AS/NZS 4024.1906:2014
IEC 61310-3, Ed. 3.0 (2007)

AS/NZS 4024.1906:2014

Australian/New Zealand Standard™

Safety of machinery

Part 1906: Displays, controls, actuators and signals—Indication, marking and actuation—Requirements for the location and operation of actuators

STANDARDS Australia

STANDARDS® NEW ZEALAND PAEREWA AOTEAROA

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee SF-041, General Principles for the Guarding of Machinery. It was approved on behalf of the Council of Standards Australia on 5 June 2014 and on behalf of the Council of Standards New Zealand on 24 April 2014.
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The following are represented on Committee SF-041:

Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Manufacturing Workers Union
Department of Mines and Petroleum, WA
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Engineers Australia
Federal Chamber of Automotive Industries
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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS 4024.1906.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee SF-041, General Principles for the Guarding of Machinery, to supersede AS 4024.1906—2006.

It is emphasized that this Standard is part of the AS(/NZS) 4024.1 series and it is imperative that it is used in conjunction with other applicable parts of the series. A complete listing of all current parts of the AS(/NZS) 4024.1 series can be found at the Standards Australia website <www.standards.org.au> and in AS/NZS 4024.1100, *Safety of machinery*, Part 1100: *Application Guide*.

The objective of this Standard is to specify safety-related requirements for actuators, operated by the hand or by other parts of the human body, at the human-machine interface.

It gives general requirements for the following:

(a) The standard direction of movement for actuators.

(b) The arrangement of an actuator in relation to other actuators.

(c) The correlation between an action and its final effects.

This Standard also applies to non-electrotechnical technologies such as mechanical and fluid-powered systems.

This Standard is identical with, and has been reproduced from IEC 61310-3, Ed. 3.0 (2007), *Safety of machinery—Indication, marking and actuation*, Part 3: *Requirements for the location and operation of actuators.*

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

(i) In the source text 'this part of IEC 61310' should read 'this Australian/New Zealand Standard'.

(ii) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
ISO		AS/NZS	
9355	Ergonomic requirements for the design of displays and control actuators	4024	Safety of machinery
9355-2	Part 2: Displays	4024.1902	Part 1902: Displays, controls, actuators and signals—Ergonomic requirements for the design of displays and control actuators—Displays
12100	Safety of machinery—Basic concepts, general principles for design		
12100-2	Part 2: Technical principles	4024.1201	Part 1201: General principles for design—Risk assessment and risk reduction

IEC			
61310	Safety of machinery—Indication, marking and actuation		
61310-1	Part 1: Requirements for visual, acoustic and tactile signals	4024.1904	Part 1904: Displays, controls, actuators and signals—Indication, marking and actuation—Requirements for visual, auditory and tactile signals
61310-2	Part 2: Requirements for marking	4024.1905	Part 1905: Displays, controls, actuators and signals—Indication, marking and actuation—Requirements for marking

The term ‘informative’ has been used in this Standard to define the application of the annex to which it applies. An ‘informative’ annex is only for information and guidance.

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Part 1906:
Displays, controls, actuators and signals—Indication, marking and actuation—Requirements for the location and operation of actuators

1 Scope

This part of IEC 61310 specifies safety-related requirements for actuators, operated by the hand or by other parts of the human body, at the human-machine interface.

It gives general requirements for

– the standard direction of movement for actuators;
– the arrangement of an actuator in relation to other actuators;
– the correlation between an action and its final effects.

It is based on IEC 60447 but is also applicable to non-electrotechnical technologies such as mechanical and fluid-powered systems.

It covers single actuators as well as groups of actuators forming part of an assembly.

This standard does not specify any requirements for "touch screens" (such information is given in IEC 60073).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60073:2002, *Basic and safety principles for man-machine interface, marking and identification – Coding principles for indicators and actuators*

IEC 60447:2004, *Basic and safety principles for man-machine interface, marking and identification – Actuating principles*

IEC 61310-1, *Safety of machinery – Indication, marking and actuation – Part 1: Requirements for visual, acoustic and tactile signals*

IEC 61310-2, *Safety of machinery – Indication, marking and actuation – Part 2: Requirements for marking*

ISO 1503:1977, *Geometrical orientation and directions of movements*

ISO 9355-2:1999, *Ergonomic requirements for the design of displays and control actuators – Part 2: Displays*

ISO 12100-2:2003, *Safety of machinery – Basic concepts, general principles for design – Part 2: Technical principles*