

AS 61800.3—2005
IEC 61800-3, Ed.2.0 (2004)

AS 61800.3—2005

Australian Standard™

**Adjustable speed electrical power drive
systems**

**Part 3: EMC requirements and specific
test methods**

This Australian Standard was prepared by Committee EL-027, Power Electronics. It was approved on behalf of the Council of Standards Australia on 16 December 2004.
This Standard was published on 5 January 2005.

The following are represented on Committee EL-027:

Australian British Chamber of Commerce
Australian Electrical and Electronic Manufacturers Association
Energy Networks Association
Engineers Australia
Testing interests (Australia)

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia, GPO Box 5420, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 04482.

AS 61800.3—2005

Australian Standard™

Adjustable speed electrical power drive systems

Part 3: EMC requirements and specific test methods

Originated as AS 61800.3—2001.
Second edition 2005.

COPYRIGHT

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 6434 7

PREFACE

This Standard was prepared by the Standards Australia Committee EL-027, Power Electronics to supersede AS 61800.3—2001.

The objective of this Standard is to provide manufacturers, regulators, test laboratories and users with electromagnetic compatibility (EMC) requirements for electrical power drives.

This Standard is identical with, and has been reproduced from, IEC 61800-3, Ed.2.0 (2004), *Adjustable speed electrical power drive systems Part 3: EMC requirements and specific test methods*.

Explanatory notes have been added to table 17 (in clause 6.4.2.2).

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text ‘this international standard’ should read ‘this Australian Standard’.
- (c) A full point should be substituted for a comma when referring to a decimal marker.
- (d) Any French text on figures should be ignored.

The terms ‘normative’ and ‘informative’ are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

CONTENTS

	<i>Page</i>
1 Scope and object	1
2 Normative references	2
3 Terms and definitions	5
4 Common requirements	10
4.1 General conditions	10
4.2 Tests	11
4.3 Documentation for the user	11
5 Immunity requirements	12
5.1 General conditions	12
5.2 Basic immunity requirements – Low-frequency disturbances	14
5.3 Basic immunity requirements – High-frequency disturbances	20
5.4 Application of immunity requirements – statistical aspect	23
6 Emission	24
6.1 General emission requirements	24
6.2 Basic low-frequency emission limits	24
6.3 Conditions related to high-frequency emission measurement	27
6.4 Basic high-frequency emission limits	28
6.5 Engineering practice	31
6.6 Application of emission requirements – statistical aspects	35
 Annex A (informative) EMC techniques	 36
A.1 General overview of EMC phenomena	36
A.2 Load conditions regarding high-frequency phenomena	39
A.3 Some immunity aspects	40
A.4 High-frequency emission measurement techniques	41
 Annex B (informative) Low-frequency phenomena	 46
B.1 Commutation notches	46
B.2 Definitions related to harmonics and interharmonics	51
B.3 Application of harmonic emission standards	57
B.4 Installation rules/Assessment of harmonic compatibility	66
B.5 Voltage unbalance	71
B.6 Voltage dips – Voltage fluctuations	74
B.7 Verification of immunity to low frequency disturbances	76
 Annex C (informative) Reactive power compensation – filtering	 78
C.1 Installation	78
C.2 Reactive power and harmonics	87

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-