Winding wires - Test methods -- Part 5: Electrical properties

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60851-5:2008 sisaldab Euroopa standardi EN 60851-5:2008 ingliskeelset teksti.	This Estonian standard EVS-EN 60851-5:2008 consists of the English text of the European standard EN 60851-5:2008.
Standard on kinnitatud Eesti Standardikeskuse 24.11.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 24.11.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 30.09.2008.	Date of Availability of the European standard text 30.09.2008.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 29.060.10

Võtmesõnad: cash registers, characteristics, data processing equipment, electromagnetic immunity, electrostatic discharge tests, facsimile equipment, local area networks, meas, photocopying machines, printers, radio disturbances, telecommunication terminals, vending machines

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60851-5

September 2008

ICS 29.060.10

Supersedes EN 60851-5:1996 + A1:1997 + A2:2004

English version

Winding wires - Test methods - Part 5: Electrical properties

(IEC 60851-5:2008)

Fils de bobinage - Méthodes d'essai - Partie 5: Propriétés électriques (CEI 60851-5:2008)

Wickeldrähte - Prüfverfahren - Teil 5: Elektrische Eigenschaften (IEC 60851-5:2008)

This European Standard was approved by CENELEC on 2008-08-01. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 60851-5:2008 E

Foreword

The text of document 55/1069/FDIS, future edition 4 of IEC 60851-5, prepared by IEC TC 55, Winding wires, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60851-5 on 2008-08-01.

This European Standard supersedes EN 60851-5:1996 + A1:1997 + A2:2004.

Significant revisions to EN 60851-5:1996 include the following points:

– in Subclause 5.3, the addition of the use of carbon brush electrodes for the counting discontinuities during the high voltage continuity test, as an alternative to the V-groove pulley electrode;

– clarifications in the breakdown voltage test for round wires larger than 2,500 mm and for fibrous covered wires.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2009-05-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2011-08-01

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 60851-5:2008 was approved by CENELEC as a European Standard without any modification.

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60851-1	-[1)]	Winding wires - Test methods - Part 1: General	EN 60851-1	1996[2)]

[1)] Undated reference.

[2)] Valid edition at date of issue.

CONTENTS

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

a) winding wires – Test methods (IEC 60851);

b) specifications for particular types of winding wires (IEC 60317);

c) packaging of winding wires (IEC 60264).

WINDING WIRES – TEST METHODS –

Part 5: Electrical properties

1 Scope

This part of IEC 60851 specifies the following tests:

– Test 5: Electrical resistance;
– Test 13: Breakdown voltage;
– Test 14: Continuity of insulation;
– Test 19: Dielectric dissipation factor;
– Test 23: Pin hole.

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 referenced documents are indispensable for the application 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 60851-1, *Winding wires – Test methods – Part 1: General*

3 Test 5: Electrical resistance

Electrical resistance is the d.c. resistance at 20 °C of 1 m of wire.

The method used shall provide a precision of 0,5 %.

For bunched wires a length of up to 10 m shall be used and the ends shall be soldered before the measurement. When measuring the resistance to check for an excessive number of broken wires, a length of 10 m of bunched wire shall be used.

If the resistance R_t is measured at a temperature t other than 20 °C, the resistance R_{20} at 20 °C shall be calculated by means of the following formula:

$$R_{20} = \frac{R_t}{1+\alpha(t-20)}$$

where

t is the actual temperature in degrees Celsius during the measurement;

α is the temperature coefficient in K^{-1}.