Lieferbedingungen für
bestimmte Typen von Wickeldrähten -
Teil 61: Flachdrähte aus Kupfer, blank
oder lackisoliert und umhüllt mit
Polyesterglasgewebe, imprägniert
mit Harz oder Lack oder unimprägniert,
Temperaturindex 180
(IEC 60317-61:2012)

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European Committee for Electrotechnical Standardization
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Foreword

The text of document 55/1322/FDIS, future edition 1 of IEC 60317-61, prepared by IEC/TC 55 "Winding wires" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60317-61:2012.

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) 2013-05-16
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-08-16

This standard is to be read in conjunction with EN 60317-0-8:2012.

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Endorsement notice

The text of the International Standard IEC 60317-61:2012 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	Harmonised as EN 60264 Series (not modified).
IEC 60317 Series	NOTE	Harmonised as EN 60317 Series (not modified).
IEC 60851 Series	NOTE	Harmonised 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 60317-0-8	2012	Specifications for particular types of winding wires - Part 0-8: General requirements - Polyester glass fibre wound, resin or varnish impregnated or not impregnated, bare or enamelled rectangular copper wire	EN 60317-0-8	2012

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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 61: Polyester glass fibre wound, minimum class 180 resin or varnish impregnated, bare or enamelled rectangular copper wire, temperature index 180

1 Scope

This part of IEC 60317 specifies the requirements of polyester glass fibre wound, impregnated, bare or enamelled rectangular copper winding wire, temperature index 180.

NOTE For this type of wire, the heat shock test is inappropriate and therefore a heat shock temperature cannot be established. Consequently, a class based on the requirements for temperature index and heat shock temperature cannot be specified.

The range of nominal conductor dimensions covered by this standard is:

- width: min. 2,0 mm; max. 16,0 mm;
- thickness: min. 0,80 mm; max. 5,60 mm.

The specified combinations of width and thickness as well as the specified width/thickness ratio are according to IEC 60317-0-8.

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 60317-0-8:2012, *Specifications for particular types of winding wires – Part 0-8: General requirements – Polyester glass fibre wound, resin or varnish impregnated or not impregnated, bare or enamelled rectangular copper wire*

3 Terms, definitions and general notes and appearance

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in 3.1 of IEC 60317-0-8:2012 shall apply.

3.2 General notes

3.2.1 Methods of test

See 3.2 of IEC 60317-0-8:2012.

In case of inconsistency between IEC 60317-0-8 and this standard, IEC 60317-61 shall prevail.

3.2.2 Winding wire

The enamelled wire shall have a temperature index of at least 180 and shall be agreed between purchaser and supplier.

The temperature index of the wire is dependent upon the type of impregnating agent used. The impregnating agent applied to the polyester glass fibres shall not contain silicone and shall have a minimum temperature index of 180.

The covering shall have one of the following grades of thickness:

- PG1: one polyester glass fibre covering over a bare conductor;
- PG2: two polyester glass fibre coverings over a bare conductor;
- grade 1 PG1: one polyester glass fibre covering (GL1) over grade 1 enamelled conductor (Grade 1);
- grade 1 PG2: two polyester glass fibre coverings (GL2) over grade 1 enamelled conductor (Grade 1);
- grade 2 PG1: one polyester glass fibre covering (GL1) over grade 2 enamelled conductor (Grade 2);
- grade 2 PG2: two polyester glass fibre coverings (GL2) over grade 2 enamelled conductor (Grade 2).

3.3 Appearance

Subclause 3.3 of IEC 60317-0-8:2012 applies.

4 Dimensions

Clause 4 of IEC 60317-0-8:2012 applies.

5 Electrical resistance

Clause 5 of IEC 60317-0-8:2012 applies.

6 Elongation

Clause 6 of IEC 60317-0-8:2012 applies.

7 Springiness

Clause 7 of IEC 60317-0-8:2012 applies.

8 Flexibility and adherence

Clause 8 of IEC 60317-0-8:2012 applies.

9 Heat shock

Test inappropriate.

10 Cut-through

Test inappropriate.

11 Resistance to abrasion

Test inappropriate.

12 Resistance to solvents

Test inappropriate.

13 Breakdown voltage

Clause 13 of IEC 60317-0-8:2012 applies.

14 Continuity of insulation

Test inappropriate.

15 Temperature index

Clause 15 of IEC 60317-0-8:2012 applies.

16 Resistance to refrigerants

Test inappropriate.

17 Solderability

Test inappropriate.

18 Heat or solvent bonding

Test inappropriate.

19 Dielectric dissipation factor

Test inappropriate.

20 Resistance to transformer oil

Test inappropriate.

23 Pin hole test

Test inappropriate

30 Packaging

Clause 30 of IEC 60317-0-8:2012 applies.

Bibliography

IEC 60264 (all parts), *Packaging of winding wires*

IEC 60317 (all parts), *Specifications for particular types of winding wires*

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

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