

Australian Standard[®]

**GENERAL REQUIREMENTS FOR
ROTATING ELECTRICAL
MACHINES**

Part 2—DIMENSIONAL SYMBOLS

This part of the standard, prepared by Committee EL/9, Rotating Electrical Machinery, was approved on behalf of the Council of the Standards Association of Australia on 19 January 1981, and was published on 1 May 1981.

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

First published 1981

This part of the standard was issued in draft form for public review as DR 79194.

ISBN 0 7262 2187 2

PREFACE

This part of the standard was prepared by Committee EL/9, Rotating Electrical Machinery.

Most of the substance of this part of the standard is presently to be found in AS 1360, Parts 10 and 11* where it was located pending the publication of this Part 2 of AS 1359. At the appropriate time the duplicated material will be deleted from the Parts of AS 1360.

In the preparation of this part of the standard, reference was made to BS 4999: Part 2† and to IEC 72‡. Acknowledgment is made of the assistance received from these sources.

This part of the standard differs from the British and IEC publications in the following minor matters:

- (a) The letter symbol AC refers to width, rather than diameter, of frame.
- (b) The Greek letter symbol α is introduced to specify an angle.
- (c) Letter symbols for shaft extensions cover flats as well as keyways.

The drafting committee is aware of an early draft proposal within IEC Sub-committee 2B for a new all-embracing alphanumeric system of dimensional symbols, but that proposal does not appear to have wide acceptance at this time.

-
- *AS 1360, Rotating electrical machines of particular types of four particular applications
 Part 10— Dimensions and outputs of standard single-speed three-phase general purpose motors.
 Part 11— Dimensions and performance of small power electrical machines.
 †BS 4999, General requirements for rotating electrical machines.
 Part 2— Symbols.
 ‡IEC 72, Dimensions and Output Ratings for Rotating Electrical Machines.

CONTENTS

	<i>Page</i>
CLAUSE	
2.1 Scope	4
2.2 Symbols for Dimensions of Machines and Slide Rails	4
2.3 Illustrative Sketches	4
TABLES	
2.1 Single-letter Symbols for Dimensions of Machines	4
2.2 Double-letter Symbols for Dimensions of Machines and Slide Rails	5
FIGURES	
2.1 Symbols for Foot-mounted Frames	6
2.2 Symbols for Flange-mounted Frames	6
2.3 Symbols for Skirt-mounted Frames	7
2.4 Symbols for Face-flange-mounted Frames	8
2.5 Symbols for Pad/Rod-mounted Frames	8
2.6 Symbols for Shaft Extensions with Keyways	9
2.7 Symbols for Shaft Extensions with Flats	9
2.8 Symbols for Tapped Hole in Shaft Extension	9
2.9 Symbols for Slide Rails	10

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
GENERAL REQUIREMENTS FOR ROTATING ELECTRICAL MACHINES

PART 2—DIMENSIONAL SYMBOLS

2.1 SCOPE. This Part of this standard specifies the symbols for the principal dimensions of machines and slide rails. The use of dimensional symbols is illustrated by typical sketches.

NOTE: The allocation of symbols is somewhat arbitrary, being derived from past practice in relation to the smaller sizes of a.c. industrial motors. Nevertheless the symbols should be applied to all cases that they can adequately cover.

2.2 SYMBOLS FOR DIMENSIONS OF MACHINES AND SLIDE RAILS. Symbols for dimensions of machines and slide rails shall be as specified in Tables 2.1 and 2.2.

2.3 ILLUSTRATIVE SKETCHES. Figs 2.1 to 2.9 illustrate the definitions given in Tables 2.1 and 2.2 but are not part of the definitions. In particular, in Figs 2.2 to 2.5, the angle α should not be inferred to be 45 degrees; its value is specified elsewhere, e.g. in AS 1360.

TABLE 2.1
SINGLE-LETTER SYMBOLS FOR DIMENSIONS OF MACHINES

Letter symbol	Dimension description
<i>A</i>	Distance between centrelines of fixing holes (end view)
<i>B</i>	Distance between centrelines of fixing holes (side view)
<i>C</i>	Distance from centreline of fixing holes at driving end of machine to shoulder of shaft
<i>D</i>	Diameter of shaft extension
<i>E</i>	Length of shaft extension from shoulder or end of useful shaft
<i>F</i>	Width of keyway
<i>G</i>	Distance from bottom of keyway or flat to opposite side of shaft extension
<i>H</i>	Distance from centreline of shaft to bottom of feet
<i>J</i>	Radius of circle to which mounting pads (or faces for rods) are tangential
<i>K</i>	Diameter of holes or width of closed slots in the feet or mounting pads (or faces)
<i>L</i>	Overall length with single shaft extension
<i>M</i>	Pitch circle diameter of fixing holes
<i>N</i>	Diameter of spigot
<i>P</i>	Outside diameter of flange
<i>R</i>	Distance from surface of mounting flange to shaft shoulder or end of useful shaft
<i>S</i>	Diameter of fixing holes in flange
<i>T</i>	Depth of spigot
α	Angle between mounting hole and centreline of terminal box.