

Australian/New Zealand Standard™

**Low-voltage switchgear and
controlgear—Controller-device
interfaces (CDIs)**

Part 1: General rules



Standards Australia



STANDARDS
NEW ZEALAND
Pūrongo Aotearoa

AS/NZS 62026.1:2001

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-006, Industrial Switchgear and Controlgear. It was approved on behalf of the Council of Standards Australia on 21 March 2001 and on behalf of the Council of Standards New Zealand on 4 May 2001. It was published on 15 May 2001.

The following interests are represented on Committee EL-006:

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Australian Electrical and Electronic Manufacturers Association
Bureau of Steel Manufacturers of Australia
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Part 1: General rules

First published as AS/NZS 62026.1:2001.

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Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 3863 X

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-006, Industrial Switchgear and Controlgear.

The objective of this Standard is to harmonize and define rules, components and requirements of a general nature applicable to industrial controller-device interfaces (CDIs).

This Standard is Part 1 of a series which, when complete, will consist of the following:

AS/NZS

62026 Low-voltage switchgear and controlgear—Controller-device interfaces (CDIs)

62026.1 Part 1: General rules (this Standard)

62026.2 Part 2: Actuator sensor interface (AS-i)

62026.3 Part 3: DeviceNet

62026.5 Part 5: Smart distributed system (SDS)

62026.6 Part 6: Seriplex (Serial multiplexed control Bus)

This Standard is identical with and has been reproduced from IEC 62026-1:2000, *Low-voltage switchgear and controlgear—Controller-device interfaces (CDIs)—Part 1: General rules*.

The class of controller-device interfaces (CDIs) covered in this Joint Australian/New Zealand Standard includes industrial CDIs for control systems, factory automation, and process automation.

Industrial CDIs have proliferated to meet specific user needs, but no single CDI meets all needs. The reason for multiple solutions is the wide range of physical, usage, information content and configuration requirements. The physical requirements have resulted in CDIs with widely differing signal and line conditioning mechanisms in order to meet distance, node count and environmental considerations.

While there is wide variation in CDI technologies, there are common components, interfaces and environmental requirements that are specified by this Standard. Standardized definitions of these common CDI requirements assist the user to compare and select technologies to match the distance, node count, throughput and installation requirements for a specific application.

This standard simplifies the CDI selection process by providing a common structure for generating a specific CDI's Joint Australian/New Zealand Standard while also allowing specific interface features and capabilities to be included. Clauses 1 to 8 contain the outline of general requirements that the CDI's Joint Australian/New Zealand Standard identifies. Clause 9 contains the test specification.

Standardization of CDI aspects also simplifies the task of writing the software for the higher layer functions of industrial control systems, such as supervisory control, operator interface and control strategy programming.

For this Standard to be complete and usable, it requires the availability of specific CDI Standards, which are the other parts of the AS/NZS 62026 series.

A reference to an International Standard identified in the Normative References Clause by strikethrough (~~example~~) is replaced by a reference to the Australian or Australian/New Zealand Standard(s) listed immediately thereafter and identified by shading (**example**). Where the struck-through referenced document and the referenced Australian or Australian/New Zealand Standard are identical, this is indicated in parenthesis after the title of the latter.

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 standard' should read 'this Australian/New Zealand Standard'.
- (c) A full point should be substituted for a comma when referring to a decimal marker.

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(CDIs)****Part 1: General rules**

Any IEC table, figure or passage of text that is struck-through is not part of this Standard. Any Australian/New Zealand table, figure or passage of text that is added (and identified by shading) is part of this Standard.

1 Scope

This International Standard applies to interfaces between low-voltage switchgear, controlgear, and controllers (e.g. programmable controllers, personal computers, etc.).

This standard does not apply to higher level industrial communication networks that have become known as fieldbuses and are considered by IEC subcommittee 65C.

The purpose of this standard is to harmonize and define rules, components and requirements of a general nature applicable to industrial CDIs. Those features of the various CDI standards which can be considered as general have therefore been brought together in this part of IEC 62026.

For each CDI, two main documents are necessary to determine all requirements and tests:

- a) this part, referred to as “part 1” in the relevant CDI parts covering the various types of CDIs;
- b) the specific CDI part of the IEC 62026 series.

A specific CDI part may omit a general requirement if it is not applicable, or it may add to it if it is inadequate in the particular case, but it shall not deviate from the requirement unless there is substantial technical justification.

NOTE Product-specific requirements for products incorporating a CDI are given in the relevant product standards. These requirements apply in addition to those given in this International Standard.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 62026. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 62026 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.