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Standards

Irish Standard  
I.S. EN IEC 60317-18:2020

Specifications for particular types of winding wires - Part 18: Polyvinyl acetal enamelled rectangular copper wire, class 120

**I.S. EN IEC 60317-18:2020**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN IEC 60317-18:2020 is the adopted Irish version of the European Document EN IEC 60317-18:2020, Specifications for particular types of winding wires - Part 18: Polyvinyl acetal enamelled rectangular copper wire, class 120

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EUROPEAN STANDARD

**EN IEC 60317-18**

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2020

ICS 29.060.10

Supersedes EN 60317-18:2004 and all of its amendments and corrigenda (if any)

English Version

**Specifications for particular types of winding wires - Part 18:  
Polyvinyl acetal enamelled rectangular copper wire, class 120  
(IEC 60317-18:2020)**

Spécifications pour types particuliers de fils de bobinage -  
Partie 18: Fil de section rectangulaire en cuivre émaillé  
avec acétal de polyvinyle, classe 120  
(IEC 60317-18:2020)

Technische Lieferbedingungen für bestimmte Typen von  
Wickeldrähten - Teil 18: Flachdrähte aus Kupfer, lackisoliert  
mit Polyvinylacetal, Klasse 120  
(IEC 60317-18:2020)

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## **EN IEC 60317-18:2020 (E)**

### **European foreword**

The text of document 55/1843/FDIS, future edition 4 of IEC 60317-18, prepared by IEC/TC 55 "Winding wires" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60317-18:2020.

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) 2021-04-10
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-07-10

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IEC 60264 (series)	NOTE	Harmonized as EN 60264 (series)
IEC 60317 (series)	NOTE	Harmonized as EN 60317 (series)
IEC 60851 (series)	NOTE	Harmonized as EN 60851 (series)
IEC 60851-4:2016	NOTE	Harmonized as EN 60851-4:2016 (not modified)

## Annex ZA (normative)

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60317-0-2	2020	Specifications for particular types of winding wires - Part 0-2: General requirements - Enamelled rectangular copper wire	-	-

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**IEC 60317-18**

Edition 4.0 2020-06

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

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**Specifications for particular types of winding wires –  
Part 18: Polyvinyl acetal enamelled rectangular copper wire, class 120**

**Spécifications pour types particuliers de fils de bobinage –  
Partie 18: Fil de section rectangulaire en cuivre émaillé avec acétal  
de polyvinyle, classe 120**



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**IEC 60317-18**

Edition 4.0 2020-06

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

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**Specifications for particular types of winding wires –  
Part 18: Polyvinyl acetal enamelled rectangular copper wire, class 120**

**Spécifications pour types particuliers de fils de bobinage –  
Partie 18: Fil de section rectangulaire en cuivre émaillé avec acétal  
de polyvinyle, classe 120**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –****Part 18: Polyvinyl acetal enamelled rectangular copper wire, class 120**

## FOREWORD

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International Standard IEC 60317-18 has been prepared by IEC technical committee 55: Winding wires.

This fourth edition cancels and replaces the third edition published in 2004 and Amendment 1:2009. This edition constitutes a technical revision.

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

- a) modification of the Scope (Clause 1);
- b) revision to thermal class designation from 105 to 120 in 3.2.2;
- c) renaming of stretching test to adherence test, and modification to the requirements in 8.2;
- d) revision to the cut-through requirement in Clause 10.

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

FDIS	Report on voting
55/1843/FDIS	55/1856/RVD

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

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

This International Standard is to be used in conjunction with IEC 60317-0-2:2020.

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 numbering of clauses in this document is not continuous from Clauses 21 through 30 in order to reserve space for possible future wire requirements prior to those for wire packaging.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://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

This part of IEC 60317 forms an element of a series of standards which deals with insulated wires used for windings in electrical equipment. It is composed of the following series:

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

## SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

### Part 18: Polyvinyl acetal enamelled rectangular copper wire, class 120

#### 1 Scope

This part of IEC 60317 specifies the requirements of enamelled rectangular copper winding wires of class 120 with a sole coating based on polyvinyl acetal or polyvinyl formal resin, which can be modified provided it retains the chemical identity of the original resin and meets all specified wire requirements

NOTE 1 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.

NOTE 2 Polyvinyl acetal is a general name for a family of thermoplastic vinyl resins produced by the condensation of polyvinyl alcohol with an aldehyde. Examples are polyvinyl acetal, polyvinyl formal and polyvinyl butyral.

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

- width: min. 2,0 mm max. 31,5 mm;
- thickness: min. 0,80 mm max. 10,0 mm.

Wires of grade 1 and grade 2 are included in this specification and apply to the complete range of conductors.

The specified combinations of width and thickness as well as the specified ratio width/thickness are given in IEC 60317-0-2.

#### 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 60317-0-2:2020, *Specifications for particular types of winding wires – Part 0-2: General requirements – Enamelled rectangular copper wire*

#### 3 Terms, definitions, general notes and appearance

##### 3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60317-0-2 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
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