

Australian Standard™

**Adjustable speed electrical power drive systems**

**Part 2: General requirements—Rating specifications for low voltage adjustable frequency a.c. power drive systems**

This Australian Standard was prepared by Committee EL-027, Power Electronics. It was approved on behalf of the Council of Standards Australia on 6 August 2004. This Standard was published on 6 September 2004.

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The following are represented on Committee EL-027:

Australian Communications Authority  
Australian Electrical and Electronic Manufacturers Association  
Bureau of Steel Manufacturers of Australia  
Energy Supply Association of Australia  
Monash University  
University of Wollongong

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**Part 2: General requirements—Rating specifications for low voltage adjustable frequency a.c. power drive systems**

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## PREFACE

This Standard was prepared by the Standards Australia Committee EL-027, Power Electronics.

The objective of this Standard is to provide designers, manufacturers, specifiers, purchasers and users of variable speed drive systems with a set of characteristics to define variable speed drives with a supply voltage of up to 1 kV a.c.

This Standard is identical with, and has been reproduced from, IEC 61800-2, Ed. 1.0 (1998), *Adjustable speed electrical power drive systems, Part 2: General requirements—Rating specifications for low voltage adjustable frequency a.c. power drive systems*.

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## STANDARDS AUSTRALIA

## Australian Standard

**Adjustable speed electrical power drive systems**  
**Part 2: General requirements—Rating specifications for low voltage**  
**adjustable frequency a.c. power drive systems**

**1 General****1.1 Scope and object**

This part of IEC 61800 applies to general purpose adjustable speed a.c. drive systems which include power conversion, control equipment, and also an a.c. motor or motors. Excluded are traction and electrical vehicle drives.

It applies to systems connected to line voltages up to 1 kV a.c., 50 Hz or 60 Hz, and load side frequency up to 600 Hz.

EMC aspects are covered in IEC 61800-3.

This part of IEC 61800 gives the characteristics of the converters and their relationship with the complete a.c. drive system. It also states their performance requirements with respect to ratings, normal operating conditions, overload conditions, surge withstand capabilities, stability, protection, a.c. line earthing, and testing. Furthermore, it deals with application guidelines, such as control strategies, diagnostics and topologies.

This part of IEC 61800 is intended to define a complete a.c. PDS in terms of its performance and not in terms of individual subsystem functional units.

**1.2 Normative references**

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61800. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 61800 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

References to international standards that are struck through in this clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is identified as such.

~~IEC 60034-1:1996, Rotating electrical machines — Part 1: Rating and performance~~

AS 1359.101, *Rotating electrical machines – General requirements, Part 101: Rating and performance* (identical to IEC 60034-1)

~~IEC 60034-2:1972, Rotating electrical machines — Part 2: Methods for determining losses and efficiency of rotating electrical machinery from tests (excluding machines for traction vehicles)~~

AS 1359.102.1, *Rotating electrical machines – General requirements, Part 102.1: Methods for determining losses and efficiency – General*