

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Amendment No. 1
to
AS/NZS 4665.1:2005
Performance of external power supplies
Part 1: Test method and energy performance mark

REVISED TEXT

The 2005 edition of AS/NZS 4665.1 is amended as follows; the amendments should be inserted in the appropriate places.

SUMMARY: This Amendment applies to the Preface, Clauses 1.1 and 1.3 and Appendices A, B and C.

Published on 27 February 2009.

Approved for publication in New Zealand on behalf of the Standards Council of New Zealand on 29 January 2009

Preface

In the seventh paragraph, *delete* the second sentence and *replace* with the following:

Regulatory authorities have advised that it is intended to mandate Part 2 of the Standard (AS/NZS 4665.2:2005) in regulations in Australia and New Zealand no earlier than 1 December 2008, except for marking requirements, which are intended to be mandated no earlier than 1 April 2009.

Clause 1.1

Add a new fourth paragraph as follows:

Power supplies within the scope of AS/NZS 4879 or IEC 61347.2.13 are excluded from the scope of this Standard.

Clause 1.3.3

Replace 'r.m.s.' with 'average'.

Clause 1.3.8

Add a new Clause 1.3.8 as follows:

1.3.8 Family of models—Non user selectable output voltage

A range of non user selectable single output models based on common technically equivalent components (typically switchmode), but each model may have a different output voltage. They may be sold under different brand names or model numbers or both. Each member of the family is included on a single test report and has the same energy performance mark, but may have a different output voltage.

Clause 1.3.9

Add a new Clause 1.3.9 as follows:

1.3.9 Multi-switch model—User selectable output voltage

A model with a single output that provides a range of user selectable output voltages. They may be sold under different brand names or model numbers or both. Test reports may include one or more models having the same energy performance mark.

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Clauses 1.3.8 to 1.3.15

Renumber Clauses 1.3.8 to 1.3.15 as Clauses 1.3.10 to 1.3.17 respectively.

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Clause 1.3.18

Add a new Clause 1.3.18 as follows:

1.3.18 Single model(s)

One or more models using technically equivalent components with identical performance specifications having the same output voltage. They may be sold under different brand names or model numbers or both. Test reports may include one or more models having the same energy performance mark.

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2009

Clauses 1.3.16 and 1.3.17

Renumber Clauses 1.3.16 and 1.3.17 as Clauses 1.3.19 and 1.3.20 respectively.

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Paragraph A1

Add new third and fourth paragraphs as follows:

External power supplies, for Mark V only, with an input power greater than or equal to 100 W shall have a true power factor of 0.9 or greater at 100% of rated load when tested at 115 V, 60 Hz.

Products tested for compliance with Mark V at both 115 V and 230 V shall meet the power factor requirement when tested at 115 V, but not when tested at 230 V.

Table A1

Delete the Table and replace with the following:

TABLE A1

ENERGY PERFORMANCE REQUIREMENTS FOR EACH NUMERAL

Mark	No load power consumption requirements			Active mode efficiency requirements		
	Nameplate output power	No load power		Nameplate output power		Average active mode efficiency
	(P_{no}) W	W		(P_{no}) W	Output specification	
I	Used if it does not meet any of the following criteria					
II	0 to <10	≤ 0.75		0 to <1	All	$\geq 0.39 \times P_{no}$
	10 to ≤ 250	≤ 1.0		1 to <49	All	$\geq 0.107 \times L_n(P_{no}) + 0.39$
III	0 to <10	≤ 0.5		0 to 1	All	$\geq 0.490 \times P_{no}$
	10 to ≤ 250	≤ 0.75		>1 to 49	All	$\geq 0.090 \times L_n(P_{no}) + 0.490$ to a maximum of 0.840
				>49 to 250	All	≥ 0.840
IV	0 to <10	≤ 0.5		0 to 1	All	$\geq 0.500 \times P_{no}$
	10 to ≤ 250	≤ 0.5		>1 to 51	All	$\geq 0.090 \times L_n(P_{no}) + 0.500$ to a maximum of 0.850
				>51 to 250	All	≥ 0.850
V		AC-AC	AC-DC			
	0 to <50	≤ 0.5	≤ 0.3	0 to 1	Output voltage <6 V and output current ≥ 0.550 A	$\geq 0.497 \times P_{no} + 0.067$
					Other models	$\geq 0.480 \times P_{no} + 0.140$
				>1 to 49	Output voltage <6 V and output current ≥ 0.550 A	$\geq 0.0750 \times L_n(P_{no}) + 0.561$
					Other models	$\geq 0.0626 \times L_n(P_{no}) + 0.622$
	50 to ≤ 250	≤ 0.5	≤ 0.5	>49 to 250	Output voltage <6 V and output current ≥ 0.550 A	≥ 0.860
					Other models	≥ 0.870
VI – X	Reserved for future use					

LEGEND:

P_{no} = nameplate output power of the EUT

L_n = the natural logarithm (base e)