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Australian Standard®

Manipulating industrial robots—Presentation of characteristics

This Australian Standard was prepared by Committee IT/6, Information Processing Systems for Industrial Automation. It was approved on behalf of the Council of Standards Australia on 16 August 1991 and published on 15 November 1991.

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Australian Electrical and Electronic Manufacturers Association
Australian Information Industry Association
Australian Robot Association
Confederation of Australian Industry
Department of Technical and Further Education N.S.W.
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PREFACE

This Standard was prepared by the Standards Australia Committee on Information Processing Systems for Industrial Automation. It is identical with and has been reproduced from ISO 9946:1991 *Manipulating industrial robots—Presentation of characteristics.*

Under arrangements made between Standards Australia and the international Standards bodies, ISO and IEC as well as certain other Standards organizations, users of this Australian Standard are advised of the following:

(a) Copyright is vested in Standards Australia.

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For the purposes of this Australian Standard, the ISO text should be modified as follows:

(i) *Terminology* The words 'Australian Standard' should replace the words 'International Standard' wherever they appear.

(ii) *References* The references to International Standards should be replaced by references to Australian Standards as follows:

Reference to International Standard		*Australian Standard*	
ISO		AS	
TR 8373	Manipulating industrial robots—Vocabulary	3877	Manipulating industrial robots—Vocabulary
9283	Manipulating industrial robots—Performance criteria and related test methods	3984	Manipulating industrial robots—Performance criteria and related test methods
9409	Manipulating industrial robots—Mechanical interfaces	3985	Manipulating industrial robots—Mechanical interfaces
9409-1	Part 1: Circular (form A)	3985.1	Part 1: Circular (form A)
9787	Manipulating industrial robots—Coordinate systems and motions	3986	Manipulating industrial robots—Coordinate systems and motions

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Manipulating industrial robots—Presentation of characteristics

1 Scope

This International Standard specifies requirements for how characteristics of robots shall be presented by the manufacturer.

2 Normative references

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

ISO/TR 8373 : 1988, *Manipulating industrial robots — Vocabulary.*

ISO 9283 : *Manipulating industrial robots — Performance criteria and related test methods.*

ISO 9409-1 : 1988, *Manipulating industrial robots — Mechanical interfaces — Part 1: Circular (form A).*

ISO 9787 : *Manipulating industrial robots — Coordinate systems and motions.*

3 Definitions

For the purposes of this International Standard, the definitions given in ISO/TR 8373 apply.

4 Units

Unless otherwise stated, all dimensions are as follows:

— length in millimetres (mm);

— angle in radians (rad) or degrees (°);

— time in seconds (s);

— mass in kilograms (kg);

— force in newtons (N);

— velocity in metres per second (m/s), radians per second (rad/s) or degrees per second (°/s).

5 Characteristics

5.1 General

The manufacturer shall provide information related to the various characteristics and requirements as described in this clause as part of the robot documentation.

5.2 Application

The manufacturer shall specify the main type(s) of application(s) for which the robot is intended.

Examples of typical applications are

— material handling;

— assembly;

— spot welding;

— arc welding;

— machining;

— spray painting/coating;

— adhesive/sealant application;

— work inspection/verification.

5.3 Power source

The manufacturer shall specify all external power sources, including type (e.g. electrical, hydraulic, pneumatic or combination) required for proper operation of the robot (mechanical structure motion actuators, control, auxiliary equipment, etc.), together with the maximum power consumption required from each. These specifications shall also include permissible ranges and fluctuations.

The manufacturer shall also specify the type of power utilized to control axis and auxiliary motion (e.g. electric,