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INTERNATIONAL STANDARD

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 4: Test requirements on accessories for cables with rated voltages from 6 kV (U_m = 7,2 kV) up to 30 kV (U_m = 36 kV)

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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 4: Test requirements on accessories for cables with rated voltages from 6 kV (U_m = 7,2 kV) up to 30 kV (U_m = 36 kV)

FOREWORD

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IEC 60502-4 has been prepared by IEC technical committee 20: Electric cables. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2010. This edition constitutes a technical revision.

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

a) Terminations, joints and stop ends are now characterized as either non-range-taking or range-taking and are tested accordingly.

b) Introduction of the 240 mm^2 conductor size for testing non-range-taking terminations, joints and stop ends.

c) Introduction of the 2 500 A separable connector size in Table 3 and the method of testing in Figure 5.

d) Introduction of dynamic short-circuit classes 0, 1, 2 and 3 in 9.2.

e) Introduction of specific requirements for test reports in Clause 10 and Clause 11 and specific recording sheets for cables, connectors and examination in Annex A, Annex B and Annex C.

f) Option to use 2 U_0 for partial discharge testing and removal of DC testing from Table 9, Table 10, Table 11, Table 12, Table 13 and Table 14.

The text of this International Standard is based on the following documents:

Draft	Report on voting
20/2110/FDIS	20/2133/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 60502 series, published under the general title *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)*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under 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.

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 4: Test requirements on accessories for cables with rated voltages from 6 kV (U_m = 7,2 kV) up to 30 kV (U_m = 36 kV)

1 Scope

This part of IEC 60502 specifies the test requirements for type testing of accessories for power cables with rated voltages from 3,6/6 (7,2) kV up to 18/30 (36) kV, complying with IEC 60502-2 or other relevant cable standards.

Accessories for special applications, such as aerial cables, submarine or ship cables or hazardous situations (explosive environments, fire-resistant cables or seismic conditions), are not included.

It is not necessary to repeat these tests, once successfully completed, unless changes are made in the materials, design or manufacturing process which can affect the performance characteristics.

Test methods are included in IEC 61442.

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 60183, *Guide to the selection of high-voltage AC cable systems*

IEC 60502-2:2014, *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 61238-1-3, *Compression and mechanical connectors for power cables – Part 1-3: Test methods and requirements for compression and mechanical connectors for power cables for rated voltages above 1 kV (U_m = 1,2 kV) up to 30 kV (U_m = 36 kV) tested on non-insulated conductors*

IEC 61442:2023, *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)*