Irish Standard
I.S. EN 50395:2005

Electrical test methods for low voltage energy cables

I.S. EN 50395:2005

Incorporating amendments/corrigenda issued since publication:
EN 50395:2005/A1:2011

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie

W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

I.S. EN 50395:2005

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50395/A1

March 2011

ICS 29.060.20

English version

Electrical test methods for low voltage energy cables

Méthodes d'essais électriques pour les câbles d'énergie basse tension

Elektrische Prüfverfahren für Niederspannungskabel und -leitungen

This amendment A1 modifies the European Standard EN 50395:2005; it was approved by CENELEC on 2011-03-14. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, Croatia, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 50395:2005/A1:2011 E

Foreword

This amendment was prepared by the Technical Committee CENELEC TC 20, Electric cables.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A1 to EN 50395:2005 on 2011-03-14.

The following dates were fixed:

– latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2012-03-14
– latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2014-03-14

2 Normative references

Delete EN 50356 from the list and **add** the following normative reference:

EN 62230:2007, *Electric cables – Spark test method*

10.2 Spark test

In 10.2.1 **replace** EN 50356 by EN 62230.

Annex A

In A.1 **delete** the existing NOTE and **insert:**

NOTE For many common insulation compounds, for instance those based on PVC or on thermoplastic polyolefines, the volume resistivity at the operating temperature of the relevant cable is assumed to be $10^{+8}\ \Omega \cdot \mathrm{m}$. In these cases the general formula reduces to:

$$R = 0{,}0367 \cdot \log\left(\frac{D}{d}\right) \quad \mathrm{M}\Omega \cdot \mathrm{km}$$

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I.S. EN 50395:2005

EUROPEAN STANDARD **EN 50395**

NORME EUROPÉENNE

EUROPÄISCHE NORM August 2005

ICS 29.060.20

Partly supersedes HD 21.2 S3:1997 + A1:2002 &
HD 22.2 S3:1997 + A1:2002

English version

Electrical test methods for low voltage energy cables

Méthodes d'essais électriques
pour les câbles d'énergie basse tension

Elektrische Prüfverfahren
für Niederspannungskabel und -leitungen

This European Standard was approved by CENELEC on 2005-07-01. 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.

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

Ref. No. EN 50395:2005 E

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 20, Electric cables. In accordance with the decision of TC 20 at its Setubal meeting (June 2004), the text of the draft was submitted to the formal vote. It was approved by CENELEC as EN 50395 on 2005-07-01.

This European Standard, together with EN 50396:2005, supersedes HD 21.2 S3:1997 + A1:2002 and HD 22.2 S3:1997 + A1:2002.

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)	2006-07-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2008-07-01

Contents

Introduction

EN 50395 contains the electrical test methods that are used for harmonized low voltage energy cables. These electrical test methods include all those previously contained in HD 21 and HD 22. Annex B gives a comparison between the original location of each test method and its place in this new European Standard.

The content of EN 50395 is not, and will not be, restricted only to test methods for cables to HD 21 and HD 22. Other test methods for harmonized LV cables may be included. Furthermore, the use of test methods in EN 50395 for cables outside HD 21 and HD 22 is not prohibited, but it is strongly recommended that expert advice be taken before such use, or before any proposal for incorporation into another standard.

1 Scope

EN 50395 contains electrical test methods required for the testing of harmonized low voltage energy cables, especially those rated at up to and including 450/750 V.

NOTE 1 A description of the origin of these test methods and the background to this European Standard is given in the Introduction and in Annex B.

The particular cable standard dictates the tests which need to be performed on the relevant cable type. It also specifies whether the specific test is a type test (T), a sample test (S) or a routine test (R) for the particular cable type.

NOTE 2 T, S and R are defined in the relevant cable standard.

The requirements to be met during or after the test are specified for the particular cable type in the relevant cable standard. However, some test requirements are obvious and universal, such as the fact that no breakdown shall occur during voltage tests, and these are stated in the particular test method.

Test methods for use specifically in utility power cables are not covered by this European Standard. They can be found in HD 605.

Test methods for use specifically in communications cables are the responsibility of the Technical Committee CENELEC TC 46X, Communication cables. At present such test methods are given in EN 50289 series.

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.

EN 50289-1-6	2002	Communication cables – Specifications for test methods - Part 1-6: Electrical test methods – Electromagnetic performance
EN 50356	2002	Method for spark testing of cables
EN 60228	2005	Conductors of insulated cables