

Winding wires - Test methods - Part 6: Thermal properties

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NATIONAL FOREWORD

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English version

**Winding wires -
Test methods -
Part 6: Thermal properties
(IEC 60851-6:2012)**

Fils de bobinage -
Méthodes d'essai -
Partie 6: Propriétés thermiques
(CEI 60851-6:2012)

Wickeldrähte -
Prüfverfahren -
Teil 6: Thermische Eigenschaften
(IEC 60851-6:2012)

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

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Foreword

The text of document 55/1312/FDIS, future edition 3 of IEC 60851-6, prepared by IEC/TC 55 "Winding wires" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60851-6:2012.

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) 2013-03-27
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-06-27

This document supersedes EN 60851-6:1996 + A1:1997 + A2:2004.

EN 60851-6:2012 includes the following significant technical changes with respect to EN 60851-6:1996 + A1:1997 + A2:2004:

- deletion of Table 2: Heating period in Test 10: Cut-through;
- revision to Test 15, where the temperature index requirements for all winding wire constructions have a common reference.

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 60851-6:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 60851-1 NOTE Harmonised as EN 60851-1.

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 60172	-	Test procedure for the determination of the temperature index of enamelled winding wires	EN 60172	-
IEC 60851-3	2009	Winding wires - Test methods - Part 3: Mechanical properties	EN 60851-3	2009
IEC 60851-5 + A1	2008 2011	Winding wires - Test methods - Part 5: Electrical properties	EN 60851-5 + A1	2008 2011

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INTRODUCTION

This part of IEC 60851 forms an element 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).

WINDING WIRES – TEST METHODS –

Part 6: Thermal properties

1 Scope

This part of IEC 60851 specifies the following tests:

- Test 9: Heat shock;
- Test 10: Cut-through;
- Test 15: Temperature index;
- Test 21: Loss of mass.

For definitions, general notes on methods of test and the complete series of methods of test for winding wires, see IEC 60851-1.

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 60851-3:2009, *Winding wires – Test methods – Part 3: Mechanical properties*

IEC 60851-5:2008, *Winding wires – Test methods – Part 5: Electrical properties*
Amendment 1:2011

3 Test 9: Heat shock (applicable to enamelled and tape wrapped wire)

3.1 General

Heat shock is the potential of the wire to withstand temperature exposure after the wire has been stretched and/or wound or bent around a mandrel.

3.2 Specimen

3.2.1 Round wire

A specimen shall be prepared in accordance with:

- 5.1.1.1 of IEC 60851-3:2009 for enamelled wires with a nominal conductor diameter up to and including 1,600 mm;
- 5.2 of IEC 60851-3:2009 for enamelled wires with a nominal conductor diameter over 1,600 mm;
- 5.1.1.4 of IEC 60851-3:2009 for tape wrapped wires with a nominal conductor diameter up to and including 1,600 mm;