
Preskusne metode za pribor energetskih kablov za napetosti od 6 kV (Um = 7,2 kV) do 36 kV (Um = 42 kV)

Test methods for accessories for power cables with rated voltages from 6 kV (Um = 7,2 kV) up to 36 kV (Um = 42 kV) (IEC 61442:2005, modified)

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EUROPEAN STANDARD

EN 61442

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2005

ICS 19.080; 290.060.20

Supersedes HD 628 S1:1996 + A1:2001

English version

**Test methods for accessories for power cables with rated voltages
from 6 kV ($U_m = 7,2$ kV) up to 36 kV ($U_m = 42$ kV)
(IEC 61442:2005, modified)**

Méthodes d'essais des accessoires
de câbles d'énergie de tensions
assignées de 6 kV ($U_m = 7,2$ kV)
à 36 kV ($U_m = 42$ kV)
(CEI 61442:2005, modifiée)

Prüfverfahren für
Starkstromkabelgarnituren mit einer
Nennspannung von 6 kV ($U_m = 7,2$ kV)
bis 36 kV ($U_m = 42$ kV)
(IEC 61442:2005, modifiziert)

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This European Standard was approved by CENELEC on 2005-03-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and 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

Foreword

The text of document 20/748/FDIS, future edition 2 of IEC 61442, prepared by IEC TC 20, Electric cables, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61442 on 2005-03-01.

A draft amendment, prepared by the Technical Committee CENELEC TC 20, Electric cables, was submitted to the formal vote and was approved by CENELEC for inclusion into EN 61442 on 2005-03-01.

This European Standard supersedes HD 628 S1:1996 + A1:2001.

In comparison with HD 628, the impact test at low temperature has been deleted.

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) 2006-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2008-03-01

Annex ZA has been added by CENELEC.

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SIST EN 61442:2005
Endorsement notice
<https://standards.iteh.ai/catalog/standards/sist/2005-987-bd1c-459e-994a-5183fa8a3884/sist-en-61442-2005>

The text of the International Standard IEC 61442:2005 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

Title

Amend the title to show the following upper voltage limit:

“... with rated voltages from 6 kV ($U_m = 7,2$ kV) up to 36 kV ($U_m = 42$ kV)”

1 Scope

Amend the voltage reference in paragraph 1 to read:

“... with rated voltages from 6 kV ($U_m = 7,2$ kV) up to 36 kV ($U_m = 42$ kV), ...”

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 Where 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 60055-1	- 1)	Paper-insulated metal-sheathed cables for rated voltages up to 18/30 kV (with copper or aluminium conductors and excluding gas-pressure and oil-filled cables) Part 1: Tests on cables and their accessories	-	-
IEC 60060-1 + corr. March	1989 1990	High-voltage test techniques Part 1: General definitions and test requirements	HD 588.1 S1	1991
IEC 60230	1966	Impulse tests on cables and their accessories	EN 60230	2002
IEC 60270	2000	High-voltage test techniques - Partial discharge measurements	EN 60270	2001
IEC 60502-2	2005	Power cables with extruded insulation and their accessories for rated voltages from 1 kV ($U_m = 1,2$ kV) up to 30 kV ($U_m = 36$ kV) Part 2: Cables for rated voltages from 6 kV ($U_m = 7,2$ kV) up to 30 kV ($U_m = 36$ kV)	-	-
IEC 60811-1-2	1985	Insulating and sheathing materials of electric cables - Common test methods Part 1-2: General application - Thermal ageing methods	EN 60811-1-2 2)	1995
IEC 60885-3	1988	Electrical test methods for electric cables Part 3: Test methods for partial discharge measurements on lengths of extruded power cables	EN 60885-3	2003
IEC 60986	2000	Short-circuit temperature limites of electric cables with rated voltagesf from 6 kV ($U_m = 7,2$ kV) up to 30 kV ($U_m = 36$ kV)	-	-

1) Undated reference.

2) EN 60811-1-2 includes corrigendum May 1988 + A1:1989 to IEC 60811-1-2:1985.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61238-1 (mod)	2003	Compression and mechanical connectors for power cables for rated voltages up to 36 kV ($U_m = 42$ kV) Part 1: Test methods and requirements	EN 61238-1	2003

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[SIST EN 61442:2005](https://standards.iteh.ai/catalog/standards/sist/26095967-bd1c-459e-994a-5183fa8a3884/sist-en-61442-2005)

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC
61442

Deuxième édition
Second edition
2005-03

**Méthodes d'essais des accessoires de câbles
d'énergie de tensions assignées
de 6 kV ($U_m = 7,2$ kV) à 30 kV ($U_m = 36$ kV)**

**Test methods for accessories for power cables
with rated voltages
from 6 kV ($U_m = 7,2$ kV) up to 30 kV ($U_m = 36$ kV)**

SIST EN 61442:2005

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TEST METHODS FOR ACCESSORIES
FOR POWER CABLES WITH RATED VOLTAGES
FROM 6 kV ($U_m = 7,2$ kV) UP TO 30 kV ($U_m = 36$ kV)**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61442 has been prepared by IEC technical committee 20: Electric cables.

This second edition of IEC 61442 cancels and replaces the first edition of IEC 61442, published in 1997, and constitutes a technical revision.

Significant technical changes with respect to the previous edition are as follows:

- a) a test in water has been added for stop ends;
- b) the heating cycles voltage test has been revised to clarify testing in air and water;
- c) the testing conditions for the short-circuit tests have been redefined;
- d) additional information has been provided for testing separable connectors with a metallic housing;

- e) tests not required by IEC, i.e. an immersion test for outdoor terminations and an impact test, have been included in order to have a common test method document with CENELEC under the IEC/CLC Dresden agreement.

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

FDIS	Report on voting
20/748/FDIS	20/762/RVD

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

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

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

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TEST METHODS FOR ACCESSORIES FOR POWER CABLES WITH RATED VOLTAGES FROM 6 kV ($U_m = 7,2$ kV) UP TO 30 kV ($U_m = 36$ kV)

1 Scope

This International Standard specifies the test methods to be used for type testing accessories for power cables with rated voltage from 3,6/6 (7,2) kV up to 18/30 (36) kV. Test methods are specified for accessories for extruded and paper insulated cables according to IEC 60502-2 and IEC 60055-1 respectively.

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 amendments) applies.

IEC 60055-1: *Paper-insulated metal-sheathed cables for rated voltages up to 18/30 kV (with copper or aluminium conductors and excluding gas-pressure and oil-filled cables) – Part 1: Tests on cables and their accessories*

IEC 60060-1:1989, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60230:1966, *Impulse tests on cables and their accessories*

IEC 60270:2000, *High-voltage test techniques – Partial discharge measurements*

IEC 60502-2:2005, *Power cables with extruded insulation and their accessories for rated voltages from 1 kV ($U_m = 1,2$ kV) up to 30 kV ($U_m = 36$ kV) – Part 2: Cables for rated voltages from 6 kV ($U_m = 7,2$ kV) up to 30 kV ($U_m = 36$ kV)*

IEC 60811-1-2:1985, *Common test methods for insulating and sheathing materials of electric and optical cables – Part 1: Methods for general application – Section Two: Thermal ageing methods*

IEC 60885-3:1988, *Electrical test methods for electric cables – Part 3: Test methods for partial discharge measurements on lengths of extruded power cables*

IEC 60986:2000, *Short-circuit temperature limits of electric cables with rated voltages from 6 kV ($U_m = 7,2$ kV) up to 30 kV ($U_m = 36$ kV)*

IEC 61238-1:2003, *Compression and mechanical connectors for power cables for rated voltages up to 30 kV ($U_m = 36$ kV) – Part 1: Test methods and requirements*