

STANDARDS AUSTRALIA

Amendment No. 1
to
AS 60146.2—2001
Semiconductor converters
Part 2: Self-commutated semiconductor converters including direct d.c. converters

CORRECTION

The 2001 edition of AS 60146.2 is amended as follows; the amendments should be inserted in the appropriate places.

SUMMARY: This Amendment applies to the Contents, Clause 5 and Table 1.

Published on 15 March 2001.

Page iii CONTENTS*Delete*

5.2.3 Storage and transport temperatures 18

Delete 5.2.4 and replace with:

5.2.3 Unusual environmental service conditions and design considerations 18

This Amendment forms part of the Standard on publication.**Page 18 Clause 5***Renumber* the following subclauses:**5.2.3** becomes **5.2.2.1**;**5.2.3.1** becomes **5.2.2.2**;**5.2.3.2** becomes **5.2.2.3**; and**5.2.4** becomes **5.2.3**.**This Amendment forms part of the Standard on publication.**

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AMDT
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Page 21 Table 1

Delete Table 1 and replace with the following:

Table 1 – Immunity levels for stiff a.c. voltage connections

Disturbance	Applicable values of IEC 61000-2-4 (throughout the table)	Immunity class			Possible consequences if exceeded ¹⁾
		A	B	C	
Frequency tolerance range (%) rate of change (%/s)	Table 1 –	±2 ±2	±1 ±1	±1 ±1	F F
Voltage amplitude tolerances a) steady state $\Delta U/U_N$ (%) b) short time (0,5 to 30 cycles) up to rated values – rectifier operation only (%) – inverter operation (%)	Table 1 – –	+10, –15 ±15 ±15	±10 +15, –10 +15, –10	±8 +15, –10 +15, – 8	F T
NOTE 1 A decrease in frequency is assumed not to coincide with an increase in line voltage and vice versa.					
NOTE 2 For overload conditions other limits shall be specified separately.					
NOTE 3 Within certain limits to be specified, the possible consequence T may be replaced by F, in particular if, by a requirement to be inserted in the specification, the purchaser requires special control arrangements.					
NOTE 4 Short-time a.c. voltage variations are not expected to occur more frequently than once every two hours.					
Voltage unbalance U_n/U_p (see figure 2) a) steady state (%) (over any 10 min) b) short time – rectifier operation only (%) – inverter operation (%)	Table 1 – –	3 8 5	2 5 5	2 3 2	F T T
NOTE 1 The higher values specified for short-time may lead to, for example, currents with uncharacteristic harmonics in the a.c. voltage.					
NOTE 2 Short-time voltage unbalances are not expected to occur more frequently than once every two hours.					
Voltage waveform a) total harmonic distortion THD (%) b) individual harmonic distortion – order 5 (%) – other odd orders excluding multiples of 3 – multiples of 3 – even orders c) commutation notches (steady state) – amplitude (% of U_{LWM}) – area (% of $U_{LWM} \times$ degree) d) interharmonic voltage components	Table 2 Table 3 Table 3 Table 4 Table 5 – – Table 6	10 8 See IEC 61000-2-4 See IEC 61000-2-4 See IEC 61000-2-4 100 625 See IEC 61000-2-4	8 6 See IEC 61000-2-4 See IEC 61000-2-4 See IEC 61000-2-4 40 250 See IEC 61000-2-4	5 3 See IEC 61000-2-4 See IEC 61000-2-4 See IEC 61000-2-4 20 125 See IEC 61000-2-4	F F F F F T T F
NOTE If several converters are connected to the same converter transformer terminals, the total area of all notches over one period of the fundamental is not expected to exceed four times the area given above for one principal commutation notch.					
1) For definitions, refer to 3.5.11.1.					

This Amendment forms part of the Standard on publication.