IEC 61180

Edition 1.0 2016-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

High-voltage test techniques for low-voltage equipment – Definitions, test and procedure requirements, test equipment

Techniques des essais à haute tension pour matériel à basse tension – Définitions, exigences et modalités relatives aux essais, matériel d'essai

IEC 61180:2016-06(en-fr)

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CONTENTS

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HIGH-VOLTAGE TEST TECHNIQUES FOR LOW-VOLTAGE EQUIPMENT –

Definitions, test and procedure requirements, test equipment

FOREWORD

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International Standard IEC 61180 has been prepared by IEC technical committee 42: High-voltage and high-current test techniques.

This 1st edition of IEC 61180 cancels and replaces the 1st edition of IEC 61180-1, issued in 1992, and the 1st edition of IEC 61180-2, issued in 1994.

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

FDIS	Report on voting
42/341/FDIS	42/342/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 stability date indicated on the IEC website 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- withdrawn,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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HIGH-VOLTAGE TEST TECHNIQUES FOR LOW-VOLTAGE EQUIPMENT –

Definitions, test and procedure requirements, test equipment

1 Scope

This International Standard is applicable to:

– dielectric tests with direct voltage;
– dielectric tests with alternating voltage;
– dielectric tests with impulse voltage;
– test equipment used for dielectric tests on low-voltage equipment.

This standard is applicable only to tests on equipment having a rated voltage of not more than 1 kV a.c. or 1,5 kV d.c.

This standard is applicable to type and routine tests for objects which are subjected to high voltage tests as specified by the technical committee.

The test equipment comprises a voltage generator and a measuring system. This standard covers test equipment in which the measuring system is protected against external interference and coupling by appropriate screening, for example a continuous conducting shield. Therefore, simple comparison tests are sufficient to ensure valid results.

This standard is not intended to be used for electromagnetic compatibility tests on electric or electronic equipment

NOTE Tests with the combination of impulse voltages and currents are covered by IEC 61000-4-5.

This standard provides the relevant technical committees as far as possible with:

– defined terms of both general and specific applicability;
– general requirements regarding test objects and test procedures;
– methods for generation and measurement of test voltages;
– test procedures;
– methods for the evaluation of test results and to indicate criteria for acceptance;
– requirements concerning approved measuring devices and checking methods;
– measurement uncertainty.

Alternative test procedures may be required and these should be specified by the relevant technical committees.

Care should be taken if the test object has voltage limiting devices, as they may influence the results of the test. The relevant technical committees should provide guidance for testing objects equipped with voltage limiting devices.

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