

Low-voltage power supplies, DC output —

Part 6: Requirements for low-voltage power supplies of assessed performance

The European Standard EN 61204-6:2001 has the status of a
British Standard

ICS 29.200

National foreword

This British Standard is the official English language version of EN 61204-6:2001. It is identical with IEC 61204-6:2000.

The UK participation in its preparation was entrusted to Technical Committee PEL/22, Power electronics, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

From 1 January 1997, all IEC publications have the number 60000 added to the old number. For instance, IEC 27-1 has been renumbered as IEC 60027-1. For a period of time during the change over from one numbering system to the other, publications may contain identifiers from both systems.

Cross-references

Attention is drawn to the fact that CEN and CENELEC Standards normally include an annex which lists a normative reference to international publications with their corresponding European publications. The British Standards which implement these international or European publications may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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This British Standard, having been prepared under the direction of the Electrotechnical Sector Committee, was published under the authority of the Standards Committee and comes into effect on 15 August 2001

Summary of pages

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Low-voltage power supplies, DC output
Part 6: Requirements for low-voltage power supplies
of assessed performance
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continue
Partie 6: Exigences relatives aux
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à des performances établies
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Stromversorgungsgeräte für
Niederspannung mit Gleichstromausgang
Teil 6: Anforderungen an
Stromversorgungsgeräte für
Niederspannung geprüfter Qualität
(IEC 61204-6:2000)

This European Standard was approved by CENELEC on 2000-12-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

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Foreword

The text of document 22E/76/FDIS, future edition 1 of IEC 61204-6, prepared by SC 22E, Stabilized power supplies, of IEC TC 22, Power electronics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61204-6 on 2000-12-01.

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) 2001-09-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2003-12-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61204-6:2000 was approved by CENELEC as a European Standard without any modification.

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LOW-VOLTAGE POWER SUPPLIES, DC OUTPUT –

Part 6: Requirements for low-voltage power supplies of assessed performance

1 Scope and object

This part of IEC 61204 applies to power supplies for general purpose applications. These power supplies carry out an a.c. to d.c. conversion or a d.c. to d.c. conversion. Appropriate provisions for safety will be found in the relevant product standards.

As far as input characteristics are concerned, this standard applies to all d.c. or a.c. source voltages with a rated value of up to 600 V.

As far as output characteristics are concerned, this standard applies only to the supplies of d.c. voltages of less than 200 V with a power limited to 2,5 kW; the latter power can be extended to 30 kW by taking care of the appropriate test methods.

The object of this part of IEC 61204 is to set down the requirements for the performance of low-voltage power supply devices of assessed functionality intended for serial production. If other performance requirements or quality assurance have been agreed by a contract, the latter prevails.

This part of IEC 61204 is intended as a guidance for the improvement of the performance of large series.

For performance and quality conformance inspection, the numbering of the clauses and subclauses of this part of IEC 61204 refer, unless stated otherwise, to IEC 61204.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61204. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61204 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60068-2-14:1984, *Environmental testing – Part 2: Tests – Test N: Change of temperature*

IEC 60068-2-20:1979, *Environmental testing – Part 2: Tests – Test T: Soldering*

IEC 60068-2-21:1999, *Environmental testing – Part 2-21: Tests – Test U: Robustness of terminations and integral mounting devices*

IEC 60068-2-45:1980, *Environmental testing – Part 2: Tests – Test XA and guidance: Immersion in cleaning solvents*

IEC 60410:1973, *Sampling plans and procedures for inspection by attributes*

IEC 60721-3-3:1994, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 3: Stationary use at weather-protected locations*

IEC 61204:1993, *Low-voltage power supply devices, d.c. output – Performance characteristics and safety requirements*

ISO 9000 (all parts), *Quality management and quality assurance standards*

3 Procedure and classification

The requirements of this standard apply to

- either the manufacturer's standard power supplies meeting the requirements of the detail specifications,
- or to specific, custom-made power supplies.

The procedure includes the following three provisions:

- the manufacturer's quality control, methods and manufacturing procedures, shall be certified to the ISO 9000 series or equivalent;
- initial product compliance with the performance requirements;
- periodic quality conformance assessment.

This standard covers the following types of power supplies:

- **type A:** modules for printed circuits;
- **type B:** power supplies up to 250 W excluding modules for printed circuits;
- **type C:** power supplies greater than 250 W and up to 1 kW;
- **type D:** power supplies greater than 1 kW.

4 Initial product compliance and tests

The tests are specified in clause 6.

All the tests shall be mandatory if the manufacturer/(user) confirms/(specifies) the presence of the feature or parameter for each model family of the power supply.

The manufacturer has to keep the records of the test results for 10 years after delivery of the last unit.

The recommended number of specimens for the manufacturer's standard power supplies depends on the type:

- type A: 10 specimens
- type B: 5 specimens
- type C: 3 specimens
- type D: 2 specimens

For custom-made power supplies, the number of specimens should be discussed in the particular contract between the manufacturer/user.