AS/NZS 5814.1:2012

Australian/New Zealand Standard™

Information technology equipment—Energy performance of internal power supplies

Part 1: Methods of measurement of energy performance

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee TE-001, Safety of Electronic Equipment. It was approved on behalf of the Council of Standards Australia on 21 June 2012 and on behalf of the Council of Standards New Zealand on 26 June 2012.
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TE-001, Safety of Electronic Equipment.

The objective of this Standard is to provide designers, manufacturers, importers, test laboratories, regulators and users of computers with a test method to assess the energy efficiency of this equipment.

This Standard was prepared in response to the publication of a plan for the regulation of computers under the Equipment Energy Efficiency Program (E3) in 2004. This Standard draws upon the test method referenced in the ENERGY STAR® Program Requirements for Computers: Version 5.0 and Version 5.2 (ENERGY STAR® V5.0 and V5.2 Computer Specification) published by the United States' Environmental Protection Agency (EPA) in 2010. The EPA test method is the de facto standard in the United States. This AS/NZS Standard is technically similar to the test method specified in the *Generalized Internal Power Supply Efficiency Test Protocol Rev 6.5*.

The term 'informative' is used to define the application of the appendix to which it applies. An informative appendix is only for information and guidance.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This document specifies a test procedure for calculating the energy efficiency of internal a.c.–d.c. and d.c.–d.c. power supplies. Internal power supplies are located in the same housing as the product that they power. An example of this type of power supply is a desktop computer power supply that has multiple output voltages: +12 V, +5 V, +3.3 V, and −12 V (see Appendix B).

The test method in this document applies specifically to power supplies that meet the following criteria:

(a) Power supplies that have detailed input and output ratings on their nameplate or in available literature from their manufacturer, specifying the maximum loads that can safely be placed on each individual d.c. output voltage bus and, where necessary, groupings of those voltage busses.

(b) Power supplies that have connectors that allow the d.c. output voltage busses to be connected and disconnected from the powered product non-destructively.

(c) Power supplies that can be detached from the housing of the product they power without causing harm to other circuits and components of the product.

This Standard also specifies the following:

(i) Internal power supply types.

(ii) Terminology used in the test method.

(iii) Information required for test reports.

1.2 EXCLUSIONS

The following are not covered by this Standard:

(a) External power supplies within the scope of the AS/NZS 4665 series.

(b) A.C.–A.C. voltage transformers.

(c) Power supplies physically integrated within the main circuit board of the device they are powering.

(d) Power supplies that have a combination of a.c. and d.c. output voltage busses.

This Standard does not specify electrical safety requirements.